

Appendix A – Photographic Log



Photograph 1: Parcel 4 looking south



Photograph 2: Parcel 4 looking west



Photograph 3: Parcel 4 looking east



Photograph 4: Parcel 5 looking north at entrance



Photograph 5: Parcel 5 looking at stockpile along boundary



Photograph 6: Parcel 5 looking at disused wooden property

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log



Photograph 7: Parcel 5 Sandstone cutting



Photograph 8: Parcel 5 view looking north, at sandstone cutting area



Photograph 9: Parcel 5 corrugated metal shed, with paint flaking



Photograph 10: Parcel 5 equipment stored in shed situated along western Parcel boundary



Photograph 11: Parcel 5 equipment storage area



Photograph 12: Parcel 5 view looking south

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Source:
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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 13: Parcel 5 stockpiles present in northern portion of parcel



Photograph 14: Parcel 5 vehicles



Photograph 15: Parcel 5, household rubbish and building materials in north eastern corner of Parcel



Photograph 16: Building materials and household rubbish



Photograph 17: Parcel 5 fibre glass and asbestos sheeting



Photograph 18: Parcel 5 residential property

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Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 19: Parcel 6 metal shed, with vintage cars inside, bowser was not connected



Photograph 20: Parcel 6 storage area for rubber tyres



Photograph 21: Parcel 6 bowser that was not connected



Photograph 22: Parcel 6 tyre cutting area



Photograph 23: Parcel 6 tyre cutting area



Photograph 24: Parcel 6 view looking south across parcel

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Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

Job No: 43210

File Name: Photographic Log

Rev	Description	Drn.	Date
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Photograph 25: Parcel 6 view looking south



Photograph 26: Parcel 6 rusted vehicles



Photograph 27: Parcel 6 rusted vehicles



Photograph 28: Parcel 6 chicken coup, with potential ACM sheeting used



Photograph 29: Parcel 6, view looking south at the shed with vintage cars



Photograph 30: Parcel 6 additional residential property separate from main house

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

Job No: 43210

File Name: Photographic Log

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Photograph 31: Parcel 6 view looking west



Photograph 32: Parcel 6 ACM sheeting used as fence along boundary



Photograph 33: Parcel 6 ACM sheeting used as fence along chicken coup



Photograph 34: Parcel 6 metal shed with equipment



Photograph 35: Parcel 6 view looking west, with bird cages



Photograph 36: Parcel 6 view looking north

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Source:
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JBS&G Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

Job No: 43210

File Name: Photographic Log

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Photograph 37: Parcel 7 looking north



Photograph 38: Parcel 7 looking east



Photograph 39: Drums present on Parcel 7



Photograph 40: Metal work on Parcel 7



Photograph 41: Chemical drums on Parcel 7



Photograph 42: Potential ACM pipe on Parcel 7

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Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 43: Parcel 8 Store and Restaurant



Photograph 44: Drums on Parcel 8



Photograph 45: Sealed and vacant portion of Parcel 8



Photograph 46: Fill material and building waste on Parcel 8



Photograph 47: Stockpiled material on Parcel 8



Photograph 48: ACM in landscaped areas in Parcel 8

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 49: Parcel 9 looking north



Photograph 50: Parcel 9 looking south



Photograph 51: Parcel 10 looking north



Photograph 52: Fill material present on Parcel 10



Photograph 53: Parcel 11 view looking north at residence



Photograph 54: Parcel 11 chemical drums along eastern boundary

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Source:
Site inspections conducted by JGS&G

Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

Job No: 43210

File Name: Photographic Log

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Photograph 55: Parcel 11 looking north at Septic tank



Photograph 56: Parcel 11 looking at the vegetable patch



Photograph 57: Parcel 11 looking north west at the shipping container



Photograph 58: Parcel 11 contrast of ground surfaces



Photograph 59: Parcel 12 Stockpile



Photograph 60: Material present within Parcel 12

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Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 61: Parcel 12 looking north



Photograph 62: Parcel 13 chemical drums



Photograph 63: Parcel 13 containing building waste



Photograph 64: Parcel 14 residential property



Photograph 65: Shed present in Parcel 14



Photograph 66: Potential ACM present within the shed in Parcel 14

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Source:
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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

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Photograph 67: Building materials in Parcel 14



Photograph 68: Buildings materials in Parcel 14



Photograph 69: Chemical drums adjacent to shed in Parcel 14



Photograph 70: Parcel 16 looking north west



Photograph 71: Potential ACM contained property on Parcel 16



Photograph 72: Geotechnical bore drilled on Parcel 16. Shale shown

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Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

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Photograph 73: Potential ACM on Parcel 16



Photograph 74: Parcel 17



Photograph 75: Parcel 17 fill material



Photograph 76: Parcel 17 building waste



Photograph 77: Parcel 18, with spray painted ACM fragments



Photograph 78: ACM fragments on surface in Parcel 18

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log



Photograph 79: ACM within fill material in Parcel 18



Photograph 80: ACM within Parcel 18



Photograph 81: Parcel 18 looking north



Photograph 82: Parcel 19 looking south



Photograph 83: ACM at surface within Parcel 19



Photograph 84: ACM within Parcel 19

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 Appendix A : Photographic Log	
Client: UrbanGrowth NSW	
Project: Riverstone Scheduled Lands Precinct A (S)	
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Photograph 85: Parcel 20, looking north along Edmund Street



Photograph 86: Building waste within Parcel 20



Photograph 87: Parcel 20 looking south



Photograph 88: Rusted chemical drums in Parcel 20



Photograph 89: Empty plastic containers in Parcel 20



Photograph 90: Empty plastic containers in Parcel 20

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Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

Job No: 43210

File Name: Photographic Log

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Photograph 91: Parcel 21 Residential property



Photograph 92: Landscaped area within Parcel 21



Photograph 93: Parcel 22 Storage of metal and vehicle parts



Photograph 94: Soil staining in Parcel 22



Photograph 95: Building and vehicle parts, looking north



Photograph 96: Chemical storage in Parcel 22

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 97: Staining on surface soils in Parcel 22



Photograph 98: Machinery on Parcel 22



Photograph 99: Machinery on Parcel 22



Photograph 100: Forklift and site shed on Parcel 22



Photograph 101: Unsealed surface of Parcel 22



Photograph 102: Machinery on Parcel 22

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Source:
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Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

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File Name: Photographic Log

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Photograph 103: Parcel 22 looking north



Photograph 104: Machinery on Parcel 22 and the IBC



Photograph 105: Machinery on Parcel 22



Photograph 106: Parcel 24 looking south



Photograph 107: Drums filled with bottles on Parcel 24



Photograph 108: Soil present on Parcel 24

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 109: Parcel 25 fill material



Photograph 110: ACM present on Parcel 25



Photograph 111: ACM present on Parcel 25



Photograph 112: Parcel 26 looking south



Photograph 113: Building materials on Parcel 26



Photograph 114: Building materials on Parcel 26

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Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

Job No: 43210

File Name: Photographic Log

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Photograph 115: Parcel 27 looking south



Photograph 116: Stockpiled material in Parcel 27



Photograph 117: Dumped material in Parcel 27



Photograph 118: Chemical drums present on Parcel 27



Photograph 119: Parcel 28 looking north



Photograph 120: Corrugated metal shed on Parcel 28

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 121: Building materials on Parcel 28



Photograph 122: Building materials on Parcel 28



Photograph 123: Parcel 29 Fill materials



Photograph 124: Chemical drum on Parcel 29



Photograph 125: Building materials on Parcel 30



Photograph 126: Empty chemical drums on Parcel 30

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Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 127: Buried chemical drums on Parcel 30



Photograph 128: Chemical drum contents on Parcel 30



Photograph 129: Building materials on Parcel 30



Photograph 130: Parcel 31 looking south



Photograph 131: Parcel 31 with fill materials



Photograph 132: Corrugated metal in Parcel 31

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

Job No: 43210

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Photograph 133: Parcel 33 looking north



Photograph 134: Parcel 34 looking south



Photograph 135: Residence on Parcel 34



Photograph 136: Parcel 34 Fire Pit



Photograph 137: Parcel 34 Residence in western portion



Photograph 138: Parcel 34 potential septic tank

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Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

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Photograph 139: Parcel 34 Car storage



Photograph 140: Parcel 35 looking south



Photograph 141: Stockpiled material on Parcel 35



Photograph 142: Parcel 37 looking south



Photograph 143: Parcel 37 showing the chicken enclosure



Photograph 144: Parcel 37 with the shipping container

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Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 145: Parcel 37 chemical storage



Photograph 146: ACM present adjacent to shed on Parcel 37



Photograph 147: Potential in-ground septic tanks on Parcel 37



Photograph 148: Parcel 38 looking east



Photograph 149: ACM present on Parcel 38



Photograph 150: Building materials, timber and wood present on Parcel 38

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Rev	Description	Drn. Date



Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log



Photograph 151: Chemical drums on Parcel 38



Photograph 152: Soil material within Parcel 38



Photograph 153: Parcel 39 looking south



Photograph 154: Parcel 39 looking north



Photograph 155: Soil present on Parcel 39



Photograph 156: Parcel 40, disused portable office

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JBS&G Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 157: Chemical Drums present on Parcel 40



Photograph 158: Corrugated shed on Parcel 40



Photograph 159: Chemical drums in Parcel 40



Photograph 160: Rubbish in Parcel 40



Photograph 161: Parcel 41 tyres dumped



Photograph 162: Parcel 41

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 163: Parcel 42 wood and rubbish



Photograph 164: Potential ACM on Parcel 42



Photograph 165: Rubbish present on Parcel 42



Photograph 166: Parcel 43 looking north east



Photograph 167: Parcel 44 looking north



Photograph 168: Parcel 45 looking north east

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Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 169: ACM Present on Parcel 45



Photograph 170: Brick residence on Parcel 45



Photograph 171: Building materials on Parcel 45



Photograph 172: Building materials in Parcel 46



Photograph 173: Building materials in Parcel 46



Photograph 174: ACM within Parcel 46

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Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 175: Parcel 47 looking north



Photograph 176: Parcel 48 residence



Photograph 177: Parcel 48 landscaped areas



Photograph 178: Parcel 50 residence



Photograph 179: Parcel 50 landscaped areas



Photograph 180: Parcel 50 potential septic tank

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

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Photograph 181: Parcel 51 looking north



Photograph 182: Parcel 52 looking south



Photograph 183: Parcel 53 looking south



Photograph 184: Building materials present on Parcel 53



Photograph 185: Chemical Drums on Parcel 53



Photograph 186: Shed on Parcel 53

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Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

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File Name: Photographic Log

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Photograph 187: Parcel 54 building materials



Photograph 188: Shipping container on Parcel 54



Photograph 189: Chemical drums and burnt material on Parcel 54



Photograph 190: Parcel 54 Burnt and melted material on Parcel 54



Photograph 191: Old and broken shipping container on Parcel 54



Photograph 192: Wood and ACM present on Parcel 54

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

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File Name: Photographic Log

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Photograph 193: Parcel 55 looking west



Photograph 194: Stockpiled material on Parcel 55



Photograph 195: Site shed and building materials present on Parcel 55



Photograph 196: Potential ACM pipes on Parcel 55



Photograph 197: ACM fragments on Parcel 55



Photograph 198: ACM and building rubble within stockpile present on Parcel 55

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 199: Building waste on Parcel 80



Photograph 200 ACM fragment on surface in Parcel 80



Photograph 201: Stockpile of material in Parcel 80



Photograph 202: Residence on Parcel 81



Photograph 203: Building material on Parcel 81



Photograph 204: Building materials on Parcel 81

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Site inspections conducted by JGS&G



Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 205: Parcel 83



Photograph 206: Parcels 84-87 looking west



Photograph 207: Parcels 84-87 looking east



Photograph 208: Parcel 88 with unsealed areas



Photograph 209: Parcel 88 residence



Photograph 210: Parcel 88 chemical storage

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Appendix A : Photographic Log

Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S)

Job No: 43210

File Name: Photographic Log

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Photograph 211: ACM present on Parcel 88



Photograph 212: Residence on Parcel 88



Photograph 213: Potential ACM pipes on Parcel 88



Photograph 214: Building material storage on Parcel 88



Photograph 215: Residence on Parcel 89



Photograph 216: Landscaped area on Parcel 89

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0	Original Issue - Rev Description	28/02/2014 Drn. Date

Appendix A : Photographic Log



Client: UrbanGrowth NSW

Project: Riverstone Scheduled Lands Precinct A (S

Job No: 43210

File Name: Photographic Log

Appendix B – Groundwater Bore Information

Groundwater Works Summary

For information on the meaning of fields please see [Glossary](#)
Document Generated on Thursday, March 6, 2014

Print Report

[Works Details](#) [Site Details](#) [Form A](#) [Licensed](#) [Construction](#) [Water Bearing Zones](#) [Drillers Log](#)

Work Requested -- GW110737

Works Details [\(top\)](#)

GROUNDWATER NUMBER GW110737
 LIC-NUM 10BL603223
 AUTHORISED-PURPOSES MONITORING BORE
 INTENDED-PURPOSES MONITORING BORE
 WORK-TYPE Well
 WORK-STATUS
 CONSTRUCTION-METHOD Other
 OWNER-TYPE Private
 COMMENCE-DATE
 COMPLETION-DATE 2009-08-25
 FINAL-DEPTH (metres) 3.00
 DRILLED-DEPTH (metres) 3.00
 CONTRACTOR-NAME
 DRILLER-NAME
 PROPERTY WOOLWORTHS PETROL DIVISION
 GWMA -
 GW-ZONE -
 STANDING-WATER-LEVEL 1.50
 SALINITY
 YIELD

Site Details [\(top\)](#)

REGION 10 - SYDNEY SOUTH COAST
 RIVER-BASIN
 AREA-DISTRICT
 CMA-MAP
 GRID-ZONE
 SCALE
 ELEVATION
 ELEVATION-SOURCE
 NORTHING 6273932.00
 EASTING 302720.00
 LATITUDE 33 39' 22"
 LONGITUDE 150 52' 21"
 GS-MAP

AMG-ZONE 56
 COORD-SOURCE
 REMARK

Form-A [\(top\)](#)

COUNTY CUMBERLAND
 PARISH ST MATTHEW
 PORTION-LOT-DP 100//835832

Licensed [\(top\)](#)

COUNTY CUMBERLAND
 PARISH ST MATTHEW
 PORTION-LOT-DP 100 835832

Construction [\(top\)](#)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
 ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE- NO	PIPE- NO	COMPONENT- CODE	COMPONENT- TYPE	DEPTH- FROM (metres)	DEPTH- TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Hole	Hole	0.00	3.00	150			Other
1	1	Casing	P.V.C.	0.00	1.10	60			Other; Seated on Bottom
1	1	Opening	Screen	1.10	3.00	60			PVC; A: .5mm; Other

Water Bearing Zones [\(top\)](#)

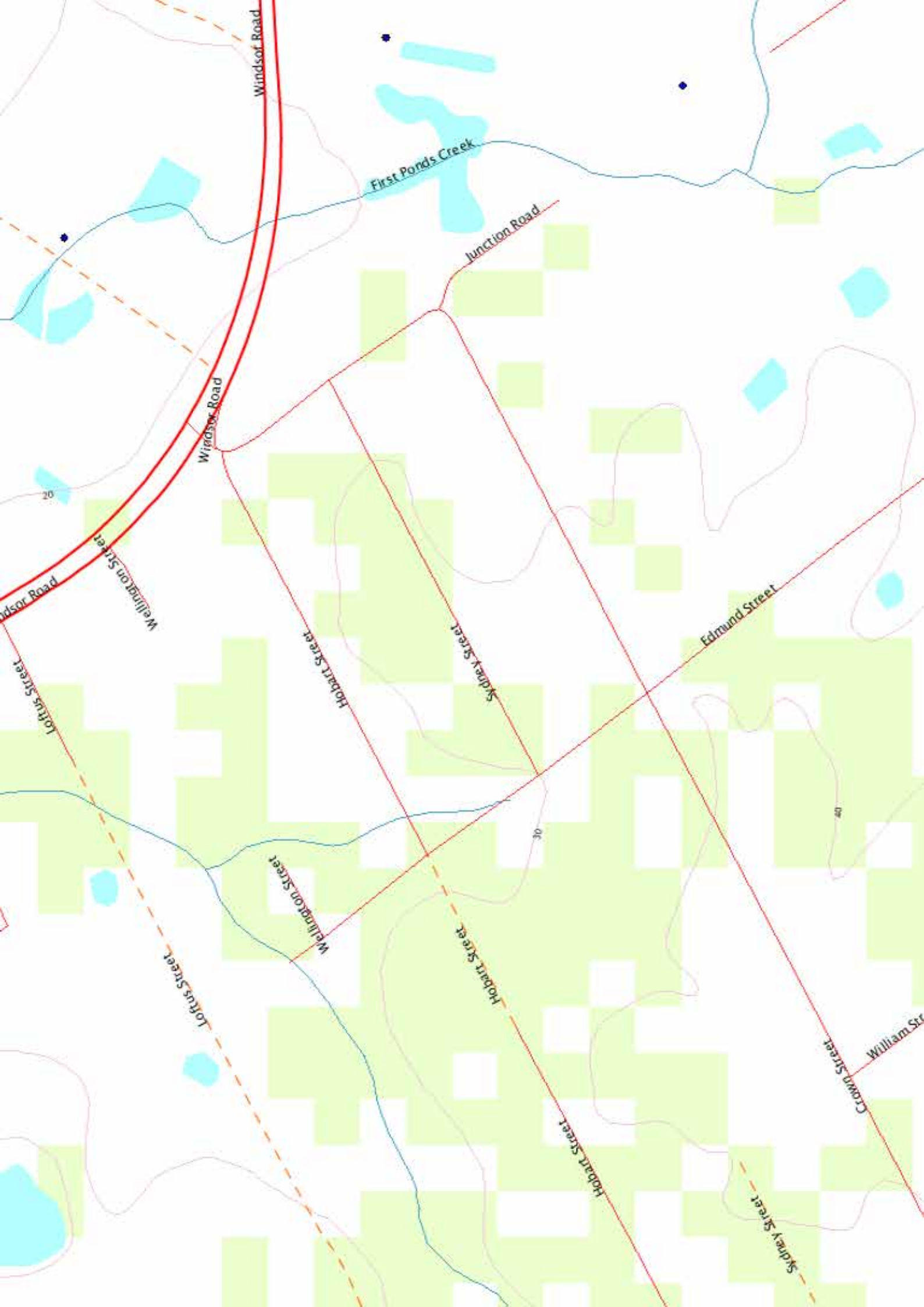
FROM- DEPTH (metres)	TO-DEPTH (metres)	THICKNESS (metres)	ROCK- CAT- DESC	S- W-L	D- D- L	YIELD	TEST-HOLE- DEPTH (metres)	DURATION	SALINITY
2.00	3.00	1.00		1.50					

Drillers Log [\(top\)](#)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	0.25	0.25	CONCRETE		
0.25	1.10	0.85	FILL		
1.10	2.80	1.70	CLAY		
2.80	3.00	0.20	CLAY SATURATED		

Warning To Clients: This raw data has been supplied to the Department of Infrastructure, Planning and Natural Resources (DIPNR) by drillers, licensees and other sources. The DIPNR does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice

should be sought in interpreting and using this data.






Appendix C – Aerial Photographs



Source: Base Image © Department of Lands © 2014 JBS&G

0	87.5	175	350
Scale: 1:8,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	LL	06-02-2014
Rev	Description	Drm.	Date

Legend:
 Approximate Site Boundary
 Conservation Area






Figure: Riverstone - 1947

Client: UrbanGrowth NSW

Project: Riverstone Precinct A - ESA

Job No: 43210

File Name: 43210_1947



Source: Base Image - © Department of Lands



Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 -AHD

A4			
A	Original Issue - R01	SE	05-03-2014
Rev	Description	Drm.	Date

Legend:

- Approximate Site Boundary
- Approximate Subdivision Boundary
- Conservation Area

Figure: Riverstone - 1947
Subdivision Extent

Client: Urban Growth NSW
 Project: Riverstone Precinct A

Job No: 43210
 File Name: 43210_1947C


© 2014 JBSS&G



Source: Base Image © Department of Lands © 2014 JBS&G

0	87.5	175	350
Scale: 1:8,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	LL	06-02-2014
Rev	Description	Drm.	Date

Legend:
 Approximate Site Boundary
 Conservation Area



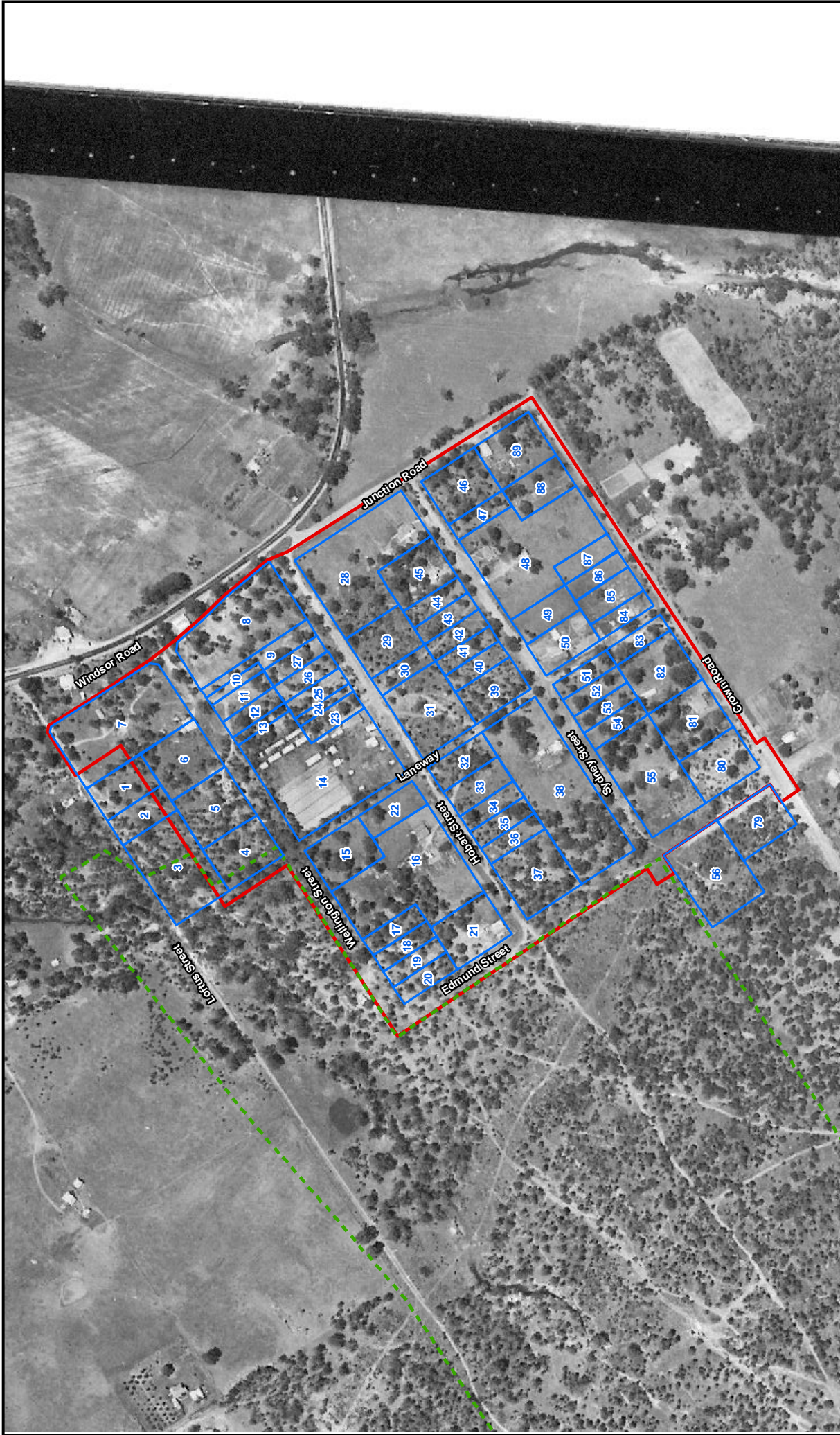
JBS&G Figure: Riverstone - 1955

Client: UrbanGrowth NSW

Project: Riverstone Precinct A - ESA

Job No: 43210

File Name: 43210_1955



Source: Base Image - © Department of Lands



Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 -AHD

- Legend:**
- Approximate Site Boundary
 - Approximate Subdivision Boundary
 - Conservation Area

Rev

Rev	Description	Drm.	Date
A4			
A	Original Issue - R01	SE	05-03-2014

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JBSS&G Figure: Riverstone - 1955
Subdivision Extent

Client: Urban Growth NSW

Project: Riverstone Precinct A

Job No: 43210


File Name: 43210_1955C



Source: Base Image © Department of Lands © 2014 JBS&G

0	87.5	175	350
Scale: 1:8,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	LL	06-02-2014
Rev	Description	Drm.	Date

Legend:
 Approximate Site Boundary
 Conservation Area



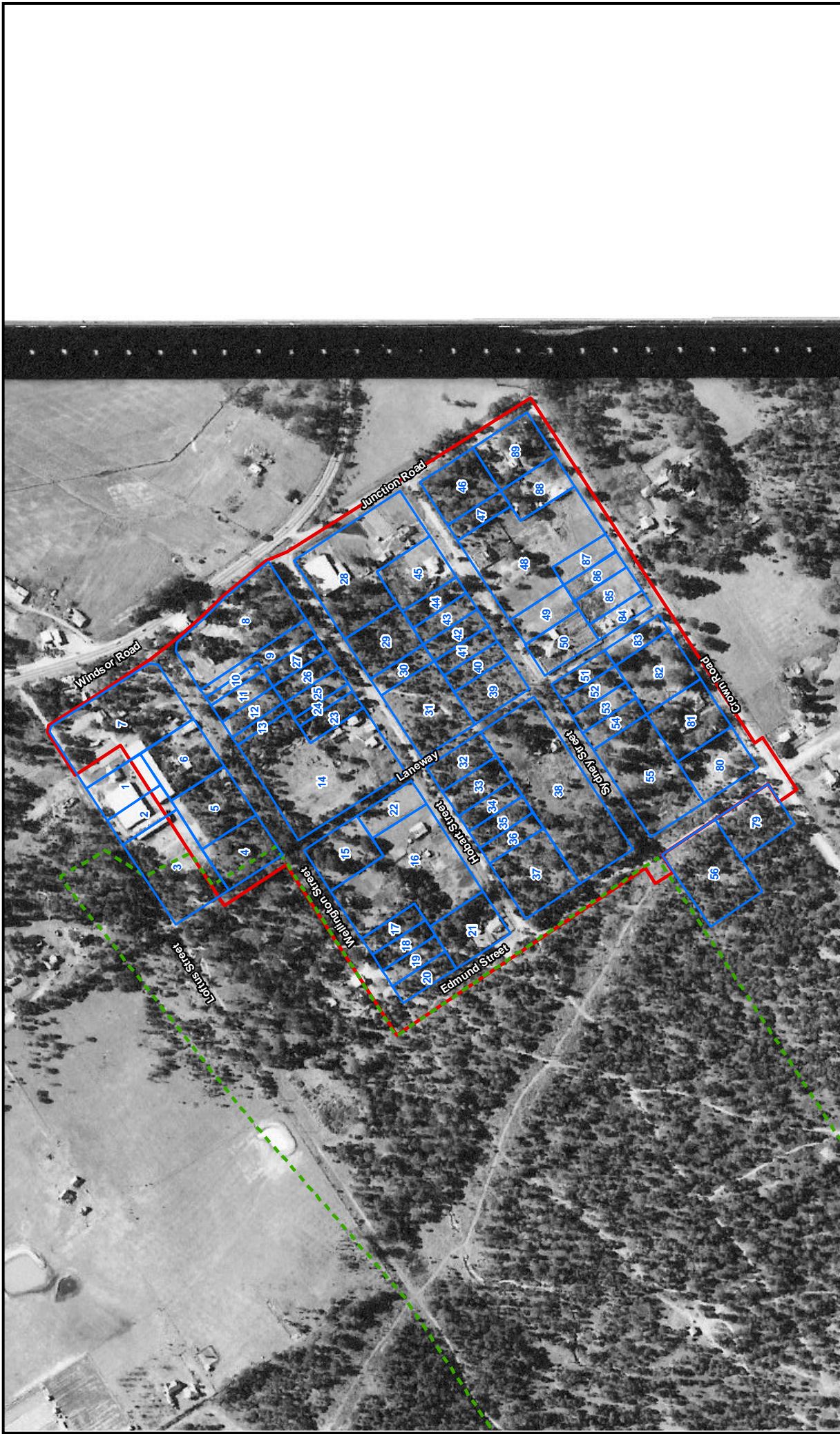
JBS&G Figure: Riverstone - 1961

Client: UrbanGrowth NSW

Project: Riverstone Precinct A - ESA

Job No: 43210

File Name: 43210_1961



Source: Base Image - © Department of Lands
 Scale: 1:5,000
 Datum: GDA 1994 MGA Zone 56 -AHD

© 2014 JBS&G

JBS&G Figure: Riverstone - 1961 Subdivision Extent

Client: Urban Growth NSW
 Project: Riverstone Precinct A
 Job No: 43210
 File Name: 43210_1961C

Legend:

- Red outline: Approximate Site Boundary
- Blue outline: Approximate Subdivision Boundary
- Green dashed line: Conservation Area


Rev	Description	Drn.	Date:
A4			
A	Original Issue - R01	SE	05-03-2014



Source: Base Image - © Department of Lands © 2014 JBS&G

0	87.5	175	350
Scale: 1:8,000			
Datum: GDA 1984 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	LL	06-02-2014
Rev	Description	Drm.	Date

Legend:
 Approximate Site Boundary
 Conservation Area



JBS&G Figure: Riverstone - 1970

Client: UrbanGrowth NSW

Project: Riverstone Precinct A - ESA

Job No: 43210

File Name: 43210_1970



Source: Base Image - © Department of Lands © 2014 JBSS&G

Legend:

- Approximate Site Boundary
- Approximate Subdivision Boundary
- Conservation Area

JBSS&G Figure: Riverstone - 1970
Subdivision Extent

Client: Urban Growth NSW
Project: Riverstone Precinct A

Job No: 43210 File Name: 43210_1970C


Scale: 1:5,000



Datum: GDA 1994 MGA Zone 56 -AHD

A4	
A	Original Issue - R01
Rev	Description
	Drn.
	Date:
	05-03-2014



Source: Base Image © Department of Lands © 2014 JBS&G

 Figure: Riverstone - 1986	
Client: UrbanGrowth NSW	
Project: Riverstone Precinct A - ESA	
Job No: 43210	
File Name: 43210_1986	

Legend:  Approximate Site Boundary  Conservation Area			
0	87.5	175	350
Scale: 1:8,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	LL	06-02-2014
Rev	Description	Drm.	Date



Source: Base Image - © Department of Lands




Scale: 1:5,000


Datum: GDA 1994 MGA Zone 56 -AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - R01	SE	03-03-2014

Legend:

- Approximate Site Boundary
- Approximate Subdivision Boundary
- Conservation Area





**Figure: Riverstone - 1986
Subdivision Extent**

Client: Urban Growth NSW
Project: Riverstone Precinct A
Job No: 43210
File Name: 43210_1986C

© 2014 JBSS&G




Source: Base Image © Department of Lands © 2014 JBS&G

0	87.5	175	350
Scale: 1:8,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	LL	06-02-2014
Rev	Description	Drm.	Date:

Legend:

Approximate Site Boundary

Conservation Area






Figure: Riverstone - 1994

Client: UrbanGrowth NSW	
Project: Riverstone Precinct A - ESA	
Job No: 43210	File Name: 43210_1994



Source: Base Image - © Department of Lands



Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 -AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - R01	SE	05-03-2014

Legend:

- Approximate Site Boundary
- Approximate Subdivision Boundary
- Conservation Area

JBS&G Figure: Riverstone - 1994
Subdivision Extent

Client: Urban Growth NSW
Project: Riverstone Precinct A
Job No: 43210
File Name: 43210_1994C


© 2014 JBS&G



Source: Base Image - © Department of Lands © 2014 JBS&G

0	87.5	175	350
Scale: 1:8,000			
Datum: GDA 1984 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	LL	06-02-2014
Rev	Description	Drm.	Date

Legend:
 Approximate Site Boundary
 Conservation Area



JBS&G Figure: Riverstone - 2002

Client: UrbanGrowth NSW

Project: Riverstone Precinct A - ESA

Job No: 43210

File Name: 43210_2002



Source: Base Image - © Department of Lands



Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 -AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - R01	SE	05-03-2014

Legend:

- Approximate Site Boundary
- Approximate Subdivision Boundary
- Conservation Area

JBS&G Figure: Riverstone - 2002
Subdivision Extent

Client: Urban Growth NSW
Project: Riverstone Precinct A
Job No: 43210
File Name: 43210_2002C



© 2014 JBS&G



Source: Base Image © SIX Maps www.maps.six.nsw.gov.au, Imagery Date: 13/04/2011, Accessed 06/02/2014 © 2014 JBS&G

0	87.5	175	350
Scale: 1:8,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	LL	06-02-2014
Rev	Description	Drm.	Date:

Legend:
 Approximate Site Boundary
 Conservation Area


 **Figure: Riverstone - 2011**
 Client: UrbanGrowth NSW
 Project: Riverstone Precinct A - ESA
 Job No: 43210
 File Name: 43210_2011



Source: Base Image - © SIX Maps www.maps.six.nsw.gov.au, imagery date 13-04-2011, accessed 06-02-2014



Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 -AHD

A4

A Original Issue - R01 SE 05-03-2014

Rev Description Dm. Date:

Legend:

- Approximate Site Boundary
- Approximate Subdivision Boundary
- Conservation Area

**Figure: Riverstone - 2011
Subdivision Extent**

Client: Urban Growth NSW	
Project: Riverstone Precinct A	
Job No: 43210	File Name: 43210_2011C

© 2014 JBSS&G

Appendix D – Historical Titles



Parcel No.	Lot No.	Section	DP	Current Owner	Historical Owner
22	1		790369	Joseph Pace	(1897 to 1939) Lucy Wright Packwood (Married Woman) (1939 to 1970) Harry Allan Husselbee (A Minor) (1970 to 1970) John Cowan (Machinist) (1970 to 1988) Jessie Cowan Standen (Married Woman) (1988 to 2004) Joseph Pace & Lena Pace (2004 to date) # Joseph Pace
4	66 67 68 69 70	29	1480	Terence William Hanly and Penelope Julie Peninton as joint tenants	Not Ordered Not Ordered Not Ordered Not Ordered Not Ordered
5	60 61 62 63 64 65	29	1480	Gary Carl Kohrmann	Not Ordered Not Ordered Not Ordered Not Ordered Not Ordered
6	56 57 58 59	29	1480	Stanley Thomas Bennett and Wendy Faye Bennett	Not Ordered Not Ordered Not Ordered Not Ordered
51	18 19	32	1480	Milutin Dedic and Dragomir Dedic as tenants in common in equal shares	Not Ordered
52	17	32	1480	Edward Owen John Smith	Not Ordered
81	80 81 82 83 84 85	32	1480	John Edward Mason	(1892 to 1937) Emily Jane Williams (Married Woman) (1937 to 1937) William Charles Stead (Retired) (1937 to 1953) James Mason (Poultry Farmer) (1953 to 1976) Kathleen Mason (Spinster) (1976 to date) # John Edward Mason (1890 to 1972) Samuel Mason (Laborer) (1972 to 1976) Kathleen Mason (Spinster) (1976 to date) # John Edward Mason (1912 to 1953) Samuel Mason (Laborer) (1953 to 1976) Kathleen Mason (Spinster) (1976 to date) # John Edward Mason
11	36 37	30	1480	James Douglas Horton and Gale Elizabeth Sheehan as joint tenants	Not Ordered Not Ordered
24	60	30	1480	Peter Mitchell and Judy Mitchell as joint tenants	Not Ordered
13	33	30	1480	Renuka Janardhan and Janardhana Lingappa as joint tenants	Not Ordered
26	56 57	30	1480	Guido Vella and Brigitte Vella as joint tenants	Not Ordered Not Ordered
14	21 22 23 24 25 26 27 28 29 30 31 32	30	1480	Nazarene Paul Teuma	(1915 to 1924) N.S.W. Realty Co Limited (1924 to 1945) Eric Russell Wormleaton (Engine Driver) (1945 to 1988) William John Withers (Labourer) (1988 to 1991) Esma Sylve Withers (1991 to date) # Nazarene Paul Teuma
	63 64 65 66 67 68 69 70	30	1480	Nazarene Paul Teuma	(1917 to 1939) Ludovic Blackwood (Merchant) (1939 to 1945) William Withers (Farmer) (1945 to 1988) William John Withers (Labourer) (1915 to 1924) N.S.W. Realty Co Limited (1924 to 1945) Eric Russell Wormleaton (Engine Driver) (1945 to 1988) William John Withers (Labourer)
9	39 52 53	30	1480	Stephen Patrick Maait and Yvonne Catherine Maait	Not Ordered Not Ordered Not Ordered
23	61 62	30	1480	Colin Anderson	Not Ordered Not Ordered
8	40 41 42 43 44 45 46 47 48 49 50 51	30	1480	Michele Burzese and Teresa Burzese as joint tenants in half share, Francesco Taranto and Nancy Taranto as joint tenants in half share and as tenants in common. - Land excludes roads within the lots - Lease to Paul John Maait and Martha Teresa Maait for Retail Nursery and Food Shop (12 Windsor Road, Vineyard)	(1887 to 1930) Jacob Prout (Draper) (1930 to 1930) Joseph Newton (Farmer) (1930 to 1935) Joseph Edward Newton (Farmer) (1935 to 1947) Joseph Newton (Store Keeper) (1947 to 1954) Ernest William Wormleaton (Store Keeper) & Winifred Elizabeth Wormleaton (Married Woman) (1954 to 1968) John Hope Sibthorpe (Member of the R.A.A.F) & Phyllis Doreen Sibthorpe (Married Woman) (1968 to date) # Michele Burzese (Fruiter) # Teresa Burzese (Married Woman) # Francesco Taranto (Fruiterer) # Nancy Taranto (Married Woman)
39	67 68 69 70	31	1480	Rade Blanusa and Bosiljka Blanusa as joint tenants	Not Ordered Not Ordered Not Ordered Not Ordered
41	63 64	31	1480	Stephen Risko and Dragica Risko as joint tenants	Not Ordered Not Ordered
40	65 66	31	1480	Elizabeth Anne O'Neill	Not Ordered Not Ordered
42	61 62	31	1480	Glen Robert Davies	Not Ordered Not Ordered
44	57 58	31	1480	Arun Prakash Mahalingam and Gayathri Subbaiah as joint tenants	Not Ordered Not Ordered

Parcel No.	Lot No.	Section	DP	Current Owner	Historical Owner		
28	36	31	1480	Thomas Gillespie and Kay Marion Pauline Gillespie as joint tenants	(1904 to 1962) Thomas Isaac Boyd (Auctioneer) (1907 to 1962) Bank of New South Wales (Mortgagee in possession) (1962 to 1970) Stanley Edward Joseph Sheehy (Farmer) (purchased – pursuant to unpaid rates) (1970 to 1971) Elspeth Scott Sheehy (Widow) (1971 to date) # Thomas Gillespie (Dairy Farmer) # Kay Marion Pauline Gillespie (Married Woman)		
	37				(1910 to 1930) Thomas George Phelts (Store Keeper) (1930 to 1947) Ridge & Company Limited		
	38				(1947 to 1947) Edward Albert Ellis (Carpenter) & Laura May Ellis (Married Woman) (1947 to 1951) Florence Agnes Sheehy (Married Woman)		
	39				(1951 to 1970) Stanley Edward Joseph Sheehy (Farmer) (purchased – pursuant to unpaid rates) (1970 to 1971) Elspeth Scott Sheehy (Widow)		
	40				(1971 to date) # Thomas Gillespie (Dairy Farmer) # Kay Marion Pauline Gillespie (Married Woman)		
	41						
	42						
	43						
	44						
	45						
	46						
49	25	32	1480	Anil Kumar in half share, Frans Liem and Tjen Jin Lay as joint tenants in half share	Not Ordered		
	26				Not Ordered		
	27				Not Ordered		
30	31	31	1480	Frank Ademovic and Claire Louise Ademovic as joint tenants	Not Ordered		
	32				Not Ordered		
29	33	31	1480	Puneet Kaur Gill	Not Ordered		
	34				Not Ordered		
	35				Not Ordered		
					Not Ordered		
89	46	32	1480	Marli Jade Blewitt and Trent Wayne Blewitt as tenants in common in equal shares	Not Ordered		
	47				Not Ordered		
	48				(1915 to 1924) N.S.W. Realty Co Limited (1924 to 1945) Enid Lucy Effie Day (Spinster) (1945 to 1947) Ernest William Wormleaton (Carrier) (1947 to 1961) Joseph Newton (Store Keeper) (1961 to 1978) Alfred Beckinsall (Plastic Moulder) & Enid Beckinsall (Married Woman) (1978 to 1978) Alfred Beckinsall (Plastic Moulder) (1978 to 1981) Sarina Nucifora (Secretary) (1981 to 1985) Donvito Pty Limited (1985 to 1985) Maureen Dorothy Donvito (Home Duties) (1985 to 1995) William Lloyd Stephenson (1995 to 1999) Taveshare Pty Limited (1999 to 2002) Edmund Kevin Bridgewater & Robyn Lynette Bridgewater (2002 to 2012) Guido Tonini (2012 to 2012) Andrew Dean Tonini (Administrator of the Estate of Guido Tonini) (2012 to date) # Marli Jade Blewitt # Trent Wayne Blewitt		
	49						
	50						
	51						
					Not Ordered		
					Not Ordered		
					Not Ordered		
					Not Ordered		
					Not Ordered		
7	38	29	1480	Norma Jean Pike	Not Ordered		
	39				Not Ordered		
7	40	31	135718	Norma Jean Pike	1915-1930: NSW Realty Co Ltd 1930-1934: Raymond Edward Vaughan (Carpenter) 1934-1935: Barbara Ellen Newton (Married Woman) 1935-1947: Joseph Edward Newton (Farmer) 1947-1973: Harry Lewis Newton (Poultry Farmer) 1973-2006: Edmund John Pike (Poultry Farmer), Norma Jean Pike (Married Woman) 2006 to date: Norma Jean Pike (Widow)		
	41						
	42						
	43						
	44						
	45						
	46				456639	Norma Jean Pike	(1891 to 1933) John Johnston (Labourer) (1933 to 1947) Barbara Ellen Newton (Married Woman) (1947 to 1957) Joseph Newton (Retired Store Keeper) (1957 to 1967) Phyllis Doreen Sibthorpe (Married Woman) (1967 to 1975) Arthur Sydney Barr (Garage Proprietor) (1975 to 1976) Hector Irving Powell (Accountant) & Alexander William Black (Electrical Operator) (1976 to 1976) Colin Sidney Barr (Labourer) & Selwyn Arthur Barr (Labourer) (1976 to 2006) Edmond (or Edmund) John Pike (Poultry Farmer) & Norma Jean Pike (Married Woman) (2006 to date) Norma Jean Pike (Widow)
	47						
	48						
	49						
50							
51							
52	29	1480	Norma Jean Pike	Not Ordered			
53				Not Ordered			
45	52	31	1480	Steven James Armstrong and Craig Andrew Armstrong as tenants in common in equal shares	Not Ordered		
	53				Not Ordered		
	54				Not Ordered		
	55				Not Ordered		
	56				Not Ordered		
85	66	32	1480	Mccall Gardens Community Ltd	Not Ordered		
	67				Not Ordered		
	68				Not Ordered		
84	69	32	1480	Collin Stuart Wambeek, Deepika Shiromani Wambeek, Vernon George Wambeek and Marie Philomena Wambeek as joint tenants	Not Ordered		
	70				Not Ordered		
21	86	30	1480	Arun Bose and Susmita Bose as joint tenants	Not Ordered		
	87				Not Ordered		
	88				Not Ordered		
	89				Not Ordered		
	90				Not Ordered		
88	52	32	1480	Jason John Hilli	Not Ordered		
	53				Not Ordered		
	54				Not Ordered		
	55				Not Ordered		
					Not Ordered		
48	28	32	1480	Noelene Gay Gillespie	(1915 to 1920) N.S.W. Realty Co Limited... Same as below (32-37 and 56-61 Section 32, DP 1480) (1893 to 1995) Isabella Bartlett (Spinster) (1995 to date) # Noelene Gay Gillespie (Acquired pursuant to possessory application)		
	29						
	30						
	31						
	32						
	33						
	34						
	35						
	36						
	37						
	56				32	1480	Noelene Gay Gillespie
57							
58							
59							
60							
61							
19	3&4	30	1480	Not Ordered	Not Ordered		



Parcel No.	Lot No.	Section	DP	Current Owner	Historical Owner
18	5&6	30	1480	Not Ordered	Not Ordered
17	7&8	30	1480	Not Ordered	Not Ordered
15	15-19	30	1480	Not Ordered	Not Ordered
10	38	30	1480	Not Ordered	Not Ordered
12	34&35	30	1480	Not Ordered	Not Ordered
27	54&55	30	1480	Not Ordered	Not Ordered
25	58&59	30	1480	Not Ordered	Not Ordered
31	21-27	31	1480	Not Ordered	Not Ordered
43	59&60	31	1480	Not Ordered	Not Ordered
46	40-45	32	1480	Not Ordered	Not Ordered
47	38&39	32	1480	Not Ordered	Not Ordered
50	21-24	32	1480	Not Ordered	Not Ordered
87	62&63	32	1480	Not Ordered	Not Ordered
86	64&65	32	1480	Not Ordered	Not Ordered
80	86&90	32	1480	Not Ordered	Not Ordered

Locality : RIVERSTONE

Cadastral Records Enquiry Report

Requested Parcel : Lot 46 DP 456639

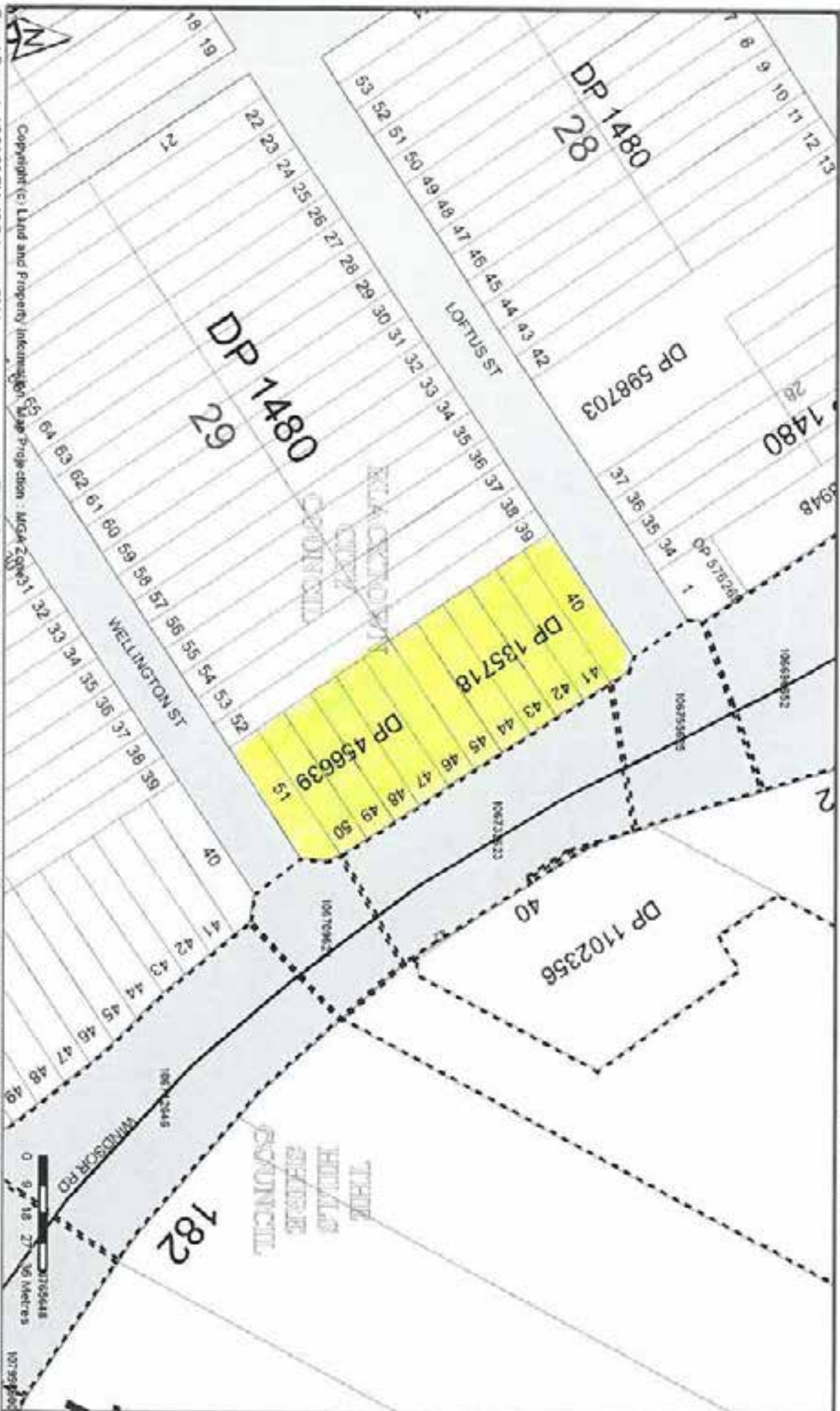
LGA : BLACKTOWN

Parish : ST MATTHEW

Identified Parcel : Lot 46 DP 456639

County : CUMBERLAND

Ref : surv:scim-grolim



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Report Generated 2:24:25 PM, 13 February, 2014
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This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGS Charting and Reference Maps.

1
0
0
0
Z

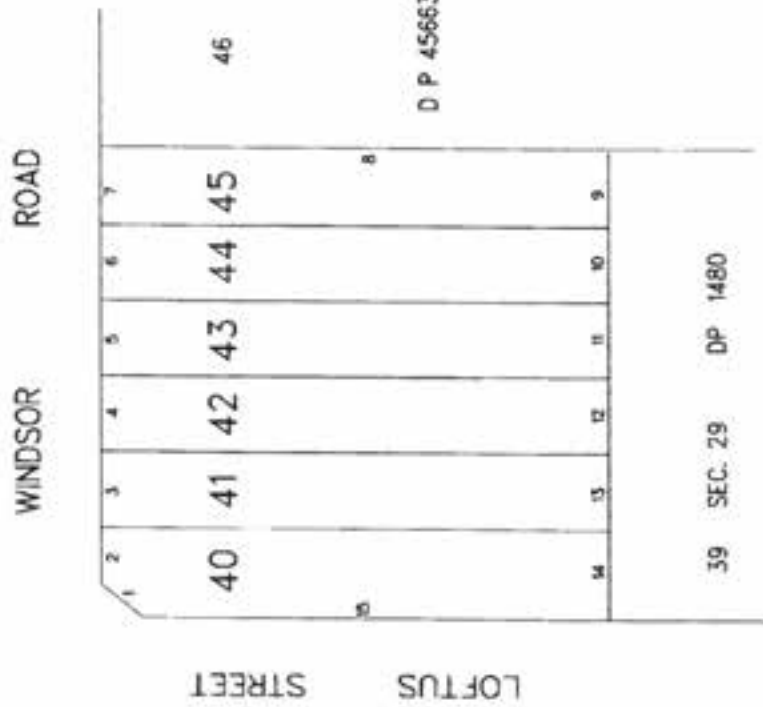
DP 135718

Registered:  B-16-1911
 Title System: TORRENS
 Purpose: DEPARTMENTAL
 Ref. Map: U8267-31
 Last Plan: DP 1480

PLAN OF AUTO-CONSOL
 4642-138 BEING RESIDUE
 AFTER ROAD ACTION

Lengths are in metres.
 Reduction Ratio to NTS

L.G.A.: BLACKTOWN
 LOCALITY: .
 PARISH: ST MATTHEW
 COUNTY: CUMBERLAND

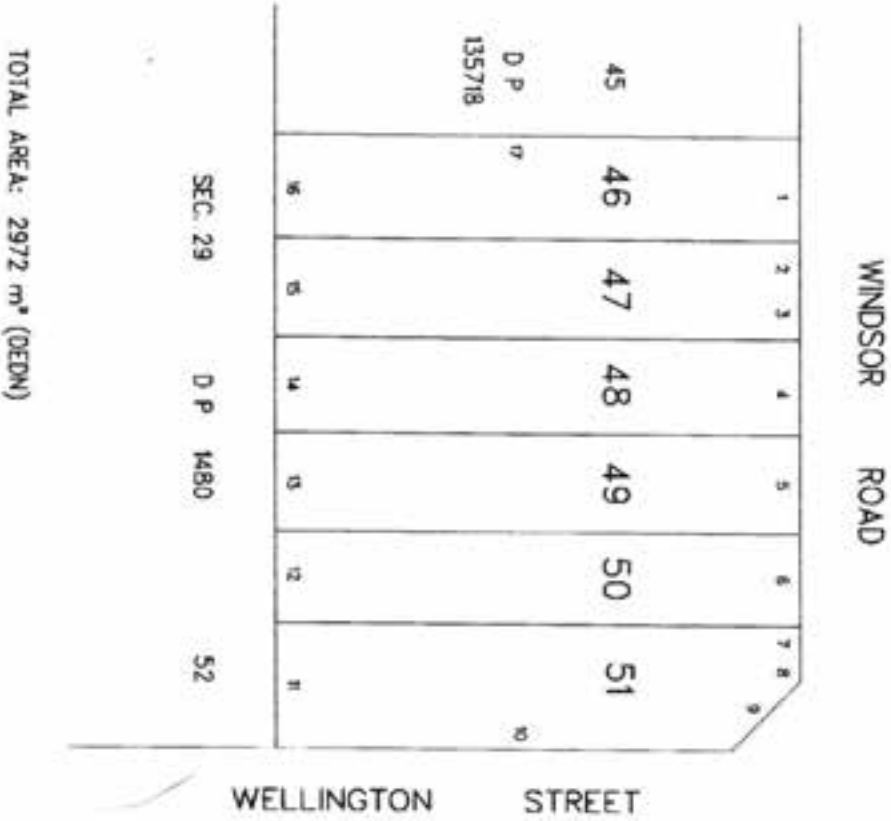


SCHEDULE	
LINE	DISTANCE
1	5.19
2	6.505
3	10.965
4	10.965
5	10.965
6	10.965
7	10.965
8	49.24 (DEDN)
9	10.06
10	10.06
11	10.06
12	10.06
13	10.06
14	10.67
15	46.59 (DEDN)

TOTAL AREA: 3010 m² (DEDN)

39 SEC. 29 DP 1480

Field dimensions and/or area(s) are not available for all lots. Any division of the gross area may necessitate the assignment of a portion of survey.



SCHEDULE	
LINE	DISTANCE
1	10.85
2	7.895
3	2.275
4	10.85
5	10.8
6	10.85
7	0.67
8	3.76
9	8.585
10	4325 (DEDN)
11	10.67
12	10.06
13	10.06
14	10.06
15	10.06
16	10.06
17	4824 (DEDN)

D P 4 5 6 6 3 9

Registered 1. 11. 1917

Title System: TORRENS

Purpose: DEPARTMENTAL

Ref. Map: U8267-31

Lot Plan: DP1480

THIS PLAN HAS BEEN CREATED TO PROVIDE UNIQUE IDENTIFIER(S) TO ENABLE THE ISSUE OF AN AUTO-CONSOL. TITLE FOR THE LAND COMPRISED IN FOLD OF THE REGISTER
 VOLUME 13180 FOLD 51

Lengths are in metres.
 Reduction Ratio: NOT TO SCALE

L.G.A.: BLACKTOWN

LOCALITY:

PARISH: ST MATTHEW

COUNTY: CUMBERLAND

LOTS PROQR DENSITY

46	PT LOT 46 SEC. 29 DP1480
47	PT LOT 47 SEC. 29 DP1480
48	PT LOT 48 SEC. 29 DP1480
49	PT LOT 48 SEC. 29 DP1480
50	PT LOT 50 SEC. 28 DP1480
51	PT LOT 51 SEC. 29 DP1480

B
D
O
Z

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

10/2/2014 5:52PM

POLIO: AUTO CONSOL 4642-138

Recorded	Number	Type of Instrument	C.T. Issue
20/8/1993		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 4642-138	

PARCELS IN CONSOL ARE:
38-45/29/1480.

11/11/1997	D9135718	DEPOSITED PLAN	
5/9/2003	9945199	40/135718 ADDED	
5/9/2003	9945199	41/135718 ADDED	
5/9/2003	9945199	42/135718 ADDED	
5/9/2003	9945199	43/135718 ADDED	
5/9/2003	9945199	44/135718 ADDED	
5/9/2003	9945199	45/135718 ADDED	
5/9/2003	9945237	40/29/1480 EXCISED	
5/9/2003	9945237	41/29/1480 EXCISED	
5/9/2003	9945237	42/29/1480 EXCISED	
5/9/2003	9945237	43/29/1480 EXCISED	
5/9/2003	9945237	44/29/1480 EXCISED	
5/9/2003	9945237	45/29/1480 EXCISED	
5/3/2004	AM74078	CAVEAT	
6/1/2006	AB947328	APPLICATION FOR PREPARATION OF LAPSING NOTICE	
19/9/2006	AC608533	NOTICE OF DEATH	EDITION 1

*** END OF SEARCH ***



Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 4642-138

SEARCH DATE	TIME	EDITION NO	DATE
10/2/2014	5:51 PM	1	19/9/2006

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
AT RIVERSTONE
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM SEE SCHEDULE OF PARCELS

FIRST SCHEDULE

NORMA JEAN PIKE (ND AC608533)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

TITLE DIAGRAM

LOTS 38-39 SEC. 29 IN DP1480

DP1480

LOTS 40-45 IN DP135718

DP135718

*** END OF SEARCH ***

mg

PRINTED ON 10/2/2014

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

11/02/2014

Ref:mg /Src:M

P 8 5 2 3 3 7



OFFICE USE ONLY table with handwritten numbers 8, 7, 5, 18 and a circled 1

MEMORANDUM OF TRANSFER REAL PROPERTY ACT, 1900

Where any restriction... (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

140 HECTOR IRVING POWELL, of Epping, Accountant and ALEXANDER WILLIAM BLACK of Kogarah, Electricity Operator (Executors of the Will of Arthur Sydney Barr) hereinafter referred to as the TRANSFEROR

being registered proprietor of an estate in fee simple⁽¹⁾ in the land hereinafter described, subject to the following encumbrances and interests

141 Subject to the provisions of Section 604 of the Local Government Act 1919.

in consideration of ONE DOLLAR (\$1.00) (the receipt whereof is hereby acknowledged), paid to the transferor by⁽²⁾ COLIN SYDNEY BARR and SELWYN ARTHUR BARR hereby transfers to

142 COLIN SYDNEY BARR of Margate, Queensland, labourer and SELWYN ARTHUR BARR of the same place labourer. hereinafter referred to as the TRANSFEREE

an estate in fee simple⁽³⁾ as Joint Tenants in the land described in the following schedule

Table with 5 columns: Reference to title (Volume, Folio), Whole or part, Description of land if part only, County, Parish. Row 1: 7824, 26, part, Being the residue after transfer to the Commissioner for Main Roads of the land in Transfer No. N70848, Cumberland, St. Matthew

Dated at WINDSOR this 9th day of August 1976

143 Signed in my presence by the transferor who is personally known to me. Signature of witness JAMES W. ORRELL, SOLICITOR, ROCKDALE. Qualification of witness

Handwritten signatures of transferors and a handwritten note: 'Accepted and certified correct for the purposes of the Real Property Act, 1900.'

144 Signed in my presence by the transferee who is personally known to me. Signature of witness, Name of witness (BLOCK LETTERS), Address of witness

Handwritten note: 'Solicitor for transferees whose signatures cannot be obtained without difficulty and delay. A.T. CORNWALL'

RULE UP ALL BLANKS

70509D

M.P.D.

NOT A LAW ENFORCEMENT AGENCY

CERTIFICATE OF J.P. & TAKING DECLARATION OF ATTESTING WITNESS

I certify that _____
 the acting witness to this dealing, appeared before me at _____
 the _____ day of _____ 19____
 and declared that he personally knew _____
 the person signing the same, and whose signature thereto he has
 attested, and that the name purporting to be such signature of the
 said _____
 is his own handwriting and that he was of sound mind and freely
 and voluntarily signed the same.

Signature _____
 Name (BLOCK LETTERS) _____
 Qualification _____

MEMORANDUM AS TO NON-REVOCACTION OF POWER OF ATTORNEY

(To be signed at the time of executing the within dealing)

The undersigned states that he has no notice of the revocation of
 the Power of Attorney registered No. _____
 Miscellaneous Register under the authority of which he has just
 executed the within dealing.

Signed at _____
 the _____ day of _____ 19____

Signature of witness _____
 Signature of attorney _____

AUTHORITY FOR USE OF INSTRUMENT OF TITLE

Authority is hereby given for the use of _____
 lodged _____
 (Insert reference to certificate, grant or dealing) _____
 in connection with _____
 (Insert number of plan or dealing) _____
 for the _____
 registration of this dealing and for delivery to _____
 (BLOCK LETTERS)
 Signature _____
 Name (BLOCK LETTERS) _____

TO BE COMPLETED BY LODGING PARTY

Lodged by DAVID ROBERTS,
 50 LILITHON
 Address: 253 WINDSOR ST,
 RICHMOND
 Phone No: 78-1099
 Documents lodged herewith

1 _____
 2 _____
 3 _____
 4 _____

Received Documents _____
 Clerk _____

DEPARTMENTAL USE ONLY

Checked _____
 Passed _____
 Signed _____

5 - 10 - 1916

REGISTERED

Registrar General

Stamp: THE COMMONWEALTH OF AUSTRALIA

TRANSFER
 830509
 046522

Handwritten: *Erwin...*

(2) The sealed where
 appearing in
 (K1) in order that
 to appear in the
 form (A).

(3) Before the time
 lodged in the
 lodged in the
 lodged in the
 at the place of

P 852337

CERTIFICATE OF TITLE
 REAL PROPERTY ACT, 1900



13180051

NEW SOUTH WALES

Appin No. 515

Prior Title Vol. 7824 Fol. 26

Vol. **13180** Fol. **51**



EDITION ISSUED

9 11 1976

CANCELLED

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

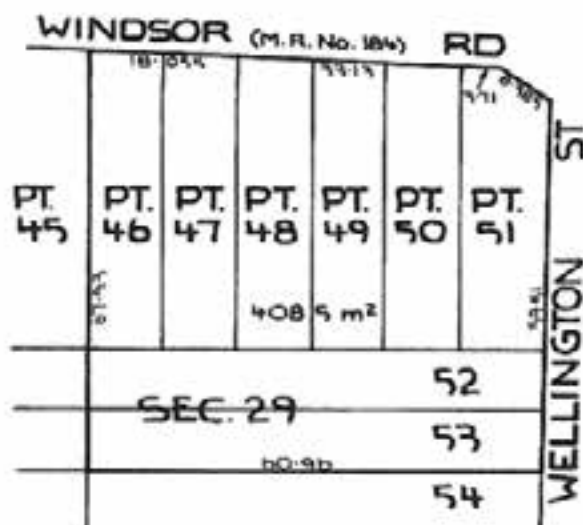
SEE AUTO FOLIO

Jaworski
 Registrar General.



PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



PT. LOTS 46 TO 51
 SEC. 29 IN DP 1480
 WITHIN DESCRIBED IS
 LOTS 46 TO 51 IN DP 1480

PA 2446 *AK*

REDUCTION RATIO 1:800

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lots 52 and 53 and the parts of Lots 46 to 51 inclusive of Section 29 in Deposited Plan 1480 shown in the plan hereon in the Municipality of Blacktown Parish of St. Matthew and County of Cumberland being part of Portion 95 granted to Maurice Charles O'Connell on 7-5-1810.

FIRST SCHEDULE

EDMOND JOHN PIKE of Riverstone, Farmer and **NOHMA JEAN PIKE** his wife, as Joint Tenants.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. The registered proprietor holds subject to Section 604 of the Local Government Act, 1919.

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

13180 51

(Page 1) Vol.

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	NATURE	INSTRUMENT NUMBER	DATE	ENTERED	Signature of Registrar General
CANCELLED					
SEE AUTO FOLIO					

SECOND SCHEDULE (continued)

PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

10/2/2014 5:52PM

POLIO: AUTO CONSOL 13180-51

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
14/11/1997		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 13180-51	
		PARCELS IN CONSOL ARE: 52-53/29/1480, 46-51/456639.	
5/3/2004	AA474078	CAVEAT	
6/1/2006	AB947128	APPLICATION FOR PREPARATION OF LAPSING NOTICE	
19/9/2006	AC608533	NOTICE OF DEATH	EDITION 1

*** END OF SEARCH ***



Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 13180-51

SEARCH DATE	TIME	EDITION NO	DATE
10/2/2014	5:51 PM	1	19/9/2006

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM SEE SCHEDULE OF PARCELS

FIRST SCHEDULE

NORMA JEAN PIKE

(IND AC608533)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

NOTE: DISPOSAL OF ANY LOTS IN DP456639 MAY REQUIRE REGISTRATION OF A
DEPOSITED PLAN OF SURVEY PURSUANT TO SECTION 114 OF THE REAL
PROPERTY ACT, 1900
UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

TITLE DIAGRAM

LOTS 52-53 SEC. 29 IN DP1480

DP1480

LOTS 46-51 IN DP456639

DP456639.

*** END OF SEARCH ***

mg

PRINTED ON 10/2/2014

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

11/02/2014

Service First Registration Pty Ltd

ACN: 108 037 029

Ph: 02 9299 9969

Fax: 02 9279 2185

Suite 804, Level 8, 46 Market Street

Sydney 2000

PO Box 784 QVB Post Shop NSW 1230

DX 189 Sydney

Summary of Owners Report

LPI

Sydney

Address: - 38 to 39 Windsor Road, Riverstone

Description: - Lots 40 to 45 D.P. 135718 and Lots 46 to 51 D.P. 455639

As regards Lots 40 to 45 D.P. 135718

<u>Date of Acquisition and term held</u>	<u>Registered Proprietor(s) & Occupations where available</u>	<u>Reference to Title at Acquisition and sale</u>
13.11.1915 (1915 to 1930)	N.S.W. Realty Co Limited	Vol 2623 Fol 78
02.12.1930 (1930 to 1934)	Raymond Edward Vaughan (Carpenter)	Vol 2623 Fol 78 Now Vol 4469 Fol 47
10.07.1934 (1934 to 1935)	Barbara Ellen Newton (Married Woman)	Vol 4469 Fol 47 Now Vol 4642 Fol 138
14.09.1935 (1935 to 1947)	Joseph Edward Newton (Farmer)	Vol 4642 Fol 138
12.12.1947 (1947 to 1973)	Harry Lewis Newton (Poultry Farmer)	Vol 4642 Fol 138
18.09.1973 (1973 to 2006)	Edmund (or Edmond) John Pike (Poultry Farmer) Norma Jean Pike (Married Woman)	Vol 4642 Fol 138 Now Auto Consol 4642-138
19.09.2006 (2006 to date)	Norma Jean Pike (Widow)	Auto Consol 4642-138

Denotes current registered proprietor

Leases and Easements: - NIL

Service First Registration Pty Ltd

ACN: 108 037 029

Ph: 02 9299 9969

Fax: 02 9279 2185

Suite 804, Level 8, 46 Market Street

Sydney 2000

PO Box 784 QVB Post Shop NSW 1230

DX 189 Sydney

As regards Lots 46 to 51 D.P. 455639

<u>Date of Acquisition and term held</u>	<u>Registered Proprietor(s) & Occupations where available</u>	<u>Reference to Title at Acquisition and sale</u>
04.12.1891 (1891 to 1933)	John Johnston (Labourer)	Vol 1038 Fol 200
11.01.1933 (1933 to 1947)	Barbara Ellen Newton (Married Woman)	Vol 1038 Fol 200 Now Vol 4562 Fol 71
17.10.1947 (1947 to 1957)	Joseph Newton (Retired Store Keeper) (Transmission Application not investigated)	Vol 4562 Fol 71
02.12.1957 (1957 to 1967)	Phyllis Doreen Sibthorpe (Married Woman)	Vol 4562 Fol 71 Now Vol 7824 Fol 26
25.08.1967 (1967 to 1975)	Arthur Sydney Barr (Garage Proprietor)	Vol 7824 Fol 26
18.02.1975 (1975 to 1976)	Hector Irving Powell (Accountant) Alexander William Black (Electrical Operator) (Section 93 Application not investigated)	Vol 7824 Fol 26
08.10.1976 (1976 to 1976)	Colin Sidney Barr (Labourer) Selwyn Arthur Barr (Labourer)	Vol 7824 Fol 26
08.10.1976 (1976 to 2006)	Edmond (or Edmund) John Pike (Poultry Farmer) Norma Jean Pike (Married Woman)	Vol 7824 Fol 26 Now Auto Consol 7824-26
19.09.2006 (2006 to date)	Norma Jean Pike (Widow)	Auto Consol 7824-26

Denotes current registered proprietor

Leases and Easements: - NIL

Yours Sincerely
Mark Groll
16 October 2009
(Ph: 0412 199 304)

Cadastral Records Enquiry Report

Ref : 29

Requested Parcel : Lot 26 Section 30 DP 1480

Identified Parcel : Lot 26 Section 30 DP 1480

Locality : RIVERSTONE

LGA : BLACKTOWN

Parish : ST MATTHEW

County : CUMBERLAND



Cadastral Records Enquiry Report

Ref : 29

Requested Parcel : Lot 87 Section 30 DP 1480
Identified Parcel : Lot 87 Section 30 DP 1480
LGA : BLACKTOWN
Parish : ST MATTHEW
County : CUMBERLAND

Locality : RIVERSTONE



Copyright (c) Land and Property Information, NSW, 2014
MGA Zone

DP 1488 © sh 5/7

PH ST MATTHEW CO CUMBE
 Scale 100 Feet to one inc

PARRAMATTA AND WINDSOR ROAD

40	41	42	43	44	45	46	47	48	49	50	51
39											52
38											53
37											54
36											55
35											56
34											57
33											58
32											59
31											60
30											61
29											62
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27											64
26											65
25											66
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23											68
22											69
21											70
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14											77
13											78
12											79
11											80
10											81
9											82
8											83
7											84
6											85
5											86
4											87
3											88
2											89
1											90

WINDSOR ROAD

40	41	42	43	44	45	46	47	48	49	50	51
39											52
38											53
37											54
36											55
35											56
34											57
33											58
32											59
31											60
30											61
29											62
28											63
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23											68
22											69
21											70
30 feet											
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18											73
17											74
16											75
15											76
14											77
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12											79
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10											81
9											82
8											83
7											84
6											85
5											86
4											87
3											88
2											89
1											90

40	41	42	43	44	45
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38					
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1					

EDMUND

100'

PLAN FORM 1

REGISTERED, VALID AND EXISTING IN ACCORDANCE WITH THE REGISTERED LAND ACT 1925 AND THE REGISTERED LAND ACT 1988. THIS PLAN IS A COPY OF THE ORIGINAL REGISTERED PLAN AND IS NOT TO BE USED AS A BASIS FOR ANY OTHER PLAN.

X Signature
[Handwritten Signature]

Over Land Office Approval

Plan Number: _____
 Date: _____
 Plan No: _____
 Date: _____

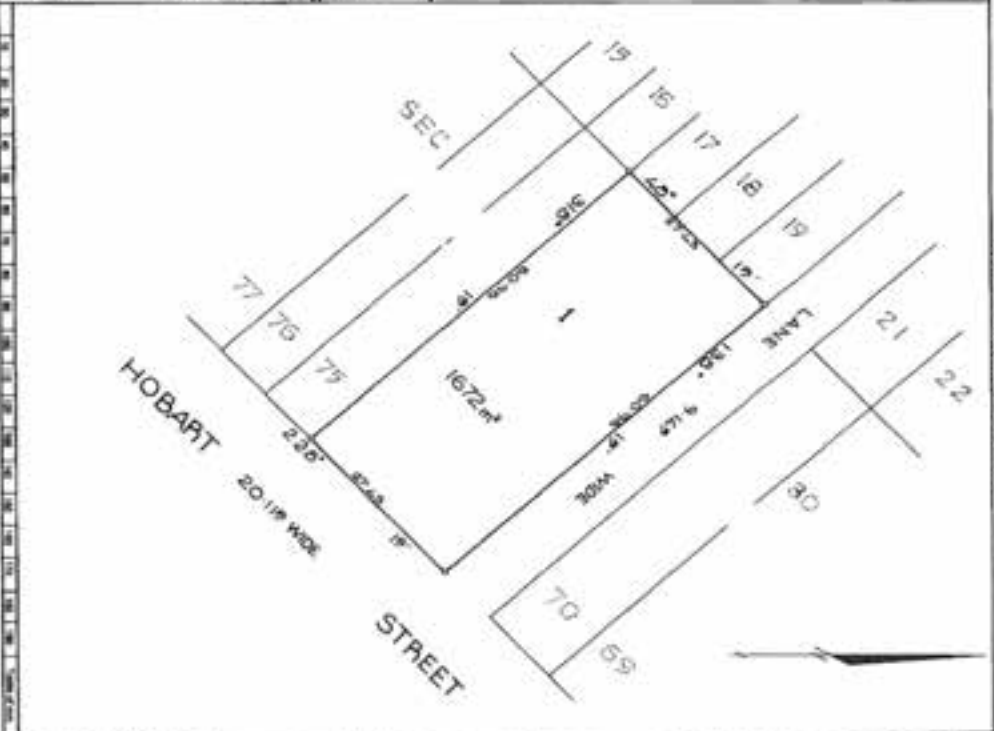
Consent Certificate

I hereby certify that the above plan is a true and correct copy of the original registered plan and is not to be used as a basis for any other plan. This certificate is given in accordance with the provisions of the Registered Land Act 1925 and the Registered Land Act 1988. I am a member of the Council of the Registrar General of Land and I am duly qualified to give this certificate.

Name: _____
 Position: _____
 Date: _____

Scale: 1:1000
 Date: 2/8/92

WARNING: CHANGING OR FOLDING WILL LEAD TO REJECTION



Plan Drawing only to appear in this space

OFFICIAL USE ONLY

DP 790369

Registered
 CA
 The Straits Times
 Register CONSOLIDATION
 Lot No: 06621-15
 Lot Plan: DP-1460

PLAN OF CONSOLIDATION OF LOTS 72, 73 & 74, SECTION 22, HOBART

Registered On: _____
 Land: _____
 Name of Applicant: _____
 Name of Contributor: _____

This plan is prepared in accordance with the provisions of the Registered Land Act 1925 and the Registered Land Act 1988.

I, PETER JOHN SHEPPARD, a Licensed Surveyor, do hereby certify that this plan is a true and correct copy of the original registered plan and is not to be used as a basis for any other plan. I am a member of the Council of the Registrar General of Land and I am duly qualified to give this certificate.

Date: 2/8/92

10 20 30 40 50 60 70 80 90 100 110 120 130 140

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day, 3 July, 1992



NEW SOUTH WALES

CIFICATE OF TITLE
PROPERTY ACT, 1900, as amended.



11040025

Vol. **11040** Fol. **25**

Appln. No. 515

AS

Edition issued 2-5-1988

Prior Title Vol. 4406 Fol. 218

L304871



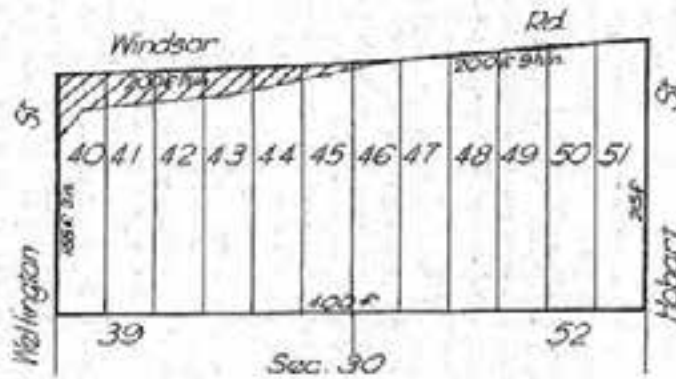
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness *L. Bellier*

J. J. J. J.
Registrar General.



PLAN SHOWING LOCATION OF LAND



CANCELLED

SEE AUTO FOLIO

L304871

aff

Area 1 ac 3rd 1 1/4 per
Scale: 100 feet to one inch

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lots 40 to 51 inclusive of Section 30 in Deposited Plan L480 in the Municipality of Blacktown Parish of St. Matthew and County of Cumberland being part of Portion 95 granted to Maurice Charles O'Connell on 7-5-1910.

FIRST SCHEDULE

NICHELE BURZESE of Ryde, Fruiterer and TERESA BURZESE, his wife as Joint Tenants as to an undivided one half share,	} as Tenants in Common
and FRANCESCO TARANTO of Leichhardt, Fruiterer and NANCY TARANTO, his wife as Joint Tenants; in the remaining undivided one half share.	

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. The registered proprietor holds subject to Section 604 Local Government Act, 1919.
3. Restriction on user No. 801 of land shown by hatching in plan hereon - See Section 272(6) Main Roads Act, 1924. Entered 23-11-1962. *Cancelled P93373Y*

J. J. J. J.
Registrar General

PENDING ARE CALLED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

WARNING THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE

11040 (Page 1) Vol. 25

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NUMBER		DATE	PARTICULARS	ENTERED	SIGNATURE OF REGISTRAR-GENERAL	CANCELLATION
	NAME	NUMBER					

SECOND SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NUMBER		DATE	PARTICULARS	ENTERED	SIGNATURE OF REGISTRAR-GENERAL	CANCELLATION
	NAME	NUMBER					
1 Mortgage	430472	3-10-1988		To give Hope Savings of Universal Savings and Thrift Co. Direct Sublease for use as part of premises.	9-5-1989	Jensen	Discharged 198305 Jensen
Transfer	198339			The legal title held in the name of Public Road within the Commission for Roads	8-1-1976	Jensen	
579090				Lease by Arthur Polster, Public Building, Public Building and Public Building details on lease in name of premises being portion of the building upon which the business of Greenhouse and Tobacco Cultivation is carried on, together with option of purchase, Book No. 12-10-1966, Registered 11-1-1983			Expired 30-6-1983
1990706				Convey by Teasos Industries Limited, as tenants premises known as Milk Bar and Ice Cream Food Business, Registered 20-8-1982			Withdrawn 1730299 Jensen
2542205				Lease to Rosalita Biaco, as tenants premises known as premises being portion of the building which the business of Greenhouse and Tobacco Cultivation is carried on, together with option of purchase, Book No. 12-10-1966, Registered 11-1-1983			Expired 30-6-1983
X693205				Lease 704646 Transfer as joint tenants, Registered 17-1-1984			Withdrawn 1730299 Jensen

NOTE: ENTRIES FILED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED SEE AUTO FOLIO

L304K 507219
 P82305 for R
 T17-10-75
 P483742 R
 (part of 198305)
 subject to the provisions of
 the 1983 Act
 R788664
 Act 111
 11/11/1983
 579090 202
 579090 202
 1983-11
 T190706 for R
 U730299 for R
 X693205
 X693205
 X693205
 X693205
 Y1466467 R
 Z623231 C
 32 N.Y.

CANCELLED

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR

Registrar General

SECOND SCHEDULE (continued)

PARTICULARS

Registrar General

CANCELLATION

L Z 623231, lease to JOSEPH BACHA of premises being GREEN Grocery
SHOP, RMB, 12 Windsor Road, Vineyard. Expires 14-2-1996.
Option of renewal 5 years. Registered 13-5-1991.



CANCELLED

SEE AUTO FOLIO

NOTATIONS AND UNREGISTERED DEALINGS

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR

Registrar General

SECOND SCHEDULE (continued)

PARTICULARS

Registrar General

CANCELLATION

CANCELLED

SEE AUTO FOLIO

NOTATIONS AND UNREGISTERED DEALINGS

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

10/2/2014 5:52PM

FOLIO: AUTO CONSOL 11040-25

Recorded Number Type of Instrument C.T. Issue

4/9/1991 CONSOL HISTORY RECORD CREATED
FOR AUTO CONSOL 11040-25

PARCELS IN CONSOL ARE:
40-51/30/1480.

5/2/1992	E237293	TRANSFER OF LEASE	EDITION 1
8/7/1993	I470669	CAVEAT	
26/8/1999	6135887	DEPARTMENTAL DEALING	
30/9/2002	8830469	APPLICATION FOR PREPARATION OF LAPSING NOTICE	
3/2/2006	AC92302	LEASE	EDITION 2

*** END OF SEARCH ***



Title Search

InfoTrack
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Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 11040-25

SEARCH DATE	TIME	EDITION NO	DATE
10/2/2014	5:52 PM	2	3/2/2006

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

MICHELE BURZESE
TERESA BURZESE
AS JOINT TENANTS IN 1/2 SHARE
FRANCESCO TARANTO
NANCY TARANTO
AS JOINT TENANTS IN 1/2 SHARE
AS TENANTS IN COMMON

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 LAND EXCLUDES THE ROAD(S) WITHIN LOTS 40, 41, 42, 43, 44, 45 & 46 SHOWN IN DP446467
- 3 AC92302 LEASE TO PAUL JOHN MAAIT & MARTHA TERESA MAAIT OF RETAIL NURSERY & FOOD SHOP, 12 WINDSOR ROAD, VINEYARD. EXPIRES: 12/6/2006. OPTION OF RENEWAL: 5 YEARS.

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 40-51 SEC. 30 IN DP1480.

*** END OF SEARCH ***

mg

PRINTED ON 10/2/2014

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11/02/2014

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

10/2/2014 9:54PM

FOLIO: AUTO CONSOL 5536-225

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
21/5/1993		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 5536-225	

PARCELS IN CONSOL ARE:

21-32/30/1480, 63-70/30/1480.

18/9/2003	5985652	DISCHARGE OF MORTGAGE	EDITION 1
-----------	---------	-----------------------	-----------

*** END OF SEARCH ***



Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 5536-225

SEARCH DATE	TIME	EDITION NO	DATE
10/2/2014	9:54 PM	1	18/9/2003

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

MASARENE PAUL TRUMA (T E22704)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 B136465 COVENANT AS REGARDS LOTS 21-32/30/1480 AND LOTS 67-70/30/1480

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND COMPRISED IN THIS FOLIO.

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 21-32 SEC. 30 IN DP1480
LOTS 63-70 SEC. 30 IN DP1480.

*** END OF SEARCH ***

mg

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11/02/2014

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

13/2/2014 3:42PM

FOLIO: 1/790369

First Title(s): OLD SYSTEM

Prior Title(s): VOL 1221 POL 133

Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
5/7/1989	DP790369	DEPOSITED PLAN	FOLIO CREATED EDITION 1
13/4/1999	5741371	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 2
13/5/1999	5817374	MORTGAGE	EDITION 3
21/10/1999	6285110	CAVEAT	
21/12/2001	8229192	CAVEAT	
14/12/2004	AA984654	APPLICATION FOR PREPARATION OF LAPSING NOTICE	
14/12/2004	AA984655	APPLICATION FOR PREPARATION OF LAPSING NOTICE	
14/12/2004	AA984656	DISCHARGE OF MORTGAGE	
14/12/2004	AA984657	TRANSFER	EDITION 4
5/1/2006	AC28798	MORTGAGE	EDITION 5

*** END OF SEARCH ***



Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/790369

SEARCH DATE	TIME	EDITION NO	DATE
13/2/2014	3:41 PM	5	5/1/2006

LAND

LOT 1 IN DEPOSITED PLAN 790369
AT RIVERSTONE
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP790369

FIRST SCHEDULE

JOSEPH PACE

(T AA984657)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 AC28798 MORTGAGE TO WESTPAC BANKING CORPORATION

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

mg

PRINTED ON 13/2/2014

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13/02/2014

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

13/2/2014 3:46PM

FOLIO: AUTO CONSOL 5536-226

Recorded	Number	Type of Instrument	C.T. Issue
23/4/1993		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 5536-226.	
		PARCELS IN CONSOL ARE: 86-90/30/1480.	
1/2/1997	2805280	DISCHARGE OF MORTGAGE	EDITION 1
25/8/1997	3351681	TRANSFER	EDITION 2
12/11/1998	5390516	MORTGAGE	EDITION 3
12/5/2003	9598038	DISCHARGE OF MORTGAGE	EDITION 4
1/7/2003	9741576	MORTGAGE	EDITION 5
8/4/2011	AQ167018	DISCHARGE OF MORTGAGE	EDITION 6
3/12/2013	A1205609	TRANSFER	
3/12/2013	A1205610	MORTGAGE	EDITION 7

*** END OF SEARCH ***

97-01T

Licence Number
10V/0096/95

TRANSFER

Real Property Act 1900



3351681 J

8

Office of State Revenue use only

200897 0132 04 201317575/01
N.S.W. STAMP DUTY \$340.00

\$ 340

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title.
If appropriate, specify the share transferred.

Auto Consol 5536-226

(B) **LOGGED BY**

L.T.O. Box

Name, Address or DX and Telephone

1133x

COMBINED LEGAL SEARCHERS

REFERENCE (max. 15 characters): T.G.

(C) **TRANSFEROR**

Jennifer Ruth Brennan

(D) acknowledges receipt of the consideration of \$25,000.00

and as regards the land specified above transfers to the Transferee an estate in fee simple as regards all my interest.

(E) subject to the following ENCUMBRANCES 1. 2. 3.

(F) **TRANSFEEE**

T
TS
(s713 LGA)
TW
(Sheriff)

RONALD PETER BOYD

TENANCY:

5

(G)

(H) We certify this dealing correct for the purposes of the Real Property Act 1900.

DATE 18.8.97

Signed in my presence by the Transferor who is personally known to me.

Signature of Witness

Teddy Gonzales
Name of Witness (BLOCK LETTERS)

Blacktown
Address of Witness

Signature of Transferor

Signed in my presence by the Transferee who is personally known to me.

Signature of Witness

TEDDY GONZALES
Name of Witness (BLOCK LETTERS)

BLACKTOWN
Address of Witness

Signature of Transferee

NB: if applicable, indicate that the signatory is the transferee's solicitor and show the solicitor's full name.

0995LTO

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

356



Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 5536-226

SEARCH DATE	TIME	EDITION NO	DATE
13/2/2014	3:46 PM	7	3/12/2013

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

ARUN BOSE
SUSMITA BOSE

AS JOINT TENANTS

(T A1205609)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 A1205610 MORTGAGE TO NATIONAL AUSTRALIA BANK LIMITED

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 86-90 SEC. 30 IN DP1480.

*** END OF SEARCH ***

mg

PRINTED ON 13/2/2014

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

13/02/2014

Requested Parcel : Lot 80 Section 31 DP 1480

Identified Parcel : Lot 80 Section 31 DP 1480

LGA : BLACKTOWN

Parish : ST MATTHEW

County : CUMBERLAND

Locality : RIVERSTONE



Copyright (c) Land and Property Information, Map Projection: MGA Zone

Cadastral Records Enquiry Report

Requested Parcel : Lot 40 Section 31 DP 1480

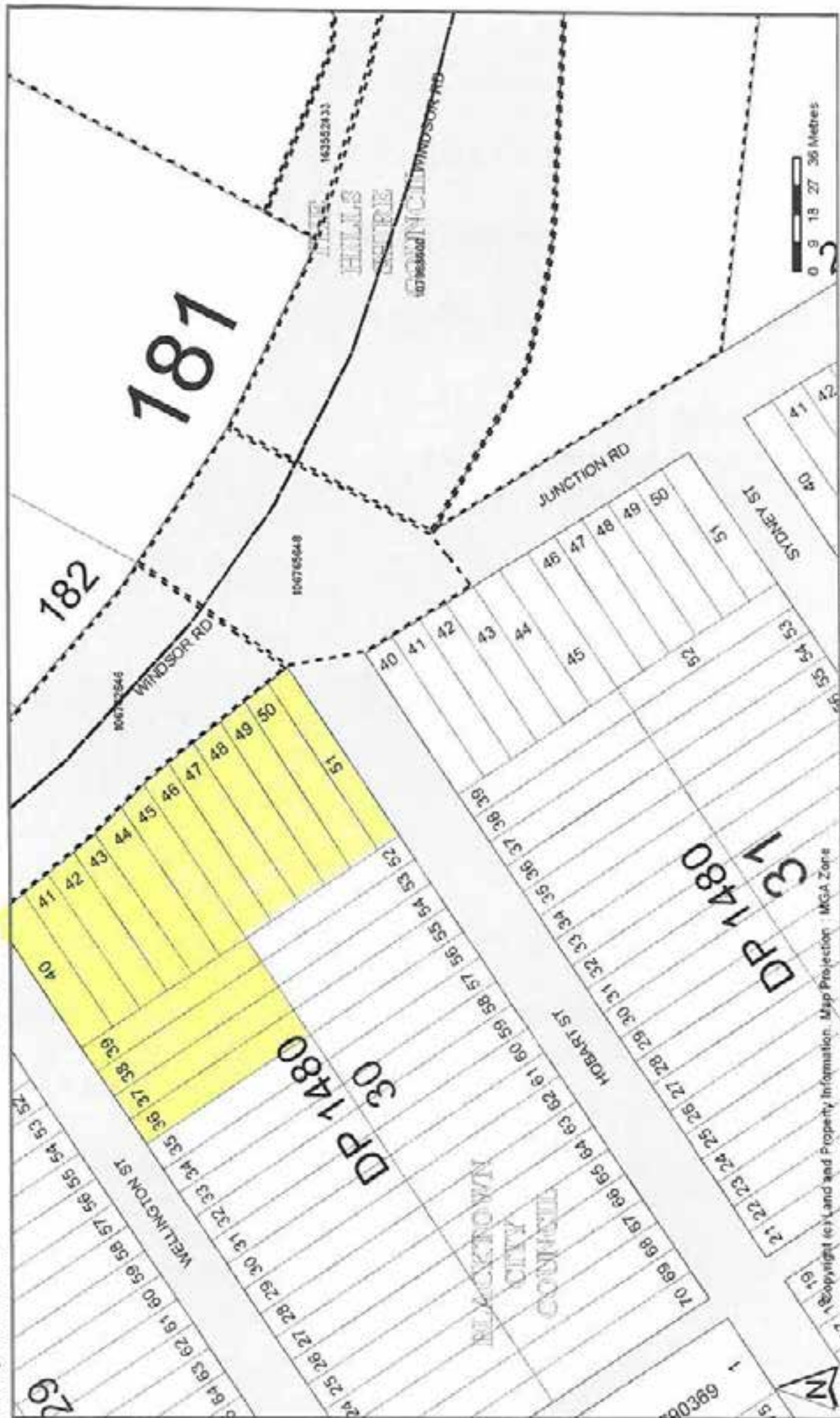
Identified Parcel : Lot 40 Section 31 DP 1480

County : CUMBERLAND

Parish : ST MATTHEW

LGA : BLACKTOWN

Locality : RIVERSTONE



This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

Report Generated 9:10:52 AM, 17 February, 2014
 Copyright © Land and Property Information ABN: 64 104 377 806
 Copyright (c) Land and Property Information. Map Projection: MGA Zone 56

Cadastral Records Enquiry Report

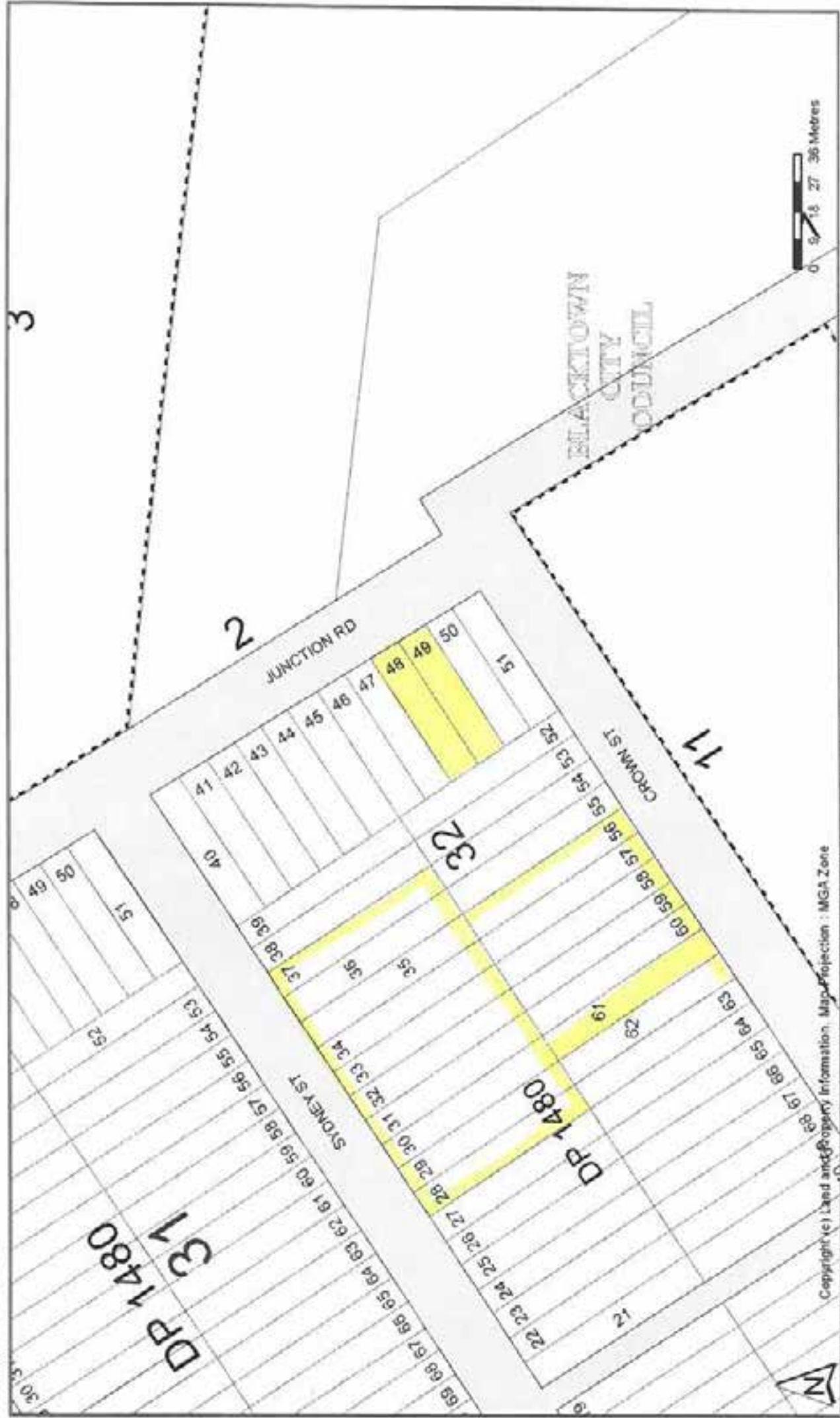
Requested Parcel : Lot 48 Section 32 DP 1480

Identified Parcel : Lot 48 Section 32 DP 1480

LGA : BLACKTOWN

Parish : ST MATTHEW

County : CUMBERLAND



Cadastral Records Enquiry Report

Requested Parcel : Lot 81 Section 32 DP 1480

Identified Parcel : Lot 81 Section 32 DP 1480

County : CUMBERLAND

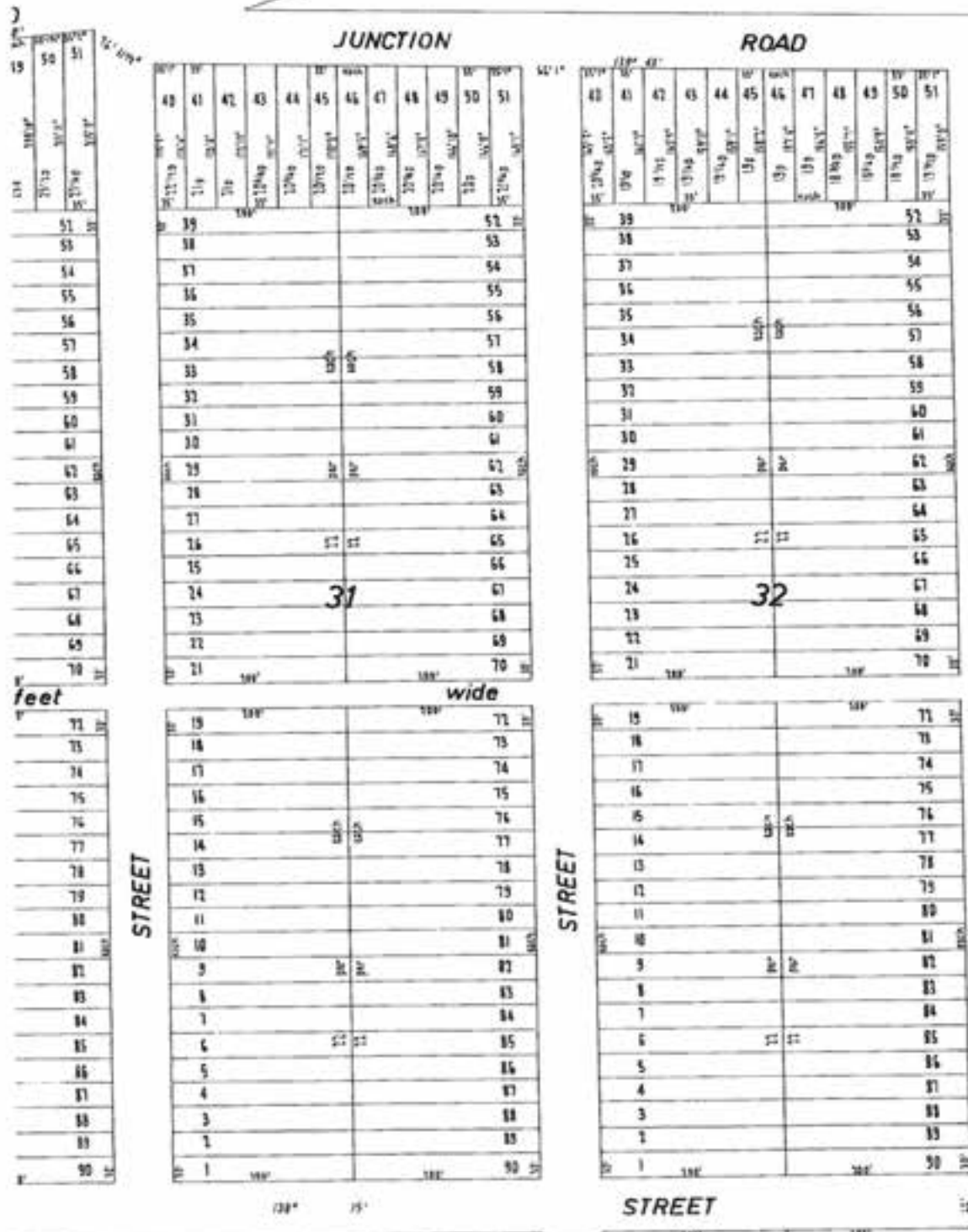
Parish : ST MATTHEW

LGA : BLACKTOWN

Locality : RIVERSTONE



ATTHEW CO CUMBERLAND
00 Feet to one inch



LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

14/2/2014 3:24PM

FOLIO: AUTO CONSOL 1022-165

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
29/8/1994		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 1022-165	

PARCELS IN CONSOL ARE:
77-82/31/1480.

12/8/1998	5191590	NOTICE OF DEATH	EDITION 1
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*** END OF SEARCH ***



Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 1022-165

SEARCH DATE	TIME	EDITION NO	DATE
14/2/2014	3:24 PM	1	12/8/1998

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

GINA TERESA LAGUZZA
ROSEMARY BURZESE
MARISA BURZESE
GRAZIELLA BURZESE

AS TENANTS IN COMMON IN EQUAL SHARES (ND 5191590)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND COMPRISED IN THIS FOLIO.

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 77-82 SEC. 31 IN DP1480.

*** END OF SEARCH ***

mg

PRINTED ON 14/2/2014

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14/02/2014

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

14/2/2014 3:30PM

FOLIO: AUTO CONSOL 8398-28

Recorded	Number	Type of Instrument	C.T. Issue
*****	*****	*****	*****
14/5/1992		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 8398-28	

PARCELS IN CONSOL ARE:
36-39/31/1480.

11/1/1993	T30730	MORTGAGE	EDITION 1
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*** END OF SEARCH ***



Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 8398-28

SEARCH DATE	TIME	EDITION NO	DATE
14/2/2014	3:25 PM	1	11/1/1993

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
AT RIVERSTONE
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

THOMAS GILLESPIE
KAY MARION PAULINE GILLESPIE
AS JOINT TENANTS

(T M463391)

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 S202690 MORTGAGE TO WESTPAC BANKING CORPORATION
- 3 130730 MORTGAGE TO WESTPAC BANKING CORPORATION

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND COMPRISED IN THIS FOLIO.

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 36-39 SEC. 31 IN DP1480.

*** END OF SEARCH ***

mg

PRINTED ON 14/2/2014

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14/02/2014



Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 4381-210

SEARCH DATE	TIME	EDITION NO	DATE
14/2/2014	3:25 PM	-	-

VOL 4381 FOL 210 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

THOMAS GILLESPIE
KAY MARION PAULINE GILLESPIE
AS JOINT TENANTS

(T M463391)

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 S202690 MORTGAGE TO WESTPAC BANKING CORPORATION
- 3 I30730 MORTGAGE TO WESTPAC BANKING CORPORATION

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 40-51 SEC. 31 IN DP1480.

*** END OF SEARCH ***

mg

PRINTED ON 14/2/2014

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14/02/2014



TRANSFER

REAL PROPERTY ACT, 1900
 (See Instructions for Completion on back of form)

T 1 | 6 | 0 | X
 \$ 30

R507

DESCRIPTION OF LAND Note (a)	STAMP \$ = 0100	Reference	If Part Only, Define Whole and Give Details	Location
		Volume 3626 Folio 81	WHOLE	RIVERSTONE
TRANSFEROR Note (b)	DONVITO PLANT PTY. LIMITED having its registered office at Fullers Road, Glenhaven			OFFICE USE ONLY N

ESTATE Note (c)
 (the abovesigned TRANSFEROR) hereby acknowledges receipt of the consideration of \$ the terms of a Section 87 Agreement and transfers an estate in fee simple approved by the Family Court of Australia at Sydney in the land above described to the TRANSFEREE

TRANSFEREE Note (b)	MAUREEN DOROTHY DONVITO of 9 Junction Road, Riverstone, Home Duties.	OFFICE USE ONLY H 137
TENANCY Note (d)	as joint tenants/tenants in common	

PRIOR ENCUMBRANCES Note (e)
 subject to the following PRIOR ENCUMBRANCES 1. _____ 2. _____

DATE OF TRANSFER 12th March 1984


We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION Note (f)
 Signed in my presence by the transferor who is personally known to me

Signature of Witness: M. Donvito SECRETARY
 Name of Witness (BLOCK LETTERS)

Signature of Transferor: [Signature]
 Name of Transferor (BLOCK LETTERS): DIRECTOR (L. Donvito)

THE COMMON SEAL OF DONVITO PLANT PTY. LIMITED was hereunto affixed by the order of the Board of Directors



Signature of Transferor: _____

Note (f)
 Signed in my presence by the transferee who is personally known to me

Signature of Witness: [Signature]
 Name of Witness (BLOCK LETTERS): ANGELA KARPIN
27A WATERLOO ST, SUNKY HILLS

Address and occupation of Witness: SOLICITOR

Signature of Transferee: [Signature]

TO BE COMPLETED BY LODGING PARTY Notes (g) and (h)	LODGED BY	Messrs A.G. Karpin & Co., Solicitors, 27A Waterloo Street, SUNKY HILLS, NSW 2010. D.K. 404 SYDNEY. 699 6825. ATKINSON & JINDEN SY. 4982 CHATELWOOD	LOCATION OF DOCUMENTS	
	Delivery Box Number	4305 1059H	CT	OTHER
OFFICE USE ONLY	Extra Fee	Checked	REGISTERED 22 - J - 1984	Produced by _____



R.B.N

INSTRUCTIONS FOR COMPLETION

This dealing should be marked by the Commissioner of Stamp Duties before lodgment at the Registrar General's Office.

Typewriting and handwriting should be clear, legible and in permanent black non-copying ink.

Abscissions are not to be made by erasure; the words rejected are to be ruled through and initialed by the parties to the dealing.

If the space provided is insufficient, additional sheets of the same size and quality of paper and having the same margins as this form should be used. Each additional sheet must be identified as an annexure and signed by the parties and the attending witnesses.

If it is intended to create easements, covenants, &c., use forms RP13A, RP13B, RP13C as appropriate.

Rule up all blanks.

The following instructions relate to the SIDE NOTES on the form.

- (a) Description of land:
 - (i) TORRENS TITLE REFERENCE.—Insert the correct Folio Identifier or Volume and Folio of the Certificate of Title/Crown Grant for the land being transferred, e.g., 135/5P12345 or Vol. 8514 Fol. 123.
 - (ii) PART/WHOLE.—If part only of the land in the Folio of the Engineer is being transferred, delete the word "WHOLE" and insert the lot and plan number, portion, &c. See also sections 227 and 227AA of the Land Management Act, 1915.
 - (iii) LOCATION.—Insert the locality shown on the Certificate of Title/Crown Grant, e.g., at Chullera. If the locality is not shown, insert the Parish and County, e.g., Pt. Limestone Co. Road.
- (b) Show the full name, address and occupation or description.
- (c) If the estate being transferred is a lesser estate than an estate in fee simple, delete "fee simple" and insert appropriate estate.
- (d) Delete if only one transferee. If more than one transferee, delete either "joint tenants" or "tenants in common", and, if the transferees hold as tenants in common, state the shares in which they hold.
- (e) In the memorandum of prior encumbrances, state only the registered number of any mortgage, lease, charge or writ to which this dealing is subject.
- (f) Execution:
 - GENERALLY (i) Should there be insufficient space for execution of this dealing, use an annexure sheet.
 - (ii) The certificate of execution under the Real Property Act, 1908, must be signed by all parties to the transfer, each party to execute the dealing in the presence of an adult witness, not being a party to the dealing, to whom he is personally known. The witness for the transferee may sign the certificate on behalf of the transferee, the witness's name (not that of his firm), to be typewritten or printed adjacent to his signature. Any person falsely or negligently certifying is liable to the penalties provided by section 117 of the Real Property Act, 1908.
 - ATTORNEY (iii) If the transfer is executed by an attorney for the transferor/transferee pursuant to a registered power of attorney, the form of attestation must set out the full name of the attorney, and the form of execution must indicate the source of his authority, e.g., "As by the attorney (or receiver or delegate, as the case may be) XT pursuant to power of attorney registered Book No. ... and I declare that I have no notice of the revocation of the said power of attorney".
 - AUTHORITY (iv) If the transfer is executed pursuant to an authority (other than specified in (iii)) the form of execution must indicate the statutory, judicial or other authority pursuant to which the transfer has been executed.
 - CORPORATION (v) If the transfer is executed by a corporation under seal, the form of execution should include a statement that the seal has been properly affixed, e.g., in accordance with the Articles of Association of the corporation. Each person attesting the affixing of the seal must state his position (e.g., director, secretary) in the corporation.
- (g) Insert the name, postal address, Document Exchange reference, telephone number and delivery box number of the lodging party.
- (h) The lodging party is to complete the LOCATION OF DOCUMENTS panel. Place a tick in the appropriate box to indicate the whereabouts of the Certificate of Title. List, in an abbreviated form, other documents lodged, e.g., stat. dec. for statutory declaration, ppte for probate, L/A for letters of administration, &c.

OFFICE USE ONLY

DIRECTION: PROP		FIRST SCHEDULE DIRECTIONS				
No. OF NAMES:		(A)	(B)	(C)	(D)	(E)
FOLIO IDENTIFIER		(B) No.	(C) SHARE	(D) 1	(E)	NAME AND DESCRIPTION
SECOND SCHEDULE & OTHER DIRECTIONS						
(A)	(B)	(C)	(D)	(E)	(F)	(G)
NO. OF NAMES: DEALING & FOLIO IDENTIFIER	DIRECTION	NONOTFN TYPE	DEALING NUMBER			DETAILS



NEW SOUTH WALES
 \$ = 6100 \$1
 STAMP DUTY
 Stamp Title Reference



V695281

TRANSFER
 REAL PROPERTY ACT, 1900

T 117th 7th 1st
 \$ 20, R697

DESCRIPTION OF LAND
 Note (a)

Volume 3626
 Folio 81

If Part Only, Delete Whole and Give Details

WHOLE

Location

Riverstone

TRANSFEROR
 Note (b)

MAUREEN DOROTHY DONVITO of 9 Junction Road, Riverstone, Home Duties

ESTATE
 Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of \$ 65,950.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE
 Note (d)

WILLIAM LLOYD STEPHENSON of 6 Archer Street, Chatswood, Contractor

OFFICE USE ONLY

S

TENANCY
 Note (e)

as joint tenants/tenants in common

PRIOR ENCUMBRANCES
 Note (f)

subject to the following PRIOR ENCUMBRANCES 1. COVENANT NO. B109480

DATE 19th APRIL, 1985

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION
 Note (g)

Signed in my presence by the transferor who is personally known to me

Maureen Donvito
 Signature of Witness

A. S. KENNEDY

Name of Witness (BLOCK LETTERS)

27A Wallace Street,
 Sydney Hills, NSW, solicitor
 Address and occupation of Witness

Maureen Donvito
 Signature of Transferor

Note (g)

Signed in my presence by the transferee who is personally known to me

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

Solicitor for the transferee
 W.G.V. Vinden

TO BE COMPLETED BY LODGING PARTY
 Notes (h) and (i)

LODGED BY		ATKINSON & VINDEN SOLICITORS 282 VICTORIA AVENUE CHATSWOOD NSW 2067 DX 9582, CHATSWOOD		LOCATION OF DOCUMENTS	
Delivery Box Number 1057M		CT	OTHER	Herewith.	
				In R.G.O. with	
				Produced by	
Checked <i>RB</i>	Passed	REGISTERED 22 1985		Secondary Directions	
Signed <i>RB</i>	Extra Fee	 Registrar General		Delivery Directions	

RB.15

INSTRUCTIONS FOR COMPLETION

This dealing should be marked by the Commissioner of Stamp Duties before lodgment by hand at the Registrar General's Office.

Typewriting and handwriting should be clear, legible and in permanent non-copying ink.

Alterations are not to be made by erasure; the words rejected are to be ruled through and initialed by the parties to the dealing.

If the space provided is insufficient, additional sheets of the same size and quality of paper and having the same margins as this form should be used. Each additional sheet must be identified as an annexure and signed by the parties and the attesting witnesses.

If it is intended to create easements, covenants, &c., use forms RP13A, RP13B, RP13C as appropriate.

Rule up all blanks.

The following instructions relate to the SIDE NOTES on the form.

(a) Description of land:

(i) TORRENS TITLE REFERENCE—For a manual reference insert the Volume and Folio (e.g., Vol. 8514 Fol. 126)—For a computer folio insert the folio identifier (e.g., 12/701914).

(ii) PART/WHOLE—If part only of the land in the folio of the Register is being transferred, delete the word "WHOLE" and insert the lot and plan number, portion, &c. See also sections 227 and 227AA of the Land Government Act, 1919.

(iii) LOCATION—Insert the locality shown on the Certificate of Title/Crown Grant, e.g., at Chollers. If the locality is not shown, insert the Parish and County, e.g., FR. Lincoln Co. Rural.

(b) Show the full name of the transferor(s).

(c) If the estate being transferred is a lesser estate than an estate in fee simple, delete "fee simple" and insert appropriate estate.

(d) Show the full name, address and occupation or description of the transferee(s).

(e) Delete if only one transferee. If more than one transferee, delete either "joint tenants" or "tenants in common", and, if the transferees hold as tenants in common, state the shares in which they hold.

(f) In the memorandum of prior encumbrances, state only the registered number of any mortgage, lease, charge or writ to which this dealing is subject.

(g) Execution:

GENERALLY (i) Should there be insufficient space for the execution of this dealing, use an annexure sheet.

(ii) The certificate of correctness under the Real Property Act, 1900, must be signed by all parties to the transfer, each party to execute the dealing in the presence of an adult witness, not being a party to the dealing, or whom he/she is personally known.

The solicitor for the transferee may sign the certificate on behalf of the transferee, the solicitor's name (not that of his/her firm), to be typewritten or printed address to the signatory. Any person falsely or negligently certifying is liable to the penalties provided by section 117 of the Real Property Act, 1900.

ATTORNEY (iii) If the transfer is executed by an attorney for the transferor/transferee pursuant to a registered power of attorney, the form of execution must set out the full name of the attorney, and the form of execution must indicate the source of his/her authority, e.g., "AS by his attorney (or receiver or delegate, as the case may be) pursuant to power of attorney registered Book No."

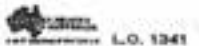
AUTHORITY (iv) If the transfer is executed pursuant to an authority (other than specified in (iii)) the form of execution must indicate the statutory, judicial or other authority pursuant to which the transfer has been executed.

CORPORATION (v) If the transfer is executed by a corporation under seal, the form of execution should include a statement that the seal has been properly affixed, e.g., in accordance with the Articles of Association of the corporation. Each person accessing the office of the seal must state his/her position (e.g., Director, secretary) in the corporation.

(h) Insert the name, postal address, Document Exchange reference, telephone number and delivery box number of the lodging party.

(i) The lodging party is to complete the LOCATION OF DOCUMENTS panel. Place a tick in the appropriate box to indicate the whereabouts of the Certificate of Title. List, in an abbreviated form, other documents lodged, e.g., stat. dec. for statutory declaration, pbte for probate, L/A. for letters of administration, &c.

OFFICE USE ONLY



FIRST SCHEDULE DIRECTIONS

(A)	FOLIO IDENTIFIER	(B)	DIRECTION	(C)	NAME

SECOND SCHEDULE AND OTHER DIRECTIONS

(D)	FOLIO IDENTIFIER	(E)	DIRECTION	(F)	NOTE TYPE	(G)	DEALING NUMBER	(H)	DETAILS

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

14/2/2014 3:30PM

FOLIO: AUTO CONSOL 3626-81

Recorded	Number	Type of Instrument	C.T. Issue
10/12/1993		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 3626-81	
PARCELS IN CONSOL ARE:			
46-51/32/1480.			
22/12/1993	1895568	CAVEAT	
28/2/1994	065888	CAVEAT	
2/3/1995	094914	WITHDRAWAL OF CAVEAT	
16/3/1995	092828	CAVEAT	
2/5/1995	0190350	CAVEAT	
5/5/1995	0127563	REQUEST	
12/5/1995	0227803	WITHDRAWAL OF CAVEAT	
24/5/1995	0253097	WITHDRAWAL OF CAVEAT	
24/5/1995	0253098	TRANSFER BY MORTGAGEE UNDER POWER OF SALE	
24/5/1995	0253099	MORTGAGE	EDITION 1
21/9/1999	6211682	DISCHARGE OF MORTGAGE	
21/9/1999	6211683	TRANSFER	
21/9/1999	6211684	MORTGAGE	EDITION 2
15/3/2002	8435261	DISCHARGE OF MORTGAGE	
15/3/2002	8435262	TRANSFER	
15/3/2002	8435263	MORTGAGE	EDITION 3
14/11/2002	9127435	DISCHARGE OF MORTGAGE	
14/11/2002	9127436	MORTGAGE	EDITION 4
17/10/2006	AC675463	DISCHARGE OF MORTGAGE	
17/10/2006	AC675464	MORTGAGE	EDITION 5
20/8/2012	AH173597	TRANSMISSION APPLICATION (EXECUTOR, ADMINISTRATOR,	EDITION 6

END OF PAGE 1 - CONTINUED OVER

SEARCH DATE

14/2/2014 3:30PM

FOLIO: AUTO CONSOL 3626-81

PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
		TRUSTEE)	
7/9/2012	AH222146	DISCHARGE OF MORTGAGE	
7/9/2012	AH222147	TRANSFER	
7/9/2012	AH222148	MORTGAGE	EDITION 7

*** END OF SEARCH ***

97-08LX



Application for Preparation of LAPSING NOTICE

Section 74I or Section 74J
Real Property Act 1900



0
127563 S

(A) **LAND AFFECTED BY CAVEAT**
Show no more than 20 References to Title

Folio identifiers 1/730435, 2/730435 and 3/218794 and
Auto Consol 3626-81

(B) **REGISTERED DEALING**
If applicable

(C) **LODGED BY**

L.T.O. Box 667N	Name, Address or DX and Telephone Parish Patience, Solicitors DX 166 Sydney Tel: 283 1333 REFERENCE (max. 15 characters): P: MPB	R

(D) **CAVEAT NO.** 092828 by Colleen Muriel Stephenson
(E) **APPLICANT** STATE BANK OF NEW SOUTH WALES LIMITED (A.C.N. 003 963 228) as mortgagee proposing
to exercise its power of sale

[Complete either Part A or Part B]

(F) **PART A - SECTION 74 I**

(G) being (a) the registered proprietor of the above land/registered dealing
(b) the possessory applicant in Application No.
(c) a person entitled to an estate or interest in the above land/registered dealing by virtue of Dealing No.

applies under section 74I of the Real Property Act 1900 for the preparation of the notice referred to in that section. The abovementioned

(H) caveat prohibits the registration of:

(F) **PART B - SECTION 74 J**

(I) being (a) ~~the registered proprietor of an estate or interest in the abovementioned land~~
(b) the registered proprietor of registered dealing No. 8 X79269, Book 3712 No. 142 & X79273

applies under section 74J of the Real Property Act 1900 for the preparation of the notice referred to in that section.

(J) **ADDRESS FOR SERVICE OF NOTICES ON CAVEATOR**

Lot 2 Junction Road, Riverstone, 2765

(K) I certify this Application correct for the purposes of the Real Property Act 1900 **DATE** 27.3.95
Signed in my presence by the Applicant who is personally known to me

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Signature of Applicant/Solicitor for Applicant/Authorised Agent of Applicant
M P Bersten

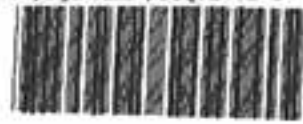
Land Titles Office Use Only

Notice in duplicate forwarded to lodging party on per	Date of Service on Caveator	<u>12.4.1995</u>
	Court Order to be lodged with LTO before	<u>4.5.1995</u>
	Court Order received on	
	No Court Order received	<u>4.5.1995</u>
	REG'N CARD SENT (initials)	<u>Reg 17 J</u> CHECKED BY <u>Reg 17 J</u>

9701TP

TRANSFER UNDER POWER OF SALE

Section 58 Real Property Act 1900



0
253098 N



Office of State Revenue use only

0026

270495 2124 04 200952919/03

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title.
If appropriate, specify the share transferred.

FOLIO IDENTIFIER AUTO CONSOL 3626-81

(B) **LODGED BY**

L.T.O. Box

Name, Address of L.T.O. Box

NATIONAL AUSTRALIA BANK LIMITED
National Australia Bank House
255 George Street, Sydney
237-1111 FAX 231-1284
45A

REFERENCE (max. 15 characters):

HS1907

(C) **TRANSFEROR**

STATE BANK OF NEW SOUTH WALES LIMITED (ACN 003 963 228)

being the mortgagee in **MORTGAGE X79273** dated **26 June, 1987** from
the registered proprietor of the above Land, acknowledges receipt of the consideration of \$ **97,000.00**
and in exercise of power of sale under that Mortgage transfers an estate in fee simple in the above Land to the Transferee

(D) subject to the following **ENCUMBRANCES**

1. 2. 3.

(E) **TRANSFEEE**

TP

TAVESHARE PTY. LIMITED (A.C.N. 002 030 355)

TENANCY:

(G) We certify this dealing correct for the purposes of the Real Property Act, 1900.

DATE 16-5-95

Signed in my presence by the transferor who is personally known to me.

[Signature]

Signature of Witness

KEVIN CHARPLE

Name of Witness (BLOCK LETTERS)

52 MARTIN PLACE SYDNEY

Address of Witness

STATE BANK OF NEW SOUTH WALES LIMITED (ACN 003 963 228) BY ITS
ATTORNEY RONALD GILBERT WHO HOLDS THE POSITION OF MANAGER,
GROUP ASSET MANAGEMENT PURSUANT TO A POWER OF ATTORNEY,
REGISTRATION NUMBER 376 Baskin AND I DECLARE THAT I HAVE
NO NOTICE OF THE REVOCATION OF THE SAID POWER OF ATTORNEY.

Signature of Transferor

[Signature]

Signed in my presence by the transferee who is personally known to me.

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

OFFICE USE
OPF MS
X 79273
OFF W
I 359603

Chris Edwards (Christopher Edwards)

Solicitor for Signature of Transferee

CHECKED BY (office use only)

[Signature]

Ref:mg /Src:M
 Form: 97-01T
 Licence: 10V/0096/96
 Edition: 9804

TRANSFER
 New South Wales
 Real Property Act 1900 (1)

6211683N



STAMP DUTY

Office of State Revenue use only

OS 29723 10/29818102 90 2266 665061
 N.S.W. STAMP DUTY 201581847/01 2262.50

(A) TORRENS TITLE

If appropriate, specify the part or share transferred
 AUTO CONSOL 3626-81

(B) LODGED BY

LTO Box	Name, Address or DX and Telephone	CODES
USA	NATIONAL AUSTRALIA BANK LIMITED National Australia Bank House 255 George Street, Sydney Reference (optional): FAX 237 1254	T TS (s713) TW (Sheriff)
	NP5202	

(C) TRANSFEROR

TAVESHARE PTY LIMITED ACN 002 030 355

(D)

The transferor acknowledges receipt of the consideration of \$ 113,500.00 and as regards the land specified above transfers to the transferee an estate in fee simple.

(E)

Encumbrances (if applicable): 1. 2. 3.

(F) TRANSFEREE

EDMUND KEVIN BRIDGEWATER AND ROBYN LYNETTE BRIDGEWATER

(G)

TENANCY: JOINT TENANTS

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. **DATE:** 17 May, 1999

Signed in my presence by the transferor who is personally known to me.

THE COMMON SEAL OF TAVESHARE PTY. LIMITED
 WAS HEREUNTO AFFIXED BY AUTHORITY OF THE

Signature of witness:
 BOARD OF DIRECTORS IN THE PRESENCE OF:

Signature of transferor:

Name of witness: *R.S. Bridgewater* *E.K. Bridgewater*

Address of witness: Secretary/Director
 Robyn Lynette Bridgewater

Director
 Edmund Kevin Bridgewater



Signed in my presence by the transferee who is personally known to me.

Signature of witness: *R. Billeart*

Signature of transferee: *E.K. Bridgewater*

Name of witness: *Rebecca Buz...*

R.S. Bridgewater

Address of witness: *3 BRIDGEMAN ST
 WINDSOR NSW
 2755*

If signed on the transferee's behalf by a solicitor or licensed conveyancer, show the signatory's full name and capacity below:

All handwriting must be in block capitals.
 A set of notes on this form (97-01T-2)
 is available from the Land Titles Office.

Ref:mg /Src:M
01-08-067
Licensee: Midware Systems
Maclarens

TRANSFER
New South Wales
Real Property Act 1900



8435262P

PRIVACY NOTE: this information is legally required and will become

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
05-03-2002 0000910499-001
SECTION 18(2)
DUTY \$ *****2.00

(A) TORRENS TITLE

If appropriate, specify the part transferred
Folio Identifier Auto Consol 3626-81

(B) LODGED BY

Delivery Box 481 D	Name, Address or DX and Telephone NOYCE LEGAL DX 28404 PARRAMATTA Telephone: 9891 6633 Reference (optional): 02/01844 TONINI	CODE T TW (Sheriff)
---------------------------	--	------------------------------

(C) TRANSFEROR

EDMUND KEVIN BRIDGEWATER and ROBYN LYNETTE BRIDGEWATER

(D) CONSIDERATION

The transferor acknowledges receipt of the consideration of \$ 285,000.00 and as regards

(E) ESTATE

the land specified above transfers to the transferee an estate in fee simple.

(F) SHARE TRANSFERRED

(G) Encumbrances (if applicable):

(H) TRANSFEREE

GUIDO TONINI

(I) TENANCY:

(J) DATE 5/3/02

I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of witness: *x RBullett*
 Name of witness: *x REBECCA BILLET*
 Address of witness: *x 2 ACTIVE PL
KELVILLE*

Signature of transferor: *x E. K. Bilgic*
x Rob Bridgewater

Certified correct for the purposes of the Real Property Act 1900 by the person whose signature appears below.

Signature: *Christopher Maley*
 Signatory's name: CHRISTOPHER MALEY
 Signatory's capacity: Solicitor for the transferee

Done

0127563

Film

STATUTORY DECLARATION

RELODGED
- 2 MAY 1995
1-10

I, ~~John Douglas Wood~~, A Licenced Commercial Agent,
of Lot 8 Greendale Road, Greendale in the State of New South Wales,

do solemnly and sincerely declare as follows:

On the 12th day of April, 1995, I attended premises known as Lot 2 Junction Road, Riverstone. I knocked on the front door of those premises, the door was answered by a male person known to me as Peter Honeysett. He said, "What are you doing here?". I said, "Is Mrs Colleen Muriel Stephenson here?". He said, "Yes, she's in the kitchen with Bill", I said, "May I come in and see her", He said, "Yes follow me". I then followed Peter Honeysett to a kitchen at the rear of the house, there I saw Bill Stephenson and Colleen Muriel Stephenson seated at a table. Bill Stephenson said, "What do you want?", I said, "I have a document to serve upon Colleen from the Land Titles Office about her Caveat over some properties". I was then approached by Colleen Muriel Stephenson, I handed her the Original of the Notice under Section 74J Real Property Act 1900 A true copy of which is marked with the letter "A" and is annexed hereto. She appeared to read the Notice and said, "I guess I'll have to renew this", I said, "You will have to apply to the Supreme Court within 21 days of today". Bill Stephenson said, "That will be done, I want you to leave!". There was other conversation relating to other matters between myself and Bill Stephenson, there was also conversation with Peter Honeysett, not relevant to this matter. I noted that the kitchen table, at which they were seated, was covered in paper work. I left the premises.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act, 1900 (as amended).

Subscribed and declared at Camden
this 13th day of APRIL 1995
one thousand nine hundred and nine.
before me *Henry J.P.*
Stewart Hensby.

J.D. Wood
J.D. Wood.

①

10-0300
Your Ref:

Our Ref: 0127563 REG17:EH MCH31

Ms Colleen Muriel Stephenson
C/- Lot 2 Junction Road
RIVERSTONE NSW 2765



Queens Square
Sydney NSW 2000
Phone (02) 228 6666
Fax (02) 233 4357

NOTICE TO CAVEATOR OF PROPOSED LAPSING OF CAVEAT
SECTION 74J REAL PROPERTY ACT 1900

TORRENS TITLE REFERENCE	REGISTERED PROPRIETOR
REGISTER FOLIOS 1/730435 2/730435, 3/218794 AUTO CONSUL 3626-81	William Lloyd Stephenson (Registered Proprietor) STATE BANK OF NEW SOUTH WALES LIMITED (Mortgagee under Mortgages X79269, X79273 and Book 3712 No.142) - applicant

The abovenamed mortgagee has made application for the preparation of a notice to you pursuant to section 74J of the Real Property Act, 1900.

Accordingly, I hereby give notice that your Caveat No. 092828 will lapse to the extent that it affects the abovementioned title(s), upon the expiration of 21 days after the date of service of this notice upon you, unless an order extending the operation of the Caveat is obtained from the Supreme Court and such order (or an office copy thereof) is lodged with me within that period.

K. NETTLE,
Director

This is the Annexure marked "A"
referred to in the affidavit of
John Douglas Wood sworn on
the 13th day of April 1995
before me *Stephen Hensby JP*
Henry JP
Justice of the Peace



Form: 03AE
Release: 2.0

**TRANSMISSION
APPLICATION**
by an Executor,
Administrator or Trustee
New South Wales
Section 93 Real Property Act 1900



AH173597N

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

(A) **TORRENS TITLE** AUTO CONSOL 3626-81

(B) **REGISTERED DEALING**

NUMBER	TORRENS TITLE

(C) **LODGED BY**

DOCUMENT COLLECTION BOX	NAME, ADDRESS OR DX, TELEPHONE, AND CUSTOMER ACCOUNT NUMBER IF ANY	CODE
48T	GRAHAME W HOWE AND CO D.X. 11569 SYDNEY DOWNTOWN 48T REFERENCE: G HOWE / Tonini	LLPN: 123819E CITYLINK AE

(D) **DECEASED REGISTERED PROPRIETOR** GUIDO TONINI

(E) **APPLICANT** ANDREW DEAN TONINI

(F) The applicant, being entitled as administrator of the estate of the deceased registered proprietor (who died on 15 March 2010) pursuant to Letters of Administration No. 2012/157681 granted on 29 June 2012 to Andrew Tonini (a certified copy of which is lodged herewith) hereby applies to be registered as proprietor of the estate or interest of the deceased registered proprietor in the abovementioned land

DATE 9/8/12.

(G) I certify I am an eligible witness and that the applicant signed this dealing in my presence. [See note* below]

Certified correct for the purposes of the Real Property Act 1900 by the applicant.

Signature of witness:

Name of witness: GRAHAME HOWE

Address of witness: Level 1 299 Elizabeth St Sydney

Signature of applicant:

(H) This section is to be completed where a notice of sale is required and the relevant data has been forwarded through eNOS. The applicant's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 289693 Full name: GRAHAME HOWE Signature:

* s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.
ALL HANDWRITING MUST BE IN BLOCK CAPITALS. Evidence sighted and returned (office use only): _____

CT PROD BY 7450 8/8 for TA



Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 3626-81

SEARCH DATE	TIME	EDITION NO	DATE
14/2/2014	3:30 PM	7	7/9/2012

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

MARLI JADE BLEWITT
TRENT WAYNE BLEWITT

AS TENANTS IN COMMON IN EQUAL SHARES

(T AH222147)

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 B109480 COVENANT
- 3 AH222148 MORTGAGE TO ING BANK (AUSTRALIA) LIMITED

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 46-51 SEC. 32 IN DP1480.

*** END OF SEARCH ***

bg

PRINTED ON 14/2/2014

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

14/02/2014

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

17/2/2014 3:11PM

FOLIO: AUTO CONSOL 5460-109

Recorded	Number	Type of Instrument	C.T. Issue
12/5/1993		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 5460-109	

PARCELS IN CONSOL ARE:
25-28/32/1480, 32-37/32/1480, 56-63/32/1480.

25/6/1993	1439209	DISCHARGE OF MORTGAGE	
25/6/1993	1439210	TRANSMISSION APPLICATION	EDITION 1
8/12/2004	AB144290	25/32/1480 EXCISED	
8/12/2004	AB144290	26/32/1480 EXCISED	
8/12/2004	AB144290	27/32/1480 EXCISED	
8/12/2004	AB144290	62/32/1480 EXCISED	
8/12/2004	AB144290	63/32/1480 EXCISED	
8/12/2004	AB144319	DEPARTMENTAL DEALING	EDITION 2
22/8/2012	AH190616	DEPARTMENTAL DEALING	

*** END OF SEARCH ***



Title Search

InfoTrack
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Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 5460-109

SEARCH DATE	TIME	EDITION NO	DATE
17/2/2014	3:10 PM	2	8/12/2004

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

NORLENE GAY GILLESPIE

(TA 1439210)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- * 2 A574344 CONDITION(S) .

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOT 28 SEC. 32 IN DP1480
LOTS 32-37 SEC. 32 IN DP1480
LOTS 56-61 SEC. 32 IN DP1480.

*** END OF SEARCH ***

mg

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17/02/2014

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

17/2/2014 3:11PM

POLIO: AUTO CONSOL 1102-153

Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
15/2/1995		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 1102-153	

PARCELS IN CONSOL ARE:
29-31/32/1480.

16/2/1995	1582568	APPLICATION FOR POSSESSORY TITLE	EDITION 1
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*** END OF SEARCH ***



Title Search

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 1102-153

SEARCH DATE	TIME	EDITION NO	DATE
17/2/2014	3:10 PM	1	16/2/1995

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
AT RIVERSTONE
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

NOELENE GAY GILLESPIE (YA 1582569)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND COMPRISED IN THIS FOLIO.

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 29-31 SEC. 32 IN DP1480.

*** END OF SEARCH ***

mg

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17/02/2014

CERTIFICATE OF TITLE

PROPERTY ACT, 1990



1220940

NEW SOUTH WALES

Appln. No. 515

Prior Title Vol. 1040 Fol. 189

Vol. **12209** Fol. **40**

Edition issued 3-9-1973.

N 351459



I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Jenkinson
Registrar General.



PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES

CANCELLED

SEE AUTO FOLD

			79	
11	5564 m ²	60.96 60.96	80	515
			81	
				CROWN ST

REDUCTION RATIO 1:800

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 80 of Section 32 in Deposited Plan 1450 in the Municipality of Blacktown Parish of St. Matthew and County of Cumberland being part of Portion 95 granted to Maurice Charles O'Connell on 7-5-1810.

FIRST SCHEDULE

~~MATTHEW HAGON~~ ~~Surveyors; Spinners~~

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
~~By Grant No. 1855670 to the Registrar General. Entered 22-5-1953. Withdrawn 19406234~~

Jenkinson
Registrar General.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

12209 Vol. 40

(Page 1) Vol. 12209 Fol. 40

WARNING THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE

P 2052357
 -235 M

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR

John Edward Mason of Ruishton, Plant Operator

INSTRUMENT NUMBER	DATE	ENTERED	Signature of Registrar General
Transfer P205234	10-8-1976		<i>[Signature]</i>

CANCELLED

SEE AUTO FOLIO

SECOND SCHEDULE (continued)

PARTICULARS

10 S.W.B. Family Credit Union Limited

INSTRUMENT NUMBER	DATE	ENTERED	Signature of Registrar General	CANCELLATION
Mortgage P205235		10-8-1976	<i>[Signature]</i>	

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

17/2/2014 3:11PM

POLIO: 80/32/1480

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 12209 POL 40

Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
5/8/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
7/9/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
18/4/1990	Y932447	DISCHARGE OF MORTGAGE	
18/4/1990	Y932448	MORTGAGE	EDITION 1
21/8/1990	Z104999	MORTGAGE	EDITION 2

*** END OF SEARCH ***



Title Search

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Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 80/32/1480

SEARCH DATE	TIME	EDITION NO	DATE
17/2/2014	3:10 PM	2	21/8/1990

LAND

LOT 80 OF SECTION 32 IN DEPOSITED PLAN 1480
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

JOHN EDWARD MASON

(T P805234)

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 Y932448 MORTGAGE TO SWB COMMUNITY CREDIT UNION LIMITED
- 3 Z104999 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND COMPRISED IN THIS FOLIO.

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

mg

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17/02/2014



Title Search

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 977-91

SEARCH DATE	TIME	EDITION NO	DATE
17/2/2014	3:10 PM	-	-

VOL 977 FOL 91 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
AT RIVERSTONE
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480

FIRST SCHEDULE

JOHN EDWARD MASON

(T P805234)

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 Y932448 MORTGAGE TO S W B COMMUNITY CREDIT UNION LIMITED
- 3 Z104999 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 81-82 SEC. 32 IN DP1480.

*** END OF SEARCH ***

9 25 10 33 1852

F 622371

11.40

Re L 21 AUG 1952

CONVEYANCING ACT, 1919-1931
 REAL PROPERTY ACT, 1900

Notice of Resumption of Land subject to the provisions of the Real Property Act, 1900.

THE COMMISSIONER FOR RAILWAYS HEREBY CERTIFIES that the copy Gazette Notification hereunto annexed is a true copy of the Gazette Notification contained in the Government Gazette of the eighteenth day of January one thousand nine hundred and fifty-two, declaring that the land therein described, being the land mentioned in the Schedule hereunder written, has been resumed. And REQUESTS that you will deal with and give effect to the said Notification as if the same were a Memorandum of Transfer of the land therein described duly executed under the Real Property Act, 1900, and HEREBY CERTIFIES that this instrument is correct for the purposes of the Real Property Act, 1900.

SCHEDULE 1 (Easement Only.)

Lot Partic.	Section Parish	Deposited Plan or Name of Estate, County	Part or Whole	Value	Fdn.
Part Lots 43 and 44	Section 17 Parish St. Matthew	D.P. 1480 County Cumberland	Part	• 2625	76
Part Lots 1 to 4 incl.	Section 32 Parish St. Matthew	D.P. 1480 County Cumberland	Part	• 2325 • 2934 5792	14 95 197
As shown on plan annexed hereto marked "A."					
Part Lots 56 to 63 incl.	Section 18 Parish St. Matthew	D.P. 1480 County Cumberland	Part	2150 • 2609 5192	18 37 166
As shown on plan annexed hereto marked "B."					
Part Lots 28 to 35 incl.	Section 19 Parish St. Matthew	D.P. 1480 County Cumberland	Part	817 • 2729 4499 5176	112 101 127 57
As shown on plan annexed hereto marked "C."					
Part Lots 20 to 27 incl.	Section 20 Parish St. Matthew	D.P. 1480 County Cumberland	Part	517 2625 852 2656 2878 2800 1092	108 79 15 95 98 97 111
As shown on plan annexed hereto marked "D."					

Schedule continued on annexed sheet marked Schedule Part 2.

DATED this Eighteenth day of February in the year one thousand nine hundred and fifty-two.

The Common Seal of The Commissioner for Railways hath been hereunto duly affixed in the presence of.

[Signature]
 Secretary for Railways

THE REGISTRAR GENERAL,
 SYDNEY.





[Published in Government Gazette No. 7 of 19th January, 1928.]

NOTIFICATION OF APPROPRIATION AND RESUMPTION OF EASEMENT FOR RAILWAY PURPOSES UNDER THE MINISTRY OF TRANSPORT ACT, 1924, AND THE PUBLIC WORKS ACT, 1912, AS RESPECTIVELY AMENDED.

WHEREAS the Commissioner for Railways is desirous of acquiring an easement or right to use in any manner the surface and subsoil of the land referred to in the Schedule hereto for constructing for railway purposes an electric high tension transmission line between Carrigford and Liffgow, deemed to be requisite and convenient for the use of the railway, and whereas the said easement or right is, in my opinion, required for carrying out the said work; Now, therefore, I, the Lieutenant-Governor with the advice of the Executive Council, in pursuance of the Ministry of Transport Act, 1924, and the Public Works Act, 1912, as respectively amended, do hereby direct that the said work shall be carried out by the Commissioner for Railways to the Constructing Authority; and I do declare by this notification to be published in the Government Gazette and in one or more newspapers published or circulated in the Dublin District wherein the said land is situated that the said easement or right is hereby appropriated and reserved for the purpose hereinafter referred to.

SCHEDULE.

(Easement only.)

All that parcel of land situate at Kevinstown in the Rillie of Blacktown, parish of St. Matthew and county of Dubhlinn and State of New South Wales being part of lots 43 and 44 section 27 d.p. 1480 and being part of the land comprised in Certificate of Title volume 2023 folio 76 being triangular in shape and having a frontage on the north-west of 30 feet to Sydney-street and a north-eastern side line being also part of the north-western side of Edmund-street of 42 feet 4 inches and said to be in the possession of A. Coombe.

Also all that parcel of land situate as aforesaid being part of lots 3 to 4 inclusive and 41 to 50 inclusive section 27 d.p. 1480 and being part of the lands comprised in Certificate of Title volume 2123 folio 74 volume 2254 folio 85 volume 2722 folio 127 being strips of land 30 feet wide on each side of and adjacent to the centre line of the proposed electric high tension transmission line from Carrigford to Liffgow which centre line intersects the north-eastern side of Edmund-street at a point 42 feet south-west of its intersection with the south-western side of Sydney-street and which centre line bears south-easterly to intersect the north-western side of Crown-street at a point 140 feet north-west of its intersection with the north-eastern side of Edmund-street and said to be partly in the possession of Miss K. Mason and partly in the possession of Miss R. E. O. Marx.

Also all that parcel of land situate as aforesaid being part of lots 26 to 43 inclusive and lots 45 to 50 inclusive section 27 d.p. 1480 and being part of the lands comprised in Certificate of Title volume 2120 folio 28 volume 2208 folio 23 and volume 2122 folio 145 being strips of land 30 feet wide on each side of and adjacent to the centre line of the proposed electric high tension transmission line from Carrigford to Liffgow which centre line intersects the north-western side of Sydney-street at a point distant 8 feet 4 inches south-west of its intersection with the north-western side of Edmund-street and which centre line bears north-westerly to intersect the south-eastern side of Robert-street at a point distant 202 feet north-west of its intersection with the north-western side of Edmund-street aforesaid and said to be partly in the possession of Mrs. M. A. Robinson partly in the possession of M. T. K. O'Leary and partly in the possession of Mrs. L. E. Bishop.

Also all that parcel of land situate as aforesaid being part of lots 28 to 34 inclusive and part of lots 31 to 38 inclusive section 27 d.p. 1480 and being part of the lands comprised in Certificate of Title volume 2123 folio 112 volume 2726 folio 201 volume 2122 folio 127 and volume 2123 folio 27 being strips of land 30 feet wide on each side of and adjacent to the centre line of the proposed electric high tension transmission line from Carrigford to Liffgow which centre line intersects the north-western side of Robert-street at a point distant 242 feet

42 feet north-west of its intersection with the north-western side of Edmund-street which centre line bears north-westerly to intersect the north-eastern side of Wellington-street at a point distant 442 feet 4 inches from its intersection with the north-western side of Edmund-street aforesaid and said to be partly in the possession of each of the following owners: Mrs. W. J. Coombs and W. J. Eitich as joint tenants the estate of the late L. Blackwood F. O. Tappin and Mrs. L. Ward as joint tenants and Ethel Thomas Pender.

Also all that parcel of land situate as aforesaid being part of lots 25 to 27 inclusive and lots 26 to 28 inclusive section 27 d.p. 1480 being part of the lands comprised in Certificate of Title volume 2223 folio 74 volume 2123 folio 102 volume 204 folio 27 volume 2123 folio 12 volume 2124 folio 27 volume 2024 folio 96 volume 2123 folio 78 volume 2123 folio 20 and volume 2127 folio 111 being strips of land 30 feet wide on each side of and adjacent to the centre line of the proposed electric high tension transmission line from Carrigford to Liffgow which centre line intersects the north-western side of Sydney-street at a point distant 473 feet 4 inches north-west of its intersection with the north-western side of Edmund-street and which centre line bears north-westerly to intersect the north-western side of Wellington-street at a point distant 472 feet 8 inches north-west of its intersection with the north-western side of Edmund-street aforesaid and said to be partly in the possession of each of the following owners: George Dwyer, Patrick Doherty, Corcoran Joseph Connell, Mrs. Elsie McLeod Egan and Henry Harold Owen as joint tenants, Mrs. Ellen May Egan Sawyer, Mrs. Alma Corbin, William Thomas Dora, Mrs. Elsie Scott and Mrs. Lila Elin May Tait.

Also all that parcel of land situate as aforesaid being part of lots 12 to 14 inclusive and part of lots 20 to 22 inclusive section 27 d.p. 1480 and being part of the lands comprised in Certificate of Title volume 224 folio 98 volume 2123 folio 112 volume 2722 folio 127 and volume 2123 folio 27 being strips of land 30 feet wide on each side of and adjacent to the centre line of the proposed electric high tension transmission line from Carrigford to Liffgow which centre line intersects the north-eastern side of Edmund-street at a point distant 242 feet 11 inches north-west of its intersection with the north-western boundary of the land comprised in Certificate of Title volume 2123 folio 248 and which centre line bears north-westerly to intersect the north-western side of Sydney-street at a point distant 48 feet 4 inches north-west of its intersection with the north-western boundary of the land comprised in Certificate of Title volume 2123 folio 248 aforesaid and said to be partly in the possession of each of the following owners: Mrs. Thomas Lind, Mrs. Mary Ann Foxworth, the estate of the late Loderie Blackwood and Mrs. Evelyn Jane Milne.

Also all that parcel of land situate as aforesaid being part of lots 46 and 47 section 27 d.p. 1480 and being part of the land comprised in Certificate of Title volume 2124 folio 148 being triangular in shape and having a frontage of 40 feet 4 inches on the north-west to Prince-street and a north-eastern side line forming also part of the north-western side of William-street of 21 feet 4 inches and said to be in the possession of Mrs. Beatrice Adelaide Doyle.

Also all that parcel of land situate as aforesaid being part of lots 1 to 4 inclusive and part of lots 20 to 22 inclusive section 27 d.p. 1480 and being part of the lands comprised in Certificate of Title volume 2123 folio 23 and volume 2123 folio 27 being strips of land 30 feet wide on each side of and adjacent to the centre line of the proposed electric high tension transmission line from Carrigford to Liffgow which centre line intersects the north-eastern side of William-street at a point distant 228 feet 4 inches north-west of its intersection with the north-western side of Nicholas-street and which centre line bears north-westerly to intersect the north-western side of Mc-Cormac-street aforesaid at a point distant 144 feet 21 inches north-east of its intersection with the north-eastern side of William-street and said to be partly in the possession of Mrs. J. P. Campbell and partly in the possession of John W. R. Coleman.

Also all that parcel of land situate as aforesaid being part of lots 28 to 43 inclusive and lots 45 to 50 inclusive section 27 d.p. 1480 and being part of the lands comprised in Certificate

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SCHEDULE PART 2 (Feasement Only.)

Lot Portion	Section Parish	Deposited Plan or Mens. of Feats. County.	Part or Whole	Volume	Folio
Part Lots 12 to 19 incl. Part Lots 23 to 29 incl.	Section 21 Parish St. Matthew	D.P.1480 County Cumberland	Part	826	99
				4276	172
				2799	101
				4425	2
As shown on plan annexed hereto marked "E."					
Part Lots 46 and 47 Part Lots 1 to 4 incl. Part Lots 38 to 44 incl.	Section 10 Section 25 Parish St. Matthew	D.P.1480 County Cumberland	Part	2834	149
				887	18
				5176	57
As shown on plan annexed hereto marked "F."					
Part Lots 38 to 45 incl. Part Lots 48 to 54 incl.	Section 9 Parish St. Matthew	D.P.1480 County Cumberland	Part	6087	225
				3331	125
				4400	200
				2799	100
As shown on plan annexed hereto marked "G."					
Part Lots 64 to 66 incl. Part Lots 28 to 38 incl.	Section 40 Section 41 Parish St. Matthew	D.P.1480 County Cumberland	Part	3331	123
				5176	58
As shown on plan annexed hereto marked "H."					
Part Lots 68 to 70 incl. Part Lots 12 to 28 incl.	Section 44 Section 45 Parish St. Matthew	D.P.1480 County Cumberland	Part	6054	21
				5465	115
				6018	144
				5176	58
As shown on plan annexed hereto marked "I."					
Part Lots 15 to 26 incl. Part Lots 55 to 65 incl.	Section 7 Parish St. Matthew	D.P.1654 County Cumberland	Part	897	62
				848	86
				3331	126
				5563	113
As shown on plan annexed hereto marked "J."					

*See being fair of land completed
 - Cert's of Title Vol 6350 Feb 1919 and
 - 6351 - 119
 as required for 6465 to 64.*

This is the Schedule Part 2 referred to as annexure to the Notice of Resumption By The Commissioner for Railways dated this 18th day of February 1952.

For and on behalf of The Commissioner for Railways.

[Signature]
 Secretary for Railways.

of Title volume 6087 folio 222 volume 2221 folio 122 volume 4097 folio 200 and volume 2788 folio 100 being strips of land 20 feet wide on each side of and adjacent to the centre line of the proposed electric high tension transmission line from Carlingford to Liffogue which centre line intersects the south-eastern side of Victoria street at a point distant 292 feet 10 inches south-west of its intersection with the north-eastern side of William street and which centre line bears north-easterly to intersect the north-western side of Prince street at a point distant 22 feet 10 inches south-west of its intersection with the south-western side of William street aforesaid and said to be partly in the possession of each of the following owners: Y. P. Barry, the estate of the late John Patrick Curran, the estate of the late Ludovic Blackwood and J. B. French.

Also all that parcel of land situate as aforesaid being part of lots 24 to 26 inclusive section 41 of 1480 and being part of the land comprised in Certificate of Title volume 2221 folio 222 being triangular in shape and having a frontage of 28 feet 04 inch on the north-east to Victoria street and a south-western side line being also part of the north-eastern side of O'Connell street of 120 feet 10 inches and said to be in the possession of the estate of the late John Patrick Curran.

Also all that parcel of land situate as aforesaid being part of lots 28 to 30 inclusive section 41 of 1480 and being part of the land comprised in Certificate of Title volume 2221 folio 222 being strips of land 20 feet wide on each side of and adjacent to the centre line of the proposed electric high tension transmission line from Carlingford to Liffogue which centre line intersects the south-eastern side of Albert street at a point bearing 228 degrees 12 minutes 175 feet 11 inches from its intersection with the south-western side of O'Connell street and which centre line bears southeasterly 27 degrees 17 minutes 227 feet 8 inches and 121 degrees 22 minutes to the south-western side of O'Connell street aforesaid and said to be in the possession of Evelyn Hand Philomena Smith.

Also all that parcel of land situate as aforesaid being part of lots 28 to 30 inclusive section 41 of 1480 and being part of the land comprised in Certificate of Title volume 6024 folio 21 being triangular in shape and having a frontage on the south-east of 21 feet 24 inches to Clyde street and a south-western side line being also part of the north-eastern side of Hamilton street of 21 feet 24 inches and said to be in the possession of Ben Lippard Stevens.

Also all that parcel of land situate as aforesaid being part of lots 12 to 29 inclusive section 41 of 1480 and being part of the land comprised in Certificate of Title volume 2423 folio 111 volume 2628 folio 144 and volume 2174 folio 28 being strips of land 20 feet wide on each side of and adjacent to the centre line of the proposed electric high tension transmission line from Carlingford to Liffogue which centre line intersects the south-eastern side of Orange street at a point distant 212 feet 8 inches south-west of its intersection with the south-western side of Hamilton street and which centre line bears westerly to intersect the south-western side of Hamilton street aforesaid at a point distant 80 feet 51 inches north-west of its intersection with the north-western side of Clyde street and said to be partly in the possession of each of the following owners: Mrs. Hesterella Neill, James Edward Mahony and John Harold Marshall.

Also all that parcel of land situate as aforesaid being part of lots 12 to 29 inclusive and lots 30 to 32 inclusive section 41 of 1480 and being part of the land comprised in Certificate of Title volume 2423 folio 111 volume 2628 folio 144 volume 2221 folio 222 and volume 2262 folio 213 being strips of land 20 feet wide on each side of and adjacent to the centre line of the proposed electric high tension transmission line from Carlingford to Liffogue which centre line intersects the south-eastern side of Normal road at a point distant 90 feet 7 inches south-west of its intersection with the north-eastern boundary of the land comprised in Certificate of Title volume 207 folio 42 aforesaid and which centre line bears easterly to intersect the north-western side of Orange street at a point distant 263 feet 1 inch north-east of its intersection with the north-eastern boundary of the land comprised in Certificate of Title volume 207 folio 42 aforesaid and said to be partly in the possession of each of the following owners: Mrs. Ethel Martha Wilson, Mrs. Alice Jane Boyd, Spence Jim Macauliffe and Stanley Manfred Hooper.

Signed at Sydney, this twentieth day of December, 1911.

E. W. STRRET, Lieutenant-Governor.

By His Excellency's Command,

F. J. FINNAN, for Minister for Transport.

(1804)

GOD SAVE THE KING!

Plan G

Plan H

Plan I

Plan I

Plan I

Plan I

*Acceptance
in agreement
with Plans
A, B, C, D, E, F, G, H, I.*

This is the copy Gazette Notification referred to in the annexed Certificate.

For The Commissioner for Railways

W. H. Andrews
Secretary for Railways.

No. **622371**

Issued by **Railways**
 Solicitor for **Portuguese**
Sydney

NOTICE OF RESUMPTION

of Excess

10/11/1957
[Signature]

Particulars entered in Register Book.

Vol.	106	107	108	109	110	111	112
177	172	2893	75	2021	2	221	178
126	99	2630	80	1498	123	222	118
248	86	2630	87	272	27	222	177
252	15	2630	100	202	121		
250	27	2630	101	228	122		
287	12	2630	102	228	122		
297	22	2630	103	228	122		
277	102	2630	104	228	122		
270	27	2630	105	228	122		
250	10	2630	106	228	122		
252	10	2630	107	228	122		

day of *January*, 1957
 at *12* minutes
 o'clock in the *noon*.

J. H. Pitt
 Registrar General



RECEIVED
 15/2/57
 Registrar General

Shire of Blacktown

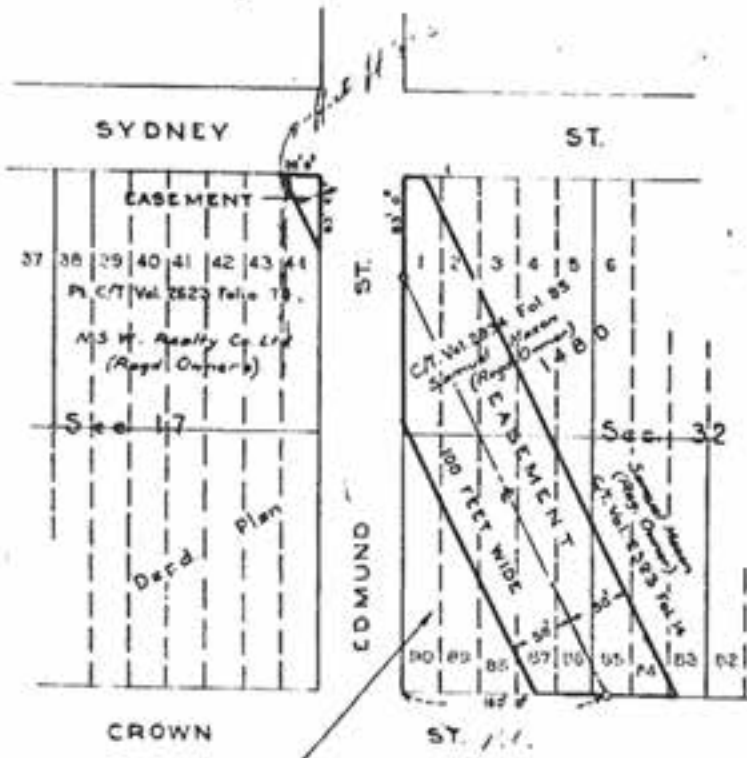
F 622371

PLAN OF EASEMENT

being part of Lots 1 to 4 incl. and part of Lots 83 to 80 incl.
 Sec 32 also part of Lots 43 & 44, Sec. 17, D.P. 1480
 Parish of St Matthew County of Cumberland

Scale: 100 Feet to 1 inch.

Accepted for ~~the~~ ~~purpose~~ ~~only~~ and will
 not be used in connection with the preparation
 of any new ~~plans~~ ~~of title~~.



This margin to be left free from notation

Signature of parties to be made in this margin
 For and on behalf of The Commissioner for Railways.

[Signature]
 Secretary for Railways

This is the plan "A" referred to as enclosure to the Notice of Resumption
 from by to the Commissioner for Railways
 dated the 1st day of February 1952.

B.

Centre Line of Transmission Line shown thus

DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH	Des.	Rev.	Passed	R.W. M... CHIEF ELECTRICAL ENGINEER
	Tod.	
132 KV TRANSMISSION LINE CARLINGFORD TO LITHGOW	Ord.	56W		LE 62049

Shire of Blacktown

F 622371

PLAN OF EASEMENT
 being part of Lots 36 to 43 incl. and parts of Lots 45 to 50 incl.
 Sec. 18, D.P. 1480

Parish of St Matthew County of Cumberland

Scale: 100 Feet to 1 Inch.

Accepted for the purposes only and will not be taken in connection with the execution of any law or order of the



This margin to be left free from notation

Signatures of parties to be made to this certificate
 For and on behalf of the Commissioner for Railways.
[Signature]
 Secretary for Railways.

This is the plan "B" referred to as annexure to the Notice of Resumption
 from by to the Commissioner for Railways
 dated the 15th day of January 1952.

B.

Centre Line of Transmission Line shown thus →

DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH	Des.	Per.	Passed	R.W. Mackay 27-151 CHIEF ELECTRICAL ENGINEER
	Ted.	Ord.	SGM	
	132 KV TRANSMISSION LINE CARLINGFORD TO LITHGOW			
				LE 62050

Shire of Blacktown

F 62287E

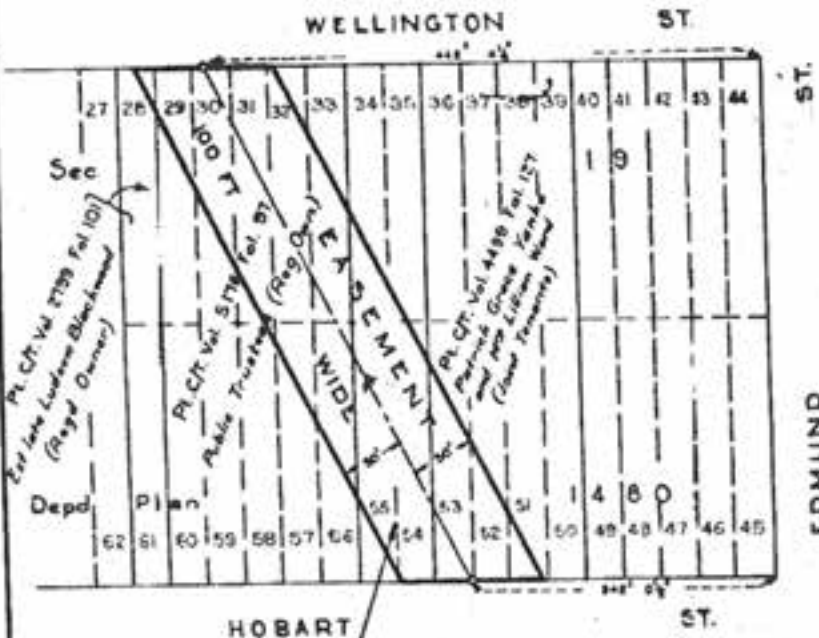
PLAN OF EASEMENT

being part of Lots 28 to 35 incl. and part of Lots 31 to 38 incl.
 Section 19, D.P. 1480

Parish of St Matthew County of Cumberland

Scale: 100 Feet. to 1 inch.

Accepted for the purposes only and will
 not be used for the purpose of the registration
 of any other instrument of title.



This margin to be left free from notation

C/T. Val. 817 Feb 112
 Mrs. Winifred Jessie Cummins } Joint Tenants
 & William John Ziesch }

B.

Centre Line of Transmission Line shown thus -

DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH	Des.	100	Passed	R.W. Macleay CHIEF ELECTRICAL ENGINEER
	Tot.	000		
132 kV TRANSMISSION LINE CARLINGFORD TO LITHGOW	Ord.	50W		LE 62051

For and on behalf of the Commissioner for Railways.
[Signature]
 Commissioner for Railways.

This is the plan "C." referred to as annexure to the Notice of Resumption
 from _____ to the Commissioner for Railways
 dated the _____ day of _____ 1952.

Witness

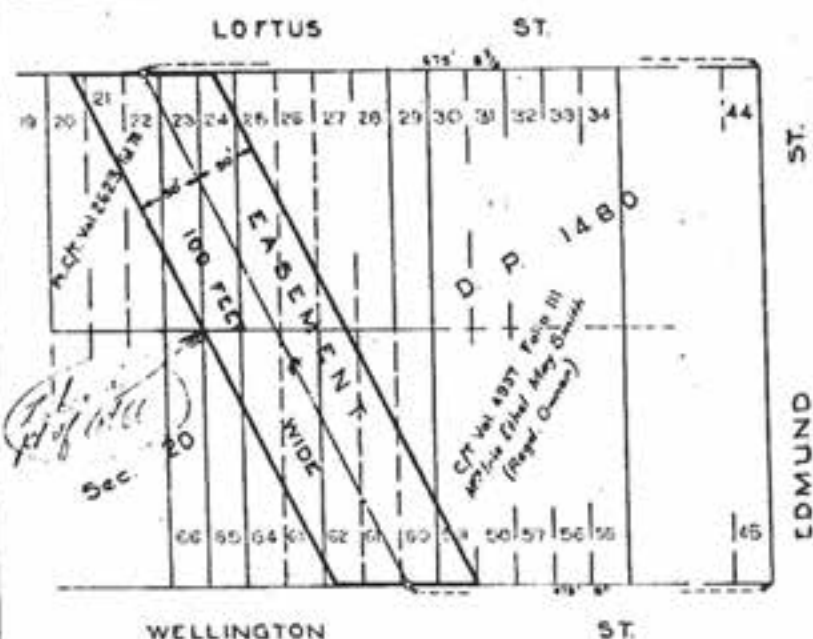
Shire of Blacktown

PLAN OF EASEMENT

being part of Lots 20 to 27 incl. and part of Lots 58 to 66 incl.
 Section 20, D.P. 1480

Parish of St Matthew County of Cumberland

Scale: 100 Feet to 1 inch.



This map is to be left free from notation

Signature of person to be submitted to Commissioner for Railways.
 For use on behalf of the Commissioner for Railways.
[Signature]
 Secretary for Railways.
 Station for Railways

This is the plan "D." referred to as annexure to the Notice of Resumption from _____ by _____ As the Commissioner for Railways dated the _____ day of _____ 1952.
 Witness.

REFERENCE

Lot	Sec.	D.P.	Part of Title	Registered Owner
			Folio	
20 to 22	20		2623 78	NSW Realty Co Ltd
23	"		817 105	Fletcher Selvie
24	"		884 31	Cornelius Joseph Connel
26 to 27	"	0	852 15	Ms Elsie Hendry & Mr John Hendry Joint Tenants
58	"	1	2636 97	Mr Ellen May Steel Bowrey
65	"		2636 93	Mr Nina Alma Carlow
62 & 64	"		978 78	William Thomas Reen
60 & 62	"		2640 59	Mr Elsie Scott

Centre Line of Transmission Line shown thus

DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH	Des.	cc-	Passed	R.W. No. <i>17-2-51</i> CHIEF ELECTRICAL ENGINEER
	132 kV TRANSMISSION LINE CARLINGFORD TO LITHOW	Tcd.	cc-	
	Ord.	SGW		

B.

Shire of Blacktown

62053

PLAN OF EASEMENT

being part of Lots 18 to 19 incl., part of Lots 23 to 29 incl. Sec. E1
 and part of Grantham Farm D.P. 1480

Parish of St. Matthew County of Cumberland

Scale: 100 Feet to 1 Inch.

Accepted by the Council pursuant to the provisions of the Act and will not be used in connection with the preparation of any local Council plan.

This margin to be left free from notation



This is the plan "E." referred to as an annexure to the Notice of Resumption
 from by the Commissioner for Railways
 dated the 1st day of February 1952.
 Witness

This is the plan "E." referred to as an annexure to the Notice of Resumption
 from by the Commissioner for Railways
 dated the 1st day of February 1952.
 Witness

Centre Line of Transmission Line shown		DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH		Dra. S.G.M. Ted. S.G.M. Ckd. S.G.M.	Passed 27.2.51 CHIEF ELECTRICAL ENGINEER
132 KV TRANSMISSION LINE CARLINGFORD TO LITHGOW		LE 62053			

B

Shire of Blacktown

P. 428/1

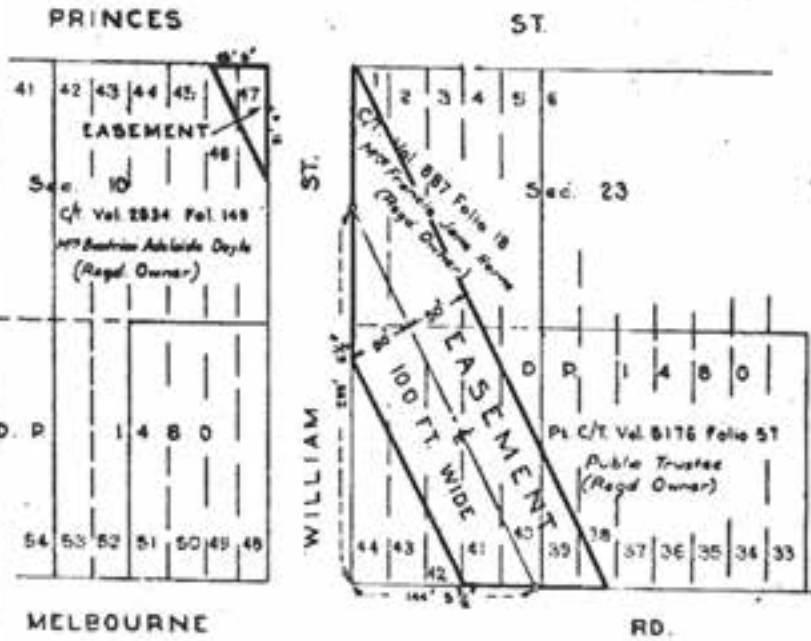
PLAN OF EASEMENT

being part of Lots 1 to 4 incl and part of Lots 38 to 44 incl,
 Sec. 23 also part of Lots 46 & 47, Sec. 10, DP1480

Parish of St Matthew County of Cumberland

Scale: 100 Feet to 1 Inch.

Accept I have read the above proposals only and will
 not be liable in connection with the preparation
 of any new Conduits of 110kV.



This margin to be left free from notation

Signature of parties to be made in this margin
 Per and on behalf of the Commissioner for Railways
John Allan Anderson
 Commissioner for Railways

This is the plan "P." referred to as annexure to the Notice of Resumption
 from by _____ to the Commissioner for Railways
 dated the _____ day of _____ 1952.
 Witness _____

Centre Line of Transmission Line shown thus

DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH	Des. 11-1	Passed	R.W. Mackay per <i>[Signature]</i> 17.1.51
	132 KV TRANSMISSION LINE CARLINGFORD TO LITHGOW	Ted. 100	CHIEF ELECTRICAL ENGINEER
	Cid. 100		LE 62055

B.

Shire of Blacktown

622056

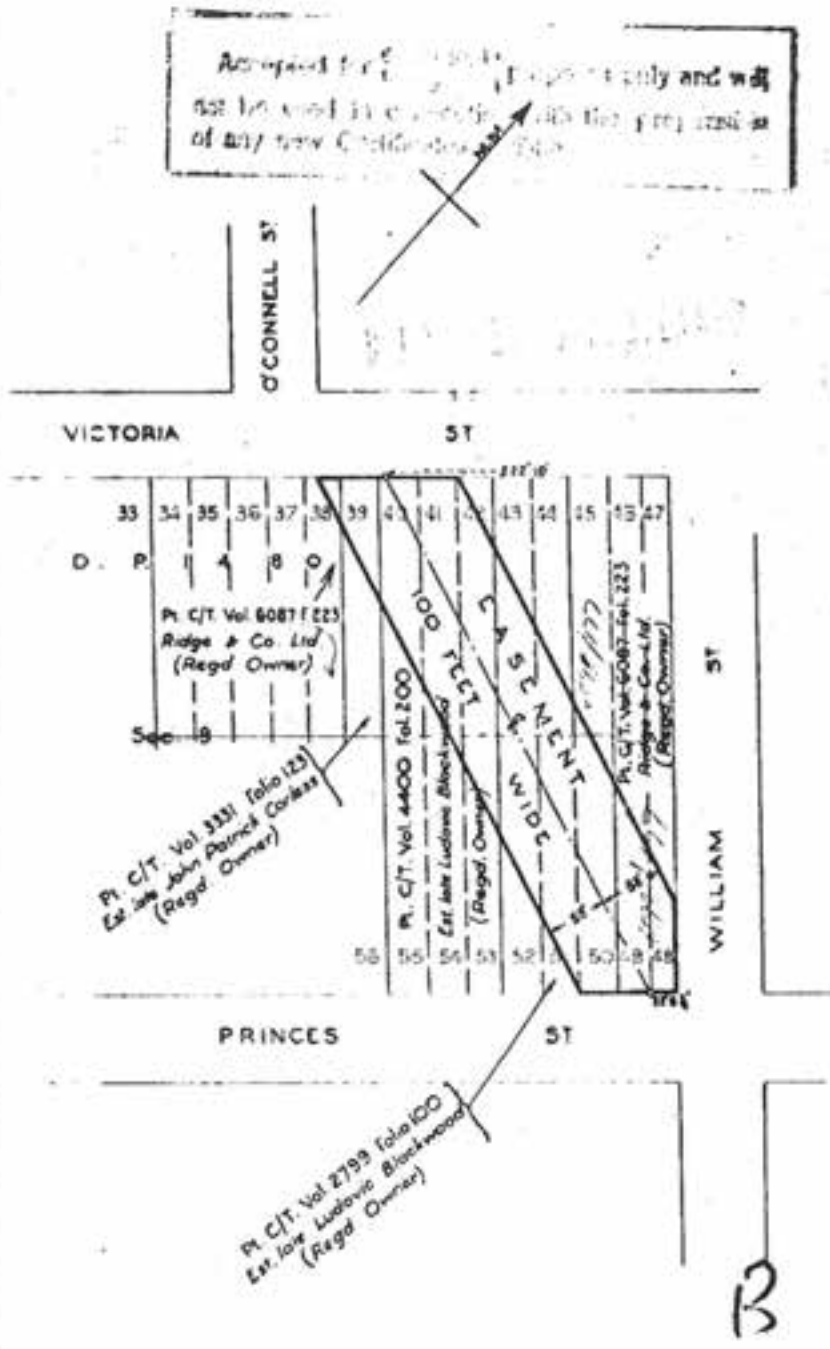
PLAN OF EASEMENT

being part of Lots 38 to 45 incl. and part of Lots 48 to 54 incl. Sec. 9,
 D. P. 1480.

Parish of St. Matthew County of Cumberland

Scale: 100 Feet to 1 inch.

Approved for the purposes only and will not be used in connection with the proposals of any new Corporation.



This margin to be left free from notation

Signature of person to be made to this margin
 For and on behalf of The Commissioner for Railways.

Handwritten signature
 Secretary for Railways

This is the plan "G." referred to as annexure to the Notice of Resumption

from by the Commissioner for Railways dated the 15th day of February 1952.

Witness

Centre Line of Transmission Line shown thus

DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH	Des.	ICW	Passed	R. W. MACHAY CHIEF ELECTRICAL ENGINEER
	Tel.	606	1/10/52	
152 kV TRANSMISSION LINE CARLINGFORD TO LITHGOW	Ord.	3CN		LE 62056

Shire of Blacktown

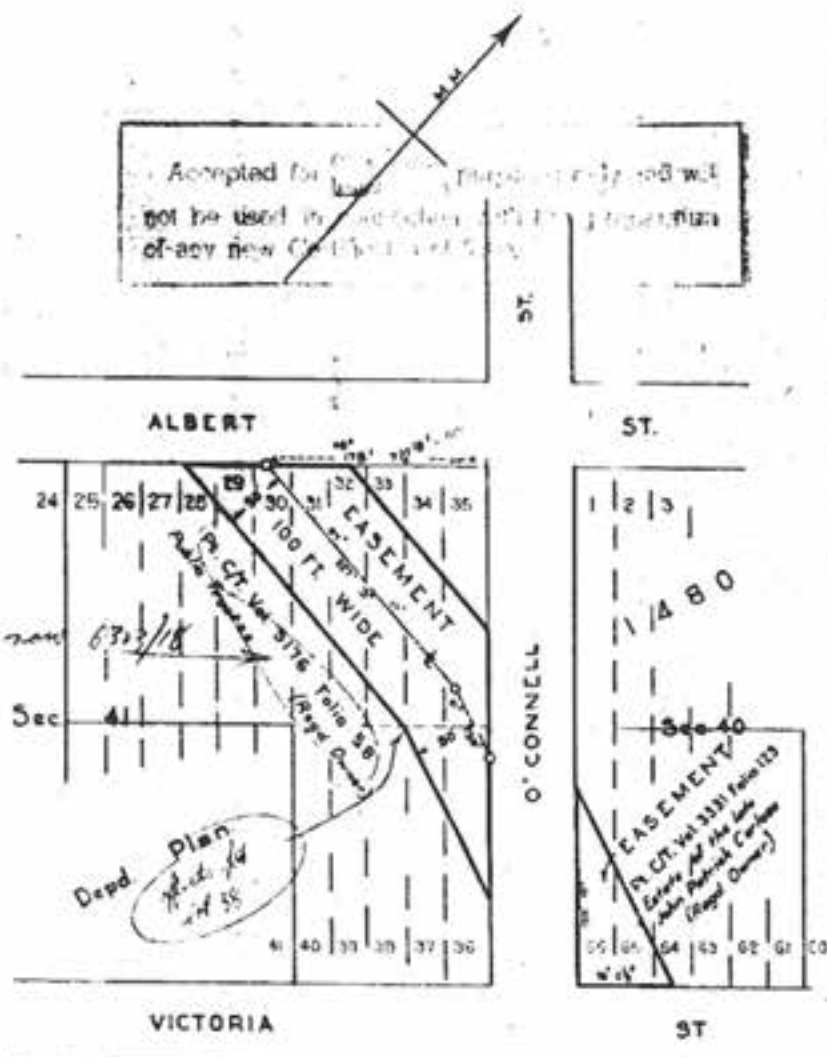
F 622371

PLAN OF EASEMENT

being part of Lots 26 to 36 incl. Sec 41 and part of
 Lots 24 to 36 incl. Sec 40 D.P. 1400

Parish of St Matthew County of Cumberland

Scale: 100 Feet to 1 Inch.



Accepted for use by the Council and will
 not be used in connection with
 of any new Railway and any

This margin to be left free from notation

Signature of parties to be made in this margin
 For and on behalf of the Council for Railways
John McIndoe
 Secretary for Railways
 Collector for Railways

This is the plan "H." referred to as annexure to the Notice of Resumption
 from *by* to the Commissioner for Railways
 dated the *11th* day of *February* 1952.
 Witness

Centre Line of Transmission Line shown thus -

DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH	Des. No.	Passed	R.W. Muehler 22.3.51 CHIEF ELECTRICAL ENGINEER
	Tel. No.	<i>R.V. 6/4</i>	
	Ord. No.	164	
132 KV TRANSMISSION LINE CARLINGFORD TO LITHGOW			LE 62057

B.

Shire of Blightown

F 60897E

PLAN OF EASEMENT

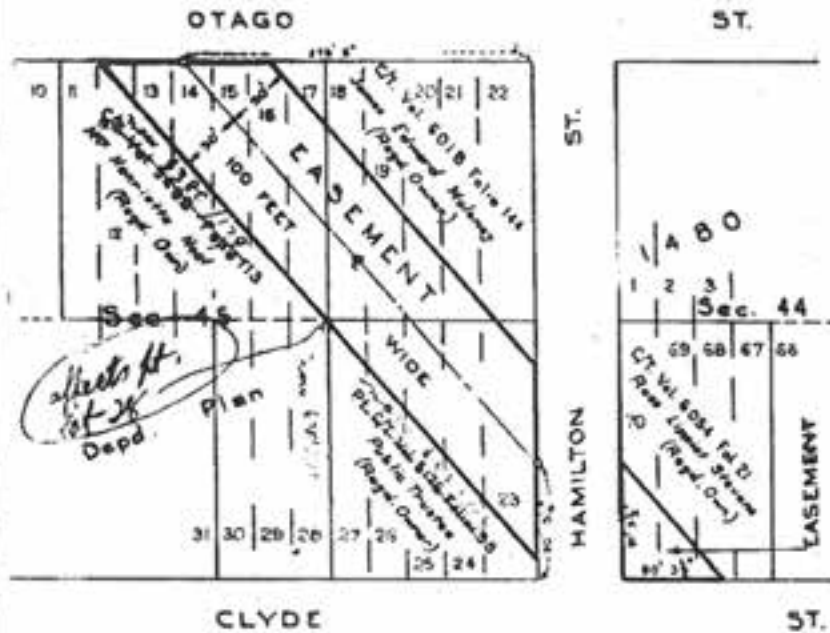
being part of Lots 12 to 28 incl. Sec 45 and part of Lots 66 to 70 incl. Sec. 44, D.P. 1480

Parish of St Matthew County of Cumberland

Scale: 100 Feet to 1 Inch.

Accepted for the purposes only and will not be used in connection with the preparation of any new Certificate of Title

This margin to be left free from notation



For and on behalf of the Commissioner for Railways
 Secretary for Railways

This is the plan "I" referred to as annexure to the Notice of Resumption from by As the Commissioner for Railways dated the 18th day of February 1952.

B.

Centre Line of Transmission Line shown thus - - - - -

DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH	Des.	100	Passed	R.W. Macdonald CHIEF ELECTRICAL ENGINEER
	Tod.	004		
	Ord.	56W		
132 KV TRANSMISSION LINE CARLINGFORD TO LITHGOW				LE 62060

of Blackdown

F 622371

PLAN OF EASEMENT

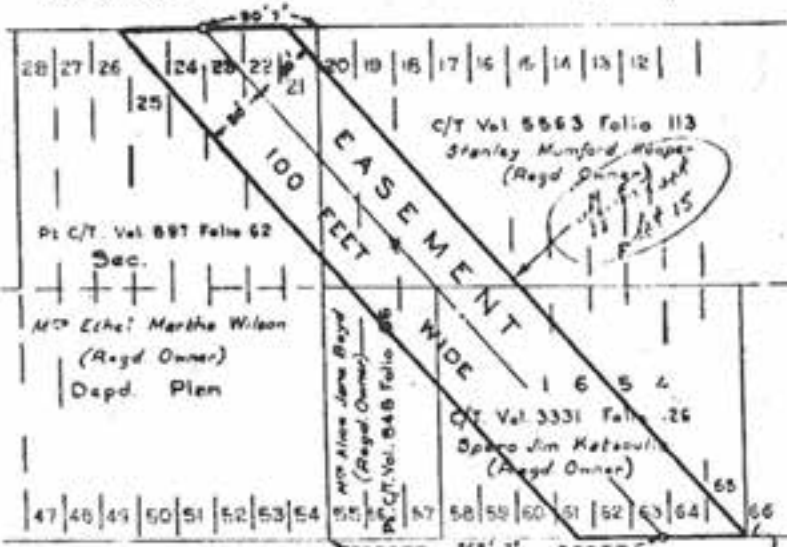
part of Lots 18 to 26 Incl, and part of Lots 55 to 65 Incl,
 Section F, of D.P. 1654
 Parish of St Matthew County of Cumberland

Scale: 100 Feet to 1 inch.

Accepted for ~~connection~~ ^{connection} purposes only and will
 not be used in connection with the preparation
 of any new Certificates of Title.

NORWOOD

RD.



OTAGO

ST

BRISBANE ST.

Handwritten note: done by ... 17/11/16

B.

Centre Line of Transmission Line shown thus →

DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH	Des. by	Prepd	R.W. Mackay 10-4-84 CHIEF ELECTRICAL ENGINEER
	Tot. nos	830	
132 kV TRANSMISSION LINE CARLINGFORD TO LITHGOW	Ord. No.	567	LE 62061

This margin to be left free from notation

Done in presence of the Commissioner for Railways.
 Per and on behalf of the Commissioner for Railways.
Handwritten signature: [Signature]
 Secretary for Railways.

This is the plan "F" referred to as annexure to the Notice of Resumption
 from by the Commissioner for Railways
 dated the 11th day of February 1952.
 Witness

Shire of Blacktown.

F 622371

PLAN OF EASEMENT

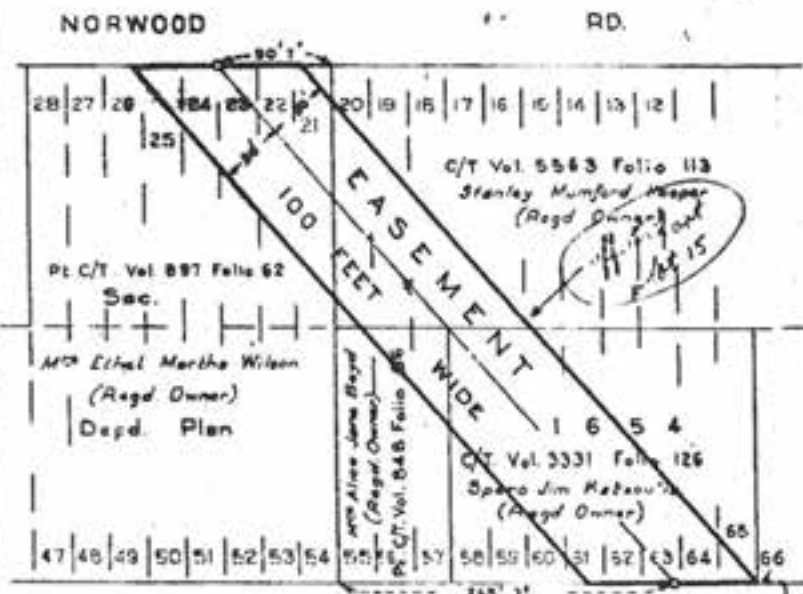
being part of Lots 15 to 26 incl, and part of Lots 55 to 66 incl,
 Section F, of D.P. 1654

Parish of St Matthew County of Cumberland

Scale: 100 Feet to 1 inch.

Accepted for ~~staking~~ ^{staking} purposes only and will
 not be used in connection with the preparation
 of any new Certificate of Title.

This margin to be left free from notation



Centre Line of Transmission Line shown thus

DEPT. OF RAILWAYS, NEW SOUTH WALES ELECTRICAL BRANCH 132 kV TRANSMISSION LINE CARLINGFORD TO LITHGOW	Des.	sen	Passed	RW Mackay No. 10-4-41 CHIEF ELECTRICAL ENGINEER LE 62061
	Tcd.	o.c.	8/10	
	Ord.	SGW		

This is the plan "J.C." referred to as an enclosure to the Notice of Resumption
 from by to the Commissioner for Railways
 dated the 11th day of February 1952.
 Witness



Title Search

InfoTrack
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 2323-14

SEARCH DATE	TIME	EDITION NO	DATE
17/2/2014	3:10 PM	-	-

VOL 2323 FOL 14 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF ST MATTHEW COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1480.

FIRST SCHEDULE

JOHN EDWARD MASON (T P605234)

SECOND SCHEDULE (4 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(3)
- 2 P622371 EASEMENT AFFECTING THE PART OF LOTS 83, 84 & 85
WITHIN DESCRIBED SHOWN SO BURDENED IN VOL 2323 FOL 14
0631648 EASEMENT VESTED IN PROSPECT ELECTRICITY
- 3 Y932448 MORTGAGE TO SWB COMMUNITY CREDIT UNION LIMITED
- 4 Z104999 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 83-85 SEC. 32 IN DP1480.

*** END OF SEARCH ***

mg

PRINTED ON 17/2/2014

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

17/02/2014

Appendix E – NSW EPA Records



You are here: [Home](#) > [Contaminated land](#) > [Record of notices](#)

Search results

Your search for: LGA: Blacktown City Council

Matched 5 notices
relating to 2 sites.

[Search Again](#)

[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
Kings Park	21 Tattersall Road	Former Dow Corning Sealants Factory	3 former
Seven Hills	27 Powers Road	Ma-Refine Oils Seven Hills	2 current

Page 1 of 1

10 February 2014

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You are here: [Home](#) > [Environment protection licences](#) > [POEO Public Register](#) > [Search for licences, applications and notices](#)

Search results

Your search for: **General Search** with the following criteria

Suburb - RIVERSTONE

returned 47 results

[Export to excel](#)

1 of 3 Pages

[Search Again](#)

Number	Name	Location	Type	Status	Issued date		
1100	A J BUSH & SONS (MANUFACTURES) PTY LTD	WINDSOR ROAD, RIVERSTONE, NSW 2765	POEO licence	Issued	09 Oct 2000		
1011896	A J BUSH & SONS (MANUFACTURES) PTY LTD	WINDSOR ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	06 May 2002		
1020686	A J BUSH & SONS (MANUFACTURES) PTY LTD	WINDSOR ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	21 May 2003		
1095658	A J BUSH & SONS (MANUFACTURES) PTY LTD	WINDSOR ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	12 Dec 2008		
1118850	A J BUSH & SONS (MANUFACTURES) PTY LTD	WINDSOR ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	02 Sep 2010		
6361	A.C.N. 098 953 336 PTY LTD	34 WELLINGTON STREET, RIVERSTONE, NSW 2765	POEO licence	Surrendered	09 Jun 2000		
1015255	A.C.N. 098 953 336 PTY LTD	34 WELLINGTON STREET, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	02 May 2002	Connect	Fe
1017861	A.C.N. 098 953 336 PTY LTD	34 WELLINGTON STREET, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	30 Aug 2002		We Put
2550	Auscol Pty Ltd	148 RIVERSTONE PDE, RIVERSTONE, NSW 2765	POEO licence	Issued	13 Jun 2000		
1027280	Auscol Pty Ltd	148 RIVERSTONE PDE, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	30 May 2003		
1050914	Auscol Pty Ltd	148 RIVERSTONE PDE, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	01 Sep 2005		
1095910	Auscol Pty Ltd	148 RIVERSTONE PDE, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	30 Jan 2009		
1519688	Auscol Pty Ltd	148 RIVERSTONE PDE, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	30 Jan 2014		
13102	AUSTRALIAN ECO OILS PTY LIMITED	55 Princes Street, RIVERSTONE, NSW 2765	POEO licence	Issued	12 Jun 2009		
4926	AUSTRALIAN WATER TECHNOLOGIES PTY LTD	BANDON ROAD, RIVERSTONE, NSW 2765	POEO licence	Surrendered	24 Jul 2000		
1001542	AUSTRALIAN WATER TECHNOLOGIES PTY LTD	BANDON ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	19 Sep 2000		
6070	AXALTA COATING SYSTEMS AUSTRALIA PTY LTD	13 MELBOURNE ROAD, RIVERSTONE, NSW 2765	POEO licence	Issued	11 May 2000		
1005172	AXALTA COATING SYSTEMS AUSTRALIA PTY LTD	13 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	21 Mar 2001		

1049736	AXALTA COATING SYSTEMS AUSTRALIA PTY LTD	13 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Issued Variation	13 Jul 2005
1093178	AXALTA COATING SYSTEMS AUSTRALIA PTY LTD	13 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Issued Variation	14 May 2009

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10 February 2014



You are here: [Home](#) > [Environment protection licences](#) > [POEO Public Register](#) > [Search for licences, applications and notices](#)

Search results

Your search for: **General Search** with the following criteria

Suburb - RIVERSTONE

returned 47 results

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Number	Name	Location	Type	Status	Issued date
1107106	AXALTA COATING SYSTEMS AUSTRALIA PTY LTD	13 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	11 Feb 2010
1117669	AXALTA COATING SYSTEMS AUSTRALIA PTY LTD	13 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	13 Sep 2010
1122844	AXALTA COATING SYSTEMS AUSTRALIA PTY LTD	13 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	16 Feb 2011
1126655	AXALTA COATING SYSTEMS AUSTRALIA PTY LTD	13 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	06 Apr 2011
1130372	AXALTA COATING SYSTEMS AUSTRALIA PTY LTD	13 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	11 Jul 2011
1502787	AXALTA COATING SYSTEMS AUSTRALIA PTY LTD	13 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	05 Dec 2011
10989	BETTER DRUMS PTY LTD	3/11 EDWARD STREET, RIVERSTONE, NSW 2765	POEO licence	Surrendered	15 Nov 2000
1021908	BETTER DRUMS PTY LTD	3/11 EDWARD STREET, RIVERSTONE, NSW 2765	s.91 Clean Up Notice	Issued	01 Nov 2002
1664	BLACKTOWN CITY COUNCIL	GARFIELD ROAD EAST, RIVERSTONE, NSW 2765	POEO licence	Surrendered	26 Jun 2000
11620	CONNIE HOLLOWAY	132 BURFITT ROAD, RIVERSTONE, NSW 2765	POEO licence	Issued	14 Mar 2002
1041409	CONNIE HOLLOWAY	132 BURFITT ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	20 Oct 2004
1042040	CONNIE HOLLOWAY	132 BURFITT ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	17 Nov 2004
1096075	CONNIE HOLLOWAY	132 BURFITT ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	21 Jan 2009
1107104	CONNIE HOLLOWAY	132 BURFITT ROAD, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	08 Feb 2010
5726	DINGA ENTERPRISES PTY LIMITED	UNIT 4/29-31 HOBART STREET, RIVERSTONE, NSW 2765	POEO licence	Surrendered	15 Aug 2000
1018797	DINGA ENTERPRISES PTY LIMITED	UNIT 4/29-31 HOBART STREET, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	09 Dec 2002
1217	HANSON CONSTRUCTION MATERIALS PTY LTD	LOT 48 MELBOURNE ROAD, RIVERSTONE, NSW 2765	POEO licence	No longer in force	01 May 2000
2701	HYMIX AUSTRALIA PTY LIMITED	55 MELBOURNE ROAD, RIVERSTONE, NSW 2765	POEO licence	No longer in force	21 Mar 2000

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Environment & Heritage | PRPOEO

1007047	HYMIX AUSTRALIA PTY LIMITED	55 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Issued Variation	09 Jun 2001
1079609	HYMIX AUSTRALIA PTY LIMITED	55 MELBOURNE ROAD, RIVERSTONE, NSW 2765	s.58 Licence Issued Variation	30 Oct 2007

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10 February 2014



You are here: [Home](#) > [Environment protection licences](#) > [POEO Public Register](#) > [Search for licences, applications and notices](#)

Search results

Your search for: **General Search** with the following criteria

Suburb - Riverstone

returned 47 results

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Number	Name	Location	Type	Status	Issued date
1032742	J.M.TYRE RECYCLING PTY LTD	81 RIVERSTONE PARADE, RIVERSTONE, NSW 2765	s.55 Licence Refusal	Issued	26 Nov 2003
5625	ROADMASTER HAULAGE PTY LTD	81 RIVERSTONE PARADE, RIVERSTONE, NSW 2765	POEO licence	Surrendered	23 Oct 2000
11949	SYDNEYWIDE PIPE CLEANING PTY LTD	40 Edward Street, RIVERSTONE, NSW 2765	POEO licence	Issued	23 Jun 2004
1072596	SYDNEYWIDE PIPE CLEANING PTY LTD	40 Edward Street, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	15 May 2007
1093498	SYDNEYWIDE PIPE CLEANING PTY LTD	40 Edward Street, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	30 Dec 2008
1096756	SYDNEYWIDE PIPE CLEANING PTY LTD	40 Edward Street, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	16 Jan 2009
1108622	SYDNEYWIDE PIPE CLEANING PTY LTD	40 Edward Street, RIVERSTONE, NSW 2765	s.58 Licence Variation	Issued	15 Jan 2010

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THE EPA Site Management Class	Explanation
A	The contamination of this site is being assessed by the EPA. Sites which have yet to be determined as significant enough to warrant regulation may result in no further regulation under the <i>Contaminated Land Management Act 1997</i> .
B	The EPA is awaiting further information to progress its initial assessment of this site.
C	The contamination of this site is or was regulated under the <i>Contaminated Land Management Act 1997</i> . Information about current or past regulatory action on this site can be found on the EPA website (www.epa.nsw.gov.au) - Environmental Issues - Contaminated Land - Record of EPA notices.
D	The contamination of this site is or was regulated under the <i>Protection of the Environment Operations Act 1997</i> . Information about current or past regulatory action on this site can be found on the EPA website (www.epa.nsw.gov.au) - Environmental Issues - Environment Protection Licences - POEO public register.
E	This is a premises with an operational Underground Petroleum Storage System, such as a service station or fuel depot. The contamination of this site is managed under the <i>Protection of the Environment Operations Act 1997</i> and the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008.
F	The contamination of this site is managed by a planning approval process. The consent authority is either the local council or a government agency, such as the Department of Planning.
G	Based on the information made available to the EPA to date, the contamination of this site is considered by the EPA to be not significant enough to warrant regulatory intervention under the <i>Contaminated Land Management Act 1997</i>
H	Initial assessment completed. The contamination of this site is to be regulated by the EPA

Suburb/City	Site Description	Site Address	Activity that caused the contamination	s60 Form Received	EPA Initial Assessment	EPA Management Class
Punchbowl	Punchbowl Laundry	42-44 Belmore Road	Chemical Industry	Yes	In progress	B
Putney		20 Waterview Street		Yes	In progress	A
Pymble	Caltex Service Station	1117 Pacific Hwy	Service Station	yes	Completed	G
Pymble	Shell Coles Express Service Station	21 Ryde Road	Service Station	Yes	In progress	A
Pymble	Former 3M site	950 Pacific Highway	Gasworks	yes	Completed	G
Quakers Hill	Caltex Service Station	450 Quakers Hill Parkway	Service Station	Yes	In progress	B
Quakers Hill	Mobil Service Station	83 Lalor Road	Service Station	Yes	In Progress	E
Queanbeyan	Mobil Depot	109 High Street	Other Petroleum	Yes	In Progress	E
Queanbeyan	Former Mobil Service Station	151-153 Uriarra Street	Service Station	yes	In Progress	A
Queanbeyan	Bill Lilley Automotive	169 Crawford Street	Service Station	Yes	In progress	B
Queanbeyan	Woolworths Petrol	196 Crawford Street Cnr Morisset Street	Service Station	yes	In Progress	A
Queanbeyan	Caltex Depot	5 Stephens Road	Service Station	Yes	In progress	B
Queanbeyan	BP Queanbeyan	50 Yass Road	Service Station	Yes	Completed	D G
Queanbeyan	Caltex Service Station	Bungendore Rd	Service Station	Yes	In progress	B
Queanbeyan	Caltex Service Station	Lanyon Dr Cnr Mccrae St	Service Station	Yes	In progress	B
Quirindi	Caltex Service Station, Quirindi	199-201 George St	Service Station	yes	In Progress	B
Quirindi	Mobil Depot, Quirindi	4-6 Cross Street	Other Petroleum	yes	In Progress	A
Ramsgate	Shell Coles Express Service Station	Grand Parade cnr Ramsgate Road	Service Station	Yes	In Progress	B
Randwick	7 Eleven Service Station	128 Barker Street	Chemical Industry	Yes	In progress	A
Randwick	7 Eleven Service Station	128 Barker Street	Service Station	Yes	Completed	C
Randwick	Caltex Service Station	2 Alison Rd	Service Station	Yes	In progress	B
Randwick	United Service Station Clovelly	33-37 Carrington Road cnr Albion Street	Service Station	yes	Completed	H
Randwick	Metro Petroleum	345 Avoca Street	Service Station	No	Completed	G

Suburb/City	Site Description	Site Address	Activity that caused the contamination	s60 Form Received	EPA Initial Assessment	EPA Management Class
Ravensworth	Ravensworth Operations Narama Mine	Lemington Road	Other Industry	Yes	In progress	A
Ravensworth	Cumnock Colliery	Old New England Highway	Other Industry	Yes	In Progress	B
Raymond Terrace	Shell Coles Express Service Station	105 Pacific Highway	Service Station	Yes	In Progress	A
Raymond Terrace	Former Motor Registry	53 William Street	Other Petroleum	Yes	In progress	A
Raymond Terrace	Caltex Service Station	Cnr Adelaide & Glenelg Streets	Service Station	Yes	In progress	B
Redfern	Former Printing Works	101a Marriott St	Other Industry	yes	Completed	G
Redfern	BP Service Station	116 Regent Street	Service Station	Yes	In Progress	E
Revesby	Caltex Service Station	181 The River Rd	Service Station	Yes	In progress	B
Revesby	Dorf Clark Industries	184-194 Milperra Road	Metal Industry	No	Completed	G
Revesby	Mirotone	21 Marigold St	Chemical Industry	No	Completed	C
Revesby	Bituminous Products	33-35 Violet Street	Chemical Industry	No	Completed	C
Rhodes	Former Glad factory site	10-16 Marquet Street	Chemical Industry	No	Completed	G
Rhodes	Homebush Bay sediments adjoining former Berger Paint factory	Oulton Avenue	Chemical Industry	No	Completed	C
Rhodes	Former Allied Feeds site	Walker Street	Other Industry	No	Completed	C F
Rhodes	Former UCAL site	Walker Street	Chemical Industry	No	Completed	C F
Richmond	Caltex Service Station	98 March St	Service Station	Yes	In progress	B
Riverstone	7 Eleven Service Station	55 Garfield Road	Service Station	Yes	In Progress	A
Riverwood	7-Eleven Service Station	30 Bonds Road	Service Station	Yes	In progress	B
Rockdale	Mobil Service Station	239 West Botany Street	Service Station	Yes	In progress	B
Rockdale	7 Eleven Service Station	99 Railway Street	Service Station	Yes	In progress	B
Rooty Hill	Mobil Service Station	1042 Great Western Highway	Service Station	Yes	In progress	B
Rooty Hill	Mobil Service Station	106 Rooty Hill Road South	Service Station	Yes	In progress	B
Rose Bay	Caltex Service Station	488 Old South Head Rd	Service Station	Yes	In progress	B

Suburb/City	Site Description	Site Address	Activity that caused the contamination	s60 Form Received	EPA Initial Assessment	EPA Management Class
Rose Bay	Rose Bay Budget Service station	638 -646 New South Head Road	Service Station	yes	Completed	C
Rosebery		108 Dunning Avenue	Chemical Industry	Yes	In progress	B
Rosebery	Autofoil P/L	2 Mentmore Ave	Other Industry	Yes	Completed	F G
Rosebery	Caltex Service Station	321 Gardeners Rd	Service Station	Yes	In progress	B
Rosebery	Rosebery Service Station	395 Gardeners Road	Service Station	No	Completed	C
Rosehill	James Hardie	Devon Street	Other Industry	No	Completed	C
Roselands	Mobil Service Station	91 Canary's Road	Service Station	Yes	In progress	B
Roselands	Centro Roselands	Roselands Drive	Service Station	Yes	In progress	B
Roseville	Mobil Service Station	2 Boundary Street	Service Station	Yes	Completed	G
Roseville	Coles Express Roseville Chase	388 Eastern Valley Way	Service Station	Yes	In progress	A
Rozelle	Caltex Service Station	121 Victoria Rd	Service Station	Yes	In progress	B
Rozelle	Kenards Rozelle	15-39 Wellington street	Other Petroleum	Yes	In progress	B
Rozelle	Mobil Service Station	178-180 Victoria Road	Service Station	Yes	In progress	B
Rozelle	BP Service Station	cnr Darling Street and Thornton Street	Service Station	Yes	In Progress	E
Rozelle	White Bay Power Station	Robert Street	Other Industry	Yes	In progress	A
Rushcutter's Bay	d'Albora Marinas	1b New Beach Road	Other Industry	Yes	In Progress	A
Rutherford	Rutherford Transpacific	11 Kyle Street	Other Industry	No	Completed	D G
Rutherford	Shell Coles Express Service Station, rutherford	118 New England Highway	Service Station	Yes	In Progress	A
Rutherford	Caltex Service Station	134-138 New England Hwy	Service Station	Yes	In progress	B
Rutherford	Transpacific Industrial Services/Nationwide Oil Pty Ltd	99 Kyle Street	Chemical Industry	Yes	In progress	B
Rydalmere	Rheem Australia	1 Alan Street	Other Industry	Yes	Completed	C
Rydalmere	Former Service Station	262-272 Victoria Road	Service Station	yes	In Progress	A
Rydalmere	BP Service Station	265 Victoria Road	Service Station	Yes	In progress	A
Rydalmere	Caltex Service Station	309 Victoria Rd	Service Station	Yes	In progress	B
Rydalmere	Mitsubishi Electric	348 Victoria Road	Unclassified	yes	Completed	C

Suburb/City	Site Description	Site Address	Activity that caused the contamination	s60 Form Received	EPA Initial Assessment	EPA Management Class
Rydalmere	Hunter Douglas	Victoria Road	Chemical Industry	No	Completed	G
Ryde	Caltex Service Station	110 Lane Cove Rd	Service Station	Yes	In progress	B
Ryde	Mobil Service Station	326-328 Blaxland Road	Service Station	Yes	In progress	B
Ryde	Shell Coles Express Ryde	45 Lane Cove Road	Service Station	Yes	In progress	A
Ryde	Ryde Bus Depot	49 - 75 Buffalo Road	Unclassified	Yes	In progress	B
Sanctuary Point	United Service Station, Sanctuary Point	147 Larmer Avenue	Service Station	Yes	Completed	G
Sandgate		158 Old Maitland Road	Chemical Industry	Yes	In progress	B
Sandgate	North Limited Storage Handling facility	Maitland Road	Other Industry	No	Completed	C G
Sandgate	Caltex Service Station	Pacific Hwy	Service Station	Yes	In progress	B
Sans Souci	7 Eleven Ramsgate	368 Rocky Point Road	Service Station	yes	Completed	H
Sans Souci	7-Eleven Service Station	474-478 Rocky Point Road	Service Station	Yes	In progress	B
Sans Souci	Former Service Station	542-544 Rocky Point Road	Service Station	No	Completed	F
Sans Souci	Kendall Street Reserve	Lawson Street and Kendall Street	Landfill	Yes	In Progress	B
Scone	Scone Works Depot	220 Susan Street	Other Petroleum	Yes	Completed	G
Scone	Shell Coles Express Service Station	91- 93 Kelly Street	Service Station	Yes	Completed	C
Scone	BP - Former Depot	Scone, Guernsey & Susan Streets	Service Station	Yes	Completed	C
Scone	Mobil Scone Airport Elt	Walter Pye Avenue	Other Petroleum	Yes	In progress	B
Seven Hills	Transport Infrastructure Development Corporation	1 Powers Road	Other Industry	Yes	In progress	B
Seven Hills	Caltex Service Station	105 Station Rd	Service Station	Yes	In progress	B
Seven Hills	Mobil Service Station	151 Prospect Highway	Service Station	Yes	In progress	B
Seven Hills	Former BP Service Station	154-156 Prospect Highway	Service Station	Yes	In Progress	A
Seven Hills	Australian Waste Oil Refineries	27 Powers Road	Other Industry	No	Completed	C
Seven Hills	Australia Post	3 Powers Road	Unclassified	Yes	Completed	G

Suburb/City	Site Description	Site Address	Activity that caused the contamination	s60 Form Received	EPA Initial Assessment	EPA Management Class
Unanderra	Prime Service Station and adjoining lands	45-49 Princes Highway	Service Station	Yes	Completed	C G
Unanderra	Caltex Service Station	86-98 Princes Hwy	Service Station	Yes	In progress	B
Unanderra	Veolia Environmental Services	9 Waynote Place	Other Industry	Yes	Completed	D
Undercliffe	Wolli Creek aqueduct	Unwin Street	Unclassified	Yes	Completed	G
Uralla	Caltex Service Station	103 Bridge Street	Service Station	Yes	In progress	B
Uralla	Phoenix Foundry	44 Duke St	Metal Industry	Yes	Completed	G
Urungra	Former Antimony Process plant	Hillside Drive	Chemical Industry	No	Completed	C
Valentine	BP Express Service Station	855 Macquarie Drive	Service Station	Yes	In Progress	E
Valentine	Valentine Public School	Tallawalla Road	Unclassified	Yes	Completed	G
Villawood	Toll Properties	110A Christina Road	Other Industry	Yes	In Progress	A
Villawood	Former Orica Crop Care	2 Christina Road	Chemical Industry	Yes	Completed	C D
Villawood	Former Defence Site	29 Biloela St	Landfill	No	Completed	G
Villawood	Former Siemens/Westinghouse	49 Miowera Road	Other Industry	No	Completed	C G
Villawood	Former Electrical Component Manufacturer	66 Christina Road	Other Industry	Yes	Completed	C
Villawood	PPG Industries	9 Birmingham Avenue	Chemical Industry	yes	In Progress	A
Vineyard	Shell Coles Express Service Station	731 Windsor Road	Service Station	Yes	Completed	E G
Vineyard	Woolworths Petrol	Windsor Road (Corner of Melbourne Street)	Service Station	Yes	In Progress	E
Wagga Wagga	Mobil Service Station	106 Edward Street	Service Station	Yes	In progress	A
Wagga Wagga	Former Shell Depot	11-15 Lake Albert Road	Other Petroleum	Yes	In Progress	A
Wagga Wagga	Caltex Service Station	170 Fitzmaurice St	Service Station	Yes	In progress	B
Wagga Wagga	Former Iron Foundry	212-230 Hammond Street	Metal Industry	No	Completed	G
Wagga Wagga	BP Service Station	31 Bourke Street	Service Station	Yes	In progress	A
Wagga Wagga	Coles Express Wagga Wagga	357-359 Edward Street	Service Station	yes	In Progress	B

Appendix F – Heritage Search

Help us improve access to data



You are here: [Home](#) > [Heritage sites](#) > [Searches and directories](#) > NSW heritage search

Search for NSW heritage

[Return to search page where you can refine/broaden your search.](#)

Statutory listed items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into two sections.

- **Section 1.** contains items listed by the **heritage council** under the NSW Heritage Act. This includes listing on the state heritage register, an interim heritage order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Branch.
- **Section 2.** contains items listed by **local councils & shires and state government agencies**. This section may also contain additional information on some of the items listed in the first section.

Section 1. Items listed under the NSW Heritage Act.

Your search returned 1 record.

Item name	Address	Suburb	LGA	SHR
Riverstone Railway Station Group and Residence	Riverstone Parade	Riverstone	Blacktown	01237

Section 2. Items listed by Local Government and State Agencies.

Your search returned 45 records.

Item name	Address	Suburb	LGA	Info source
Bicentennial Museum	81 Garfield Road East	Riverstone	Blacktown	LGOV
Cassola	20 Riverstone Road	Riverstone	Blacktown	LGOV
Convent	166 Garfield Road East	Riverstone	Blacktown	LGOV
Eastern Creek Bridge	Garfield Road	Riverstone	Blacktown	SGOV
Farmhouse	Riverstone Road	Riverstone	Blacktown	GAZ
Group of Workers' Cottages	23,25,27,29,31,33,37,39,43,45,47 and 49 Richards Avenues	Riverstone	Blacktown	LGOV
Hebe Farm	14 Bridge Street	Riverstone	Blacktown	LGOV
House	21 Church Street	Riverstone	Blacktown	LGOV
House	66 Crown Street	Riverstone	Blacktown	LGOV
House	42 Bourke	Riverstone	Blacktown	LGOV
House	45 Bourke Street	Riverstone	Blacktown	LGOV
House	Redgate Farm Road	Riverstone	Blacktown	GAZ

House	64 Elizabeth Street	Riverstone	Blacktown	LGOV
House	52 Elizabeth Street	Riverstone	Blacktown	LGOV
House	122 Regent Street	Riverstone	Blacktown	LGOV
House	7 Richards Avenue	Riverstone	Blacktown	LGOV
House	17 Richards Avenue	Riverstone	Blacktown	LGOV
House	169 Garfield Road East	Riverstone	Blacktown	LGOV
House	17 George Street	Riverstone	Blacktown	LGOV
House	27 King Street	Riverstone	Blacktown	LGOV
House	25 King Street	Riverstone	Blacktown	LGOV
House	38 Park Street	Riverstone	Blacktown	LGOV
House	22 West Parade	Riverstone	Blacktown	LGOV
House	41 Riverstone Road	Riverstone	Blacktown	LGOV
House & Shop	76 -78 Garfield Road East	Riverstone	Blacktown	LGOV
House & Slab Cottage	180 Garfield Road West	Riverstone	Blacktown	LGOV
Nu Welwyn	4 Clarke Street	Riverstone	Blacktown	LGOV
Parrington Terrace	39 - 41A Garfield Road East	Riverstone	Blacktown	LGOV
Police Station	Elizabeth Street	Riverstone	Blacktown	LGOV
Railway Station Group	Riverstone Parade	Riverstone	Blacktown	LGOV
Redgate	20 Farm Road	Riverstone	Blacktown	LGOV
Riverstone General Cemetery	Garfield Road West	Riverstone	Blacktown	LGOV
Riverstone High School	Regent Street	Riverstone	Blacktown	LGOV
Riverstone Police Station	Railway Terrace, Corner Elizabeth Street	Riverstone	Blacktown	SGOV
Riverstone Public School (former)	Garfield Road East	Riverstone	Blacktown	LGOV
Riverstone Railway Station Group and Residence	Riverstone Parade	Riverstone	Blacktown	SGOV
Rosebank	213 Garfield Road East	Riverstone	Blacktown	LGOV
Rosebank	Garfield Road East	Riverstone	Blacktown	GAZ
Shop	4 Garfield Road West	Riverstone	Blacktown	LGOV
St Andrews Uniting	62 Garfield Road East	Riverstone	Blacktown	LGOV

Church				
St. Johns Catholic Church	164 Garfield Road East	Riverstone	Blacktown	LGOV
St. Pauls Anglican Church	19 Elizabeth Street	Riverstone	Blacktown	LGOV
Station Masters Residence (former)	Riverstone Parade	Riverstone	Blacktown	LGOV
War Memorial	Riverstone Parade	Riverstone	Blacktown	LGOV
Warrawong	158 Riverstone Road	Riverstone	Blacktown	LGOV

There was a total of 46 records matching your search criteria.

Key:

LGA = Local Government Area

GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.

Note: The Heritage Branch seeks to keep the State Heritage Inventory (SHI) up to date, however the latest listings in Local and Regional Environmental Plans (LEPs and REPs) may not yet be included. Always check with the relevant local council or shire for the most recent listings.

Appendix G – Council Records

Applicant LAUREN LUEDECKE
LEVEL 1
50 MARGARET STREET
SYDNEY NSW 2000

Property LOT 1 DP 790369

HOBART STREET,

Suburb RIVERSTONE Parish of St.Matthew

NOTE: The land the subject of this Certificate is known to be located in the suburb of Riverstone.
For all correspondence and property transactions this suburb name is to be used.

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO
SECTION 149(2) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 1988.

1.2 Development Control Plans

As at the date of this certificate the abovementioned land is not affected by Blacktown Development Control Plan 2006. It is affected however by the NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010.

1.3 Relevant State Environmental Planning Policies (SEPPs), including draft policies, or Regional Environmental Plans deemed to be SEPPs

State Environmental Planning Policy - Housing For Seniors Or People With a Disability 2004

State Environmental Planning Policy No. 5 - Housing for Older People and People with a Disability has been repealed by a new State Environmental Planning Policy (SEPP) - Seniors Living 2004, which was renamed to SEPP (Housing for Seniors or People with a Disability) 2004 effective from 12 October 2007. The new SEPP sets out standards and design requirements for self-care housing, "serviced" self-care housing, vertical villages, residential care facilities and hostels. The Policy recognises that demand for these forms of housing will grow over the next 10 - 15 years. It encourages the development of high quality accommodation for our ageing population and for people who have disabilities - housing that is in keeping with the local neighbourhood.

State Environmental Planning Policy No. 6 - Number of Storeys in a Building

This policy sets out a method for determining the number of storeys in a building, to prevent possible confusion arising from the interpretation of various environmental planning instruments.

State Environmental Planning Policy No. 19 - Bushland in Urban Areas

This policy protects and preserves bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. The policy is designed to protect bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

State Environmental Planning Policy No. 22 - Shops and Commercial Premises

The policy permits within a business zone, a change of use from one kind of shop to another or one kind of commercial premises to another, even if the change of use is prohibited under an environmental planning instrument. Development consent must be obtained and the consent authority satisfied that the change of use will have no, or only minor, environmental effect.

State Environmental Planning Policy No. 32 - Urban Consolidation (Redevelopment of Land)

This policy states the Government's intention to ensure that urban consolidation objectives are met in all urban areas throughout the State. The policy focuses on the redevelopment of urban land that is no longer required for the purpose it is currently zoned or used and encourages local councils to pursue their own urban consolidation strategies to help implement the aims and objectives of the policy. Councils will continue to be responsible for the majority of rezonings. The policy sets out guidelines for the Minister to follow when considering whether to initiate a regional environmental plan (REP) to make particular sites available for consolidated urban redevelopment. Where a site is rezoned by an REP, the Minister will be the consent authority.

State Environmental Planning Policy No. 55 - Remediation of Land

This policy provides state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals.

State Environmental Planning Policy No. 62 - Sustainable Aquaculture

This policy encourages the sustainable expansion of the industry in NSW. The policy implements the regional strategies already developed by creating a simple approach to identify and categorise aquaculture development on the basis of its potential environmental impact. The SEPP also identifies aquaculture development as a designated development only where there are potential environmental risks.

State Environmental Planning Policy No. 64 - Advertising and Signage

This policy aims to ensure that outdoor advertising is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of high quality design and finish. The SEPP was amended in August 2007 to permit and regulate outdoor advertising in transport corridors (e.g. freeways, tollways and rail corridors). The amended SEPP also aims to ensure that public benefits may be derived from advertising along and adjacent to transport corridors.

State Environmental Planning Policy - Affordable Rental Housing 2009

This policy establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

State Environmental Planning Policy - Exempt and Complying Development Codes

This policy streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

State Environmental Planning Policy - Major Development 2005

The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan No. 9 - Extractive Industry Sydney Region

This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

- (a) The abovementioned land is subject to the provisions of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and is zoned:

R2 - LOW DENSITY RESIDENTIAL

- (b) Extracts from the environmental planning instrument which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of the environmental planning instrument.

- (c) Extracts from the environmental planning instrument which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.
- (d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.
- (e) The environmental planning instrument does not nominate minimum land dimensions for the erection of a dwelling-house. It does however provide minimum land areas for the erection of a dwelling-house and stipulates that a dwelling must not be erected on land in the Riverstone Scheduled Lands on any lot with a depth that exceeds 35 metres.

- (f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.
- (g) The land is not within a conservation area.
- (h) This land does not contain a heritage item under the protection of an environmental planning instrument.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land and/or in a high risk or high hazard flood area.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land and/or in a high risk or high hazard flood area.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

The NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010 nominates preferred road patterns in this part of the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

The land is affected by a road pattern.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

This lot is shown flood prone on mapping provided by the Department of Planning. The investigation for this area has not been completed and all enquiries should be directed to the Department of Planning. Flood related development controls for this lot are provided in the Development Control Plan for this area, prepared by the Department of Planning. Where development is proposed within or adjacent to land that is shown on the Flood Prone Land figure as being affected by the 1% AEP level, Council may require a more detailed flood study to be undertaken by the applicant to confirm the extent on the flood affectation on that land.

8. LAND RESERVED FOR ACQUISITION

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 provides for the acquisition of certain land zoned RE1, SP2 and E2 by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

This Property is affected by Section 94 Contributions Plan No. 20 - Riverstone & Alex Avenue Precincts.

Note: Pursuant to the Section 94E Direction issued by the Minister for Planning on 4 March 2011, Council must not impose a condition of development consent under Sections 94(1) or 94(3) or the Act requiring the payment of a monetary contribution exceeding \$30,000 for each dwelling authorised by the development consent, or in the case of a development consent that authorises the subdivision of land into residential lots, exceeding \$30,000 for each residential lot authorised to be created by the development consent.

In complying with the Minister's Section 94E Direction, the purchaser is hereby advised that Council may not be in a position to provide all of the facilities listed in the applicable contributions plan due to the potential shortfall of contributions to be received as a result of the \$30,000 per dwelling/lot limit.

This property is affected by a Special Infrastructure Contribution which is designed to levy a special contribution in order to coordinate strategic land use planning with the provision of state or regional infrastructure in the Western Sydney Growth Areas.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Category 1 Type Vegetation

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

- (a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.
- (b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.
- (c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.
- (d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.
- (e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO
SECTION 149(5) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communities. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per: _____

End of Certificate

Schedule 1 Exempt development

(Appendix 4, Clause 3.1)

Note 1. *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* specifies exempt development under that Policy. The Policy has State-wide application.

Note 2. Exempt development may be carried out without the need for development consent under the Act. Such development is not exempt from any approval, licence, permit or authority that is required under any other Act and adjoining owners' property rights and the common law still apply.

Advertisements, signs etc

- (1) Advertisements and advertising structures:
 - (a) Must not be moving signs.
 - (b) If over a public road, must be least 3m above, and 600mm from the outside of, the carriageway of the road.
 - (c) Must not exceed a maximum size of 1.2m long × 600mm high.
 - (d) Must relate to the use of a building on the property on which it is displayed, unless it is in a business zone.
 - (e) Must not be erected on a heritage item, unless the advertisement or structure replaces an existing sign (that was lawfully erected) with an advertisement or structure of the same or lesser size in the same location.
- (2) Business identification signs in a residential zone:
 - (a) Must be for a home office or a business or professional consulting room.
 - (b) Only 1 sign is permitted per premises.
 - (c) Must not exceed a maximum size of 1.2m in length × 600mm in height.
 - (d) May display only:
 - (i) the name of the occupant, and
 - (ii) the address and phone number of the occupant, and
 - (iii) the type of business.
 - (e) Must be located wholly within the boundaries of the property to which it relates.
 - (f) Maximum height of a free-standing sign: 2m above ground level.
 - (g) Must not be illuminated or flashing.
- (3) Wall signs in an industrial zone:
 - (a) Only 1 wall sign is permitted per premises.
 - (b) Must relate to the use of the premises on which it is displayed.
 - (c) Must be displayed on the facade of the premises to which it relates.
 - (d) Must not exceed a maximum size of 2m × 1.2m.
 - (e) Must not extend laterally beyond the wall of any building to which it is attached.
 - (f) Must not project above the top of any wall to which it is attached.
 - (g) Must not cover any window, door or architectural projection.
 - (h) Must be securely fixed to the building to which it is attached.
 - (i) Must not be flashing.
- (4) Business identification signs in an industrial zone:
 - (a) For single occupier buildings:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed maximum size of 500mm × 1.5m, and
 - (iii) must not exceed a maximum height from ground level of 1.5m, and
 - (iv) must not project over a public place, and
 - (v) must be securely fixed to the building to which it is attached; and
 - (vi) must not be flashing.

- (b) For factory units:
 - (i) only 1 sign is permitted per factory, and
 - (ii) each sign must be of uniform size, colour and dimensions and is not to exceed 200mm² per sign, and
 - (iii) must identify only the number of the unit and the name of the respective factory unit occupant, and
 - (iv) must be located on, or behind, the building line setback adjacent to the entrance to the unit, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.
- (c) For sex services premises:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed 1.5m² per sign, and
 - (iii) must be limited to a trade name of the business operated and the address of the premises, and
 - (iv) must not include depictions, pictures or drawings on the sign, and
 - (v) must be located wholly within the boundaries of the property to which it relates.
- (5) Business identification signs in a special purpose or environmental protection zone:
 - (a) must only identify the premises or land on which the sign is located, the name of the occupier, the activity carried out on the premises or land and directions to access the site, and
 - (b) must not exceed a maximum size of 3.5m² per sign.

Change of use of existing community facility to another community facility

- (1) Must not be a change from or to a registered club.
- (2) Must meet any conditions that applied to the existing community facility that relate to any of the following:
 - (a) The maintenance of landscaping.
 - (b) Car parking.
 - (c) The provision of space for the loading or unloading of goods and vehicles.
 - (d) The protection of the environment.

Schedule 2 Complying development

(Appendix 4, Clause 3.2)

Note 1. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 specifies complying development and the complying development conditions for that development under that Policy. The Policy has State-wide application.

Note 2. Information relevant to this Part is also contained in the Act, the Environmental Planning and Assessment Regulation 2000, the Protection of the Environment Operations Act 1997 and the Roads Act 1993.

This schedule is blank on the making of this Precinct Plan.

Part 1 Types of development

Part 2 Complying development certificate conditions

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To allow people to carry out a reasonable range of activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours.
- To support the well being of the community, by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a low density residential environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Bed and breakfast accommodation; Business identification signs; Child care centres; Community facilities; Drainage; Dual occupancies; Dwelling houses; Earthworks; Educational establishments; Environmental protection works; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Neighbourhood shops; Places of public worship; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Veterinary hospitals

4 Prohibited

Any other development not specified in item 2 or 3

Extract from SEPP (SRGC) 2006 – Appendix 4 (Riverstone & Alex Avenue Precinct)

6.2 Attached dwellings in Zone R2 Low Density Residential

(1) The objectives of this clause are:

- (a) to permit, with development consent, attached dwellings within Zone R2 Low Density Residential in limited circumstances, and
- (b) to provide location and development criteria that must be satisfied before development consent can be granted.

(2) Development for the purposes of attached dwellings is permissible with development consent only on land within Zone R2 Low Density Residential that is:

- (a) adjoining land within Zone RE1 Public Recreation or land that is separated from land within Zone RE1 Public Recreation only by a public road, or
- (b) adjoining land within Zone E2 Environmental Conservation or land that is separated from land within Zone E2 Environmental Conservation only by a public road, or
- (c) adjoining land within Zone SP2 Infrastructure and shown on the Land Reservation Acquisition Map as Local Drainage, or that is separated from such land only by a public road.

(3) Before granting development consent under this clause the Council must be satisfied that:

- (a) the attached dwellings will not adversely impact on the amenity of adjoining residential properties, and
- (b) the attached dwellings will be designed and oriented to provide active frontages to and surveillance of the public recreation or drainage land, and
- (c) the attached dwellings will not adversely impact upon or limit solar access to adjoining residential or public open space land.

(4) This clause has effect despite anything to the contrary in the Land Use Table at the end of Part 2 or other provision of this Precinct Plan.

Applicant LAUREN LUEDECKE
LEVEL 1
50 MARGARET STREET
SYDNEY NSW 2000

Property LOT 32 SEC 32 DP 1480

SYDNEY STREET,

Suburb RIVERSTONE

Parish of St.Matthew

NOTE: The land the subject of this Certificate is known to be located in the suburb of Riverstone.
For all correspondence and property transactions this suburb name is to be used.

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO
SECTION 149(2) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 1988.

1.2 Development Control Plans

As at the date of this certificate the abovementioned land is not affected by Blacktown Development Control Plan 2006. It is affected however by the NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010.

1.3 Relevant State Environmental Planning Policies (SEPPs), including draft policies, or Regional Environmental Plans deemed to be SEPPs

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State Environmental Planning Policy No. 5 - Housing for Older People and People with a Disability has been repealed by a new State Environmental Planning Policy (SEPP) - Seniors Living 2004, which was renamed to SEPP (Housing for Seniors or People with a Disability) 2004 effective from 12 October 2007. The new SEPP sets out standards and design requirements for self-care housing, "serviced" self-care housing, vertical villages, residential care facilities and hostels. The Policy recognises that demand for these forms of housing will grow over the next 10 - 15 years. It encourages the development of high quality accommodation for our ageing population and for people who have disabilities - housing that is in keeping with the local neighbourhood.

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The policy permits within a business zone, a change of use from one kind of shop to another or one kind of commercial premises to another, even if the change of use is prohibited under an environmental planning instrument. Development consent must be obtained and the consent authority satisfied that the change of use will have no, or only minor, environmental effect.

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This policy states the Government's intention to ensure that urban consolidation objectives are met in all urban areas throughout the State. The policy focuses on the redevelopment of urban land that is no longer required for the purpose it is currently zoned or used and encourages local councils to pursue their own urban consolidation strategies to help implement the aims and objectives of the policy. Councils will continue to be responsible for the majority of rezonings. The policy sets out guidelines for the Minister to follow when considering whether to initiate a regional environmental plan (REP) to make particular sites available for consolidated urban redevelopment. Where a site is rezoned by an REP, the Minister will be the consent authority.

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This policy aims to ensure that outdoor advertising is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of high quality design and finish. The SEPP was amended in August 2007 to permit and regulate outdoor advertising in transport corridors (e.g. freeways, tollways and rail corridors). The amended SEPP also aims to ensure that public benefits may be derived from advertising along and adjacent to transport corridors.

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This policy establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

State Environmental Planning Policy - Exempt and Complying Development Codes

This policy streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

State Environmental Planning Policy - Major Development 2005

The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan No. 9 - Extractive Industry Sydney Region

This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

- (a) The abovementioned land is subject to the provisions of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and is zoned:

R2 - LOW DENSITY RESIDENTIAL

- (b) Extracts from the environmental planning instrument which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of the environmental planning instrument.

- (c) Extracts from the environmental planning instrument which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.
- (d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.
- (e) The environmental planning instrument does not nominate minimum land dimensions for the erection of a dwelling-house. It does however provide minimum land areas for the erection of a dwelling-house and stipulates that a dwelling must not be erected on land in the Riverstone Scheduled Lands on any lot with a depth that exceeds 35 metres.

- (f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.
- (g) The land is not within a conservation area.
- (h) This land does not contain a heritage item under the protection of an environmental planning instrument.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

The NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010 nominates preferred road patterns in this part of the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

The land is affected by a road pattern.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 provides for the acquisition of certain land zoned RE1, SP2 and E2 by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

This Property is affected by Section 94 Contributions Plan No. 20 - Riverstone & Alex Avenue Precincts.

Note: Pursuant to the Section 94E Direction issued by the Minister for Planning on 4 March 2011, Council must not impose a condition of development consent under Sections 94(1) or 94(3) or the Act requiring the payment of a monetary contribution exceeding \$30,000 for each dwelling authorised by the development consent, or in the case of a development consent that authorises the subdivision of land into residential lots, exceeding \$30,000 for each residential lot authorised to be created by the development consent.

In complying with the Minister's Section 94E Direction, the purchaser is hereby advised that Council may not be in a position to provide all of the facilities listed in the applicable contributions plan due to the potential shortfall of contributions to be received as a result of the \$30,000 per dwelling/lot limit.

This property is affected by a Special Infrastructure Contribution which is designed to levy a special contribution in order to coordinate strategic land use planning with the provision of state or regional infrastructure in the Western Sydney Growth Areas.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Category 1 Type Vegetation

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

- (a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.
- (b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.
- (c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.
- (d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.
- (e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO
SECTION 149(5) OF THE *ENVIRONMENTAL PLANNING*
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communities. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per: _____

End of Certificate

Schedule 1 Exempt development

(Appendix 4, Clause 3.1)

Note 1. *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* specifies exempt development under that Policy. The Policy has State-wide application.

Note 2. Exempt development may be carried out without the need for development consent under the Act. Such development is not exempt from any approval, licence, permit or authority that is required under any other Act and adjoining owners' property rights and the common law still apply.

Advertisements, signs etc

- (1) Advertisements and advertising structures:
 - (a) Must not be moving signs.
 - (b) If over a public road, must be least 3m above, and 600mm from the outside of, the carriageway of the road.
 - (c) Must not exceed a maximum size of 1.2m long × 600mm high.
 - (d) Must relate to the use of a building on the property on which it is displayed, unless it is in a business zone.
 - (e) Must not be erected on a heritage item, unless the advertisement or structure replaces an existing sign (that was lawfully erected) with an advertisement or structure of the same or lesser size in the same location.
- (2) Business identification signs in a residential zone:
 - (a) Must be for a home office or a business or professional consulting room.
 - (b) Only 1 sign is permitted per premises.
 - (c) Must not exceed a maximum size of 1.2m in length × 600mm in height.
 - (d) May display only:
 - (i) the name of the occupant, and
 - (ii) the address and phone number of the occupant, and
 - (iii) the type of business.
 - (e) Must be located wholly within the boundaries of the property to which it relates.
 - (f) Maximum height of a free-standing sign: 2m above ground level.
 - (g) Must not be illuminated or flashing.
- (3) Wall signs in an industrial zone:
 - (a) Only 1 wall sign is permitted per premises.
 - (b) Must relate to the use of the premises on which it is displayed.
 - (c) Must be displayed on the facade of the premises to which it relates.
 - (d) Must not exceed a maximum size of 2m × 1.2m.
 - (e) Must not extend laterally beyond the wall of any building to which it is attached.
 - (f) Must not project above the top of any wall to which it is attached.
 - (g) Must not cover any window, door or architectural projection.
 - (h) Must be securely fixed to the building to which it is attached.
 - (i) Must not be flashing.
- (4) Business identification signs in an industrial zone:
 - (a) For single occupier buildings:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed maximum size of 500mm × 1.5m, and
 - (iii) must not exceed a maximum height from ground level of 1.5m, and
 - (iv) must not project over a public place, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.

- (b) For factory units:
 - (i) only 1 sign is permitted per factory, and
 - (ii) each sign must be of uniform size, colour and dimensions and is not to exceed 200mm^2 per sign, and
 - (iii) must identify only the number of the unit and the name of the respective factory unit occupant, and
 - (iv) must be located on, or behind, the building line setback adjacent to the entrance to the unit, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.
- (c) For sex services premises:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed 1.5m^2 per sign, and
 - (iii) must be limited to a trade name of the business operated and the address of the premises, and
 - (iv) must not include depictions, pictures or drawings on the sign, and
 - (v) must be located wholly within the boundaries of the property to which it relates.
- (5) Business identification signs in a special purpose or environmental protection zone:
 - (a) must only identify the premises or land on which the sign is located, the name of the occupier, the activity carried out on the premises or land and directions to access the site, and
 - (b) must not exceed a maximum size of 3.5m^2 per sign.

Change of use of existing community facility to another community facility

- (1) Must not be a change from or to a registered club.
- (2) Must meet any conditions that applied to the existing community facility that relate to any of the following:
 - (a) The maintenance of landscaping.
 - (b) Car parking.
 - (c) The provision of space for the loading or unloading of goods and vehicles.
 - (d) The protection of the environment.

Schedule 2 Complying development

(Appendix 4, Clause 3.2)

Note 1. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 specifies complying development and the complying development conditions for that development under that Policy. The Policy has State-wide application.

Note 2. Information relevant to this Part is also contained in the Act, the Environmental Planning and Assessment Regulation 2000, the Protection of the Environment Operations Act 1997 and the Roads Act 1993.

This schedule is blank on the making of this Precinct Plan.

Part 1 Types of development

Part 2 Complying development certificate conditions

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To allow people to carry out a reasonable range of activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours.
- To support the well being of the community, by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a low density residential environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Bed and breakfast accommodation; Business identification signs; Child care centres; Community facilities; Drainage; Dual occupancies; Dwelling houses; Earthworks; Educational establishments; Environmental protection works; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Neighbourhood shops; Places of public worship; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Veterinary hospitals

4 Prohibited

Any other development not specified in item 2 or 3

Extract from SEPP (SRGC) 2006 – Appendix 4 (Riverstone & Alex Avenue Precinct)

6.2 Attached dwellings in Zone R2 Low Density Residential

(1) The objectives of this clause are:

- (a) to permit, with development consent, attached dwellings within Zone R2 Low Density Residential in limited circumstances, and
- (b) to provide location and development criteria that must be satisfied before development consent can be granted.

(2) Development for the purposes of attached dwellings is permissible with development consent only on land within Zone R2 Low Density Residential that is:

- (a) adjoining land within Zone RE1 Public Recreation or land that is separated from land within Zone RE1 Public Recreation only by a public road, or
- (b) adjoining land within Zone E2 Environmental Conservation or land that is separated from land within Zone E2 Environmental Conservation only by a public road, or
- (c) adjoining land within Zone SP2 Infrastructure and shown on the Land Reservation Acquisition Map as Local Drainage, or that is separated from such land only by a public road.

(3) Before granting development consent under this clause the Council must be satisfied that:

- (a) the attached dwellings will not adversely impact on the amenity of adjoining residential properties, and
- (b) the attached dwellings will be designed and oriented to provide active frontages to and surveillance of the public recreation or drainage land, and
- (c) the attached dwellings will not adversely impact upon or limit solar access to adjoining residential or public open space land.

(4) This clause has effect despite anything to the contrary in the Land Use Table at the end of Part 2 or other provision of this Precinct Plan.

Applicant LAUREN LUEDECKE
 LEVEL 1
 50 MARGARET STREET
 SYDNEY NSW 2000

Property LOT 42 SEC 31 DP 1480

JUNCTION ROAD,

Suburb RIVERSTONE



Parish of St. Matthew

NOTE: The land the subject of this Certificate is known to be located in the suburb of Riverstone. For all correspondence and property transactions this suburb name is to be used.

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO
SECTION 149(2) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 1988.

1.2 Development Control Plans

As at the date of this certificate the abovementioned land is not affected by Blacktown Development Control Plan 2006. It is affected however by the NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010.

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NOTICE OF DISCLAIMER OF LIABILITY

Blacktown City Council gives notice and points out to all users of the information supplied herein the information herein which has been compiled by Council from sources outside of Council's control, although having been provided with all due care and in good faith, is provided on the basis that Council will not accept any responsibility for and will not be liable for its contents or for any consequence arising from its use, and every user of such information is advised to make all necessary enquiries from the appropriate organisations, institutions and the like.

Blacktown City Council also gives notice to all users of the information supplied herein that wherever any particular enquiry herein remains unanswered or has not been elaborated upon, such silence should not be interpreted as meaning or inferring either a negative or a positive response as the case may be.

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The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan No. 9 - Extractive Industry Sydney Region

This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

- (a) The abovementioned land is subject to the provisions of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and is zoned:

R2 - LOW DENSITY RESIDENTIAL

- (b) Extracts from the environmental planning instrument which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of the environmental planning instrument.

- (c) Extracts from the environmental planning instrument which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.
- (d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.
- (e) The environmental planning instrument does not nominate minimum land dimensions for the erection of a dwelling-house. It does however provide minimum land areas for the erection of a dwelling-house and stipulates that a dwelling must not be erected on land in the Riverstone Scheduled Lands on any lot with a depth that exceeds 35 metres.

- (f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.
- (g) The land is not within a conservation area.
- (h) This land does not contain a heritage item under the protection of an environmental planning instrument.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

The NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010 nominates preferred road patterns in this part of the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 provides for the acquisition of certain land zoned RE1, SP2 and E2 by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

This Property is affected by Section 94 Contributions Plan No. 20 - Riverstone & Alex Avenue Precincts.

Note: Pursuant to the Section 94E Direction issued by the Minister for Planning on 4 March 2011, Council must not impose a condition of development consent under Sections 94(1) or 94(3) or the Act requiring the payment of a monetary contribution exceeding \$30,000 for each dwelling authorised by the development consent, or in the case of a development consent that authorises the subdivision of land into residential lots, exceeding \$30,000 for each residential lot authorised to be created by the development consent.

In complying with the Minister's Section 94E Direction, the purchaser is hereby advised that Council may not be in a position to provide all of the facilities listed in the applicable contributions plan due to the potential shortfall of contributions to be received as a result of the \$30,000 per dwelling/lot limit.

This property is affected by a Special Infrastructure Contribution which is designed to levy a special contribution in order to coordinate strategic land use planning with the provision of state or regional infrastructure in the Western Sydney Growth Areas.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Category 1 Type Vegetation

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

- (a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.
- (b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.
- (c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.
- (d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.
- (e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO
SECTION 149(5) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communities. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per: _____

End of Certificate

Schedule 1 Exempt development

(Appendix 4, Clause 3.1)

Note 1. *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* specifies exempt development under that Policy. The Policy has State-wide application.

Note 2. Exempt development may be carried out without the need for development consent under the Act. Such development is not exempt from any approval, licence, permit or authority that is required under any other Act and adjoining owners' property rights and the common law still apply.

Advertisements, signs etc

- (1) Advertisements and advertising structures:
 - (a) Must not be moving signs.
 - (b) If over a public road, must be least 3m above, and 600mm from the outside of, the carriageway of the road.
 - (c) Must not exceed a maximum size of 1.2m long × 600mm high.
 - (d) Must relate to the use of a building on the property on which it is displayed, unless it is in a business zone.
 - (e) Must not be erected on a heritage item, unless the advertisement or structure replaces an existing sign (that was lawfully erected) with an advertisement or structure of the same or lesser size in the same location.
- (2) Business identification signs in a residential zone:
 - (a) Must be for a home office or a business or professional consulting room.
 - (b) Only 1 sign is permitted per premises.
 - (c) Must not exceed a maximum size of 1.2m in length × 600mm in height.
 - (d) May display only:
 - (i) the name of the occupant, and
 - (ii) the address and phone number of the occupant, and
 - (iii) the type of business.
 - (e) Must be located wholly within the boundaries of the property to which it relates.
 - (f) Maximum height of a free-standing sign: 2m above ground level.
 - (g) Must not be illuminated or flashing.
- (3) Wall signs in an industrial zone:
 - (a) Only 1 wall sign is permitted per premises.
 - (b) Must relate to the use of the premises on which it is displayed.
 - (c) Must be displayed on the facade of the premises to which it relates.
 - (d) Must not exceed a maximum size of 2m × 1.2m.
 - (e) Must not extend laterally beyond the wall of any building to which it is attached.
 - (f) Must not project above the top of any wall to which it is attached.
 - (g) Must not cover any window, door or architectural projection.
 - (h) Must be securely fixed to the building to which it is attached.
 - (i) Must not be flashing.
- (4) Business identification signs in an industrial zone:
 - (a) For single occupier buildings:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed maximum size of 500mm × 1.5m, and
 - (iii) must not exceed a maximum height from ground level of 1.5m, and
 - (iv) must not project over a public place, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.

- (b) For factory units:
 - (i) only 1 sign is permitted per factory, and
 - (ii) each sign must be of uniform size, colour and dimensions and is not to exceed 200mm² per sign, and
 - (iii) must identify only the number of the unit and the name of the respective factory unit occupant, and
 - (iv) must be located on, or behind, the building line setback adjacent to the entrance to the unit, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.
- (c) For sex services premises:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed 1.5m² per sign, and
 - (iii) must be limited to a trade name of the business operated and the address of the premises, and
 - (iv) must not include depictions, pictures or drawings on the sign, and
 - (v) must be located wholly within the boundaries of the property to which it relates.
- (5) Business identification signs in a special purpose or environmental protection zone:
 - (a) must only identify the premises or land on which the sign is located, the name of the occupier, the activity carried out on the premises or land and directions to access the site, and
 - (b) must not exceed a maximum size of 3.5m² per sign.

Change of use of existing community facility to another community facility

- (1) Must not be a change from or to a registered club.
- (2) Must meet any conditions that applied to the existing community facility that relate to any of the following:
 - (a) The maintenance of landscaping.
 - (b) Car parking.
 - (c) The provision of space for the loading or unloading of goods and vehicles.
 - (d) The protection of the environment.

Schedule 2 Complying development

(Appendix 4, Clause 3.2)

Note 1. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 specifies complying development and the complying development conditions for that development under that Policy. The Policy has State-wide application.

Note 2. Information relevant to this Part is also contained in the Act, the Environmental Planning and Assessment Regulation 2000, the Protection of the Environment Operations Act 1997 and the Roads Act 1993.

This schedule is blank on the making of this Precinct Plan.

Part 1 Types of development

Part 2 Complying development certificate conditions

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To allow people to carry out a reasonable range of activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours.
- To support the well being of the community, by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a low density residential environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Bed and breakfast accommodation; Business identification signs; Child care centres; Community facilities; Drainage; Dual occupancies; Dwelling houses; Earthworks; Educational establishments; Environmental protection works; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Neighbourhood shops; Places of public worship; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Veterinary hospitals

4 Prohibited

Any other development not specified in item 2 or 3

Extract from SEPP (SRGC) 2006 – Appendix 4 (Riverstone & Alex Avenue Precinct)

6.2 Attached dwellings in Zone R2 Low Density Residential

- (1) The objectives of this clause are:
 - (a) to permit, with development consent, attached dwellings within Zone R2 Low Density Residential in limited circumstances, and
 - (b) to provide location and development criteria that must be satisfied before development consent can be granted.

- (2) Development for the purposes of attached dwellings is permissible with development consent only on land within Zone R2 Low Density Residential that is:
 - (a) adjoining land within Zone RE1 Public Recreation or land that is separated from land within Zone RE1 Public Recreation only by a public road, or
 - (b) adjoining land within Zone E2 Environmental Conservation or land that is separated from land within Zone E2 Environmental Conservation only by a public road, or
 - (c) adjoining land within Zone SP2 Infrastructure and shown on the Land Reservation Acquisition Map as Local Drainage, or that is separated from such land only by a public road.

- (3) Before granting development consent under this clause the Council must be satisfied that:
 - (a) the attached dwellings will not adversely impact on the amenity of adjoining residential properties, and
 - (b) the attached dwellings will be designed and oriented to provide active frontages to and surveillance of the public recreation or drainage land, and
 - (c) the attached dwellings will not adversely impact upon or limit solar access to adjoining residential or public open space land.

- (4) This clause has effect despite anything to the contrary in the Land Use Table at the end of Part 2 or other provision of this Precinct Plan.

Applicant LAUREN LUEDECKE
LEVEL 1
50 MARGARET STREET
SYDNEY NSW 2000

Property LOT 46 DP 456639

WINDSOR ROAD,

Suburb RIVERSTONE Parish of St. Matthew

NOTE: The land the subject of this Certificate is known to be located in the suburb of Riverstone. For all correspondence and property transactions this suburb name is to be used.

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO
SECTION 149(2) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 1988.

1.2 Development Control Plans

As at the date of this certificate the abovementioned land is not affected by Blacktown Development Control Plan 2006. It is affected however by the NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010.

1.3 Relevant State Environmental Planning Policies (SEPPs), including draft policies, or Regional Environmental Plans deemed to be SEPPs

State Environmental Planning Policy - Housing For Seniors Or People With a Disability 2004

State Environmental Planning Policy No. 5 - Housing for Older People and People with a Disability has been repealed by a new State Environmental Planning Policy (SEPP) - Seniors Living 2004, which was renamed to SEPP (Housing for Seniors or People with a Disability) 2004 effective from 12 October 2007. The new SEPP sets out standards and design requirements for self-care housing, "serviced" self-care housing, vertical villages, residential care facilities and hostels. The Policy recognises that demand for these forms of housing will grow over the next 10 - 15 years. It encourages the development of high quality accommodation for our ageing population and for people who have disabilities - housing that is in keeping with the local neighbourhood.

State Environmental Planning Policy No. 6 - Number of Storeys in a Building

This policy sets out a method for determining the number of storeys in a building, to prevent possible confusion arising from the interpretation of various environmental planning instruments.

State Environmental Planning Policy No. 19 - Bushland in Urban Areas

This policy protects and preserves bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. The policy is designed to protect bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

State Environmental Planning Policy No. 22 - Shops and Commercial Premises

The policy permits within a business zone, a change of use from one kind of shop to another or one kind of commercial premises to another, even if the change of use is prohibited under an environmental planning instrument. Development consent must be obtained and the consent authority satisfied that the change of use will have no, or only minor, environmental effect.

State Environmental Planning Policy No. 32 - Urban Consolidation (Redevelopment of Land)

This policy states the Government's intention to ensure that urban consolidation objectives are met in all urban areas throughout the State. The policy focuses on the redevelopment of urban land that is no longer required for the purpose it is currently zoned or used and encourages local councils to pursue their own urban consolidation strategies to help implement the aims and objectives of the policy. Councils will continue to be responsible for the majority of rezonings. The policy sets out guidelines for the Minister to follow when considering whether to initiate a regional environmental plan (REP) to make particular sites available for consolidated urban redevelopment. Where a site is rezoned by an REP, the Minister will be the consent authority.

State Environmental Planning Policy No. 55 - Remediation of Land

This policy provides state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals.

State Environmental Planning Policy No. 62 - Sustainable Aquaculture

This policy encourages the sustainable expansion of the industry in NSW. The policy implements the regional strategies already developed by creating a simple approach to identify and categorise aquaculture development on the basis of its potential environmental impact. The SEPP also identifies aquaculture development as a designated development only where there are potential environmental risks.

State Environmental Planning Policy No. 64 - Advertising and Signage

This policy aims to ensure that outdoor advertising is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of high quality design and finish. The SEPP was amended in August 2007 to permit and regulate outdoor advertising in transport corridors (e.g. freeways, tollways and rail corridors). The amended SEPP also aims to ensure that public benefits may be derived from advertising along and adjacent to transport corridors.

State Environmental Planning Policy - Affordable Rental Housing 2009

This policy establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

State Environmental Planning Policy - Exempt and Complying Development Codes

This policy streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

State Environmental Planning Policy - Major Development 2005

The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

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This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

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This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

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This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

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This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

- (a) The abovementioned land is subject to the provisions of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and is zoned:

R2 - LOW DENSITY RESIDENTIAL

- (b) Extracts from the environmental planning instrument which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of the environmental planning instrument.

- (c) Extracts from the environmental planning instrument which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.
- (d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.
- (e) The environmental planning instrument does not nominate minimum land dimensions for the erection of a dwelling-house. It does however provide minimum land areas for the erection of a dwelling-house and stipulates that a dwelling must not be erected on land in the Riverstone Scheduled Lands on any lot with a depth that exceeds 35 metres.

- (f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.
- (g) The land is not within a conservation area.
- (h) This land does not contain a heritage item under the protection of an environmental planning instrument.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

The NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010 nominates preferred road patterns in this part of the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

The land is affected by a road pattern.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 provides for the acquisition of certain land zoned RE1, SP2 and E2 by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

This Property is affected by Section 94 Contributions Plan No. 20 - Riverstone & Alex Avenue Precincts.

Note: Pursuant to the Section 94E Direction issued by the Minister for Planning on 4 March 2011, Council must not impose a condition of development consent under Sections 94(1) or 94(3) or the Act requiring the payment of a monetary contribution exceeding \$30,000 for each dwelling authorised by the development consent, or in the case of a development consent that authorises the subdivision of land into residential lots, exceeding \$30,000 for each residential lot authorised to be created by the development consent.

In complying with the Minister's Section 94E Direction, the purchaser is hereby advised that Council may not be in a position to provide all of the facilities listed in the applicable contributions plan due to the potential shortfall of contributions to be received as a result of the \$30,000 per dwelling/lot limit.

This property is affected by a Special Infrastructure Contribution which is designed to levy a special contribution in order to coordinate strategic land use planning with the provision of state or regional infrastructure in the Western Sydney Growth Areas.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Category 1 Type Vegetation

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

- (a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.
- (b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.
- (c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.
- (d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.
- (e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO
SECTION 149(5) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communities. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per: _____

End of Certificate

Schedule 1 Exempt development

(Appendix 4, Clause 3.1)

Note 1. *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* specifies exempt development under that Policy. The Policy has State-wide application.

Note 2. Exempt development may be carried out without the need for development consent under the Act. Such development is not exempt from any approval, licence, permit or authority that is required under any other Act and adjoining owners' property rights and the common law still apply.

Advertisements, signs etc

- (1) Advertisements and advertising structures:
 - (a) Must not be moving signs.
 - (b) If over a public road, must be least 3m above, and 600mm from the outside of, the carriageway of the road.
 - (c) Must not exceed a maximum size of 1.2m long × 600mm high.
 - (d) Must relate to the use of a building on the property on which it is displayed, unless it is in a business zone.
 - (e) Must not be erected on a heritage item, unless the advertisement or structure replaces an existing sign (that was lawfully erected) with an advertisement or structure of the same or lesser size in the same location.
- (2) Business identification signs in a residential zone:
 - (a) Must be for a home office or a business or professional consulting room.
 - (b) Only 1 sign is permitted per premises.
 - (c) Must not exceed a maximum size of 1.2m in length × 600mm in height.
 - (d) May display only:
 - (i) the name of the occupant, and
 - (ii) the address and phone number of the occupant, and
 - (iii) the type of business.
 - (e) Must be located wholly within the boundaries of the property to which it relates.
 - (f) Maximum height of a free-standing sign: 2m above ground level.
 - (g) Must not be illuminated or flashing.
- (3) Wall signs in an industrial zone:
 - (a) Only 1 wall sign is permitted per premises.
 - (b) Must relate to the use of the premises on which it is displayed.
 - (c) Must be displayed on the facade of the premises to which it relates.
 - (d) Must not exceed a maximum size of 2m × 1.2m.
 - (e) Must not extend laterally beyond the wall of any building to which it is attached.
 - (f) Must not project above the top of any wall to which it is attached.
 - (g) Must not cover any window, door or architectural projection.
 - (h) Must be securely fixed to the building to which it is attached.
 - (i) Must not be flashing.
- (4) Business identification signs in an industrial zone:
 - (a) For single occupier buildings:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed maximum size of 500mm × 1.5m, and
 - (iii) must not exceed a maximum height from ground level of 1.5m, and
 - (iv) must not project over a public place, and
 - (v) must be securely fixed to the building to which it is attached; and
 - (vi) must not be flashing.

- (b) For factory units:
 - (i) only 1 sign is permitted per factory, and
 - (ii) each sign must be of uniform size, colour and dimensions and is not to exceed 200mm^2 per sign, and
 - (iii) must identify only the number of the unit and the name of the respective factory unit occupant, and
 - (iv) must be located on, or behind, the building line setback adjacent to the entrance to the unit, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.
- (c) For sex services premises:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed 1.5m^2 per sign, and
 - (iii) must be limited to a trade name of the business operated and the address of the premises, and
 - (iv) must not include depictions, pictures or drawings on the sign, and
 - (v) must be located wholly within the boundaries of the property to which it relates.
- (5) Business identification signs in a special purpose or environmental protection zone:
 - (a) must only identify the premises or land on which the sign is located, the name of the occupier, the activity carried out on the premises or land and directions to access the site, and
 - (b) must not exceed a maximum size of 3.5m^2 per sign.

Change of use of existing community facility to another community facility

- (1) Must not be a change from or to a registered club.
- (2) Must meet any conditions that applied to the existing community facility that relate to any of the following:
 - (a) The maintenance of landscaping.
 - (b) Car parking.
 - (c) The provision of space for the loading or unloading of goods and vehicles.
 - (d) The protection of the environment.

Schedule 2 Complying development

(Appendix 4, Clause 3.2)

Note 1. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 specifies complying development and the complying development conditions for that development under that Policy. The Policy has State-wide application.

Note 2. Information relevant to this Part is also contained in the Act, the Environmental Planning and Assessment Regulation 2000, the Protection of the Environment Operations Act 1997 and the Roads Act 1993.

This schedule is blank on the making of this Precinct Plan.

Part 1 Types of development

Part 2 Complying development certificate conditions

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To allow people to carry out a reasonable range of activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours.
- To support the well being of the community, by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a low density residential environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Bed and breakfast accommodation; Business identification signs; Child care centres; Community facilities; Drainage; Dual occupancies; Dwelling houses; Earthworks; Educational establishments; Environmental protection works; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Neighbourhood shops; Places of public worship; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Veterinary hospitals

4 Prohibited

Any other development not specified in item 2 or 3

Extract from SEPP (SRGC) 2006 – Appendix 4 (Riverstone & Alex Avenue Precinct)

6.2 Attached dwellings in Zone R2 Low Density Residential

(1) The objectives of this clause are:

- (a) to permit, with development consent, attached dwellings within Zone R2 Low Density Residential in limited circumstances, and
- (b) to provide location and development criteria that must be satisfied before development consent can be granted.

(2) Development for the purposes of attached dwellings is permissible with development consent only on land within Zone R2 Low Density Residential that is:

- (a) adjoining land within Zone RE1 Public Recreation or land that is separated from land within Zone RE1 Public Recreation only by a public road, or
- (b) adjoining land within Zone E2 Environmental Conservation or land that is separated from land within Zone E2 Environmental Conservation only by a public road, or
- (c) adjoining land within Zone SP2 Infrastructure and shown on the Land Reservation Acquisition Map as Local Drainage, or that is separated from such land only by a public road.

(3) Before granting development consent under this clause the Council must be satisfied that:

- (a) the attached dwellings will not adversely impact on the amenity of adjoining residential properties, and
- (b) the attached dwellings will be designed and oriented to provide active frontages to and surveillance of the public recreation or drainage land, and
- (c) the attached dwellings will not adversely impact upon or limit solar access to adjoining residential or public open space land.

(4) This clause has effect despite anything to the contrary in the Land Use Table at the end of Part 2 or other provision of this Precinct Plan.

Applicant LAUREN LUEDECKE
 LEVEL 1
 50 MARGARET STREET
 SYDNEY NSW 2000

Property RESIDUE OF LOT 46 SEC 30 DP 1480 AFTER
 EXCISION OF LAND BY DP 446467

WINDSOR ROAD,

Suburb RIVERSTONE Parish of St.Matthew

NOTE: The land the subject of this Certificate is known to be located in the suburb of Riverstone.
 For all correspondence and property transactions this suburb name is to be used.

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO
SECTION 149(2) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 1988.

1.2 Development Control Plans

As at the date of this certificate the abovementioned land is not affected by Blacktown Development Control Plan 2006. It is affected however by the NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010.

1.3 Relevant State Environmental Planning Policies (SEPPs), including draft policies, or Regional Environmental Plans deemed to be SEPPs

State Environmental Planning Policy - Housing For Seniors Or People With a Disability 2004

State Environmental Planning Policy No. 5 - Housing for Older People and People with a Disability has been repealed by a new State Environmental Planning Policy (SEPP) - Seniors Living 2004, which was renamed to SEPP (Housing for Seniors or People with a Disability) 2004 effective from 12 October 2007. The new SEPP sets out standards and design requirements for self-care housing, "serviced" self-care housing, vertical villages, residential care facilities and hostels. The Policy recognises that demand for these forms of housing will grow over the next 10 - 15 years. It encourages the development of high quality accommodation for our ageing population and for people who have disabilities - housing that is in keeping with the local neighbourhood.

State Environmental Planning Policy No. 6 - Number of Storeys in a Building

This policy sets out a method for determining the number of storeys in a building, to prevent possible confusion arising from the interpretation of various environmental planning instruments.

State Environmental Planning Policy No. 19 - Bushland in Urban Areas

This policy protects and preserves bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. The policy is designed to protect bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

State Environmental Planning Policy No. 22 - Shops and Commercial Premises

The policy permits within a business zone, a change of use from one kind of shop to another or one kind of commercial premises to another, even if the change of use is prohibited under an environmental planning instrument. Development consent must be obtained and the consent authority satisfied that the change of use will have no, or only minor, environmental effect.

State Environmental Planning Policy No. 32 - Urban Consolidation (Redevelopment of Land)

This policy states the Government's intention to ensure that urban consolidation objectives are met in all urban areas throughout the State. The policy focuses on the redevelopment of urban land that is no longer required for the purpose it is currently zoned or used and encourages local councils to pursue their own urban consolidation strategies to help implement the aims and objectives of the policy. Councils will continue to be responsible for the majority of rezonings. The policy sets out guidelines for the Minister to follow when considering whether to initiate a regional environmental plan (REP) to make particular sites available for consolidated urban redevelopment. Where a site is rezoned by an REP, the Minister will be the consent authority.

State Environmental Planning Policy No. 55 - Remediation of Land

This policy provides state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals.

State Environmental Planning Policy No. 62 - Sustainable Aquaculture

This policy encourages the sustainable expansion of the industry in NSW. The policy implements the regional strategies already developed by creating a simple approach to identify and categorise aquaculture development on the basis of its potential environmental impact. The SEPP also identifies aquaculture development as a designated development only where there are potential environmental risks.

State Environmental Planning Policy No. 64 - Advertising and Signage

This policy aims to ensure that outdoor advertising is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of high quality design and finish. The SEPP was amended in August 2007 to permit and regulate outdoor advertising in transport corridors (e.g. freeways, tollways and rail corridors). The amended SEPP also aims to ensure that public benefits may be derived from advertising along and adjacent to transport corridors.

State Environmental Planning Policy - Affordable Rental Housing 2009

This policy establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

State Environmental Planning Policy - Exempt and Complying Development Codes

This policy streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

State Environmental Planning Policy - Major Development 2005

The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan No. 9 - Extractive Industry Sydney Region

This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

- (a) The abovementioned land is subject to the provisions of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and is zoned:

R2 - LOW DENSITY RESIDENTIAL

- (b) Extracts from the environmental planning instrument which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of the environmental planning instrument.

- (c) Extracts from the environmental planning instrument which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.
- (d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.
- (e) The environmental planning instrument does not nominate minimum land dimensions for the erection of a dwelling-house. It does however provide minimum land areas for the erection of a dwelling-house and stipulates that a dwelling must not be erected on land in the Riverstone Scheduled Lands on any lot with a depth that exceeds 35 metres.

- (f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.
- (g) The land is not within a conservation area.
- (h) This land does not contain a heritage item under the protection of an environmental planning instrument.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

The NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010 nominates preferred road patterns in this part of the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

The land is affected by a road pattern.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 provides for the acquisition of certain land zoned RE1, SP2 and E2 by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

This Property is affected by Section 94 Contributions Plan No. 20 - Riverstone & Alex Avenue Precincts.

Note: Pursuant to the Section 94E Direction issued by the Minister for Planning on 4 March 2011, Council must not impose a condition of development consent under Sections 94(1) or 94(3) or the Act requiring the payment of a monetary contribution exceeding \$30,000 for each dwelling authorised by the development consent, or in the case of a development consent that authorises the subdivision of land into residential lots, exceeding \$30,000 for each residential lot authorised to be created by the development consent.

In complying with the Minister's Section 94E Direction, the purchaser is hereby advised that Council may not be in a position to provide all of the facilities listed in the applicable contributions plan due to the potential shortfall of contributions to be received as a result of the \$30,000 per dwelling/lot limit.

This property is affected by a Special Infrastructure Contribution which is designed to levy a special contribution in order to coordinate strategic land use planning with the provision of state or regional infrastructure in the Western Sydney Growth Areas.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Category 1 Type Vegetation

within 100m buffer around Category 1

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

- (a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.
- (b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.
- (c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.
- (d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.
- (e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO
SECTION 149(5) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communities. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per: _____

End of Certificate

Schedule 1 Exempt development

(Appendix 4, Clause 3.1)

Note 1. *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* specifies exempt development under that Policy. The Policy has State-wide application.

Note 2. Exempt development may be carried out without the need for development consent under the Act. Such development is not exempt from any approval, licence, permit or authority that is required under any other Act and adjoining owners' property rights and the common law still apply.

Advertisements, signs etc

- (1) Advertisements and advertising structures:
 - (a) Must not be moving signs.
 - (b) If over a public road, must be least 3m above, and 600mm from the outside of, the carriageway of the road.
 - (c) Must not exceed a maximum size of 1.2m long × 600mm high.
 - (d) Must relate to the use of a building on the property on which it is displayed, unless it is in a business zone.
 - (e) Must not be erected on a heritage item, unless the advertisement or structure replaces an existing sign (that was lawfully erected) with an advertisement or structure of the same or lesser size in the same location.
- (2) Business identification signs in a residential zone:
 - (a) Must be for a home office or a business or professional consulting room.
 - (b) Only 1 sign is permitted per premises.
 - (c) Must not exceed a maximum size of 1.2m in length × 600mm in height.
 - (d) May display only:
 - (i) the name of the occupant, and
 - (ii) the address and phone number of the occupant, and
 - (iii) the type of business.
 - (e) Must be located wholly within the boundaries of the property to which it relates.
 - (f) Maximum height of a free-standing sign: 2m above ground level.
 - (g) Must not be illuminated or flashing.
- (3) Wall signs in an industrial zone:
 - (a) Only 1 wall sign is permitted per premises.
 - (b) Must relate to the use of the premises on which it is displayed.
 - (c) Must be displayed on the facade of the premises to which it relates.
 - (d) Must not exceed a maximum size of 2m × 1.2m.
 - (e) Must not extend laterally beyond the wall of any building to which it is attached.
 - (f) Must not project above the top of any wall to which it is attached.
 - (g) Must not cover any window, door or architectural projection.
 - (h) Must be securely fixed to the building to which it is attached.
 - (i) Must not be flashing.
- (4) Business identification signs in an industrial zone:
 - (a) For single occupier buildings:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed maximum size of 500mm × 1.5m, and
 - (iii) must not exceed a maximum height from ground level of 1.5m, and
 - (iv) must not project over a public place, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.

- (b) For factory units:
 - (i) only 1 sign is permitted per factory, and
 - (ii) each sign must be of uniform size, colour and dimensions and is not to exceed 200mm² per sign, and
 - (iii) must identify only the number of the unit and the name of the respective factory unit occupant, and
 - (iv) must be located on, or behind, the building line setback adjacent to the entrance to the unit, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.
- (c) For sex services premises:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed 1.5m² per sign, and
 - (iii) must be limited to a trade name of the business operated and the address of the premises, and
 - (iv) must not include depictions, pictures or drawings on the sign, and
 - (v) must be located wholly within the boundaries of the property to which it relates.
- (5) Business identification signs in a special purpose or environmental protection zone:
 - (a) must only identify the premises or land on which the sign is located, the name of the occupier, the activity carried out on the premises or land and directions to access the site, and
 - (b) must not exceed a maximum size of 3.5m² per sign.

Change of use of existing community facility to another community facility

- (1) Must not be a change from or to a registered club.
- (2) Must meet any conditions that applied to the existing community facility that relate to any of the following:
 - (a) The maintenance of landscaping.
 - (b) Car parking.
 - (c) The provision of space for the loading or unloading of goods and vehicles.
 - (d) The protection of the environment.

Schedule 2 Complying development

(Appendix 4, Clause 3.2)

Note 1. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 specifies complying development and the complying development conditions for that development under that Policy. The Policy has State-wide application.

Note 2. Information relevant to this Part is also contained in the Act, the Environmental Planning and Assessment Regulation 2000, the Protection of the Environment Operations Act 1997 and the Roads Act 1993.

This schedule is blank on the making of this Precinct Plan.

Part 1 Types of development

Part 2 Complying development certificate conditions

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To allow people to carry out a reasonable range of activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours.
- To support the well being of the community, by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a low density residential environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Bed and breakfast accommodation; Business identification signs; Child care centres; Community facilities; Drainage; Dual occupancies; Dwelling houses; Earthworks; Educational establishments; Environmental protection works; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Neighbourhood shops; Places of public worship; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Veterinary hospitals

4 Prohibited

Any other development not specified in item 2 or 3

Extract from SEPP (SRGC) 2006 – Appendix 4 (Riverstone & Alex Avenue Precinct)

6.2 Attached dwellings in Zone R2 Low Density Residential

(1) The objectives of this clause are:

- (a) to permit, with development consent, attached dwellings within Zone R2 Low Density Residential in limited circumstances, and
- (b) to provide location and development criteria that must be satisfied before development consent can be granted.

(2) Development for the purposes of attached dwellings is permissible with development consent only on land within Zone R2 Low Density Residential that is:

- (a) adjoining land within Zone RE1 Public Recreation or land that is separated from land within Zone RE1 Public Recreation only by a public road, or
- (b) adjoining land within Zone E2 Environmental Conservation or land that is separated from land within Zone E2 Environmental Conservation only by a public road, or
- (c) adjoining land within Zone SP2 Infrastructure and shown on the Land Reservation Acquisition Map as Local Drainage, or that is separated from such land only by a public road.

(3) Before granting development consent under this clause the Council must be satisfied that:

- (a) the attached dwellings will not adversely impact on the amenity of adjoining residential properties, and
- (b) the attached dwellings will be designed and oriented to provide active frontages to and surveillance of the public recreation or drainage land, and
- (c) the attached dwellings will not adversely impact upon or limit solar access to adjoining residential or public open space land.

(4) This clause has effect despite anything to the contrary in the Land Use Table at the end of Part 2 or other provision of this Precinct Plan.

Applicant LAUREN LUEDECKE
LEVEL 1
50 MARGARET STREET
SYDNEY NSW 2000

Property LOT 47 SEC 32 DP 1480

91 JUNCTION ROAD,

Suburb RIVERSTONE Parish of St. Matthew

NOTE: The land the subject of this Certificate is known to be located in the suburb of Riverstone.
For all correspondence and property transactions this suburb name is to be used.

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO
SECTION 149(2) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 1988.

1.2 Development Control Plans

As at the date of this certificate the abovementioned land is not affected by Blacktown Development Control Plan 2006. It is affected however by the NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010.

1.3 Relevant State Environmental Planning Policies (SEPPs), including draft policies, or Regional Environmental Plans deemed to be SEPPs

NOTICE OF DISCLAIMER OF LIABILITY

Blacktown City Council gives notice and points out to all users of the information supplied herein the information herein which has been compiled by Council from sources outside of Council's control, although having been provided with all due care and in good faith, is provided on the basis that Council will not accept any responsibility for and will not be liable for its contents or for any consequence arising from its use, and every user of such information is advised to make all necessary enquiries from the appropriate organisations, institutions and the like.

Blacktown City Council also gives notice to all users of the information supplied herein that wherever any particular enquiry herein remains unanswered or has not been elaborated upon, such silence should not be interpreted as meaning or inferring either a negative or a positive response as the case may be.

State Environmental Planning Policy - Housing For Seniors Or People With a Disability 2004

State Environmental Planning Policy No. 5 - Housing for Older People and People with a Disability has been repealed by a new State Environmental Planning Policy (SEPP) - Seniors Living 2004, which was renamed to SEPP (Housing for Seniors or People with a Disability) 2004 effective from 12 October 2007. The new SEPP sets out standards and design requirements for self-care housing, "serviced" self-care housing, vertical villages, residential care facilities and hostels. The Policy recognises that demand for these forms of housing will grow over the next 10 - 15 years. It encourages the development of high quality accommodation for our ageing population and for people who have disabilities - housing that is in keeping with the local neighbourhood.

State Environmental Planning Policy No. 6 - Number of Storeys in a Building

This policy sets out a method for determining the number of storeys in a building, to prevent possible confusion arising from the interpretation of various environmental planning instruments.

State Environmental Planning Policy No. 19 - Bushland in Urban Areas

This policy protects and preserves bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. The policy is designed to protect bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

State Environmental Planning Policy No. 22 - Shops and Commercial Premises

The policy permits within a business zone, a change of use from one kind of shop to another or one kind of commercial premises to another, even if the change of use is prohibited under an environmental planning instrument. Development consent must be obtained and the consent authority satisfied that the change of use will have no, or only minor, environmental effect.

State Environmental Planning Policy No. 32 - Urban Consolidation (Redevelopment of Land)

This policy states the Government's intention to ensure that urban consolidation objectives are met in all urban areas throughout the State. The policy focuses on the redevelopment of urban land that is no longer required for the purpose it is currently zoned or used and encourages local councils to pursue their own urban consolidation strategies to help implement the aims and objectives of the policy. Councils will continue to be responsible for the majority of rezonings. The policy sets out guidelines for the Minister to follow when considering whether to initiate a regional environmental plan (REP) to make particular sites available for consolidated urban redevelopment. Where a site is rezoned by an REP, the Minister will be the consent authority.

State Environmental Planning Policy No. 55 - Remediation of Land

This policy provides state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals.

State Environmental Planning Policy No. 62 - Sustainable Aquaculture

This policy encourages the sustainable expansion of the industry in NSW. The policy implements the regional strategies already developed by creating a simple approach to identity and categorise aquaculture development on the basis of its potential environmental impact. The SEPP also identifies aquaculture development as a designated development only where there are potential environmental risks.

State Environmental Planning Policy No. 64 - Advertising and Signage

This policy aims to ensure that outdoor advertising is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of high quality design and finish. The SEPP was amended in August 2007 to permit and regulate outdoor advertising in transport corridors (e.g. freeways, tollways and rail corridors). The amended SEPP also aims to ensure that public benefits may be derived from advertising along and adjacent to transport corridors.

State Environmental Planning Policy - Affordable Rental Housing 2009

This policy establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

State Environmental Planning Policy - Exempt and Complying Development Codes

This policy streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

State Environmental Planning Policy - Major Development 2005

The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan No. 9 - Extractive Industry Sydney Region

This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

- (a) The abovementioned land is subject to the provisions of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and is zoned:

R2 - LOW DENSITY RESIDENTIAL

- (b) Extracts from the environmental planning instrument which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of the environmental planning instrument.

- (c) Extracts from the environmental planning instrument which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.
- (d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.
- (e) The environmental planning instrument does not nominate minimum land dimensions for the erection of a dwelling-house. It does however provide minimum land areas for the erection of a dwelling-house and stipulates that a dwelling must not be erected on land in the Riverstone Scheduled Lands on any lot with a depth that exceeds 35 metres.

- (f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.
- (g) The land is not within a conservation area.
- (h) This land does not contain a heritage item under the protection of an environmental planning instrument.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

The NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010 nominates preferred road patterns in this part of the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

The land is affected by a road pattern.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 provides for the acquisition of certain land zoned RE1, SP2 and E2 by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

This Property is affected by Section 94 Contributions Plan No. 20 - Riverstone & Alex Avenue Precincts.

Note: Pursuant to the Section 94E Direction issued by the Minister for Planning on 4 March 2011, Council must not impose a condition of development consent under Sections 94(1) or 94(3) or the Act requiring the payment of a monetary contribution exceeding \$30,000 for each dwelling authorised by the development consent, or in the case of a development consent that authorises the subdivision of land into residential lots, exceeding \$30,000 for each residential lot authorised to be created by the development consent.

In complying with the Minister's Section 94E Direction, the purchaser is hereby advised that Council may not be in a position to provide all of the facilities listed in the applicable contributions plan due to the potential shortfall of contributions to be received as a result of the \$30,000 per dwelling/lot limit.

This property is affected by a Special Infrastructure Contribution which is designed to levy a special contribution in order to coordinate strategic land use planning with the provision of state or regional infrastructure in the Western Sydney Growth Areas.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Category 1 Type Vegetation

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

- (a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.
- (b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.
- (c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.
- (d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.
- (e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO
SECTION 149(5) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communities. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per: _____

End of Certificate

Schedule 1 Exempt development

(Appendix 4, Clause 3.1)

Note 1. *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* specifies exempt development under that Policy. The Policy has State-wide application.

Note 2. Exempt development may be carried out without the need for development consent under the Act. Such development is not exempt from any approval, licence, permit or authority that is required under any other Act and adjoining owners' property rights and the common law still apply.

Advertisements, signs etc

- (1) Advertisements and advertising structures:
 - (a) Must not be moving signs.
 - (b) If over a public road, must be least 3m above, and 600mm from the outside of, the carriageway of the road.
 - (c) Must not exceed a maximum size of 1.2m long × 600mm high.
 - (d) Must relate to the use of a building on the property on which it is displayed, unless it is in a business zone.
 - (e) Must not be erected on a heritage item, unless the advertisement or structure replaces an existing sign (that was lawfully erected) with an advertisement or structure of the same or lesser size in the same location.
- (2) Business identification signs in a residential zone:
 - (a) Must be for a home office or a business or professional consulting room.
 - (b) Only 1 sign is permitted per premises.
 - (c) Must not exceed a maximum size of 1.2m in length × 600mm in height.
 - (d) May display only:
 - (i) the name of the occupant, and
 - (ii) the address and phone number of the occupant, and
 - (iii) the type of business.
 - (e) Must be located wholly within the boundaries of the property to which it relates.
 - (f) Maximum height of a free-standing sign: 2m above ground level.
 - (g) Must not be illuminated or flashing.
- (3) Wall signs in an industrial zone:
 - (a) Only 1 wall sign is permitted per premises.
 - (b) Must relate to the use of the premises on which it is displayed.
 - (c) Must be displayed on the facade of the premises to which it relates.
 - (d) Must not exceed a maximum size of 2m × 1.2m.
 - (e) Must not extend laterally beyond the wall of any building to which it is attached.
 - (f) Must not project above the top of any wall to which it is attached.
 - (g) Must not cover any window, door or architectural projection.
 - (h) Must be securely fixed to the building to which it is attached.
 - (i) Must not be flashing.
- (4) Business identification signs in an industrial zone:
 - (a) For single occupier buildings:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed maximum size of 500mm × 1.5m, and
 - (iii) must not exceed a maximum height from ground level of 1.5m, and
 - (iv) must not project over a public place, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.

- (b) For factory units:
 - (i) only 1 sign is permitted per factory, and
 - (ii) each sign must be of uniform size, colour and dimensions and is not to exceed 200mm² per sign, and
 - (iii) must identify only the number of the unit and the name of the respective factory unit occupant, and
 - (iv) must be located on, or behind, the building line setback adjacent to the entrance to the unit, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.
- (c) For sex services premises:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed 1.5m² per sign, and
 - (iii) must be limited to a trade name of the business operated and the address of the premises, and
 - (iv) must not include depictions, pictures or drawings on the sign, and
 - (v) must be located wholly within the boundaries of the property to which it relates.
- (5) Business identification signs in a special purpose or environmental protection zone:
 - (a) must only identify the premises or land on which the sign is located, the name of the occupier, the activity carried out on the premises or land and directions to access the site, and
 - (b) must not exceed a maximum size of 3.5m² per sign.

Change of use of existing community facility to another community facility

- (1) Must not be a change from or to a registered club.
- (2) Must meet any conditions that applied to the existing community facility that relate to any of the following:
 - (a) The maintenance of landscaping.
 - (b) Car parking.
 - (c) The provision of space for the loading or unloading of goods and vehicles.
 - (d) The protection of the environment.

Schedule 2 Complying development

(Appendix 4, Clause 3.2)

Note 1. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 specifies complying development and the complying development conditions for that development under that Policy. The Policy has State-wide application.

Note 2. Information relevant to this Part is also contained in the Act, the Environmental Planning and Assessment Regulation 2000, the Protection of the Environment Operations Act 1997 and the Roads Act 1993.

This schedule is blank on the making of this Precinct Plan.

Part 1 Types of development

Part 2 Complying development certificate conditions

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To allow people to carry out a reasonable range of activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours.
- To support the well being of the community, by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a low density residential environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Bed and breakfast accommodation; Business identification signs; Child care centres; Community facilities; Drainage; Dual occupancies; Dwelling houses; Earthworks; Educational establishments; Environmental protection works; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Neighbourhood shops; Places of public worship; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Veterinary hospitals

4 Prohibited

Any other development not specified in item 2 or 3

Extract from SEPP (SRGC) 2006 – Appendix 4 (Riverstone & Alex Avenue Precinct)

6.2 Attached dwellings in Zone R2 Low Density Residential

- (1) The objectives of this clause are:
 - (a) to permit, with development consent, attached dwellings within Zone R2 Low Density Residential in limited circumstances, and
 - (b) to provide location and development criteria that must be satisfied before development consent can be granted.
- (2) Development for the purposes of attached dwellings is permissible with development consent only on land within Zone R2 Low Density Residential that is:
 - (a) adjoining land within Zone RE1 Public Recreation or land that is separated from land within Zone RE1 Public Recreation only by a public road, or
 - (b) adjoining land within Zone E2 Environmental Conservation or land that is separated from land within Zone E2 Environmental Conservation only by a public road, or
 - (c) adjoining land within Zone SP2 Infrastructure and shown on the Land Reservation Acquisition Map as Local Drainage, or that is separated from such land only by a public road.
- (3) Before granting development consent under this clause the Council must be satisfied that:
 - (a) the attached dwellings will not adversely impact on the amenity of adjoining residential properties, and
 - (b) the attached dwellings will be designed and oriented to provide active frontages to and surveillance of the public recreation or drainage land, and
 - (c) the attached dwellings will not adversely impact upon or limit solar access to adjoining residential or public open space land.
- (4) This clause has effect despite anything to the contrary in the Land Use Table at the end of Part 2 or other provision of this Precinct Plan.

Applicant LAUREN LUEDECKE
LEVEL 1
50 MARGARET STREET
SYDNEY NSW 2000

Property LOT 64 SEC 30 DP 1480

HOBART STREET,

Suburb RIVERSTONE Parish of St. Matthew

NOTE: The land the subject of this Certificate is known to be located in the suburb of Riverstone. For all correspondence and property transactions this suburb name is to be used.

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO
SECTION 149(2) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 1988.

1.2 Development Control Plans

As at the date of this certificate the abovementioned land is not affected by Blacktown Development Control Plan 2006. It is affected however by the NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010.

1.3 Relevant State Environmental Planning Policies (SEPPs), including draft policies, or Regional Environmental Plans deemed to be SEPPs

State Environmental Planning Policy - Housing For Seniors Or People With a Disability 2004

State Environmental Planning Policy No. 5 - Housing for Older People and People with a Disability has been repealed by a new State Environmental Planning Policy (SEPP) - Seniors Living 2004, which was renamed to SEPP (Housing for Seniors or People with a Disability) 2004 effective from 12 October 2007. The new SEPP sets out standards and design requirements for self-care housing, "serviced" self-care housing, vertical villages, residential care facilities and hostels. The Policy recognises that demand for these forms of housing will grow over the next 10 - 15 years. It encourages the development of high quality accommodation for our ageing population and for people who have disabilities - housing that is in keeping with the local neighbourhood.

State Environmental Planning Policy No. 6 - Number of Storeys in a Building

This policy sets out a method for determining the number of storeys in a building, to prevent possible confusion arising from the interpretation of various environmental planning instruments.

State Environmental Planning Policy No. 19 - Bushland in Urban Areas

This policy protects and preserves bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. The policy is designed to protect bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

State Environmental Planning Policy No. 22 - Shops and Commercial Premises

The policy permits within a business zone, a change of use from one kind of shop to another or one kind of commercial premises to another, even if the change of use is prohibited under an environmental planning instrument. Development consent must be obtained and the consent authority satisfied that the change of use will have no, or only minor, environmental effect.

State Environmental Planning Policy No. 32 - Urban Consolidation (Redevelopment of Land)

This policy states the Government's intention to ensure that urban consolidation objectives are met in all urban areas throughout the State. The policy focuses on the redevelopment of urban land that is no longer required for the purpose it is currently zoned or used and encourages local councils to pursue their own urban consolidation strategies to help implement the aims and objectives of the policy. Councils will continue to be responsible for the majority of rezonings. The policy sets out guidelines for the Minister to follow when considering whether to initiate a regional environmental plan (REP) to make particular sites available for consolidated urban redevelopment. Where a site is rezoned by an REP, the Minister will be the consent authority.

State Environmental Planning Policy No. 55 - Remediation of Land

This policy provides state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals.

State Environmental Planning Policy No. 62 - Sustainable Aquaculture

This policy encourages the sustainable expansion of the industry in NSW. The policy implements the regional strategies already developed by creating a simple approach to identify and categorise aquaculture development on the basis of its potential environmental impact. The SEPP also identifies aquaculture development as a designated development only where there are potential environmental risks.

State Environmental Planning Policy No. 64 - Advertising and Signage

This policy aims to ensure that outdoor advertising is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of high quality design and finish. The SEPP was amended in August 2007 to permit and regulate outdoor advertising in transport corridors (e.g. freeways, tollways and rail corridors). The amended SEPP also aims to ensure that public benefits may be derived from advertising along and adjacent to transport corridors.

State Environmental Planning Policy - Affordable Rental Housing 2009

This policy establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

State Environmental Planning Policy - Exempt and Complying Development Codes

This policy streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

State Environmental Planning Policy - Major Development 2005

The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan No. 9 - Extractive Industry Sydney Region

This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

- (a) The abovementioned land is subject to the provisions of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and is zoned:

R2 - LOW DENSITY RESIDENTIAL

- (b) Extracts from the environmental planning instrument which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of the environmental planning instrument.

- (c) Extracts from the environmental planning instrument which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.
- (d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.
- (e) The environmental planning instrument does not nominate minimum land dimensions for the erection of a dwelling-house. It does however provide minimum land areas for the erection of a dwelling-house and stipulates that a dwelling must not be erected on land in the Riverstone Scheduled Lands on any lot with a depth that exceeds 35 metres.

- (f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.
- (g) The land is not within a conservation area.
- (h) This land does not contain a heritage item under the protection of an environmental planning instrument.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

The NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010 nominates preferred road patterns in this part of the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

The land is affected by a road pattern.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 provides for the acquisition of certain land zoned RE1, SP2 and E2 by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

This Property is affected by Section 94 Contributions Plan No. 20 - Riverstone & Alex Avenue Precincts.

Note: Pursuant to the Section 94E Direction issued by the Minister for Planning on 4 March 2011, Council must not impose a condition of development consent under Sections 94(1) or 94(3) or the Act requiring the payment of a monetary contribution exceeding \$30,000 for each dwelling authorised by the development consent, or in the case of a development consent that authorises the subdivision of land into residential lots, exceeding \$30,000 for each residential lot authorised to be created by the development consent.

In complying with the Minister's Section 94E Direction, the purchaser is hereby advised that Council may not be in a position to provide all of the facilities listed in the applicable contributions plan due to the potential shortfall of contributions to be received as a result of the \$30,000 per dwelling/lot limit.

This property is affected by a Special Infrastructure Contribution which is designed to levy a special contribution in order to coordinate strategic land use planning with the provision of state or regional infrastructure in the Western Sydney Growth Areas.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Category 1 Type Vegetation

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

- (a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.
- (b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.
- (c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.
- (d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.
- (e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO
SECTION 149(5) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

This land contains an Aboriginal archaeological site under the protection of the National Parks and Wildlife Service Act, 1974. Before any development can proceed in an area known to contain Aboriginal archaeological sites, a consent to destroy must be obtained from the Director of the National Parks and Wildlife Service.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communities. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per:  _____

End of Certificate

Schedule 1 Exempt development

(Appendix 4, Clause 3.1)

Note 1. *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* specifies exempt development under that Policy. The Policy has State-wide application.

Note 2. Exempt development may be carried out without the need for development consent under the Act. Such development is not exempt from any approval, licence, permit or authority that is required under any other Act and adjoining owners' property rights and the common law still apply.

Advertisements, signs etc

- (1) Advertisements and advertising structures:
 - (a) Must not be moving signs.
 - (b) If over a public road, must be least 3m above, and 600mm from the outside of, the carriageway of the road.
 - (c) Must not exceed a maximum size of 1.2m long × 600mm high.
 - (d) Must relate to the use of a building on the property on which it is displayed, unless it is in a business zone.
 - (e) Must not be erected on a heritage item, unless the advertisement or structure replaces an existing sign (that was lawfully erected) with an advertisement or structure of the same or lesser size in the same location.
- (2) Business identification signs in a residential zone:
 - (a) Must be for a home office or a business or professional consulting room.
 - (b) Only 1 sign is permitted per premises.
 - (c) Must not exceed a maximum size of 1.2m in length × 600mm in height.
 - (d) May display only:
 - (i) the name of the occupant, and
 - (ii) the address and phone number of the occupant, and
 - (iii) the type of business.
 - (e) Must be located wholly within the boundaries of the property to which it relates.
 - (f) Maximum height of a free-standing sign: 2m above ground level.
 - (g) Must not be illuminated or flashing.
- (3) Wall signs in an industrial zone:
 - (a) Only 1 wall sign is permitted per premises.
 - (b) Must relate to the use of the premises on which it is displayed.
 - (c) Must be displayed on the facade of the premises to which it relates.
 - (d) Must not exceed a maximum size of 2m × 1.2m.
 - (e) Must not extend laterally beyond the wall of any building to which it is attached.
 - (f) Must not project above the top of any wall to which it is attached.
 - (g) Must not cover any window, door or architectural projection.
 - (h) Must be securely fixed to the building to which it is attached.
 - (i) Must not be flashing.
- (4) Business identification signs in an industrial zone:
 - (a) For single occupier buildings:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed maximum size of 500mm × 1.5m, and
 - (iii) must not exceed a maximum height from ground level of 1.5m, and
 - (iv) must not project over a public place, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.

- (b) For factory units:
 - (i) only 1 sign is permitted per factory, and
 - (ii) each sign must be of uniform size, colour and dimensions and is not to exceed 200mm² per sign, and
 - (iii) must identify only the number of the unit and the name of the respective factory unit occupant, and
 - (iv) must be located on, or behind, the building line setback adjacent to the entrance to the unit, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.
- (c) For sex services premises:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed 1.5m² per sign, and
 - (iii) must be limited to a trade name of the business operated and the address of the premises, and
 - (iv) must not include depictions, pictures or drawings on the sign, and
 - (v) must be located wholly within the boundaries of the property to which it relates.
- (5) Business identification signs in a special purpose or environmental protection zone:
 - (a) must only identify the premises or land on which the sign is located, the name of the occupier, the activity carried out on the premises or land and directions to access the site, and
 - (b) must not exceed a maximum size of 3.5m² per sign.

Change of use of existing community facility to another community facility

- (1) Must not be a change from or to a registered club.
- (2) Must meet any conditions that applied to the existing community facility that relate to any of the following:
 - (a) The maintenance of landscaping.
 - (b) Car parking.
 - (c) The provision of space for the loading or unloading of goods and vehicles.
 - (d) The protection of the environment.

Schedule 2 Complying development

(Appendix 4, Clause 3.2)

Note 1. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 specifies complying development and the complying development conditions for that development under that Policy. The Policy has State-wide application.

Note 2. Information relevant to this Part is also contained in the Act, the Environmental Planning and Assessment Regulation 2000, the Protection of the Environment Operations Act 1997 and the Roads Act 1993.

This schedule is blank on the making of this Precinct Plan.

Part 1 Types of development

Part 2 Complying development certificate conditions

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To allow people to carry out a reasonable range of activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours.
- To support the well being of the community, by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a low density residential environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Bed and breakfast accommodation; Business identification signs; Child care centres; Community facilities; Drainage; Dual occupancies; Dwelling houses; Earthworks; Educational establishments; Environmental protection works; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Neighbourhood shops; Places of public worship; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Veterinary hospitals

4 Prohibited

Any other development not specified in item 2 or 3

Extract from SEPP (SRGC) 2006 – Appendix 4 (Riverstone & Alex Avenue Precinct)

6.2 Attached dwellings in Zone R2 Low Density Residential

(1) The objectives of this clause are:

- (a) to permit, with development consent, attached dwellings within Zone R2 Low Density Residential in limited circumstances, and
- (b) to provide location and development criteria that must be satisfied before development consent can be granted.

(2) Development for the purposes of attached dwellings is permissible with development consent only on land within Zone R2 Low Density Residential that is:

- (a) adjoining land within Zone RE1 Public Recreation or land that is separated from land within Zone RE1 Public Recreation only by a public road, or
- (b) adjoining land within Zone E2 Environmental Conservation or land that is separated from land within Zone E2 Environmental Conservation only by a public road, or
- (c) adjoining land within Zone SP2 Infrastructure and shown on the Land Reservation Acquisition Map as Local Drainage, or that is separated from such land only by a public road.

(3) Before granting development consent under this clause the Council must be satisfied that:

- (a) the attached dwellings will not adversely impact on the amenity of adjoining residential properties, and
- (b) the attached dwellings will be designed and oriented to provide active frontages to and surveillance of the public recreation or drainage land, and
- (c) the attached dwellings will not adversely impact upon or limit solar access to adjoining residential or public open space land.

(4) This clause has effect despite anything to the contrary in the Land Use Table at the end of Part 2 or other provision of this Precinct Plan.

Applicant LAUREN LUEDECKE
LEVEL 1
50 MARGARET STREET
SYDNEY NSW 2000

Property LOT 82 SEC 31 DP 1480

SYDNEY STREET,

Suburb RIVERSTONE Parish of St. Matthew

NOTE: The land the subject of this Certificate is known to be located in the suburb of Riverstone.
For all correspondence and property transactions this suburb name is to be used.

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO
SECTION 149(2) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 1988.

1.2 Development Control Plans

As at the date of this certificate the abovementioned land is not affected by Blacktown Development Control Plan 2006. It is affected however by the NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010.

1.3 Relevant State Environmental Planning Policies (SEPPs), including draft policies, or Regional Environmental Plans deemed to be SEPPs

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This policy states the Government's intention to ensure that urban consolidation objectives are met in all urban areas throughout the State. The policy focuses on the redevelopment of urban land that is no longer required for the purpose it is currently zoned or used and encourages local councils to pursue their own urban consolidation strategies to help implement the aims and objectives of the policy. Councils will continue to be responsible for the majority of rezonings. The policy sets out guidelines for the Minister to follow when considering whether to initiate a regional environmental plan (REP) to make particular sites available for consolidated urban redevelopment. Where a site is rezoned by an REP, the Minister will be the consent authority.

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This policy streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

State Environmental Planning Policy - Major Development 2005

The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan No. 9 - Extractive Industry Sydney Region

This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

- (a) The abovementioned land is subject to the provisions of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and is zoned:

R2 - LOW DENSITY RESIDENTIAL

- (b) Extracts from the environmental planning instrument which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of the environmental planning instrument.

- (c) Extracts from the environmental planning instrument which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.
- (d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.
- (e) The environmental planning instrument does not nominate minimum land dimensions for the erection of a dwelling-house. It does however provide minimum land areas for the erection of a dwelling-house and stipulates that a dwelling must not be erected on land in the Riverstone Scheduled Lands on any lot with a depth that exceeds 35 metres.

- (f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.
- (g) The land is not within a conservation area.
- (h) This land does not contain a heritage item under the protection of an environmental planning instrument.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

The NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010 nominates preferred road patterns in this part of the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

The land is affected by a road pattern.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 provides for the acquisition of certain land zoned RE1, SP2 and E2 by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

This Property is affected by Section 94 Contributions Plan No. 20 - Riverstone & Alex Avenue Precincts.

Note: Pursuant to the Section 94E Direction issued by the Minister for Planning on 4 March 2011, Council must not impose a condition of development consent under Sections 94(1) or 94(3) or the Act requiring the payment of a monetary contribution exceeding \$30,000 for each dwelling authorised by the development consent, or in the case of a development consent that authorises the subdivision of land into residential lots, exceeding \$30,000 for each residential lot authorised to be created by the development consent.

In complying with the Minister's Section 94E Direction, the purchaser is hereby advised that Council may not be in a position to provide all of the facilities listed in the applicable contributions plan due to the potential shortfall of contributions to be received as a result of the \$30,000 per dwelling/lot limit.

This property is affected by a Special Infrastructure Contribution which is designed to levy a special contribution in order to coordinate strategic land use planning with the provision of state or regional infrastructure in the Western Sydney Growth Areas.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Category 1 Type Vegetation

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

- (a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.
- (b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.
- (c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.
- (d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.
- (e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO
SECTION 149(5) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communities. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per: _____

End of Certificate

Schedule 1 Exempt development

(Appendix 4, Clause 3.1)

Note 1. *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* specifies exempt development under that Policy. The Policy has State-wide application.

Note 2. Exempt development may be carried out without the need for development consent under the Act. Such development is not exempt from any approval, licence, permit or authority that is required under any other Act and adjoining owners' property rights and the common law still apply.

Advertisements, signs etc

- (1) Advertisements and advertising structures:
 - (a) Must not be moving signs.
 - (b) If over a public road, must be least 3m above, and 600mm from the outside of, the carriageway of the road.
 - (c) Must not exceed a maximum size of 1.2m long × 600mm high.
 - (d) Must relate to the use of a building on the property on which it is displayed, unless it is in a business zone.
 - (e) Must not be erected on a heritage item, unless the advertisement or structure replaces an existing sign (that was lawfully erected) with an advertisement or structure of the same or lesser size in the same location.
- (2) Business identification signs in a residential zone:
 - (a) Must be for a home office or a business or professional consulting room.
 - (b) Only 1 sign is permitted per premises.
 - (c) Must not exceed a maximum size of 1.2m in length × 600mm in height.
 - (d) May display only:
 - (i) the name of the occupant, and
 - (ii) the address and phone number of the occupant, and
 - (iii) the type of business.
 - (e) Must be located wholly within the boundaries of the property to which it relates.
 - (f) Maximum height of a free-standing sign: 2m above ground level.
 - (g) Must not be illuminated or flashing.
- (3) Wall signs in an industrial zone:
 - (a) Only 1 wall sign is permitted per premises.
 - (b) Must relate to the use of the premises on which it is displayed.
 - (c) Must be displayed on the facade of the premises to which it relates.
 - (d) Must not exceed a maximum size of 2m × 1.2m.
 - (e) Must not extend laterally beyond the wall of any building to which it is attached.
 - (f) Must not project above the top of any wall to which it is attached.
 - (g) Must not cover any window, door or architectural projection.
 - (h) Must be securely fixed to the building to which it is attached.
 - (i) Must not be flashing.
- (4) Business identification signs in an industrial zone:
 - (a) For single occupier buildings:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed maximum size of 500mm × 1.5m, and
 - (iii) must not exceed a maximum height from ground level of 1.5m, and
 - (iv) must not project over a public place, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.

- (b) For factory units:
 - (i) only 1 sign is permitted per factory, and
 - (ii) each sign must be of uniform size, colour and dimensions and is not to exceed 200mm^2 per sign, and
 - (iii) must identify only the number of the unit and the name of the respective factory unit occupant, and
 - (iv) must be located on, or behind, the building line setback adjacent to the entrance to the unit, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.
- (c) For sex services premises:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed 1.5m^2 per sign, and
 - (iii) must be limited to a trade name of the business operated and the address of the premises, and
 - (iv) must not include depictions, pictures or drawings on the sign, and
 - (v) must be located wholly within the boundaries of the property to which it relates.
- (5) Business identification signs in a special purpose or environmental protection zone:
 - (a) must only identify the premises or land on which the sign is located, the name of the occupier, the activity carried out on the premises or land and directions to access the site, and
 - (b) must not exceed a maximum size of 3.5m^2 per sign.

Change of use of existing community facility to another community facility

- (1) Must not be a change from or to a registered club.
- (2) Must meet any conditions that applied to the existing community facility that relate to any of the following:
 - (a) The maintenance of landscaping.
 - (b) Car parking.
 - (c) The provision of space for the loading or unloading of goods and vehicles.
 - (d) The protection of the environment.

Schedule 2 Complying development

(Appendix 4, Clause 3.2)

Note 1. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 specifies complying development and the complying development conditions for that development under that Policy. The Policy has State-wide application.

Note 2. Information relevant to this Part is also contained in the Act, the Environmental Planning and Assessment Regulation 2000, the Protection of the Environment Operations Act 1997 and the Roads Act 1993.

This schedule is blank on the making of this Precinct Plan.

Part 1 Types of development

Part 2 Complying development certificate conditions

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To allow people to carry out a reasonable range of activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours.
- To support the well being of the community, by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a low density residential environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Bed and breakfast accommodation; Business identification signs; Child care centres; Community facilities; Drainage; Dual occupancies; Dwelling houses; Earthworks; Educational establishments; Environmental protection works; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Neighbourhood shops; Places of public worship; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Veterinary hospitals

4 Prohibited

Any other development not specified in item 2 or 3

Extract from SEPP (SRGC) 2006 – Appendix 4 (Riverstone & Alex Avenue Precinct)

6.2 Attached dwellings in Zone R2 Low Density Residential

(1) The objectives of this clause are:

- (a) to permit, with development consent, attached dwellings within Zone R2 Low Density Residential in limited circumstances, and
- (b) to provide location and development criteria that must be satisfied before development consent can be granted.

(2) Development for the purposes of attached dwellings is permissible with development consent only on land within Zone R2 Low Density Residential that is:

- (a) adjoining land within Zone RE1 Public Recreation or land that is separated from land within Zone RE1 Public Recreation only by a public road, or
- (b) adjoining land within Zone E2 Environmental Conservation or land that is separated from land within Zone E2 Environmental Conservation only by a public road, or
- (c) adjoining land within Zone SP2 Infrastructure and shown on the Land Reservation Acquisition Map as Local Drainage, or that is separated from such land only by a public road.

(3) Before granting development consent under this clause the Council must be satisfied that:

- (a) the attached dwellings will not adversely impact on the amenity of adjoining residential properties, and
- (b) the attached dwellings will be designed and oriented to provide active frontages to and surveillance of the public recreation or drainage land, and
- (c) the attached dwellings will not adversely impact upon or limit solar access to adjoining residential or public open space land.

(4) This clause has effect despite anything to the contrary in the Land Use Table at the end of Part 2 or other provision of this Precinct Plan.

Applicant LAUREN LUEDECKE
LEVEL 1
50 MARGARET STREET
SYDNEY NSW 2000
Property LOT 84 SEC 32 DP 1480
CROWN STREET,
Suburb RIVERSTONE Parish of St. Matthew

NOTE: The land the subject of this Certificate is known to be located in the suburb of Riverstone. For all correspondence and property transactions this suburb name is to be used.

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO
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NOTICE OF DISCLAIMER OF LIABILITY

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Blacktown City Council also gives notice to all users of the information supplied herein that wherever any particular enquiry herein remains unanswered or has not been elaborated upon, such silence should not be interpreted as meaning or inferring either a negative or a positive response as the case may be.

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This policy streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

State Environmental Planning Policy - Major Development 2005

The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan No. 9 - Extractive Industry Sydney Region

This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

- (a) The abovementioned land is subject to the provisions of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and is zoned:

R2 - LOW DENSITY RESIDENTIAL
RE1 - PUBLIC RECREATION

- (b) Extracts from the environmental planning instrument which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of the environmental planning instrument.

- (c) Extracts from the environmental planning instrument which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.
- (d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.
- (e) The environmental planning instrument does not nominate minimum land dimensions for the erection of a dwelling-house. It does however provide minimum land areas for the erection of a dwelling-house and stipulates that a dwelling must not be erected on land in the Riverstone Scheduled Lands on any lot with a depth that exceeds 35 metres.

- (f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.
- (g) The land is not within a conservation area.
- (h) This land does not contain a heritage item under the protection of an environmental planning instrument.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

The NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010 nominates preferred road patterns in this part of the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

The land is affected by a road pattern.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 provides for the acquisition of certain land zoned RE1, SP2 and E2 by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

This Property is affected by Section 94 Contributions Plan No. 20 - Riverstone & Alex Avenue Precincts.

Note: Pursuant to the Section 94E Direction issued by the Minister for Planning on 4 March 2011, Council must not impose a condition of development consent under Sections 94(1) or 94(3) or the Act requiring the payment of a monetary contribution exceeding \$30,000 for each dwelling authorised by the development consent, or in the case of a development consent that authorises the subdivision of land into residential lots, exceeding \$30,000 for each residential lot authorised to be created by the development consent.

In complying with the Minister's Section 94E Direction, the purchaser is hereby advised that Council may not be in a position to provide all of the facilities listed in the applicable contributions plan due to the potential shortfall of contributions to be received as a result of the \$30,000 per dwelling/lot limit.

This property is affected by a Special Infrastructure Contribution which is designed to levy a special contribution in order to coordinate strategic land use planning with the provision of state or regional infrastructure in the Western Sydney Growth Areas.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Category 1 Type Vegetation

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

- (a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.
- (b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.
- (c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.
- (d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.
- (e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO
SECTION 149(5) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communities. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per:  _____

End of Certificate

Schedule 1 Exempt development

(Appendix 4, Clause 3.1)

Note 1. *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* specifies exempt development under that Policy. The Policy has State-wide application.

Note 2. Exempt development may be carried out without the need for development consent under the Act. Such development is not exempt from any approval, licence, permit or authority that is required under any other Act and adjoining owners' property rights and the common law still apply.

Advertisements, signs etc

- (1) Advertisements and advertising structures:
 - (a) Must not be moving signs.
 - (b) If over a public road, must be least 3m above, and 600mm from the outside of, the carriageway of the road.
 - (c) Must not exceed a maximum size of 1.2m long × 600mm high.
 - (d) Must relate to the use of a building on the property on which it is displayed, unless it is in a business zone.
 - (e) Must not be erected on a heritage item, unless the advertisement or structure replaces an existing sign (that was lawfully erected) with an advertisement or structure of the same or lesser size in the same location.
- (2) Business identification signs in a residential zone:
 - (a) Must be for a home office or a business or professional consulting room.
 - (b) Only 1 sign is permitted per premises.
 - (c) Must not exceed a maximum size of 1.2m in length × 600mm in height.
 - (d) May display only:
 - (i) the name of the occupant, and
 - (ii) the address and phone number of the occupant, and
 - (iii) the type of business.
 - (e) Must be located wholly within the boundaries of the property to which it relates.
 - (f) Maximum height of a free-standing sign: 2m above ground level.
 - (g) Must not be illuminated or flashing.
- (3) Wall signs in an industrial zone:
 - (a) Only 1 wall sign is permitted per premises.
 - (b) Must relate to the use of the premises on which it is displayed.
 - (c) Must be displayed on the facade of the premises to which it relates.
 - (d) Must not exceed a maximum size of 2m × 1.2m.
 - (e) Must not extend laterally beyond the wall of any building to which it is attached.
 - (f) Must not project above the top of any wall to which it is attached.
 - (g) Must not cover any window, door or architectural projection.
 - (h) Must be securely fixed to the building to which it is attached.
 - (i) Must not be flashing.
- (4) Business identification signs in an industrial zone:
 - (a) For single occupier buildings:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed maximum size of 500mm × 1.5m, and
 - (iii) must not exceed a maximum height from ground level of 1.5m, and
 - (iv) must not project over a public place, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.

- (b) For factory units:
 - (i) only 1 sign is permitted per factory, and
 - (ii) each sign must be of uniform size, colour and dimensions and is not to exceed 200mm² per sign, and
 - (iii) must identify only the number of the unit and the name of the respective factory unit occupant, and
 - (iv) must be located on, or behind, the building line setback adjacent to the entrance to the unit, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.
- (c) For sex services premises:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed 1.5m² per sign, and
 - (iii) must be limited to a trade name of the business operated and the address of the premises, and
 - (iv) must not include depictions, pictures or drawings on the sign, and
 - (v) must be located wholly within the boundaries of the property to which it relates.
- (5) Business identification signs in a special purpose or environmental protection zone:
 - (a) must only identify the premises or land on which the sign is located, the name of the occupier, the activity carried out on the premises or land and directions to access the site, and
 - (b) must not exceed a maximum size of 3.5m² per sign.

Change of use of existing community facility to another community facility

- (1) Must not be a change from or to a registered club.
- (2) Must meet any conditions that applied to the existing community facility that relate to any of the following:
 - (a) The maintenance of landscaping.
 - (b) Car parking.
 - (c) The provision of space for the loading or unloading of goods and vehicles.
 - (d) The protection of the environment.

Schedule 2 Complying development

(Appendix 4, Clause 3.2)

Note 1. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 specifies complying development and the complying development conditions for that development under that Policy. The Policy has State-wide application.

Note 2. Information relevant to this Part is also contained in the Act, the Environmental Planning and Assessment Regulation 2000, the Protection of the Environment Operations Act 1997 and the Roads Act 1993.

This schedule is blank on the making of this Precinct Plan.

Part 1 Types of development

Part 2 Complying development certificate conditions

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To allow people to carry out a reasonable range of activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours.
- To support the well being of the community, by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a low density residential environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Bed and breakfast accommodation; Business identification signs; Child care centres; Community facilities; Drainage; Dual occupancies; Dwelling houses; Earthworks; Educational establishments; Environmental protection works; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Neighbourhood shops; Places of public worship; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Veterinary hospitals

4 Prohibited

Any other development not specified in item 2 or 3

Extract from SEPP (SRGC) 2006 – Appendix 4 (Riverstone & Alex Avenue Precinct)

6.2 Attached dwellings in Zone R2 Low Density Residential

- (1) The objectives of this clause are:
 - (a) to permit, with development consent, attached dwellings within Zone R2 Low Density Residential in limited circumstances, and
 - (b) to provide location and development criteria that must be satisfied before development consent can be granted.

- (2) Development for the purposes of attached dwellings is permissible with development consent only on land within Zone R2 Low Density Residential that is:
 - (a) adjoining land within Zone RE1 Public Recreation or land that is separated from land within Zone RE1 Public Recreation only by a public road, or
 - (b) adjoining land within Zone E2 Environmental Conservation or land that is separated from land within Zone E2 Environmental Conservation only by a public road, or
 - (c) adjoining land within Zone SP2 Infrastructure and shown on the Land Reservation Acquisition Map as Local Drainage, or that is separated from such land only by a public road.

- (3) Before granting development consent under this clause the Council must be satisfied that:
 - (a) the attached dwellings will not adversely impact on the amenity of adjoining residential properties, and
 - (b) the attached dwellings will be designed and oriented to provide active frontages to and surveillance of the public recreation or drainage land, and
 - (c) the attached dwellings will not adversely impact upon or limit solar access to adjoining residential or public open space land.

- (4) This clause has effect despite anything to the contrary in the Land Use Table at the end of Part 2 or other provision of this Precinct Plan.

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone RE1 Public Recreation

1 Objectives of zone

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

2 Permitted without consent

Nil

3 Permitted with consent

Building identification signs; Business identification signs; Community facilities; Drainage; Earthworks; Environmental facilities; Environmental protection works; Flood mitigation works; Kiosks; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Roads; Water recycling facilities; Waterbodies (artificial)

4 Prohibited

Any development not specified in item 2 or 3

Applicant LAUREN LUEDECKE
LEVEL 1
50 MARGARET STREET
SYDNEY NSW 2000

Property LOT 89 SEC 30 DP 1480

179 HOBART STREET,

Suburb RIVERSTONE Parish of St. Matthew

NOTE: The land the subject of this Certificate is known to be located in the suburb of Riverstone.
For all correspondence and property transactions this suburb name is to be used.

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO
SECTION 149(2) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 1988.

1.2 Development Control Plans

As at the date of this certificate the abovementioned land is not affected by Blacktown Development Control Plan 2006. It is affected however by the NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010.

1.3 Relevant State Environmental Planning Policies (SEPPs), including draft policies, or Regional Environmental Plans deemed to be SEPPs

State Environmental Planning Policy - Housing For Seniors Or People With a Disability 2004

State Environmental Planning Policy No. 5 - Housing for Older People and People with a Disability has been repealed by a new State Environmental Planning Policy (SEPP) - Seniors Living 2004, which was renamed to SEPP (Housing for Seniors or People with a Disability) 2004 effective from 12 October 2007. The new SEPP sets out standards and design requirements for self-care housing, "serviced" self-care housing, vertical villages, residential care facilities and hostels. The Policy recognises that demand for these forms of housing will grow over the next 10 - 15 years. It encourages the development of high quality accommodation for our ageing population and for people who have disabilities - housing that is in keeping with the local neighbourhood.

State Environmental Planning Policy No. 6 - Number of Storeys in a Building

This policy sets out a method for determining the number of storeys in a building, to prevent possible confusion arising from the interpretation of various environmental planning instruments.

State Environmental Planning Policy No. 19 - Bushland in Urban Areas

This policy protects and preserves bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. The policy is designed to protect bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

State Environmental Planning Policy No. 22 - Shops and Commercial Premises

The policy permits within a business zone, a change of use from one kind of shop to another or one kind of commercial premises to another, even if the change of use is prohibited under an environmental planning instrument. Development consent must be obtained and the consent authority satisfied that the change of use will have no, or only minor, environmental effect.

State Environmental Planning Policy No. 32 - Urban Consolidation (Redevelopment of Land)

This policy states the Government's intention to ensure that urban consolidation objectives are met in all urban areas throughout the State. The policy focuses on the redevelopment of urban land that is no longer required for the purpose it is currently zoned or used and encourages local councils to pursue their own urban consolidation strategies to help implement the aims and objectives of the policy. Councils will continue to be responsible for the majority of rezonings. The policy sets out guidelines for the Minister to follow when considering whether to initiate a regional environmental plan (REP) to make particular sites available for consolidated urban redevelopment. Where a site is rezoned by an REP, the Minister will be the consent authority.

State Environmental Planning Policy No. 55 - Remediation of Land

This policy provides state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals.

State Environmental Planning Policy No. 62 - Sustainable Aquaculture

This policy encourages the sustainable expansion of the industry in NSW. The policy implements the regional strategies already developed by creating a simple approach to identify and categorise aquaculture development on the basis of its potential environmental impact. The SEPP also identifies aquaculture development as a designated development only where there are potential environmental risks.

State Environmental Planning Policy No. 64 - Advertising and Signage

This policy aims to ensure that outdoor advertising is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of high quality design and finish. The SEPP was amended in August 2007 to permit and regulate outdoor advertising in transport corridors (e.g. freeways, tollways and rail corridors). The amended SEPP also aims to ensure that public benefits may be derived from advertising along and adjacent to transport corridors.

State Environmental Planning Policy - Affordable Rental Housing 2009

This policy establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

State Environmental Planning Policy - Exempt and Complying Development Codes

This policy streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

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The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan No. 9 - Extractive Industry Sydney Region

This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

- (a) The abovementioned land is subject to the provisions of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 and is zoned:

R2 - LOW DENSITY RESIDENTIAL

- (b) Extracts from the environmental planning instrument which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of the environmental planning instrument.

- (c) Extracts from the environmental planning instrument which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.
- (d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.
- (e) The environmental planning instrument does not nominate minimum land dimensions for the erection of a dwelling-house. It does however provide minimum land areas for the erection of a dwelling-house and stipulates that a dwelling must not be erected on land in the Riverstone Scheduled Lands on any lot with a depth that exceeds 35 metres.

- (f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.
- (g) The land is not within a conservation area.
- (h) This land does not contain a heritage item under the protection of an environmental planning instrument.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land, unless it is on part of the lot that is identified as high risk bush fire prone land.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

The NSW Government's Blacktown City Council Growth Centre Precincts Development Control Plan 2010 nominates preferred road patterns in this part of the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

The land is affected by a road pattern.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 provides for the acquisition of certain land zoned RE1, SP2 and E2 by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

This Property is affected by Section 94 Contributions Plan No. 20 - Riverstone & Alex Avenue Precincts.

Note: Pursuant to the Section 94E Direction issued by the Minister for Planning on 4 March 2011, Council must not impose a condition of development consent under Sections 94(1) or 94(3) or the Act requiring the payment of a monetary contribution exceeding \$30,000 for each dwelling authorised by the development consent, or in the case of a development consent that authorises the subdivision of land into residential lots, exceeding \$30,000 for each residential lot authorised to be created by the development consent.

In complying with the Minister's Section 94E Direction, the purchaser is hereby advised that Council may not be in a position to provide all of the facilities listed in the applicable contributions plan due to the potential shortfall of contributions to be received as a result of the \$30,000 per dwelling/lot limit.

This property is affected by a Special Infrastructure Contribution which is designed to levy a special contribution in order to coordinate strategic land use planning with the provision of state or regional infrastructure in the Western Sydney Growth Areas.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Category 1 Type Vegetation

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

- (a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.
- (b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.
- (c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.
- (d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.
- (e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO
SECTION 149(5) OF THE *ENVIRONMENTAL PLANNING*
AND ASSESSMENT ACT 1979 (EP&A Act 1979)

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communities. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per: _____

End of Certificate

Schedule 1 Exempt development

(Appendix 4, Clause 3.1)

Note 1. *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* specifies exempt development under that Policy. The Policy has State-wide application.

Note 2. Exempt development may be carried out without the need for development consent under the Act. Such development is not exempt from any approval, licence, permit or authority that is required under any other Act and adjoining owners' property rights and the common law still apply.

Advertisements, signs etc

- (1) Advertisements and advertising structures:
 - (a) Must not be moving signs.
 - (b) If over a public road, must be least 3m above, and 600mm from the outside of, the carriageway of the road.
 - (c) Must not exceed a maximum size of 1.2m long × 600mm high.
 - (d) Must relate to the use of a building on the property on which it is displayed, unless it is in a business zone.
 - (e) Must not be erected on a heritage item, unless the advertisement or structure replaces an existing sign (that was lawfully erected) with an advertisement or structure of the same or lesser size in the same location.
- (2) Business identification signs in a residential zone:
 - (a) Must be for a home office or a business or professional consulting room.
 - (b) Only 1 sign is permitted per premises.
 - (c) Must not exceed a maximum size of 1.2m in length × 600mm in height.
 - (d) May display only:
 - (i) the name of the occupant, and
 - (ii) the address and phone number of the occupant, and
 - (iii) the type of business.
 - (e) Must be located wholly within the boundaries of the property to which it relates.
 - (f) Maximum height of a free-standing sign: 2m above ground level.
 - (g) Must not be illuminated or flashing.
- (3) Wall signs in an industrial zone:
 - (a) Only 1 wall sign is permitted per premises.
 - (b) Must relate to the use of the premises on which it is displayed.
 - (c) Must be displayed on the facade of the premises to which it relates.
 - (d) Must not exceed a maximum size of 2m × 1.2m.
 - (e) Must not extend laterally beyond the wall of any building to which it is attached.
 - (f) Must not project above the top of any wall to which it is attached.
 - (g) Must not cover any window, door or architectural projection.
 - (h) Must be securely fixed to the building to which it is attached.
 - (i) Must not be flashing.
- (4) Business identification signs in an industrial zone:
 - (a) For single occupier buildings:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed maximum size of 500mm × 1.5m, and
 - (iii) must not exceed a maximum height from ground level of 1.5m, and
 - (iv) must not project over a public place, and
 - (v) must be securely fixed to the building to which it is attached; and
 - (vi) must not be flashing.

- (b) For factory units:
 - (i) only 1 sign is permitted per factory, and
 - (ii) each sign must be of uniform size, colour and dimensions and is not to exceed 200mm² per sign, and
 - (iii) must identify only the number of the unit and the name of the respective factory unit occupant, and
 - (iv) must be located on, or behind, the building line setback adjacent to the entrance to the unit, and
 - (v) must be securely fixed to the building to which it is attached, and
 - (vi) must not be flashing.
- (c) For sex services premises:
 - (i) only 1 sign is permitted per premises, and
 - (ii) must not exceed 1.5m² per sign, and
 - (iii) must be limited to a trade name of the business operated and the address of the premises, and
 - (iv) must not include depictions, pictures or drawings on the sign, and
 - (v) must be located wholly within the boundaries of the property to which it relates.
- (5) Business identification signs in a special purpose or environmental protection zone:
 - (a) must only identify the premises or land on which the sign is located, the name of the occupier, the activity carried out on the premises or land and directions to access the site, and
 - (b) must not exceed a maximum size of 3.5m² per sign.

Change of use of existing community facility to another community facility

- (1) Must not be a change from or to a registered club.
- (2) Must meet any conditions that applied to the existing community facility that relate to any of the following:
 - (a) The maintenance of landscaping.
 - (b) Car parking.
 - (c) The provision of space for the loading or unloading of goods and vehicles.
 - (d) The protection of the environment.

Schedule 2 Complying development

(Appendix 4, Clause 3.2)

Note 1. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 specifies complying development and the complying development conditions for that development under that Policy. The Policy has State-wide application.

Note 2. Information relevant to this Part is also contained in the Act, the Environmental Planning and Assessment Regulation 2000, the Protection of the Environment Operations Act 1997 and the Roads Act 1993.

This schedule is blank on the making of this Precinct Plan.

Part 1 Types of development

Part 2 Complying development certificate conditions

ATTACHMENT A
Alex Ave and Riverstone Precinct

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To allow people to carry out a reasonable range of activities from their homes, where such activities are not likely to adversely affect the living environment of neighbours.
- To support the well being of the community, by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a low density residential environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Bed and breakfast accommodation; Business identification signs; Child care centres; Community facilities; Drainage; Dual occupancies; Dwelling houses; Earthworks; Educational establishments; Environmental protection works; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Neighbourhood shops; Places of public worship; Roads; Secondary dwellings; Semi-detached dwellings; Shop top housing; Veterinary hospitals

4 Prohibited

Any other development not specified in item 2 or 3

Extract from SEPP (SRGC) 2006 – Appendix 4 (Riverstone & Alex Avenue Precinct)

6.2 Attached dwellings in Zone R2 Low Density Residential

(1) The objectives of this clause are:

- (a) to permit, with development consent, attached dwellings within Zone R2 Low Density Residential in limited circumstances, and
- (b) to provide location and development criteria that must be satisfied before development consent can be granted.

(2) Development for the purposes of attached dwellings is permissible with development consent only on land within Zone R2 Low Density Residential that is:

- (a) adjoining land within Zone RE1 Public Recreation or land that is separated from land within Zone RE1 Public Recreation only by a public road, or
- (b) adjoining land within Zone E2 Environmental Conservation or land that is separated from land within Zone E2 Environmental Conservation only by a public road, or
- (c) adjoining land within Zone SP2 Infrastructure and shown on the Land Reservation Acquisition Map as Local Drainage, or that is separated from such land only by a public road.

(3) Before granting development consent under this clause the Council must be satisfied that:

- (a) the attached dwellings will not adversely impact on the amenity of adjoining residential properties, and
- (b) the attached dwellings will be designed and oriented to provide active frontages to and surveillance of the public recreation or drainage land, and
- (c) the attached dwellings will not adversely impact upon or limit solar access to adjoining residential or public open space land.

(4) This clause has effect despite anything to the contrary in the Land Use Table at the end of Part 2 or other provision of this Precinct Plan.

Appendix H – Dangerous Good



WorkCover

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D14/033648
Your Ref: Michelle Delandro

18 March 2014

Attention: Michelle Delandro
JBS & G (NSW & WA)
Level 1,
50 Margaret St
Sydney NSW 2000



Dear Ms Delandro,

RE SITE: Lot 33 Sec 30 DP 1480 Riverstone NSW

I refer to your site search request received by WorkCover NSW on 10 March 2014 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Team



WorkCover

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D14/033643
Your Ref: Michelle Delandro

18 March 2014

Attention: Michelle Delandro
JBS & G (NSW & WA)
Level 1,
50 Margaret St
Sydney NSW 2000



Dear Mr Delandro,

RE SITE: Lot 62 & 63 DP 1480 Riverstone NSW

I refer to your site search request received by WorkCover NSW on 11 March 2014 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Team



WorkCover

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D14/024258
Your Ref: Kate Sharp

26 February 2014

Attention: Kate Sharp
JBS & G
Level 1,
50 Margaret St
Sydney NSW 2000

Dear Ms Sharp,

RE SITE: 190 Crown St Riverstone NSW

I refer to your site search request received by WorkCover NSW on 17 February 2014 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Team



WorkCover

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92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D14/025125
Your Ref: Pongsathorn Patanan

4 March 2014

Attention: Pongsathorn Patanan
JBS & G
Level 1,
50 Margaret St
Sydney NSW 2000

Dear Mr Patanan,

RE SITE: 1378-1386 Windsor Rd Riverstone NSW

I refer to your site search request received by WorkCover NSW on 26 February 2014 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely


Brent Jones
Senior Licensing Officer
Dangerous Goods Team



WorkCover

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Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D14/025125
Your Ref: Pongsathorn Patanan

4 March 2014

Attention: Pongsathorn Patanan
JBS & G
Level 1,
50 Margaret St
Sydney NSW 2000

Dear Mr Patanan,

RE SITE: 201 Hobart St Riverstone Riverstone NSW

I refer to your site search request received by WorkCover NSW on 26 February 2014 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Team



WorkCover

WorkCover NSW
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Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D14/025125
Your Ref: Pongsathorn Patanan

4 March 2014

Attention: Pongsathorn Patanan
JBS & G
Level 1,
50 Margaret St
Sydney NSW 2000

Dear Mr Patanan,

RE SITE: 101 Junction St Riverstone Riverstone NSW

I refer to your site search request received by WorkCover NSW on 26 February 2014 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely


Brent Jones
Senior Licensing Officer
Dangerous Goods Team



WorkCover

WorkCover NSW
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Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D14/025125
Your Ref: Pongsathorn Patanan

4 March 2014

Attention: Pongsathorn Patanan
JBS & G
Level 1,
50 Margaret St
Sydney NSW 2000

Dear Mr Patanan,

RE SITE: 228 Sydney St Riverstone NSW

I refer to your site search request received by WorkCover NSW on 26 February 2014 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

A handwritten signature in black ink, appearing to be 'Brent Jones'.

Brent Jones
Senior Licensing Officer
Dangerous Goods Team

Appendix I – Geotechnical Investigation

Appendix J – Hazardous Material Survey



Hazardous Materials Register
 Address: Riverstone Precinct A 'Scheduled Lands' (Stages 1 to 3)
 Riverstone, NSW

JBS&G SAMPLE NO.	TYPE OF HAZMAT & LOCATION	PHOTO NUMBER	FRIABILITY	MATERIAL DESCRIPTION	ACCESSIBLE AREA?	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY (m ²)	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
Riverstone Precinct A											
Parcel 4, Wellington Street											
LS 01	Subsurface soil, central portion	-	N/A	Lead in soil	Yes	32ppm	-	-	None	18 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 5, Wellington Street											
Visual	ACM sheeting and fibre glass sheeting, north east corner	-	Non-friable	ACM Sheeting, Fibre Glass	Yes	Assumed asbestos	Generally intact	<10	Remove prior to demolition	5 May 2014, JBS&G (NSW & WA) Pty Ltd, TH	
Parcel 6, Wellington Street											
Visual	ACM sheeting along boundary fence and chicken coup	-	Non-friable	ACM Sheeting	Yes	Assumed asbestos	Generally intact	<10	Remove prior to demolition	5 May 2014, JBS&G (NSW & WA) Pty Ltd, TH	
Parcel 7, Wellington Street											
AF 21	FCS fragments to ground surfaces	-	Non-friable	FCS fragments	Limited due to compacted ground surface	Assumed asbestos	Broken fragments	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 8, Hobart Street (Commercial)											
Visual	FCS eaves surrounding building	3	Non-friable	FCS	No: above access restrictions	Assumed asbestos	Intact	+250	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS panels to exterior walls, surrounding building	3	Non-friable	FCS	Yes	Assumed asbestos	Intact	+300	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to bearers and joists in	-	Non-friable	FCS packing	No: locked	Assumed asbestos	Generally intact	10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



Hazardous Materials Register
 Address: Riverstone Precinct A 'Scheduled Lands' (Stages 1 to 3)
 Riverstone, NSW

JBS&G SAMPLE NO.	TYPE OF HAZMAT & LOCATION	PHOTO NUMBER	FRIABILITY	MATERIAL DESCRIPTION	ACCESSIBLE AREA?	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY (m ²)	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
	underfloor void										
Visual	FCS gables to front of building, northern portion	-	Non-friable	FCS	No; above height access restrictions	Assumed asbestos	Intact	50	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS façade to roof adjacent to toilets	-	Non-friable	FCS	No; above height access restrictions	Assumed asbestos	Intact	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS panels to ceiling, exterior veranda	-	Non-friable	FCS	Yes	Assumed asbestos	Intact	10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	BEBB to rear of building	-	Non-friable	BEBB	No; locked	Assumed asbestos	Intact	1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS panels to bill boards adjacent to highway, northern portion	-	Non-friable	FCS	Yes	Assumed asbestos	Intact	2 units (10m ² each)	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS panels behind tiles in wet areas of bathroom	-	Non-friable	FCS	Not readily	Assumed asbestos	Intact	20	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 15	AC fragments to ground surface adjacent to stockpile, western portion	-	Non-friable	FCS	Limited due to rubble	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 16	AC fragments associated with soil stockpile, central portion	-	Non-friable	FCS	Limited due to rubble	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



Hazardous Materials Register
 Address: Riverstone Precinct A 'Scheduled Lands' (Stages 1 to 3)
 Riverstone, NSW

JBS&G SAMPLE NO.	TYPE OF HAZMAT & LOCATION	PHOTO NUMBER	FRIABILITY	MATERIAL DESCRIPTION	ACCESSIBLE AREA?	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY (m ²)	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
AF 17	AC fragments associated with fill material, rear southern portion	-	Non-friable	FCS	Limited due to rubble	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 18	AC fragments associated with fill material, third tier	-	Non-friable	FCS	Limited due to rubble	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 19	AC fragments associated with raised fill material, third tier	-	Non-friable	FCS	Limited due to rubble	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 20	AC fragments associated with fill material, second tier	-	Non-friable	FCS	Limited due to rubble	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 14, Hobart Street											
Visual	FCS eaves surrounding residence	-	Non-friable	FCS	Not readily	Assumed asbestos	Generally intact	80	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS walls to exterior, throughout	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact	120	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to bearers and joists	-	Non-friable	FCS packing	No	Assumed asbestos	Generally intact	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to timber window and door frames	-	Non-friable	FCS packing	No	Assumed asbestos	Generally intact	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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JBS&G SAMPLE NO.	TYPE OF HAZMAT & LOCATION	PHOTO NUMBER	FRIABILITY	MATERIAL DESCRIPTION	ACCESSIBLE AREA?	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY (m ²)	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
Visual	FCS walls to exterior toilet adjacent to residence, northern portion	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact, minor damage	10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	AC saw-toothed roofing to exterior toilet adjacent to residence	-	Non-friable	AC	Yes	Assumed asbestos	Generally intact, minor damage	5	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	Redundant FCS panel adjacent to exterior toilet	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact, minor damage	2	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	Redundant FCS panel in metal shed adjacent to exterior toilet	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact, minor damage	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	Redundant FCS panel under house	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact, minor damage	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	Redundant FCS panel to rear iron shed, northern portion	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact, minor damage	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	Redundant FCS panel in chicken cage, adjacent to residence to west	-	Non-friable	FCS	Not readily	Assumed asbestos	Generally intact, minor damage	2	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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Visual	SMF insulation in ceiling cavity	-	N/A	SMF insulation	No	Assumed SMF	Generally intact	120	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	Old brown VFT to kitchen	-	Non-friable	VFT	No: indoors not accessed	Assumed asbestos	Generally intact	20	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	BEBB, residence exterior	-	Non-friable	BEBB	No	Assumed asbestos	Generally intact	1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 01	White paint to garage door, rear northern portion	-	N/A	White paint	Yes	<1mg/cm ²	Flaky	10	None	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 16, Hobart Street											
Visual	BEBB to exterior southern wall of granny flat	-	Non-friable	BEBB	Yes	Assumed asbestos	Generally intact	2	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS walls, exterior eastern portion of granny flat	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact, minor damage	30	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS walls to exterior sunroom, northern portion of granny flat	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact	20	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS panels to dog house adjacent to granny flat, western portion	-	Non-friable	FCS	Yes	Assumed asbestos	Intact	20	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	Old brown VFT in	-	Non-friable	VFT	No access to residence interior	Assumed asbestos	Generally intact, minor damage	10	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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	Kitchen, granny flat									RC	
Visual	SMF insulation material to external veranda ceiling, granny flat	-	N/A	SMF insulation	Not readily	Assumed SMF	Generally intact	20	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to bearers and joists of granny flat and residence	4	Non-friable	FCS	Not readily	Assumed asbestos	Generally intact	10	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to timber window and door frames, granny flat	-	Non-friable	FCS	Not readily	Assumed asbestos	Generally intact	<10	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	SMF HWS to eastern portion of residence, exterior	-	N/A	SMF insulation	Yes	Assumed SMF	Generally intact	2	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 01	Green paint to exterior southern wall, granny flat	-	N/A	Green paint	Yes	<1 mg/cm ²	Flaky	10	None	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 02	Cream paint to exterior walls, granny flat	-	N/A	Cream paint	Yes	9.7 mg/cm²	Flaky	40	Remove flaking, dusting and deteriorated paint prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 03	Cream paint to timber support beams, veranda of granny flat	-	N/A	Cream paint	Yes	2.4 mg/cm²	Flaky	20	Remove flaking, dusting and deteriorated paint prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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LP 04	Green paint to exterior window sill, granny flat	-	N/A	Green paint	Yes	<1mg/cm ²	Flaky	5	None	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 05	Cream paint to exterior toilet adjacent to granny flat	-	N/A	Cream paint	Yes	<1mg/cm ²	Flaky	10	None	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 06	Green paint to metal roofing of exterior toilet adjacent to granny flat	-	N/A	Green paint	Yes	2.7 mg/cm²	Flaky	5	Remove flaking, dusting and deteriorated paint prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 07	Brown paint to large metal container, western portion adjacent to residence	-	N/A	Brown paint	Yes	1.2 mg/cm²	Flaky	20	Remove flaking, dusting and deteriorated paint prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 08	White paint to handrails of veranda, residence	-	N/A	White paint	Yes	<1mg/cm ²	Intact	5	None	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 18, Wellington Street											
AF 02	AC fragment to ground surface associated with fill material	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<10	Remove prior to demolition	18 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 19, Wellington Street											
AF 01	AC fragment to ground surface associated	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	18 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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	with fill material										
AF 03	AC fragment to ground surface associated with fill material	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	18 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 04	AC fragment to ground surface associated with fill material	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<10	Remove prior to demolition	18 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 21, Edmund Street											
Visual	FCS packing to bearers and joists in the underfloor void associated with pre-existing brick building structure	-	Non-friable	FCS packing	Not readily	Assumed asbestos	Generally intact	<10	Remove prior to demolition	6 March 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 24, Hobart Street											
LP 01	Red paint to drum in northern portion	-	N/A	Red paint	Yes	<1mg/cm ²	Intact	2	None	19 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 02	Blue paint to drum in northern portion	-	N/A	Blue paint	Yes	<1mg/cm ²	Intact	2	None	19 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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LP 03	Beige paint to timber beams in north-western portion	-	N/A	Beige paint	Yes	<1mg/cm ²	Intact	<1	None	19 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 04	Green paint to timber beams in north-western portion	-	N/A	Green paint	Yes	<1mg/cm ²	Intact	<1	None	19 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 25, Hobart Street											
AF 24	Cream linoleum fragments in northern portion	-	Non-friable	Linoleum	Limited due to leaf litter	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	19 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 26, Hobart Street											
Visual	AC fragment to ground surface, central portion	-	Non-friable	AC	Limited due to leaf litter	Assumed asbestos	Broken fragment	<1	Remove prior to demolition	19 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 28, Sydney Street											
Visual	FCS eave surrounding residence, all elevations	-	Non-friable	FCS	Not readily	Assumed asbestos	Intact	150	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS sarking under tiles to roof	-	Non-friable	FCS	No; above height access restriction	Assumed asbestos	Intact	240	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	BEBB in carport adjacent to residence, southern portion	5	Non-friable	BEBB	Yes	Assumed asbestos	Intact	1	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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Visual	FCS panels to exterior veranda ceiling	-	Non-friable	FCS	Not readily	Assumed asbestos	Intact	20	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS panels to ceiling of rear internal sunroom	-	Non-friable	FCS	Not readily	Assumed asbestos	Intact	20	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	SMF HWS, residence exterior	-	N/A	SMF insulation	Yes	Assumed SMF	Generally intact	2	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to timber window and door frames	-	Non-friable	FCS packing	No	Assumed asbestos	Generally intact	<10	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	BEBB to power pole in vacant block adjacent to residence	-	Non-friable	BEBB	Yes	Assumed asbestos	Generally intact	1	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 01	White paint to timber sleepers in front yard, southern portion	-	N/A	White paint	Yes	<1mg/cm ²	Flaky	10	None	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 33, Hobart Street											
LS 01	Subsurface soil, central portion	-	N/A	Lead in soil	Yes	42ppm	-	-	None	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 37, Hobart Street											
Visual	FCS packing to underfloor void and to bearers and joists	-	Non-friable	FCS packing	No	Assumed asbestos	Intact	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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Visual	Gaskets to old fuel tank/pump	-	Non-friable	Gaskets	Not readily	Assumed asbestos	Intact, concealed	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	Oil/fuel drums storage adjacent to residence	-	N/A	Fuel/oil drums	Yes	-	Intact, minor spillage	4 units	-	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 13	Redundant FCS panels to rear work shed, southern portion	-	Non-friable	FCS debris	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 14	Redundant FCS panels to ground surfaces adjacent to work shed, southern portion	-	Non-friable	FCS debris	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 38, Sydney Street											
AF 23	AC fragments to ground surface associated with soil stockpile	6	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	SMF HWS in central portion	-	N/A	SMF insulation	Yes	Assumed SMF	Minor damage	2	Remove prior to demolition	20 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 42, Sydney Street											
AF 08	AC pipes in rubble stockpile, central portion	7	Non-friable	AC	Yes	Assumed asbestos	Generally intact, minor damage	2 units (~10m ²)	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 45, Sydney Street											



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Visual	FCS eaves surrounding residence	-	Non-friable	FCS	Yes	Assumed asbestos	Intact	120	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to timber window and door frames of residence	-	Non-friable	FCS packing	Yes	Assumed asbestos	Generally intact	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to underfloor void of residence	-	Non-friable	FCS packing	Yes	Assumed asbestos	Generally intact	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS sarking under tiles to roof	-	Non-friable	FCS	Yes	Assumed asbestos	Intact concealed	Throughout roof (200m ²)	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	BEBB to exterior eastern portion of residence	-	Non-friable	BEBB	Yes	Assumed asbestos	Intact	1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS eaves to fibro shed adjacent to residence, northern portion	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact	20	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS walls to fibro shed adjacent to residence	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact, minor damage	40	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	Timber-look FCS walls to granny flat adjacent to residence, western portion	-	Non-friable	Compressed FCS	Yes	Assumed asbestos	Intact	50	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS panels to wooden storage	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact, minor damage	2	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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	crate in metal shed, rear northern portion									RC	
Visual	SMF HWS to exterior eastern portion of residence		N/A	SMF insulation	Yes	Assumed SMF	Generally intact	2	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 10	AC fragments to fill material in front garden bed, southern portion	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 11	AC fragments adjacent to fibro shed adjacent to residence, northern portion	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 12	AC fragments adjacent to septic tank associated with fill material	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 01	Red paint to metal downpipes, residence	-	N/A	Red paint	Yes	<1mg/cm ²	Flaky	10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 02	White paint to window sill, residence exterior	-	N/A	White paint	Yes	<1mg/cm ²	Flaky	20	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 03	White paint to timber beams,	-	N/A	White paint	Yes	<1mg/cm ²	Flaky	15	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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	southern entrance of residence									RC	
LP 04	White paint to door frame of fibro shed, adjacent to residence northern portion	-	N/A	White paint	Yes	< 1mg/cm ²	Flaky	2	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 05	White paint to door of fibro shed adjacent to residence	-	N/A	White paint	Yes	< 1mg/cm ²	Flaky	5	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 06	White paint to timber door frame in iron shed, rear northern portion	-	N/A	White paint	Yes	< 1mg/cm ²	Flaky	5	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 46, Sydney Street											
AF 09	AC fragment to ground surface associated with fill material	-	Non-friable	AC	Limited due to leaf litter	Assumed asbestos	Broken fragment	<1	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 48, Sydney Street											
Visual	FCS sarking under tiles to roof	-	Non-friable	FCS	No	Assumed asbestos	Intact	+200	Remove prior to demolition	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS gables to residence	-	Non-friable	FCS	No	Assumed asbestos	Intact	50	Remove prior to demolition	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS eaves surrounding residence	-	Non-friable	FCS	Not readily	Assumed asbestos	Intact	120	Remove prior to demolition	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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										RC	
Visual	BEBB to residence exterior, northern portion	-	Non-friable	BEBB	Yes	Assumed asbestos	Intact	1	Remove prior to demolition	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	SMF insulation in ceiling cavity	-	N/A	SMF insulation	No	Assumed SMF	Intact	200	Remove prior to demolition	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	SMF HWS exterior residence to rear, eastern portion	-	N/A	SMF insulation	Yes	Assumed SMF	Generally intact	2	Remove prior to demolition	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 01	Cream paint to timber support beams, exterior veranda	-	N/A	Cream paint	Yes	< 1mg/cm ²	Intact	30	None	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 50, Sydney Street											
Visual	FCS eaves surrounding residence	-	Non-friable	FCS	Not readily	Assumed asbestos	Intact	120	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS sarking under tiles to roof	-	Non-friable	FCS	Not readily	Assumed asbestos	Intact	200	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to underfloor void	-	Non-friable	FCS packing	No	Assumed asbestos	Generally intact	<10	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to timber window and door frames	-	Non-friable	FCS packing	No	Assumed asbestos	Generally intact	<10	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	BEBB to exterior eastern	-	Non-friable	BEBB	No: locked	Assumed asbestos	Generally intact	1	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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	portion of residence										
Visual	FCS eave to exterior toilet, adjacent to residence	-	Non-friable	FCS	Yes	Assumed asbestos	Intact	10	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	AC sheeting to roof of exterior toilet, adjacent to residence	-	Non-friable	AC	Yes	Assumed asbestos	Generally intact, minor damage	5	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	AC debris surrounding exterior toilet, adjacent to residence	-	Non-friable	AC debris	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	SMF insulation in ceiling cavity	-	N/A	SMF insulation	No	Assumed SMF	Intact	200	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	SMF HWS to residence exterior	-	N/A	SMF insulation	Yes	Assumed SMF	Generally intact	2	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 01	White paint to exterior toilet door	-	N/A	White paint	Yes	<1mg/cm ²	Flaky	3	None	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 02	White paint to exterior toilet door frame	-	N/A	White paint	Yes	1.3 mg/cm²	Flaky	5	Remove flaking, dusting and deteriorated paint prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 54, Sydney Street											
LP 01	Red paint to new shipping container, south-	-	N/A	Red paint	Yes	<1mg/cm ²	Intact	40	None	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



Hazardous Materials Register
 Address: Riverstone Precinct A 'Scheduled Lands' (Stages 1 to 3)
 Riverstone, NSW

JBS&G SAMPLE NO.	TYPE OF HAZMAT & LOCATION	PHOTO NUMBER	FRIABILITY	MATERIAL DESCRIPTION	ACCESSIBLE AREA?	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY (m ²)	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
	western portion										
LP 02	Cream paint to old shipping container, southern portion	-	N/A	Cream paint	Yes	1.2 mg/cm²	Flaky	30	Remove flaking, dusting and deteriorated paint prior to demolition	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
As LP 02	Cream paint to old shipping container, southern portion	8	N/A	Cream paint	No: due to leaf litter	Assumed to contain elevated levels of lead	Flaky	30	Remove flaking, dusting and deteriorated paint prior to demolition	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 55, Sydney Street											
AF 06	AC fragments to ground surfaces	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
AF 07	AC fragments to ground surfaces and rubble stockpile	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 80, Crown Road											
AF 22	AC fragments to ground surfaces adjacent to soil stockpile	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragments	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 81, Crown Road											
Visual	BEBB to residence exterior, southern portion	-	Non-friable	BEBB	Yes	Assumed asbestos	Intact	1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



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JBS&G SAMPLE NO.	TYPE OF HAZMAT & LOCATION	PHOTO NUMBER	FRIABILITY	MATERIAL DESCRIPTION	ACCESSIBLE AREA?	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY (m ²)	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
Visual	SMF HWS to front of residence, southern portion	-	N/A	SMF insulation	Yes	Assumed SMF	Generally intact	2	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 01	White paint on timber beams to metal shed, rear northern portion	-	N/A	White paint	Yes	<1mg/cm ²	Generally intact	40	None	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
LP 02	Pink paint substrate beneath newer white paint on timber beams to metal shed, rear northern portion	-	N/A	Pink paint	Yes	<1mg/cm ²	Generally intact	40	None	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 83, Crown Road											
LS 01	Subsurface soil, central portion	-	N/A	Lead in soil	Yes	34ppm	-	-	None	21 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 88, Crown Road											
AF 15	AC pipes stored above shipping container in yard adjacent to residence	-	Non-friable	AC	Not readily	Assumed asbestos	Generally intact, minor damage	2 units 10m ² each	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	AC fragment to ground surfaces associated with damaged AC pipe	-	Non-friable	AC	Yes	Assumed asbestos	Broken fragment	<1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



Hazardous Materials Register
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 Riverstone, NSW

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	(see above)										
Visual	New BEBB to work shed adjacent to residence	-	Non-friable	BEBB	Yes	Assumed not to contain asbestos	Intact	1	None	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	AC roofing to granny flat adjacent to residence to rear	-	Non-friable	AC	Not readily	Assumed asbestos	Generally intact, minor damage	80	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS walls to residence	-	Non-friable	FCS	Yes	Assumed asbestos	Generally intact	200	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS eaves surrounding residence	-	Non-friable	FCS	No: above height access restrictions	Assumed asbestos	Intact	100	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS sarking under tiles to roof	-	Non-friable	FCS	No	Assumed asbestos	Intact, concealed	200	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS walls to exterior toilet adjacent to residence, northern portion	-	Non-friable	FCS	No: yard locked	Assumed asbestos	Generally intact	20	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	BEBB to exterior south-western wall of residence	-	Non-friable	BEBB	Yes	Assumed asbestos	Intact	1	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to timber window and door frames of residence	-	Non-friable	FCS packing	No	Assumed asbestos	Generally intact	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Visual	FCS packing to bearers and joists in underfloor void	-	Non-friable	FCS packing	No	Assumed asbestos	Generally intact	<10	Remove prior to demolition	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	



Hazardous Materials Register
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 Riverstone, NSW

JBS&G SAMPLE NO.	TYPE OF HAZMAT & LOCATION	PHOTO NUMBER	FRIABILITY	MATERIAL DESCRIPTION	ACCESSIBLE AREA?	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY (m ²)	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
LP 01	Yellow paint to door frame of office adjacent to work shed	-	N/A	Yellow paint	Yes	< 1mg/cm ²	Intact	< 5	None	25 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	
Parcel 89, Crown Road											
Visual	FCS packing to bearers and joists in the underfloor void associated with pre-existing red brick building structure.	-	Non-friable	FCS packing	Not readily	Assumed asbestos	Generally intact	< 10	Remove prior to demolition	24 February 2014, JBS&G (NSW & WA) Pty Ltd, RC	

Notes: AF = Asbestos Find; FCS = Fibrous Cement Sheeting; CFCS = Compressed Fibrous Cement Sheeting; BEBB = Black Electrical Backing Board; SMF = Synthetic Mineral Fibre; HWS = Hot Water System; AC = Asbestos Cement; VFT = Vinyl Floor Tile; LP = Lead in Paint; LS = Lead in Soil.

Appendix K – Field Soil Sample Summary Logs

Parcel	Samples	Depth Interval (m bgs) and Material Description	Comments
4	P04-L01	0-0.1: Silty clay, brown, heterogeneous, dry, medium plasticity, stiff.	-
		0.2: Silty clay, light brown, homogenous, stiff, medium plasticity.	-
	P04-L02	0-0.1: Silty sand, light brown, heterogeneous, dry, medium dense, fine grain.	-
		0.2: Silty sand, light brown, heterogeneous, dry, medium dense, fine grain with concrete and plastic	-
		0.3: Silty sand, light brown, heterogeneous, dry, medium dense, fine grain with concrete and plastic	-
	5	P5-L01	0.0-0.1: Silty clay, brown, dry, medium plasticity, with sandstone fragments.
P5-L02		0.0-0.1: Silty clay, brown, dry, medium plasticity with minor fine to coarse gravels	-
P5-L03		0.0-0.1: Silty clay, brown, dry, medium plasticity with minor fine to coarse gravels and rootlets	-
6	P6-L01	0.0-0.1: Silty clay, red to brown, dry, medium plasticity with minor fine to coarse gravels.	-
	P6-L02	0.0-0.1: Silty clay, red to brown, dry, medium plasticity with minor fine to coarse gravels.	-
	P6-L03	0.0-0.1: Silty clay, red to brown, dry, medium plasticity with minor fine to coarse gravels.	-
7	P07-L01	0-0.1: Silty clay, brown, dry, medium plasticity, firm, fine, brick and concrete gravels, metal.	-
		0.1: Silty clay, light brown, dry, medium plasticity, firm.	
	P07-L02	0-0.1: Silty clay, brown, heterogeneous, dry, medium plasticity, firm.	Surface Staining
		0.1: Silty clay, light brown with grey and red, homogenous, dry, stiff.	-
	P07-L03	0-0.1: Silty clay, brown, heterogeneous, dry, medium plasticity, firm.	-
		0.2: Silty clay, light brown with grey to red, homogeneous, dry, medium plasticity, stiff.	-
8	P08-SP01-A	0.3 Silty clay, brown with red and orange, heterogeneous, damp, stiff inclusions of ironstone, brick and concrete.	-
	P08-SP01-B	0.3 Silty clay, brown, heterogeneous, damp, stiff inclusions of ironstone, brick and gravels.	
	P08-SP01-C	0.3 Silty clay, brown, heterogeneous, dry, stiff inclusions of brick and concrete.	ACM observed on ground surface

	P08-L01	0-0.1: Gravelly clay, light brown, heterogeneous, fine gravels of brick, concrete, shale, ironstone, igneous gravel.	-
		0.2-0.3: Gravelly clay, light brown, heterogeneous, fine gravels of brick, concrete, shale, ironstone, igneous gravel.	-
	P08-L02	0-0.1: Gravelly sand, brown, heterogeneous, fine brick concrete, medium dense, igneous gravels.	-
		0.2-0.3: Gravelly sand, brown, heterogeneous, fine brick concrete, medium dense, igneous gravels.	-
	P08-L03	0-0.1: Gravelly sand, light grey-yellow, heterogeneous, dry, medium dense, concrete, brick, fine sandstone gravels.	-
	9	P09-L01	0.0.1: Gravelly silty clay, brown with grey and red mottles, heterogeneous, dry, medium dense, stiff.
0.2: Silty clay, brown, homogenous, stiff, medium plasticity, dry.			-
P09-L02		0-0.1: Gravelly sand, heterogeneous, dry, medium dense, fine grained, inclusions of fine gravels of brick, bitumen	-
		0.2: Silty Clay, red with brown mottles, homogenous, medium plasticity, stiff.	-
P09-L03		0-0.1: Silty gravelly clay, brown, heterogeneous, dry, medium plasticity, fine sandstone, brick, bitumen gravels.	-
10		P10-L01	0-0.1: Silty Sand, brown to yellow, heterogeneous, dry, fine-coarse, gravels of sandstone.
	0.4-0.5: Silty Sand, brown to yellow, heterogeneous, dry, fine-coarse, gravels of sandstone.		-
	P10-L02	0-0.1: Silty Sand, dark brown, heterogeneous, damp, medium dense, fine-coarse grain, coarse gravels of sandstone.	-
		0.2-0.3: Silty Sand, dark brown, heterogeneous, damp, medium dense, fine-coarse grain, coarse gravels of sandstone.	-
		0.3: Silty clay, grey with light brown and red mottles, homogenous, damp, medium plasticity, stiff.	-
	11	P11-BH01	0.0-0.1: Silty Clay, light brown, homogenous, dry, medium plasticity, stiff.
P11-BH02		0.0-0.1: Silty Clay, light brown, homogenous, dry, medium plasticity, stiff.	-

	P11-BH02	0.0-0.1: Silty sandy clay, brown, heterogeneous, dry, medium dense.	-
		0.0-0.3: Silty Clay, light brown, homogenous, dry, medium plasticity, stiff.	-
12	P12-L01	0-0.1: Sandy silty clay, light brown, dry, low plasticity, firm.	-
		0.2-0.3: Sandy silty clay, light brown, dry, low plasticity, firm.	-
		0.4: Silty clay, brown, homogenous, medium plasticity, stiff.	-
	P12-L02	0-0.1: Silty clay, brown, homogenous, dry, medium plasticity, stiff, rootlets.	-
		0.15: Silty clay, brown, homogenous, dry, medium plasticity, stiff.	-
13	P13-L01	0-0.1: Silty sandy clay, brown, heterogeneous, dry, low plasticity, firm.	-
		0.15:0-0.2: Silty sandy, brown, homogenous, dry, medium plasticity, stiff.	-
	P13-L02	0-0.1: Silty clay, brown, homogenous, dry, medium plasticity, stiff.	-
		0.15: Silty clay, light brown with red mottles, homogenous, dry, medium plasticity, stiff.	-
14	P14-L01	0-0.1: Silty clay, light brown, stiff, dry, medium plasticity.	Area ploughed for market garden
		0.2-0.3: Silty clay, light brown, stiff, dry, medium plasticity.	-
	P14-L02	0-0.1: Silty clay, dark brown, heterogeneous, firm, dry, low plasticity.	-
		0.1: Silty clay, light brown with grey and red mottles, homogeneous, stiff, medium plasticity.	-
	P14-L03	0-0.1: Silty gravelly clay, brown, heterogeneous, dry, firm, low plasticity with fine charcoal gravels.	-
		0.2-0.3: Silty gravelly clay, brown, heterogeneous, dry, firm, low plasticity with fine charcoal gravels.	-
15	P15-L01	0.0-0.1: Silty clay, dark brown, homogenous, medium plasticity, stiff and damp	-
		0.2: Silty clay, light brown, red and red mottles, homogenous, medium plasticity, stiff and dry.	-
	P15-L02	0.0-0.1: Silty clay, dark brown, homogenous, medium plasticity and firm.	-
		0.2: Silty clay, light brown, red and red mottles, homogenous, medium plasticity, stiff.	-
16	P16-L01	0.0-0.1: Silty clay, dark brown, homogenous, medium plasticity and firm.	-

		0.2: Silty clay, light brown, red and red mottles, homogenous, medium plasticity, stiff.	-
	P16-L02	0.0-0.1: Silty clay, dark brown, homogenous, medium plasticity, firm with inclusions of rootlets.	-
		0.2: Silty clay, light brown, red and red mottles, homogenous, medium plasticity, stiff.	-
	P16-L03	0.0-0.1: Silty clay, dark brown, homogenous, dry, medium plasticity, stiff with rootlets.	-
		0.75: Silty clay, light brown, homogenous, medium plasticity, stiff.	
17	P17-L01	0.0-0.1: Silty clay, brown, homogenous, dry, medium plasticity, stiff with organic matter.	-
		0.2: Silty clay, light brown to grey, homogenous, stiff, medium plasticity.	-
	P17-L02	0-0.1: Silty clay, light brown, homogenous, dry, medium plasticity, rootlets.	-
		0.2-0.3 Silty clay, light brown, homogenous, dry, medium plasticity, rootlets.	-
18	P18-L01	0-0.1: Silty clay, hetero, dark brown, medium plasticity, firm, fine charcoal, gravels, glass, plastic, brick	-
		0.2-0.3: Silty clay, light brown, homogenous, dry.	-
	P18-L02	0-0.1: Silty clay, brown, homogenous, dry, medium plasticity, stiff, rootlets.	-
		0.15: Silty clay, homogenous, light brown, dry, medium plasticity, stiff.	-
19	P19-L01	0-0.1: Silty clayey sand, light brown, homogenous, medium dense, fine grained, inclusion of organic matter.	-
		0.2-0.3: Silty clayey sand, light brown, homogenous, medium dense, fine grained, inclusion of organic matter.	-
	P19-L02	0.0-0.1: Silty clayey sand, brown, homogenous, medium dense, fine grained.	-
		0.2: Silty clay, light grey to brown, mottles, homogenous, low plasticity, stiff.	-
20	P20-L01	0-0.1: Silty clayey sand, dark brown, heterogeneous, damp, medium plasticity, organic matter, inclusions of shale, brick concrete bitumen, tile, glass.	QC01/QC01A

		0.2-0.3: Silty clay, light grey brown, homogenous, dry, stiff, low plasticity, weathered silt stone.	-
	P20-L02	0.0-0.1: Silty clayey sand, light brown, heterogeneous, dry, siltstone, shale	-
21	P21-L01	0-0.1: Silty clay, dark brown, homogenous, damp, medium plasticity, stiff.	-
		0.1: Silty clay, red with grey and brown mottles, homogenous, damp, very stiff.	-
	P21-L02	0-0.1: Silty clay, dark brown, homogenous, damp, medium plasticity, stiff.	Garden bed/ organic odour/
		0.1: Silty clay, homogenous, grey with red and brown mottles, damp, very stiff.	-
	P21-L03	0.0-0.1: Silty clay, dark brown, homogenous, damp, medium plasticity, stiff.	-
		0.1: Silty clay, homogenous, grey with red and brown mottles, stiff, medium plasticity.	-
22	P22-L01	0-0.1: Gravelly clay, dark brown to black, heterogeneous, damp, medium plasticity, firm, fine igneous gravels, shale and brick.	Next to tyre that has evidence of hydraulic fluid/surface staining.
	P22-L02	0-0.1: Clayey gravel, dark brown to black, heterogonous, damp, low plasticity, firm, fine igneous gravels, fine brick.	Surface sampling
	P22-L03	0-0.1: Silty clay, dark brown, heterogonous, damp, medium plasticity, stiff, inclusions of brick.	-
		0.1: Silty clay, light brown with red and grey mottles, homogenous, medium plasticity, stiff.	-
24	P24-L01	0-0.1: Sandy clay, brown, heterogeneous, low plasticity, firm, damp with rootlets.	-
		0.2: Silty clay, light brown, homogenous, dry, medium plasticity, stiff.	-
	P24-L02	0-0.1: Silty gravelly clay, dark brown, heterogeneous, damp, fine charcoal gravels, medium plasticity inclusions of screw bolts.	
		0.2-0.3: Silty clay, dark brown with red mottles, heterogeneous, damp, medium plasticity, stiff.	
25	P25-L01	0-0.1: Gravelly clay, black to brown, heterogeneous, dry, low plasticity, stiff, charcoal, gravels, metals, glass.	
		0.1: Silty clay, light brown, homogenous, dry, medium plasticity, stiff.	

	P25-L02	0-0.1: Silty clay, brown, heterogeneous, medium plasticity, stiff, inclusions of fine road gravels and ironstone	
		0.2: Reworked natural silty clay, heterogeneous, Red with grey and yellow mottles.	
26	P26-L01	0-0.1: Silty clay, light brown, heterogeneous, medium plasticity, damp, stiff, inclusions of brick.	ACM observed
		0.2-0.3: Silty clay, light brown, heterogeneous, medium plasticity, damp, stiff, inclusions of brick.	-
	P26-L02	0-0.1: Silty clay, light brown, heterogeneous, medium plasticity, dry, stiff, inclusions of rootlets.	QC03/QC03A
		0.3: Silty clay, brown to red, homogenous, medium plasticity, dry, stiff, inclusions of fine siltstone gravels.	-
27	P27-L01	0-0.1: Silty clay, light brown, heterogeneous, dry, medium plasticity, stiff, inclusions of brick and road base gravels.	-
		0.2: Silty clay, light brown with red mottles, homogenous, dry, medium plasticity, stiff.	-
	P27-L02	0-0.1: Silty clay, light brown, heterogeneous, dry, medium plasticity, stiff, fine brick and sandstone gravels.	-
		0.2: Silty clay, light brown with red and grey mottles, homogenous, dry, medium plasticity, stiff.	-
28	P28-L01	0-0.1: Silty clay, brown, homogenous, dry, stiff.	-
		0.1: Silty clay, red to brown with grey mottles, homogenous, dry, stiff	-
	P28-L02	0-0.1: Silty gravelly clay, brown, heterogeneous, dry, medium plasticity, stiff, fine igneous gravels and concrete.	Building scrapes
	P28-L03	0-0.1: Silty clay, light brown, heterogeneous, dry, stiff, fine brick, medium plasticity, stiff, igneous gravels.	-
		0.1: Silty clay, red-brown with grey mottles, homogenous, damp, medium plasticity, stiff.	-
29	P29-L01	0-0.1: Silty clay, brown, homogenous, medium plasticity, stiff.	-
		0.2: Silty clay, light brown with red-brown and grey mottles, homogenous, damp, medium plasticity, stiff.	-
	L29-L02	0-0.1: Silty clay, brown, homogenous, medium plasticity, stiff with rootlets.	-
		0.2: Silty clay, light brown with red-brown and grey mottles, homogenous, medium plasticity, stiff.	-

P30	P30-L01	0-0.1: Silty clay, dark brown, heterogeneous, low plasticity, firm inclusions of wood, fine igneous gravels and plastic.	-
		0.2: Silty clay, light brown with red-brown and grey mottles, homogenous, medium plasticity, stiff.	-
	P30-L02	0-0.1: Silty clay, dark brown, heterogeneous, low plasticity, firm inclusions of rootlets.	-
		0.15: Silty clay, brown with red and grey mottles, homogeneous, medium plasticity, stiff.	-
P31	P31-L01	0-0.1: Silty clay, light brown, homogeneous, medium plasticity, stiff.	-
		0.15: Silty clay, light brown with red mottles, homogeneous, dry.	-
	P31-L02	0-0.1: Silty clay, light brown, homogeneous, medium plasticity, stiff.	-
		0.15: Silty clay, light brown with red mottles, homogeneous, medium plasticity, stiff.	-
P32	P32-L01	0-0.1: Silty clay, dark brown, homogeneous, medium plasticity, damp, stiff with rootlets.	-
		0.2: Silty clay, light brown with red and grey mottles, homogeneous, medium plasticity, stiff.	-
	P32-L02	0-0.1: Silty clay, dark brown, homogeneous, medium plasticity, damp, stiff with rootlets.	-
		0.2: Silty clay, light brown with red and grey mottles, homogeneous, medium plasticity, stiff.	-
P33	P33-L01	0-0.1: Silty clay, dark brown, homogeneous, medium plasticity, damp, stiff with rootlets.	-
		0.2: Silty clay, light brown with red and grey mottles, homogeneous, medium plasticity, stiff.	-
	P33-L02	0-0.1: Silty clay, dark brown, homogeneous, medium plasticity, damp, stiff.	-
		0.2: Silty clay, light brown with red and grey mottles, homogeneous, medium plasticity, stiff.	-
P34	P34-BH01	0.0-0.1: Silty Clay, light brown, homogenous, dry, medium plasticity, stiff, with ironstone inclusions	-
	P34-BH02	0.0-0.1: Silty Clay, light brown, homogenous, dry, medium plasticity, stiff.	-

	P34-BH03	0-0.1: Silty sandy clay, brown-yellow, heterogeneous, dry, low plasticity, with concrete, plastic, brick	-
		0.1-0.3: Silty sandy clay, brown-yellow, heterogeneous, dry, low plasticity, with concrete, plastic, brick	-
P35	P35-L01	0-0.1: Silty clay, dark brown, homogeneous, medium plasticity, damp, stiff.	-
		0.2: Silty clay, light brown with red and grey mottles, homogeneous, medium plasticity, stiff.	-
	P35-L02	0-0.1: Silty clay, dark brown, homogeneous, medium plasticity, damp, stiff.	-
		0.2: Silty clay, light brown with red and grey mottles, homogeneous, medium plasticity, stiff.	-
P36	P36-L01	0-0.1: Silty clay, dark brown, homogeneous, medium plasticity, damp, stiff.	QC04/QC04-A
		0.2: Silty clay, light brown with red and grey mottles, homogeneous, medium plasticity, stiff.	-
	P36-L02	0-0.1: Silty clay, dark brown, homogeneous, medium plasticity, damp, stiff with organic matter.	-
		0.2: Silty clay, light brown with red and grey mottles, homogeneous, medium plasticity, stiff.	-
P37	P37-L01	0-0.1: Silty clay, dark brown, heterogeneous, damp, medium plasticity, stiff, inclusions of fine brick gravels, charcoal, metal and shale.	-
		0.2-0.3: Silty clay, dark brown, heterogeneous, damp, medium plasticity, stiff, inclusions of fine brick gravels, charcoal, metal and shale.	-
	P37-L02	0-0.1: Silty clay, brown, heterogeneous, damp, medium plasticity, firm.	-
		0.1: Silty clay, light brown, homogeneous, dry, medium plasticity, stiff.	-
	P37-L03	0-0.1: Clayey gravel, black to brown, heterogeneous, dry, medium plasticity, stiff inclusions of igneous rock and charcoal.	-
P38	P38-L01	0-0.1: Silty clay, dark brown, heterogeneous, medium plasticity, damp, stiff.	Surface staining
		0.2: Silty clay, light brown, homogenous, grey with red mottles, medium plasticity, stiff.	
	P38-L02	0-0.1: Silty clay, brown, heterogeneous, medium plasticity, damp, stiff inclusions of metal shavings.	Metals shavings on the surface
		0.2: Silty clay, light brown, homogenous, grey with red mottles, medium plasticity, stiff.	-

	P38-L03	0-0.1: Silty clay, brown, heterogeneous, medium plasticity, damp, stiff.	Motor bike track
		0.2: Silty clay, brown with red mottles, homogenous, grey with red mottles, medium plasticity, stiff.	-
P39	P39-L02	0-0.1: Silty clay, dark brown, homogeneous, damp, medium plasticity, stiff.	-
		0.2: Silty clay, light brown with red mottles, homogeneous, dry, medium plasticity, firm.	-
P40	P40-L01	0-0.1: Silty gravelly sand, brown to grey, heterogeneous, dry, dense, find to cause grain, inclusions of fine gravels and concrete.	-
		0-0.1: Gravelly sandy clay, brown, heterogeneous, dry, low plasticity, firm.	In building scare
	0.1: Silty gravelly sandy, brown to grey, heterogeneous, dry, fine to cause grains, inclusions of fine brick and concrete gravels.		
	P40-L03	0-0.1: Silty Gravelly sand, heterogeneous, grey-brown, dense, fine to coarse grains, inclusions of brick and concrete fine gravels.	Refusal on rock at 0.2mbgs
P41	P41-L01	0-0.1: Silty clay, brown, homogeneous, dry, low plasticity, firm.	-
		0.1: Silty clay, brown, homogeneous, dry, low plasticity, firm.	-
	P41-L02	0-0.1: Silty clay, brown, homogeneous, dry, low plasticity, firm.	-
		0.1: Silty clay, red brown, homogeneous, stiff, medium plasticity.	-
P42	P42-L01	0-0.1: Silty clay, brown, homogeneous, dry, low plasticity, firm.	OC11/QC11A
		0.1: Silty clay, red to brown, homogeneous, stiff, medium plasticity, stiff.	-
	P42-L02	0-0.1: Silty clay, brown to red, homogeneous, dry, low plasticity, firm.	-
		0.1: Silty clay, brown to red, homogeneous, dry, low plasticity, stiff.	-
P43	P43-L01	0-0.1: Silty clay, homogenous, brown, medium plasticity, firm.	-
P44	P44-L01	0-0.1: Silty clay, homogenous, brown, medium plasticity, firm.	QC10/QC10A
		0.1: Silty clay, homogenous, red to brown with grey mottles, medium plasticity, stiff.	

	P44-L02	0.1: Silty sandy clay, homogenous, low plasticity, firm.	-
P45	P45-L01	0-0.1: Silty gravelly clay, brown, heterogeneous, low plasticity, stiff, inclusions of fine-coarse river gravels.	ACM impacted surface
		0.1: Silty clay, light brown, homogeneous, low plasticity, stiff.	-
	P45-L02	0-0.1: Silty gravelly clay, brown, heterogeneous, low plasticity, stiff, inclusions of fine-coarse river gravels.	-
		0.2: Silty clay, light brown, homogeneous, low plasticity, stiff.	-
	P45-L03	0-0.1: Silty gravelly clay, brown, heterogeneous, low plasticity, stiff, inclusions of brick and concrete.	QC14/QC14-A
		0.2: Silty clay, light brown with red mottles, homogenous, medium plasticity, stiff.	-
	P45-L04	0-0.1: Silty gravelly clay, dark brown, heterogeneous, low plasticity, stiff, inclusions of charcoal gravels, wood, brick.	ACM burnt scar
	P46	P46-L01	0-0.1: Silty clay, brown, homogenous, dry, low plasticity, firm.
0.1: Silty clay, red to brown with grey, homogenous, dry, low plasticity, stiff			-
P46-L02		0-0.1: Silty clay, light brown, homogenous, dry, medium plasticity, stiff.	-
		0.2: Silty clay, light brown, homogenous, dry, medium plasticity, stiff.	-
P47	P47-L01	0-0.1: Silty clay, light brown, homogenous, dry, medium plasticity, stiff.	QC12/QC12A
		0.2: Silty clay, light brown, homogenous, dry, medium plasticity, stiff.	
	P47-L02	0-0.1: Silty clay, light brown, homogenous, medium plasticity, stiff.	-
		0.2: Silty clay, light brown, homogenous, medium plasticity, stiff.	
P48	P48-L01	0-0.1: Silty clay, dark brown to black, homogenous, medium plasticity, stiff.	-
	P48-L02	0-0.1: Silty clay, dark brown to black, homogenous, medium plasticity, stiff.	-
		0.2: Silty clay, brown with red mottles, homogenous, medium plasticity, stiff.	-
	P48-L03	0-0.1: Silty clay, dark brown, homogenous, medium plasticity, stiff.	-
		0.1: Silty clay, brown with red mottles, homogenous, medium plasticity, stiff.	-

P49	P49-L01	0-0.1: Silty clay, dark brown, homogenous, medium plasticity, stiff.	-
		0.1: Silty clay, brown with red mottles, homogenous, medium plasticity, stiff	-
	P49-L02	0-0.1: Silty clay, dark brown, homogenous, medium plasticity, stiff.	-
		0.1: Silty clay, brown with red mottles, homogenous, medium plasticity, stiff.	-
P50	P50-L01	0-0.1: Silty sand, dark brown, homogenous, dry, medium plasticity, firm.	-
		0.2-0.3: Silty sand, dark brown, homogenous, dry, medium plasticity, firm.	-
		0.3: Silt clay, red to brown with grey mottles, homogenous, medium plasticity, and stiff.	-
	P50-L02	0-0.1: Silty clay, brown, heterogeneous, medium plasticity, dry, stiff inclusions of fine brick, concrete, ironstone.	-
		0.2-0.3: Silty clay, brown, heterogeneous, medium plasticity, dry, stiff inclusions of fine brick, concrete, ironstone.	-
	P50-L03	0-0.1: Silty clay, brown, heterogeneous, medium plasticity, inclusions ironstone gravels.	-
0.1: Silty clay, light brown, homogeneous, medium plasticity, stiff.		-	
P51	P51-L01	0-0.1: Silty clay, brown, heterogeneous, medium plasticity, inclusions of rootlets.	QC09/QC09-a
		0.1: Silty clay, light brown, heterogeneous, medium plasticity, stiff.	-
	P51-L02	0-0.1: Silty clay, brown, homogeneous, medium plasticity, inclusions of rootlets.	-
		0.1: Silty clay, brown to red, homogeneous, medium plasticity, stiff.	-
P52	P52-L01	0-0.1: Silty clay, dark brown, homogeneous, medium plasticity, inclusions of rootlets.	QC08/QC08-A
		0.1: Silty clay, light brown, homogenous, dry, medium plasticity, stiff.	-
	P52-L02	0-0.1: Silty clay, brown, homogeneous, medium plasticity, inclusions of rootlets.	-
		0.1: Silty clay, brown, homogeneous, medium plasticity, inclusions of rootlets	-
P53	P53-L01	0-0.1: Silty gravelly clay, brown, heterogeneous, low plasticity, firm, inclusions of igneous gravels.	-
	P53-L02	0-0.1: Silty gravelly clay, brown with red, heterogeneous, low plasticity, stiff, inclusions of igneous and ironstone gravels.	-
	P53-L02	0-0.1: Silty gravelly clay, brown, heterogeneous, low plasticity, stiff, inclusions of igneous gravels.	-

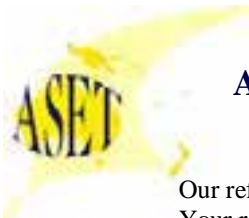
P54	P54-L01	0-0.1: Silty gravelly clay, black to brown, heterogeneous, low plasticity, damp, stiff, hydrocarbon odour.	Staining
	P54-L02	0-0.1: Gravelly sandy clay, dark brown, heterogeneous, low plasticity, damp, stiff, inclusions of igneous gravels.	-
	P54-L03	0-0.1: Silty clay, dark brown, homogeneous, damp, stiff, inclusions of rootlets.	Plastic bucket
		0.1-0.3: Silty clay, red, homogeneous, damp, stiff, inclusions of ironstone.	-
P55	P55-L01	0-0.1: Silty clay, dark brown, homogeneous, damp, medium plasticity, stiff.	Downhill from drum
		0.2: Silty clay, dark brown, homogeneous, medium plasticity, stiff.	-
	P55-L02	0-0.1: Silty clay, dark brown, homogeneous, damp, medium plasticity, stiff inclusions of brick fragments.	ACM on surface
		0.2: Silty clay, brown with red and grey mottles, homogeneous, damp, medium plasticity, stiff.	
	P55-L03	0-0.1: Silty clay, brown, homogeneous, damp, medium plasticity, stiff inclusions of glass.	Under above ground storage tank(petrol/diesel)
		0.1: Silty clay, brown with red and grey mottles, homogeneous, damp, medium plasticity, stiff inclusions of ironstone. Refusal on rock	
P80	P80-L01	0-0.1: Silty clay, brown, homogenous, dry, medium plasticity, stiff.	-
		0.1: Silty clay, brown, homogenous, dry, medium plasticity, stiff.	-
	P80-L2	0-0.1: Silty clay, brown, heterogeneous, dry, medium plasticity, stiff inclusions of plastic and metal.	-
		0.1: Silty clay, brown with grey and red mottles, homogeneous, dry, medium plasticity, stiff.	-
P81	P81-L01	0-0.1: Silty clay, brown homogeneous, dry, medium plasticity, stiff.	-
		0.1: Silty clay, brown homogeneous, dry, medium plasticity, stiff.	-
	P81-L02	0-0.1: Silty sandy clay, dark brown, heterogeneous, dry, low plasticity, stiff inclusions of sandstone gravels and brick.	-
		0.2-0.3: Silty sandy clay, dark brown, heterogeneous, dry, low plasticity, stiff inclusions of sandstone gravels and brick	-
	P81-L03	0-0.1: Silty clay, brown, homogeneous, dry, medium plasticity, stiff.	-
P82	P82-L01	0-0.1: Silty clay, dark brown, homogeneous, dry, medium plasticity, stiff.	-

		0.1: Silty clay, brown to red, homogeneous, dry, medium plasticity, stiff.	-
	P82-L02	0-0.1: Silty clay, dark brown, homogeneous, dry, medium plasticity, stiff.	-
		0.2: Silty clay, red to brown with grey, homogeneous, dry, medium plasticity, stiff.	-
P83	P83-L01	0-0.1: Silty clay, dark brown, homogeneous, dry, medium plasticity, stiff.	QC13/QC13A
		0.2: Silty clay, light brown with red and grey mottles, homogeneous, dry, medium plasticity, stiff.	
	P83-L02	0-0.1: Silty clay, light brown, homogeneous, dry, medium plasticity, stiff.	-
		0.1: Silty clay, brown to red with grey mottles, homogeneous, dry, medium plasticity, stiff.	-
P84	P84-L01	0-0.1: Silty clay, brown, homogeneous, dry, medium plasticity, stiff inclusions of rootlets.	QC09/QC09-A
		0.1: Silty clay, brown to red, homogeneous, dry, medium plasticity, stiff.	-
	P84-L02	0-0.1: Silty clay, dark brown, homogeneous, dry, medium plasticity, stiff.	-
		0.1: Silty clay, brown to red mottles, homogeneous, dry, medium plasticity, stiff.	-
P85	P85-L01	0-0.1: Silty clay, dark brown, homogeneous, dry, medium plasticity, stiff inclusions of rootlets.	-
		0.1: Silty clay, red to brown, homogeneous, dry, medium plasticity, stiff.	-
	P85-L02	0-0.1: Silty clay, brown, homogeneous, dry, medium plasticity, stiff.	-
		0.1: Silty clay, brown with red mottles, homogeneous, dry, medium plasticity, stiff	-
P86	P86-L01	0-0.1: Silty clay, brown, homogeneous, dry, medium plasticity, stiff	-
		0.1: Silty clay, brown with red mottles, homogeneous, dry, medium plasticity, stiff.	-
	P86-L02	0-0.1: Silty clay, brown, homogeneous, dry, medium plasticity, stiff.	-
		0.1: Silty clay, brown with red mottles, homogeneous, dry, medium plasticity, stiff	-
P87	P87-L01	0-0.1: Silty clay, dark brown, homogeneous, dry, medium plasticity, stiff	-
		0.1: Silty clay, brown with red mottles, homogeneous, dry, medium plasticity, stiff	-
	P87-L02	0-0.1: Silty clay, brown, homogeneous, dry, medium plasticity, stiff	
		0.1: Silty clay, brown with red mottles, homogeneous, dry, medium plasticity, stiff.	

P88	P88-L01	0-0.1: Silty gravelly clay, dark brown, heterogeneous, dry, medium plasticity, firm inclusions of fine brick and concrete gravels.	QC15/QC15-A
	P88-L02	0-0.1: Silty clay, brown, heterogeneous, dry, medium plasticity, firm inclusions of fine brick and concrete gravels.	-
		0.1: Silty clay, light brown, homogenous, dry, stiff.	-
	P88-L03	0-0.1: Silty clay, brown, heterogeneous, dry, medium plasticity, stiff.	-
		0.1: Silty clay, brown, heterogeneous, dry, medium plasticity, stiff.	-
	P89	P89-L01	0-0.1: Silty clay, brown, homogeneous, damp, medium plasticity, stiff.
0.2: Silty clay, red with grey and brown mottles, homogeneous, damp, medium plasticity, stiff.			-
P89-L02		0-0.1: Silty sandy clay, dark brown, homogeneous, damp, medium plasticity, stiff.	-
		0.3: Silty clay, red with grey and brown mottles, homogeneous, damp, medium plasticity, stiff	-
P89-L03		0-0.1: Silty clay, brown, homogeneous, damp, medium plasticity, stiff inclusions of ironstone gravels.	-

Appendix K: Field Soil Sample Summary Logs

Appendix L – Laboratory Reports and Chain of Custody Documentation



Our ref: ASET37489/ 40669 / 1 - 5
Your ref: 409205
NATA Accreditation No: 14484

25 February 2014

Eurofins MGT
Unit F3, 16 Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons

Dear Robert,

Asbestos Identification

This report presents the results of five samples, forwarded by Eurofins MGT on 21 February 2014, for analysis for asbestos.

1.Introduction:Five samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1 and Australian Standards AS 4964 - 2004 and WA/ NEPM Guidelines**)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia/ NEPM Guidelines for the Assessment Remediation and Management of Asbestos in contaminated sites.

3. Results : **Sample No. 1. ASET37489 / 40669 / 1. P20-L01 - 0-0.1 - Fe14289.**
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement and glass.
No asbestos detected.

Sample No. 2. ASET37489 / 40669 / 2. P19-L02 - 0-0.1 - Fe14295.
Approx dimensions 8.2 cm x 8.0 cm x 4.8 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster and brick like material.
No asbestos detected.

Sample No. 3. ASET37489 / 40669 / 3. P18-L01 - 0-0.1 - Fe14296.
Approx dimensions 9.0 cm x 8.5 cm x 4.8 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, brick, paint flakes, corroded metal and pieces of glass.
No asbestos detected.

Sample No. 4. ASET37489 / 40669 / 4. P03-L01 - 0-0.1 - Fe14305.
Approx dimensions 8.4 cm x 8.1 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

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ASBESTOS DETECTION & IDENTIFICATION • REPAIR & CALIBRATION OF SCIENTIFIC EQUIPMENT • AIRBORNE FIBRE & SILICA MONITORING





Sample No. 5. ASET37489 / 40669 / 5. QC01 - Fe14322.

Approx dimensions 8.0 cm x 8.0 cm x 4.2 cm

The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.

No asbestos detected.

Analysed and reported by,

A handwritten signature in black ink, appearing to read "Nisansala Maddage", is written over a light blue horizontal line.

**Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier
Approved Signatory**



Accredited for compliance with ISO/IEC 17025.

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation only covers the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

All samples indicating "No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 409205-S
 Client Reference RIVERSTONE 43210
 Received Date Feb 19, 2014

Client Sample ID			P20-L01 0-0.1	P19-L02 0-0.1	P18-L01 0-0.1	P17-L02 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe14289	S14-Fe14295	S14-Fe14296	S14-Fe14300
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	49	-	-	-
TRH C15-C28	50	mg/kg	210	-	-	-
TRH C29-C36	50	mg/kg	830	-	-	-
TRH C10-36 (Total)	50	mg/kg	1100	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	95	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	68	-	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	68	-	-	-
TRH >C16-C34	100	mg/kg	840	-	-	-
TRH >C34-C40	100	mg/kg	390	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	0.7	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P20-L01 0-0.1	P19-L02 0-0.1	P18-L01 0-0.1	P17-L02 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe14289	S14-Fe14295	S14-Fe14296	S14-Fe14300
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	0.7	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	87	88	94	87
p-Terphenyl-d14 (surr.)	1	%	77	87	88	87
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchlorendate (surr.)	1	%	116	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	130	-	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	116	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	8.2	8.8	7.7	8.0
Cadmium	0.4	mg/kg	< 0.4	0.5	0.7	0.5
Chromium	5	mg/kg	17	22	16	20
Copper	5	mg/kg	8.2	7.1	20	8.3
Lead	5	mg/kg	15	12	68	14
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	6.0	< 5	14	< 5
Zinc	5	mg/kg	80	15	730	18

Client Sample ID			P20-L01 0-0.1	P19-L02 0-0.1	P18-L01 0-0.1	P17-L02 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe14289	S14-Fe14295	S14-Fe14296	S14-Fe14300
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
% Moisture	0.1	%	32	13	26	4.9
Asbestos (% weight as per WA Guidelines)			see attached	see attached	see attached	-

Client Sample ID			P17-SP01-B	P03-L01 0-0.1	P04-L01 0-0.1	P04-SP01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe14303	S14-Fe14305	S14-Fe14309	S14-Fe14315
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	51	-
TRH C10-36 (Total)	50	mg/kg	-	-	51	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	93	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P17-SP01-B	P03-L01 0-0.1	P04-L01 0-0.1	P04-SP01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe14303	S14-Fe14305	S14-Fe14309	S14-Fe14315
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	89	92	88	94
p-Terphenyl-d14 (surr.)	1	%	92	94	90	91
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	-	-	< 0.2	< 0.2
Toxaphene	1	mg/kg	-	-	< 1	< 1
Dibutylchloroendate (surr.)	1	%	-	-	83	91
Tetrachloro-m-xylene (surr.)	1	%	-	-	86	89
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	< 0.5
Total PCB	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibutylchloroendate (surr.)	1	%	-	-	83	91
Heavy Metals						
Arsenic	2	mg/kg	7.9	8.2	8.8	-
Cadmium	0.4	mg/kg	0.9	0.5	< 0.4	-
Chromium	5	mg/kg	25	23	25	-
Copper	5	mg/kg	17	8.5	9.8	-
Lead	5	mg/kg	180	24	19	-
Mercury	0.05	mg/kg	0.06	< 0.05	< 0.05	-
Nickel	5	mg/kg	10	< 5	5.2	-
Zinc	5	mg/kg	110	76	21	-
% Moisture						
% Moisture	0.1	%	10	18	12	7.3
Asbestos (% weight as per WA Guidelines)						
Asbestos (% weight as per WA Guidelines)			-	see attached	-	-

Client Sample ID			QC01
Sample Matrix			Soil
Eurofins mgt Sample No.			S14-Fe14322
Date Sampled			Feb 18, 2014
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	49
TRH C15-C28	50	mg/kg	150
TRH C29-C36	50	mg/kg	450
TRH C10-36 (Total)	50	mg/kg	650
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	95
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene ^{N02}	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	72
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	72
TRH >C16-C34	100	mg/kg	500
TRH >C34-C40	100	mg/kg	210
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2
2-Fluorobiphenyl (surr.)	1	%	103
p-Terphenyl-d14 (surr.)	1	%	92
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05

Client Sample ID			QC01
Sample Matrix			Soil
Eurofins mgt Sample No.			S14-Fe14322
Date Sampled			Feb 18, 2014
Test/Reference	LOR	Unit	
Organochlorine Pesticides			
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2
Toxaphene	1	mg/kg	< 1
Dibutylchloroendate (surr.)	1	%	92
Tetrachloro-m-xylene (surr.)	1	%	117
Polychlorinated Biphenyls (PCB)			
Aroclor-1016	0.5	mg/kg	< 0.5
Aroclor-1232	0.5	mg/kg	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5
Total PCB	0.5	mg/kg	< 0.5
Dibutylchloroendate (surr.)	1	%	92
Heavy Metals			
Arsenic	2	mg/kg	5.6
Cadmium	0.4	mg/kg	0.6
Chromium	5	mg/kg	23
Copper	5	mg/kg	16
Lead	5	mg/kg	20
Mercury	0.05	mg/kg	< 0.05
Nickel	5	mg/kg	< 5
Zinc	5	mg/kg	25
% Moisture			
% Moisture	0.1	%	15
Asbestos (% weight as per WA Guidelines)			see attached

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Feb 24, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Feb 24, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Feb 21, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Feb 24, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Feb 24, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Feb 24, 2014	28 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Feb 21, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Feb 21, 2014	28 Day

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 409205
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 19, 2014 10:20 AM
Due: Feb 26, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	CANCELLED	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted															
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
External Laboratory															
P20-L01 0-0.1	Feb 18, 2014		Soil	S14-Fe14289											
P20-L01 0.2-0.3	Feb 18, 2014		Soil	S14-Fe14290								X			
P20-L02 0-0.1	Feb 18, 2014		Soil	S14-Fe14291											
P20-L02 0.3-0.4	Feb 18, 2014		Soil	S14-Fe14292						X					
P19-L01 0-0.1	Feb 18, 2014		Soil	S14-Fe14293											
P19-L01 0.2-0.3	Feb 18, 2014		Soil	S14-Fe14294											
P19-L02 0-0.1	Feb 18, 2014		Soil	S14-Fe14295										X	
P18-L01 0-0.1	Feb 18, 2014		Soil	S14-Fe14296										X	

Melbourne
 3-5 Kingston Town Close
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 MATA # 1261
 Site # 1254 & 14271

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 MATA # 1261 Site # 20794

Brisbane
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 Murrarie QLD 4172
 Phone +61 7 3802 4600
 MATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000
Client Job No.: RIVERSTONE 43210

Order No.: 409205
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Sample Detail		Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	CANCELLED	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P18-L01 0.2-0.3	Feb 18, 2014	Soil	S14-Fe14297						X			
P18-L02 0-0.1	Feb 18, 2014	Soil	S14-Fe14298						X			
P17-L02 0-0.1	Feb 18, 2014	Soil	S14-Fe14299						X			
P17-L02 0.2-0.3	Feb 18, 2014	Soil	S14-Fe14300		X		X					
P17-L01 0-0.1	Feb 18, 2014	Soil	S14-Fe14301						X			
P17-SP01-A	Feb 18, 2014	Soil	S14-Fe14302						X			
P17-SP01-B	Feb 18, 2014	Soil	S14-Fe14303				X					
P17-SP01-C	Feb 18, 2014	Soil	S14-Fe14304						X			
P03-L01 0-0.1	Feb 18, 2014	Soil	S14-Fe14305				X				X	
P03-L01 0.2-	Feb 18, 2014	Soil	S14-Fe14306						X			

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Brisbane
 1/21 Smailwood Place
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 Phone +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.:
Report #: 409205
Phone: 02 8245 0300
Fax:

Received: Feb 19, 2014 10:20 AM
Due: Feb 26, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail		Asbestos (% weight as per WA Guidelines)		% Moisture		CANCELLED		HOLD		TRH C6-C9		Polycyclic Aromatic Hydrocarbons		Organochlorine Pesticides		Metals M8		BTEX		Polychlorinated Biphenyls (PCB)		Total Recoverable Hydrocarbons		
Laboratory where analysis is conducted																								
Melbourne Laboratory - NATA Site # 1254 & 14271																								
Sydney Laboratory - NATA Site # 18217																								
Brisbane Laboratory - NATA Site # 20794																								
External Laboratory																								
0.3																								
P03-L02 0.0-0.1	Feb 18, 2014	Soil	S14-Fe14307					X																
P03-L03 0.0-0.1	Feb 18, 2014	Soil	S14-Fe14308					X																
P04-L01 0.0-0.1	Feb 18, 2014	Soil	S14-Fe14309	X								X	X	X										
P04-L02 0.0-0.1	Feb 18, 2014	Soil	S14-Fe14310					X																
P04-L02 0.3-0.4	Feb 18, 2014	Soil	S14-Fe14311					X																
P17-SP01A	Feb 18, 2014	Soil	S14-Fe14312					X																
P17-SP01B	Feb 18, 2014	Soil	S14-Fe14313					X																
P17-SP01C	Feb 18, 2014	Soil	S14-Fe14314					X																
P04-SP01	Feb 18, 2014	Soil	S14-Fe14315	X								X	X	X										

Company Name:	JBS & G (NSW & WA) Pty Ltd	Order No.:	
Address:	Level 1, 50 Margaret St Sydney NSW 2000	Report #:	409205
Client Job No.:	RIVERSTONE 43210	Phone:	02 8245 0300
		Fax:	

Sample Detail					Asbestos (% weight as per W/A Guidelines)	% Moisture	CANCELLED	HOLD	TRH C6-C9	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted															
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217					X		X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
External Laboratory						X									
P03-SP02	Feb 18, 2014		Soil	S14-Fe14316				X							
P03-SP03	Feb 18, 2014		Soil	S14-Fe14317				X							
P03-SP01	Feb 18, 2014		Soil	S14-Fe14318				X							
RINSATE	Feb 18, 2014		Water	S14-Fe14319					X	X	X	X	X	X	X
TRIP SPIKE	Feb 18, 2014		Water	S14-Fe14320					X				X		
TRIP BLANK	Feb 18, 2014		Water	S14-Fe14321					X				X		
QC01	Feb 18, 2014		Soil	S14-Fe14322	X	X				X	X	X	X	X	X
P03-L02 (0.2-0.3)	Feb 18, 2014		Soil	S14-Fe15226				X							
P17-L01 (0.2-0.3)	Feb 18, 2014		Soil	S14-Fe15227				X							

Eurofins | mgt Internal Quality Control Review and Glossary

Received: Feb 19, 2014 10:20 AM

Due: General Feb 26, 2014

Priority: 1. Laboratory QC Data for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.

Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are corrected for Matrix Spikes and Surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient <i>Page 11 of 19</i> <i>Report Number: 409205-S</i>

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	79			70-130	Pass	
TRH C10-C14	%	79			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	95			70-130	Pass	
Toluene	%	91			70-130	Pass	
Ethylbenzene	%	88			70-130	Pass	
m&p-Xylenes	%	90			70-130	Pass	
o-Xylene	%	87			70-130	Pass	
Xylenes - Total	%	89			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	94			70-130	Pass	
TRH C6-C10	%	83			70-130	Pass	
TRH >C10-C16	%	88			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	120			70-130	Pass	
Acenaphthylene	%	93			70-130	Pass	
Anthracene	%	107			70-130	Pass	
Benz(a)anthracene	%	90			70-130	Pass	
Benzo(a)pyrene	%	88			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Benzo(b&i)fluoranthene	%	90			70-130	Pass		
Benzo(g,h,i)perylene	%	118			70-130	Pass		
Benzo(k)fluoranthene	%	99			70-130	Pass		
Chrysene	%	99			70-130	Pass		
Dibenz(a,h)anthracene	%	118			70-130	Pass		
Fluoranthene	%	108			70-130	Pass		
Fluorene	%	126			70-130	Pass		
Indeno(1,2,3-cd)pyrene	%	125			70-130	Pass		
Naphthalene	%	106			70-130	Pass		
Phenanthrene	%	105			70-130	Pass		
Pyrene	%	99			70-130	Pass		
LCS - % Recovery								
Organochlorine Pesticides								
Chlordanes - Total	%	108			70-130	Pass		
4,4'-DDD	%	103			70-130	Pass		
4,4'-DDE	%	108			70-130	Pass		
4,4'-DDT	%	103			70-130	Pass		
a-BHC	%	95			70-130	Pass		
Aldrin	%	103			70-130	Pass		
b-BHC	%	92			70-130	Pass		
d-BHC	%	105			70-130	Pass		
Dieldrin	%	102			70-130	Pass		
Endosulfan I	%	102			70-130	Pass		
Endosulfan II	%	106			70-130	Pass		
Endosulfan sulphate	%	123			70-130	Pass		
Endrin	%	106			70-130	Pass		
Endrin aldehyde	%	98			70-130	Pass		
Endrin ketone	%	106			70-130	Pass		
g-BHC (Lindane)	%	101			70-130	Pass		
Heptachlor	%	104			70-130	Pass		
Heptachlor epoxide	%	105			70-130	Pass		
Hexachlorobenzene	%	105			70-130	Pass		
Methoxychlor	%	108			70-130	Pass		
LCS - % Recovery								
Polychlorinated Biphenyls (PCB)								
Aroclor-1260	%	95			70-130	Pass		
LCS - % Recovery								
Heavy Metals								
Arsenic	%	86			70-130	Pass		
Cadmium	%	100			70-130	Pass		
Chromium	%	103			70-130	Pass		
Copper	%	127			70-130	Pass		
Lead	%	98			70-130	Pass		
Mercury	%	77			70-130	Pass		
Nickel	%	101			70-130	Pass		
Zinc	%	101			70-130	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S14-Fe13427	NCP	%	71		70-130	Pass	
TRH C10-C14	S14-Fe15396	NCP	%	81		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S14-Fe13427	NCP	%	81		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Toluene	S14-Fe13427	NCP	%	83		70-130	Pass	
Ethylbenzene	S14-Fe13427	NCP	%	82		70-130	Pass	
m&p-Xylenes	S14-Fe13427	NCP	%	88		70-130	Pass	
o-Xylene	S14-Fe13427	NCP	%	85		70-130	Pass	
Xylenes - Total	S14-Fe13427	NCP	%	87		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S14-Fe13427	NCP	%	77		70-130	Pass	
TRH C6-C10	S14-Fe13427	NCP	%	76		70-130	Pass	
TRH >C10-C16	S14-Fe15396	NCP	%	92		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Fe16662	NCP	%	118		70-130	Pass	
Acenaphthylene	S14-Fe16662	NCP	%	98		70-130	Pass	
Anthracene	S14-Fe16662	NCP	%	111		70-130	Pass	
Benz(a)anthracene	S14-Fe16662	NCP	%	93		70-130	Pass	
Benzo(a)pyrene	S14-Fe16662	NCP	%	99		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe16662	NCP	%	100		70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe16662	NCP	%	123		70-130	Pass	
Benzo(k)fluoranthene	S14-Fe16662	NCP	%	106		70-130	Pass	
Chrysene	S14-Fe16662	NCP	%	108		70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe16662	NCP	%	116		70-130	Pass	
Fluoranthene	S14-Fe16662	NCP	%	114		70-130	Pass	
Fluorene	S14-Fe16662	NCP	%	123		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe16662	NCP	%	127		70-130	Pass	
Naphthalene	S14-Fe16662	NCP	%	115		70-130	Pass	
Phenanthrene	S14-Fe16662	NCP	%	109		70-130	Pass	
Pyrene	S14-Fe16662	NCP	%	109		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	S14-Fe13095	NCP	%	113		70-130	Pass	
4,4'-DDD	S14-Fe13095	NCP	%	114		70-130	Pass	
4,4'-DDE	S14-Fe13095	NCP	%	113		70-130	Pass	
4,4'-DDT	S14-Fe13095	NCP	%	96		70-130	Pass	
a-BHC	S14-Fe13095	NCP	%	101		70-130	Pass	
Aldrin	S14-Fe13095	NCP	%	103		70-130	Pass	
b-BHC	S14-Fe13095	NCP	%	97		70-130	Pass	
d-BHC	S14-Fe13095	NCP	%	110		70-130	Pass	
Dieldrin	S14-Fe13095	NCP	%	106		70-130	Pass	
Endosulfan I	S14-Fe13095	NCP	%	107		70-130	Pass	
Endosulfan II	S14-Fe13095	NCP	%	112		70-130	Pass	
Endosulfan sulphate	S14-Fe13095	NCP	%	112		70-130	Pass	
Endrin	S14-Fe13095	NCP	%	106		70-130	Pass	
Endrin aldehyde	S14-Fe13095	NCP	%	102		70-130	Pass	
Endrin ketone	S14-Fe13095	NCP	%	111		70-130	Pass	
g-BHC (Lindane)	S14-Fe13095	NCP	%	102		70-130	Pass	
Heptachlor	S14-Fe13095	NCP	%	104		70-130	Pass	
Heptachlor epoxide	S14-Fe13095	NCP	%	108		70-130	Pass	
Hexachlorobenzene	S14-Fe13095	NCP	%	106		70-130	Pass	
Methoxychlor	S14-Fe13095	NCP	%	110		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls (PCB)				Result 1				
Aroclor-1260	S14-Fe12988	NCP	%	100		70-130	Pass	
Spike - % Recovery								

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heavy Metals				Result 1					
Arsenic	S14-Fe13427	NCP	%	84			70-130	Pass	
Cadmium	S14-Fe13427	NCP	%	80			70-130	Pass	
Chromium	S14-Fe13427	NCP	%	91			70-130	Pass	
Copper	S14-Fe13427	NCP	%	99			70-130	Pass	
Lead	S14-Fe13427	NCP	%	88			70-130	Pass	
Mercury	S14-Fe13427	NCP	%	71			70-130	Pass	
Nickel	S14-Fe13427	NCP	%	96			70-130	Pass	
Zinc	S14-Fe13427	NCP	%	96			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe13427	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S14-Fe15396	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S14-Fe15396	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S14-Fe15396	NCP	mg/kg	120	88	28	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Fe13427	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-Fe13427	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-Fe13427	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-Fe13427	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-Fe13427	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-Fe13427	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Fe13427	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-Fe13427	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Fe13427	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S14-Fe15396	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S14-Fe15396	NCP	mg/kg	110	< 100	27	30%	Pass	
TRH >C34-C40	S14-Fe15396	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Fe16662	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S14-Fe12988	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
γ-BHC (Lindane)	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S14-Fe12988	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S14-Fe12988	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S14-Fe12988	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Fe12988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S14-Fe12988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S14-Fe12988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S14-Fe12988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S14-Fe12988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S14-Fe12988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Fe13427	NCP	mg/kg	2.4	2.3	2.0	30%	Pass
Cadmium	S14-Fe13427	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S14-Fe13427	NCP	mg/kg	25	30	21	30%	Pass
Copper	S14-Fe13427	NCP	mg/kg	9.9	11	15	30%	Pass
Lead	S14-Fe13427	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Mercury	S14-Fe13427	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

~~Final report - this Report replaces any previously issued Report~~

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
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 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 409205-W
 Client Reference RIVERSTONE 43210
 Received Date Feb 19, 2014

Client Sample ID			RINSATE	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Fe14319	S14-Fe14320	S14-Fe14321
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	85%	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	< 0.001	105%	< 0.001
Toluene	0.001	mg/L	< 0.001	95%	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	92%	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	97%	< 0.002
o-Xylene	0.001	mg/L	< 0.001	98%	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	97%	< 0.003
4-Bromofluorobenzene (surr.)	1	%	70	100	76
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.02	mg/L	< 0.02	-	-
TRH C6-C10	0.02	mg/L	< 0.02	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	-	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	-	-
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
Indeno(1,2,3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-

Client Sample ID			RINSATE	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Fe14319	S14-Fe14320	S14-Fe14321
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH	0.001	mg/L	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	103	-	-
p-Terphenyl-d14 (surr.)	1	%	119	-	-
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	< 0.001	-	-
4,4'-DDD	0.0001	mg/L	< 0.0001	-	-
4,4'-DDE	0.0001	mg/L	< 0.0001	-	-
4,4'-DDT	0.0001	mg/L	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	-	-
d-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	-	-
Toxaphene	0.01	mg/L	< 0.01	-	-
Dibutylchloredate (surr.)	1	%	130	-	-
Tetrachloro-m-xylene (surr.)	1	%	116	-	-
Polychlorinated Biphenyls (PCB)					
Aroclor-1016	0.005	mg/L	< 0.005	-	-
Aroclor-1232	0.005	mg/L	< 0.005	-	-
Aroclor-1242	0.005	mg/L	< 0.005	-	-
Aroclor-1248	0.005	mg/L	< 0.005	-	-
Aroclor-1254	0.005	mg/L	< 0.005	-	-
Aroclor-1260	0.005	mg/L	< 0.005	-	-
Total PCB	0.005	mg/L	< 0.005	-	-
Dibutylchloredate (surr.)	1	%	130	-	-
Heavy Metals					
Arsenic	0.005	mg/L	< 0.005	-	-
Cadmium	0.0005	mg/L	< 0.0005	-	-
Chromium	0.005	mg/L	< 0.005	-	-
Copper	0.005	mg/L	< 0.005	-	-
Lead	0.005	mg/L	< 0.005	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-
Nickel	0.005	mg/L	< 0.005	-	-
Zinc	0.005	mg/L	< 0.005	-	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Feb 20, 2014	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Feb 20, 2014	7 Day
BTEX - Method: E029/E016 BTEX	Sydney	Feb 19, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Feb 20, 2014	7 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Feb 20, 2014	7 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Feb 20, 2014	7 Day
Metals M8 - Method: E022/E030 Unfiltered Metals in Water & E026 Mercury	Sydney	Feb 19, 2014	28 Day

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 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 409205
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 19, 2014 10:20 AM
Due: Feb 26, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	CANCELLED	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted															
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
External Laboratory															
P20-L01 0-0.1	Feb 18, 2014		Soil	S14-Fe14289				X	X	X					
P20-L01 0.2-0.3	Feb 18, 2014		Soil	S14-Fe14290				X	X	X		X			
P20-L02 0-0.1	Feb 18, 2014		Soil	S14-Fe14291				X	X	X		X			
P20-L02 0.3-0.4	Feb 18, 2014		Soil	S14-Fe14292				X	X	X		X			
P19-L01 0-0.1	Feb 18, 2014		Soil	S14-Fe14293				X	X	X		X			
P19-L01 0.2-0.3	Feb 18, 2014		Soil	S14-Fe14294				X	X	X		X			
P19-L02 0-0.1	Feb 18, 2014		Soil	S14-Fe14295				X	X	X		X			
P18-L01 0-0.1	Feb 18, 2014		Soil	S14-Fe14296				X	X	X		X			

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Sample Detail		Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	CANCELLED	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P18-L01 0.2-0.3	Feb 18, 2014	Soil	S14-Fe14297						X			
P18-L02 0-0.1	Feb 18, 2014	Soil	S14-Fe14298						X			
P17-L02 0-0.1	Feb 18, 2014	Soil	S14-Fe14299						X			
P17-L02 0.2-0.3	Feb 18, 2014	Soil	S14-Fe14300		X		X					
P17-L01 0-0.1	Feb 18, 2014	Soil	S14-Fe14301						X			
P17-SP01-A	Feb 18, 2014	Soil	S14-Fe14302						X			
P17-SP01-B	Feb 18, 2014	Soil	S14-Fe14303				X					
P17-SP01-C	Feb 18, 2014	Soil	S14-Fe14304						X			
P03-L01 0-0.1	Feb 18, 2014	Soil	S14-Fe14305				X				X	
P03-L01 0.2-	Feb 18, 2014	Soil	S14-Fe14306						X			

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Sample Detail		Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	CANCELLED	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
0.3											X	
P03-L02 0.0-0.1	Feb 18, 2014	Soil	S14-Fe14307						X			
P03-L03 0.0-0.1	Feb 18, 2014	Soil	S14-Fe14308						X			
P04-L01 0.0-0.1	Feb 18, 2014	Soil	S14-Fe14309				X					
P04-L02 0.0-0.1	Feb 18, 2014	Soil	S14-Fe14310						X			
P04-L02 0.3-0.4	Feb 18, 2014	Soil	S14-Fe14311						X			
P17-SP01A	Feb 18, 2014	Soil	S14-Fe14312							X		
P17-SP01B	Feb 18, 2014	Soil	S14-Fe14313							X		
P17-SP01C	Feb 18, 2014	Soil	S14-Fe14314							X		
P04-SP01	Feb 18, 2014	Soil	S14-Fe14315									X

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Sample Detail		Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	CANCELLED	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P03-SP02	Feb 18, 2014	Soil	S14-Fe14316						X			
P03-SP03	Feb 18, 2014	Soil	S14-Fe14317						X			
P03-SP01	Feb 18, 2014	Soil	S14-Fe14318						X			
RINSATE	Feb 18, 2014	Water	S14-Fe14319			X						
TRIP SPIKE	Feb 18, 2014	Water	S14-Fe14320					X				
TRIP BLANK	Feb 18, 2014	Water	S14-Fe14321					X				
QC01	Feb 18, 2014	Soil	S14-Fe14322				X					
P03-L02 (0.2-0.3)	Feb 18, 2014	Soil	S14-Fe15226						X			
P17-L01 (0.2-0.3)	Feb 18, 2014	Soil	S14-Fe15227						X			

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/L	< 0.02		0.02	Pass	
TRH C10-C14	mg/L	< 0.05		0.05	Pass	
TRH C15-C28	mg/L	< 0.1		0.1	Pass	
TRH C29-C36	mg/L	< 0.1		0.1	Pass	
Method Blank						
BTEX						
Benzene	mg/L	< 0.001		0.001	Pass	
Toluene	mg/L	< 0.001		0.001	Pass	
Ethylbenzene	mg/L	< 0.001		0.001	Pass	
m&p-Xylenes	mg/L	< 0.002		0.002	Pass	
o-Xylene	mg/L	< 0.001		0.001	Pass	
Xylenes - Total	mg/L	< 0.003		0.003	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/L	< 0.02		0.02	Pass	
TRH C6-C10	mg/L	< 0.02		0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02		0.02	Pass	
TRH >C10-C16	mg/L	< 0.05		0.05	Pass	
TRH >C16-C34	mg/L	< 0.1		0.1	Pass	
TRH >C34-C40	mg/L	< 0.1		0.1	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/L	< 0.001		0.001	Pass	
Acenaphthylene	mg/L	< 0.001		0.001	Pass	
Anthracene	mg/L	< 0.001		0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001		0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001		0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001		0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001		0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001		0.001	Pass	
Chrysene	mg/L	< 0.001		0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001		0.001	Pass	
Fluoranthene	mg/L	< 0.001		0.001	Pass	
Fluorene	mg/L	< 0.001		0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001		0.001	Pass	
Naphthalene	mg/L	< 0.001		0.001	Pass	
Phenanthrene	mg/L	< 0.001		0.001	Pass	
Pyrene	mg/L	< 0.001		0.001	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/L	< 0.001		0.001	Pass	
4,4'-DDD	mg/L	< 0.0001		0.0001	Pass	
4,4'-DDE	mg/L	< 0.0001		0.0001	Pass	
4,4'-DDT	mg/L	< 0.0001		0.0001	Pass	
a-BHC	mg/L	< 0.0001		0.0001	Pass	
Aldrin	mg/L	< 0.0001		0.0001	Pass	
b-BHC	mg/L	< 0.0001		0.0001	Pass	
d-BHC	mg/L	< 0.0001		0.0001	Pass	
Dieldrin	mg/L	< 0.0001		0.0001	Pass	
Endosulfan I	mg/L	< 0.0001		0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.005			0.005	Pass	
Cadmium	mg/L	< 0.0005			0.0005	Pass	
Chromium	mg/L	< 0.005			0.005	Pass	
Copper	mg/L	< 0.005			0.005	Pass	
Lead	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.005			0.005	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	98			70-130	Pass	
TRH C10-C14	%	113			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	100			70-130	Pass	
Ethylbenzene	%	98			70-130	Pass	
m&p-Xylenes	%	103			70-130	Pass	
o-Xylene	%	102			70-130	Pass	
Xylenes - Total	%	103			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	104			70-130	Pass	
TRH C6-C10	%	91			70-130	Pass	
TRH >C10-C16	%	119			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	107			70-130	Pass	
Acenaphthylene	%	95			70-130	Pass	
Anthracene	%	109			70-130	Pass	
Benz(a)anthracene	%	96			70-130	Pass	
Benzo(a)pyrene	%	114			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	98	70-130	Pass			
Benzo(g,h,i)perylene	%	125	70-130	Pass			
Benzo(k)fluoranthene	%	95	70-130	Pass			
Chrysene	%	109	70-130	Pass			
Dibenz(a,h)anthracene	%	93	70-130	Pass			
Fluoranthene	%	102	70-130	Pass			
Fluorene	%	99	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	90	70-130	Pass			
Naphthalene	%	102	70-130	Pass			
Phenanthrene	%	101	70-130	Pass			
Pyrene	%	104	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	95	70-130	Pass			
4,4'-DDD	%	90	70-130	Pass			
4,4'-DDE	%	90	70-130	Pass			
4,4'-DDT	%	80	70-130	Pass			
a-BHC	%	90	70-130	Pass			
Aldrin	%	90	70-130	Pass			
b-BHC	%	90	70-130	Pass			
d-BHC	%	80	70-130	Pass			
Dieldrin	%	90	70-130	Pass			
Endosulfan I	%	90	70-130	Pass			
Endosulfan II	%	90	70-130	Pass			
Endosulfan sulphate	%	80	70-130	Pass			
Endrin	%	80	70-130	Pass			
Endrin aldehyde	%	90	70-130	Pass			
Endrin ketone	%	90	70-130	Pass			
g-BHC (Lindane)	%	90	70-130	Pass			
Heptachlor	%	80	70-130	Pass			
Heptachlor epoxide	%	90	70-130	Pass			
Hexachlorobenzene	%	110	70-130	Pass			
Methoxychlor	%	90	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	126	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	93	70-130	Pass			
Cadmium	%	95	70-130	Pass			
Chromium	%	95	70-130	Pass			
Copper	%	93	70-130	Pass			
Lead	%	99	70-130	Pass			
Mercury	%	109	70-130	Pass			
Nickel	%	92	70-130	Pass			
Zinc	%	92	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	S14-Fe13290	NCP	%	88	70-130	Pass	
TRH C10-C14	S14-Fe11988	NCP	%	73	70-130	Pass	
Spike - % Recovery							
BTEX				Result 1			
Benzene	S14-Fe13290	NCP	%	96	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Toluene	S14-Fe13290	NCP	%	88			70-130	Pass	
Ethylbenzene	S14-Fe13290	NCP	%	87			70-130	Pass	
m&p-Xylenes	S14-Fe13290	NCP	%	92			70-130	Pass	
o-Xylene	S14-Fe13290	NCP	%	91			70-130	Pass	
Xylenes - Total	S14-Fe13290	NCP	%	92			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S14-Fe13290	NCP	%	99			70-130	Pass	
TRH C6-C10	S14-Fe13290	NCP	%	80			70-130	Pass	
TRH >C10-C16	S14-Fe11988	NCP	%	76			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S14-Fe12179	NCP	%	110			70-130	Pass	
Acenaphthylene	S14-Fe12179	NCP	%	115			70-130	Pass	
Anthracene	S14-Fe12179	NCP	%	106			70-130	Pass	
Benz(a)anthracene	S14-Fe12179	NCP	%	110			70-130	Pass	
Benzo(a)pyrene	S14-Fe12179	NCP	%	116			70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe12179	NCP	%	93			70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe12179	NCP	%	99			70-130	Pass	
Benzo(k)fluoranthene	S14-Fe12179	NCP	%	119			70-130	Pass	
Chrysene	S14-Fe12179	NCP	%	115			70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe12179	NCP	%	116			70-130	Pass	
Fluoranthene	S14-Fe12179	NCP	%	115			70-130	Pass	
Fluorene	S14-Fe12179	NCP	%	114			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe12179	NCP	%	115			70-130	Pass	
Naphthalene	S14-Fe12179	NCP	%	127			70-130	Pass	
Phenanthrene	S14-Fe12179	NCP	%	109			70-130	Pass	
Pyrene	S14-Fe12179	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1260	S14-Fe13829	NCP	%	120			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Fe15407	NCP	%	91			70-130	Pass	
Cadmium	S14-Fe15407	NCP	%	99			70-130	Pass	
Chromium	S14-Fe15407	NCP	%	92			70-130	Pass	
Copper	S14-Fe15407	NCP	%	88			70-130	Pass	
Lead	S14-Fe15407	NCP	%	100			70-130	Pass	
Mercury	S14-Fe15407	NCP	%	110			70-130	Pass	
Nickel	S14-Fe15407	NCP	%	87			70-130	Pass	
Zinc	M14-Fe14575	NCP	%	91			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe13289	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S14-Fe11985	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S14-Fe11985	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S14-Fe11985	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Fe13289	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S14-Fe13289	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S14-Fe13289	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S14-Fe13289	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	

Duplicate								
BTEX				Result 1	Result 2	RPD		
o-Xylene	S14-Fe13289	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Xylenes - Total	S14-Fe13289	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S14-Fe13289	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C6-C10	S14-Fe13289	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C6-C10 less BTEX (F1)	S14-Fe13289	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH >C10-C16	S14-Fe11985	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH >C16-C34	S14-Fe11985	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
TRH >C34-C40	S14-Fe11985	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Acenaphthylene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Anthracene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(a)anthracene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(a)pyrene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(b&j)fluoranthene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(g,h,i)perylene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(k)fluoranthene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chrysene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibenz(a,h)anthracene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluoranthene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluorene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Naphthalene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Phenanthrene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Pyrene	S14-Fe12178	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S14-Fe11989	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4,4'-DDD	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
4,4'-DDE	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
4,4'-DDT	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
a-BHC	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Aldrin	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
b-BHC	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
d-BHC	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Dieldrin	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endosulfan I	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endosulfan II	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endosulfan sulphate	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endrin	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endrin aldehyde	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endrin ketone	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
g-BHC (Lindane)	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Heptachlor	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Heptachlor epoxide	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Hexachlorobenzene	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Methoxychlor	S14-Fe11989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Toxaphene	S14-Fe11989	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass

Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Fe13846	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1232	S14-Fe13846	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1242	S14-Fe13846	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1248	S14-Fe13846	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1254	S14-Fe13846	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1260	S14-Fe13846	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Fe15405	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Cadmium	S14-Fe15405	NCP	mg/L	0.0014	0.0012	15	30%	Pass
Chromium	S14-Fe15405	NCP	mg/L	0.0060	0.0050	13	30%	Pass
Copper	S14-Fe15405	NCP	mg/L	0.032	0.030	8.0	30%	Pass
Lead	S14-Fe15405	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Mercury	S14-Fe15405	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel	S14-Fe15405	NCP	mg/L	0.15	0.14	8.0	30%	Pass
Zinc	S14-Fe15405	NCP	mg/L	1.2	1.1	10	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

~~Final report - this Report replaces any previously issued Report~~

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Feb 19, 2014 10:20 AM
Eurofins | mgt reference: **409205**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
 - Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 3 degrees Celsius.
 - All samples have been received as described on the above COC.
 - COC has been completed correctly.
 - Attempt to chill was evident.
 - Appropriately preserved sample containers have been used.
 - All samples were received in good condition.
 - Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
 - Organic samples had Teflon liners.
 - Sample containers for volatile analysis received with zero headspace.
 - Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Asbestos conducted by ASET | Samples QC01/A sent to Envirolab as requested

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

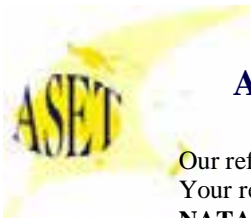
Eurofins | mgt Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis
NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience





Our ref : ASET37555/ 40735 / 1 - 5

Your ref :409384

NATA Accreditation No: 14484

27 February 2014

Eurofins MGT
Unit F3, Building F, 16, Mars Road
Lane Cove
NSW 2066

Attn: Dr Robert Symons

Dear Robert

Asbestos Identification

This report presents the results of five samples, forwarded by Eurofins MGT on 25 February 2014, for analysis for asbestos.

1.Introduction:Five samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1 and Australian Guidelines AS 4964 - 2004 and WA/ NEPM Guidelines**)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia Guidelines for the Assessment Remediation and Management of Asbestos contaminated sites in Western Australia. Remediation and Management of Asbestos contaminated sites in Western Australia

3. Results : **Sample No. 1. ASET37555 / 40735 / 1. 409384 - P16 - L02 - 0.0 - 0.1 - Fe15810.**
Approx dimensions 10.0 cm x 7.5 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET37555 / 40735 / 2. 409384 - P30 - L02 - 0.0 - 0.1 - Fe15813.
Approx dimensions 10.0 cm x 8.0 cm x 5.2 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 3. ASET37555 / 40735 / 3. 409384 - P33 - L01 - 0.0 - 0.1 - Fe15823.
Approx dimensions 10.0 cm x 8.0 cm x 4.85 cm
The sample consisted of a mixture of clayish sandy soil, stones and plant matter.
No asbestos detected.

Sample No. 4. ASET37555 / 40735 / 4. 409384 - P38 - SP01 A - Fe15826.
Approx dimensions 10.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish sandy soil, stones, plant matter and fragments of plaster.
No asbestos detected.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
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Sample No. 5. ASET37555 / 40735 / 5. 409384 - P38 - L01 - 0.0 - 0.1 - Fe15829.
Approx dimensions 10.0 cm x 8.0 cm x 5.25 cm
The sample consisted of a mixture of clayish sandy soil, stones and plant matter.
No asbestos detected.

Analysed and reported by,



Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

Accredited for compliance with ISO/IEC 17025.

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation covers only the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

***denotes fibres in bonded form in fragments**

^denotes loose fibres

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



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 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 409384-S
 Client Reference RIVERSTONE 43210
 Received Date Feb 25, 2014

Client Sample ID			P15-L02 0-0.1	P16-L02 0-0.1	P30-L02 0-0.1	P31-L02 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe15808	S14-Fe15810	S14-Fe15813	S14-Fe15815
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	101	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P15-L02 0-0.1	P16-L02 0-0.1	P30-L02 0-0.1	P31-L02 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe15808	S14-Fe15810	S14-Fe15813	S14-Fe15815
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	102	99	101	104
p-Terphenyl-d14 (surr.)	1	%	121	117	120	124
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Toxaphene	1	mg/kg	-	-	< 1	-
Dibutylchlorendate (surr.)	1	%	-	-	91	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	79	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	-
Total PCB	0.5	mg/kg	-	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	-	-	91	-
Heavy Metals						
Arsenic	2	mg/kg	4.9	5.3	5.9	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	1.0
Chromium	5	mg/kg	14	13	8.4	36
Copper	5	mg/kg	6.2	23	5.8	6.4
Lead	5	mg/kg	17	38	11	21
Mercury	0.05	mg/kg	< 0.05	0.06	< 0.05	< 0.05
Nickel	5	mg/kg	< 5	14	< 5	< 5
Zinc	5	mg/kg	48	91	8.3	18

Client Sample ID			P15-L02 0-0.1	P16-L02 0-0.1	P30-L02 0-0.1	P31-L02 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe15808	S14-Fe15810	S14-Fe15813	S14-Fe15815
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit				
% Moisture	0.1	%	20	21	16	5.3
Asbestos (% weight as per WA Guidelines)			-	see attached	see attached	-

Client Sample ID			P36-L01 0-0.1	P35-L01 0-0.1	P32-L02 0-0.1	P33-L01 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe15816	S14-Fe15818	S14-Fe15820	S14-Fe15823
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	25
TRH C15-C28	50	mg/kg	-	-	-	81
TRH C29-C36	50	mg/kg	-	-	-	150
TRH C10-36 (Total)	50	mg/kg	-	-	-	260
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	210
TRH >C34-C40	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P36-L01 0-0.1	P35-L01 0-0.1	P32-L02 0-0.1	P33-L01 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe15816	S14-Fe15818	S14-Fe15820	S14-Fe15823
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	102	105	95	104
p-Terphenyl-d14 (surr.)	1	%	121	128	116	122
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Toxaphene	1	mg/kg	-	-	-	< 1
Dibutylchloroendate (surr.)	1	%	-	-	-	99
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	85
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB	0.5	mg/kg	-	-	-	< 0.5
Dibutylchloroendate (surr.)	1	%	-	-	-	99
Heavy Metals						
Arsenic	2	mg/kg	11	15	5.8	6.2
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	0.5
Chromium	5	mg/kg	11	21	7.5	17
Copper	5	mg/kg	18	6.5	9.6	14
Lead	5	mg/kg	51	17	18	36
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.07
Nickel	5	mg/kg	< 5	5.6	6.9	6.7
Zinc	5	mg/kg	38	17	15	51
% Moisture						
% Moisture	0.1	%	15	12	11	15
Asbestos (% weight as per WA Guidelines)						
Asbestos (% weight as per WA Guidelines)			-	-	-	see attached

Client Sample ID			P29-L02 0-0.1 Soil	P38-SP01A Soil	P38-L01 0-0.1 Soil	P38-L02 0-0.1 Soil
Sample Matrix			S14-Fe15824	S14-Fe15826	S14-Fe15829	S14-Fe15830
Eurofins mgt Sample No.			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	-
TRH C10-C14	20	mg/kg	-	< 20	< 20	-
TRH C15-C28	50	mg/kg	-	< 50	530	-
TRH C29-C36	50	mg/kg	-	70	260	-
TRH C10-36 (Total)	50	mg/kg	-	70	790	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	101	103	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	-	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	< 20	-
TRH >C10-C16	50	mg/kg	-	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	< 50	-
TRH >C16-C34	100	mg/kg	-	< 100	740	-
TRH >C34-C40	100	mg/kg	-	< 100	140	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	101	101	116	118
p-Terphenyl-d14 (surr.)	1	%	113	105	94	99
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	-

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P29-L02 0-0.1 Soil S14-Fe15824 Feb 20, 2014	P38-SP01A Soil S14-Fe15826 Feb 20, 2014	P38-L01 0-0.1 Soil S14-Fe15829 Feb 20, 2014	P38-L02 0-0.1 Soil S14-Fe15830 Feb 20, 2014
Organochlorine Pesticides						
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	-	< 0.05	0.10	-
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	-	< 0.2	< 0.2	-
Toxaphene	1	mg/kg	-	< 1	< 1	-
Dibutylchloroendate (surr.)	1	%	-	89	112	-
Tetrachloro-m-xylene (surr.)	1	%	-	116	89	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	< 0.5	-
Total PCB	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibutylchloroendate (surr.)	1	%	-	89	112	-
Heavy Metals						
Arsenic	2	mg/kg	11	13	10	8.8
Cadmium	0.4	mg/kg	1.0	3.0	< 0.4	1.6
Chromium	5	mg/kg	35	37	18	57
Copper	5	mg/kg	6.7	160	1000	130
Lead	5	mg/kg	20	430	100	150
Mercury	0.05	mg/kg	< 0.05	0.12	< 0.05	0.15
Nickel	5	mg/kg	< 5	27	9.4	19
Zinc	5	mg/kg	21	780	39	460
% Moisture	0.1	%	9.9	21	13	13
Asbestos (% weight as per WA Guidelines)			-	see attached	see attached	-

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	QC04 Soil S14-Fe15832 Feb 20, 2014	P35- SP01 Soil S14-Fe16378 Feb 20, 2014
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	114	129
p-Terphenyl-d14 (surr.)	1	%	106	115
Heavy Metals				
Arsenic	2	mg/kg	6.1	3.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	11	< 5
Copper	5	mg/kg	17	< 5
Lead	5	mg/kg	40	8.2
Mercury	0.05	mg/kg	< 0.05	< 0.05
Nickel	5	mg/kg	5.2	< 5
Zinc	5	mg/kg	36	< 5
% Moisture				
	0.1	%	18	16

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Feb 27, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Feb 27, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Feb 26, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Feb 27, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Feb 27, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Feb 27, 2014	28 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Feb 26, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Feb 26, 2014	28 Day

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Brisbane
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 Phone +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 409384
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 25, 2014 8:34 AM
Due: Mar 4, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Analysis Results										
					Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted															
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
External Laboratory															
P15-L01 0-0.1	Feb 20, 2014		Soil	S14-Fe15807											
P15-L02 0-0.1	Feb 20, 2014		Soil	S14-Fe15808				X							
P16-L01 0-0.1	Feb 20, 2014		Soil	S14-Fe15809											
P16-L02 0-0.1	Feb 20, 2014		Soil	S14-Fe15810						X					
P16-L03 0-0.1	Feb 20, 2014		Soil	S14-Fe15811						X					
P30-L01 0-0.1	Feb 20, 2014		Soil	S14-Fe15812											
P30-L02 0-0.1	Feb 20, 2014		Soil	S14-Fe15813						X				X	
P31-L01 0-0.1	Feb 20, 2014		Soil	S14-Fe15814									X		
P31-L02 0-0.1	Feb 20, 2014		Soil	S14-Fe15815										X	
P36-L01 0-0.1	Feb 20, 2014		Soil	S14-Fe15816											X

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Sample Detail		Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271						X						
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory											X	
P36-L02 0-0.1	Feb 20, 2014									X		S14-Fe15817
P35-L01 0-0.1	Feb 20, 2014							X				S14-Fe15818
P35-L02 0-0.1	Feb 20, 2014							X				S14-Fe15819
P32-L02 0-0.1	Feb 20, 2014							X				S14-Fe15820
P32-L01 0-0.1	Feb 20, 2014							X				S14-Fe15821
P33-L02 0-0.1	Feb 20, 2014							X				S14-Fe15822
P33-L01 0-0.1	Feb 20, 2014							X				S14-Fe15823
P29-L02 0-0.1	Feb 20, 2014							X				S14-Fe15824
P29-L01 0-0.1	Feb 20, 2014							X				S14-Fe15825
P38-SP01A	Feb 20, 2014							X				S14-Fe15826
P38-SP01B	Feb 20, 2014							X				S14-Fe15827

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Sample Detail		Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271						X						
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P38-SP01C	Feb 20, 2014									X		
P38-L01 0-0.1	Feb 20, 2014										X	
P38-L02 0-0.1	Feb 20, 2014										X	
P38-L03 0-0.1	Feb 20, 2014										X	
QC04	Feb 20, 2014										X	
QC05	Feb 20, 2014										X	
QC06	Feb 20, 2014										X	
QC07	Feb 20, 2014										X	
TRIP SPIKE	Feb 20, 2014											X
TRIP BLANK	Feb 20, 2014											X
RINSATE	Feb 20, 2014											X

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
BTEX						
Benzene	mg/kg	< 0.1		0.1	Pass	
Toluene	mg/kg	< 0.1		0.1	Pass	
Ethylbenzene	mg/kg	< 0.1		0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2		0.2	Pass	
o-Xylene	mg/kg	< 0.1		0.1	Pass	
Xylenes - Total	mg/kg	< 0.3		0.3	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/kg	< 0.5		0.5	Pass	
Acenaphthylene	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5		0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5		0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Chrysene	mg/kg	< 0.5		0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5		0.5	Pass	
Fluoranthene	mg/kg	< 0.5		0.5	Pass	
Fluorene	mg/kg	< 0.5		0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/kg	< 0.1		0.1	Pass	
4,4'-DDD	mg/kg	< 0.05		0.05	Pass	
4,4'-DDE	mg/kg	< 0.05		0.05	Pass	
4,4'-DDT	mg/kg	< 0.05		0.05	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	73			70-130	Pass	
TRH C10-C14	%	80			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	104			70-130	Pass	
Toluene	%	99			70-130	Pass	
Ethylbenzene	%	100			70-130	Pass	
m&p-Xylenes	%	100			70-130	Pass	
o-Xylene	%	91			70-130	Pass	
Xylenes - Total	%	97			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	76			70-130	Pass	
TRH C6-C10	%	79			70-130	Pass	
TRH >C10-C16	%	82			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	110			70-130	Pass	
Acenaphthylene	%	108			70-130	Pass	
Anthracene	%	111			70-130	Pass	
Benz(a)anthracene	%	114			70-130	Pass	
Benzo(a)pyrene	%	112			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	104	70-130	Pass			
Benzo(g,h,i)perylene	%	101	70-130	Pass			
Benzo(k)fluoranthene	%	106	70-130	Pass			
Chrysene	%	112	70-130	Pass			
Dibenz(a,h)anthracene	%	110	70-130	Pass			
Fluoranthene	%	115	70-130	Pass			
Fluorene	%	109	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	107	70-130	Pass			
Naphthalene	%	106	70-130	Pass			
Phenanthrene	%	103	70-130	Pass			
Pyrene	%	110	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	109	70-130	Pass			
4,4'-DDD	%	110	70-130	Pass			
4,4'-DDE	%	110	70-130	Pass			
4,4'-DDT	%	110	70-130	Pass			
a-BHC	%	93	70-130	Pass			
Aldrin	%	100	70-130	Pass			
b-BHC	%	86	70-130	Pass			
d-BHC	%	102	70-130	Pass			
Dieldrin	%	104	70-130	Pass			
Endosulfan I	%	102	70-130	Pass			
Endosulfan II	%	110	70-130	Pass			
Endosulfan sulphate	%	116	70-130	Pass			
Endrin	%	107	70-130	Pass			
Endrin aldehyde	%	101	70-130	Pass			
Endrin ketone	%	104	70-130	Pass			
g-BHC (Lindane)	%	96	70-130	Pass			
Heptachlor	%	104	70-130	Pass			
Heptachlor epoxide	%	106	70-130	Pass			
Hexachlorobenzene	%	112	70-130	Pass			
Methoxychlor	%	113	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	115	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	88	70-130	Pass			
Cadmium	%	109	70-130	Pass			
Chromium	%	106	70-130	Pass			
Copper	%	120	70-130	Pass			
Lead	%	107	70-130	Pass			
Mercury	%	105	70-130	Pass			
Nickel	%	103	70-130	Pass			
Zinc	%	114	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Polycyclic Aromatic Hydrocarbons				Result 1			
Acenaphthene	S14-Fe15808	CP	%	122	70-130	Pass	
Acenaphthylene	S14-Fe15808	CP	%	119	70-130	Pass	
Anthracene	S14-Fe15808	CP	%	123	70-130	Pass	
Benz(a)anthracene	S14-Fe15808	CP	%	126	70-130	Pass	
Benzo(a)pyrene	S14-Fe15808	CP	%	117	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Benzo(b&j)fluoranthene	S14-Fe15808	CP	%	100		70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe15808	CP	%	123		70-130	Pass	
Benzo(k)fluoranthene	S14-Fe15808	CP	%	126		70-130	Pass	
Chrysene	S14-Fe15808	CP	%	122		70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe15808	CP	%	129		70-130	Pass	
Fluoranthene	S14-Fe15808	CP	%	122		70-130	Pass	
Fluorene	S14-Fe15808	CP	%	123		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe15808	CP	%	126		70-130	Pass	
Naphthalene	S14-Fe15808	CP	%	123		70-130	Pass	
Phenanthrene	S14-Fe15808	CP	%	123		70-130	Pass	
Pyrene	S14-Fe15808	CP	%	116		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	S14-Fe15808	CP	%	90		70-130	Pass	
Cadmium	S14-Fe15808	CP	%	95		70-130	Pass	
Chromium	S14-Fe15808	CP	%	93		70-130	Pass	
Copper	S14-Fe15808	CP	%	125		70-130	Pass	
Lead	S14-Fe15808	CP	%	102		70-130	Pass	
Mercury	S14-Fe15808	CP	%	107		70-130	Pass	
Nickel	S14-Fe15808	CP	%	96		70-130	Pass	
Zinc	S14-Fe15808	CP	%	122		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S14-Fe18628	NCP	%	71		70-130	Pass	
TRH C10-C14	S14-Fe15706	NCP	%	87		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S14-Fe18628	NCP	%	99		70-130	Pass	
Toluene	S14-Fe18628	NCP	%	94		70-130	Pass	
Ethylbenzene	S14-Fe18628	NCP	%	96		70-130	Pass	
m&p-Xylenes	S14-Fe18628	NCP	%	98		70-130	Pass	
o-Xylene	S14-Fe18628	NCP	%	94		70-130	Pass	
Xylenes - Total	S14-Fe18628	NCP	%	97		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S14-Fe18628	NCP	%	72		70-130	Pass	
TRH C6-C10	S14-Fe18628	NCP	%	84		70-130	Pass	
TRH >C10-C16	S14-Fe15706	NCP	%	89		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	S14-Fe15027	NCP	%	100		70-130	Pass	
4,4'-DDD	S14-Fe15027	NCP	%	111		70-130	Pass	
4,4'-DDE	S14-Fe15027	NCP	%	104		70-130	Pass	
4,4'-DDT	S14-Fe15027	NCP	%	125		70-130	Pass	
a-BHC	S14-Fe15027	NCP	%	80		70-130	Pass	
Aldrin	S14-Fe15027	NCP	%	98		70-130	Pass	
b-BHC	S14-Fe15027	NCP	%	73		70-130	Pass	
d-BHC	S14-Fe15027	NCP	%	87		70-130	Pass	
Dieldrin	S14-Fe15027	NCP	%	102		70-130	Pass	
Endosulfan I	S14-Fe15027	NCP	%	93		70-130	Pass	
Endosulfan II	S14-Fe15027	NCP	%	116		70-130	Pass	
Endosulfan sulphate	S14-Fe15027	NCP	%	129		70-130	Pass	
Endrin	S14-Fe15027	NCP	%	101		70-130	Pass	
Endrin aldehyde	S14-Fe15027	NCP	%	107		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin ketone	S14-Fe15027	NCP	%	107			70-130	Pass	
g-BHC (Lindane)	S14-Fe15027	NCP	%	80			70-130	Pass	
Heptachlor	S14-Fe15027	NCP	%	91			70-130	Pass	
Heptachlor epoxide	S14-Fe15027	NCP	%	100			70-130	Pass	
Hexachlorobenzene	S14-Fe15027	NCP	%	96			70-130	Pass	
Methoxychlor	S14-Fe15027	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1260	S14-Fe14858	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S14-Fe15829	CP	%	124			70-130	Pass	
Acenaphthylene	S14-Fe15829	CP	%	125			70-130	Pass	
Anthracene	S14-Fe15829	CP	%	117			70-130	Pass	
Benz(a)anthracene	S14-Fe15829	CP	%	89			70-130	Pass	
Benzo(a)pyrene	S14-Fe15829	CP	%	79			70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe15829	CP	%	83			70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe15829	CP	%	94			70-130	Pass	
Benzo(k)fluoranthene	S14-Fe15829	CP	%	81			70-130	Pass	
Chrysene	S14-Fe15829	CP	%	124			70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe15829	CP	%	112			70-130	Pass	
Fluoranthene	S14-Fe15829	CP	%	118			70-130	Pass	
Fluorene	S14-Fe15829	CP	%	118			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe15829	CP	%	113			70-130	Pass	
Naphthalene	S14-Fe15829	CP	%	127			70-130	Pass	
Phenanthrene	S14-Fe15829	CP	%	125			70-130	Pass	
Pyrene	S14-Fe15829	CP	%	100			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Fe15829	CP	%	72			70-130	Pass	
Cadmium	S14-Fe15829	CP	%	96			70-130	Pass	
Chromium	S14-Fe15829	CP	%	73			70-130	Pass	
Lead	S14-Fe15829	CP	%	122			70-130	Pass	
Mercury	S14-Fe15829	CP	%	105			70-130	Pass	
Nickel	S14-Fe15829	CP	%	89			70-130	Pass	
Zinc	S14-Fe15829	CP	%	121			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Fe15808	CP	mg/kg	4.9	5.1	5.0	30%	Pass	
Cadmium	S14-Fe15808	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S14-Fe15808	CP	mg/kg	14	8.8	42	30%	Fail	Q15
Copper	S14-Fe15808	CP	mg/kg	6.2	7.7	21	30%	Pass	
Lead	S14-Fe15808	CP	mg/kg	17	19	12	30%	Pass	
Mercury	S14-Fe15808	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Nickel	S14-Fe15808	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S14-Fe15808	CP	mg/kg	48	61	23	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe15813	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Fe15813	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-Fe15813	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-Fe15813	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-Fe15813	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-Fe15813	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-Fe15813	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Fe15813	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-Fe15813	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Fe15813	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S14-Fe15813	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4,4'-DDD	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S14-Fe15813	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S14-Fe15813	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S14-Fe15813	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD			
Aroclor-1016	S14-Fe15813	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1232	S14-Fe15813	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S14-Fe15813	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S14-Fe15813	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S14-Fe15813	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S14-Fe15813	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total PCB	S14-Fe15027	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S14-Fe15829	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S14-Fe15829	CP	mg/kg	530	630	17	30%	Pass	
TRH C29-C36	S14-Fe15829	CP	mg/kg	260	400	40	30%	Fail	Q15
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S14-Fe15829	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S14-Fe15829	CP	mg/kg	740	930	23	30%	Pass	
TRH >C34-C40	S14-Fe15829	CP	mg/kg	140	280	67	30%	Fail	Q15

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)anthracene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Fe15829	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Fe15829	CP	mg/kg	10	4.9	69	30%	Fail	Q15
Cadmium	S14-Fe15829	CP	mg/kg	< 0.4	0.5	35	30%	Fail	Q15
Chromium	S14-Fe15829	CP	mg/kg	18	21	15	30%	Pass	
Copper	S14-Fe15829	CP	mg/kg	1000	360	95	30%	Fail	Q15
Lead	S14-Fe15829	CP	mg/kg	100	35	96	30%	Fail	Q15
Mercury	S14-Fe15829	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Nickel	S14-Fe15829	CP	mg/kg	9.4	8.3	13	30%	Pass	
Zinc	S14-Fe15829	CP	mg/kg	39	27	34	30%	Fail	Q15

Comments

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference:ASET37555/40735/1-5

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 409384-W
 Client Reference RIVERSTONE 43210
 Received Date Feb 25, 2014

Client Sample ID			TRIP SPIKE	TRIP BLANK	RINSATE
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Fe15836	S14-Fe15837	S14-Fe15838
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	75%	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	< 0.1
TRH C29-C36	0.1	mg/L	-	-	< 0.1
TRH C10-36 (Total)	0.1	mg/L	-	-	< 0.1
BTEX					
Benzene	0.001	mg/L	102%	< 0.001	< 0.001
Toluene	0.001	mg/L	91%	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	85%	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	91%	< 0.002	< 0.002
o-Xylene	0.001	mg/L	90%	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	91%	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	95	74	77
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.02	mg/L	-	-	< 0.02
TRH C6-C10	0.02	mg/L	-	-	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	-	-	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	< 0.1
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	-	-	< 0.001
Benzo(g,h,i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	< 0.001
Dibenz(a,h)anthracene	0.001	mg/L	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001
Indeno(1,2,3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	< 0.001

Client Sample ID			TRIP SPIKE	TRIP BLANK	RINSATE
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Fe15836	S14-Fe15837	S14-Fe15838
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Phenanthrene	0.001	mg/L	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	< 0.001
Total PAH	0.001	mg/L	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	107
p-Terphenyl-d14 (surr.)	1	%	-	-	124
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	-	-	< 0.001
4,4'-DDD	0.0001	mg/L	-	-	< 0.0001
4,4'-DDE	0.0001	mg/L	-	-	< 0.0001
4,4'-DDT	0.0001	mg/L	-	-	< 0.0001
a-BHC	0.0001	mg/L	-	-	< 0.0001
Aldrin	0.0001	mg/L	-	-	< 0.0001
b-BHC	0.0001	mg/L	-	-	< 0.0001
d-BHC	0.0001	mg/L	-	-	< 0.0001
Dieldrin	0.0001	mg/L	-	-	< 0.0001
Endosulfan I	0.0001	mg/L	-	-	< 0.0001
Endosulfan II	0.0001	mg/L	-	-	< 0.0001
Endosulfan sulphate	0.0001	mg/L	-	-	< 0.0001
Endrin	0.0001	mg/L	-	-	< 0.0001
Endrin aldehyde	0.0001	mg/L	-	-	< 0.0001
Endrin ketone	0.0001	mg/L	-	-	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	-	-	< 0.0001
Heptachlor	0.0001	mg/L	-	-	< 0.0001
Heptachlor epoxide	0.0001	mg/L	-	-	< 0.0001
Hexachlorobenzene	0.0001	mg/L	-	-	< 0.0001
Methoxychlor	0.0001	mg/L	-	-	< 0.0001
Toxaphene	0.01	mg/L	-	-	< 0.01
Dibutylchloroendate (surr.)	1	%	-	-	123
Tetrachloro-m-xylene (surr.)	1	%	-	-	100
Polychlorinated Biphenyls (PCB)					
Aroclor-1016	0.005	mg/L	-	-	< 0.005
Aroclor-1232	0.005	mg/L	-	-	< 0.005
Aroclor-1242	0.005	mg/L	-	-	< 0.005
Aroclor-1248	0.005	mg/L	-	-	< 0.005
Aroclor-1254	0.005	mg/L	-	-	< 0.005
Aroclor-1260	0.005	mg/L	-	-	< 0.005
Total PCB	0.005	mg/L	-	-	< 0.005
Dibutylchloroendate (surr.)	1	%	-	-	123
Heavy Metals					
Arsenic	0.001	mg/L	-	-	< 0.001
Cadmium	0.0002	mg/L	-	-	< 0.0002
Chromium	0.001	mg/L	-	-	< 0.001
Copper	0.001	mg/L	-	-	< 0.001
Lead	0.001	mg/L	-	-	< 0.001
Mercury	0.0001	mg/L	-	-	< 0.0001
Nickel	0.001	mg/L	-	-	< 0.001
Zinc	0.001	mg/L	-	-	< 0.001

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Feb 28, 2014	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Feb 28, 2014	7 Day
BTEX - Method: E029/E016 BTEX	Sydney	Feb 25, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Feb 28, 2014	7 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Feb 28, 2014	7 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Feb 28, 2014	7 Day
Metals M8 - Method: USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury	Melbourne	Feb 25, 2014	28 Day

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 409384
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 25, 2014 8:34 AM
Due: Mar 4, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Analysis Results										
					Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted															
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
External Laboratory															
P15-L01 0-0.1	Feb 20, 2014		Soil	S14-Fe15807											
P15-L02 0-0.1	Feb 20, 2014		Soil	S14-Fe15808				X							
P16-L01 0-0.1	Feb 20, 2014		Soil	S14-Fe15809				X							
P16-L02 0-0.1	Feb 20, 2014		Soil	S14-Fe15810				X							
P16-L03 0-0.1	Feb 20, 2014		Soil	S14-Fe15811				X							
P30-L01 0-0.1	Feb 20, 2014		Soil	S14-Fe15812				X							
P30-L02 0-0.1	Feb 20, 2014		Soil	S14-Fe15813				X							
P31-L01 0-0.1	Feb 20, 2014		Soil	S14-Fe15814				X							
P31-L02 0-0.1	Feb 20, 2014		Soil	S14-Fe15815				X							
P36-L01 0-0.1	Feb 20, 2014		Soil	S14-Fe15816				X							

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 NATA # 1261 Site # 20794

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Sample Detail		Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P36-L02 0-0.1	Feb 20, 2014										X	
		Soil								X		S14-Fe15817
P35-L01 0-0.1	Feb 20, 2014					X						
		Soil						X				S14-Fe15818
P35-L02 0-0.1	Feb 20, 2014									X		
		Soil										S14-Fe15819
P32-L02 0-0.1	Feb 20, 2014							X				
		Soil						X				S14-Fe15820
P32-L01 0-0.1	Feb 20, 2014									X		
		Soil										S14-Fe15821
P33-L02 0-0.1	Feb 20, 2014									X		
		Soil										S14-Fe15822
P33-L01 0-0.1	Feb 20, 2014							X				
		Soil						X				S14-Fe15823
P29-L02 0-0.1	Feb 20, 2014										X	
		Soil										S14-Fe15824
P29-L01 0-0.1	Feb 20, 2014									X		
		Soil										S14-Fe15825
P38-SP01A	Feb 20, 2014										X	
		Soil										S14-Fe15826
P38-SP01B	Feb 20, 2014										X	
		Soil										S14-Fe15827

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Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271					X							
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P38-SP01C	Feb 20, 2014					X					X	
P38-L01 0-0.1	Feb 20, 2014										X	
P38-L02 0-0.1	Feb 20, 2014										X	
P38-L03 0-0.1	Feb 20, 2014										X	
QC04	Feb 20, 2014										X	
QC05	Feb 20, 2014										X	
QC06	Feb 20, 2014										X	
QC07	Feb 20, 2014										X	
TRIP SPIKE	Feb 20, 2014										X	
TRIP BLANK	Feb 20, 2014										X	
RINSATE	Feb 20, 2014										X	

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Sample Detail	
Laboratory where analysis is conducted	
Melbourne Laboratory - NATA Site # 1254 & 14271	
Sydney Laboratory - NATA Site # 18217	
Brisbane Laboratory - NATA Site # 20794	
External Laboratory	
P35- SP01	Feb 20, 2014
	Soil
	S14-Fe16378
Total Recoverable Hydrocarbons	
Polychlorinated Biphenyls (PCB)	
BTEX	
Metals M8	X
Metals M8	X
Organochlorine Pesticides	X
Polycyclic Aromatic Hydrocarbons	X
TRH C6-C9	X
HOLD	X
Asbestos (% weight as per WA Guidelines)	X
% Moisture	X

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4,4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.001			0.001	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	128			70-130	Pass	
TRH C10-C14	%	95			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	119			70-130	Pass	
Toluene	%	114			70-130	Pass	
Ethylbenzene	%	117			70-130	Pass	
m&p-Xylenes	%	118			70-130	Pass	
o-Xylene	%	103			70-130	Pass	
Xylenes - Total	%	113			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	81			70-130	Pass	
TRH C6-C10	%	130			70-130	Pass	
TRH >C10-C16	%	108			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	115			70-130	Pass	
Anthracene	%	91			70-130	Pass	
Benz(a)anthracene	%	84			70-130	Pass	
Benzo(a)pyrene	%	90			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	93	70-130	Pass			
Benzo(g,h,i)perylene	%	77	70-130	Pass			
Benzo(k)fluoranthene	%	88	70-130	Pass			
Chrysene	%	95	70-130	Pass			
Dibenz(a,h)anthracene	%	77	70-130	Pass			
Fluoranthene	%	92	70-130	Pass			
Fluorene	%	90	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	77	70-130	Pass			
Naphthalene	%	74	70-130	Pass			
Phenanthrene	%	91	70-130	Pass			
Pyrene	%	93	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	85	70-130	Pass			
4,4'-DDD	%	80	70-130	Pass			
4,4'-DDE	%	100	70-130	Pass			
4,4'-DDT	%	90	70-130	Pass			
a-BHC	%	80	70-130	Pass			
Aldrin	%	90	70-130	Pass			
b-BHC	%	90	70-130	Pass			
d-BHC	%	80	70-130	Pass			
Dieldrin	%	90	70-130	Pass			
Endosulfan I	%	90	70-130	Pass			
Endosulfan II	%	90	70-130	Pass			
Endosulfan sulphate	%	90	70-130	Pass			
Endrin	%	90	70-130	Pass			
Endrin aldehyde	%	80	70-130	Pass			
Endrin ketone	%	80	70-130	Pass			
g-BHC (Lindane)	%	90	70-130	Pass			
Heptachlor	%	100	70-130	Pass			
Heptachlor epoxide	%	90	70-130	Pass			
Hexachlorobenzene	%	100	70-130	Pass			
Methoxychlor	%	80	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	113	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	94	80-120	Pass			
Cadmium	%	91	80-120	Pass			
Chromium	%	94	80-120	Pass			
Copper	%	99	80-120	Pass			
Lead	%	90	80-120	Pass			
Nickel	%	93	80-120	Pass			
Zinc	%	94	80-120	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	S14-Fe16230	NCP	%	81	70-130	Pass	
Spike - % Recovery							
BTEX				Result 1			
Benzene	S14-Fe16230	NCP	%	98	70-130	Pass	
Toluene	S14-Fe16230	NCP	%	90	70-130	Pass	
Ethylbenzene	S14-Fe16230	NCP	%	87	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	S14-Fe16230	NCP	%	94			70-130	Pass	
o-Xylene	S14-Fe16230	NCP	%	92			70-130	Pass	
Xylenes - Total	S14-Fe16230	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S14-Fe20934	NCP	%	105			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S14-Fe16230	NCP	%	117			70-130	Pass	
TRH C6-C10	S14-Fe16230	NCP	%	85			70-130	Pass	
TRH >C10-C16	S14-Fe20934	NCP	%	118			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S14-Fe20933	NCP	%	107			70-130	Pass	
Acenaphthylene	S14-Fe20933	NCP	%	103			70-130	Pass	
Anthracene	S14-Fe20933	NCP	%	105			70-130	Pass	
Benz(a)anthracene	S14-Fe20933	NCP	%	92			70-130	Pass	
Benzo(a)pyrene	S14-Fe20933	NCP	%	87			70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe20933	NCP	%	73			70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe20933	NCP	%	96			70-130	Pass	
Benzo(k)fluoranthene	S14-Fe20933	NCP	%	96			70-130	Pass	
Chrysene	S14-Fe20933	NCP	%	78			70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe20933	NCP	%	94			70-130	Pass	
Fluoranthene	S14-Fe20933	NCP	%	104			70-130	Pass	
Fluorene	S14-Fe20933	NCP	%	100			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe20933	NCP	%	96			70-130	Pass	
Naphthalene	S14-Fe20933	NCP	%	72			70-130	Pass	
Phenanthrene	S14-Fe20933	NCP	%	101			70-130	Pass	
Pyrene	S14-Fe20933	NCP	%	105			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe17624	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Fe17624	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S14-Fe17624	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S14-Fe17624	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S14-Fe17624	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S14-Fe17624	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S14-Fe17624	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S14-Fe20932	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S14-Fe20932	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S14-Fe20932	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Fe17624	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	S14-Fe17624	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Fe17624	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	S14-Fe20932	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S14-Fe20932	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S14-Fe20932	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Acenaphthylene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Anthracene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benz(a)anthracene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(a)pyrene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(b&j)fluoranthene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(g,h,i)perylene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(k)fluoranthene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chrysene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibenz(a,h)anthracene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluoranthene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluorene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Naphthalene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Phenanthrene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Pyrene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Jean Heng	Client Services
Emily Rosenberg	Senior Analyst-Metal (VIC)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

~~Final report - this Report replaces any previously issued Report~~

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Feb 25, 2014 8:34 AM
Eurofins | mgt reference: **409384**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
 - Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 5 degrees Celsius.
 - All samples have been received as described on the above COC.
 - COC has been completed correctly.
 - Attempt to chill was evident.
 - Appropriately preserved sample containers have been used.
 - All samples were received in good condition.
 - Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
 - Organic samples had Teflon liners.
 - Sample containers for volatile analysis received with zero headspace.
 - Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Samples QC04A, QC05A, QC06A & QC07A sent to Envirolab as requested | Asbestos analysis conducted by ASET

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Eurofins | mgt Sample Receipt

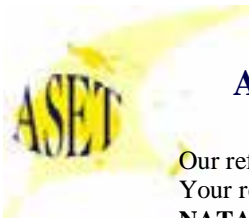


Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis

NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience





Our ref: ASET37554/ 40734 / 1 - 8

Your ref: 409634

NATA Accreditation No: 14484

28 February 2014

Eurofins MGT
Unit F3, Building F, 16, Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons

Dear Robert,

Asbestos Identification

This report presents the results of eight samples, forwarded by Eurofins MGT on 25 February 2014, for analysis for asbestos.

1.Introduction:Eight samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1 and Australian Standards AS 4964 - 2004 and WA/ NEPM Guidelines**)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia/ NEPM Guidelines for the Assessment Remediation and Management of Asbestos in contaminated sites.

3. Results : **Sample No. 1. ASET37554/ 40734/ 1. P55 - SP01- Fe18010.**
Approx dimensions 10.2 cm x 9.6 cm x 9.1 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and bitumen.
No asbestos detected.

Sample No. 2. ASET37554/ 40734/ 2. P55 - SP02 - Fe18011.
Approx dimensions 10.4 cm x 9.5 cm x 9.3 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 3. ASET37554/ 40734/ 3. P55 - L02 - 0 - 0.1 - Fe18013.
Approx dimensions 9.5 cm x 9.2 cm x 8.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, glass and brick.
No asbestos detected.

Sample No. 4. ASET37554/ 40734/ 4. P54 - L01 - 0 - 0.1 - Fe18015.
Approx dimensions 8.6 cm x 7.9 cm x 7.6 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

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Sample No. 5. ASET37554 / 40734 / 5. P51 - L01 - 0 - 0.1 - Fe18023.

Approx dimensions 9.6 cm x 9.5 cm x 9.3 cm

The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.

No asbestos detected.

Sample No. 6. ASET37554 / 40734 / 6. P86 - L01 - 0 - 0.1 - Fe18031.

Approx dimensions 9.7 cm x 9.5 cm x 8.6 cm

The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.

No asbestos detected.

Sample No. 7. ASET37554 / 40734 / 7. P48 - L01 - 0 - 0.1 - Fe18035.

Approx dimensions 9.5 cm x 9.1 cm x 8.9 cm

The sample consisted of a mixture of soil, stones, wood chips, plant matter and fragments of bitumen.

No asbestos detected.

Sample No. 8. ASET37554 / 40734 / 8. QC09 - Fe18041.

Approx dimensions 9.4 cm x 9.3 cm x 8.7 cm

The sample consisted of a mixture of clayish soil, stones and plant matter.

No asbestos detected.

Analysed and reported by,



Laxman Dias. BSc
Analyst / Approved Identifier.
Approved Signatory



Accredited for compliance with ISO/IEC 17025.

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation only covers the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

All samples indicating "No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 409634-S
 Client Reference RIVERSTONE 43210
 Received Date Feb 21, 2014

Client Sample ID			P55-SP01	P55-SP02	P55-L02 0-0.1	P55-L03 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18010	S14-Fe18011	S14-Fe18013	S14-Fe18014
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	51
TRH C15-C28	50	mg/kg	-	-	-	170
TRH C29-C36	50	mg/kg	-	-	-	230
TRH C10-36 (Total)	50	mg/kg	-	-	-	450
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	52
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	-	52
TRH >C16-C34	100	mg/kg	-	-	-	340
TRH >C34-C40	100	mg/kg	-	-	-	150
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P55-SP01	P55-SP02	P55-L02 0-0.1	P55-L03 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18010	S14-Fe18011	S14-Fe18013	S14-Fe18014
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	99	99	95	102
p-Terphenyl-d14 (surr.)	1	%	119	123	117	122
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.02
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Toxaphene	1	mg/kg	-	-	-	< 1
Dibutylchloroendate (surr.)	1	%	-	-	-	115
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	111
Organophosphorus Pesticides (OP)						
Chlorpyrifos	0.5	mg/kg	-	-	-	< 0.5
Coumaphos	0.5	mg/kg	-	-	-	< 0.5
Demeton (total)	1	mg/kg	-	-	-	< 1
Diazinon	0.5	mg/kg	-	-	-	< 0.5
Dichlorvos	0.5	mg/kg	-	-	-	< 0.5
Dimethoate	0.5	mg/kg	-	-	-	< 0.5
Disulfoton	0.5	mg/kg	-	-	-	< 0.5
Ethoprop	0.5	mg/kg	-	-	-	< 0.5
Fenitrothion	0.5	mg/kg	-	-	-	< 0.5
Fensulfothion	0.5	mg/kg	-	-	-	< 0.5
Fenthion	0.5	mg/kg	-	-	-	< 0.5
Methyl azinphos	0.5	mg/kg	-	-	-	< 0.5
Malathion	0.5	mg/kg	-	-	-	< 0.5
Methyl parathion	0.5	mg/kg	-	-	-	< 0.5
Mevinphos	0.5	mg/kg	-	-	-	< 0.5
Monocrotophos	10	mg/kg	-	-	-	< 10

Client Sample ID			P55-SP01	P55-SP02	P55-L02 0-0.1	P55-L03 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18010	S14-Fe18011	S14-Fe18013	S14-Fe18014
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Organophosphorus Pesticides (OP)						
Parathion	0.5	mg/kg	-	-	-	< 0.5
Phorate	0.5	mg/kg	-	-	-	< 0.5
Profenofos	0.5	mg/kg	-	-	-	< 0.5
Prothiofos	0.5	mg/kg	-	-	-	< 0.5
Ronnel	0.5	mg/kg	-	-	-	< 0.5
Stirophos	0.5	mg/kg	-	-	-	< 0.5
Trichloronate	0.5	mg/kg	-	-	-	< 0.5
Triphenylphosphate (surr.)	1	%	-	-	-	120
Heavy Metals						
Arsenic	2	mg/kg	4.8	8.4	9.6	13
Cadmium	0.4	mg/kg	< 0.4	0.7	1.1	1.4
Chromium	5	mg/kg	24	30	47	42
Copper	5	mg/kg	18	6.2	5.8	19
Lead	5	mg/kg	49	16	30	55
Mercury	0.05	mg/kg	0.68	< 0.05	< 0.05	0.06
Nickel	5	mg/kg	15	< 5	5.9	7.7
Zinc	5	mg/kg	130	23	39	340
% Moisture	0.1	%	12	9.5	11	16
Asbestos (% weight as per WA Guidelines)			see attached	see attached	see attached	-

Client Sample ID			P54-L01 0-0.1	P54-L02 0-0.1	P53-L02 0-0.1	P52-L01 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18015	S14-Fe18016	S14-Fe18019	S14-Fe18021
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	54	-	-	-
TRH C15-C28	50	mg/kg	13000	-	-	-
TRH C29-C36	50	mg/kg	17000	-	-	-
TRH C10-36 (Total)	50	mg/kg	30000	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	99	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	130	-	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	130	-	-	-
TRH >C16-C34	100	mg/kg	27000	-	-	-
TRH >C34-C40	100	mg/kg	6300	-	-	-

Client Sample ID			P54-L01 0-0.1 Soil	P54-L02 0-0.1 Soil	P53-L02 0-0.1 Soil	P52-L01 0-0.1 Soil
Sample Matrix			S14-Fe18015	S14-Fe18016	S14-Fe18019	S14-Fe18021
Eurofins mgt Sample No.			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	98	88	99	105
p-Terphenyl-d14 (surr.)	1	%	74	112	117	121
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.02	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchlorodate (surr.)	1	%	127	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	123	-	-	-

Client Sample ID			P54-L01 0-0.1	P54-L02 0-0.1	P53-L02 0-0.1	P52-L01 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18015	S14-Fe18016	S14-Fe18019	S14-Fe18021
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Organophosphorus Pesticides (OP)						
Chlorpyrifos	0.5	mg/kg	< 0.5	-	-	-
Coumaphos	0.5	mg/kg	< 0.5	-	-	-
Demeton (total)	1	mg/kg	< 1	-	-	-
Diazinon	0.5	mg/kg	< 0.5	-	-	-
Dichlorvos	0.5	mg/kg	< 0.5	-	-	-
Dimethoate	0.5	mg/kg	< 0.5	-	-	-
Disulfoton	0.5	mg/kg	< 0.5	-	-	-
Ethoprop	0.5	mg/kg	< 0.5	-	-	-
Fenitrothion	0.5	mg/kg	< 0.5	-	-	-
Fensulfothion	0.5	mg/kg	< 0.5	-	-	-
Fenthion	0.5	mg/kg	< 0.5	-	-	-
Methyl azinphos	0.5	mg/kg	< 0.5	-	-	-
Malathion	0.5	mg/kg	< 0.5	-	-	-
Methyl parathion	0.5	mg/kg	< 0.5	-	-	-
Mevinphos	0.5	mg/kg	< 0.5	-	-	-
Monocrotophos	10	mg/kg	< 10	-	-	-
Parathion	0.5	mg/kg	< 0.5	-	-	-
Phorate	0.5	mg/kg	< 0.5	-	-	-
Profenofos	0.5	mg/kg	< 0.5	-	-	-
Prothiofos	0.5	mg/kg	< 0.5	-	-	-
Ronnel	0.5	mg/kg	< 0.5	-	-	-
Stirophos	0.5	mg/kg	< 0.5	-	-	-
Trichloronate	0.5	mg/kg	< 0.5	-	-	-
Triphenylphosphate (surr.)	1	%	105	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	3.1	< 2	8.3	5.3
Cadmium	0.4	mg/kg	0.6	4.1	< 0.4	0.5
Chromium	5	mg/kg	22	190	960	61
Copper	5	mg/kg	28	45	67	< 5
Lead	5	mg/kg	120	16	12	18
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	11	140	44	< 5
Zinc	5	mg/kg	270	130	180	12
% Moisture	0.1	%	17	13	17	10
Asbestos (% weight as per WA Guidelines)			see attached	-	-	-

Client Sample ID			P51-L01 0-0.1	P39-L01 0-0.1	P84-L02 0-0.1	P85-L01 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18023	S14-Fe18025	S14-Fe18028	S14-Fe18029
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	< 50	-	-	-
TRH C10-36 (Total)	50	mg/kg	< 50	-	-	-

Client Sample ID			P51-L01 0-0.1 Soil	P39-L01 0-0.1 Soil	P84-L02 0-0.1 Soil	P85-L01 0-0.1 Soil
Sample Matrix			S14-Fe18023	S14-Fe18025	S14-Fe18028	S14-Fe18029
Eurofins mgt Sample No.			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Date Sampled						
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	106	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	99	124	119	110
p-Terphenyl-d14 (surr.)	1	%	118	118	119	111
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.02	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-

Client Sample ID			P51-L01 0-0.1	P39-L01 0-0.1	P84-L02 0-0.1	P85-L01 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18023	S14-Fe18025	S14-Fe18028	S14-Fe18029
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchloroendate (surr.)	1	%	81	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	71	-	-	-
Organophosphorus Pesticides (OP)						
Chlorpyrifos	0.5	mg/kg	< 0.5	-	-	-
Coumaphos	0.5	mg/kg	< 0.5	-	-	-
Demeton (total)	1	mg/kg	< 1	-	-	-
Diazinon	0.5	mg/kg	< 0.5	-	-	-
Dichlorvos	0.5	mg/kg	< 0.5	-	-	-
Dimethoate	0.5	mg/kg	< 0.5	-	-	-
Disulfoton	0.5	mg/kg	< 0.5	-	-	-
Ethoprop	0.5	mg/kg	< 0.5	-	-	-
Fenitrothion	0.5	mg/kg	< 0.5	-	-	-
Fensulfothion	0.5	mg/kg	< 0.5	-	-	-
Fenthion	0.5	mg/kg	< 0.5	-	-	-
Methyl azinphos	0.5	mg/kg	< 0.5	-	-	-
Malathion	0.5	mg/kg	< 0.5	-	-	-
Methyl parathion	0.5	mg/kg	< 0.5	-	-	-
Mevinphos	0.5	mg/kg	< 0.5	-	-	-
Monocrotophos	10	mg/kg	< 10	-	-	-
Parathion	0.5	mg/kg	< 0.5	-	-	-
Phorate	0.5	mg/kg	< 0.5	-	-	-
Profenofos	0.5	mg/kg	< 0.5	-	-	-
Prothiofos	0.5	mg/kg	< 0.5	-	-	-
Ronnel	0.5	mg/kg	< 0.5	-	-	-
Stirophos	0.5	mg/kg	< 0.5	-	-	-
Trichloronate	0.5	mg/kg	< 0.5	-	-	-
Triphenylphosphate (surr.)	1	%	111	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	3.3	3.6	8.6	6.0
Cadmium	0.4	mg/kg	0.7	1.1	2.3	0.7
Chromium	5	mg/kg	31	42	62	22
Copper	5	mg/kg	< 5	< 5	43	13
Lead	5	mg/kg	16	26	390	28
Mercury	0.05	mg/kg	< 0.05	< 0.05	0.06	< 0.05
Nickel	5	mg/kg	< 5	< 5	11	7.5
Zinc	5	mg/kg	19	19	550	40
% Moisture	0.1	%	10.0	6.1	16	18
Asbestos (% weight as per WA Guidelines)			see attached	-	-	-

Client Sample ID			P86-L01 0-0.1 Soil	P87-L02 0-0.1 Soil	P48-L01 0-0.1 Soil	P48-L03 0-0.1 Soil
Sample Matrix			S14-Fe18031	S14-Fe18034	S14-Fe18035	S14-Fe18037
Eurofins mgt Sample No.			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	-
TRH C10-C14	20	mg/kg	< 20	-	< 20	-
TRH C15-C28	50	mg/kg	< 50	-	330	-
TRH C29-C36	50	mg/kg	75	-	780	-
TRH C10-36 (Total)	50	mg/kg	75	-	1100	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	104	-	105	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	820	-
TRH >C34-C40	100	mg/kg	< 100	-	1000	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	0.8	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	1.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	13	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	14	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	13	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	7.3	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	18	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	18	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	2.7	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	26	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	7.4	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	5.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	22	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	150	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	22	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	22	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	22	1.2
2-Fluorobiphenyl (surr.)	1	%	128	125	106	103
p-Terphenyl-d14 (surr.)	1	%	114	113	123	116
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.02	-	< 0.5	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	< 0.5	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	< 0.5	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	< 0.5	-

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P86-L01 0-0.1 Soil S14-Fe18031 Feb 21, 2014	P87-L02 0-0.1 Soil S14-Fe18034 Feb 21, 2014	P48-L01 0-0.1 Soil S14-Fe18035 Feb 21, 2014	P48-L03 0-0.1 Soil S14-Fe18037 Feb 21, 2014
Organochlorine Pesticides						
a-BHC	0.05	mg/kg	< 0.05	-	< 0.5	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.5	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.5	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.5	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.5	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.5	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.5	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.5	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.5	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.5	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.5	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.5	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.5	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.5	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.5	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 1	-
Toxaphene	1	mg/kg	< 1	-	< 1	-
Dibutylchloroendate (surr.)	1	%	85	-	129	-
Tetrachloro-m-xylene (surr.)	1	%	74	-	86	-
Organophosphorus Pesticides (OP)						
Chlorpyrifos	0.5	mg/kg	< 0.5	-	< 0.5	-
Coumaphos	0.5	mg/kg	< 0.5	-	< 0.5	-
Demeton (total)	1	mg/kg	< 1	-	< 1	-
Diazinon	0.5	mg/kg	< 0.5	-	< 0.5	-
Dichlorvos	0.5	mg/kg	< 0.5	-	< 0.5	-
Dimethoate	0.5	mg/kg	< 0.5	-	< 0.5	-
Disulfoton	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethoprop	0.5	mg/kg	< 0.5	-	< 0.5	-
Fenitrothion	0.5	mg/kg	< 0.5	-	< 0.5	-
Fensulfothion	0.5	mg/kg	< 0.5	-	< 0.5	-
Fenthion	0.5	mg/kg	< 0.5	-	< 0.5	-
Methyl azinphos	0.5	mg/kg	< 0.5	-	< 0.5	-
Malathion	0.5	mg/kg	< 0.5	-	< 0.5	-
Methyl parathion	0.5	mg/kg	< 0.5	-	< 0.5	-
Mevinphos	0.5	mg/kg	< 0.5	-	< 0.5	-
Monocrotophos	10	mg/kg	< 10	-	< 10	-
Parathion	0.5	mg/kg	< 0.5	-	< 0.5	-
Phorate	0.5	mg/kg	< 0.5	-	< 0.5	-
Profenofos	0.5	mg/kg	< 0.5	-	< 0.5	-
Prothiofos	0.5	mg/kg	< 0.5	-	< 0.5	-
Ronnel	0.5	mg/kg	< 0.5	-	< 0.5	-
Stirophos	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichloronate	0.5	mg/kg	< 0.5	-	< 0.5	-
Triphenylphosphate (surr.)	1	%	109	-	105	-
Heavy Metals						
Arsenic	2	mg/kg	7.8	3.4	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	< 0.4
Chromium	5	mg/kg	22	12	< 5	9.6
Copper	5	mg/kg	9.4	13	6.1	25

Client Sample ID			P86-L01 0-0.1	P87-L02 0-0.1	P48-L01 0-0.1	P48-L03 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18031	S14-Fe18034	S14-Fe18035	S14-Fe18037
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	18	21	< 5	67
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	5.9	9.9	< 5	7.6
Zinc	5	mg/kg	32	72	51	130
% Moisture	0.1	%	18	18	6.3	25
Asbestos (% weight as per WA Guidelines)			see attached	-	see attached	-

Client Sample ID			P49-L01 0-0.1	QC09
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S14-Fe18038	S14-Fe18041
Date Sampled			Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	-	< 20
TRH C10-C14	20	mg/kg	-	< 20
TRH C15-C28	50	mg/kg	-	< 50
TRH C29-C36	50	mg/kg	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	< 50
BTEX				
Benzene	0.1	mg/kg	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	105
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20
TRH >C10-C16	50	mg/kg	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50
TRH >C16-C34	100	mg/kg	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			P49-L01 0-0.1	QC09
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S14-Fe18038	S14-Fe18041
Date Sampled			Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	122	126
p-Terphenyl-d14 (surr.)	1	%	107	120
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	-	< 0.02
4.4'-DDD	0.05	mg/kg	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2
Toxaphene	1	mg/kg	-	< 1
Dibutylchloroendate (surr.)	1	%	-	85
Tetrachloro-m-xylene (surr.)	1	%	-	73
Organophosphorus Pesticides (OP)				
Chlorpyrifos	0.5	mg/kg	-	< 0.5
Coumaphos	0.5	mg/kg	-	< 0.5
Demeton (total)	1	mg/kg	-	< 1
Diazinon	0.5	mg/kg	-	< 0.5
Dichlorvos	0.5	mg/kg	-	< 0.5
Dimethoate	0.5	mg/kg	-	< 0.5
Disulfoton	0.5	mg/kg	-	< 0.5
Ethoprop	0.5	mg/kg	-	< 0.5
Fenitrothion	0.5	mg/kg	-	< 0.5
Fensulfothion	0.5	mg/kg	-	< 0.5
Fenthion	0.5	mg/kg	-	< 0.5
Methyl azinphos	0.5	mg/kg	-	< 0.5
Malathion	0.5	mg/kg	-	< 0.5
Methyl parathion	0.5	mg/kg	-	< 0.5

Client Sample ID			P49-L01 0-0.1	QC09
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S14-Fe18038	S14-Fe18041
Date Sampled			Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit		
Organophosphorus Pesticides (OP)				
Mevinphos	0.5	mg/kg	-	< 0.5
Monocrotophos	10	mg/kg	-	< 10
Parathion	0.5	mg/kg	-	< 0.5
Phorate	0.5	mg/kg	-	< 0.5
Profenofos	0.5	mg/kg	-	< 0.5
Prothiofos	0.5	mg/kg	-	< 0.5
Ronnel	0.5	mg/kg	-	< 0.5
Stirophos	0.5	mg/kg	-	< 0.5
Trichloronate	0.5	mg/kg	-	< 0.5
Triphenylphosphate (surr.)	1	%	-	110
Heavy Metals				
Arsenic	2	mg/kg	5.2	4.4
Cadmium	0.4	mg/kg	0.4	0.8
Chromium	5	mg/kg	12	39
Copper	5	mg/kg	13	< 5
Lead	5	mg/kg	22	20
Mercury	0.05	mg/kg	< 0.05	< 0.05
Nickel	5	mg/kg	6.8	< 5
Zinc	5	mg/kg	49	23
% Moisture				
	0.1	%	20	9.0
Asbestos (% weight as per WA Guidelines)				
			-	see attached

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Feb 27, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Feb 27, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Feb 26, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Feb 27, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Feb 27, 2014	14 Day
Organophosphorus Pesticides (OP) - Method: E014 Organophosphorus Pesticides (OP)	Sydney	Feb 27, 2014	14 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Feb 26, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Feb 26, 2014	28 Day

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
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NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 409634
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 25, 2014 11:18 AM
Due: Mar 4, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Analysis Results										
					% Moisture	Asbestos (% weight as per WA Guidelines)	HOLD	TRH C6-C9	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	Metals M8 filtered	BTEX	Organophosphorus Pesticides (OP)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted															
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
External Laboratory															
SS-SP01A	Feb 21, 2014		Soil	S14-Fe18007											
SS-SP01B	Feb 21, 2014		Soil	S14-Fe18008			X								
SS-SP01C	Feb 21, 2014		Soil	S14-Fe18009			X								
P55-SP01	Feb 21, 2014		Soil	S14-Fe18010	X				X						
P55-SP02	Feb 21, 2014		Soil	S14-Fe18011	X				X						
P55-L01 0-0.1	Feb 21, 2014		Soil	S14-Fe18012					X						
P55-L02 0-0.1	Feb 21, 2014		Soil	S14-Fe18013	X				X						
P55-L03 0-0.1	Feb 21, 2014		Soil	S14-Fe18014	X				X					X	X
P54-L01 0-0.1	Feb 21, 2014		Soil	S14-Fe18015	X				X					X	X
P54-L02 0-0.1	Feb 21, 2014		Soil	S14-Fe18016	X				X						

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Sample Detail		Total Recoverable Hydrocarbons	Organophosphorus Pesticides (OP)	BTEX	Metals M8 filtered	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P54-L03 0-0.1	Feb 21, 2014										X	
P53-L01 0-0.1	Feb 21, 2014									X		
P53-L02 0-0.1	Feb 21, 2014					X						
P53-L03 0-0.1	Feb 21, 2014									X		
P52-L01 0-0.1	Feb 21, 2014									X		
P52-L02 0-0.1	Feb 21, 2014									X		
P51-L01 0-0.1	Feb 21, 2014									X		
P51-L02 0-0.1	Feb 21, 2014									X		
P39-L01 0-0.1	Feb 21, 2014									X		
P39-L02 0-0.1	Feb 21, 2014									X		
P84-L01 0-0.1	Feb 21, 2014									X		

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Sample Detail		% Moisture	Asbestos (% weight as per WA Guidelines)	HOLD	TRH C6-C9	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	Metals M8 filtered	BTEX	Organophosphorus Pesticides (OP)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P84-L02 0-0.1	Feb 21, 2014	Soil	X			X		X				
P85-L01 0-0.1	Feb 21, 2014	Soil	X			X		X				
P85-L02 0-0.1	Feb 21, 2014	Soil		X								
P86-L01 0-0.1	Feb 21, 2014	Soil	X			X		X			X	X
P86-L02 0-0.1	Feb 21, 2014	Soil		X								
P87-L01 0-0.1	Feb 21, 2014	Soil		X								
P87-L02 0-0.1	Feb 21, 2014	Soil	X			X		X			X	X
P48-L01 0-0.1	Feb 21, 2014	Soil	X			X		X			X	X
P48-L02 0-0.1	Feb 21, 2014	Soil	X			X		X			X	X
P48-L03 0-0.1	Feb 21, 2014	Soil	X			X		X			X	X
P49-L01 0-0.1	Feb 21, 2014	Soil	X			X		X			X	X

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Received: Feb 25, 2014 11:18 AM
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Contact Name: Thomas Harding

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Sample Detail		Total Recoverable Hydrocarbons	Organophosphorus Pesticides (OP)	BTEX	Metals M8 filtered	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P49-L02 0-0.1	Feb 21, 2014	Soil								X		
QC08	Feb 21, 2014	Soil								X		
QC09	Feb 21, 2014	Soil				X		X				
RINSATE	Feb 21, 2014	Water					X	X				
TRIP SPIKE	Feb 20, 2014	Water							X			
TRIP BLANK	Feb 20, 2014	Water							X			

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
BTEX						
Benzene	mg/kg	< 0.1		0.1	Pass	
Toluene	mg/kg	< 0.1		0.1	Pass	
Ethylbenzene	mg/kg	< 0.1		0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2		0.2	Pass	
o-Xylene	mg/kg	< 0.1		0.1	Pass	
Xylenes - Total	mg/kg	< 0.3		0.3	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/kg	< 0.5		0.5	Pass	
Acenaphthylene	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5		0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5		0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Chrysene	mg/kg	< 0.5		0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5		0.5	Pass	
Fluoranthene	mg/kg	< 0.5		0.5	Pass	
Fluorene	mg/kg	< 0.5		0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/kg	< 0.1		0.1	Pass	
4,4'-DDD	mg/kg	< 0.05		0.05	Pass	
4,4'-DDE	mg/kg	< 0.05		0.05	Pass	
4,4'-DDT	mg/kg	< 0.05		0.05	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05	0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05	0.05	Pass	
Endrin	mg/kg	< 0.05	0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05	0.05	Pass	
Endrin ketone	mg/kg	< 0.05	0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05	0.05	Pass	
Heptachlor	mg/kg	< 0.05	0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05	0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05	0.05	Pass	
Methoxychlor	mg/kg	< 0.2	0.2	Pass	
Method Blank					
Organophosphorus Pesticides (OP)					
Chlorpyrifos	mg/kg	< 0.5	0.5	Pass	
Coumaphos	mg/kg	< 0.5	0.5	Pass	
Demeton (total)	mg/kg	< 1	1	Pass	
Diazinon	mg/kg	< 0.5	0.5	Pass	
Dichlorvos	mg/kg	< 0.5	0.5	Pass	
Dimethoate	mg/kg	< 0.5	0.5	Pass	
Disulfoton	mg/kg	< 0.5	0.5	Pass	
Ethoprop	mg/kg	< 0.5	0.5	Pass	
Fenitrothion	mg/kg	< 0.5	0.5	Pass	
Fensulfothion	mg/kg	< 0.5	0.5	Pass	
Fenthion	mg/kg	< 0.5	0.5	Pass	
Methyl azinphos	mg/kg	< 0.5	0.5	Pass	
Malathion	mg/kg	< 0.5	0.5	Pass	
Methyl parathion	mg/kg	< 0.5	0.5	Pass	
Mevinphos	mg/kg	< 0.5	0.5	Pass	
Monocrotophos	mg/kg	< 10	10	Pass	
Parathion	mg/kg	< 0.5	0.5	Pass	
Phorate	mg/kg	< 0.5	0.5	Pass	
Profenofos	mg/kg	< 0.5	0.5	Pass	
Prothiofos	mg/kg	< 0.5	0.5	Pass	
Ronnel	mg/kg	< 0.5	0.5	Pass	
Stirophos	mg/kg	< 0.5	0.5	Pass	
Trichloronate	mg/kg	< 0.5	0.5	Pass	
Method Blank					
Heavy Metals					
Arsenic	mg/kg	< 2	2	Pass	
Cadmium	mg/kg	< 0.4	0.4	Pass	
Chromium	mg/kg	< 5	5	Pass	
Copper	mg/kg	< 5	5	Pass	
Lead	mg/kg	< 5	5	Pass	
Mercury	mg/kg	< 0.05	0.05	Pass	
Nickel	mg/kg	< 5	5	Pass	
Zinc	mg/kg	< 5	5	Pass	
LCS - % Recovery					
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	%	73	70-130	Pass	
TRH C10-C14	%	80	70-130	Pass	
LCS - % Recovery					
BTEX					
Benzene	%	104	70-130	Pass	
Toluene	%	99	70-130	Pass	
Ethylbenzene	%	100	70-130	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	100		70-130	Pass	
o-Xylene	%	91		70-130	Pass	
Xylenes - Total	%	97		70-130	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	%	76		70-130	Pass	
TRH C6-C10	%	79		70-130	Pass	
TRH >C10-C16	%	82		70-130	Pass	
LCS - % Recovery						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	%	124		70-130	Pass	
Acenaphthylene	%	122		70-130	Pass	
Anthracene	%	118		70-130	Pass	
Benz(a)anthracene	%	115		70-130	Pass	
Benzo(a)pyrene	%	120		70-130	Pass	
Benzo(b&j)fluoranthene	%	123		70-130	Pass	
Benzo(g,h,i)perylene	%	112		70-130	Pass	
Benzo(k)fluoranthene	%	118		70-130	Pass	
Chrysene	%	120		70-130	Pass	
Dibenz(a,h)anthracene	%	115		70-130	Pass	
Fluoranthene	%	129		70-130	Pass	
Fluorene	%	125		70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	113		70-130	Pass	
Naphthalene	%	112		70-130	Pass	
Phenanthrene	%	116		70-130	Pass	
Pyrene	%	125		70-130	Pass	
LCS - % Recovery						
Organochlorine Pesticides						
Chlordanes - Total	%	109		70-130	Pass	
4.4'-DDD	%	110		70-130	Pass	
4.4'-DDE	%	110		70-130	Pass	
4.4'-DDT	%	110		70-130	Pass	
a-BHC	%	93		70-130	Pass	
Aldrin	%	100		70-130	Pass	
b-BHC	%	86		70-130	Pass	
d-BHC	%	102		70-130	Pass	
Dieldrin	%	104		70-130	Pass	
Endosulfan I	%	102		70-130	Pass	
Endosulfan II	%	110		70-130	Pass	
Endosulfan sulphate	%	116		70-130	Pass	
Endrin	%	107		70-130	Pass	
Endrin aldehyde	%	101		70-130	Pass	
Endrin ketone	%	104		70-130	Pass	
g-BHC (Lindane)	%	96		70-130	Pass	
Heptachlor	%	104		70-130	Pass	
Heptachlor epoxide	%	106		70-130	Pass	
Hexachlorobenzene	%	112		70-130	Pass	
Methoxychlor	%	113		70-130	Pass	
LCS - % Recovery						
Organophosphorus Pesticides (OP)						
Chlorpyrifos	%	96		70-130	Pass	
Coumaphos	%	105		70-130	Pass	
Demeton (total)	%	101		70-130	Pass	
Diazinon	%	96		70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Dichlorvos	%	99	70-130	Pass			
Dimethoate	%	100	70-130	Pass			
Disulfoton	%	103	70-130	Pass			
Ethoprop	%	97	70-130	Pass			
Fenitrothion	%	90	70-130	Pass			
Fensulfothion	%	114	70-130	Pass			
Fenthion	%	97	70-130	Pass			
Methyl azinphos	%	91	70-130	Pass			
Malathion	%	100	70-130	Pass			
Methyl parathion	%	90	70-130	Pass			
Mevinphos	%	99	70-130	Pass			
Monocrotophos	%	89	70-130	Pass			
Parathion	%	89	70-130	Pass			
Phorate	%	96	70-130	Pass			
Profenofos	%	95	70-130	Pass			
Prothiofos	%	95	70-130	Pass			
Ronnel	%	93	70-130	Pass			
Stirophos	%	81	70-130	Pass			
Trichloronate	%	85	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	98	70-130	Pass			
Cadmium	%	107	70-130	Pass			
Chromium	%	104	70-130	Pass			
Copper	%	120	70-130	Pass			
Lead	%	110	70-130	Pass			
Mercury	%	99	70-130	Pass			
Nickel	%	104	70-130	Pass			
Zinc	%	111	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Polycyclic Aromatic Hydrocarbons				Result 1			
Acenaphthene	S14-Fe18010	CP	%	121	70-130	Pass	
Acenaphthylene	S14-Fe18010	CP	%	116	70-130	Pass	
Anthracene	S14-Fe18010	CP	%	100	70-130	Pass	
Benz(a)anthracene	S14-Fe18010	CP	%	127	70-130	Pass	
Benzo(a)pyrene	S14-Fe18010	CP	%	109	70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe18010	CP	%	122	70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe18010	CP	%	117	70-130	Pass	
Benzo(k)fluoranthene	S14-Fe18010	CP	%	113	70-130	Pass	
Chrysene	S14-Fe18010	CP	%	130	70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe18010	CP	%	115	70-130	Pass	
Fluoranthene	S14-Fe18010	CP	%	127	70-130	Pass	
Fluorene	S14-Fe18010	CP	%	121	70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe18010	CP	%	115	70-130	Pass	
Naphthalene	S14-Fe18010	CP	%	130	70-130	Pass	
Phenanthrene	S14-Fe18010	CP	%	116	70-130	Pass	
Pyrene	S14-Fe18010	CP	%	123	70-130	Pass	
Spike - % Recovery							
Heavy Metals				Result 1			
Arsenic	S14-Fe18010	CP	%	77	70-130	Pass	
Cadmium	S14-Fe18010	CP	%	96	70-130	Pass	
Copper	S14-Fe18010	CP	%	97	70-130	Pass	
Lead	S14-Fe18306	NCP	%	80	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Mercury	S14-Fe18010	CP	%	98		70-130	Pass	
Nickel	S14-Fe18010	CP	%	100		70-130	Pass	
Zinc	S14-Fe21528	NCP	%	107		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S14-Fe18628	NCP	%	71		70-130	Pass	
TRH C10-C14	S14-Fe15706	NCP	%	87		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S14-Fe18628	NCP	%	99		70-130	Pass	
Toluene	S14-Fe18628	NCP	%	94		70-130	Pass	
Ethylbenzene	S14-Fe18628	NCP	%	96		70-130	Pass	
m&p-Xylenes	S14-Fe18628	NCP	%	98		70-130	Pass	
o-Xylene	S14-Fe18628	NCP	%	94		70-130	Pass	
Xylenes - Total	S14-Fe18628	NCP	%	97		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S14-Fe18628	NCP	%	72		70-130	Pass	
TRH C6-C10	S14-Fe18628	NCP	%	84		70-130	Pass	
TRH >C10-C16	S14-Fe15706	NCP	%	89		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	S14-Fe15027	NCP	%	100		70-130	Pass	
4,4'-DDD	S14-Fe15027	NCP	%	111		70-130	Pass	
4,4'-DDE	S14-Fe15027	NCP	%	104		70-130	Pass	
4,4'-DDT	S14-Fe15027	NCP	%	125		70-130	Pass	
a-BHC	S14-Fe15027	NCP	%	80		70-130	Pass	
Aldrin	S14-Fe15027	NCP	%	98		70-130	Pass	
b-BHC	S14-Fe15027	NCP	%	73		70-130	Pass	
d-BHC	S14-Fe15027	NCP	%	87		70-130	Pass	
Dieldrin	S14-Fe15027	NCP	%	102		70-130	Pass	
Endosulfan I	S14-Fe15027	NCP	%	93		70-130	Pass	
Endosulfan II	S14-Fe15027	NCP	%	116		70-130	Pass	
Endosulfan sulphate	S14-Fe15027	NCP	%	129		70-130	Pass	
Endrin	S14-Fe15027	NCP	%	101		70-130	Pass	
Endrin aldehyde	S14-Fe15027	NCP	%	107		70-130	Pass	
Endrin ketone	S14-Fe15027	NCP	%	107		70-130	Pass	
g-BHC (Lindane)	S14-Fe15027	NCP	%	80		70-130	Pass	
Heptachlor	S14-Fe15027	NCP	%	91		70-130	Pass	
Heptachlor epoxide	S14-Fe15027	NCP	%	100		70-130	Pass	
Hexachlorobenzene	S14-Fe15027	NCP	%	96		70-130	Pass	
Methoxychlor	S14-Fe15027	NCP	%	94		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Fe18023	CP	%	117		70-130	Pass	
Acenaphthylene	S14-Fe18023	CP	%	115		70-130	Pass	
Anthracene	S14-Fe18023	CP	%	118		70-130	Pass	
Benz(a)anthracene	S14-Fe18023	CP	%	122		70-130	Pass	
Benzo(a)pyrene	S14-Fe18023	CP	%	114		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe18023	CP	%	110		70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe18023	CP	%	109		70-130	Pass	
Benzo(k)fluoranthene	S14-Fe18023	CP	%	129		70-130	Pass	
Chrysene	S14-Fe18023	CP	%	121		70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe18023	CP	%	121		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fluoranthene	S14-Fe18023	CP	%	127			70-130	Pass	
Fluorene	S14-Fe18023	CP	%	118			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S14-Fe18023	CP	%	118			70-130	Pass	
Naphthalene	S14-Fe18023	CP	%	119			70-130	Pass	
Phenanthrene	S14-Fe18023	CP	%	116			70-130	Pass	
Pyrene	S14-Fe18023	CP	%	124			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Fe18028	CP	%	84			70-130	Pass	
Cadmium	S14-Fe18028	CP	%	91			70-130	Pass	
Chromium	S14-Fe18028	CP	%	120			70-130	Pass	
Mercury	S14-Fe18028	CP	%	92			70-130	Pass	
Nickel	S14-Fe18028	CP	%	99			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Fe18010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Fe18010	CP	mg/kg	4.8	3.5	34	30%	Fail	Q15
Cadmium	S14-Fe18010	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S14-Fe18010	CP	mg/kg	24	15	46	30%	Fail	Q15
Copper	S14-Fe18010	CP	mg/kg	18	10	57	30%	Fail	Q15
Lead	S14-Fe18010	CP	mg/kg	49	46	7.0	30%	Pass	
Mercury	S14-Fe18010	CP	mg/kg	0.68	0.37	61	30%	Fail	Q15
Nickel	S14-Fe18010	CP	mg/kg	15	11	31	30%	Fail	Q15
Zinc	S14-Fe18010	CP	mg/kg	130	130	1.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe18014	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S14-Fe15829	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S14-Fe15829	NCP	mg/kg	530	630	17	30%	Pass	
TRH C29-C36	S14-Fe15829	NCP	mg/kg	260	400	40	30%	Fail	Q15
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Fe18014	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-Fe18014	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-Fe18014	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-Fe18014	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	S14-Fe18014	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-Fe18014	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Fe18014	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-Fe18014	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Fe18014	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S14-Fe15829	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S14-Fe15829	NCP	mg/kg	740	930	23	30%	Pass	
TRH >C34-C40	S14-Fe15829	NCP	mg/kg	140	280	67	30%	Fail	Q15
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S14-Fe18014	CP	mg/kg	< 0.02	< 0.02	<1	30%	Pass	
4,4'-DDD	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S14-Fe18014	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S14-Fe18014	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S14-Fe18014	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Fe18028	CP	mg/kg	8.6	16	57	30%	Fail	Q15
Cadmium	S14-Fe18028	CP	mg/kg	2.3	2.3	1.0	30%	Pass	
Chromium	S14-Fe18028	CP	mg/kg	62	73	16	30%	Pass	
Copper	S14-Fe18028	CP	mg/kg	43	47	9.0	30%	Pass	
Lead	S14-Fe18028	CP	mg/kg	390	440	11	30%	Pass	
Mercury	S14-Fe18028	CP	mg/kg	0.06	0.09	39	30%	Fail	Q15
Nickel	S14-Fe18028	CP	mg/kg	11	10	7.0	30%	Pass	
Zinc	S14-Fe18028	CP	mg/kg	550	570	3.0	30%	Pass	

Comments

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference:ASET37554/40734/1-8

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 409634-W
 Client Reference RIVERSTONE 43210
 Received Date Feb 21, 2014

Client Sample ID			RINSATE	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Fe18042	S14-Fe18043	S14-Fe18044
Date Sampled			Feb 21, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	75%	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	< 0.001	101%	< 0.001
Toluene	0.001	mg/L	< 0.001	91%	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	86%	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	91%	< 0.002
o-Xylene	0.001	mg/L	< 0.001	91%	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	91%	< 0.003
4-Bromofluorobenzene (surr.)	1	%	75	92	74
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.02	mg/L	< 0.02	-	-
TRH C6-C10	0.02	mg/L	< 0.02	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	-	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	-	-
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
Indeno(1,2,3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-

Client Sample ID			RINSATE	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Fe18042	S14-Fe18043	S14-Fe18044
Date Sampled			Feb 21, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH	0.001	mg/L	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	116	-	-
p-Terphenyl-d14 (surr.)	1	%	130	-	-
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	< 0.001	-	-
4,4'-DDD	0.0001	mg/L	< 0.0001	-	-
4,4'-DDE	0.0001	mg/L	< 0.0001	-	-
4,4'-DDT	0.0001	mg/L	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	-	-
d-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	-	-
Toxaphene	0.01	mg/L	< 0.01	-	-
Dibutylchloroendate (surr.)	1	%	115	-	-
Tetrachloro-m-xylene (surr.)	1	%	100	-	-
Organophosphorus Pesticides (OP)					
Chlorpyrifos	0.002	mg/L	< 0.002	-	-
Coumaphos	0.002	mg/L	< 0.002	-	-
Demeton (total)	0.004	mg/L	< 0.004	-	-
Diazinon	0.002	mg/L	< 0.002	-	-
Dichlorvos	0.002	mg/L	< 0.002	-	-
Dimethoate	0.002	mg/L	< 0.002	-	-
Disulfoton	0.002	mg/L	< 0.002	-	-
Ethoprop	0.002	mg/L	< 0.002	-	-
Fenitrothion	0.002	mg/L	< 0.002	-	-
Fensulfothion	0.002	mg/L	< 0.002	-	-
Fenthion	0.002	mg/L	< 0.002	-	-
Methyl azinphos	0.002	mg/L	< 0.002	-	-
Malathion	0.002	mg/L	< 0.002	-	-
Methyl parathion	0.002	mg/L	< 0.002	-	-
Mevinphos	0.002	mg/L	< 0.002	-	-
Monocrotophos	0.02	mg/L	< 0.02	-	-
Parathion	0.002	mg/L	< 0.002	-	-
Phorate	0.002	mg/L	< 0.002	-	-
Profenofos	0.002	mg/L	< 0.002	-	-

Client Sample ID			RINSATE	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Fe18042	S14-Fe18043	S14-Fe18044
Date Sampled			Feb 21, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit			
Organophosphorus Pesticides (OP)					
Prothiofos	0.002	mg/L	< 0.002	-	-
Ronnel	0.002	mg/L	< 0.002	-	-
Stirophos	0.002	mg/L	< 0.002	-	-
Trichloronate	0.002	mg/L	< 0.002	-	-
Triphenylphosphate (surr.)	1	%	121	-	-
Heavy Metals					
Arsenic (filtered)	0.001	mg/L	< 0.001	-	-
Cadmium (filtered)	0.0001	mg/L	< 0.0001	-	-
Chromium (filtered)	0.001	mg/L	< 0.001	-	-
Copper (filtered)	0.001	mg/L	< 0.001	-	-
Lead (filtered)	0.001	mg/L	< 0.001	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	-	-
Nickel (filtered)	0.001	mg/L	< 0.001	-	-
Zinc (filtered)	0.005	mg/L	< 0.005	-	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Feb 28, 2014	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Feb 28, 2014	7 Day
BTEX - Method: E029/E016 BTEX	Sydney	Feb 25, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Feb 28, 2014	7 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Feb 28, 2014	7 Day
Organophosphorus Pesticides (OP) - Method: E014 Organophosphorus Pesticides (OP)	Sydney	Feb 28, 2014	7 Day
Metals M8 filtered - Method: E020/E030 Filtered Metals in Water & E026 Mercury	Sydney	Feb 25, 2014	28 Day

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 409634
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 25, 2014 11:18 AM
Due: Mar 4, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	% Moisture	Asbestos (% weight as per WA Guidelines)	HOLD	TRH C6-C9	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	Metals M8 filtered	BTEX	Organophosphorus Pesticides (OP)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted															
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
External Laboratory															
SS-SP01A	Feb 21, 2014		Soil	S14-Fe18007											
SS-SP01B	Feb 21, 2014		Soil	S14-Fe18008			X								
SS-SP01C	Feb 21, 2014		Soil	S14-Fe18009			X								
P55-SP01	Feb 21, 2014		Soil	S14-Fe18010	X						X				
P55-SP02	Feb 21, 2014		Soil	S14-Fe18011	X						X				
P55-L01 0-0.1	Feb 21, 2014		Soil	S14-Fe18012			X								
P55-L02 0-0.1	Feb 21, 2014		Soil	S14-Fe18013	X						X				
P55-L03 0-0.1	Feb 21, 2014		Soil	S14-Fe18014	X						X			X	X
P54-L01 0-0.1	Feb 21, 2014		Soil	S14-Fe18015	X						X			X	X
P54-L02 0-0.1	Feb 21, 2014		Soil	S14-Fe18016	X						X				

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Brisbane
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 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
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 NSW 2000

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Sample Detail		Total Recoverable Hydrocarbons	Organophosphorus Pesticides (OP)	BTEX	Metals M8 filtered	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P54-L03 0-0.1	Feb 21, 2014										X	
P53-L01 0-0.1	Feb 21, 2014									X		
P53-L02 0-0.1	Feb 21, 2014					X						
P53-L03 0-0.1	Feb 21, 2014									X		
P52-L01 0-0.1	Feb 21, 2014									X		
P52-L02 0-0.1	Feb 21, 2014									X		
P51-L01 0-0.1	Feb 21, 2014									X		
P51-L02 0-0.1	Feb 21, 2014									X		
P39-L01 0-0.1	Feb 21, 2014									X		
P39-L02 0-0.1	Feb 21, 2014									X		
P84-L01 0-0.1	Feb 21, 2014									X		

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Company Name: JBS & G (NSW & WA) Pty Ltd
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Sample Detail													
Laboratory where analysis is conducted													
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217													
Brisbane Laboratory - NATA Site # 20794													
External Laboratory													
Sample ID	Date	Soil	S14-Fe18028	S14-Fe18029	S14-Fe18030	S14-Fe18031	S14-Fe18032	S14-Fe18033	S14-Fe18034	S14-Fe18035	S14-Fe18036	S14-Fe18037	S14-Fe18038
P84-L02 0-0.1	Feb 21, 2014	Soil	X										
P85-L01 0-0.1	Feb 21, 2014	Soil	X	X									
P85-L02 0-0.1	Feb 21, 2014	Soil			X								
P86-L01 0-0.1	Feb 21, 2014	Soil	X			X							
P86-L02 0-0.1	Feb 21, 2014	Soil					X						
P87-L01 0-0.1	Feb 21, 2014	Soil						X					
P87-L02 0-0.1	Feb 21, 2014	Soil							X				
P48-L01 0-0.1	Feb 21, 2014	Soil	X						X	X			
P48-L02 0-0.1	Feb 21, 2014	Soil	X						X	X			
P48-L03 0-0.1	Feb 21, 2014	Soil	X						X	X			
P49-L01 0-0.1	Feb 21, 2014	Soil	X						X	X			
Total Recoverable Hydrocarbons													
Organophosphorus Pesticides (OP)						X							
BTEX						X							
Metals M8 filtered						X							
Metals M8						X		X		X			
Organochlorine Pesticides						X							
Polycyclic Aromatic Hydrocarbons						X	X		X	X	X	X	X
TRH C6-C9						X							
HOLD						X		X					
Asbestos (% weight as per WA Guidelines)							X						
% Moisture			X										

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Client Job No.: RIVERSTONE 43210

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Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 25, 2014 11:18 AM
Due: Mar 4, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail		Total Recoverable Hydrocarbons	Organophosphorus Pesticides (OP)	BTEX	Metals M8 filtered	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P49-L02 0-0.1	Feb 21, 2014	Soil								X		
QC08	Feb 21, 2014	Soil								X		
QC09	Feb 21, 2014	Soil				X		X				
RINSATE	Feb 21, 2014	Water					X	X				
TRIP SPIKE	Feb 20, 2014	Water							X			
TRIP BLANK	Feb 20, 2014	Water							X			

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4,4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Organophosphorus Pesticides (OP)							
Chlorpyrifos	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.002			0.002	Pass	
Demeton (total)	mg/L	< 0.004			0.004	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Methyl azinphos	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.02			0.02	Pass	
Parathion	mg/L	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Profenofos	mg/L	< 0.002			0.002	Pass	
Prothiofos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Stirophos	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0001			0.0001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	101			70-130	Pass	
TRH C10-C14	%	95			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	101			70-130	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Ethylbenzene	%	99		70-130	Pass	
m&p-Xylenes	%	104		70-130	Pass	
o-Xylene	%	103		70-130	Pass	
Xylenes - Total	%	104		70-130	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	%	73		70-130	Pass	
TRH C6-C10	%	112		70-130	Pass	
TRH >C10-C16	%	108		70-130	Pass	
LCS - % Recovery						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	%	104		70-130	Pass	
Acenaphthylene	%	103		70-130	Pass	
Anthracene	%	104		70-130	Pass	
Benz(a)anthracene	%	93		70-130	Pass	
Benzo(a)pyrene	%	94		70-130	Pass	
Benzo(b&j)fluoranthene	%	76		70-130	Pass	
Benzo(g,h,i)perylene	%	87		70-130	Pass	
Benzo(k)fluoranthene	%	106		70-130	Pass	
Chrysene	%	111		70-130	Pass	
Dibenz(a,h)anthracene	%	86		70-130	Pass	
Fluoranthene	%	103		70-130	Pass	
Fluorene	%	101		70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	86		70-130	Pass	
Naphthalene	%	105		70-130	Pass	
Phenanthrene	%	102		70-130	Pass	
Pyrene	%	102		70-130	Pass	
LCS - % Recovery						
Organochlorine Pesticides						
Chlordanes - Total	%	85		70-130	Pass	
4,4'-DDD	%	80		70-130	Pass	
4,4'-DDE	%	100		70-130	Pass	
4,4'-DDT	%	90		70-130	Pass	
a-BHC	%	80		70-130	Pass	
Aldrin	%	90		70-130	Pass	
b-BHC	%	90		70-130	Pass	
d-BHC	%	80		70-130	Pass	
Dieldrin	%	90		70-130	Pass	
Endosulfan I	%	90		70-130	Pass	
Endosulfan II	%	90		70-130	Pass	
Endosulfan sulphate	%	90		70-130	Pass	
Endrin	%	90		70-130	Pass	
Endrin aldehyde	%	80		70-130	Pass	
Endrin ketone	%	80		70-130	Pass	
g-BHC (Lindane)	%	90		70-130	Pass	
Heptachlor	%	100		70-130	Pass	
Heptachlor epoxide	%	90		70-130	Pass	
Hexachlorobenzene	%	100		70-130	Pass	
Methoxychlor	%	80		70-130	Pass	
LCS - % Recovery						
Organophosphorus Pesticides (OP)						
Chlorpyrifos	%	103		70-130	Pass	
Coumaphos	%	96		70-130	Pass	
Demeton (total)	%	102		70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Diazinon	%	100	70-130	Pass			
Dichlorvos	%	102	70-130	Pass			
Dimethoate	%	86	70-130	Pass			
Disulfoton	%	104	70-130	Pass			
Ethoprop	%	97	70-130	Pass			
Fenitrothion	%	95	70-130	Pass			
Fensulfothion	%	102	70-130	Pass			
Fenthion	%	104	70-130	Pass			
Methyl azinphos	%	78	70-130	Pass			
Malathion	%	100	70-130	Pass			
Methyl parathion	%	91	70-130	Pass			
Mevinphos	%	99	70-130	Pass			
Parathion	%	107	70-130	Pass			
Phorate	%	103	70-130	Pass			
Profenofos	%	98	70-130	Pass			
Prothiofos	%	104	70-130	Pass			
Ronnel	%	98	70-130	Pass			
Stirophos	%	88	70-130	Pass			
Trichloronate	%	90	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	102	70-130	Pass			
Cadmium (filtered)	%	100	70-130	Pass			
Chromium (filtered)	%	100	70-130	Pass			
Copper (filtered)	%	102	70-130	Pass			
Lead (filtered)	%	101	70-130	Pass			
Mercury (filtered)	%	97	70-130	Pass			
Nickel (filtered)	%	103	70-130	Pass			
Zinc (filtered)	%	102	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	S14-Fe18087	NCP	%	85	70-130	Pass	
TRH C10-C14	S14-Fe20934	NCP	%	105	70-130	Pass	
Spike - % Recovery							
BTEX				Result 1			
Benzene	S14-Fe18087	NCP	%	100	70-130	Pass	
Toluene	S14-Fe18087	NCP	%	94	70-130	Pass	
Ethylbenzene	S14-Fe18087	NCP	%	91	70-130	Pass	
m&p-Xylenes	S14-Fe18087	NCP	%	96	70-130	Pass	
o-Xylene	S14-Fe18087	NCP	%	96	70-130	Pass	
Xylenes - Total	S14-Fe18087	NCP	%	96	70-130	Pass	
Spike - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1			
Naphthalene	S14-Fe18087	NCP	%	112	70-130	Pass	
TRH C6-C10	S14-Fe18087	NCP	%	92	70-130	Pass	
TRH >C10-C16	S14-Fe20934	NCP	%	118	70-130	Pass	
Spike - % Recovery							
Polycyclic Aromatic Hydrocarbons				Result 1			
Acenaphthene	S14-Fe20542	NCP	%	108	70-130	Pass	
Acenaphthylene	S14-Fe20542	NCP	%	106	70-130	Pass	
Anthracene	S14-Fe20542	NCP	%	106	70-130	Pass	
Benz(a)anthracene	S14-Fe20542	NCP	%	98	70-130	Pass	
Benzo(a)pyrene	S14-Fe20542	NCP	%	98	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(b&i)fluoranthene	S14-Fe20542	NCP	%	88			70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe20542	NCP	%	106			70-130	Pass	
Benzo(k)fluoranthene	S14-Fe20542	NCP	%	105			70-130	Pass	
Chrysene	S14-Fe20542	NCP	%	111			70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe20542	NCP	%	107			70-130	Pass	
Fluoranthene	S14-Fe20542	NCP	%	105			70-130	Pass	
Fluorene	S14-Fe20542	NCP	%	104			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe20542	NCP	%	106			70-130	Pass	
Naphthalene	S14-Fe20542	NCP	%	124			70-130	Pass	
Phenanthrene	S14-Fe20542	NCP	%	103			70-130	Pass	
Pyrene	S14-Fe20542	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S14-Fe16945	NCP	%	101			70-130	Pass	
Cadmium (filtered)	S14-Fe16945	NCP	%	106			70-130	Pass	
Chromium (filtered)	S14-Fe16945	NCP	%	93			70-130	Pass	
Copper (filtered)	S14-Fe16945	NCP	%	92			70-130	Pass	
Lead (filtered)	S14-Fe16945	NCP	%	94			70-130	Pass	
Mercury (filtered)	M14-Fe16075	NCP	%	99			70-130	Pass	
Nickel (filtered)	S14-Fe16945	NCP	%	93			70-130	Pass	
Zinc (filtered)	S14-Fe16945	NCP	%	93			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe18086	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S14-Fe20932	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S14-Fe20932	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S14-Fe20932	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Fe18086	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S14-Fe18086	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S14-Fe18086	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S14-Fe18086	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S14-Fe18086	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S14-Fe18086	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Fe18086	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	S14-Fe18086	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Fe18086	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	S14-Fe20932	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S14-Fe20932	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S14-Fe20932	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&i)fluoranthene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Chrysene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibenz(a,h)anthracene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluoranthene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluorene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Naphthalene	S14-Fe20541	NCP	mg/L	0.062	0.091	38	30%	Fail
Phenanthrene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Pyrene	S14-Fe20541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic (filtered)	S14-Fe16944	NCP	mg/L	0.0010	0.0010	4.0	30%	Pass
Cadmium (filtered)	S14-Fe16944	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Chromium (filtered)	S14-Fe16944	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)	S14-Fe16944	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lead (filtered)	S14-Fe16944	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Mercury (filtered)	S14-Fe16944	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel (filtered)	S14-Fe16944	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Zinc (filtered)	S14-Fe16944	NCP	mg/L	0.0090	0.010	6.0	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Feb 25, 2014 11:18 AM
Eurofins | mgt reference: **409634**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
 - Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 4 degrees Celsius.
 - All samples have been received as described on the above COC.
 - COC has been completed correctly.
 - Attempt to chill was evident.
 - Appropriately preserved sample containers have been used.
 - All samples were received in good condition.
 - Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
 - Organic samples had Teflon liners.
 - Sample containers for volatile analysis received with zero headspace.
 - Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Samples QC08A & QC09/A sent to Envirolab as requested | Asbestos analysis conducted by ASET

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Eurofins | mgt Sample Receipt

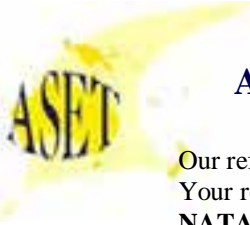


Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis

NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience





Our ref: ASET37606/ 40786 / 1 - 8
Your ref: 409681
NATA Accreditation No: 14484

4 March 2014

Eurofins MGT
Unit F3, Building F, 16, Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons

Dear Robert,

Asbestos Identification

This report presents the results of eight samples, forwarded by Eurofins MGT on 27 February 2014, for analysis for asbestos.

1.Introduction:Eight samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1 and Australian Standards AS 4964 - 2004 and WA/ NEPM Guidelines**)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia/ NEPM Guidelines for the Assessment Remediation and Management of Asbestos in contaminated sites.

3. Results : **Sample No. 1. ASET37606 / 40786 / 1. P89 - L01 0 - 0.1 - Fe18306.**
Approx dimensions 9.4 cm x 9.2 cm x 8.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET37606 / 40786 / 2. P42 - SP01 - Fe18315.
Approx dimensions 9.5 cm x 9.2 cm x 8.4 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of fibre cement*, plaster, bitumen, coal like material and shale.
Chrysotile*(Estimated approximate weight = 0.006g) asbestos detected.
Estimated approximate total weight of asbestos = 0.006g
Estimated approximate total asbestos weight in AF = 0.006g
Approximate total weight of AF = 0.05g
Approximate total weight of soil = 788g
Estimated approximate w/w % = 0.0008%

Sample No. 3. ASET37606 / 40786 / 3. P42 - L01 0 - 0.1 - Fe18316.
Approx dimensions 8.7 cm x 8.6 cm x 8.4 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 4. ASET37606 / 40786 / 4. P50 - L02 0 - 0.1 - Fe18324.
Approx dimensions 9.5 cm x 8.7 cm x 8.6 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.
No asbestos detected.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

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ASBESTOS DETECTION & IDENTIFICATION • REPAIR & CALIBRATION OF SCIENTIFIC EQUIPMENT • AIRBORNE FIBRE & SILICA MONITORING





Sample No. 5. ASET37606 / 40786 / 5. QC11 - Fe18328.

Approx dimensions 9.3 cm x 8.6 cm x 8.4 cm

The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.

No asbestos detected.

Sample No. 6. ASET37606 / 40786 / 6. P46 - L01 0 - 0. - Fe18332.

Approx dimensions 9.2 cm x 8.7 cm x 8.4 cm

The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.

No asbestos detected.

Sample No. 7. ASET37606 / 40786 / 7. P28 - L02 0 - 0.1 - Fe18339.

Approx dimensions 9.3 cm x 8.7 cm x 8.5 cm

The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of cement, brick and shale.

No asbestos detected.

Sample No. 8. ASET37606 / 40786 / 8. P82 - L02 0 - 0.1 - Fe18345.

Approx dimensions 8.8 cm x 8.7 cm x 8.5 cm

The sample consisted of a mixture of soil, stones and plant matter.

No asbestos detected.

Analysed and reported by,



Laxman Dias. BSc
Analyst / Approved Identifier.
Approved Signatory



Accredited for compliance with ISO/IEC 17025.

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation covers only the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

***denotes fibres in bonded form in fragments**

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 409681-S
 Client Reference RIVERSTONE 43210
 Received Date Feb 24, 2014

Client Sample ID			P89-L01 0-0.1	P89-L03 0-0.1	P40-L01 0-0.1	P40-L02 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18306	S14-Fe18308	S14-Fe18309	S14-Fe18311
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	140	-	-	-
TRH C10-36 (Total)	50	mg/kg	140	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	85	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	120	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	1.4	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	1.9	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	1.6	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	1.3	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	1.7	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	4.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P89-L01 0-0.1	P89-L03 0-0.1	P40-L01 0-0.1	P40-L02 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18306	S14-Fe18308	S14-Fe18309	S14-Fe18311
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	4.6	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	4.3	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	24	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	2.0	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	2.3	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	2.5	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	103	103	97	104
p-Terphenyl-d14 (surr.)	1	%	118	118	114	124
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchlorendate (surr.)	1	%	105	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	94	-	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	105	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	11	< 2	< 2	5.6
Cadmium	0.4	mg/kg	0.5	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	24	10	12	16
Copper	5	mg/kg	28	18	12	17
Lead	5	mg/kg	21	25	12	20
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	7.5	7.2	8.4	7.3
Zinc	5	mg/kg	29	47	120	92

Client Sample ID			P89-L01 0-0.1	P89-L03 0-0.1	P40-L01 0-0.1	P40-L02 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18306	S14-Fe18308	S14-Fe18309	S14-Fe18311
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
% Moisture	0.1	%	16	16	7.5	10.0
Asbestos (% weight as per WA Guidelines)			see attached	-	-	-

Client Sample ID			P41-L01 0-0.1	P41-L02 0-0.1	P42-SP01	P42-L01 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18313	S14-Fe18314	S14-Fe18315	S14-Fe18316
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	100	106	105	107
p-Terphenyl-d14 (surr.)	1	%	121	121	126	114
Heavy Metals						
Arsenic	2	mg/kg	6.2	3.8	5.2	4.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.6
Chromium	5	mg/kg	11	13	25	25
Copper	5	mg/kg	< 5	8.5	43	11
Lead	5	mg/kg	11	17	90	94
Mercury	0.05	mg/kg	< 0.05	< 0.05	0.05	< 0.05
Nickel	5	mg/kg	< 5	< 5	26	< 5
Zinc	5	mg/kg	10	27	100	36
% Moisture	0.1	%	7.8	9.3	8.8	8.5
Asbestos (% weight as per WA Guidelines)			-	-	see attached	see attached

Client Sample ID			P43-L01 0-0.1	P43-L02 0-0.1	P44-L01 0-0.1	P44-L02 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18318	S14-Fe18319	S14-Fe18320	S14-Fe18321
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	103	103	97	106
p-Terphenyl-d14 (surr.)	1	%	123	125	116	123
Heavy Metals						
Arsenic	2	mg/kg	5.8	3.7	5.8	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	16	13	14
Copper	5	mg/kg	28	11	11	6.1
Lead	5	mg/kg	55	19	18	12
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	13	6.6	< 5	< 5
Zinc	5	mg/kg	46	41	13	29
% Moisture	0.1	%	17	8.7	17	7.9

Client Sample ID			P50-L01 0.2-0.3	P50-L02 0-0.1	P50-L03 0-0.1	QC11
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18323	S14-Fe18324	S14-Fe18326	S14-Fe18328
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P50-L01 0.2-0.3	P50-L02 0-0.1	P50-L03 0-0.1	QC11
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18323	S14-Fe18324	S14-Fe18326	S14-Fe18328
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	105	104	104	108
p-Terphenyl-d14 (surr.)	1	%	127	125	123	110
Heavy Metals						
Arsenic	2	mg/kg	7.6	3.8	6.3	8.6
Cadmium	0.4	mg/kg	0.6	0.4	0.9	0.6
Chromium	5	mg/kg	15	12	17	27
Copper	5	mg/kg	54	45	25	15
Lead	5	mg/kg	280	61	37	100
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	8.0	< 5	6.8	6.0
Zinc	5	mg/kg	240	160	110	34
% Moisture	0.1	%	21	8.7	9.5	11
Asbestos (% weight as per WA Guidelines)			-	see attached	-	see attached

Client Sample ID			P46-L01 0-0.1	P47-L01 0-0.1	P28-L02 0-0.1	P28-L03 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18332	S14-Fe18334	S14-Fe18339	S14-Fe18340
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	87	-

Client Sample ID			P46-L01 0-0.1	P47-L01 0-0.1	P28-L02 0-0.1	P28-L03 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18332	S14-Fe18334	S14-Fe18339	S14-Fe18340
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	98	101	102	102
p-Terphenyl-d14 (surr.)	1	%	119	121	119	123
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-

Client Sample ID			P46-L01 0-0.1	P47-L01 0-0.1	P28-L02 0-0.1	P28-L03 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18332	S14-Fe18334	S14-Fe18339	S14-Fe18340
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Toxaphene	1	mg/kg	-	-	< 1	-
Dibutylchlorendate (surr.)	1	%	-	-	89	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	80	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	-
Total PCB	0.5	mg/kg	-	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	-	-	89	-
Heavy Metals						
Arsenic	2	mg/kg	15	8.0	< 2	9.0
Cadmium	0.4	mg/kg	1.8	0.5	< 0.4	0.7
Chromium	5	mg/kg	47	21	36	20
Copper	5	mg/kg	47	13	< 5	13
Lead	5	mg/kg	120	28	73	21
Mercury	0.05	mg/kg	< 0.05	< 0.05	0.10	< 0.05
Nickel	5	mg/kg	11	6.3	53	10
Zinc	5	mg/kg	320	26	320	260
% Moisture						
% Moisture	0.1	%	13	9.1	9.4	9.9
Asbestos (% weight as per WA Guidelines)						
Asbestos (% weight as per WA Guidelines)			see attached	-	see attached	-

Client Sample ID			P83-L01 0-0.1	P83-L02 0-0.1	P82-L02 0-0.1
Sample Matrix			Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18341	S14-Fe18342	S14-Fe18345
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	-	< 50
BTEX					
Benzene	0.1	mg/kg	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	84

Client Sample ID			P83-L01 0-0.1	P83-L02 0-0.1	P82-L02 0-0.1
Sample Matrix			Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18341	S14-Fe18342	S14-Fe18345
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	104	103	105
p-Terphenyl-d14 (surr.)	1	%	123	124	124
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05

Client Sample ID			P83-L01 0-0.1	P83-L02 0-0.1	P82-L02 0-0.1
Sample Matrix			Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe18341	S14-Fe18342	S14-Fe18345
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	< 0.2
Toxaphene	1	mg/kg	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	85
Tetrachloro-m-xylene (surr.)	1	%	-	-	79
Polychlorinated Biphenyls (PCB)					
Aroclor-1016	0.5	mg/kg	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	< 0.5
Total PCB	0.5	mg/kg	-	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	-	85
Heavy Metals					
Arsenic	2	mg/kg	< 2	3.2	9.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	1.1
Chromium	5	mg/kg	12	23	44
Copper	5	mg/kg	31	18	< 5
Lead	5	mg/kg	38	44	24
Mercury	0.05	mg/kg	< 0.05	0.06	< 0.05
Nickel	5	mg/kg	21	21	< 5
Zinc	5	mg/kg	81	92	14
% Moisture					
% Moisture	0.1	%	12	12	4.8
Asbestos (% weight as per WA Guidelines)					
Asbestos (% weight as per WA Guidelines)			-	-	see attached

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Feb 27, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Feb 27, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Feb 26, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Feb 27, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Feb 27, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Feb 27, 2014	28 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Feb 26, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Feb 26, 2014	28 Day

Melbourne
 3-5 Kingston Town Close
 Oakleigh VIC 3166
 Phone +61 3 8584 5000
 MATA # 126
 Site # 1254 & 14271

Sydney
 Unit F6, Building F
 16 Mars Road
 Lane Cove West NSW 2066
 Phone +61 2 9500 8400
 NATA # 1261 Site # 18217

Brisbane
 1/21 Smallwood Place
 Murrarie QLD 4172
 Phone +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 409681
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 26, 2014 2:05 PM
Due: Mar 5, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794									
External Laboratory		Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
	P89-L01 0-0.1	Feb 24, 2014	Soil		S14-Fe18306	X	X	X	X
	P89-L02 0-0.1	Feb 24, 2014	Soil		S14-Fe18307				
	P89-L03 0-0.1	Feb 24, 2014	Soil		S14-Fe18308	X	X	X	X
	P40-L01 0-0.1	Feb 24, 2014	Soil		S14-Fe18309	X	X	X	X
	P40-L02 0-0.1	Feb 24, 2014	Soil		S14-Fe18310				
	P40-L02 0.2-0.3	Feb 24, 2014	Soil		S14-Fe18311	X	X	X	X
	P40-L03 0-0.1	Feb 24, 2014	Soil		S14-Fe18312				
	P41-L01 0-0.1	Feb 24, 2014	Soil		S14-Fe18313	X	X	X	X
	P41-L02 0-0.1	Feb 24, 2014	Soil		S14-Fe18314	X	X	X	X
Total Recoverable Hydrocarbons									
Polychlorinated Biphenyls (PCB)									
BTEX									
Metals M8									
Organochlorine Pesticides									
Polycyclic Aromatic Hydrocarbons									
HOLD									
Asbestos (% weight as per WA Guidelines)						X			
% Moisture									

Melbourne
 3-5 Kingston Town Close
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 MATA # 126
 Site # 1254 & 14271

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 NATA # 1261 Site # 18217

Brisbane
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 Murrarie QLD 4172
 Phone +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 409681
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 26, 2014 2:05 PM
Due: Mar 5, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail		% Moisture	Asbestos (% weight as per WA Guidelines)	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
External Laboratory										
P42-SP01	Feb 24, 2014	Soil	X				X			
P42-L01 0-0.1	Feb 24, 2014	Soil	X		X		X			
P42-L02 0-0.1	Feb 24, 2014	Soil	X		X		X			
P43-L01 0-0.1	Feb 24, 2014	Soil		X						
P43-L02 0-0.1	Feb 24, 2014	Soil	X		X		X			
P44-L01 0-0.1	Feb 24, 2014	Soil	X		X		X			
P44-L02 0-0.1	Feb 24, 2014	Soil	X		X		X			
P50-L01 0-0.1	Feb 24, 2014	Soil		X						
P50-L01 0.2-0.3	Feb 24, 2014	Soil	X		X		X			
P50-L02 0-0.1	Feb 24, 2014	Soil	X		X		X			
P50-L02 0.2-	Feb 24, 2014	Soil		X						

Melbourne
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 MATA # 126
 Site # 1254 & 14271

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 NATA # 1261 Site # 18217

Brisbane
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 Murarie QLD 4172
 Phone +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 409681
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 26, 2014 2:05 PM
Due: Mar 5, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail		% Moisture	Asbestos (% weight as per WA Guidelines)	HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
External Laboratory										
0.3			X							
P50-L03 0-0.1	Feb 24, 2014	Soil			X		X			
QC10	Feb 24, 2014	Soil		X						
QC11	Feb 24, 2014	Soil	X		X		X			
TRIP SPIKE	Feb 24, 2014	Water		X						
TRIP BLANK	Feb 24, 2014	Water		X						
RINSATE	Feb 24, 2014	Water		X						
P46-L01 0-0.1	Feb 24, 2014	Soil	X		X		X			
P46-L02 0-0.1	Feb 24, 2014	Soil		X						
P47-L01 0-0.1	Feb 24, 2014	Soil	X		X		X			
P47-L02 0-0.1	Feb 24, 2014	Soil		X						

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Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
External Laboratory										
QC12	Feb 24, 2014	Soil	X	X						
P46-SP01	Feb 24, 2014	Soil		X						
P28-L01 0-0.1	Feb 24, 2014	Soil		X						
P28-L02 0-0.1	Feb 24, 2014	Soil	X		X	X	X	X	X	X
P28-L03 0-0.1	Feb 24, 2014	Soil	X		X	X	X			
P83-L01 0-0.1	Feb 24, 2014	Soil			X	X	X			
P83-L02 0-0.1	Feb 24, 2014	Soil			X	X	X			
P82-L01 0-0.1	Feb 24, 2014	Soil		X						
QC13	Feb 24, 2014	Soil		X						
P82-L02 0-0.1	Feb 24, 2014	Soil	X		X	X	X	X	X	X

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
BTEX						
Benzene	mg/kg	< 0.1		0.1	Pass	
Toluene	mg/kg	< 0.1		0.1	Pass	
Ethylbenzene	mg/kg	< 0.1		0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2		0.2	Pass	
o-Xylene	mg/kg	< 0.1		0.1	Pass	
Xylenes - Total	mg/kg	< 0.3		0.3	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/kg	< 0.5		0.5	Pass	
Acenaphthylene	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5		0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5		0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Chrysene	mg/kg	< 0.5		0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5		0.5	Pass	
Fluoranthene	mg/kg	< 0.5		0.5	Pass	
Fluorene	mg/kg	< 0.5		0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/kg	< 0.1		0.1	Pass	
4,4'-DDD	mg/kg	< 0.05		0.05	Pass	
4,4'-DDE	mg/kg	< 0.05		0.05	Pass	
4,4'-DDT	mg/kg	< 0.05		0.05	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	85			70-130	Pass	
TRH C10-C14	%	84			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	99			70-130	Pass	
Toluene	%	88			70-130	Pass	
Ethylbenzene	%	79			70-130	Pass	
m&p-Xylenes	%	83			70-130	Pass	
o-Xylene	%	80			70-130	Pass	
Xylenes - Total	%	82			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	82			70-130	Pass	
TRH C6-C10	%	90			70-130	Pass	
TRH >C10-C16	%	92			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	105			70-130	Pass	
Acenaphthylene	%	105			70-130	Pass	
Anthracene	%	113			70-130	Pass	
Benz(a)anthracene	%	105			70-130	Pass	
Benzo(a)pyrene	%	109			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	100	70-130	Pass			
Benzo(g,h,i)perylene	%	104	70-130	Pass			
Benzo(k)fluoranthene	%	112	70-130	Pass			
Chrysene	%	112	70-130	Pass			
Dibenz(a,h)anthracene	%	106	70-130	Pass			
Fluoranthene	%	108	70-130	Pass			
Fluorene	%	105	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	106	70-130	Pass			
Naphthalene	%	115	70-130	Pass			
Phenanthrene	%	100	70-130	Pass			
Pyrene	%	102	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	109	70-130	Pass			
4,4'-DDD	%	110	70-130	Pass			
4,4'-DDE	%	110	70-130	Pass			
4,4'-DDT	%	110	70-130	Pass			
a-BHC	%	93	70-130	Pass			
Aldrin	%	100	70-130	Pass			
b-BHC	%	86	70-130	Pass			
d-BHC	%	102	70-130	Pass			
Dieldrin	%	104	70-130	Pass			
Endosulfan I	%	102	70-130	Pass			
Endosulfan II	%	110	70-130	Pass			
Endosulfan sulphate	%	116	70-130	Pass			
Endrin	%	107	70-130	Pass			
Endrin aldehyde	%	101	70-130	Pass			
Endrin ketone	%	104	70-130	Pass			
g-BHC (Lindane)	%	96	70-130	Pass			
Heptachlor	%	104	70-130	Pass			
Heptachlor epoxide	%	106	70-130	Pass			
Hexachlorobenzene	%	112	70-130	Pass			
Methoxychlor	%	113	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	115	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	86	70-130	Pass			
Cadmium	%	101	70-130	Pass			
Chromium	%	81	70-130	Pass			
Copper	%	120	70-130	Pass			
Lead	%	99	70-130	Pass			
Mercury	%	103	70-130	Pass			
Nickel	%	89	70-130	Pass			
Zinc	%	104	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	S14-Fe18306	CP	%	75	70-130	Pass	
TRH C10-C14	S14-Fe18306	CP	%	87	70-130	Pass	
Spike - % Recovery							
BTEX				Result 1			
Benzene	S14-Fe18306	CP	%	94	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Toluene	S14-Fe18306	CP	%	86		70-130	Pass	
Ethylbenzene	S14-Fe18306	CP	%	80		70-130	Pass	
m&p-Xylenes	S14-Fe18306	CP	%	85		70-130	Pass	
o-Xylene	S14-Fe18306	CP	%	82		70-130	Pass	
Xylenes - Total	S14-Fe18306	CP	%	84		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S14-Fe18306	CP	%	70		70-130	Pass	
TRH C6-C10	S14-Fe18306	CP	%	83		70-130	Pass	
TRH >C10-C16	S14-Fe18306	CP	%	97		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Fe18306	CP	%	88		70-130	Pass	
Acenaphthylene	S14-Fe18306	CP	%	87		70-130	Pass	
Anthracene	S14-Fe18306	CP	%	89		70-130	Pass	
Benz(a)anthracene	S14-Fe18306	CP	%	91		70-130	Pass	
Benzo(a)pyrene	S14-Fe18306	CP	%	88		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe18306	CP	%	85		70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe18306	CP	%	88		70-130	Pass	
Benzo(k)fluoranthene	S14-Fe18306	CP	%	88		70-130	Pass	
Chrysene	S14-Fe18306	CP	%	90		70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe18306	CP	%	85		70-130	Pass	
Fluoranthene	S14-Fe18306	CP	%	92		70-130	Pass	
Fluorene	S14-Fe18306	CP	%	88		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe18306	CP	%	87		70-130	Pass	
Naphthalene	S14-Fe18306	CP	%	90		70-130	Pass	
Phenanthrene	S14-Fe18306	CP	%	85		70-130	Pass	
Pyrene	S14-Fe18306	CP	%	87		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	S14-Fe15027	NCP	%	100		70-130	Pass	
4,4'-DDD	S14-Fe15027	NCP	%	111		70-130	Pass	
4,4'-DDE	S14-Fe15027	NCP	%	104		70-130	Pass	
4,4'-DDT	S14-Fe15027	NCP	%	125		70-130	Pass	
a-BHC	S14-Fe15027	NCP	%	80		70-130	Pass	
Aldrin	S14-Fe15027	NCP	%	98		70-130	Pass	
b-BHC	S14-Fe15027	NCP	%	73		70-130	Pass	
d-BHC	S14-Fe15027	NCP	%	87		70-130	Pass	
Dieldrin	S14-Fe15027	NCP	%	102		70-130	Pass	
Endosulfan I	S14-Fe15027	NCP	%	93		70-130	Pass	
Endosulfan II	S14-Fe15027	NCP	%	116		70-130	Pass	
Endosulfan sulphate	S14-Fe15027	NCP	%	129		70-130	Pass	
Endrin	S14-Fe15027	NCP	%	101		70-130	Pass	
Endrin aldehyde	S14-Fe15027	NCP	%	107		70-130	Pass	
Endrin ketone	S14-Fe15027	NCP	%	107		70-130	Pass	
g-BHC (Lindane)	S14-Fe15027	NCP	%	80		70-130	Pass	
Heptachlor	S14-Fe15027	NCP	%	91		70-130	Pass	
Heptachlor epoxide	S14-Fe15027	NCP	%	100		70-130	Pass	
Hexachlorobenzene	S14-Fe15027	NCP	%	96		70-130	Pass	
Methoxychlor	S14-Fe15027	NCP	%	94		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls (PCB)				Result 1				
Aroclor-1260	S14-Fe14858	NCP	%	104		70-130	Pass	
Spike - % Recovery								

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Heavy Metals				Result 1				
Cadmium	S14-Fe18306	CP	%	86		70-130	Pass	
Copper	S14-Fe18306	CP	%	105		70-130	Pass	
Lead	S14-Fe18306	CP	%	80		70-130	Pass	
Mercury	S14-Fe18306	CP	%	70		70-130	Pass	
Nickel	S14-Fe18306	CP	%	94		70-130	Pass	
Zinc	S14-Fe18306	CP	%	98		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Fe18321	CP	%	117		70-130	Pass	
Acenaphthylene	S14-Fe18321	CP	%	117		70-130	Pass	
Anthracene	S14-Fe18321	CP	%	123		70-130	Pass	
Benz(a)anthracene	S14-Fe18321	CP	%	119		70-130	Pass	
Benzo(a)pyrene	S14-Fe18321	CP	%	118		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe18321	CP	%	113		70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe18321	CP	%	118		70-130	Pass	
Benzo(k)fluoranthene	S14-Fe18321	CP	%	121		70-130	Pass	
Chrysene	S14-Fe18321	CP	%	124		70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe18321	CP	%	115		70-130	Pass	
Fluoranthene	S14-Fe18321	CP	%	124		70-130	Pass	
Fluorene	S14-Fe18321	CP	%	119		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe18321	CP	%	114		70-130	Pass	
Naphthalene	S14-Fe18321	CP	%	123		70-130	Pass	
Phenanthrene	S14-Fe18321	CP	%	116		70-130	Pass	
Pyrene	S14-Fe18321	CP	%	119		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	S14-Fe18321	CP	%	85		70-130	Pass	
Cadmium	S14-Fe18321	CP	%	89		70-130	Pass	
Copper	S14-Fe18321	CP	%	129		70-130	Pass	
Lead	S14-Fe18321	CP	%	98		70-130	Pass	
Mercury	S14-Fe18321	CP	%	87		70-130	Pass	
Nickel	S14-Fe18321	CP	%	90		70-130	Pass	
Zinc	S14-Fe18321	CP	%	116		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Fe18342	CP	%	119		70-130	Pass	
Acenaphthylene	S14-Fe18342	CP	%	123		70-130	Pass	
Anthracene	S14-Fe18342	CP	%	127		70-130	Pass	
Benz(a)anthracene	S14-Fe18342	CP	%	124		70-130	Pass	
Benzo(a)pyrene	S14-Fe18342	CP	%	118		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe18342	CP	%	115		70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe18342	CP	%	119		70-130	Pass	
Benzo(k)fluoranthene	S14-Fe18342	CP	%	122		70-130	Pass	
Chrysene	S14-Fe18342	CP	%	114		70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe18342	CP	%	117		70-130	Pass	
Fluoranthene	S14-Fe18342	CP	%	129		70-130	Pass	
Fluorene	S14-Fe18342	CP	%	122		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe18342	CP	%	116		70-130	Pass	
Naphthalene	S14-Fe18342	CP	%	128		70-130	Pass	
Phenanthrene	S14-Fe18342	CP	%	122		70-130	Pass	
Pyrene	S14-Fe18342	CP	%	124		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Arsenic	S14-Fe18342	CP	%	85			70-130	Pass	
Cadmium	S14-Fe18342	CP	%	100			70-130	Pass	
Chromium	S14-Fe18342	CP	%	70			70-130	Pass	
Copper	S14-Fe18342	CP	%	108			70-130	Pass	
Lead	S14-Fe18342	CP	%	88			70-130	Pass	
Mercury	S14-Fe18342	CP	%	116			70-130	Pass	
Zinc	S14-Fe18342	CP	%	107			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe18306	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S14-Fe18306	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S14-Fe18306	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S14-Fe18306	CP	mg/kg	140	94	39	30%	Fail	Q15
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Fe18306	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-Fe18306	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-Fe18306	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-Fe18306	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-Fe18306	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-Fe18306	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Fe18306	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-Fe18306	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Fe18306	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S14-Fe18306	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S14-Fe18306	CP	mg/kg	120	120	4.0	30%	Pass	
TRH >C34-C40	S14-Fe18306	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S14-Fe18306	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4,4'-DDD	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S14-Fe18306	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S14-Fe18306	CP	mg/kg	< 1	< 1	<1	30%	Pass	

Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Fe18306	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S14-Fe18306	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S14-Fe18306	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S14-Fe18306	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S14-Fe18306	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S14-Fe18306	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Total PCB	S14-Fe15027	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Fe18306	CP	mg/kg	11	15	31	30%	Fail Q15
Cadmium	S14-Fe18306	CP	mg/kg	0.5	< 0.4	53	30%	Fail Q15
Chromium	S14-Fe18306	CP	mg/kg	24	32	29	30%	Pass
Copper	S14-Fe18306	CP	mg/kg	28	25	11	30%	Pass
Lead	S14-Fe18306	CP	mg/kg	21	20	6.0	30%	Pass
Mercury	S14-Fe18306	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Nickel	S14-Fe18306	CP	mg/kg	7.5	6.1	20	30%	Pass
Zinc	S14-Fe18306	CP	mg/kg	29	35	20	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S14-Fe18321	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Fe18321	CP	mg/kg	< 2	< 2	<1	30%	Pass
Cadmium	S14-Fe18321	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S14-Fe18321	CP	mg/kg	14	7.7	56	30%	Fail Q15
Copper	S14-Fe18321	CP	mg/kg	6.1	6.3	4.0	30%	Pass
Lead	S14-Fe18321	CP	mg/kg	12	12	1.0	30%	Pass
Mercury	S14-Fe18321	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Nickel	S14-Fe18321	CP	mg/kg	< 5	< 5	<1	30%	Pass
Zinc	S14-Fe18321	CP	mg/kg	29	29	1.0	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Benzo(k)fluoranthene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S14-Fe18342	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Fe18342	CP	mg/kg	3.2	3.1	4.0	30%	Pass
Cadmium	S14-Fe18342	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S14-Fe18342	CP	mg/kg	23	20	14	30%	Pass
Copper	S14-Fe18342	CP	mg/kg	18	15	18	30%	Pass
Lead	S14-Fe18342	CP	mg/kg	44	60	31	30%	Fail Q15
Mercury	S14-Fe18342	CP	mg/kg	0.06	< 0.05	45	30%	Fail Q15
Nickel	S14-Fe18342	CP	mg/kg	21	14	40	30%	Fail Q15
Zinc	S14-Fe18342	CP	mg/kg	92	120	26	30%	Pass

Comments

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference:ASET37606/40786/1-8

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Feb 26, 2014 2:05 PM
Eurofins | mgt reference: **409681**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
 - Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 3 degrees Celsius.
 - All samples have been received as described on the above COC.
 - COC has been completed correctly.
 - Attempt to chill was evident.
 - Appropriately preserved sample containers have been used.
 - All samples were received in good condition.
 - Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
 - Organic samples had Teflon liners.
 - Sample containers for volatile analysis received with zero headspace.
 - Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

P46-L01 is referring to P46-L01:0.0-0.1 as per email | Samples QC10A, QC11A, QC12A & QC13A sent to Envirolab as requested

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Eurofins | mgt Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis

NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience



JBS & G (NSW & WA) Pty Ltd
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 409948-S
 Client Reference RIVERSTONE 43210
 Received Date Feb 26, 2014

Client Sample ID			P08-SP01A	P08-L03 0-0.1	P08-SP01-D	P07-L03 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe20443	S14-Fe20446	S14-Fe20447	S14-Fe20448
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	93	-
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	93	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	94	92	95	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P08-SP01A	P08-L03 0-0.1	P08-SP01-D	P07-L03 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe20443	S14-Fe20446	S14-Fe20447	S14-Fe20448
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	84	94	94	101
p-Terphenyl-d14 (surr.)	1	%	95	106	108	118
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Toxaphene	1	mg/kg	< 1	< 1	< 1	-
Dibutylchloroendate (surr.)	1	%	129	88	95	-
Tetrachloro-m-xylene (surr.)	1	%	92	79	79	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PCB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibutylchloroendate (surr.)	1	%	129	88	95	-
Heavy Metals						
Arsenic	2	mg/kg	2.7	< 2	7.7	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.4
Chromium	5	mg/kg	14	< 5	45	49
Copper	5	mg/kg	18	< 5	32	42
Lead	5	mg/kg	30	70	74	63
Mercury	0.05	mg/kg	0.10	< 0.05	0.14	< 0.05
Nickel	5	mg/kg	9.1	< 5	16	25
Zinc	5	mg/kg	62	150	130	260

Client Sample ID			P08-SP01A	P08-L03 0-0.1	P08-SP01-D	P07-L03 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe20443	S14-Fe20446	S14-Fe20447	S14-Fe20448
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit				
% Moisture	0.1	%	18	11	11	1.9
Asbestos (% weight as per WA Guidelines)			see attached	see attached	see attached	-

Client Sample ID			P07-L01 0-0.1	P07-L02 0-0.1	P14-L03 0-0.1	P14-L03 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe20449	S14-Fe20450	S14-Fe20451	S14-Fe20453
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	53	< 20	-	-
TRH C15-C28	50	mg/kg	130	53	-	-
TRH C29-C36	50	mg/kg	330	100	-	-
TRH C10-36 (Total)	50	mg/kg	510	150	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	87	91	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	57	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	57	< 50	-	-
TRH >C16-C34	100	mg/kg	410	140	-	-
TRH >C34-C40	100	mg/kg	140	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	4.7	< 0.5	< 0.5	< 0.5

Client Sample ID			P07-L01 0-0.1	P07-L02 0-0.1	P14-L03 0-0.1	P14-L03 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe20449	S14-Fe20450	S14-Fe20451	S14-Fe20453
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	1.1	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.4	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	93	98	96	93
p-Terphenyl-d14 (surr.)	1	%	107	113	114	107
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	-
Toxaphene	1	mg/kg	< 1	< 1	-	-
Dibutylchloroendate (surr.)	1	%	102	99	-	-
Tetrachloro-m-xylene (surr.)	1	%	73	70	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PCB	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibutylchloroendate (surr.)	1	%	102	99	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	7.4	2.5
Cadmium	0.4	mg/kg	< 0.4	0.4	< 0.4	0.8
Chromium	5	mg/kg	13	16	14	210
Copper	5	mg/kg	16	22	61	63
Lead	5	mg/kg	32	52	130	74
Mercury	0.05	mg/kg	0.12	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	9.7	17	5.8	15
Zinc	5	mg/kg	130	150	590	500
% Moisture	0.1	%	2.9	6.6	15	11
Asbestos (% weight as per WA Guidelines)			see attached	see attached	-	-

Client Sample ID			P14-L01 0-0.1 Soil	P80-L01 0-0.1 Soil	P80-L02 0-0.1 Soil	P80-SP01-E Soil
Sample Matrix			S14-Fe20454	S14-Fe20456	S14-Fe20457	S14-Fe20458
Eurofins mgt Sample No.			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	< 20
TRH C10-C14	20	mg/kg	< 20	-	-	< 20
TRH C15-C28	50	mg/kg	< 50	-	-	< 50
TRH C29-C36	50	mg/kg	< 50	-	-	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	-	-	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	101	-	-	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	< 20
TRH >C10-C16	50	mg/kg	< 50	-	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	< 50
TRH >C16-C34	100	mg/kg	< 100	-	-	< 100
TRH >C34-C40	100	mg/kg	< 100	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	94	93	100	85
p-Terphenyl-d14 (surr.)	1	%	107	108	116	98
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	< 0.05

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P14-L01 0-0.1 Soil S14-Fe20454 Feb 25, 2014	P80-L01 0-0.1 Soil S14-Fe20456 Feb 25, 2014	P80-L02 0-0.1 Soil S14-Fe20457 Feb 25, 2014	P80-SP01-E Soil S14-Fe20458 Feb 25, 2014
Organochlorine Pesticides						
a-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	-	-	< 0.2
Toxaphene	1	mg/kg	< 1	-	-	< 1
Dibutylchloroendate (surr.)	1	%	94	-	-	95
Tetrachloro-m-xylene (surr.)	1	%	75	-	-	74
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	< 0.5
Total PCB	0.5	mg/kg	< 0.5	-	-	< 0.5
Dibutylchloroendate (surr.)	1	%	94	-	-	95
Heavy Metals						
Arsenic	2	mg/kg	8.2	2.3	8.5	7.7
Cadmium	0.4	mg/kg	1.5	< 0.4	1.3	< 0.4
Chromium	5	mg/kg	13	11	35	45
Copper	5	mg/kg	13	5.5	< 5	7.4
Lead	5	mg/kg	39	15	24	17
Mercury	0.05	mg/kg	0.08	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	8.6	< 5	< 5	20
Zinc	5	mg/kg	610	97	13	39
% Moisture	0.1	%	15	4.8	6.7	7.6
Asbestos (% weight as per WA Guidelines)			see attached	-	-	see attached

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P80-SP01-C Soil S14-Fe20460 Feb 25, 2014	P22-L03 0-0.1 Soil S14-Fe20463 Feb 25, 2014	P22-L02 0-0.1 Soil S14-Fe20464 Feb 25, 2014	P22-L01 0-0.1 Soil S14-Fe20465 Feb 25, 2014
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	< 50	280	< 50
TRH C29-C36	50	mg/kg	-	120	610	< 50
TRH C10-36 (Total)	50	mg/kg	-	120	890	< 50
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	92	91	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	130	840	< 100
TRH >C34-C40	100	mg/kg	-	< 100	300	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	1.1	2.7
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	1.1	3.3
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	96	97	92	100
p-Terphenyl-d14 (surr.)	1	%	112	112	105	112
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P80-SP01-C Soil S14-Fe20460 Feb 25, 2014	P22-L03 0-0.1 Soil S14-Fe20463 Feb 25, 2014	P22-L02 0-0.1 Soil S14-Fe20464 Feb 25, 2014	P22-L01 0-0.1 Soil S14-Fe20465 Feb 25, 2014
Organochlorine Pesticides						
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	-	< 1	< 1	< 1
Dibutylchloroendate (surr.)	1	%	-	92	97	79
Tetrachloro-m-xylene (surr.)	1	%	-	72	79	73
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1232	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total PCB	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibutylchloroendate (surr.)	1	%	-	92	97	79
Heavy Metals						
Arsenic	2	mg/kg	3.8	6.3	2.6	3.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	1.9	< 0.4
Chromium	5	mg/kg	51	15	36	< 5
Copper	5	mg/kg	< 5	26	37	19
Lead	5	mg/kg	20	25	68	29
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.05
Nickel	5	mg/kg	32	16	27	8.0
Zinc	5	mg/kg	28	79	160	49
% Moisture	0.1	%	9.6	15	16	8.2
Asbestos (% weight as per WA Guidelines)			-	-	see attached	-

Client Sample ID			P08-L02 0-0.1	P08-L01 0-0.1	P08-L01 0.2-0.3	P88-L03 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe20466	S14-Fe20468	S14-Fe20469	S14-Fe20471
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	56	140	82	51
TRH C10-36 (Total)	50	mg/kg	56	140	82	51
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	101	99	100	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	120	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	160	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	95	94	92	93
p-Terphenyl-d14 (surr.)	1	%	112	110	108	104
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			P08-L02 0-0.1	P08-L01 0-0.1	P08-L01 0.2-0.3	P88-L03 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe20466	S14-Fe20468	S14-Fe20469	S14-Fe20471
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchloroendate (surr.)	1	%	79	78	79	89
Tetrachloro-m-xylene (surr.)	1	%	100	70	72	71
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchloroendate (surr.)	1	%	79	78	79	89
Heavy Metals						
Arsenic	2	mg/kg	3.1	8.9	4.9	3.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	39	29	25
Copper	5	mg/kg	9.8	32	5.8	12
Lead	5	mg/kg	19	16	19	130
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	8.8	27	22	23
Zinc	5	mg/kg	54	72	56	84
% Moisture	0.1	%	7.4	8.3	7.4	20
Asbestos (% weight as per WA Guidelines)			see attached	see attached	see attached	see attached

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P88-L01 0-0.1 Soil S14-Fe20472 Feb 25, 2014	P88-L02 0-0.1 Soil S14-Fe20473 Feb 25, 2014	P37-L01 0.2-0.3 Soil S14-Fe20475 Feb 25, 2014	P37-L03 0-0.1 Soil S14-Fe20477 Feb 25, 2014
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	95	95	89	97
p-Terphenyl-d14 (surr.)	1	%	109	111	104	117
Heavy Metals						
Arsenic	2	mg/kg	6.3	< 2	6.9	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.6	< 0.4
Chromium	5	mg/kg	24	11	16	17
Copper	5	mg/kg	28	9.9	80	110
Lead	5	mg/kg	160	18	26	19
Mercury	0.05	mg/kg	0.07	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	21	< 5	10	16
Zinc	5	mg/kg	190	60	75	220
% Moisture	0.1	%	17	3.6	16	2.4
Asbestos (% weight as per WA Guidelines)			-	see attached	-	see attached

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P45-L04 0-0.1 Soil S14-Fe20479 Feb 25, 2014	P45-L01 0-0.1 Soil S14-Fe20480 Feb 25, 2014	P45-L03 0-0.1 Soil S14-Fe20482 Feb 25, 2014	P81-L02 0-0.1 Soil S14-Fe20484 Feb 25, 2014
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 100	-	-
TRH C10-C14	20	mg/kg	33	120	-	-
TRH C15-C28	50	mg/kg	150	770	-	-
TRH C29-C36	50	mg/kg	370	2700	-	-
TRH C10-36 (Total)	50	mg/kg	550	3600	-	-

Client Sample ID			P45-L04 0-0.1 Soil	P45-L01 0-0.1 Soil	P45-L03 0-0.1 Soil	P81-L02 0-0.1 Soil
Sample Matrix			S14-Fe20479	S14-Fe20480	S14-Fe20482	S14-Fe20484
Eurofins mgt Sample No.			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Date Sampled						
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.5	-	-
Toluene	0.1	mg/kg	0.2	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 1	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.5	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 1.5	-	-
4-Bromofluorobenzene (surr.)	1	%	73	94	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 2.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 100	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 100	-	-
TRH >C10-C16	50	mg/kg	< 50	160	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	160	-	-
TRH >C16-C34	100	mg/kg	460	2700	-	-
TRH >C34-C40	100	mg/kg	210	1400	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 2.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	-	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	92	94	96	95
p-Terphenyl-d14 (surr.)	1	%	103	121	115	114
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	0.55	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-

Client Sample ID			P45-L04 0-0.1	P45-L01 0-0.1	P45-L03 0-0.1	P81-L02 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe20479	S14-Fe20480	S14-Fe20482	S14-Fe20484
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	-
Toxaphene	1	mg/kg	< 1	< 1	-	-
Dibutylchloroendate (surr.)	1	%	104	125	-	-
Tetrachloro-m-xylene (surr.)	1	%	82	78	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PCB	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibutylchloroendate (surr.)	1	%	104	125	-	-
Heavy Metals						
Arsenic	2	mg/kg	2.9	< 2	9.1	< 2
Cadmium	0.4	mg/kg	2.3	< 0.4	0.9	< 0.4
Chromium	5	mg/kg	16	16	28	23
Copper	5	mg/kg	820	19	16	12
Lead	5	mg/kg	68	23	47	71
Mercury	0.05	mg/kg	0.06	0.06	< 0.05	< 0.05
Nickel	5	mg/kg	100	5.5	6.7	14
Zinc	5	mg/kg	1200	160	150	150
% Moisture						
% Moisture	0.1	%	55	29	11	16
Asbestos (% weight as per WA Guidelines)						
Asbestos (% weight as per WA Guidelines)			see attached	see attached	-	-

Client Sample ID			P81-L01 0-0.1	QC14	QC15	QC16
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe20486	S14-Fe20487	S14-Fe20488	S14-Fe20489
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	< 50
TRH C10-36 (Total)	50	mg/kg	-	-	-	< 50

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P81-L01 0-0.1 Soil S14-Fe20486 Feb 25, 2014	QC14 Soil S14-Fe20487 Feb 25, 2014	QC15 Soil S14-Fe20488 Feb 25, 2014	QC16 Soil S14-Fe20489 Feb 25, 2014
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	93
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	91	97	110	95
p-Terphenyl-d14 (surr.)	1	%	109	116	130	112
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			P81-L01 0-0.1	QC14	QC15	QC16
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Fe20486	S14-Fe20487	S14-Fe20488	S14-Fe20489
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Toxaphene	1	mg/kg	-	-	-	< 1
Dibutylchlorodate (surr.)	1	%	-	-	-	99
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	71
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB	0.5	mg/kg	-	-	-	< 0.5
Dibutylchlorodate (surr.)	1	%	-	-	-	99
Heavy Metals						
Arsenic	2	mg/kg	17	6.2	< 2	4.4
Cadmium	0.4	mg/kg	0.7	1.1	< 0.4	0.6
Chromium	5	mg/kg	23	25	20	23
Copper	5	mg/kg	19	15	12	25
Lead	5	mg/kg	74	53	160	43
Mercury	0.05	mg/kg	0.13	0.05	< 0.05	0.10
Nickel	5	mg/kg	9.1	6.9	20	14
Zinc	5	mg/kg	170	210	110	77
% Moisture						
% Moisture	0.1	%	19	18	18	18
Asbestos (% weight as per WA Guidelines)						
Asbestos (% weight as per WA Guidelines)			-	-	-	see attached

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Mar 05, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Mar 05, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Mar 05, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Mar 03, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Mar 03, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Mar 03, 2014	28 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Mar 03, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Feb 28, 2014	28 Day

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 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
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Client Job No.: RIVERSTONE 43210

Order No.: 409948
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 26, 2014 2:05 PM
Due: Mar 5, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271														
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794														
External Laboratory														
P08-SP01A	Feb 25, 2014		Soil	S14-Fe20443				X	X	X				
P08-SP01B	Feb 25, 2014		Soil	S14-Fe20444					X		X			
P08-SP01C	Feb 25, 2014		Soil	S14-Fe20445						X				
P08-L03 0-0.1	Feb 25, 2014		Soil	S14-Fe20446	X			X	X	X	X			
P08-SP01-D	Feb 25, 2014		Soil	S14-Fe20447	X			X	X	X	X			
P07-L03 0-0.1	Feb 25, 2014		Soil	S14-Fe20448	X			X	X	X	X			
P07-L01 0-0.1	Feb 25, 2014		Soil	S14-Fe20449	X			X	X	X	X			
P07-L02 0-0.1	Feb 25, 2014		Soil	S14-Fe20450	X			X	X	X	X			
P14-L03 0-0.1	Feb 25, 2014		Soil	S14-Fe20451	X			X	X	X	X			
P14-L02 0-0.1	Feb 25, 2014		Soil	S14-Fe20452						X		X		

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Sample Detail																					
Laboratory where analysis is conducted																					
Melbourne Laboratory - NATA Site # 1254 & 14271																					
Sydney Laboratory - NATA Site # 18217																					
Brisbane Laboratory - NATA Site # 20794																					
External Laboratory																					
P14-L03 0.2-0.3	Feb 25, 2014	Soil	S14-Fe20453	X																	
P14-L01 0-0.1	Feb 25, 2014	Soil	S14-Fe20454	X																	
P14-L01 0.2-0.3	Feb 25, 2014	Soil	S14-Fe20455				X														
P80-L01 0-0.1	Feb 25, 2014	Soil	S14-Fe20456	X																	
P80-L02 0-0.1	Feb 25, 2014	Soil	S14-Fe20457	X																	
P80-SP01-E	Feb 25, 2014	Soil	S14-Fe20458	X																	
P80-SP01-D	Feb 25, 2014	Soil	S14-Fe20459																		
P80-SP01-C	Feb 25, 2014	Soil	S14-Fe20460	X																	
P80-SP01-B	Feb 26, 2014	Soil	S14-Fe20461																		
P80-SP01-A	Feb 26, 2014	Soil	S14-Fe20462																		
Total Recoverable Hydrocarbons																					
Polychlorinated Biphenyls (PCB)																					
BTEX																					
Metals M8																					
Organochlorine Pesticides																					
Polycyclic Aromatic Hydrocarbons																					
TRH C6-C9																					
HOLD																					
Asbestos (% weight as per WA Guidelines)																					
% Moisture																					

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Sample Detail		Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted											
Melbourne Laboratory - NATA Site # 1254 & 14271											
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
External Laboratory											
P22-L03 0-0.1	Feb 25, 2014	Soil	S14-Fe20463	X	X	X	X	X	X	X	X
P22-L02 0-0.1	Feb 25, 2014	Soil	S14-Fe20464	X	X	X	X	X	X	X	X
P22-L01 0-0.1	Feb 25, 2014	Soil	S14-Fe20465	X	X	X	X	X	X	X	X
P08-L02 0-0.1	Feb 25, 2014	Soil	S14-Fe20466	X	X	X	X	X	X	X	X
P08-L02 0.2-0.3	Feb 25, 2014	Soil	S14-Fe20467					X			
P08-L01 0-0.1	Feb 25, 2014	Soil	S14-Fe20468	X	X	X	X	X	X	X	X
P08-L01 0.2-0.3	Feb 25, 2014	Soil	S14-Fe20469	X	X	X	X	X	X	X	X
P88-L03 0-0.1	Feb 25, 2014	Soil	S14-Fe20470					X			
P88-L03 0.3-0.4	Feb 25, 2014	Soil	S14-Fe20471	X	X	X	X	X	X	X	X

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Sample Detail		% Moisture	Asbestos (% weight as per WA Guidelines)	HOLD	TRH C6-C9	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted											
Melbourne Laboratory - NATA Site # 1254 & 14271											
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
External Laboratory											
P88-L01 0-0.1	Feb 25, 2014	Soil	X					X			
P88-L02 0-0.1	Feb 25, 2014	Soil	X			X		X			
P37-L03 0.2-0.3	Feb 25, 2014	Soil		X							
P37-L01 0.2-0.3	Feb 25, 2014	Soil	X			X		X			
P37-L02 0-0.1	Feb 25, 2014	Soil		X							
P37-L03 0-0.1	Feb 25, 2014	Soil	X			X		X			
P37-L01 0-0.1	Feb 25, 2014	Soil		X							
P45-L04 0-0.1	Feb 25, 2014	Soil	X			X		X		X	X
P45-L01 0-0.1	Feb 25, 2014	Soil	X			X		X		X	X
P45-L02 0-0.1	Feb 25, 2014	Soil		X							

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Sample Detail		% Moisture	Asbestos (% weight as per WA Guidelines)	HOLD	TRH C6-C9	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted											
Melbourne Laboratory - NATA Site # 1254 & 14271											
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
External Laboratory											
P45-L03 0-0.1	Feb 25, 2014	Soil	X			X		X			
P81-L02 0.2-0.3	Feb 25, 2014	Soil		X							
P81-L02 0-0.1	Feb 25, 2014	Soil	X			X					
P81-L03 0-0.1	Feb 25, 2014	Soil		X							
P81-L01 0-0.1	Feb 25, 2014	Soil	X			X					
QC14	Feb 25, 2014	Soil	X			X					
QC15	Feb 25, 2014	Soil	X			X					
QC16	Feb 25, 2014	Soil	X			X					
RINSATE	Feb 25, 2014	Water				X		X	X	X	X
TRIP SPIKE	Feb 25, 2014	Water			X			X	X	X	
TRIP BLANK	Feb 25, 2014	Water			X						

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
BTEX						
Benzene	mg/kg	< 0.1		0.1	Pass	
Toluene	mg/kg	< 0.1		0.1	Pass	
Ethylbenzene	mg/kg	< 0.1		0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2		0.2	Pass	
o-Xylene	mg/kg	< 0.1		0.1	Pass	
Xylenes - Total	mg/kg	< 0.3		0.3	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/kg	< 0.5		0.5	Pass	
Acenaphthylene	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5		0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5		0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Chrysene	mg/kg	< 0.5		0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5		0.5	Pass	
Fluoranthene	mg/kg	< 0.5		0.5	Pass	
Fluorene	mg/kg	< 0.5		0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/kg	< 0.1		0.1	Pass	
4,4'-DDD	mg/kg	< 0.05		0.05	Pass	
4,4'-DDE	mg/kg	< 0.05		0.05	Pass	
4,4'-DDT	mg/kg	< 0.05		0.05	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05		0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05		0.05	Pass	
Endrin	mg/kg	< 0.05		0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05		0.05	Pass	
Endrin ketone	mg/kg	< 0.05		0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05		0.05	Pass	
Heptachlor	mg/kg	< 0.05		0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05		0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05		0.05	Pass	
Methoxychlor	mg/kg	< 0.2		0.2	Pass	
Toxaphene	mg/kg	< 1		1	Pass	
Method Blank						
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	mg/kg	< 0.5		0.5	Pass	
Aroclor-1232	mg/kg	< 0.5		0.5	Pass	
Aroclor-1242	mg/kg	< 0.5		0.5	Pass	
Aroclor-1248	mg/kg	< 0.5		0.5	Pass	
Aroclor-1254	mg/kg	< 0.5		0.5	Pass	
Aroclor-1260	mg/kg	< 0.5		0.5	Pass	
Total PCB	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Heavy Metals						
Arsenic	mg/kg	< 2		2	Pass	
Cadmium	mg/kg	< 0.4		0.4	Pass	
Chromium	mg/kg	< 5		5	Pass	
Copper	mg/kg	< 5		5	Pass	
Lead	mg/kg	< 5		5	Pass	
Mercury	mg/kg	< 0.05		0.05	Pass	
Nickel	mg/kg	< 5		5	Pass	
Zinc	mg/kg	< 5		5	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	%	87		70-130	Pass	
TRH C10-C14	%	86		70-130	Pass	
LCS - % Recovery						
BTEX						
Benzene	%	102		70-130	Pass	
Toluene	%	97		70-130	Pass	
Ethylbenzene	%	93		70-130	Pass	
m&p-Xylenes	%	101		70-130	Pass	
o-Xylene	%	98		70-130	Pass	
Xylenes - Total	%	100		70-130	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	%	82		70-130	Pass	
TRH C6-C10	%	93		70-130	Pass	
TRH >C10-C16	%	97		70-130	Pass	
LCS - % Recovery						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	%	110		70-130	Pass	
Acenaphthylene	%	109		70-130	Pass	
Anthracene	%	108		70-130	Pass	
Benz(a)anthracene	%	115		70-130	Pass	
Benzo(a)pyrene	%	111		70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&j)fluoranthene	%	90	70-130	Pass			
Benzo(g,h,i)perylene	%	107	70-130	Pass			
Benzo(k)fluoranthene	%	125	70-130	Pass			
Chrysene	%	112	70-130	Pass			
Dibenz(a,h)anthracene	%	111	70-130	Pass			
Fluoranthene	%	116	70-130	Pass			
Fluorene	%	110	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	110	70-130	Pass			
Naphthalene	%	112	70-130	Pass			
Phenanthrene	%	102	70-130	Pass			
Pyrene	%	109	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	103	70-130	Pass			
4,4'-DDD	%	109	70-130	Pass			
4,4'-DDE	%	121	70-130	Pass			
4,4'-DDT	%	99	70-130	Pass			
a-BHC	%	106	70-130	Pass			
Aldrin	%	109	70-130	Pass			
b-BHC	%	106	70-130	Pass			
d-BHC	%	107	70-130	Pass			
Dieldrin	%	106	70-130	Pass			
Endosulfan I	%	109	70-130	Pass			
Endosulfan II	%	109	70-130	Pass			
Endosulfan sulphate	%	115	70-130	Pass			
Endrin	%	106	70-130	Pass			
Endrin aldehyde	%	93	70-130	Pass			
Endrin ketone	%	102	70-130	Pass			
g-BHC (Lindane)	%	105	70-130	Pass			
Heptachlor	%	115	70-130	Pass			
Heptachlor epoxide	%	106	70-130	Pass			
Hexachlorobenzene	%	123	70-130	Pass			
Methoxychlor	%	96	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	95	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96	70-130	Pass			
Cadmium	%	98	70-130	Pass			
Chromium	%	98	70-130	Pass			
Copper	%	101	70-130	Pass			
Lead	%	96	70-130	Pass			
Mercury	%	79	70-130	Pass			
Nickel	%	97	70-130	Pass			
Zinc	%	81	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C10-C14	S14-Fe20443	CP	%	87	70-130	Pass	
Spike - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1			
TRH >C10-C16	S14-Fe20443	CP	%	98	70-130	Pass	
Spike - % Recovery							

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Fe20443	CP	%	107		70-130	Pass	
Acenaphthylene	S14-Fe20443	CP	%	103		70-130	Pass	
Anthracene	S14-Fe20443	CP	%	101		70-130	Pass	
Benzo(a)anthracene	S14-Fe20443	CP	%	111		70-130	Pass	
Benzo(a)pyrene	S14-Fe20443	CP	%	102		70-130	Pass	
Benzo(b&i)fluoranthene	S14-Fe20443	CP	%	93		70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe20443	CP	%	102		70-130	Pass	
Benzo(k)fluoranthene	S14-Fe20443	CP	%	120		70-130	Pass	
Chrysene	S14-Fe20443	CP	%	108		70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe20443	CP	%	105		70-130	Pass	
Fluoranthene	S14-Fe20443	CP	%	113		70-130	Pass	
Fluorene	S14-Fe20443	CP	%	107		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe20443	CP	%	102		70-130	Pass	
Naphthalene	S14-Fe20443	CP	%	110		70-130	Pass	
Phenanthrene	S14-Fe20443	CP	%	102		70-130	Pass	
Pyrene	S14-Fe20443	CP	%	106		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	S14-Fe20443	CP	%	108		70-130	Pass	
4,4'-DDD	S14-Fe20443	CP	%	106		70-130	Pass	
4,4'-DDE	S14-Fe20443	CP	%	127		70-130	Pass	
4,4'-DDT	S14-Fe20443	CP	%	108		70-130	Pass	
a-BHC	S14-Fe20443	CP	%	107		70-130	Pass	
Aldrin	S14-Fe20443	CP	%	109		70-130	Pass	
b-BHC	S14-Fe20443	CP	%	103		70-130	Pass	
d-BHC	S14-Fe20443	CP	%	107		70-130	Pass	
Dieldrin	S14-Fe20443	CP	%	112		70-130	Pass	
Endosulfan I	S14-Fe20443	CP	%	112		70-130	Pass	
Endosulfan II	S14-Fe20443	CP	%	106		70-130	Pass	
Endosulfan sulphate	S14-Fe20443	CP	%	125		70-130	Pass	
Endrin	S14-Fe20443	CP	%	110		70-130	Pass	
Endrin aldehyde	S14-Fe20443	CP	%	97		70-130	Pass	
Endrin ketone	S14-Fe20443	CP	%	103		70-130	Pass	
g-BHC (Lindane)	S14-Fe20443	CP	%	105		70-130	Pass	
Heptachlor	S14-Fe20443	CP	%	120		70-130	Pass	
Heptachlor epoxide	S14-Fe20443	CP	%	119		70-130	Pass	
Hexachlorobenzene	S14-Fe20443	CP	%	128		70-130	Pass	
Methoxychlor	S14-Fe20443	CP	%	129		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	S14-Fe20443	CP	%	74		70-130	Pass	
Cadmium	S14-Fe20443	CP	%	96		70-130	Pass	
Chromium	S14-Fe20443	CP	%	92		70-130	Pass	
Copper	S14-Fe20443	CP	%	118		70-130	Pass	
Lead	S14-Fe20443	CP	%	86		70-130	Pass	
Mercury	S14-Fe20443	CP	%	82		70-130	Pass	
Nickel	S14-Fe20443	CP	%	92		70-130	Pass	
Zinc	S14-Fe20443	CP	%	103		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Fe20457	CP	%	108		70-130	Pass	
Acenaphthylene	S14-Fe20457	CP	%	105		70-130	Pass	
Anthracene	S14-Fe20457	CP	%	105		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Benz(a)anthracene	S14-Fe20457	CP	%	118		70-130	Pass	
Benzo(a)pyrene	S14-Fe20457	CP	%	106		70-130	Pass	
Benzo(b&i)fluoranthene	S14-Fe20457	CP	%	97		70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe20457	CP	%	101		70-130	Pass	
Benzo(k)fluoranthene	S14-Fe20457	CP	%	123		70-130	Pass	
Chrysene	S14-Fe20457	CP	%	109		70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe20457	CP	%	109		70-130	Pass	
Fluoranthene	S14-Fe20457	CP	%	115		70-130	Pass	
Fluorene	S14-Fe20457	CP	%	108		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe20457	CP	%	107		70-130	Pass	
Naphthalene	S14-Fe20457	CP	%	110		70-130	Pass	
Phenanthrene	S14-Fe20457	CP	%	104		70-130	Pass	
Pyrene	S14-Fe20457	CP	%	110		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	S14-Fe20457	CP	%	75		70-130	Pass	
Cadmium	S14-Fe20457	CP	%	70		70-130	Pass	
Copper	S14-Fe20457	CP	%	111		70-130	Pass	
Lead	S14-Fe20457	CP	%	71		70-130	Pass	
Mercury	S14-Fe20457	CP	%	79		70-130	Pass	
Nickel	S14-Fe20457	CP	%	95		70-130	Pass	
Zinc	S14-Fe20457	CP	%	105		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S14-Fe20466	CP	%	85		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S14-Fe20466	CP	%	101		70-130	Pass	
Toluene	S14-Fe20466	CP	%	90		70-130	Pass	
Ethylbenzene	S14-Fe20466	CP	%	84		70-130	Pass	
m&p-Xylenes	S14-Fe20466	CP	%	90		70-130	Pass	
o-Xylene	S14-Fe20466	CP	%	86		70-130	Pass	
Xylenes - Total	S14-Fe20466	CP	%	89		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S14-Fe20466	CP	%	70		70-130	Pass	
TRH C6-C10	S14-Fe20466	CP	%	96		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Fe20472	CP	%	103		70-130	Pass	
Acenaphthylene	S14-Fe20472	CP	%	101		70-130	Pass	
Anthracene	S14-Fe20472	CP	%	100		70-130	Pass	
Benz(a)anthracene	S14-Fe20472	CP	%	113		70-130	Pass	
Benzo(a)pyrene	S14-Fe20472	CP	%	101		70-130	Pass	
Benzo(b&i)fluoranthene	S14-Fe20472	CP	%	101		70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe20472	CP	%	77		70-130	Pass	
Benzo(k)fluoranthene	S14-Fe20472	CP	%	107		70-130	Pass	
Chrysene	S14-Fe20472	CP	%	108		70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe20472	CP	%	87		70-130	Pass	
Fluoranthene	S14-Fe20472	CP	%	125		70-130	Pass	
Fluorene	S14-Fe20472	CP	%	103		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe20472	CP	%	85		70-130	Pass	
Naphthalene	S14-Fe20472	CP	%	115		70-130	Pass	
Phenanthrene	S14-Fe20472	CP	%	113		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	S14-Fe20472	CP	%	114			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Fe20472	CP	%	88			70-130	Pass	
Cadmium	S14-Fe20472	CP	%	100			70-130	Pass	
Chromium	S14-Fe20472	CP	%	95			70-130	Pass	
Copper	S14-Fe20472	CP	%	99			70-130	Pass	
Mercury	S14-Fe20472	CP	%	77			70-130	Pass	
Nickel	S14-Fe20472	CP	%	100			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S14-Fe20488	CP	%	109			70-130	Pass	
Acenaphthylene	S14-Fe20488	CP	%	106			70-130	Pass	
Anthracene	S14-Fe20488	CP	%	104			70-130	Pass	
Benz(a)anthracene	S14-Fe20488	CP	%	123			70-130	Pass	
Benzo(a)pyrene	S14-Fe20488	CP	%	90			70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe20488	CP	%	90			70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe20488	CP	%	72			70-130	Pass	
Benzo(k)fluoranthene	S14-Fe20488	CP	%	112			70-130	Pass	
Chrysene	S14-Fe20488	CP	%	113			70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe20488	CP	%	89			70-130	Pass	
Fluoranthene	S14-Fe20488	CP	%	130			70-130	Pass	
Fluorene	S14-Fe20488	CP	%	110			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe20488	CP	%	79			70-130	Pass	
Naphthalene	S14-Fe20488	CP	%	115			70-130	Pass	
Phenanthrene	S14-Fe20488	CP	%	121			70-130	Pass	
Pyrene	S14-Fe20488	CP	%	119			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Fe20488	CP	%	98			70-130	Pass	
Cadmium	S14-Fe20488	CP	%	97			70-130	Pass	
Chromium	S14-Fe20488	CP	%	103			70-130	Pass	
Mercury	S14-Fe20488	CP	%	102			70-130	Pass	
Nickel	S14-Fe20488	CP	%	88			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe20443	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S14-Fe20443	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S14-Fe20443	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S14-Fe20443	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Fe20443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-Fe20443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-Fe20443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-Fe20443	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-Fe20443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-Fe20443	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	S14-Fe20443	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C6-C10 less BTEX (F1)	S14-Fe20443	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	S14-Fe20443	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S14-Fe20443	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S14-Fe20443	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S14-Fe20443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S14-Fe20443	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S14-Fe20443	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S14-Fe20443	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S14-Fe20443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Fe20443	CP	mg/kg	2.7	< 2	34	30%	Fail	Q15
Cadmium	S14-Fe20443	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S14-Fe20443	CP	mg/kg	14	19	28	30%	Pass	
Lead	S14-Fe20443	CP	mg/kg	30	32	8.0	30%	Pass	
Mercury	S14-Fe20443	CP	mg/kg	0.10	0.07	40	30%	Fail	Q15
Nickel	S14-Fe20443	CP	mg/kg	9.1	11	23	30%	Pass	
Zinc	S14-Fe20443	CP	mg/kg	62	62	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Fe20457	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Fe20457	CP	mg/kg	8.5	9.8	13	30%	Pass	
Cadmium	S14-Fe20457	CP	mg/kg	1.3	1.1	15	30%	Pass	
Chromium	S14-Fe20457	CP	mg/kg	35	48	29	30%	Pass	
Copper	S14-Fe20457	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S14-Fe20457	CP	mg/kg	24	30	24	30%	Pass	
Mercury	S14-Fe20457	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Nickel	S14-Fe20457	CP	mg/kg	< 5	6.1	27	30%	Pass	
Zinc	S14-Fe20457	CP	mg/kg	13	15	12	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe20466	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Fe20466	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-Fe20466	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-Fe20466	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-Fe20466	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-Fe20466	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-Fe20466	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Fe20466	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-Fe20466	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Fe20466	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD			
Aroclor-1016	S14-Fe20466	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1232	S14-Fe20466	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S14-Fe20466	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S14-Fe20466	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S14-Fe20466	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S14-Fe20466	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Fe20472	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Fe20472	CP	mg/kg	6.3	< 2	170	30%	Fail	Q15
Cadmium	S14-Fe20472	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Copper	S14-Fe20472	CP	mg/kg	28	9.9	95	30%	Fail	Q15
Lead	S14-Fe20472	CP	mg/kg	160	140	18	30%	Pass	
Mercury	S14-Fe20472	CP	mg/kg	0.07	< 0.05	39	30%	Fail	Q15
Nickel	S14-Fe20472	CP	mg/kg	21	50	82	30%	Fail	Q15
Zinc	S14-Fe20472	CP	mg/kg	190	140	30	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Fe20488	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Fe20488	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S14-Fe20488	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S14-Fe20488	CP	mg/kg	20	24	20	30%	Pass	
Copper	S14-Fe20488	CP	mg/kg	12	19	44	30%	Fail	Q15
Lead	S14-Fe20488	CP	mg/kg	160	170	2.0	30%	Pass	
Mercury	S14-Fe20488	CP	mg/kg	< 0.05	0.09	53	30%	Fail	Q15
Nickel	S14-Fe20488	CP	mg/kg	20	25	23	30%	Pass	
Zinc	S14-Fe20488	CP	mg/kg	110	150	33	30%	Fail	Q15

Comments

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference:ASET37610/40790/1-17

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 409948-W
 Client Reference RIVERSTONE 43210
 Received Date Feb 26, 2014

Client Sample ID			RINSATE	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Fe20490	S14-Fe20491	S14-Fe20492
Date Sampled			Feb 25, 2014	Feb 25, 2014	Feb 25, 2014
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	101%	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	< 0.001	102%	< 0.001
Toluene	0.001	mg/L	< 0.001	93%	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	89%	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	95%	< 0.002
o-Xylene	0.001	mg/L	< 0.001	95%	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	95%	< 0.003
4-Bromofluorobenzene (surr.)	1	%	72	100	73
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.02	mg/L	< 0.02	-	-
TRH C6-C10	0.02	mg/L	< 0.02	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	-	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	-	-
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
Indeno(1,2,3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled	LOR	Unit	RINSATE Water S14-Fe20490 Feb 25, 2014	TRIP SPIKE Water S14-Fe20491 Feb 25, 2014	TRIP BLANK Water S14-Fe20492 Feb 25, 2014
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH	0.001	mg/L	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	82	-	-
p-Terphenyl-d14 (surr.)	1	%	97	-	-
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	< 0.001	-	-
4,4'-DDD	0.0001	mg/L	< 0.0001	-	-
4,4'-DDE	0.0001	mg/L	< 0.0001	-	-
4,4'-DDT	0.0001	mg/L	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	-	-
d-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	-	-
Toxaphene	0.01	mg/L	< 0.01	-	-
Dibutylchloredate (surr.)	1	%	112	-	-
Tetrachloro-m-xylene (surr.)	1	%	100	-	-
Polychlorinated Biphenyls (PCB)					
Aroclor-1016	0.005	mg/L	< 0.005	-	-
Aroclor-1232	0.005	mg/L	< 0.005	-	-
Aroclor-1242	0.005	mg/L	< 0.005	-	-
Aroclor-1248	0.005	mg/L	< 0.005	-	-
Aroclor-1254	0.005	mg/L	< 0.005	-	-
Aroclor-1260	0.005	mg/L	< 0.005	-	-
Total PCB	0.005	mg/L	< 0.005	-	-
Dibutylchloredate (surr.)	1	%	112	-	-
Heavy Metals					
Arsenic	0.005	mg/L	< 0.005	-	-
Cadmium	0.0005	mg/L	< 0.0005	-	-
Chromium	0.005	mg/L	< 0.005	-	-
Copper	0.005	mg/L	< 0.005	-	-
Lead	0.005	mg/L	< 0.005	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-
Nickel	0.005	mg/L	< 0.005	-	-
Zinc	0.005	mg/L	< 0.005	-	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Feb 28, 2014	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Feb 28, 2014	7 Day
BTEX - Method: E029/E016 BTEX	Sydney	Feb 26, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Feb 28, 2014	7 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Feb 28, 2014	7 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Feb 28, 2014	7 Day
Metals M8 - Method: E022/E030 Unfiltered Metals in Water & E026 Mercury	Sydney	Feb 26, 2014	28 Day

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 409948
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 26, 2014 2:05 PM
Due: Mar 5, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	HOLD	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271														
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794														
External Laboratory														
P08-SP01A	Feb 25, 2014		Soil	S14-Fe20443			X	X	X	X			X	
P08-SP01B	Feb 25, 2014		Soil	S14-Fe20444							X			
P08-SP01C	Feb 25, 2014		Soil	S14-Fe20445							X			
P08-L03 0-0.1	Feb 25, 2014		Soil	S14-Fe20446				X	X	X			X	
P08-SP01-D	Feb 25, 2014		Soil	S14-Fe20447				X	X	X			X	
P07-L03 0-0.1	Feb 25, 2014		Soil	S14-Fe20448				X	X	X			X	
P07-L01 0-0.1	Feb 25, 2014		Soil	S14-Fe20449				X	X	X			X	
P07-L02 0-0.1	Feb 25, 2014		Soil	S14-Fe20450				X	X	X			X	
P14-L03 0-0.1	Feb 25, 2014		Soil	S14-Fe20451				X	X	X			X	
P14-L02 0-0.1	Feb 25, 2014		Soil	S14-Fe20452				X	X	X			X	

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Laboratory where analysis is conducted																			
Melbourne Laboratory - NATA Site # 1254 & 14271																			
Sydney Laboratory - NATA Site # 18217																			
Brisbane Laboratory - NATA Site # 20794																			
External Laboratory																			
P14-L03 0.2-0.3	Feb 25, 2014	Soil	S14-Fe20453	X															
P14-L01 0-0.1	Feb 25, 2014	Soil	S14-Fe20454	X				X	X										
P14-L01 0.2-0.3	Feb 25, 2014	Soil	S14-Fe20455			X													
P80-L01 0-0.1	Feb 25, 2014	Soil	S14-Fe20456	X					X										
P80-L02 0-0.1	Feb 25, 2014	Soil	S14-Fe20457	X					X										
P80-SP01-E	Feb 25, 2014	Soil	S14-Fe20458	X					X										
P80-SP01-D	Feb 25, 2014	Soil	S14-Fe20459							X									
P80-SP01-C	Feb 25, 2014	Soil	S14-Fe20460	X							X								
P80-SP01-B	Feb 26, 2014	Soil	S14-Fe20461								X								
P80-SP01-A	Feb 26, 2014	Soil	S14-Fe20462								X								
Total Recoverable Hydrocarbons																			
Polychlorinated Biphenyls (PCB)																			
BTEX																			
Metals M8																			
Organochlorine Pesticides																			
Polycyclic Aromatic Hydrocarbons																			
TRH C6-C9																			
HOLD																			
Asbestos (% weight as per WA Guidelines)																			
% Moisture																			

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Sample Detail		% Moisture	Asbestos (% weight as per WA Guidelines)	HOLD	TRH C6-C9	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted											
Melbourne Laboratory - NATA Site # 1254 & 14271											
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
External Laboratory											
P22-L03 0-0.1	Feb 25, 2014	Soil	X			X	X	X	X	X	X
P22-L02 0-0.1	Feb 25, 2014	Soil	X			X	X	X	X	X	X
P22-L01 0-0.1	Feb 25, 2014	Soil	X			X	X	X	X	X	X
P08-L02 0-0.1	Feb 25, 2014	Soil	X			X	X	X	X	X	X
P08-L02 0.2-0.3	Feb 25, 2014	Soil		X							
P08-L01 0-0.1	Feb 25, 2014	Soil	X			X	X	X	X	X	X
P08-L01 0.2-0.3	Feb 25, 2014	Soil	X			X	X	X	X	X	X
P88-L03 0-0.1	Feb 25, 2014	Soil		X							
P88-L03 0.3-0.4	Feb 25, 2014	Soil	X			X	X	X	X	X	X

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Sample Detail		% Moisture	Asbestos (% weight as per WA Guidelines)	HOLD	TRH C6-C9	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted											
Melbourne Laboratory - NATA Site # 1254 & 14271											
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
External Laboratory											
P88-L01 0-0.1	Feb 25, 2014	Soil	X					X			
P88-L02 0-0.1	Feb 25, 2014	Soil	X			X		X			
P37-L03 0.2-0.3	Feb 25, 2014	Soil		X							
P37-L01 0.2-0.3	Feb 25, 2014	Soil	X			X		X			
P37-L02 0-0.1	Feb 25, 2014	Soil		X							
P37-L03 0-0.1	Feb 25, 2014	Soil	X			X		X			
P37-L01 0-0.1	Feb 25, 2014	Soil		X							
P45-L04 0-0.1	Feb 25, 2014	Soil	X			X		X		X	X
P45-L01 0-0.1	Feb 25, 2014	Soil	X			X		X		X	X
P45-L02 0-0.1	Feb 25, 2014	Soil		X							

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Sample Detail																					
Laboratory where analysis is conducted																					
Melbourne Laboratory - NATA Site # 1254 & 14271																					
Sydney Laboratory - NATA Site # 18217																					
Brisbane Laboratory - NATA Site # 20794																					
External Laboratory																					
P45-L03 0-0.1	Feb 25, 2014	Soil		S14-Fe20482	X																
P81-L02 0.2-0.3	Feb 25, 2014	Soil		S14-Fe20483		X															
P81-L02 0-0.1	Feb 25, 2014	Soil		S14-Fe20484	X			X													
P81-L03 0-0.1	Feb 25, 2014	Soil		S14-Fe20485			X														
P81-L01 0-0.1	Feb 25, 2014	Soil		S14-Fe20486	X			X													
QC14	Feb 25, 2014	Soil		S14-Fe20487	X			X													
QC15	Feb 25, 2014	Soil		S14-Fe20488	X			X													
QC16	Feb 25, 2014	Soil		S14-Fe20489	X			X													
RINSATE	Feb 25, 2014	Water		S14-Fe20490				X													
TRIP SPIKE	Feb 25, 2014	Water		S14-Fe20491			X														
TRIP BLANK	Feb 25, 2014	Water		S14-Fe20492			X														
				Total Recoverable Hydrocarbons																	
				Polychlorinated Biphenyls (PCB)																	
				BTEX																	
				Metals M8																	
				Organochlorine Pesticides																	
				Polycyclic Aromatic Hydrocarbons																	
				TRH C6-C9																	
				HOLD																	
				Asbestos (% weight as per WA Guidelines)																	
				% Moisture																	

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4,4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.005			0.005	Pass	
Cadmium	mg/L	< 0.0005			0.0005	Pass	
Chromium	mg/L	< 0.005			0.005	Pass	
Copper	mg/L	< 0.005			0.005	Pass	
Lead	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.005			0.005	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	108			70-130	Pass	
TRH C10-C14	%	86			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	102			70-130	Pass	
Toluene	%	96			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	100			70-130	Pass	
o-Xylene	%	99			70-130	Pass	
Xylenes - Total	%	99			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	108			70-130	Pass	
TRH C6-C10	%	103			70-130	Pass	
TRH >C10-C16	%	95			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	115			70-130	Pass	
Anthracene	%	91			70-130	Pass	
Benz(a)anthracene	%	84			70-130	Pass	
Benzo(a)pyrene	%	90			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Benzo(b&i)fluoranthene	%	93			70-130	Pass		
Benzo(g,h,i)perylene	%	77			70-130	Pass		
Benzo(k)fluoranthene	%	88			70-130	Pass		
Chrysene	%	95			70-130	Pass		
Dibenz(a,h)anthracene	%	77			70-130	Pass		
Fluoranthene	%	92			70-130	Pass		
Fluorene	%	90			70-130	Pass		
Indeno(1,2,3-cd)pyrene	%	77			70-130	Pass		
Naphthalene	%	74			70-130	Pass		
Phenanthrene	%	91			70-130	Pass		
Pyrene	%	93			70-130	Pass		
LCS - % Recovery								
Organochlorine Pesticides								
Chlordanes - Total	%	85			70-130	Pass		
4,4'-DDD	%	80			70-130	Pass		
4,4'-DDE	%	100			70-130	Pass		
4,4'-DDT	%	90			70-130	Pass		
a-BHC	%	80			70-130	Pass		
Aldrin	%	90			70-130	Pass		
b-BHC	%	90			70-130	Pass		
d-BHC	%	80			70-130	Pass		
Dieldrin	%	90			70-130	Pass		
Endosulfan I	%	90			70-130	Pass		
Endosulfan II	%	90			70-130	Pass		
Endosulfan sulphate	%	90			70-130	Pass		
Endrin	%	90			70-130	Pass		
Endrin aldehyde	%	80			70-130	Pass		
Endrin ketone	%	80			70-130	Pass		
g-BHC (Lindane)	%	90			70-130	Pass		
Heptachlor	%	100			70-130	Pass		
Heptachlor epoxide	%	90			70-130	Pass		
Hexachlorobenzene	%	100			70-130	Pass		
Methoxychlor	%	80			70-130	Pass		
LCS - % Recovery								
Polychlorinated Biphenyls (PCB)								
Aroclor-1260	%	113			70-130	Pass		
LCS - % Recovery								
Heavy Metals								
Arsenic	%	97			70-130	Pass		
Cadmium	%	99			70-130	Pass		
Chromium	%	96			70-130	Pass		
Copper	%	93			70-130	Pass		
Lead	%	95			70-130	Pass		
Mercury	%	107			70-130	Pass		
Nickel	%	97			70-130	Pass		
Zinc	%	97			70-130	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S14-Fe19704	NCP	%	97		70-130	Pass	
TRH C10-C14	S14-Fe20543	NCP	%	83		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S14-Fe19704	NCP	%	96		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Toluene	S14-Fe19704	NCP	%	90			70-130	Pass	
Ethylbenzene	S14-Fe19704	NCP	%	89			70-130	Pass	
m&p-Xylenes	S14-Fe19704	NCP	%	96			70-130	Pass	
o-Xylene	S14-Fe19704	NCP	%	94			70-130	Pass	
Xylenes - Total	S14-Fe19704	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S14-Fe19704	NCP	%	97			70-130	Pass	
TRH C6-C10	S14-Fe19704	NCP	%	87			70-130	Pass	
TRH >C10-C16	S14-Fe20543	NCP	%	92			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S14-Fe20933	NCP	%	107			70-130	Pass	
Acenaphthylene	S14-Fe20933	NCP	%	103			70-130	Pass	
Anthracene	S14-Fe20933	NCP	%	105			70-130	Pass	
Benz(a)anthracene	S14-Fe20933	NCP	%	92			70-130	Pass	
Benzo(a)pyrene	S14-Fe20933	NCP	%	87			70-130	Pass	
Benzo(b&j)fluoranthene	S14-Fe20933	NCP	%	73			70-130	Pass	
Benzo(g,h,i)perylene	S14-Fe20933	NCP	%	96			70-130	Pass	
Benzo(k)fluoranthene	S14-Fe20933	NCP	%	96			70-130	Pass	
Chrysene	S14-Fe20933	NCP	%	78			70-130	Pass	
Dibenz(a,h)anthracene	S14-Fe20933	NCP	%	94			70-130	Pass	
Fluoranthene	S14-Fe20933	NCP	%	104			70-130	Pass	
Fluorene	S14-Fe20933	NCP	%	100			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Fe20933	NCP	%	96			70-130	Pass	
Naphthalene	S14-Fe20933	NCP	%	72			70-130	Pass	
Phenanthrene	S14-Fe20933	NCP	%	101			70-130	Pass	
Pyrene	S14-Fe20933	NCP	%	105			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Fe22757	NCP	%	79			70-130	Pass	
Cadmium	S14-Fe22757	NCP	%	79			70-130	Pass	
Chromium	S14-Fe22757	NCP	%	78			70-130	Pass	
Copper	S14-Fe22757	NCP	%	76			70-130	Pass	
Lead	S14-Fe22757	NCP	%	77			70-130	Pass	
Mercury	S14-Fe19704	NCP	%	102			70-130	Pass	
Nickel	S14-Fe22757	NCP	%	78			70-130	Pass	
Zinc	S14-Fe22757	NCP	%	82			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe19255	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S14-Fe20541	NCP	mg/L	1.9	2.8	39	30%	Fail	Q15
TRH C15-C28	S14-Fe20541	NCP	mg/L	0.30	0.30	16	30%	Pass	
TRH C29-C36	S14-Fe20541	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Fe19255	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S14-Fe19255	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S14-Fe19255	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S14-Fe19255	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S14-Fe19255	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S14-Fe19255	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S14-Fe19255	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C6-C10	S14-Fe19255	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C6-C10 less BTEX (F1)	S14-Fe19255	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH >C10-C16	S14-Fe20541	NCP	mg/L	1.3	1.8	32	30%	Fail
TRH >C16-C34	S14-Fe20541	NCP	mg/L	0.20	0.20	4.0	30%	Pass
TRH >C34-C40	S14-Fe20541	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Acenaphthylene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Anthracene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benz(a)anthracene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(a)pyrene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(b&j)fluoranthene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(g,h,i)perylene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(k)fluoranthene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chrysene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibenz(a,h)anthracene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluoranthene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluorene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Naphthalene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Phenanthrene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Pyrene	S14-Fe20932	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Fe23211	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Cadmium	S14-Fe23211	NCP	mg/L	< 0.0005	< 0.0005	<1	30%	Pass
Chromium	S14-Fe23211	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Copper	S14-Fe23211	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Lead	S14-Fe23211	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Mercury	S14-Fe19703	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel	S14-Fe23211	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Zinc	S14-Fe23211	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Feb 26, 2014 2:05 PM
Eurofins | mgt reference: **409948**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
 - Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 26 degrees Celsius.
 - All samples have been received as described on the above COC.
 - COC has been completed correctly.
 - Attempt to chill was evident.
 - Appropriately preserved sample containers have been used.
 - All samples were received in good condition.
 - Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
 - Organic samples had Teflon liners.
 - Sample containers for volatile analysis received with zero headspace.
 - Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Samples QA14A, QC15A & QC16A sent to Envirolab as requested | Asbestos conducted by ASET |
Discrepancy: COC: P8-SP01-C JAR: P80-SP01-C sample labeled as per jar

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Eurofins | mgt Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis
NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience





Our ref: ASET37687/ 40867 / 1 - 5
Your ref: 410328
NATA Accreditation No: 14484

6 March 2014

Eurofins MGT
Unit F3, 16 Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons



Dear Robert,

Asbestos Identification

This report presents the results of five samples, forwarded by Eurofins MGT on 3 March 2014, for analysis for asbestos.

1.Introduction:Five samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1 and Australian Standards AS 4964 - 2004 and WA/ NEPM Guidelines**)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia/ NEPM Guidelines for the Assessment Remediation and Management of Asbestos in contaminated sites.

3. Results : **Sample No. 1. ASET37687/ 40867/ 1. SS-SP01B - Ma00003.**

Approx dimensions 8.5 cm x 8.5 cm x 5.4 cm

The sample consisted of a mixture of soil, stones, synthetic mineral fibres, plant matter, fragments of plaster, cement, fibre cement*, brick, paint flakes and pieces of glass.

Chrysotile* (Estimated approximate weight= 0.005g) asbestos and Crocidolite* (Estimated approximate weight= 0.0012g) asbestos detected.

Estimated approximate total weight of asbestos = 0.0062g

Estimated approximate total weight of asbestos in AF (ACM < 7mm) = 0.0062g

Approximate total weight of AF (ACM < 7mm) = 0.04g

Approximate total weight of soil = 566.0g

Estimated approximate % w/w = 0.001%

Sample No. 2. ASET37687/ 40867/ 2. P52-L02 - 0-0.1 - Ma00008.

Approx dimensions 9.0 cm x 8.0 cm x 5.0 cm

The sample consisted of a mixture of clayish soil, stones and plant matter.

No asbestos detected.

Sample No. 3. ASET37687/ 40867/ 3. P84-L01 - 0-0.1 - Ma00011.

Approx dimensions 8.8 cm x 8.8 cm x 5.4 cm

The sample consisted of a mixture of clayish soil, stones, corroded metal and plant matter.

No asbestos detected.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
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Sample No. 4. ASET37687 / 40867 / 4. P87-L01 - 0-0.1 - Ma00014.
Approx dimensions 8.5 cm x 8.0 cm x 5.7 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 5. ASET37687 / 40867 / 5. QC08 - Ma00017.
Approx dimensions 9.0 cm x 8.5 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Analysed and reported by,

A handwritten signature in black ink, appearing to read "Nisansala Maddage".

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier
Approved Signatory



Accredited for compliance with ISO/IEC 17025.

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation only covers the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

*** denotes asbestos detected in ACM in bonded form.**

All samples indicating "No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

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 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: **Thomas Harding**

Report **410328-S**
 Client Reference **ADDITIONAL : RIVERSTONE 43210**
 Received Date **Feb 28, 2014**

Client Sample ID			SS-SP01B	P55-L01:0-0.1	P54-L03:0-0.1	P53-L01:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00003	S14-Ma00004	S14-Ma00005	S14-Ma00006
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	360	-	-	-
TRH C29-C36	50	mg/kg	490	-	-	-
TRH C10-36 (Total)	50	mg/kg	850	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	118	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	770	-	-	-
TRH >C34-C40	100	mg/kg	260	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SS-SP01B	P55-L01:0-0.1	P54-L03:0-0.1	P53-L01:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00003	S14-Ma00004	S14-Ma00005	S14-Ma00006
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	2.3	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	110	115	125	120
p-Terphenyl-d14 (surr.)	1	%	91	96	107	97
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4,4'-DDD	0.05	mg/kg	0.25	-	-	-
4,4'-DDE	0.05	mg/kg	0.12	-	-	-
4,4'-DDT	0.05	mg/kg	0.28	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	0.11	-	-	-
Endosulfan I	0.05	mg/kg	0.20	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	0.06	-	-	-
Endrin	0.05	mg/kg	0.23	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchlorendate (surr.)	1	%	108	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	85	-	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	2.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB	0.5	mg/kg	2.5	-	-	-
Dibutylchlorendate (surr.)	1	%	108	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	13	15	15	2.0
Cadmium	0.4	mg/kg	15	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	87	29	78	2000
Copper	5	mg/kg	4200	8.1	11	67
Lead	5	mg/kg	3000	33	31	21
Mercury	0.05	mg/kg	2.9	0.05	< 0.05	0.09
Nickel	5	mg/kg	230	< 5	5.8	17
Zinc	5	mg/kg	11000	77	48	220

Client Sample ID			SS-SP01B	P55-L01:0-0.1	P54-L03:0-0.1	P53-L01:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00003	S14-Ma00004	S14-Ma00005	S14-Ma00006
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
% Moisture	0.1	%	21	12	10	18
Asbestos (% weight as per WA Guidelines)			see attached	-	-	-

Client Sample ID			P53-L03:0-0.1	P52-L02:0-0.1	P51-L02:0-0.1	P39-L02:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00007	S14-Ma00008	S14-Ma00009	S14-Ma00010
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	21	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	88	-	-
TRH C10-36 (Total)	50	mg/kg	-	110	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	122	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	110	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P53-L03:0-0.1 Soil	P52-L02:0-0.1 Soil	P51-L02:0-0.1 Soil	P39-L02:0-0.1 Soil
Sample Matrix			S14-Ma00007	S14-Ma00008	S14-Ma00009	S14-Ma00010
Eurofins mgt Sample No.			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	122	110	115	121
p-Terphenyl-d14 (surr.)	1	%	103	97	103	107
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	1	mg/kg	-	< 1	-	-
Dibutylchloroendate (surr.)	1	%	-	100	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	77	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB	0.5	mg/kg	-	< 0.5	-	-
Dibutylchloroendate (surr.)	1	%	-	100	-	-
Heavy Metals						
Arsenic	2	mg/kg	5.7	13	16	6.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	1100	29	29	7.9
Copper	5	mg/kg	200	5.7	13	< 5
Lead	5	mg/kg	19	20	38	14
Mercury	0.05	mg/kg	0.06	< 0.05	0.07	< 0.05
Nickel	5	mg/kg	88	< 5	8.6	< 5
Zinc	5	mg/kg	110	18	62	11
% Moisture						
% Moisture	0.1	%	9.8	9.5	22	10
Asbestos (% weight as per WA Guidelines)						
Asbestos (% weight as per WA Guidelines)			-	see attached	-	-

Client Sample ID			P84-L01:0-0.1 Soil	P85-L02:0-0.1 Soil	P86-L02:0-0.1 Soil	P87-L01:0-0.1 Soil
Sample Matrix			S14-Ma00011	S14-Ma00012	S14-Ma00013	S14-Ma00014
Eurofins mgt Sample No.			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	< 20
TRH C10-C14	20	mg/kg	< 20	-	-	< 20
TRH C15-C28	50	mg/kg	< 50	-	-	< 50
TRH C29-C36	50	mg/kg	< 50	-	-	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	-	-	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	118	-	-	121
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	< 20
TRH >C10-C16	50	mg/kg	< 50	-	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	< 50
TRH >C16-C34	100	mg/kg	< 100	-	-	< 100
TRH >C34-C40	100	mg/kg	< 100	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	126	130	117	113
p-Terphenyl-d14 (surr.)	1	%	107	117	108	109
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	< 0.05

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P84-L01:0-0.1 Soil S14-Ma00011 Feb 21, 2014	P85-L02:0-0.1 Soil S14-Ma00012 Feb 21, 2014	P86-L02:0-0.1 Soil S14-Ma00013 Feb 21, 2014	P87-L01:0-0.1 Soil S14-Ma00014 Feb 21, 2014
Organochlorine Pesticides						
a-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	-	-	< 0.2
Toxaphene	1	mg/kg	< 1	-	-	< 1
Dibutylchloroendate (surr.)	1	%	79	-	-	114
Tetrachloro-m-xylene (surr.)	1	%	78	-	-	86
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	< 0.5
Total PCB	0.5	mg/kg	< 0.5	-	-	< 0.5
Dibutylchloroendate (surr.)	1	%	79	-	-	114
Heavy Metals						
Arsenic	2	mg/kg	17	12	17	14
Cadmium	0.4	mg/kg	< 0.4	3.1	< 0.4	< 0.4
Chromium	5	mg/kg	46	31	20	33
Copper	5	mg/kg	8.3	32	19	11
Lead	5	mg/kg	26	110	33	28
Mercury	0.05	mg/kg	0.05	0.07	< 0.05	0.05
Nickel	5	mg/kg	< 5	21	7.9	7.7
Zinc	5	mg/kg	40	420	97	30
% Moisture	0.1	%	13	19	29	19
Asbestos (% weight as per WA Guidelines)			see attached	-	-	see attached

Client Sample ID			P48-L02:0-0.1 Soil	P49-L02:0-0.1 Soil	QC08 Soil
Sample Matrix			S14-Ma00015	S14-Ma00016	S14-Ma00017
Eurofins mgt Sample No.			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Date Sampled					
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	52
TRH C15-C28	50	mg/kg	-	-	230
TRH C29-C36	50	mg/kg	-	-	390
TRH C10-36 (Total)	50	mg/kg	-	-	670
BTEX					
Benzene	0.1	mg/kg	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	121
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	66
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	66
TRH >C16-C34	100	mg/kg	-	-	550
TRH >C34-C40	100	mg/kg	-	-	140
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	115	126	129
p-Terphenyl-d14 (surr.)	1	%	111	106	117
Organochlorine Pesticides					
Comments					R16
Chlordanes - Total	0.1	mg/kg	-	-	< 5
4,4'-DDD	0.05	mg/kg	-	-	< 5
4,4'-DDE	0.05	mg/kg	-	-	< 5

Client Sample ID			P48-L02:0-0.1	P49-L02:0-0.1	QC08
Sample Matrix			Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00015	S14-Ma00016	S14-Ma00017
Date Sampled			Feb 21, 2014	Feb 21, 2014	Feb 21, 2014
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
4.4'-DDT	0.05	mg/kg	-	-	< 5
a-BHC	0.05	mg/kg	-	-	< 5
Aldrin	0.05	mg/kg	-	-	< 5
b-BHC	0.05	mg/kg	-	-	< 5
d-BHC	0.05	mg/kg	-	-	< 5
Dieldrin	0.05	mg/kg	-	-	< 5
Endosulfan I	0.05	mg/kg	-	-	< 5
Endosulfan II	0.05	mg/kg	-	-	< 5
Endosulfan sulphate	0.05	mg/kg	-	-	< 5
Endrin	0.05	mg/kg	-	-	< 5
Endrin aldehyde	0.05	mg/kg	-	-	< 5
Endrin ketone	0.05	mg/kg	-	-	< 5
g-BHC (Lindane)	0.05	mg/kg	-	-	< 5
Heptachlor	0.05	mg/kg	-	-	< 5
Heptachlor epoxide	0.05	mg/kg	-	-	< 5
Hexachlorobenzene	0.05	mg/kg	-	-	< 5
Methoxychlor	0.2	mg/kg	-	-	< 20
Toxaphene	1	mg/kg	-	-	< 100
Dibutylchloroendate (surr.)	1	%	-	-	Q09A ₁
Tetrachloro-m-xylene (surr.)	1	%	-	-	Q09A ₁
Polychlorinated Biphenyls (PCB)					
Comments					R16
Aroclor-1016	0.5	mg/kg	-	-	< 50
Aroclor-1232	0.5	mg/kg	-	-	< 50
Aroclor-1242	0.5	mg/kg	-	-	< 50
Aroclor-1248	0.5	mg/kg	-	-	< 50
Aroclor-1254	0.5	mg/kg	-	-	< 50
Aroclor-1260	0.5	mg/kg	-	-	< 50
Total PCB	0.5	mg/kg	-	-	< 50
Dibutylchloroendate (surr.)	1	%	-	-	Q09A ₁
Heavy Metals					
Arsenic	2	mg/kg	9.0	5.8	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	7.4	42
Copper	5	mg/kg	16	10	6.6
Lead	5	mg/kg	71	23	31
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	5.3	< 5	< 5
Zinc	5	mg/kg	130	50	26
% Moisture	0.1	%	18	24	9.0
Asbestos (% weight as per WA Guidelines)			-	-	see attached

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Mar 07, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Mar 07, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Mar 07, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Mar 05, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Mar 04, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Mar 04, 2014	28 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Mar 04, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Mar 04, 2014	28 Day

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 Site # 1254 & 14271

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Brisbane
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 NATA # 1261 Site # 20794

ABN - 50 005 085 521 e.mail : EnviroSales@eurofins.com.au web : www.eurofins.com.au

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: ADDITIONAL : RIVERSTONE 43210

Order No.: 410328
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 28, 2014 9:38 AM
Due: Mar 7, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
SS-SP01B	Feb 21, 2014		Soil	S14-Ma00003								
P55-L01:0-0.1	Feb 21, 2014		Soil	S14-Ma00004								
P54-L03:0-0.1	Feb 21, 2014		Soil	S14-Ma00005								
P53-L01:0-0.1	Feb 21, 2014		Soil	S14-Ma00006								
P53-L03:0-0.1	Feb 21, 2014		Soil	S14-Ma00007								
P52-L02:0-0.1	Feb 21, 2014		Soil	S14-Ma00008								
P51-L02:0-0.1	Feb 21, 2014		Soil	S14-Ma00009								
P39-L02:0-0.1	Feb 21, 2014		Soil	S14-Ma00010								
P84-L01:0-0.1	Feb 21, 2014		Soil	S14-Ma00011								
P85-L02:0-0.1	Feb 21, 2014		Soil	S14-Ma00012								

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 Murrarie QLD 4172
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Company Name: JBS & G (NSW & WA) Pty Ltd
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Order No.: 410328
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Received: Feb 28, 2014 9:38 AM
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Sample Detail			Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
External Laboratory										
P86-L02:0-0.1	Feb 21, 2014	Soil				X		X	X	X
P87-L01:0-0.1	Feb 21, 2014	Soil				X	X	X	X	X
P48-L02:0-0.1	Feb 21, 2014	Soil				X	X	X	X	X
P49-L02:0-0.1	Feb 21, 2014	Soil				X	X	X	X	X
QC08	Feb 21, 2014	Soil				X	X	X	X	X

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
BTEX						
Benzene	mg/kg	< 0.1		0.1	Pass	
Toluene	mg/kg	< 0.1		0.1	Pass	
Ethylbenzene	mg/kg	< 0.1		0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2		0.2	Pass	
o-Xylene	mg/kg	< 0.1		0.1	Pass	
Xylenes - Total	mg/kg	< 0.3		0.3	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/kg	< 0.5		0.5	Pass	
Acenaphthylene	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5		0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5		0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Chrysene	mg/kg	< 0.5		0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5		0.5	Pass	
Fluoranthene	mg/kg	< 0.5		0.5	Pass	
Fluorene	mg/kg	< 0.5		0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/kg	< 0.1		0.1	Pass	
4,4'-DDD	mg/kg	< 0.05		0.05	Pass	
4,4'-DDE	mg/kg	< 0.05		0.05	Pass	
4,4'-DDT	mg/kg	< 0.05		0.05	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	89			70-130	Pass	
TRH C10-C14	%	80			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	105			70-130	Pass	
Toluene	%	93			70-130	Pass	
Ethylbenzene	%	91			70-130	Pass	
m&p-Xylenes	%	94			70-130	Pass	
o-Xylene	%	94			70-130	Pass	
Xylenes - Total	%	94			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	75			70-130	Pass	
TRH C6-C10	%	98			70-130	Pass	
TRH >C10-C16	%	89			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	124			70-130	Pass	
Acenaphthylene	%	123			70-130	Pass	
Anthracene	%	125			70-130	Pass	
Benz(a)anthracene	%	114			70-130	Pass	
Benzo(a)pyrene	%	116			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	106	70-130	Pass			
Benzo(g,h,i)perylene	%	117	70-130	Pass			
Benzo(k)fluoranthene	%	124	70-130	Pass			
Chrysene	%	125	70-130	Pass			
Dibenz(a,h)anthracene	%	126	70-130	Pass			
Fluoranthene	%	123	70-130	Pass			
Fluorene	%	123	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	125	70-130	Pass			
Naphthalene	%	121	70-130	Pass			
Phenanthrene	%	121	70-130	Pass			
Pyrene	%	119	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	124	70-130	Pass			
4,4'-DDD	%	123	70-130	Pass			
4,4'-DDE	%	130	70-130	Pass			
4,4'-DDT	%	116	70-130	Pass			
a-BHC	%	125	70-130	Pass			
Aldrin	%	123	70-130	Pass			
b-BHC	%	124	70-130	Pass			
d-BHC	%	128	70-130	Pass			
Dieldrin	%	127	70-130	Pass			
Endosulfan I	%	121	70-130	Pass			
Endosulfan II	%	122	70-130	Pass			
Endosulfan sulphate	%	126	70-130	Pass			
Endrin	%	124	70-130	Pass			
Endrin aldehyde	%	99	70-130	Pass			
Endrin ketone	%	123	70-130	Pass			
g-BHC (Lindane)	%	124	70-130	Pass			
Heptachlor	%	129	70-130	Pass			
Heptachlor epoxide	%	126	70-130	Pass			
Hexachlorobenzene	%	127	70-130	Pass			
Methoxychlor	%	123	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	113	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	114	70-130	Pass			
Cadmium	%	120	70-130	Pass			
Chromium	%	117	70-130	Pass			
Copper	%	113	70-130	Pass			
Lead	%	113	70-130	Pass			
Mercury	%	112	70-130	Pass			
Nickel	%	114	70-130	Pass			
Zinc	%	118	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	S14-Ma00003	CP	%	91	70-130	Pass	
TRH C10-C14	S14-Ma03234	NCP	%	82	70-130	Pass	
Spike - % Recovery							
BTEX				Result 1			
Benzene	S14-Ma00003	CP	%	98	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Toluene	S14-Ma00003	CP	%	86		70-130	Pass	
Ethylbenzene	S14-Ma00003	CP	%	85		70-130	Pass	
m&p-Xylenes	S14-Ma00003	CP	%	88		70-130	Pass	
o-Xylene	S14-Ma00003	CP	%	90		70-130	Pass	
Xylenes - Total	S14-Ma00003	CP	%	89		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S14-Ma00003	CP	%	71		70-130	Pass	
TRH C6-C10	S14-Ma00003	CP	%	88		70-130	Pass	
TRH >C10-C16	S14-Ma03234	NCP	%	91		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Ma00003	CP	%	86		70-130	Pass	
Acenaphthylene	S14-Ma00003	CP	%	120		70-130	Pass	
Anthracene	S14-Ma00003	CP	%	86		70-130	Pass	
Benz(a)anthracene	S14-Ma00003	CP	%	88		70-130	Pass	
Benzo(a)pyrene	S14-Ma00003	CP	%	93		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Ma00003	CP	%	98		70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma00003	CP	%	93		70-130	Pass	
Benzo(k)fluoranthene	S14-Ma00003	CP	%	94		70-130	Pass	
Chrysene	S14-Ma00003	CP	%	103		70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma00003	CP	%	88		70-130	Pass	
Fluoranthene	S14-Ma00003	CP	%	69		70-130	Fail	Q08
Fluorene	S14-Ma00003	CP	%	95		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00003	CP	%	90		70-130	Pass	
Naphthalene	S14-Ma00003	CP	%	98		70-130	Pass	
Phenanthrene	S14-Ma00003	CP	%	72		70-130	Pass	
Pyrene	S14-Ma00003	CP	%	70		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls (PCB)				Result 1				
Aroclor-1260	S14-Ma00020	NCP	%	105		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Zinc	S14-Ma00357	NCP	%	101		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Ma00013	CP	%	98		70-130	Pass	
Acenaphthylene	S14-Ma00013	CP	%	118		70-130	Pass	
Anthracene	S14-Ma00013	CP	%	94		70-130	Pass	
Benz(a)anthracene	S14-Ma00013	CP	%	94		70-130	Pass	
Benzo(a)pyrene	S14-Ma00013	CP	%	77		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Ma00013	CP	%	99		70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma00013	CP	%	70		70-130	Pass	
Benzo(k)fluoranthene	S14-Ma00013	CP	%	86		70-130	Pass	
Chrysene	S14-Ma00013	CP	%	98		70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma00013	CP	%	73		70-130	Pass	
Fluoranthene	S14-Ma00013	CP	%	90		70-130	Pass	
Fluorene	S14-Ma00013	CP	%	104		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00013	CP	%	73		70-130	Pass	
Naphthalene	S14-Ma00013	CP	%	103		70-130	Pass	
Phenanthrene	S14-Ma00013	CP	%	97		70-130	Pass	
Pyrene	S14-Ma00013	CP	%	89		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Arsenic	S14-Ma00013	CP	%	77			70-130	Pass	
Cadmium	S14-Ma00013	CP	%	112			70-130	Pass	
Chromium	S14-Ma00013	CP	%	103			70-130	Pass	
Copper	S14-Ma00013	CP	%	84			70-130	Pass	
Lead	S14-Ma00013	CP	%	114			70-130	Pass	
Mercury	S14-Ma00013	CP	%	106			70-130	Pass	
Nickel	S14-Ma00013	CP	%	96			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Ma00003	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S14-Ma03223	NCP	mg/kg	690	620	11	30%	Pass	
TRH C15-C28	S14-Ma03223	NCP	mg/kg	2400	2100	11	30%	Pass	
TRH C29-C36	S14-Ma03223	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Ma00003	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-Ma00003	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-Ma00003	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-Ma00003	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-Ma00003	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-Ma00003	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-Ma00003	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Ma00003	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S14-Ma03223	NCP	mg/kg	1500	1400	13	30%	Pass	
TRH >C16-C34	S14-Ma03223	NCP	mg/kg	1700	1600	9.0	30%	Pass	
TRH >C34-C40	S14-Ma03223	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Ma00003	CP	mg/kg	0.7	< 0.5	200	30%	Fail	Q15
Fluorene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Ma00003	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Ma00003	CP	mg/kg	0.9	< 0.5	200	30%	Fail	Q15
Pyrene	S14-Ma00003	CP	mg/kg	0.7	< 0.5	200	30%	Fail	Q15
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S14-Ma00020	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4,4'-DDD	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
a-BHC	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S14-Ma00020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S14-Ma00020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S14-Ma00020	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD			
Aroclor-1016	S14-Ma00020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1232	S14-Ma00020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S14-Ma00020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S14-Ma00020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S14-Ma00020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S14-Ma00020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Ma00003	CP	mg/kg	13	8.3	43	30%	Fail	Q15
Cadmium	S14-Ma00003	CP	mg/kg	15	15	2.0	30%	Pass	
Lead	S14-Ma00003	CP	mg/kg	3000	2800	6.0	30%	Pass	
Mercury	S14-Ma00003	CP	mg/kg	2.9	3.0	2.0	30%	Pass	
Zinc	S14-Ma00003	CP	mg/kg	11000	8700	27	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Ma00013	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Ma00013	CP	mg/kg	17	12	38	30%	Fail	Q15
Cadmium	S14-Ma00013	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S14-Ma00013	CP	mg/kg	20	16	22	30%	Pass	
Copper	S14-Ma00013	CP	mg/kg	19	17	14	30%	Pass	
Lead	S14-Ma00013	CP	mg/kg	33	39	18	30%	Pass	
Mercury	S14-Ma00013	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Nickel	S14-Ma00013	CP	mg/kg	7.9	7.1	11	30%	Pass	
Zinc	S14-Ma00013	CP	mg/kg	97	130	25	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference
Q09A	The Surrogate recovery is outside of the recommended acceptance criteria due to matrix interference and is unquantifiable. A result of 1 has been reported for the purposes of providing a numerical result. Acceptance criteria were met for all other QC.
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details
R16	The LORs have been raised due to the high concentration of one or more analytes

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons Laboratory Manager

Final report - this Report replaces any previously issued Reports

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: ADDITIONAL : RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Feb 28, 2014 9:38 AM
Eurofins | mgt reference: **410328**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 4 degrees Celsius.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- Organic samples had Teflon liners.
- Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Additional from report 409634 | Asbestos conducted at ASET

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Eurofins | mgt Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis
NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience





Our ref: ASET37685/ 40865 / 1 - 2
Your ref: 410331
NATA Accreditation No: 14484

6 March 2014

Eurofins MGT
Unit F3, 16 Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons

Dear Robert,

Asbestos Identification

This report presents the results of two samples, forwarded by Eurofins MGT on 3 March 2014, for analysis for asbestos.

1.Introduction:Two samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1 and Australian Standards AS 4964 - 2004 and WA/ NEPM Guidelines**)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia/ NEPM Guidelines for the Assessment Remediation and Management of Asbestos in contaminated sites.

3. Results : **Sample No. 1. ASET37685/ 40865 / 1. P36-L02 - 0-0.1 - Ma00024.**
Approx dimensions 8.8 cm x 8.7 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET37685/ 40865 / 2. P29-L02 - 0-0.1 - Ma00028.
Approx dimensions 9.0 cm x 8.2 cm x 5.4 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Analysed and reported by,

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier
Approved Signatory



Accredited for compliance with ISO/IEC 17025.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

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The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation only covers the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

All samples indicating "No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

JBS & G (NSW & WA) Pty Ltd
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 410331-S
 Client Reference ADDITIONAL : RIVERSTONE 43210
 Received Date Feb 28, 2014

Client Sample ID			P15-L01:0-0.1	P16-L01:0-0.1	P16-L02:0-0.1	P16-L03:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00018	S14-Ma00019	S14-Ma00020	S14-Ma00021
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	58	-
TRH C10-36 (Total)	50	mg/kg	-	-	58	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	126	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	0.8	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	1.2	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5

Client Sample ID			P15-L01:0-0.1	P16-L01:0-0.1	P16-L02:0-0.1	P16-L03:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00018	S14-Ma00019	S14-Ma00020	S14-Ma00021
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	0.8	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	1.1	-	< 0.5
Total PAH	0.5	mg/kg	< 0.5	3.9	-	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	-	1.2
2-Fluorobiphenyl (surr.)	1	%	118	122	-	123
p-Terphenyl-d14 (surr.)	1	%	111	113	-	118
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Toxaphene	1	mg/kg	-	-	< 1	-
Dibutylchloroendate (surr.)	1	%	-	-	93	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	84	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	-
Total PCB	0.5	mg/kg	-	-	< 0.5	-
Dibutylchloroendate (surr.)	1	%	-	-	93	-
Heavy Metals						
Arsenic	2	mg/kg	5.1	18	-	3.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	14	40	-	16
Copper	5	mg/kg	9.9	14	-	32
Lead	5	mg/kg	21	35	-	18
Mercury	0.05	mg/kg	0.05	0.07	-	0.09
Nickel	5	mg/kg	6.0	9.2	-	8.5
Zinc	5	mg/kg	49	300	-	61

Client Sample ID			P15-L01:0-0.1	P16-L01:0-0.1	P16-L02:0-0.1	P16-L03:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00018	S14-Ma00019	S14-Ma00020	S14-Ma00021
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit				
% Moisture	0.1	%	21	19	23	19

Client Sample ID			P30-L01:0-0.1	P31-L01:0-0.1	P36-L02:0-0.1	P35-L02:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00022	S14-Ma00023	S14-Ma00024	S14-Ma00025
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	76	-
TRH C15-C28	50	mg/kg	-	-	110	-
TRH C29-C36	50	mg/kg	-	-	330	-
TRH C10-36 (Total)	50	mg/kg	-	-	520	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	120	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	83	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	83	-
TRH >C16-C34	100	mg/kg	-	-	340	-
TRH >C34-C40	100	mg/kg	-	-	170	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P30-L01:0-0.1	P31-L01:0-0.1	P36-L02:0-0.1	P35-L02:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00022	S14-Ma00023	S14-Ma00024	S14-Ma00025
Date Sampled			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	111	112	114	121
p-Terphenyl-d14 (surr.)	1	%	105	107	95	109
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Toxaphene	1	mg/kg	-	-	< 1	-
Dibutylchloroendate (surr.)	1	%	-	-	95	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	90	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	-
Total PCB	0.5	mg/kg	-	-	< 0.5	-
Dibutylchloroendate (surr.)	1	%	-	-	95	-
Heavy Metals						
Arsenic	2	mg/kg	8.1	11	12	17
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	19	10	24	14
Copper	5	mg/kg	11	5.2	12	9.4
Lead	5	mg/kg	24	27	27	20
Mercury	0.05	mg/kg	0.06	< 0.05	0.06	0.06
Nickel	5	mg/kg	6.3	< 5	6.0	5.7
Zinc	5	mg/kg	64	19	55	24
% Moisture						
% Moisture	0.1	%	26	11	14	10
Asbestos (% weight as per WA Guidelines)						
Asbestos (% weight as per WA Guidelines)			-	-	see attached	-

Client Sample ID			P32-L01:0-0.1 Soil	P33-L02:0-0.1 Soil	P29-L02:0-0.1 Soil	P29-L01:0-0.1 Soil
Sample Matrix			S14-Ma00026	S14-Ma00027	S14-Ma00028	S14-Ma00029
Eurofins mgt Sample No.			Feb 20, 2014	Feb 20, 2014	Feb 20, 2014	Feb 20, 2014
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	72	-
TRH C10-36 (Total)	50	mg/kg	-	-	72	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	129	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	-	1.2
2-Fluorobiphenyl (surr.)	1	%	110	107	-	117
p-Terphenyl-d14 (surr.)	1	%	111	103	-	112
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	-

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P32-L01:0-0.1 Soil S14-Ma00026 Feb 20, 2014	P33-L02:0-0.1 Soil S14-Ma00027 Feb 20, 2014	P29-L02:0-0.1 Soil S14-Ma00028 Feb 20, 2014	P29-L01:0-0.1 Soil S14-Ma00029 Feb 20, 2014
Organochlorine Pesticides						
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Toxaphene	1	mg/kg	-	-	< 1	-
Dibutylchloroendate (surr.)	1	%	-	-	87	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	75	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	-
Total PCB	0.5	mg/kg	-	-	< 0.5	-
Dibutylchloroendate (surr.)	1	%	-	-	87	-
Heavy Metals						
Arsenic	2	mg/kg	11	14	-	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	22	50	-	25
Copper	5	mg/kg	7.0	8.6	-	8.5
Lead	5	mg/kg	26	31	-	23
Mercury	0.05	mg/kg	0.07	0.05	-	< 0.05
Nickel	5	mg/kg	5.2	7.7	-	7.4
Zinc	5	mg/kg	36	49	-	23
% Moisture	0.1	%	9.9	15	11	11
Asbestos (% weight as per WA Guidelines)			-	-	see attached	-

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P38-SP01C Soil S14-Ma00030 Feb 20, 2014	P38-L03:0-0.1 Soil S14-Ma00031 Feb 20, 2014	QC05 Soil S14-Ma00032 Feb 20, 2014
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	118	109	100
p-Terphenyl-d14 (surr.)	1	%	113	103	110
Heavy Metals					
Arsenic	2	mg/kg	14	14	16
Cadmium	0.4	mg/kg	2.2	< 0.4	< 0.4
Chromium	5	mg/kg	37	36	17
Copper	5	mg/kg	84	9.2	8.8
Lead	5	mg/kg	400	30	18
Mercury	0.05	mg/kg	0.15	0.06	< 0.05
Nickel	5	mg/kg	15	5.1	< 5
Zinc	5	mg/kg	620	36	23
% Moisture	0.1	%	25	28	14

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Mar 07, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Mar 07, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Mar 07, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Mar 05, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Mar 04, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Mar 04, 2014	28 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Mar 04, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Mar 04, 2014	28 Day

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 Site # 1254 & 14271

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 NATA # 1261 Site # 20794

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Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: ADDITIONAL : RIVERSTONE 43210

Order No.: 410331
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 28, 2014 9:38 AM
Due: Mar 7, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
P15-L01:0-0.1	Feb 20, 2014		Soil	S14-Ma00018				X		X		
P16-L01:0-0.1	Feb 20, 2014		Soil	S14-Ma00019				X		X		
P16-L02:0-0.1	Feb 20, 2014		Soil	S14-Ma00020				X	X	X		
P16-L03:0-0.1	Feb 20, 2014		Soil	S14-Ma00021				X		X		
P30-L01:0-0.1	Feb 20, 2014		Soil	S14-Ma00022				X	X	X		
P31-L01:0-0.1	Feb 20, 2014		Soil	S14-Ma00023				X	X	X		
P36-L02:0-0.1	Feb 20, 2014		Soil	S14-Ma00024				X	X	X		
P35-L02:0-0.1	Feb 20, 2014		Soil	S14-Ma00025				X	X	X		
P32-L01:0-0.1	Feb 20, 2014		Soil	S14-Ma00026				X	X	X		
P33-L02:0-0.1	Feb 20, 2014		Soil	S14-Ma00027				X	X	X		

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 MATA # 126
 Site # 1254 & 14271

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 NATA # 1261 Site # 18217

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 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: ADDITIONAL : RIVERSTONE 43210

Order No.: 410331
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 28, 2014 9:38 AM
Due: Mar 7, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Laboratory where analysis is conducted																					
Melbourne Laboratory - NATA Site # 1254 & 14271																					
Sydney Laboratory - NATA Site # 18217																					
Brisbane Laboratory - NATA Site # 20794																					
External Laboratory																					
P29-L02:0-0.1	Feb 20, 2014	Soil	S14-Ma00028	X	X																
P29-L01:0-0.1	Feb 20, 2014	Soil	S14-Ma00029	X																	
P38-SP01C	Feb 20, 2014	Soil	S14-Ma00030	X																	
P38-L03:0-0.1	Feb 20, 2014	Soil	S14-Ma00031	X																	
QC05	Feb 20, 2014	Soil	S14-Ma00032	X																	
				Asbestos (% weight as per WA Guidelines)																	
				% Moisture		X															
				Polycyclic Aromatic Hydrocarbons		X															
				Organochlorine Pesticides				X													
				Metals M8				X		X											
				BTEX				X		X											
				Polychlorinated Biphenyls (PCB)				X		X											
				Total Recoverable Hydrocarbons				X		X											

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
BTEX						
Benzene	mg/kg	< 0.1		0.1	Pass	
Toluene	mg/kg	< 0.1		0.1	Pass	
Ethylbenzene	mg/kg	< 0.1		0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2		0.2	Pass	
o-Xylene	mg/kg	< 0.1		0.1	Pass	
Xylenes - Total	mg/kg	< 0.3		0.3	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/kg	< 0.5		0.5	Pass	
Acenaphthylene	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5		0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5		0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Chrysene	mg/kg	< 0.5		0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5		0.5	Pass	
Fluoranthene	mg/kg	< 0.5		0.5	Pass	
Fluorene	mg/kg	< 0.5		0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/kg	< 0.1		0.1	Pass	
4,4'-DDD	mg/kg	< 0.05		0.05	Pass	
4,4'-DDE	mg/kg	< 0.05		0.05	Pass	
4,4'-DDT	mg/kg	< 0.05		0.05	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	89			70-130	Pass	
TRH C10-C14	%	80			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	105			70-130	Pass	
Toluene	%	93			70-130	Pass	
Ethylbenzene	%	91			70-130	Pass	
m&p-Xylenes	%	94			70-130	Pass	
o-Xylene	%	94			70-130	Pass	
Xylenes - Total	%	94			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	75			70-130	Pass	
TRH C6-C10	%	98			70-130	Pass	
TRH >C10-C16	%	89			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	126			70-130	Pass	
Acenaphthylene	%	129			70-130	Pass	
Anthracene	%	124			70-130	Pass	
Benz(a)anthracene	%	123			70-130	Pass	
Benzo(a)pyrene	%	101			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	100	70-130	Pass			
Benzo(g,h,i)perylene	%	79	70-130	Pass			
Benzo(k)fluoranthene	%	121	70-130	Pass			
Chrysene	%	122	70-130	Pass			
Dibenz(a,h)anthracene	%	89	70-130	Pass			
Fluoranthene	%	117	70-130	Pass			
Fluorene	%	130	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	90	70-130	Pass			
Naphthalene	%	101	70-130	Pass			
Phenanthrene	%	108	70-130	Pass			
Pyrene	%	122	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	124	70-130	Pass			
4,4'-DDD	%	123	70-130	Pass			
4,4'-DDE	%	130	70-130	Pass			
4,4'-DDT	%	116	70-130	Pass			
a-BHC	%	125	70-130	Pass			
Aldrin	%	123	70-130	Pass			
b-BHC	%	124	70-130	Pass			
d-BHC	%	128	70-130	Pass			
Dieldrin	%	127	70-130	Pass			
Endosulfan I	%	121	70-130	Pass			
Endosulfan II	%	122	70-130	Pass			
Endosulfan sulphate	%	126	70-130	Pass			
Endrin	%	124	70-130	Pass			
Endrin aldehyde	%	99	70-130	Pass			
Endrin ketone	%	123	70-130	Pass			
g-BHC (Lindane)	%	124	70-130	Pass			
Heptachlor	%	129	70-130	Pass			
Heptachlor epoxide	%	126	70-130	Pass			
Hexachlorobenzene	%	127	70-130	Pass			
Methoxychlor	%	123	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	113	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	103	70-130	Pass			
Cadmium	%	108	70-130	Pass			
Chromium	%	104	70-130	Pass			
Copper	%	103	70-130	Pass			
Lead	%	102	70-130	Pass			
Mercury	%	102	70-130	Pass			
Nickel	%	103	70-130	Pass			
Zinc	%	107	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Polycyclic Aromatic Hydrocarbons				Result 1			
Acenaphthene	S14-Ma00018	CP	%	102	70-130	Pass	
Acenaphthylene	S14-Ma00018	CP	%	111	70-130	Pass	
Anthracene	S14-Ma00018	CP	%	95	70-130	Pass	
Benz(a)anthracene	S14-Ma00018	CP	%	100	70-130	Pass	
Benzo(a)pyrene	S14-Ma00018	CP	%	95	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(b&j)fluoranthene	S14-Ma00018	CP	%	89			70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma00018	CP	%	77			70-130	Pass	
Benzo(k)fluoranthene	S14-Ma00018	CP	%	95			70-130	Pass	
Chrysene	S14-Ma00018	CP	%	91			70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma00018	CP	%	79			70-130	Pass	
Fluoranthene	S14-Ma00018	CP	%	92			70-130	Pass	
Fluorene	S14-Ma00018	CP	%	104			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00018	CP	%	83			70-130	Pass	
Naphthalene	S14-Ma00018	CP	%	97			70-130	Pass	
Phenanthrene	S14-Ma00018	CP	%	91			70-130	Pass	
Pyrene	S14-Ma00018	CP	%	91			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Cadmium	S14-Ma00018	CP	%	87			70-130	Pass	
Mercury	S14-Ma00018	CP	%	86			70-130	Pass	
Nickel	S14-Ma00018	CP	%	113			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S14-Ma00020	CP	%	89			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S14-Ma00020	CP	%	96			70-130	Pass	
Toluene	S14-Ma00020	CP	%	86			70-130	Pass	
Ethylbenzene	S14-Ma00020	CP	%	85			70-130	Pass	
m&p-Xylenes	S14-Ma00020	CP	%	87			70-130	Pass	
o-Xylene	S14-Ma00020	CP	%	87			70-130	Pass	
Xylenes - Total	S14-Ma00020	CP	%	87			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S14-Ma00020	CP	%	72			70-130	Pass	
TRH C6-C10	S14-Ma00020	CP	%	91			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1260	S14-Ma00020	CP	%	105			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S14-Ma00028	CP	%	86			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S14-Ma00028	CP	%	97			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Ma00030	CP	%	75			70-130	Pass	
Cadmium	S14-Ma00030	CP	%	89			70-130	Pass	
Chromium	S14-Ma00030	CP	%	72			70-130	Pass	
Mercury	S14-Ma00030	CP	%	88			70-130	Pass	
Nickel	S14-Ma00030	CP	%	90			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Benzo(a)pyrene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&i)fluoranthene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Ma00018	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Ma00018	CP	mg/kg	5.1	7.7	41	30%	Fail	Q15
Cadmium	S14-Ma00018	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S14-Ma00018	CP	mg/kg	14	15	9.0	30%	Pass	
Copper	S14-Ma00018	CP	mg/kg	9.9	11	7.0	30%	Pass	
Lead	S14-Ma00018	CP	mg/kg	21	25	17	30%	Pass	
Mercury	S14-Ma00018	CP	mg/kg	0.05	0.06	17	30%	Pass	
Nickel	S14-Ma00018	CP	mg/kg	6.0	7.3	19	30%	Pass	
Zinc	S14-Ma00018	CP	mg/kg	49	47	3.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Ma00020	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Ma00020	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-Ma00020	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-Ma00020	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-Ma00020	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-Ma00020	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-Ma00020	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Ma00020	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-Ma00020	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Ma00020	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S14-Ma00020	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4,4'-DDD	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Endrin	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S14-Ma00020	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S14-Ma00020	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S14-Ma00020	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Ma00020	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S14-Ma00020	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S14-Ma00020	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S14-Ma00020	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S14-Ma00020	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S14-Ma00020	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C10-C14	S14-Ma00028	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	S14-Ma00028	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	S14-Ma00028	CP	mg/kg	72	87	20	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	S14-Ma00028	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S14-Ma00028	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S14-Ma00028	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Ma00030	CP	mg/kg	14	12	9.0	30%	Pass
Cadmium	S14-Ma00030	CP	mg/kg	2.2	2.0	10	30%	Pass
Chromium	S14-Ma00030	CP	mg/kg	37	30	20	30%	Pass
Copper	S14-Ma00030	CP	mg/kg	84	110	27	30%	Pass
Lead	S14-Ma00030	CP	mg/kg	400	330	20	30%	Pass
Mercury	S14-Ma00030	CP	mg/kg	0.15	0.14	7.0	30%	Pass
Nickel	S14-Ma00030	CP	mg/kg	15	14	13	30%	Pass
Zinc	S14-Ma00030	CP	mg/kg	620	600	3.0	30%	Pass

Comments

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference:ASET37685/40865/1-2

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: ADDITIONAL : RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Feb 28, 2014 9:38 AM
Eurofins | mgt reference: **410331**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 5 degrees Celsius.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- Organic samples had Teflon liners.
- Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Asbestos conducted at ASET | Additional from report 409384

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Eurofins | mgt Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis
NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience





Our ref : ASET37686/ 40866 / 1 - 1
Your ref : 410332
NATA Accreditation No: 14484

6 March 2014

Eurofins MGT
Unit F3, Building F, 16, Mars Road
Lane Cove
NSW 2066

Attn: Dr Robert Symons,

Dear Robert,

Asbestos Identification

This report presents the results of one sample, forwarded by Eurofins MGT on 3 March 2014, for analysis for asbestos.

1.Introduction: One sample forwarded was examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1 and Australian Guidelines AS 4964 - 2004 and WA/ NEPM Guidelines**)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia Guidelines for the Assessment Remediation and Management of Asbestos contaminated sites in Western Australia.

3. Results : **Sample No. 1. ASET37686/ 40866 / 1. P47 - L02 0 - 0.1 - Ma00070.**
Approx dimensions 9.7 cm x 9.5 cm x 8.8 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of bitumen, plastic and corroded metal.
No asbestos detected.

Analysed and reported by,

Laxman Dias. BSc
Analyst / Approved Identifier.
Approved Signatory



This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.



The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation covers only the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

All samples indicating "No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

JBS & G (NSW & WA) Pty Ltd
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 410332-S
 Client Reference ADDITIONAL : RIVERSTONE 43210
 Received Date Feb 28, 2014

Client Sample ID			P89-L02:0-0.1	P40-L02:0-0.1	P40-L03:0-0.1	P42-L02:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00056	S14-Ma00057	S14-Ma00058	S14-Ma00059
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	2.0	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	2.1	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	1.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	1.8	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	1.7	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	5.4	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	1.2	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	3.0	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	5.0	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	26	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	2.8	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	3.0	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	3.3	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	101	94	101	92
p-Terphenyl-d14 (surr.)	1	%	117	109	116	106
Heavy Metals						
Arsenic	2	mg/kg	2.6	6.4	5.3	12
Cadmium	0.4	mg/kg	0.9	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.6	19	27	21
Copper	5	mg/kg	32	32	39	< 5
Lead	5	mg/kg	71	32	51	17
Mercury	0.05	mg/kg	0.57	0.09	0.05	< 0.05
Nickel	5	mg/kg	5.4	12	12	< 5
Zinc	5	mg/kg	83	190	500	9.4
% Moisture	0.1	%	18	11	2.4	7.7

Client Sample ID			P43-L02:0-0.1 Soil	P50-L01:0-0.1 Soil	P82-L01:0-0.1 Soil	P50-L02:0-0.1 Soil
Sample Matrix			S14-Ma00060	S14-Ma00061	S14-Ma00062	S14-Ma00063
Eurofins mgt Sample No.			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	68
TRH C10-36 (Total)	50	mg/kg	-	-	-	68
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	113
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	-
2-Fluorobiphenyl (surr.)	1	%	94	96	92	-
p-Terphenyl-d14 (surr.)	1	%	109	109	108	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	0.31
4,4'-DDT	0.05	mg/kg	-	-	-	0.09

Client Sample ID			P43-L02:0-0.1	P50-L01:0-0.1	P82-L01:0-0.1	P50-L02:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00060	S14-Ma00061	S14-Ma00062	S14-Ma00063
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Toxaphene	1	mg/kg	-	-	-	< 1
Dibutylchloroendate (surr.)	1	%	-	-	-	128
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	81
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB	0.5	mg/kg	-	-	-	< 0.5
Dibutylchloroendate (surr.)	1	%	-	-	-	128
Heavy Metals						
Arsenic	2	mg/kg	6.1	14	15	-
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	-
Chromium	5	mg/kg	16	19	29	-
Copper	5	mg/kg	7.3	56	8.8	-
Lead	5	mg/kg	20	790	33	-
Mercury	0.05	mg/kg	< 0.05	0.06	< 0.05	-
Nickel	5	mg/kg	< 5	7.7	5.6	-
Zinc	5	mg/kg	32	430	77	-
% Moisture	0.1	%	9.1	27	14	9.9

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P50-L02:0.2-0.3 Soil S14-Ma00064 Feb 24, 2014	P46-L01:0-0.1 Soil S14-Ma00068 Feb 24, 2014	P46-L02:0-0.1 Soil S14-Ma00069 Feb 24, 2014	P47-L02:0-0.1 Soil S14-Ma00070 Feb 24, 2014
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	64
TRH C10-36 (Total)	50	mg/kg	-	-	-	64
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	129
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	93	95	97	100
p-Terphenyl-d14 (surr.)	1	%	109	112	113	114

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P50-L02:0.2-0.3 Soil S14-Ma00064 Feb 24, 2014	P46-L01:0-0.1 Soil S14-Ma00068 Feb 24, 2014	P46-L02:0-0.1 Soil S14-Ma00069 Feb 24, 2014	P47-L02:0-0.1 Soil S14-Ma00070 Feb 24, 2014
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Toxaphene	1	mg/kg	-	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	-	74
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	76
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB	0.5	mg/kg	-	-	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	-	-	74
Heavy Metals						
Arsenic	2	mg/kg	7.2	17	17	8.0
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	< 0.4
Chromium	5	mg/kg	12	42	38	14
Copper	5	mg/kg	40	22	9.9	16
Lead	5	mg/kg	49	63	37	65
Mercury	0.05	mg/kg	< 0.05	0.06	< 0.05	0.10
Nickel	5	mg/kg	< 5	7.9	7.4	7.0
Zinc	5	mg/kg	180	220	36	220
% Moisture						
% Moisture	0.1	%	7.8	13	8.5	8.8
Asbestos (% weight as per WA Guidelines)						
Asbestos (% weight as per WA Guidelines)			-	-	-	see attached

Client Sample ID			P46-SP01	P28-L01:0-0.1
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S14-Ma00071	S14-Ma00072
Date Sampled			Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	96	92
p-Terphenyl-d14 (surr.)	1	%	111	109
Heavy Metals				
Arsenic	2	mg/kg	3.2	10
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	32	20
Copper	5	mg/kg	19	15
Lead	5	mg/kg	16	54
Mercury	0.05	mg/kg	< 0.05	0.06
Nickel	5	mg/kg	28	8.4
Zinc	5	mg/kg	49	150
% Moisture				
	0.1	%	6.2	12

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Mar 07, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Mar 07, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Mar 07, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Mar 05, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Mar 04, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Mar 04, 2014	28 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Mar 04, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Mar 04, 2014	28 Day

Melbourne
 3-5 Kingston Town Close
 Oakleigh VIC 3166
 Phone : +61 3 8584 5000
 MATA # 1261
 Site # 1254 & 14271

Sydney
 Unit F6, Building F
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 Lane Cove West NSW 2066
 Phone : +61 2 9500 8400
 NATA # 1261 Site # 18217

Brisbane
 1/21 Smallwood Place
 Murrarie QLD 4172
 Phone : +61 7 3802 4600
 NATA # 1261 Site # 20794

ABN - 50 005 085 521 e.mail - EnviroSales@eurofins.com.au web - www.eurofins.com.au

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: ADDITIONAL : RIVERSTONE 43210

Order No.: 410332
Report #: 02 8245 0300
Phone:
Fax:

Received: Feb 28, 2014 9:38 AM
Due: Mar 7, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Laboratory where analysis is conducted					
Melbourne Laboratory - NATA Site # 1254 & 14271					
Sydney Laboratory - NATA Site # 18217					
Brisbane Laboratory - NATA Site # 20794					
External Laboratory					
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
P89-L02:0-0.1	Feb 24, 2014		Soil	S14-Ma00056	
P40-L02:0-0.1	Feb 24, 2014		Soil	S14-Ma00057	
P40-L03:0-0.1	Feb 24, 2014		Soil	S14-Ma00058	
P42-L02:0-0.1	Feb 24, 2014		Soil	S14-Ma00059	
P43-L02:0-0.1	Feb 24, 2014		Soil	S14-Ma00060	
P50-L01:0-0.1	Feb 24, 2014		Soil	S14-Ma00061	
P82-L01:0-0.1	Feb 24, 2014		Soil	S14-Ma00062	
P50-L02:0-0.1	Feb 24, 2014		Soil	S14-Ma00063	
P50-L02:0.2-0.3	Feb 24, 2014		Soil	S14-Ma00064	
					Total Recoverable Hydrocarbons
					Polychlorinated Biphenyls (PCB)
					BTEX
					Metals M8
					Organochlorine Pesticides
					Polycyclic Aromatic Hydrocarbons
					TRH C6-C9
				X	Asbestos (% weight as per WA Guidelines)
					% Moisture

Melbourne
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 Oakleigh VIC 3166
 Phone : +61 3 8584 5000
 MATA # 126
 Site # 1254 & 14271

Sydney
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 Lane Cove West NSW 2066
 Phone : +61 2 9500 8400
 NATA # 1261 Site # 18217

Brisbane
 1/21 Sharnwood Place
 Murrarie QLD 4172
 Phone : +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: ADDITIONAL : RIVERSTONE 43210

Order No.: 410332
Report #: 02 8245 0300
Phone:
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Received: Feb 28, 2014 9:38 AM
Due: Mar 7, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

		% Moisture	Asbestos (% weight as per WA Guidelines)	TRH C6-C9	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
External Laboratory										
TS	Feb 24, 2014	Water	S14-Ma00065	X				X		
TB	Feb 24, 2014	Water	S14-Ma00066	X				X		
RINSATE	Feb 24, 2014	Water	S14-Ma00067		X	X	X	X	X	X
P46-L01:0-0.1	Feb 24, 2014	Soil	S14-Ma00068		X		X			
P46-L02:0-0.1	Feb 24, 2014	Soil	S14-Ma00069		X		X			
P47-L02:0-0.1	Feb 24, 2014	Soil	S14-Ma00070		X		X		X	X
P46-SP01	Feb 24, 2014	Soil	S14-Ma00071		X		X			
P28-L01:0-0.1	Feb 24, 2014	Soil	S14-Ma00072		X		X			

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
BTEX						
Benzene	mg/kg	< 0.1		0.1	Pass	
Toluene	mg/kg	< 0.1		0.1	Pass	
Ethylbenzene	mg/kg	< 0.1		0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2		0.2	Pass	
o-Xylene	mg/kg	< 0.1		0.1	Pass	
Xylenes - Total	mg/kg	< 0.3		0.3	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/kg	< 0.5		0.5	Pass	
Acenaphthylene	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5		0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5		0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Chrysene	mg/kg	< 0.5		0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5		0.5	Pass	
Fluoranthene	mg/kg	< 0.5		0.5	Pass	
Fluorene	mg/kg	< 0.5		0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/kg	< 0.1		0.1	Pass	
4,4'-DDD	mg/kg	< 0.05		0.05	Pass	
4,4'-DDE	mg/kg	< 0.05		0.05	Pass	
4,4'-DDT	mg/kg	< 0.05		0.05	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	89			70-130	Pass	
TRH C10-C14	%	77			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	105			70-130	Pass	
Toluene	%	93			70-130	Pass	
Ethylbenzene	%	91			70-130	Pass	
m&p-Xylenes	%	94			70-130	Pass	
o-Xylene	%	94			70-130	Pass	
Xylenes - Total	%	94			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	75			70-130	Pass	
TRH C6-C10	%	98			70-130	Pass	
TRH >C10-C16	%	85			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	117			70-130	Pass	
Acenaphthylene	%	112			70-130	Pass	
Anthracene	%	117			70-130	Pass	
Benz(a)anthracene	%	122			70-130	Pass	
Benzo(a)pyrene	%	112			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	110	70-130	Pass			
Benzo(g,h,i)perylene	%	110	70-130	Pass			
Benzo(k)fluoranthene	%	123	70-130	Pass			
Chrysene	%	119	70-130	Pass			
Dibenz(a,h)anthracene	%	113	70-130	Pass			
Fluoranthene	%	125	70-130	Pass			
Fluorene	%	118	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	112	70-130	Pass			
Naphthalene	%	116	70-130	Pass			
Phenanthrene	%	112	70-130	Pass			
Pyrene	%	127	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	124	70-130	Pass			
4,4'-DDD	%	123	70-130	Pass			
4,4'-DDE	%	130	70-130	Pass			
4,4'-DDT	%	116	70-130	Pass			
a-BHC	%	125	70-130	Pass			
Aldrin	%	123	70-130	Pass			
b-BHC	%	124	70-130	Pass			
d-BHC	%	128	70-130	Pass			
Dieldrin	%	127	70-130	Pass			
Endosulfan I	%	121	70-130	Pass			
Endosulfan II	%	122	70-130	Pass			
Endosulfan sulphate	%	126	70-130	Pass			
Endrin	%	124	70-130	Pass			
Endrin aldehyde	%	99	70-130	Pass			
Endrin ketone	%	123	70-130	Pass			
g-BHC (Lindane)	%	124	70-130	Pass			
Heptachlor	%	129	70-130	Pass			
Heptachlor epoxide	%	126	70-130	Pass			
Hexachlorobenzene	%	127	70-130	Pass			
Methoxychlor	%	123	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	113	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	111	70-130	Pass			
Cadmium	%	123	70-130	Pass			
Chromium	%	111	70-130	Pass			
Copper	%	110	70-130	Pass			
Lead	%	114	70-130	Pass			
Mercury	%	116	70-130	Pass			
Nickel	%	110	70-130	Pass			
Zinc	%	117	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Heavy Metals				Result 1			
Arsenic	S14-Ma00056	CP	%	111	70-130	Pass	
Nickel	S14-Ma00056	CP	%	105	70-130	Pass	
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	S14-Ma00063	CP	%	84	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	S14-Ma00028	NCP	%	86			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S14-Ma00063	CP	%	99			70-130	Pass	
Toluene	S14-Ma00063	CP	%	88			70-130	Pass	
Ethylbenzene	S14-Ma00063	CP	%	87			70-130	Pass	
m&p-Xylenes	S14-Ma00063	CP	%	89			70-130	Pass	
o-Xylene	S14-Ma00063	CP	%	89			70-130	Pass	
Xylenes - Total	S14-Ma00063	CP	%	89			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S14-Ma00063	CP	%	70			70-130	Pass	
TRH C6-C10	S14-Ma00063	CP	%	93			70-130	Pass	
TRH >C10-C16	S14-Ma00028	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1260	S14-Ma00020	NCP	%	105			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S14-Ma00069	CP	%	123			70-130	Pass	
Acenaphthylene	S14-Ma00069	CP	%	121			70-130	Pass	
Anthracene	S14-Ma00069	CP	%	117			70-130	Pass	
Benz(a)anthracene	S14-Ma00069	CP	%	129			70-130	Pass	
Benzo(a)pyrene	S14-Ma00069	CP	%	107			70-130	Pass	
Benzo(b&j)fluoranthene	S14-Ma00069	CP	%	101			70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma00069	CP	%	111			70-130	Pass	
Benzo(k)fluoranthene	S14-Ma00069	CP	%	127			70-130	Pass	
Chrysene	S14-Ma00069	CP	%	124			70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma00069	CP	%	118			70-130	Pass	
Fluoranthene	S14-Ma00069	CP	%	130			70-130	Pass	
Fluorene	S14-Ma00069	CP	%	123			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00069	CP	%	116			70-130	Pass	
Naphthalene	S14-Ma00069	CP	%	125			70-130	Pass	
Phenanthrene	S14-Ma00069	CP	%	122			70-130	Pass	
Pyrene	S14-Ma00069	CP	%	121			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Ma00070	CP	%	111			70-130	Pass	
Cadmium	S14-Ma00070	CP	%	125			70-130	Pass	
Chromium	S14-Ma00070	CP	%	113			70-130	Pass	
Copper	S14-Ma00070	CP	%	116			70-130	Pass	
Lead	S14-Ma00070	CP	%	125			70-130	Pass	
Nickel	S14-Ma00070	CP	%	119			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Ma00056	CP	mg/kg	2.6	3.2	20	30%	Pass	
Cadmium	S14-Ma00056	CP	mg/kg	0.9	0.9	2.0	30%	Pass	
Chromium	S14-Ma00056	CP	mg/kg	9.6	12	21	30%	Pass	
Copper	S14-Ma00056	CP	mg/kg	32	33	4.0	30%	Pass	
Lead	S14-Ma00056	CP	mg/kg	71	82	14	30%	Pass	
Mercury	S14-Ma00056	CP	mg/kg	0.57	0.62	9.0	30%	Pass	
Nickel	S14-Ma00056	CP	mg/kg	5.4	7.3	31	30%	Fail	Q15
Zinc	S14-Ma00056	CP	mg/kg	83	95	13	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	S14-Ma00063	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C10-C14	S14-Ma00028	NCP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	S14-Ma00028	NCP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	S14-Ma00028	NCP	mg/kg	72	87	20	30%	Pass
Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	S14-Ma00063	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	S14-Ma00063	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	S14-Ma00063	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	S14-Ma00063	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	S14-Ma00063	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total	S14-Ma00063	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S14-Ma00063	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	S14-Ma00063	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C6-C10 less BTEX (F1)	S14-Ma00063	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	S14-Ma00028	NCP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S14-Ma00028	NCP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S14-Ma00028	NCP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S14-Ma00063	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S14-Ma00063	CP	mg/kg	0.31	0.28	13	30%	Pass
4,4'-DDT	S14-Ma00063	CP	mg/kg	0.09	0.08	7.0	30%	Pass
a-BHC	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S14-Ma00063	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S14-Ma00063	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S14-Ma00063	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Ma00063	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S14-Ma00063	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S14-Ma00063	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S14-Ma00063	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S14-Ma00063	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S14-Ma00063	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)anthracene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Ma00069	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Ma00070	CP	mg/kg	8.0	8.2	3.0	30%	Pass	
Cadmium	S14-Ma00070	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S14-Ma00070	CP	mg/kg	14	18	27	30%	Pass	
Copper	S14-Ma00070	CP	mg/kg	16	14	13	30%	Pass	
Lead	S14-Ma00070	CP	mg/kg	65	56	15	30%	Pass	
Mercury	S14-Ma00070	CP	mg/kg	0.10	0.06	41	30%	Fail	Q15
Nickel	S14-Ma00070	CP	mg/kg	7.0	10	38	30%	Fail	Q15
Zinc	S14-Ma00070	CP	mg/kg	220	210	8.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 410332-W
 Client Reference ADDITIONAL : RIVERSTONE 43210
 Received Date Feb 28, 2014

Client Sample ID			TS	TB	RINSATE
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Ma00065	S14-Ma00066	S14-Ma00067
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	73%	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	< 0.1
TRH C29-C36	0.1	mg/L	-	-	< 0.1
TRH C10-36 (Total)	0.1	mg/L	-	-	< 0.1
BTEX					
Benzene	0.001	mg/L	100%	< 0.001	< 0.001
Toluene	0.001	mg/L	89%	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	84%	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	90%	< 0.002	< 0.002
o-Xylene	0.001	mg/L	89%	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	90%	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	94	71	73
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.02	mg/L	-	-	< 0.02
TRH C6-C10	0.02	mg/L	-	-	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	-	-	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	< 0.1
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	-	-	< 0.001
Benzo(g,h,i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	< 0.001
Dibenz(a,h)anthracene	0.001	mg/L	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001
Indeno(1,2,3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	< 0.001

Client Sample ID			TS	TB	RINSATE
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Ma00065	S14-Ma00066	S14-Ma00067
Date Sampled			Feb 24, 2014	Feb 24, 2014	Feb 24, 2014
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Phenanthrene	0.001	mg/L	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	< 0.001
Total PAH	0.001	mg/L	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	101
p-Terphenyl-d14 (surr.)	1	%	-	-	127
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	-	-	< 0.001
4,4'-DDD	0.0001	mg/L	-	-	< 0.0001
4,4'-DDE	0.0001	mg/L	-	-	< 0.0001
4,4'-DDT	0.0001	mg/L	-	-	< 0.0001
a-BHC	0.0001	mg/L	-	-	< 0.0001
Aldrin	0.0001	mg/L	-	-	< 0.0001
b-BHC	0.0001	mg/L	-	-	< 0.0001
d-BHC	0.0001	mg/L	-	-	< 0.0001
Dieldrin	0.0001	mg/L	-	-	< 0.0001
Endosulfan I	0.0001	mg/L	-	-	< 0.0001
Endosulfan II	0.0001	mg/L	-	-	< 0.0001
Endosulfan sulphate	0.0001	mg/L	-	-	< 0.0001
Endrin	0.0001	mg/L	-	-	< 0.0001
Endrin aldehyde	0.0001	mg/L	-	-	< 0.0001
Endrin ketone	0.0001	mg/L	-	-	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	-	-	< 0.0001
Heptachlor	0.0001	mg/L	-	-	< 0.0001
Heptachlor epoxide	0.0001	mg/L	-	-	< 0.0001
Hexachlorobenzene	0.0001	mg/L	-	-	< 0.0001
Methoxychlor	0.0001	mg/L	-	-	< 0.0001
Toxaphene	0.01	mg/L	-	-	< 0.01
Dibutylchloroendate (surr.)	1	%	-	-	99
Tetrachloro-m-xylene (surr.)	1	%	-	-	88
Polychlorinated Biphenyls (PCB)					
Aroclor-1016	0.005	mg/L	-	-	< 0.005
Aroclor-1232	0.005	mg/L	-	-	< 0.005
Aroclor-1242	0.005	mg/L	-	-	< 0.005
Aroclor-1248	0.005	mg/L	-	-	< 0.005
Aroclor-1254	0.005	mg/L	-	-	< 0.005
Aroclor-1260	0.005	mg/L	-	-	< 0.005
Total PCB	0.005	mg/L	-	-	< 0.005
Dibutylchloroendate (surr.)	1	%	-	-	99
Heavy Metals					
Arsenic	0.005	mg/L	-	-	< 0.005
Cadmium	0.0005	mg/L	-	-	< 0.0005
Chromium	0.005	mg/L	-	-	< 0.005
Copper	0.005	mg/L	-	-	< 0.005
Lead	0.005	mg/L	-	-	< 0.005
Mercury	0.0001	mg/L	-	-	< 0.0001
Nickel	0.005	mg/L	-	-	< 0.005
Zinc	0.005	mg/L	-	-	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Mar 07, 2014	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Mar 07, 2014	7 Day
BTEX - Method: E029/E016 BTEX	Sydney	Mar 07, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Mar 04, 2014	7 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Mar 04, 2014	7 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Mar 04, 2014	7 Day
Metals M8 - Method: E022/E030 Unfiltered Metals in Water & E026 Mercury	Sydney	Mar 03, 2014	28 Day

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: ADDITIONAL : RIVERSTONE 43210

Order No.:
Report #: 410332
Phone: 02 8245 0300
Fax:

Received: Feb 28, 2014 9:38 AM
Due: Mar 7, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Laboratory where analysis is conducted			
Melbourne Laboratory - NATA Site # 1254 & 14271			
Sydney Laboratory - NATA Site # 18217			
Brisbane Laboratory - NATA Site # 20794			
External Laboratory			
Sample ID	Sample Date	Sampling Time	LAB ID
P89-L02:0-0.1	Feb 24, 2014	Soil	S14-Ma00056
P40-L02:0-0.1	Feb 24, 2014	Soil	S14-Ma00057
P40-L03:0-0.1	Feb 24, 2014	Soil	S14-Ma00058
P42-L02:0-0.1	Feb 24, 2014	Soil	S14-Ma00059
P43-L02:0-0.1	Feb 24, 2014	Soil	S14-Ma00060
P50-L01:0-0.1	Feb 24, 2014	Soil	S14-Ma00061
P82-L01:0-0.1	Feb 24, 2014	Soil	S14-Ma00062
P50-L02:0-0.1	Feb 24, 2014	Soil	S14-Ma00063
P50-L02:0.2-0.3	Feb 24, 2014	Soil	S14-Ma00064
Matrix			
Asbestos (% weight as per WA Guidelines)			
% Moisture			
TRH C6-C9			
Polycyclic Aromatic Hydrocarbons			
Organochlorine Pesticides			
Metals M8			
BTEX			
Polychlorinated Biphenyls (PCB)			
Total Recoverable Hydrocarbons			

Melbourne
 3-5 Kingston Town Close
 Oakleigh VIC 3166
 Phone : +61 3 8584 5000
 MATA # 126
 Site # 1254 & 14271

Sydney
 Unit F6, Building F
 16 Mers Road
 Lane Cove West NSW 2066
 Phone : +61 2 9500 8400
 NATA # 1261 Site # 18217

Brisbane
 1/21 Sharnwood Place
 Murarie QLD 4172
 Phone : +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
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Sample Detail		Total Recoverable Hydrocarbons		Polychlorinated Biphenyls (PCB)		BTEX		Metals M8		Organochlorine Pesticides		Polycyclic Aromatic Hydrocarbons		TRH C6-C9		Asbestos (% weight as per WA Guidelines)		% Moisture		
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271																				
Sydney Laboratory - NATA Site # 18217																				
Brisbane Laboratory - NATA Site # 20794																				
External Laboratory																				
TS	Feb 24, 2014	Water	S14-Ma00065																	
TB	Feb 24, 2014	Water	S14-Ma00066																	
RINSATE	Feb 24, 2014	Water	S14-Ma00067																	
P46-L01:0-0.1	Feb 24, 2014	Soil	S14-Ma00068																	
P46-L02:0-0.1	Feb 24, 2014	Soil	S14-Ma00069																	
P47-L02:0-0.1	Feb 24, 2014	Soil	S14-Ma00070																	
P46-SP01	Feb 24, 2014	Soil	S14-Ma00071																	
P28-L01:0-0.1	Feb 24, 2014	Soil	S14-Ma00072																	

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/L	< 0.02		0.02	Pass	
TRH C10-C14	mg/L	< 0.05		0.05	Pass	
TRH C15-C28	mg/L	< 0.1		0.1	Pass	
TRH C29-C36	mg/L	< 0.1		0.1	Pass	
Method Blank						
BTEX						
Benzene	mg/L	< 0.001		0.001	Pass	
Toluene	mg/L	< 0.001		0.001	Pass	
Ethylbenzene	mg/L	< 0.001		0.001	Pass	
m&p-Xylenes	mg/L	< 0.002		0.002	Pass	
o-Xylene	mg/L	< 0.001		0.001	Pass	
Xylenes - Total	mg/L	< 0.003		0.003	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/L	< 0.02		0.02	Pass	
TRH C6-C10	mg/L	< 0.02		0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02		0.02	Pass	
TRH >C10-C16	mg/L	< 0.05		0.05	Pass	
TRH >C16-C34	mg/L	< 0.1		0.1	Pass	
TRH >C34-C40	mg/L	< 0.1		0.1	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/L	< 0.001		0.001	Pass	
Acenaphthylene	mg/L	< 0.001		0.001	Pass	
Anthracene	mg/L	< 0.001		0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001		0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001		0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001		0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001		0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001		0.001	Pass	
Chrysene	mg/L	< 0.001		0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001		0.001	Pass	
Fluoranthene	mg/L	< 0.001		0.001	Pass	
Fluorene	mg/L	< 0.001		0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001		0.001	Pass	
Naphthalene	mg/L	< 0.001		0.001	Pass	
Phenanthrene	mg/L	< 0.001		0.001	Pass	
Pyrene	mg/L	< 0.001		0.001	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/L	< 0.001		0.001	Pass	
4,4'-DDD	mg/L	< 0.0001		0.0001	Pass	
4,4'-DDE	mg/L	< 0.0001		0.0001	Pass	
4,4'-DDT	mg/L	< 0.0001		0.0001	Pass	
a-BHC	mg/L	< 0.0001		0.0001	Pass	
Aldrin	mg/L	< 0.0001		0.0001	Pass	
b-BHC	mg/L	< 0.0001		0.0001	Pass	
d-BHC	mg/L	< 0.0001		0.0001	Pass	
Dieldrin	mg/L	< 0.0001		0.0001	Pass	
Endosulfan I	mg/L	< 0.0001		0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.005			0.005	Pass	
Cadmium	mg/L	< 0.0005			0.0005	Pass	
Chromium	mg/L	< 0.005			0.005	Pass	
Copper	mg/L	< 0.005			0.005	Pass	
Lead	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.005			0.005	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	101			70-130	Pass	
TRH C10-C14	%	102			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	101			70-130	Pass	
Ethylbenzene	%	99			70-130	Pass	
m&p-Xylenes	%	104			70-130	Pass	
o-Xylene	%	103			70-130	Pass	
Xylenes - Total	%	104			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	73			70-130	Pass	
TRH C6-C10	%	112			70-130	Pass	
TRH >C10-C16	%	113			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	79			70-130	Pass	
Acenaphthylene	%	77			70-130	Pass	
Anthracene	%	76			70-130	Pass	
Benz(a)anthracene	%	78			70-130	Pass	
Benzo(a)pyrene	%	74			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Benzo(b&i)fluoranthene	%	102			70-130	Pass		
Benzo(g,h,i)perylene	%	75			70-130	Pass		
Benzo(k)fluoranthene	%	77			70-130	Pass		
Chrysene	%	78			70-130	Pass		
Dibenz(a,h)anthracene	%	80			70-130	Pass		
Fluoranthene	%	80			70-130	Pass		
Fluorene	%	80			70-130	Pass		
Indeno(1,2,3-cd)pyrene	%	76			70-130	Pass		
Naphthalene	%	77			70-130	Pass		
Phenanthrene	%	75			70-130	Pass		
Pyrene	%	78			70-130	Pass		
LCS - % Recovery								
Organochlorine Pesticides								
Chlordanes - Total	%	80			70-130	Pass		
4,4'-DDD	%	80			70-130	Pass		
4,4'-DDE	%	90			70-130	Pass		
4,4'-DDT	%	70			70-130	Pass		
a-BHC	%	80			70-130	Pass		
Aldrin	%	80			70-130	Pass		
b-BHC	%	80			70-130	Pass		
d-BHC	%	80			70-130	Pass		
Dieldrin	%	80			70-130	Pass		
Endosulfan I	%	80			70-130	Pass		
Endosulfan II	%	80			70-130	Pass		
Endosulfan sulphate	%	90			70-130	Pass		
Endrin	%	80			70-130	Pass		
Endrin aldehyde	%	80			70-130	Pass		
Endrin ketone	%	80			70-130	Pass		
g-BHC (Lindane)	%	80			70-130	Pass		
Heptachlor	%	90			70-130	Pass		
Heptachlor epoxide	%	80			70-130	Pass		
Hexachlorobenzene	%	100			70-130	Pass		
Methoxychlor	%	80			70-130	Pass		
LCS - % Recovery								
Polychlorinated Biphenyls (PCB)								
Aroclor-1260	%	106			70-130	Pass		
LCS - % Recovery								
Heavy Metals								
Arsenic	%	96			70-130	Pass		
Cadmium	%	99			70-130	Pass		
Chromium	%	96			70-130	Pass		
Copper	%	92			70-130	Pass		
Lead	%	97			70-130	Pass		
Mercury	%	98			70-130	Pass		
Nickel	%	97			70-130	Pass		
Zinc	%	96			70-130	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S14-Fe15250	NCP	%	93		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S14-Fe15250	NCP	%	100		70-130	Pass	
Toluene	S14-Fe15250	NCP	%	95		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ethylbenzene	S14-Fe15250	NCP	%	93			70-130	Pass	
m&p-Xylenes	S14-Fe15250	NCP	%	98			70-130	Pass	
o-Xylene	S14-Fe15250	NCP	%	97			70-130	Pass	
Xylenes - Total	S14-Fe15250	NCP	%	98			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S14-Fe19720	NCP	%	98			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S14-Fe15250	NCP	%	89			70-130	Pass	
TRH C6-C10	S14-Fe15250	NCP	%	100			70-130	Pass	
TRH >C10-C16	S14-Fe19720	NCP	%	108			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S14-Fe21609	NCP	%	85			70-130	Pass	
4.4'-DDD	S14-Fe21609	NCP	%	90			70-130	Pass	
4.4'-DDE	S14-Fe21609	NCP	%	100			70-130	Pass	
4.4'-DDT	S14-Fe21609	NCP	%	70			70-130	Pass	
a-BHC	S14-Fe21609	NCP	%	90			70-130	Pass	
Aldrin	S14-Fe21609	NCP	%	80			70-130	Pass	
b-BHC	S14-Fe21609	NCP	%	90			70-130	Pass	
d-BHC	S14-Fe21609	NCP	%	90			70-130	Pass	
Dieldrin	S14-Fe21609	NCP	%	90			70-130	Pass	
Endosulfan I	S14-Fe21609	NCP	%	90			70-130	Pass	
Endosulfan II	S14-Fe21609	NCP	%	80			70-130	Pass	
Endosulfan sulphate	S14-Fe21609	NCP	%	90			70-130	Pass	
Endrin	S14-Fe21609	NCP	%	90			70-130	Pass	
Endrin aldehyde	S14-Fe21609	NCP	%	70			70-130	Pass	
Endrin ketone	S14-Fe21609	NCP	%	90			70-130	Pass	
g-BHC (Lindane)	S14-Fe21609	NCP	%	80			70-130	Pass	
Heptachlor	S14-Fe21609	NCP	%	90			70-130	Pass	
Heptachlor epoxide	S14-Fe21609	NCP	%	90			70-130	Pass	
Hexachlorobenzene	S14-Fe21609	NCP	%	90			70-130	Pass	
Methoxychlor	S14-Fe21609	NCP	%	80			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1260	S14-Fe21610	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Fe22817	NCP	%	95			70-130	Pass	
Cadmium	S14-Fe22817	NCP	%	95			70-130	Pass	
Chromium	S14-Fe22817	NCP	%	95			70-130	Pass	
Copper	S14-Fe22817	NCP	%	89			70-130	Pass	
Lead	S14-Fe22817	NCP	%	94			70-130	Pass	
Mercury	S14-Fe22817	NCP	%	94			70-130	Pass	
Nickel	S14-Fe22817	NCP	%	94			70-130	Pass	
Zinc	S14-Fe22817	NCP	%	95			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Fe18086	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	

Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	S14-Fe18086	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Toluene	S14-Fe18086	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Ethylbenzene	S14-Fe18086	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
m&p-Xylenes	S14-Fe18086	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
o-Xylene	S14-Fe18086	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Xylenes - Total	S14-Fe18086	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C10-C14	S14-Fe19719	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH C15-C28	S14-Fe19719	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
TRH C29-C36	S14-Fe19719	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S14-Fe18086	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C6-C10	S14-Fe18086	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C6-C10 less BTEX (F1)	S14-Fe18086	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH >C10-C16	S14-Fe19719	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH >C16-C34	S14-Fe19719	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
TRH >C34-C40	S14-Fe19719	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S14-Fe21608	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4,4'-DDD	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
4,4'-DDE	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
4,4'-DDT	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
a-BHC	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Aldrin	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
b-BHC	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
d-BHC	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Dieldrin	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endosulfan I	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endosulfan II	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endosulfan sulphate	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endrin	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endrin aldehyde	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Endrin ketone	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
g-BHC (Lindane)	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Heptachlor	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Heptachlor epoxide	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Hexachlorobenzene	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Methoxychlor	S14-Fe21608	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Toxaphene	S14-Fe21608	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Fe21608	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1232	S14-Fe21608	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1242	S14-Fe21608	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1248	S14-Fe21608	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1254	S14-Fe21608	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1260	S14-Fe21608	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Ma00067	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Cadmium	S14-Ma00067	CP	mg/L	< 0.0005	< 0.0005	<1	30%	Pass	
Chromium	S14-Ma00067	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Copper	S14-Ma00067	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Lead	S14-Ma00067	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Mercury	S14-Ma00067	CP	mg/L	< 0.0001	0.0002	<1	30%	Pass	
Nickel	S14-Ma00067	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Zinc	S14-Ma00067	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

~~Final report - this Report replaces any previously issued Report~~

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: ADDITIONAL : RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Feb 28, 2014 9:38 AM
Eurofins | mgt reference: **410332**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
 - Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 3 degrees Celsius.
 - All samples have been received as described on the above COC.
 - COC has been completed correctly.
 - Attempt to chill was evident.
 - Appropriately preserved sample containers have been used.
 - All samples were received in good condition.
 - Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
 - Organic samples had Teflon liners.
 - Sample containers for volatile analysis received with zero headspace.
 - Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Additional from report 409681 | Asbestos conducted at ASET

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Eurofins | mgt Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis
NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience





AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET37733/ 40913 / 1 - 2

Your ref : 410351

NATA Accreditation No: 14484

7 March 2014

Eurofins | mgt
Unit F3, Building F, 16, Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons

Dear Robert

Asbestos Identification

This report presents the results of two samples, forwarded by Eurofins | mgt on 5 March 2014, for analysis for asbestos.

1.Introduction:Two samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method.
(Safer Environment Method 1 and Australian Guidelines AS 4964 - 2004 and WA/NEPM Guidelines)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia/ NEPM Guidelines for the Assessment Remediation and Management of Asbestos contaminated sites in Western Australia.

3. Results : **Sample No. 1. ASET37733 / 40913 / 1. P20 - L02 - 0 - 0.1 - Ma00182.**
Approx dimensions 7.6 cm x 7.4 cm x 6.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET37733 / 40913 / 2. P17 - L01 - 0 - 0.1 - Ma00190.
Approx dimensions 8.5 cm x 8.4 cm x 7.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Analysed and reported by,

Laxman Dias. BSc
Analyst / Approved Identifier
Approved Signatory



Accredited for compliance with ISO/IEC 17025.

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

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ASBESTOS DETECTION & IDENTIFICATION • REPAIR & CALIBRATION OF SCIENTIFIC EQUIPMENT • AIRBORNE FIBRE & SILICA MONITORING



in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation covers only the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

All samples indicating " No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 410351-S
 Client Reference ADDITIONAL : RIVERSTONE 43210
 Received Date Mar 02, 2014

Client Sample ID			P20-L01:0.2-0.3	P20-L02:0-0.1	P20-L02:0.3-0.4	P19-L01:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00181	S14-Ma00182	S14-Ma00183	S14-Ma00184
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	22	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	160	-	-
TRH C10-36 (Total)	50	mg/kg	-	180	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	107	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	160	-	-
TRH >C34-C40	100	mg/kg	-	120	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P20-L01:0.2-0.3 Soil S14-Ma00181 Feb 18, 2014	P20-L02:0-0.1 Soil S14-Ma00182 Feb 18, 2014	P20-L02:0.3-0.4 Soil S14-Ma00183 Feb 18, 2014	P19-L01:0-0.1 Soil S14-Ma00184 Feb 18, 2014
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	93	99	103	98
p-Terphenyl-d14 (surr.)	1	%	104	118	122	120
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	1	mg/kg	-	< 1	-	-
Dibutylchlorendate (surr.)	1	%	-	114	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	88	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB	0.5	mg/kg	-	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	-	114	-	-
Heavy Metals						
Arsenic	2	mg/kg	16	18	17	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	37	33	47	20
Copper	5	mg/kg	10	12	8.9	14
Lead	5	mg/kg	19	26	23	560
Mercury	0.05	mg/kg	< 0.05	0.08	0.06	0.09
Nickel	5	mg/kg	6.5	8.6	8.2	9.0
Zinc	5	mg/kg	30	35	26	64

Client Sample ID			P20-L01:0.2-0.3	P20-L02:0-0.1	P20-L02:0.3-0.4	P19-L01:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00181	S14-Ma00182	S14-Ma00183	S14-Ma00184
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
% Moisture	0.1	%	7.6	11	6.0	23
Asbestos (% weight as per WA Guidelines)			-	see attached	-	-

Client Sample ID			P19-L01:0.2-0.3	P18-L01:0-0.1	P18-L01:0.2-0.3	P18-L02:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00185	S14-Ma00186	S14-Ma00187	S14-Ma00188
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	110	-	-
TRH C10-36 (Total)	50	mg/kg	-	110	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	104	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	120	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5

Client Sample ID			P19-L01:0.2-0.3	P18-L01:0-0.1	P18-L01:0.2-0.3	P18-L02:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00185	S14-Ma00186	S14-Ma00187	S14-Ma00188
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Total PAH	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	-	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	100	-	99	101
p-Terphenyl-d14 (surr.)	1	%	120	-	119	117
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	1	mg/kg	-	< 1	-	-
Dibutylchlorendate (surr.)	1	%	-	130	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	101	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB	0.5	mg/kg	-	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	-	130	-	-
Heavy Metals						
Arsenic	2	mg/kg	13	-	36	24
Cadmium	0.4	mg/kg	< 0.4	-	1.0	< 0.4
Chromium	5	mg/kg	33	-	28	51
Copper	5	mg/kg	8.8	-	22	17
Lead	5	mg/kg	95	-	87	33
Mercury	0.05	mg/kg	0.06	-	0.09	0.09
Nickel	5	mg/kg	7.1	-	27	12
Zinc	5	mg/kg	37	-	1200	69

Client Sample ID			P19-L01:0.2-0.3	P18-L01:0-0.1	P18-L01:0.2-0.3	P18-L02:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00185	S14-Ma00186	S14-Ma00187	S14-Ma00188
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
% Moisture	0.1	%	7.2	21	34	35

Client Sample ID			P17-L02:0-0.1	P17-L01:0-0.1	P17-SP01-A	P17-SP01-C
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00189	S14-Ma00190	S14-Ma00191	S14-Ma00192
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	110	-	-
TRH C10-36 (Total)	50	mg/kg	-	110	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	119	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	120	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P17-L02:0-0.1	P17-L01:0-0.1	P17-SP01-A	P17-SP01-C
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00189	S14-Ma00190	S14-Ma00191	S14-Ma00192
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	97	103	96	102
p-Terphenyl-d14 (surr.)	1	%	114	121	115	119
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	1	mg/kg	-	< 1	-	-
Dibutylchloroendate (surr.)	1	%	-	112	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	74	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB	0.5	mg/kg	-	< 0.5	-	-
Dibutylchloroendate (surr.)	1	%	-	112	-	-
Heavy Metals						
Arsenic	2	mg/kg	14	14	12	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	1.9
Chromium	5	mg/kg	28	29	25	23
Copper	5	mg/kg	11	10	16	19
Lead	5	mg/kg	30	24	80	160
Mercury	0.05	mg/kg	0.08	0.06	0.09	0.09
Nickel	5	mg/kg	8.3	9.3	13	13
Zinc	5	mg/kg	35	31	88	140
% Moisture						
% Moisture	0.1	%	7.8	14	6.3	11
Asbestos (% weight as per WA Guidelines)						
Asbestos (% weight as per WA Guidelines)			-	see attached	-	-

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P03-L01:0-0.1 Soil S14-Ma00193 Feb 18, 2014	P03-L01:0.2-0.3 Soil S14-Ma00194 Feb 18, 2014	P03-L02:0.0-0.1 Soil S14-Ma00195 Feb 18, 2014	P03-L03:0.0-0.1 Soil S14-Ma00196 Feb 18, 2014
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	52	-	-	-
TRH C10-36 (Total)	50	mg/kg	52	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	112	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	-	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	-	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	-	103	100	102
p-Terphenyl-d14 (surr.)	1	%	-	120	121	121

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P03-L01:0-0.1 Soil S14-Ma00193 Feb 18, 2014	P03-L01:0.2-0.3 Soil S14-Ma00194 Feb 18, 2014	P03-L02:0.0-0.1 Soil S14-Ma00195 Feb 18, 2014	P03-L03:0.0-0.1 Soil S14-Ma00196 Feb 18, 2014
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchlorendate (surr.)	1	%	119	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	81	-	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	119	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	-	24	15	8.4
Cadmium	0.4	mg/kg	-	< 0.4	1.0	< 0.4
Chromium	5	mg/kg	-	61	38	15
Copper	5	mg/kg	-	11	37	10
Lead	5	mg/kg	-	37	110	29
Mercury	0.05	mg/kg	-	0.06	0.07	0.06
Nickel	5	mg/kg	-	7.0	21	5.6
Zinc	5	mg/kg	-	91	440	82
% Moisture						
% Moisture	0.1	%	18	9.2	19	15

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P04-L02:0.0-0.1 Soil S14-Ma00197 Feb 18, 2014	P04-L02:0.3-0.4 Soil S14-Ma00198 Feb 18, 2014	P03-SP02 Soil S14-Ma00202 Feb 18, 2014	P03-SP03 Soil S14-Ma00203 Feb 18, 2014
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	59	-	-	-
TRH C29-C36	50	mg/kg	110	-	-	-
TRH C10-36 (Total)	50	mg/kg	170	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	108	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	140	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	99	101	100	99
p-Terphenyl-d14 (surr.)	1	%	116	120	117	116

Client Sample ID			P04-L02:0.0-0.1	P04-L02:0.3-0.4	P03-SP02	P03-SP03
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00197	S14-Ma00198	S14-Ma00202	S14-Ma00203
Date Sampled			Feb 18, 2014	Feb 18, 2014	Feb 18, 2014	Feb 18, 2014
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchlorendate (surr.)	1	%	103	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	105	-	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	103	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	7.0	11	12	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	28	12	79
Copper	5	mg/kg	40	25	45	15
Lead	5	mg/kg	50	36	26	42
Mercury	0.05	mg/kg	0.06	0.06	0.05	0.05
Nickel	5	mg/kg	< 5	6.6	25	9.4
Zinc	5	mg/kg	75	77	190	130
% Moisture						
% Moisture	0.1	%	16	8.4	7.3	10

Client Sample ID			P03-SP01
Sample Matrix			Soil
Eurofins mgt Sample No.			S14-Ma00204
Date Sampled			Feb 18, 2014
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2
2-Fluorobiphenyl (surr.)	1	%	98
p-Terphenyl-d14 (surr.)	1	%	125
Heavy Metals			
Arsenic	2	mg/kg	16
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	42
Copper	5	mg/kg	18
Lead	5	mg/kg	58
Mercury	0.05	mg/kg	< 0.05
Nickel	5	mg/kg	6.0
Zinc	5	mg/kg	540
% Moisture	0.1	%	12

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Mar 06, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Mar 06, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Mar 06, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Mar 06, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Mar 06, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Mar 06, 2014	28 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Mar 06, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Mar 06, 2014	28 Day

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Brisbane
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 NATA # 1261 Site # 20794

ABN - 50 005 085 521 e.mail : EnviroSales@eurofins.com.au web : www.eurofins.com.au

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: ADDITIONAL : RIVERSTONE 43210

Order No.: 410351
Report #: 02 8245 0300
Phone:
Fax:

Received: Mar 2, 2014 11:50 AM
Due: Mar 10, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Analysis Results										
					Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	CANCELLED	Asbestos (% weight as per WA Guidelines)	% Moisture		
Laboratory where analysis is conducted															
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
External Laboratory															
P20-L01:0.2-0.3	Feb 18, 2014		Soil	S14-Ma00181											
P20-L02:0-0.1	Feb 18, 2014		Soil	S14-Ma00182											
P20-L02:0.3-0.4	Feb 18, 2014		Soil	S14-Ma00183											
P19-L01:0-0.1	Feb 18, 2014		Soil	S14-Ma00184											
P19-L01:0.2-0.3	Feb 18, 2014		Soil	S14-Ma00185											
P18-L01:0-0.1	Feb 18, 2014		Soil	S14-Ma00186											
P18-L01:0.2-0.3	Feb 18, 2014		Soil	S14-Ma00187											

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Sample Detail		% Moisture	Asbestos (% weight as per WA Guidelines)	CANCELLED	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
External Laboratory										
P18-L02:0-0.1	Feb 18, 2014	Soil	X				X			
P17-L02:0-0.1	Feb 18, 2014	Soil	X		X		X			
P17-L01:0-0.1	Feb 18, 2014	Soil	X		X		X	X	X	X
P17-SP01-A	Feb 18, 2014	Soil	X		X		X			
P17-SP01-C	Feb 18, 2014	Soil	X		X		X			
P03-L01:0-0.1	Feb 18, 2014	Soil	X					X	X	X
P03-L01:0.2-0.3	Feb 18, 2014	Soil	X							
P03-L02:0-0.1	Feb 18, 2014	Soil	X		X		X			
P03-L03:0-0.1	Feb 18, 2014	Soil	X		X		X			

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Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail											
Laboratory where analysis is conducted											
Melbourne Laboratory - NATA Site # 1254 & 14271											
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
External Laboratory											
P04-L02:0.0-0.1	Feb 18, 2014	Soil	S14-Ma00197	X							
P04-L02:0.3-0.4	Feb 18, 2014	Soil	S14-Ma00198	X							
P17-SP01A	Feb 18, 2014	Soil	S14-Ma00199					X			
P17-SP01B	Feb 18, 2014	Soil	S14-Ma00200					X			
P17-SP01C	Feb 18, 2014	Soil	S14-Ma00201					X			
P03-SP02	Feb 18, 2014	Soil	S14-Ma00202					X		X	
P03-SP03	Feb 18, 2014	Soil	S14-Ma00203					X		X	
P03-SP01	Feb 18, 2014	Soil	S14-Ma00204					X		X	
				% Moisture		X					
				Asbestos (% weight as per WA Guidelines)			X				
				CANCELLED		X					
				Polycyclic Aromatic Hydrocarbons		X		X	X		
				Organochlorine Pesticides		X		X	X		
				Metals M8		X		X	X	X	
				BTEX		X		X	X		
				Polychlorinated Biphenyls (PCB)		X		X	X		
				Total Recoverable Hydrocarbons		X		X	X		

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
BTEX						
Benzene	mg/kg	< 0.1		0.1	Pass	
Toluene	mg/kg	< 0.1		0.1	Pass	
Ethylbenzene	mg/kg	< 0.1		0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2		0.2	Pass	
o-Xylene	mg/kg	< 0.1		0.1	Pass	
Xylenes - Total	mg/kg	< 0.3		0.3	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/kg	< 0.5		0.5	Pass	
Acenaphthylene	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5		0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5		0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Chrysene	mg/kg	< 0.5		0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5		0.5	Pass	
Fluoranthene	mg/kg	< 0.5		0.5	Pass	
Fluorene	mg/kg	< 0.5		0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/kg	< 0.1		0.1	Pass	
4,4'-DDD	mg/kg	< 0.05		0.05	Pass	
4,4'-DDE	mg/kg	< 0.05		0.05	Pass	
4,4'-DDT	mg/kg	< 0.05		0.05	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	90			70-130	Pass	
TRH C10-C14	%	75			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	101			70-130	Pass	
Toluene	%	94			70-130	Pass	
Ethylbenzene	%	92			70-130	Pass	
m&p-Xylenes	%	94			70-130	Pass	
o-Xylene	%	95			70-130	Pass	
Xylenes - Total	%	94			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	97			70-130	Pass	
TRH C6-C10	%	90			70-130	Pass	
TRH >C10-C16	%	80			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	114			70-130	Pass	
Acenaphthylene	%	116			70-130	Pass	
Anthracene	%	114			70-130	Pass	
Benz(a)anthracene	%	119			70-130	Pass	
Benzo(a)pyrene	%	111			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	98	70-130	Pass			
Benzo(g,h,i)perylene	%	100	70-130	Pass			
Benzo(k)fluoranthene	%	110	70-130	Pass			
Chrysene	%	114	70-130	Pass			
Dibenz(a,h)anthracene	%	113	70-130	Pass			
Fluoranthene	%	123	70-130	Pass			
Fluorene	%	115	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	110	70-130	Pass			
Naphthalene	%	119	70-130	Pass			
Phenanthrene	%	106	70-130	Pass			
Pyrene	%	123	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	71	70-130	Pass			
4,4'-DDD	%	84	70-130	Pass			
4,4'-DDE	%	71	70-130	Pass			
4,4'-DDT	%	80	70-130	Pass			
a-BHC	%	72	70-130	Pass			
Aldrin	%	71	70-130	Pass			
b-BHC	%	71	70-130	Pass			
d-BHC	%	71	70-130	Pass			
Dieldrin	%	74	70-130	Pass			
Endosulfan I	%	74	70-130	Pass			
Endosulfan II	%	71	70-130	Pass			
Endosulfan sulphate	%	86	70-130	Pass			
Endrin	%	70	70-130	Pass			
Endrin aldehyde	%	76	70-130	Pass			
Endrin ketone	%	73	70-130	Pass			
g-BHC (Lindane)	%	72	70-130	Pass			
Heptachlor	%	71	70-130	Pass			
Heptachlor epoxide	%	71	70-130	Pass			
Hexachlorobenzene	%	86	70-130	Pass			
Methoxychlor	%	72	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	81	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	102	70-130	Pass			
Cadmium	%	99	70-130	Pass			
Chromium	%	102	70-130	Pass			
Copper	%	103	70-130	Pass			
Lead	%	93	70-130	Pass			
Mercury	%	97	70-130	Pass			
Nickel	%	101	70-130	Pass			
Zinc	%	104	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Polycyclic Aromatic Hydrocarbons				Result 1			
Acenaphthene	S14-Ma00181	CP	%	111	70-130	Pass	
Acenaphthylene	S14-Ma00181	CP	%	112	70-130	Pass	
Anthracene	S14-Ma00181	CP	%	110	70-130	Pass	
Benz(a)anthracene	S14-Ma00181	CP	%	116	70-130	Pass	
Benzo(a)pyrene	S14-Ma00181	CP	%	100	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Benzo(b&j)fluoranthene	S14-Ma00181	CP	%	111		70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma00181	CP	%	101		70-130	Pass	
Benzo(k)fluoranthene	S14-Ma00181	CP	%	108		70-130	Pass	
Chrysene	S14-Ma00181	CP	%	110		70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma00181	CP	%	115		70-130	Pass	
Fluoranthene	S14-Ma00181	CP	%	125		70-130	Pass	
Fluorene	S14-Ma00181	CP	%	114		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00181	CP	%	111		70-130	Pass	
Naphthalene	S14-Ma00181	CP	%	115		70-130	Pass	
Phenanthrene	S14-Ma00181	CP	%	110		70-130	Pass	
Pyrene	S14-Ma00181	CP	%	124		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	S14-Ma00181	CP	%	91		70-130	Pass	
Cadmium	S14-Ma00181	CP	%	115		70-130	Pass	
Chromium	S14-Ma00181	CP	%	97		70-130	Pass	
Copper	S14-Ma00181	CP	%	106		70-130	Pass	
Lead	S14-Ma00181	CP	%	92		70-130	Pass	
Mercury	S14-Ma00181	CP	%	116		70-130	Pass	
Nickel	S14-Ma00181	CP	%	102		70-130	Pass	
Zinc	S14-Ma00181	CP	%	103		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S14-Ma00182	CP	%	93		70-130	Pass	
TRH C10-C14	S14-Fe23878	NCP	%	89		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S14-Ma00182	CP	%	102		70-130	Pass	
Toluene	S14-Ma00182	CP	%	98		70-130	Pass	
Ethylbenzene	S14-Ma00182	CP	%	94		70-130	Pass	
m&p-Xylenes	S14-Ma00182	CP	%	95		70-130	Pass	
o-Xylene	S14-Ma00182	CP	%	97		70-130	Pass	
Xylenes - Total	S14-Ma00182	CP	%	96		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S14-Ma00182	CP	%	95		70-130	Pass	
TRH C6-C10	S14-Ma00182	CP	%	91		70-130	Pass	
TRH >C10-C16	S14-Fe23878	NCP	%	93		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	S14-Ma00214	NCP	%	79		70-130	Pass	
4,4'-DDD	S14-Ma00214	NCP	%	107		70-130	Pass	
4,4'-DDE	S14-Ma00214	NCP	%	87		70-130	Pass	
4,4'-DDT	S14-Ma00214	NCP	%	73		70-130	Pass	
a-BHC	S14-Ma00214	NCP	%	76		70-130	Pass	
Aldrin	S14-Ma00214	NCP	%	84		70-130	Pass	
b-BHC	S14-Ma00214	NCP	%	82		70-130	Pass	
d-BHC	S14-Ma00214	NCP	%	82		70-130	Pass	
Dieldrin	S14-Ma00214	NCP	%	79		70-130	Pass	
Endosulfan I	S14-Ma00214	NCP	%	87		70-130	Pass	
Endosulfan II	S14-Ma00214	NCP	%	86		70-130	Pass	
Endosulfan sulphate	S14-Ma00214	NCP	%	81		70-130	Pass	
Endrin	S14-Ma00214	NCP	%	76		70-130	Pass	
Endrin aldehyde	S14-Ma00214	NCP	%	83		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Endrin ketone	S14-Ma00214	NCP	%	71		70-130	Pass	
g-BHC (Lindane)	S14-Ma00214	NCP	%	78		70-130	Pass	
Heptachlor	S14-Ma00214	NCP	%	82		70-130	Pass	
Heptachlor epoxide	S14-Ma00214	NCP	%	77		70-130	Pass	
Hexachlorobenzene	S14-Ma00214	NCP	%	107		70-130	Pass	
Methoxychlor	S14-Ma00214	NCP	%	74		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Ma00191	CP	%	118		70-130	Pass	
Acenaphthylene	S14-Ma00191	CP	%	118		70-130	Pass	
Anthracene	S14-Ma00191	CP	%	111		70-130	Pass	
Benz(a)anthracene	S14-Ma00191	CP	%	127		70-130	Pass	
Benzo(a)pyrene	S14-Ma00191	CP	%	104		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Ma00191	CP	%	126		70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma00191	CP	%	97		70-130	Pass	
Benzo(k)fluoranthene	S14-Ma00191	CP	%	118		70-130	Pass	
Chrysene	S14-Ma00191	CP	%	117		70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma00191	CP	%	116		70-130	Pass	
Fluoranthene	S14-Ma00191	CP	%	125		70-130	Pass	
Fluorene	S14-Ma00191	CP	%	119		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00191	CP	%	111		70-130	Pass	
Naphthalene	S14-Ma00191	CP	%	123		70-130	Pass	
Phenanthrene	S14-Ma00191	CP	%	117		70-130	Pass	
Pyrene	S14-Ma00191	CP	%	117		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	S14-Ma00192	CP	%	93		70-130	Pass	
Cadmium	S14-Ma00192	CP	%	120		70-130	Pass	
Chromium	S14-Ma00192	CP	%	105		70-130	Pass	
Copper	S14-Ma00192	CP	%	97		70-130	Pass	
Mercury	S14-Ma00192	CP	%	109		70-130	Pass	
Nickel	S14-Ma00192	CP	%	111		70-130	Pass	
Zinc	S14-Ma00192	CP	%	104		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Ma00204	CP	%	113		70-130	Pass	
Acenaphthylene	S14-Ma00204	CP	%	113		70-130	Pass	
Anthracene	S14-Ma00204	CP	%	105		70-130	Pass	
Benz(a)anthracene	S14-Ma00204	CP	%	122		70-130	Pass	
Benzo(a)pyrene	S14-Ma00204	CP	%	105		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Ma00204	CP	%	98		70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma00204	CP	%	101		70-130	Pass	
Benzo(k)fluoranthene	S14-Ma00204	CP	%	97		70-130	Pass	
Chrysene	S14-Ma00204	CP	%	114		70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma00204	CP	%	116		70-130	Pass	
Fluoranthene	S14-Ma00204	CP	%	128		70-130	Pass	
Fluorene	S14-Ma00204	CP	%	115		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00204	CP	%	113		70-130	Pass	
Naphthalene	S14-Ma00204	CP	%	118		70-130	Pass	
Phenanthrene	S14-Ma00204	CP	%	111		70-130	Pass	
Pyrene	S14-Ma00204	CP	%	126		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Ma00181	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Ma00181	CP	mg/kg	16	20	26	30%	Pass	
Cadmium	S14-Ma00181	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S14-Ma00181	CP	mg/kg	37	36	3.0	30%	Pass	
Copper	S14-Ma00181	CP	mg/kg	10	10	3.0	30%	Pass	
Lead	S14-Ma00181	CP	mg/kg	19	19	2.0	30%	Pass	
Mercury	S14-Ma00181	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Nickel	S14-Ma00181	CP	mg/kg	6.5	6.9	6.0	30%	Pass	
Zinc	S14-Ma00181	CP	mg/kg	30	26	13	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Ma00182	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S14-Fe23878	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S14-Fe23878	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S14-Fe23878	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Ma00182	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-Ma00182	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-Ma00182	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-Ma00182	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-Ma00182	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-Ma00182	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Ma00182	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-Ma00182	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Ma00182	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S14-Fe23878	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S14-Fe23878	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S14-Fe23878	NCP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S14-Ma00214	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S14-Ma00214	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S14-Ma00214	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S14-Ma00214	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Ma00214	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S14-Ma00214	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S14-Ma00214	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S14-Ma00214	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S14-Ma00214	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S14-Ma00214	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S14-Ma00191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Ma00192	CP	mg/kg	14	14	3.0	30%	Pass
Cadmium	S14-Ma00192	CP	mg/kg	1.9	2.1	11	30%	Pass
Chromium	S14-Ma00192	CP	mg/kg	23	24	6.0	30%	Pass
Copper	S14-Ma00192	CP	mg/kg	19	18	8.0	30%	Pass
Lead	S14-Ma00192	CP	mg/kg	160	140	11	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Mercury	S14-Ma00192	CP	mg/kg	0.09	0.08	15	30%	Pass
Nickel	S14-Ma00192	CP	mg/kg	13	12	3.0	30%	Pass
Zinc	S14-Ma00192	CP	mg/kg	140	130	5.0	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S14-Ma00204	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: ADDITIONAL : RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Mar 2, 2014 11:50 AM
Eurofins | mgt reference: **410351**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 3 degrees Celsius.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- Organic samples had Teflon liners.
- Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Additional from report 409205 | Asbestos conducted at ASET | Bag was not received for sample P04-L02:0.0-0.1, thus asbestos cancelled | Sample P17-SP01A-C not received in the original report, analysis cancelled

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Comments

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference:ASET37733/40913/1-2

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

~~Final report - this Report replaces any previously issued Report~~

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.



Our ref : ASET37731/ 40911 / 1 - 4

Your ref :410357

NATA Accreditation No: 14484

7 March 2014

Eurofins MGT
Unit F3, Building F, 16, Mars Road
Lane Cove
NSW 2066



Attn: Dr Robert Symons

Dear Robert

Asbestos Identification

This report presents the results of four samples, forwarded by Eurofins MGT on 5 March 2014, for analysis for asbestos.

1.Introduction:Four samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1 and Australian Guidelines AS 4964 - 2004 and WA/ NEPM Guidelines**)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia Guidelines for the Assessment Remediation and Management of Asbestos contaminated sites in Western Australia.

3. Results : **Sample No. 1. ASET37731/ 40911/ 1. 410357 - P24 - L01 - 0.0 - 0.1 - Ma00214.**
Approx dimensions 10.0 cm x 10.0 cm x 5.65 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 2. ASET37731/ 40911/ 2. 410357 - P27 - L01 - 0.0 - 0.1 - Ma00222.
Approx dimensions 10.0 cm x 10.0 cm x 5.25 cm
The sample consisted of a mixture of clayish sandy soil, stones and plant matter.
No asbestos detected.

Sample No. 3. ASET37731/ 40911/ 3. 410357 - P09 - L01 - 0.0 - 0.1 - Ma00224.
Approx dimensions 10.0 cm x 10.0 cm x 5.65 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, paint flakes and bitumen.
No asbestos detected.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

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ASBESTOS DETECTION & IDENTIFICATION • REPAIR & CALIBRATION OF SCIENTIFIC EQUIPMENT • AIRBORNE FIBRE & SILICA MONITORING



Sample No. 4. ASET37731 / 40911 / 4. 410357 - P12 - L01 - 0.2 - 0.3 - Ma00230.
Approx dimensions 10.0 cm x 10.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Analysed and reported by,



**Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory**

Accredited for compliance with ISO/IEC 17025.

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation covers only the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

^ denotes loose fibres of relevant asbestos types detected in soil/dust.

*** denotes asbestos detected in ACM in bonded form.**

denotes AF.

All samples indicating "No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 410357-S
 Client Reference ADDITIONAL : RIVERSTONE 43210
 Received Date Mar 02, 2014

Client Sample ID			P24-L01:0-0.1	P24-L02:0.2-0.3	P25-L02:0-0.1	P25-L02:0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00213	S14-Ma00214	S14-Ma00215	S14-Ma00216
Date Sampled			Feb 19, 2014	Feb 19, 2014	Feb 19, 2014	Feb 19, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	< 50	-	-
TRH C10-36 (Total)	50	mg/kg	-	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	101	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	< 100	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P24-L01:0-0.1	P24-L02:0.2-0.3	P25-L02:0-0.1	P25-L02:0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00213	S14-Ma00214	S14-Ma00215	S14-Ma00216
Date Sampled			Feb 19, 2014	Feb 19, 2014	Feb 19, 2014	Feb 19, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	95	95	99	96
p-Terphenyl-d14 (surr.)	1	%	111	113	118	113
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	1	mg/kg	-	< 1	-	-
Dibutylchloroendate (surr.)	1	%	-	96	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	77	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB	0.5	mg/kg	-	< 0.5	-	-
Dibutylchloroendate (surr.)	1	%	-	96	-	-
Heavy Metals						
Arsenic	2	mg/kg	9.0	66	21	18
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	8.0	100	27	22
Copper	5	mg/kg	8.1	13	12	9.8
Lead	5	mg/kg	160	15	15	11
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	5.7	< 5	< 5	< 5
Zinc	5	mg/kg	83	18	17	11

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P24-L01:0-0.1 Soil S14-Ma00213 Feb 19, 2014	P24-L02:0.2-0.3 Soil S14-Ma00214 Feb 19, 2014	P25-L02:0-0.1 Soil S14-Ma00215 Feb 19, 2014	P25-L02:0.2-0.3 Soil S14-Ma00216 Feb 19, 2014
% Moisture	0.1	%	13	21	16	18
Asbestos (% weight as per WA Guidelines)			-	see attached	-	-

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P26-L02:0-0.1 Soil S14-Ma00217 Feb 19, 2014	P26-L01:0-0.1 Soil S14-Ma00220 Feb 19, 2014	P26-L01:0.2-0.3 Soil S14-Ma00221 Feb 19, 2014	P27-L01:0-0.1 Soil S14-Ma00222 Feb 19, 2014
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	< 20
TRH C10-C14	20	mg/kg	-	31	-	< 20
TRH C15-C28	50	mg/kg	-	89	-	< 50
TRH C29-C36	50	mg/kg	-	170	-	110
TRH C10-36 (Total)	50	mg/kg	-	290	-	110
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	110	-	117
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-	< 20
TRH >C10-C16	50	mg/kg	-	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-	< 50
TRH >C16-C34	100	mg/kg	-	240	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100	-	110
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-

Client Sample ID			P26-L02:0-0.1 Soil	P26-L01:0-0.1 Soil	P26-L01:0.2-0.3 Soil	P27-L01:0-0.1 Soil
Sample Matrix			S14-Ma00217	S14-Ma00220	S14-Ma00221	S14-Ma00222
Eurofins mgt Sample No.			Feb 19, 2014	Feb 19, 2014	Feb 19, 2014	Feb 19, 2014
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Total PAH	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	-	0.6	-
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	-	1.2	-
2-Fluorobiphenyl (surr.)	1	%	96	-	112	-
p-Terphenyl-d14 (surr.)	1	%	115	-	119	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2	-	< 0.2
Toxaphene	1	mg/kg	-	< 1	-	< 1
Dibutylchlorendate (surr.)	1	%	-	103	-	116
Tetrachloro-m-xylene (surr.)	1	%	-	82	-	78
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	< 0.5
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	< 0.5
Total PCB	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	103	-	116
Heavy Metals						
Arsenic	2	mg/kg	19	-	17	-
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	-
Chromium	5	mg/kg	36	-	51	-
Copper	5	mg/kg	8.9	-	11	-
Lead	5	mg/kg	34	-	49	-
Mercury	0.05	mg/kg	0.06	-	< 0.05	-
Nickel	5	mg/kg	7.2	-	6.5	-
Zinc	5	mg/kg	73	-	61	-

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P26-L02:0-0.1 Soil S14-Ma00217 Feb 19, 2014	P26-L01:0-0.1 Soil S14-Ma00220 Feb 19, 2014	P26-L01:0.2-0.3 Soil S14-Ma00221 Feb 19, 2014	P27-L01:0-0.1 Soil S14-Ma00222 Feb 19, 2014
% Moisture	0.1	%	9.1	16	9.4	8.3
Asbestos (% weight as per WA Guidelines)			-	-	-	see attached

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P27-L02:0-0.1 Soil S14-Ma00223 Feb 19, 2014	P09-L01:0-0.1 Soil S14-Ma00224 Feb 19, 2014	P09-L02:0-0.1 Soil S14-Ma00225 Feb 19, 2014	P09-L03:0-0.1 Soil S14-Ma00226 Feb 19, 2014
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	69	-	-
TRH C10-36 (Total)	50	mg/kg	-	69	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	114	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	< 100	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Comments						G01
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 5

Client Sample ID			P27-L02:0-0.1	P09-L01:0-0.1	P09-L02:0-0.1	P09-L03:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00223	S14-Ma00224	S14-Ma00225	S14-Ma00226
Date Sampled			Feb 19, 2014	Feb 19, 2014	Feb 19, 2014	Feb 19, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Total PAH	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	-	< 0.5	< 5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	-	0.6	6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	-	1.2	12
2-Fluorobiphenyl (surr.)	1	%	101	-	98	86
p-Terphenyl-d14 (surr.)	1	%	119	-	116	102
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	1	mg/kg	-	< 1	-	-
Dibutylchloroendate (surr.)	1	%	-	108	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	75	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB	0.5	mg/kg	-	< 0.5	-	-
Dibutylchloroendate (surr.)	1	%	-	108	-	-
Heavy Metals						
Arsenic	2	mg/kg	11	-	7.2	5.5
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Chromium	5	mg/kg	35	-	32	11
Copper	5	mg/kg	20	-	25	27
Lead	5	mg/kg	42	-	28	170
Mercury	0.05	mg/kg	< 0.05	-	< 0.05	0.06
Nickel	5	mg/kg	12	-	27	8.5
Zinc	5	mg/kg	62	-	60	120

Client Sample ID			P27-L02:0-0.1	P09-L01:0-0.1	P09-L02:0-0.1	P09-L03:0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00223	S14-Ma00224	S14-Ma00225	S14-Ma00226
Date Sampled			Feb 19, 2014	Feb 19, 2014	Feb 19, 2014	Feb 19, 2014
Test/Reference	LOR	Unit				
% Moisture	0.1	%	12	12	8.7	14
Asbestos (% weight as per WA Guidelines)			-	see attached	-	-

Client Sample ID			P10-L01:0.2-0.3	P10-L02:0-0.1	P12-L01:0-0.1	P12-L01:0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00227	S14-Ma00228	S14-Ma00229	S14-Ma00230
Date Sampled			Feb 19, 2014	Feb 19, 2014	Feb 19, 2014	Feb 19, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	50
TRH C15-C28	50	mg/kg	-	-	-	170
TRH C29-C36	50	mg/kg	-	-	-	640
TRH C10-36 (Total)	50	mg/kg	-	-	-	860
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	110
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	83
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	-	83
TRH >C16-C34	100	mg/kg	-	-	-	610
TRH >C34-C40	100	mg/kg	-	-	-	630
Polycyclic Aromatic Hydrocarbons						
Comments						G01
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5

Client Sample ID			P10-L01:0.2-0.3	P10-L02:0-0.1	P12-L01:0-0.1	P12-L01:0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma00227	S14-Ma00228	S14-Ma00229	S14-Ma00230
Date Sampled			Feb 19, 2014	Feb 19, 2014	Feb 19, 2014	Feb 19, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	12
2-Fluorobiphenyl (surr.)	1	%	100	99	98	96
p-Terphenyl-d14 (surr.)	1	%	117	118	116	115
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.2	mg/kg	-	-	-	< 0.2
Toxaphene	1	mg/kg	-	-	-	< 1
Dibutylchloroendate (surr.)	1	%	-	-	-	78
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	82
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB	0.5	mg/kg	-	-	-	< 0.5
Dibutylchloroendate (surr.)	1	%	-	-	-	78
Heavy Metals						
Arsenic	2	mg/kg	6.6	4.5	12	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	1.6	1.9
Chromium	5	mg/kg	21	9.0	27	33
Copper	5	mg/kg	7.0	16	72	75
Lead	5	mg/kg	28	40	380	370
Mercury	0.05	mg/kg	< 0.05	< 0.05	0.09	0.09
Nickel	5	mg/kg	< 5	< 5	15	16
Zinc	5	mg/kg	39	48	470	500

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P10-L01:0.2-0.3 Soil S14-Ma00227 Feb 19, 2014	P10-L02:0-0.1 Soil S14-Ma00228 Feb 19, 2014	P12-L01:0-0.1 Soil S14-Ma00229 Feb 19, 2014	P12-L01:0.2-0.3 Soil S14-Ma00230 Feb 19, 2014
% Moisture	0.1	%	13	15	7.6	11
Asbestos (% weight as per WA Guidelines)			-	-	-	see attached

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P13-L02:0-0.1 Soil S14-Ma00231 Feb 19, 2014
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2
2-Fluorobiphenyl (surr.)	1	%	99
p-Terphenyl-d14 (surr.)	1	%	118
Heavy Metals			
Arsenic	2	mg/kg	16
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	31
Copper	5	mg/kg	12
Lead	5	mg/kg	37
Mercury	0.05	mg/kg	0.07
Nickel	5	mg/kg	5.6
Zinc	5	mg/kg	160
% Moisture	0.1	%	12

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Mar 07, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Mar 07, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Mar 06, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Mar 07, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Mar 06, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Mar 06, 2014	28 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Mar 06, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Mar 06, 2014	28 Day

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 3-5 Kingston Town Close
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 MATA # 1261
 Site # 1254 & 14271

Sydney
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 NATA # 1261 Site # 18217

Brisbane
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 Murrarie QLD 4172
 Phone : +61 7 3802 4600
 NATA # 1261 Site # 20794

ABN - 50 005 085 521 e.mail - EnviroSales@eurofins.com.au web - www.eurofins.com.au

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: ADDITIONAL : RIVERSTONE 43210

Order No.: 410357
Report #: 02 8245 0300
Phone:
Fax:

Received: Mar 2, 2014 11:50 AM
Due: Mar 10, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	% Moisture	Asbestos (% weight as per WA Guidelines)	CANCELLED	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted													
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217													
Brisbane Laboratory - NATA Site # 20794													
External Laboratory													
P24-L01:0-0.1	Feb 19, 2014		Soil	S14-Ma00213	X			X		X			
P24-L02:0-0.3	Feb 19, 2014		Soil	S14-Ma00214	X			X		X			X
P25-L02:0-0.1	Feb 19, 2014		Soil	S14-Ma00215	X			X		X			
P25-L02:0-0.3	Feb 19, 2014		Soil	S14-Ma00216	X			X		X			
P26-L02:0-0.1	Feb 19, 2014		Soil	S14-Ma00217	X			X		X			
P26-L02:0-0.3	Feb 19, 2014		Soil	S14-Ma00218			X						
P26-L01:0-0.1	Feb 19, 2014		Soil	S14-Ma00220	X				X			X	X
P26-L01:0-0.2	Feb 19, 2014		Soil	S14-Ma00221	X			X		X			

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 NATA # 1261 Site # 18217

Brisbane
 1/21 Sharnwood Place
 Murrarie QLD 4172
 Phone : +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: ADDITIONAL : RIVERSTONE 43210

Order No.: 410357
Report #: 02 8245 0300
Phone:
Fax:

Received: Mar 2, 2014 11:50 AM
Due: Mar 10, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail		% Moisture	Asbestos (% weight as per WA Guidelines)	CANCELLED	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
External Laboratory										
0.3			X							
P27-L01:0-0.1	Feb 19, 2014	Soil	S14-Ma00222	X		X		X	X	X
P27-L02:0-0.1	Feb 19, 2014	Soil	S14-Ma00223	X	X		X		X	X
P09-L01:0-0.1	Feb 19, 2014	Soil	S14-Ma00224	X		X		X	X	X
P09-L02:0-0.1	Feb 19, 2014	Soil	S14-Ma00225	X	X		X			
P09-L03:0-0.1	Feb 19, 2014	Soil	S14-Ma00226	X	X		X			
P10-L01:0.2-0.3	Feb 19, 2014	Soil	S14-Ma00227	X	X		X			
P10-L02:0-0.1	Feb 19, 2014	Soil	S14-Ma00228	X	X		X			
P12-L01:0-0.1	Feb 19, 2014	Soil	S14-Ma00229	X	X		X			
P12-L01:0.2-0.3	Feb 19, 2014	Soil	S14-Ma00230	X	X		X		X	X

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 Site # 1254 & 14271

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 NATA # 1261 Site # 18217

Brisbane
 1721 Smallwood Place
 Murraine QLD 4172
 Phone : +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: ADDITIONAL : RIVERSTONE 43210

Order No.: 410357
Report #: 02 8245 0300
Phone:
Fax:

Received: Mar 2, 2014 11:50 AM
Due: Mar 10, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail	
Laboratory where analysis is conducted	
Melbourne Laboratory - NATA Site # 1254 & 14271	
Sydney Laboratory - NATA Site # 18217	X
Brisbane Laboratory - NATA Site # 20794	
External Laboratory	
P13-L02:0-0.1	Feb 19, 2014
	Soil
	S14-Ma00231
Total Recoverable Hydrocarbons	
Polychlorinated Biphenyls (PCB)	
BTEX	
Metals M8	X
Organochlorine Pesticides	X
Polycyclic Aromatic Hydrocarbons	X
CANCELLED	X
Asbestos (% weight as per WA Guidelines)	X
% Moisture	X

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.02			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05		0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05		0.05	Pass	
Endrin	mg/kg	< 0.05		0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05		0.05	Pass	
Endrin ketone	mg/kg	< 0.05		0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05		0.05	Pass	
Heptachlor	mg/kg	< 0.05		0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05		0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05		0.05	Pass	
Methoxychlor	mg/kg	< 0.2		0.2	Pass	
Toxaphene	mg/kg	< 1		1	Pass	
Method Blank						
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	mg/kg	< 0.5		0.5	Pass	
Aroclor-1232	mg/kg	< 0.5		0.5	Pass	
Aroclor-1242	mg/kg	< 0.5		0.5	Pass	
Aroclor-1248	mg/kg	< 0.5		0.5	Pass	
Aroclor-1254	mg/kg	< 0.5		0.5	Pass	
Aroclor-1260	mg/kg	< 0.5		0.5	Pass	
Total PCB	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Heavy Metals						
Arsenic	mg/kg	< 2		2	Pass	
Cadmium	mg/kg	< 0.4		0.4	Pass	
Chromium	mg/kg	< 5		5	Pass	
Copper	mg/kg	< 5		5	Pass	
Lead	mg/kg	< 5		5	Pass	
Mercury	mg/kg	< 0.05		0.05	Pass	
Nickel	mg/kg	< 5		5	Pass	
Zinc	mg/kg	< 5		5	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	%	90		70-130	Pass	
TRH C10-C14	%	78		70-130	Pass	
LCS - % Recovery						
BTEX						
Benzene	%	101		70-130	Pass	
Toluene	%	94		70-130	Pass	
Ethylbenzene	%	92		70-130	Pass	
m&p-Xylenes	%	94		70-130	Pass	
o-Xylene	%	95		70-130	Pass	
Xylenes - Total	%	94		70-130	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	%	97		70-130	Pass	
TRH C6-C10	%	90		70-130	Pass	
TRH >C10-C16	%	86		70-130	Pass	
LCS - % Recovery						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	%	114		70-130	Pass	
Acenaphthylene	%	114		70-130	Pass	
Anthracene	%	112		70-130	Pass	
Benz(a)anthracene	%	119		70-130	Pass	
Benzo(a)pyrene	%	110		70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	125	70-130	Pass			
Benzo(g,h,i)perylene	%	108	70-130	Pass			
Benzo(k)fluoranthene	%	99	70-130	Pass			
Chrysene	%	114	70-130	Pass			
Dibenz(a,h)anthracene	%	116	70-130	Pass			
Fluoranthene	%	123	70-130	Pass			
Fluorene	%	114	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	115	70-130	Pass			
Naphthalene	%	115	70-130	Pass			
Phenanthrene	%	109	70-130	Pass			
Pyrene	%	124	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	71	70-130	Pass			
4,4'-DDD	%	84	70-130	Pass			
4,4'-DDE	%	71	70-130	Pass			
4,4'-DDT	%	80	70-130	Pass			
a-BHC	%	72	70-130	Pass			
Aldrin	%	71	70-130	Pass			
b-BHC	%	71	70-130	Pass			
d-BHC	%	71	70-130	Pass			
Dieldrin	%	74	70-130	Pass			
Endosulfan I	%	74	70-130	Pass			
Endosulfan II	%	71	70-130	Pass			
Endosulfan sulphate	%	86	70-130	Pass			
Endrin	%	70	70-130	Pass			
Endrin aldehyde	%	76	70-130	Pass			
Endrin ketone	%	73	70-130	Pass			
g-BHC (Lindane)	%	72	70-130	Pass			
Heptachlor	%	71	70-130	Pass			
Heptachlor epoxide	%	71	70-130	Pass			
Hexachlorobenzene	%	86	70-130	Pass			
Methoxychlor	%	72	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	81	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	91	70-130	Pass			
Cadmium	%	92	70-130	Pass			
Chromium	%	88	70-130	Pass			
Copper	%	96	70-130	Pass			
Lead	%	87	70-130	Pass			
Mercury	%	95	70-130	Pass			
Nickel	%	76	70-130	Pass			
Zinc	%	95	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Polycyclic Aromatic Hydrocarbons				Result 1			
Acenaphthene	S14-Ma00213	CP	%	105	70-130	Pass	
Acenaphthylene	S14-Ma00213	CP	%	108	70-130	Pass	
Anthracene	S14-Ma00213	CP	%	98	70-130	Pass	
Benz(a)anthracene	S14-Ma00213	CP	%	111	70-130	Pass	
Benzo(a)pyrene	S14-Ma00213	CP	%	93	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Benzo(b&j)fluoranthene	S14-Ma00213	CP	%	118		70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma00213	CP	%	101		70-130	Pass	
Benzo(k)fluoranthene	S14-Ma00213	CP	%	103		70-130	Pass	
Chrysene	S14-Ma00213	CP	%	106		70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma00213	CP	%	112		70-130	Pass	
Fluoranthene	S14-Ma00213	CP	%	120		70-130	Pass	
Fluorene	S14-Ma00213	CP	%	107		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00213	CP	%	108		70-130	Pass	
Naphthalene	S14-Ma00213	CP	%	111		70-130	Pass	
Phenanthrene	S14-Ma00213	CP	%	103		70-130	Pass	
Pyrene	S14-Ma00213	CP	%	120		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	S14-Ma00213	CP	%	98		70-130	Pass	
Cadmium	S14-Ma00213	CP	%	107		70-130	Pass	
Chromium	S14-Ma00213	CP	%	110		70-130	Pass	
Copper	S14-Ma00213	CP	%	108		70-130	Pass	
Lead	S14-Ma00213	CP	%	87		70-130	Pass	
Mercury	S14-Ma00213	CP	%	115		70-130	Pass	
Nickel	S14-Ma00213	CP	%	104		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S14-Ma00214	CP	%	87		70-130	Pass	
TRH C10-C14	S14-Ma01056	NCP	%	85		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S14-Ma00214	CP	%	97		70-130	Pass	
Toluene	S14-Ma00214	CP	%	92		70-130	Pass	
Ethylbenzene	S14-Ma00214	CP	%	90		70-130	Pass	
m&p-Xylenes	S14-Ma00214	CP	%	92		70-130	Pass	
o-Xylene	S14-Ma00214	CP	%	93		70-130	Pass	
Xylenes - Total	S14-Ma00214	CP	%	92		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S14-Ma00214	CP	%	84		70-130	Pass	
TRH C6-C10	S14-Ma00214	CP	%	87		70-130	Pass	
TRH >C10-C16	S14-Ma01056	NCP	%	95		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	S14-Ma00214	CP	%	79		70-130	Pass	
4,4'-DDD	S14-Ma00214	CP	%	107		70-130	Pass	
4,4'-DDE	S14-Ma00214	CP	%	87		70-130	Pass	
4,4'-DDT	S14-Ma00214	CP	%	73		70-130	Pass	
a-BHC	S14-Ma00214	CP	%	76		70-130	Pass	
Aldrin	S14-Ma00214	CP	%	84		70-130	Pass	
b-BHC	S14-Ma00214	CP	%	82		70-130	Pass	
d-BHC	S14-Ma00214	CP	%	82		70-130	Pass	
Dieldrin	S14-Ma00214	CP	%	79		70-130	Pass	
Endosulfan I	S14-Ma00214	CP	%	87		70-130	Pass	
Endosulfan II	S14-Ma00214	CP	%	86		70-130	Pass	
Endosulfan sulphate	S14-Ma00214	CP	%	81		70-130	Pass	
Endrin	S14-Ma00214	CP	%	76		70-130	Pass	
Endrin aldehyde	S14-Ma00214	CP	%	83		70-130	Pass	
Endrin ketone	S14-Ma00214	CP	%	71		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
g-BHC (Lindane)	S14-Ma00214	CP	%	78			70-130	Pass	
Heptachlor	S14-Ma00214	CP	%	82			70-130	Pass	
Heptachlor epoxide	S14-Ma00214	CP	%	77			70-130	Pass	
Hexachlorobenzene	S14-Ma00214	CP	%	107			70-130	Pass	
Methoxychlor	S14-Ma00214	CP	%	74			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S14-Ma00225	CP	%	112			70-130	Pass	
Acenaphthylene	S14-Ma00225	CP	%	114			70-130	Pass	
Anthracene	S14-Ma00225	CP	%	110			70-130	Pass	
Benz(a)anthracene	S14-Ma00225	CP	%	120			70-130	Pass	
Benzo(a)pyrene	S14-Ma00225	CP	%	115			70-130	Pass	
Benzo(b&j)fluoranthene	S14-Ma00225	CP	%	129			70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma00225	CP	%	117			70-130	Pass	
Benzo(k)fluoranthene	S14-Ma00225	CP	%	119			70-130	Pass	
Chrysene	S14-Ma00225	CP	%	116			70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma00225	CP	%	117			70-130	Pass	
Fluoranthene	S14-Ma00225	CP	%	130			70-130	Pass	
Fluorene	S14-Ma00225	CP	%	114			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00225	CP	%	123			70-130	Pass	
Naphthalene	S14-Ma00225	CP	%	117			70-130	Pass	
Phenanthrene	S14-Ma00225	CP	%	109			70-130	Pass	
Pyrene	S14-Ma00225	CP	%	130			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Ma00228	CP	%	120			70-130	Pass	
Cadmium	S14-Ma00228	CP	%	100			70-130	Pass	
Chromium	S14-Ma00228	CP	%	130			70-130	Pass	
Copper	S14-Ma00228	CP	%	123			70-130	Pass	
Lead	S14-Ma00228	CP	%	111			70-130	Pass	
Mercury	S14-Ma00228	CP	%	117			70-130	Pass	
Nickel	S14-Ma00228	CP	%	112			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-Ma00213	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Ma00213	CP	mg/kg	9.0	8.6	5.0	30%	Pass
Cadmium	S14-Ma00213	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S14-Ma00213	CP	mg/kg	8.0	13	50	30%	Fail
Copper	S14-Ma00213	CP	mg/kg	8.1	8.3	3.0	30%	Pass
Lead	S14-Ma00213	CP	mg/kg	160	160	6.0	30%	Pass
Mercury	S14-Ma00213	CP	mg/kg	< 0.05	0.05	11	30%	Pass
Nickel	S14-Ma00213	CP	mg/kg	5.7	6.2	9.0	30%	Pass
Zinc	S14-Ma00213	CP	mg/kg	83	96	15	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	S14-Ma00214	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C10-C14	S14-Ma01056	NCP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	S14-Ma01056	NCP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	S14-Ma01056	NCP	mg/kg	< 50	< 50	<1	30%	Pass
Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	S14-Ma00214	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	S14-Ma00214	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	S14-Ma00214	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	S14-Ma00214	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	S14-Ma00214	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total	S14-Ma00214	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S14-Ma00214	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	S14-Ma00214	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C6-C10 less BTEX (F1)	S14-Ma00214	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	S14-Ma01056	NCP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S14-Ma01056	NCP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S14-Ma01056	NCP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S14-Ma00214	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S14-Ma00214	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S14-Ma00214	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S14-Ma00214	CP	mg/kg	< 1	< 1	<1	30%	Pass

Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Ma00214	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S14-Ma00214	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S14-Ma00214	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S14-Ma00214	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S14-Ma00214	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S14-Ma00214	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S14-Ma00225	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Ma00228	CP	mg/kg	4.5	4.6	2.0	30%	Pass
Chromium	S14-Ma00228	CP	mg/kg	9.0	8.2	8.0	30%	Pass
Copper	S14-Ma00228	CP	mg/kg	16	21	28	30%	Pass
Mercury	S14-Ma00228	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Nickel	S14-Ma00228	CP	mg/kg	< 5	< 5	<1	30%	Pass

Comments

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference:ASET37731/40911/1-4

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Reports)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: ADDITIONAL : RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Mar 2, 2014 11:50 AM
Eurofins | mgt reference: **410357**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 13.5 degrees Celsius.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- Organic samples had Teflon liners.
- Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Additional from report 409296 | Asbestos conducted at ASET | Sample P26-L02:0.2-0.3 was not received in the original report, thus analysis cancelled

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Eurofins | mgt Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis
NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience





Our ref: ASET37793/ 40973 / 1 - 1
Your ref: 410987
NATA Accreditation No: 14484

11 March 2014

Eurofins | mgt
Unit F3, 16 Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons

Dear Robert

Asbestos Identification

This report presents the results of one sample, forwarded by Eurofins | mgt on 7 March 2014, for analysis for asbestos.

1.Introduction:One sample forwarded was examined and analysed for the presence of asbestos.

2. Methods : The sample was examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1 and Australian Standards AS 4964 - 2004 and WA/ NEPM Guidelines**)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia/ NEPM Guidelines for the Assessment Remediation and Management of Asbestos in contaminated sites.

3. Results : **Sample No. 1. ASET37793 / 40973 / 1. P21-L02 - 0-0.1 - Ma04703.**
Approx dimensions 15.0 cm x 15.0 cm x 6.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and brick like material.
No asbestos detected.

Analysed and reported by,

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier
Approved Signatory



Accredited for compliance with ISO/IEC 17025.

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation only covers the qualitative part of the results reported.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

OCCUPATIONAL HEALTH & SAFETY STUDIES • INDOOR AIR QUALITY SURVEYS • HAZARDOUS MATERIAL SURVEYS • RADIATION SURVEYS • ASBESTOS SURVEYS
ASBESTOS DETECTION & IDENTIFICATION • REPAIR & CALIBRATION OF SCIENTIFIC EQUIPMENT • AIRBORNE FIBRE & SILICA MONITORING



ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

All samples indicating "No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 410987-S
 Client Reference RIVERSTONE 43210
 Received Date Mar 06, 2014

Client Sample ID			P21-L01: 0-0.1 Soil	P21-L02: 0-0.1 Soil	P21-L03: 0-0.1 Soil
Sample Matrix			S14-Ma04702	S14-Ma04703	S14-Ma04704
Eurofins mgt Sample No.			Mar 06, 2014	Mar 06, 2014	Mar 06, 2014
Date Sampled					
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	-	< 20	-
TRH C10-C14	20	mg/kg	-	< 20	-
TRH C15-C28	50	mg/kg	-	78	-
TRH C29-C36	50	mg/kg	-	200	-
TRH C10-36 (Total)	50	mg/kg	-	280	-
BTEX					
Benzene	0.1	mg/kg	-	< 0.1	-
Toluene	0.1	mg/kg	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	107	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-
TRH >C10-C16	50	mg/kg	-	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-
TRH >C16-C34	100	mg/kg	-	220	-
TRH >C34-C40	100	mg/kg	-	< 100	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			P21-L01: 0-0.1	P21-L02: 0-0.1	P21-L03: 0-0.1
Sample Matrix			Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma04702	S14-Ma04703	S14-Ma04704
Date Sampled			Mar 06, 2014	Mar 06, 2014	Mar 06, 2014
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	96	98	94
p-Terphenyl-d14 (surr.)	1	%	111	114	110
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-
a-BHC	0.05	mg/kg	-	< 0.05	-
Aldrin	0.05	mg/kg	-	< 0.05	-
b-BHC	0.05	mg/kg	-	< 0.05	-
d-BHC	0.05	mg/kg	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-
Endrin	0.05	mg/kg	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-
Toxaphene	1	mg/kg	-	< 1	-
Dibutylchloredate (surr.)	1	%	-	128	-
Tetrachloro-m-xylene (surr.)	1	%	-	121	-
Polychlorinated Biphenyls (PCB)					
Aroclor-1016	0.5	mg/kg	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-
Total PCB	0.5	mg/kg	-	< 0.5	-
Dibutylchloredate (surr.)	1	%	-	128	-
Heavy Metals					
Arsenic	2	mg/kg	3.9	6.0	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.4
Chromium	5	mg/kg	9.5	19	27
Copper	5	mg/kg	22	24	36
Lead	5	mg/kg	100	28	330
Mercury	0.05	mg/kg	< 0.05	0.07	0.17
Nickel	5	mg/kg	< 5	19	7.0
Zinc	5	mg/kg	50	81	600

Client Sample ID			P21-L01: 0-0.1	P21-L02: 0-0.1	P21-L03: 0-0.1
Sample Matrix			Soil	Soil	Soil
Eurofins mgt Sample No.			S14-Ma04702	S14-Ma04703	S14-Ma04704
Date Sampled			Mar 06, 2014	Mar 06, 2014	Mar 06, 2014
Test/Reference	LOR	Unit			
% Moisture	0.1	%	21	29	20
Asbestos (% weight as per WA Guidelines)			-	see attached	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Mar 07, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Mar 07, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Mar 07, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Mar 07, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Mar 07, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Mar 07, 2014	28 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Mar 07, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Mar 07, 2014	28 Day

Melbourne
 3-5 Kingston Town Close
 Oakleigh VIC 3166
 Phone: +61 3 8584 5000
 MATA # 126
 Site # 1254 & 14271

Sydney
 Unit F6, Building F
 16 Mars Road,
 Lane Cove West NSW 2066
 Phone: +61 2 9500 8400
 NATA # 1261 Site # 18217

Brisbane
 1/21 Stralwood Place
 Murrarie QLD 4172
 Phone: +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 410987
Report #: 02 8245 0300
Phone:
Fax:

Received: Mar 6, 2014 3:11 PM
Due: Mar 13, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted													
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217													
Brisbane Laboratory - NATA Site # 20794													
External Laboratory													
P21-L01: 0-0.1	Mar 06, 2014		Soil	S14-Ma04702				X	X	X			
P21-L02: 0-0.1	Mar 06, 2014		Soil	S14-Ma04703				X	X	X			
P21-L03: 0-0.1	Mar 06, 2014		Soil	S14-Ma04704				X	X	X			
RINSATE	Mar 06, 2014		Water	S14-Ma04705				X	X	X			
TS	Mar 06, 2014		Water	S14-Ma04706							X		
TB	Mar 06, 2014		Water	S14-Ma04707							X		

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	103			70-130	Pass	
TRH C10-C14	%	78			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	109			70-130	Pass	
Toluene	%	104			70-130	Pass	
Ethylbenzene	%	104			70-130	Pass	
m&p-Xylenes	%	105			70-130	Pass	
o-Xylene	%	104			70-130	Pass	
Xylenes - Total	%	105			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	73			70-130	Pass	
TRH C6-C10	%	105			70-130	Pass	
TRH >C10-C16	%	86			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	111			70-130	Pass	
Acenaphthylene	%	113			70-130	Pass	
Anthracene	%	116			70-130	Pass	
Benz(a)anthracene	%	129			70-130	Pass	
Benzo(a)pyrene	%	107			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	101	70-130	Pass			
Benzo(g,h,i)perylene	%	101	70-130	Pass			
Benzo(k)fluoranthene	%	125	70-130	Pass			
Chrysene	%	115	70-130	Pass			
Dibenz(a,h)anthracene	%	112	70-130	Pass			
Fluoranthene	%	107	70-130	Pass			
Fluorene	%	113	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	110	70-130	Pass			
Naphthalene	%	118	70-130	Pass			
Phenanthrene	%	109	70-130	Pass			
Pyrene	%	126	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	89	70-130	Pass			
4,4'-DDD	%	80	70-130	Pass			
4,4'-DDE	%	97	70-130	Pass			
4,4'-DDT	%	83	70-130	Pass			
a-BHC	%	80	70-130	Pass			
Aldrin	%	95	70-130	Pass			
b-BHC	%	73	70-130	Pass			
d-BHC	%	86	70-130	Pass			
Dieldrin	%	90	70-130	Pass			
Endosulfan I	%	97	70-130	Pass			
Endosulfan II	%	90	70-130	Pass			
Endosulfan sulphate	%	91	70-130	Pass			
Endrin	%	81	70-130	Pass			
Endrin aldehyde	%	86	70-130	Pass			
Endrin ketone	%	84	70-130	Pass			
g-BHC (Lindane)	%	83	70-130	Pass			
Heptachlor	%	79	70-130	Pass			
Heptachlor epoxide	%	88	70-130	Pass			
Hexachlorobenzene	%	102	70-130	Pass			
Methoxychlor	%	88	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	94	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	94	70-130	Pass			
Cadmium	%	93	70-130	Pass			
Chromium	%	100	70-130	Pass			
Copper	%	96	70-130	Pass			
Lead	%	89	70-130	Pass			
Mercury	%	84	70-130	Pass			
Nickel	%	95	70-130	Pass			
Zinc	%	93	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Heavy Metals				Result 1			
Arsenic	S14-Ma04773	NCP	%	117	70-130	Pass	
Cadmium	S14-Ma01980	NCP	%	118	70-130	Pass	
Chromium	S14-Ma04773	NCP	%	128	70-130	Pass	
Copper	S14-Ma04773	NCP	%	89	70-130	Pass	
Lead	S14-Ma01980	NCP	%	115	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Mercury	S14-Ma01980	NCP	%	100		70-130	Pass	
Nickel	S14-Ma01980	NCP	%	125		70-130	Pass	
Zinc	S14-Ma02009	NCP	%	96		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S14-Ma03162	NCP	%	121		70-130	Pass	
TRH C10-C14	S14-Ma04703	CP	%	95		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S14-Ma03162	NCP	%	130		70-130	Pass	
Toluene	S14-Ma03162	NCP	%	124		70-130	Pass	
Ethylbenzene	S14-Ma03162	NCP	%	122		70-130	Pass	
m&p-Xylenes	S14-Ma03162	NCP	%	124		70-130	Pass	
o-Xylene	S14-Ma03162	NCP	%	123		70-130	Pass	
Xylenes - Total	S14-Ma03162	NCP	%	124		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S14-Ma03162	NCP	%	70		70-130	Pass	
TRH C6-C10	S14-Ma03162	NCP	%	123		70-130	Pass	
TRH >C10-C16	S14-Ma04703	CP	%	110		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-Ma04703	CP	%	112		70-130	Pass	
Acenaphthylene	S14-Ma04703	CP	%	111		70-130	Pass	
Anthracene	S14-Ma04703	CP	%	100		70-130	Pass	
Benz(a)anthracene	S14-Ma04703	CP	%	123		70-130	Pass	
Benzo(a)pyrene	S14-Ma04703	CP	%	102		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Ma04703	CP	%	101		70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma04703	CP	%	102		70-130	Pass	
Benzo(k)fluoranthene	S14-Ma04703	CP	%	122		70-130	Pass	
Chrysene	S14-Ma04703	CP	%	112		70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma04703	CP	%	114		70-130	Pass	
Fluoranthene	S14-Ma04703	CP	%	130		70-130	Pass	
Fluorene	S14-Ma04703	CP	%	112		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma04703	CP	%	110		70-130	Pass	
Naphthalene	S14-Ma04703	CP	%	113		70-130	Pass	
Phenanthrene	S14-Ma04703	CP	%	110		70-130	Pass	
Pyrene	S14-Ma04703	CP	%	123		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	S14-Ma03760	NCP	%	99		70-130	Pass	
4,4'-DDD	S14-Ma03760	NCP	%	122		70-130	Pass	
4,4'-DDE	S14-Ma03760	NCP	%	106		70-130	Pass	
4,4'-DDT	S14-Ma03760	NCP	%	76		70-130	Pass	
a-BHC	S14-Ma03760	NCP	%	79		70-130	Pass	
Aldrin	S14-Ma03760	NCP	%	85		70-130	Pass	
b-BHC	S14-Ma03760	NCP	%	87		70-130	Pass	
d-BHC	S14-Ma03760	NCP	%	81		70-130	Pass	
Dieldrin	S14-Ma03760	NCP	%	106		70-130	Pass	
Endosulfan I	S14-Ma03760	NCP	%	97		70-130	Pass	
Endosulfan II	S14-Ma03760	NCP	%	103		70-130	Pass	
Endosulfan sulphate	S14-Ma03760	NCP	%	73		70-130	Pass	
Endrin	S14-Ma03760	NCP	%	81		70-130	Pass	
Endrin aldehyde	S14-Ma03760	NCP	%	107		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin ketone	S14-Ma03760	NCP	%	85			70-130	Pass	
g-BHC (Lindane)	S14-Ma03760	NCP	%	72			70-130	Pass	
Heptachlor	S14-Ma03760	NCP	%	77			70-130	Pass	
Heptachlor epoxide	S14-Ma03760	NCP	%	120			70-130	Pass	
Hexachlorobenzene	S14-Ma03760	NCP	%	99			70-130	Pass	
Methoxychlor	S14-Ma03760	NCP	%	98			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1260	S14-Ma03760	NCP	%	108			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S14-Ma04773	NCP	mg/kg	11	11	4.0	30%	Pass	
Cadmium	S14-Ma01980	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S14-Ma01980	NCP	mg/kg	15	7.3	68	30%	Fail	Q15
Copper	S14-Ma01980	NCP	mg/kg	200	250	25	30%	Pass	
Lead	S14-Ma04773	NCP	mg/kg	420	530	21	30%	Pass	
Mercury	S14-Ma01980	NCP	mg/kg	0.060	0.060	1.0	30%	Pass	
Nickel	S14-Ma01980	NCP	mg/kg	11	19	55	30%	Fail	Q15
Zinc	S14-Ma04773	NCP	mg/kg	80	84	5.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Ma03162	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S14-Ma04703	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S14-Ma04703	CP	mg/kg	78	63	20	30%	Pass	
TRH C29-C36	S14-Ma04703	CP	mg/kg	200	160	22	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Ma03162	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-Ma03162	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-Ma03162	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-Ma03162	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-Ma03162	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-Ma03162	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-Ma03162	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-Ma03162	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Ma03162	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S14-Ma04703	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S14-Ma04703	CP	mg/kg	220	170	28	30%	Pass	
TRH >C34-C40	S14-Ma04703	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Fluoranthene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S14-Ma04703	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S14-Ma03825	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4.4'-DDD	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDE	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDT	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S14-Ma03825	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S14-Ma03825	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S14-Ma03825	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Ma03760	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S14-Ma03760	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S14-Ma03760	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S14-Ma03760	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S14-Ma03760	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S14-Ma03760	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Comments

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference:ASET37793/40973/1-1

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 410987-W
 Client Reference RIVERSTONE 43210
 Received Date Mar 06, 2014

Client Sample ID			RINSATE	TS	TB
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Ma04705	S14-Ma04706	S14-Ma04707
Date Sampled			Mar 06, 2014	Mar 06, 2014	Mar 06, 2014
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	70%	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	< 0.001	96%	< 0.001
Toluene	0.001	mg/L	< 0.001	97%	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	92%	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	96%	< 0.002
o-Xylene	0.001	mg/L	< 0.001	96%	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	96%	< 0.003
4-Bromofluorobenzene (surr.)	1	%	85	98	83
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.02	mg/L	< 0.02	-	-
TRH C6-C10	0.02	mg/L	< 0.02	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	-	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.001	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	-	-
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
Indeno(1,2,3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-

Client Sample ID			RINSATE	TS	TB
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-Ma04705	S14-Ma04706	S14-Ma04707
Date Sampled			Mar 06, 2014	Mar 06, 2014	Mar 06, 2014
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH	0.001	mg/L	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	102	-	-
p-Terphenyl-d14 (surr.)	1	%	119	-	-
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	< 0.001	-	-
4,4'-DDD	0.0001	mg/L	< 0.0001	-	-
4,4'-DDE	0.0001	mg/L	< 0.0001	-	-
4,4'-DDT	0.0001	mg/L	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	-	-
d-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	-	-
Toxaphene	0.01	mg/L	< 0.01	-	-
Dibutylchloredate (surr.)	1	%	84	-	-
Tetrachloro-m-xylene (surr.)	1	%	100	-	-
Polychlorinated Biphenyls (PCB)					
Aroclor-1016	0.005	mg/L	< 0.005	-	-
Aroclor-1232	0.005	mg/L	< 0.005	-	-
Aroclor-1242	0.005	mg/L	< 0.005	-	-
Aroclor-1248	0.005	mg/L	< 0.005	-	-
Aroclor-1254	0.005	mg/L	< 0.005	-	-
Aroclor-1260	0.005	mg/L	< 0.005	-	-
Total PCB	0.005	mg/L	< 0.005	-	-
Dibutylchloredate (surr.)	1	%	84	-	-
Heavy Metals					
Arsenic	0.005	mg/L	< 0.005	-	-
Cadmium	0.0005	mg/L	< 0.0005	-	-
Chromium	0.005	mg/L	< 0.005	-	-
Copper	0.005	mg/L	< 0.005	-	-
Lead	0.005	mg/L	< 0.005	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-
Nickel	0.005	mg/L	< 0.005	-	-
Zinc	0.005	mg/L	< 0.005	-	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Mar 11, 2014	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Mar 11, 2014	7 Day
BTEX - Method: E029/E016 BTEX	Sydney	Mar 06, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Mar 11, 2014	7 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Mar 11, 2014	7 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Mar 11, 2014	7 Day
Metals M8 - Method: E022/E030 Unfiltered Metals in Water & E026 Mercury	Sydney	Mar 06, 2014	28 Day

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 3-5 Kingston Town Close
 Oakleigh VIC 3166
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 Site # 1254 & 14271

Sydney
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 NATA # 1261 Site # 18217

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 Murrarie QLD 4172
 Phone: +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 410987
Report #: 02 8245 0300
Phone:
Fax:

Received: Mar 6, 2014 3:11 PM
Due: Mar 13, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Total Recoverable Hydrocarbons	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	TRH C6-C9	Asbestos (% weight as per WA Guidelines)	% Moisture
Laboratory where analysis is conducted													
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217													
Brisbane Laboratory - NATA Site # 20794													
External Laboratory													
P21-L01: 0-0.1	Mar 06, 2014		Soil	S14-Ma04702				X	X	X			
P21-L02: 0-0.1	Mar 06, 2014		Soil	S14-Ma04703				X	X	X			
P21-L03: 0-0.1	Mar 06, 2014		Soil	S14-Ma04704				X	X	X			
RINSATE	Mar 06, 2014		Water	S14-Ma04705				X	X	X			
TS	Mar 06, 2014		Water	S14-Ma04706							X		
TB	Mar 06, 2014		Water	S14-Ma04707							X		

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4,4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.005			0.005	Pass	
Cadmium	mg/L	< 0.0005			0.0005	Pass	
Chromium	mg/L	< 0.005			0.005	Pass	
Copper	mg/L	< 0.005			0.005	Pass	
Lead	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.005			0.005	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	100			70-130	Pass	
TRH C10-C14	%	93			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	118			70-130	Pass	
Toluene	%	113			70-130	Pass	
Ethylbenzene	%	111			70-130	Pass	
m&p-Xylenes	%	119			70-130	Pass	
o-Xylene	%	117			70-130	Pass	
Xylenes - Total	%	118			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	96			70-130	Pass	
TRH C6-C10	%	107			70-130	Pass	
TRH >C10-C16	%	102			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	103			70-130	Pass	
Acenaphthylene	%	105			70-130	Pass	
Anthracene	%	103			70-130	Pass	
Benz(a)anthracene	%	90			70-130	Pass	
Benzo(a)pyrene	%	99			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&j)fluoranthene	%	85	70-130	Pass			
Benzo(g,h,i)perylene	%	90	70-130	Pass			
Benzo(k)fluoranthene	%	96	70-130	Pass			
Chrysene	%	113	70-130	Pass			
Dibenz(a,h)anthracene	%	76	70-130	Pass			
Fluoranthene	%	107	70-130	Pass			
Fluorene	%	98	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	78	70-130	Pass			
Naphthalene	%	104	70-130	Pass			
Phenanthrene	%	103	70-130	Pass			
Pyrene	%	103	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	90	70-130	Pass			
4,4'-DDD	%	90	70-130	Pass			
4,4'-DDE	%	90	70-130	Pass			
4,4'-DDT	%	90	70-130	Pass			
a-BHC	%	90	70-130	Pass			
Aldrin	%	90	70-130	Pass			
b-BHC	%	90	70-130	Pass			
d-BHC	%	80	70-130	Pass			
Dieldrin	%	100	70-130	Pass			
Endosulfan I	%	100	70-130	Pass			
Endosulfan II	%	100	70-130	Pass			
Endosulfan sulphate	%	120	70-130	Pass			
Endrin	%	100	70-130	Pass			
Endrin aldehyde	%	100	70-130	Pass			
Endrin ketone	%	100	70-130	Pass			
g-BHC (Lindane)	%	90	70-130	Pass			
Heptachlor	%	100	70-130	Pass			
Heptachlor epoxide	%	100	70-130	Pass			
Hexachlorobenzene	%	100	70-130	Pass			
Methoxychlor	%	110	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	99	70-130	Pass			
Cadmium	%	102	70-130	Pass			
Chromium	%	106	70-130	Pass			
Copper	%	98	70-130	Pass			
Lead	%	97	70-130	Pass			
Mercury	%	91	70-130	Pass			
Nickel	%	99	70-130	Pass			
Zinc	%	99	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	S14-Ma04212	NCP	%	87	70-130	Pass	
TRH C10-C14	S14-Ma04213	NCP	%	108	70-130	Pass	
Spike - % Recovery							
BTEX				Result 1			
Benzene	S14-Ma04212	NCP	%	100	70-130	Pass	
Toluene	S14-Ma04212	NCP	%	96	70-130	Pass	
Ethylbenzene	S14-Ma04212	NCP	%	93	70-130	Pass	
m&p-Xylenes	S14-Ma04212	NCP	%	97	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	S14-Ma04212	NCP	%	95			70-130	Pass	
Xylenes - Total	S14-Ma04212	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S14-Ma04212	NCP	%	77			70-130	Pass	
TRH C6-C10	S14-Ma04212	NCP	%	93			70-130	Pass	
TRH >C10-C16	S14-Ma04213	NCP	%	118			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S14-Ma04212	NCP	%	105			70-130	Pass	
Acenaphthylene	S14-Ma04212	NCP	%	104			70-130	Pass	
Anthracene	S14-Ma04212	NCP	%	108			70-130	Pass	
Benz(a)anthracene	S14-Ma04212	NCP	%	92			70-130	Pass	
Benzo(a)pyrene	S14-Ma04212	NCP	%	101			70-130	Pass	
Benzo(b&j)fluoranthene	S14-Ma04212	NCP	%	96			70-130	Pass	
Benzo(g,h,i)perylene	S14-Ma04212	NCP	%	87			70-130	Pass	
Benzo(k)fluoranthene	S14-Ma04212	NCP	%	96			70-130	Pass	
Chrysene	S14-Ma04212	NCP	%	115			70-130	Pass	
Dibenz(a,h)anthracene	S14-Ma04212	NCP	%	74			70-130	Pass	
Fluoranthene	S14-Ma04212	NCP	%	113			70-130	Pass	
Fluorene	S14-Ma04212	NCP	%	99			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-Ma04212	NCP	%	73			70-130	Pass	
Naphthalene	S14-Ma04212	NCP	%	110			70-130	Pass	
Phenanthrene	S14-Ma04212	NCP	%	109			70-130	Pass	
Pyrene	S14-Ma04212	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S14-Ma02948	NCP	%	99			70-130	Pass	
Cadmium	S14-Ma02948	NCP	%	101			70-130	Pass	
Chromium	S14-Ma02948	NCP	%	102			70-130	Pass	
Copper	S14-Ma02948	NCP	%	96			70-130	Pass	
Lead	S14-Ma02948	NCP	%	94			70-130	Pass	
Mercury	S14-Ma02948	NCP	%	88			70-130	Pass	
Nickel	S14-Ma02948	NCP	%	96			70-130	Pass	
Zinc	S14-Ma02948	NCP	%	84			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-Ma04211	NCP	mg/L	0.030	0.028	6.0	30%	Pass	
TRH C10-C14	S14-Ma04211	NCP	mg/L	0.070	0.060	15	30%	Pass	
TRH C15-C28	S14-Ma04211	NCP	mg/L	0.88	0.78	12	30%	Pass	
TRH C29-C36	S14-Ma04211	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-Ma04211	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S14-Ma04211	NCP	mg/L	0.014	0.014	5.0	30%	Pass	
Ethylbenzene	S14-Ma04211	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S14-Ma04211	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S14-Ma04211	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S14-Ma04211	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S14-Ma04211	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C6-C10	S14-Ma04211	NCP	mg/L	0.030	0.028	5.0	30%	Pass
TRH C6-C10 less BTEX (F1)	S14-Ma04211	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH >C10-C16	S14-Ma04211	NCP	mg/L	0.25	0.22	13	30%	Pass
TRH >C16-C34	S14-Ma04211	NCP	mg/L	0.76	0.68	11	30%	Pass
TRH >C34-C40	S14-Ma04211	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S14-Ma04211	NCP	mg/L	0.065	0.062	4.0	30%	Pass
Acenaphthylene	S14-Ma04211	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Anthracene	S14-Ma04211	NCP	mg/L	0.018	0.019	4.0	30%	Pass
Benz(a)anthracene	S14-Ma04211	NCP	mg/L	0.0011	0.0012	4.0	30%	Pass
Benzo(a)pyrene	S14-Ma04211	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(b&j)fluoranthene	S14-Ma04211	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(g,h,i)perylene	S14-Ma04211	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(k)fluoranthene	S14-Ma04211	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chrysene	S14-Ma04211	NCP	mg/L	0.0015	0.0017	12	30%	Pass
Dibenz(a,h)anthracene	S14-Ma04211	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluoranthene	S14-Ma04211	NCP	mg/L	0.026	0.027	2.0	30%	Pass
Fluorene	S14-Ma04211	NCP	mg/L	0.076	0.077	2.0	30%	Pass
Indeno(1,2,3-cd)pyrene	S14-Ma04211	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Naphthalene	S14-Ma04211	NCP	mg/L	0.015	0.013	10	30%	Pass
Phenanthrene	S14-Ma04211	NCP	mg/L	0.13	0.13	3.0	30%	Pass
Pyrene	S14-Ma04211	NCP	mg/L	0.017	0.017	3.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-Ma02946	NCP	mg/L	0.0050	< 0.005	2.0	30%	Pass
Cadmium	S14-Ma02946	NCP	mg/L	0.0010	0.0010	4.0	30%	Pass
Chromium	S14-Ma02946	NCP	mg/L	0.0070	0.0060	3.0	30%	Pass
Copper	S14-Ma02946	NCP	mg/L	0.027	0.026	1.0	30%	Pass
Lead	S14-Ma02946	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Mercury	S14-Ma02946	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel	S14-Ma02946	NCP	mg/L	0.10	0.097	3.0	30%	Pass
Zinc	S14-Ma02946	NCP	mg/L	1.1	1.1	<1	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

~~Final report - this Report replaces any previously issued Report~~

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Mar 6, 2014 3:11 PM
Eurofins | mgt reference: **410987**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
 - Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 15 degrees Celsius.
 - All samples have been received as described on the above COC.
 - COC has been completed correctly.
 - Attempt to chill was evident.
 - Appropriately preserved sample containers have been used.
 - All samples were received in good condition.
 - Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
 - Organic samples had Teflon liners.
 - Sample containers for volatile analysis received with zero headspace.
 - Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Asbestos analysis conducted by ASET as per WA Guidelines

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Eurofins | mgt Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis
NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience





Our ref : ASET38822/ 42002 / 1 - 6
Your ref : 417048
NATA Accreditation No: 14484



8 May 2014

Eurofins | MGT
Unit F3, Building F, 16 Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons

Dear Robert

Asbestos Identification

This report presents the results of six samples, forwarded by Eurofins | MGT on 6 May 2014, for analysis for asbestos.

1.Introduction:Six samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1 and Australian Guidelines AS 4964 - 2004 and WA/ NEPM Guidelines**)

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia/ NEPM Guidelines for the Assessment Remediation and Management of Asbestos in contaminated sites.

3. Results : **Sample No. 1. ASET38822/ 42002 / 1. P05 - L02 - My03483.**

Approx dimensions 9.6 cm x 9.4 cm x 9.1 cm

The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of glass.

No asbestos detected.

Sample No. 2. ASET38822/ 42002 / 2. P06- L02 - My03486.

Approx dimensions 11.3 cm x 10.3 cm x 10.2 cm

The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.

No asbestos detected.

Sample No. 3. ASET38822/ 42002 / 3. P06 - SP01A - My03488.

Approx dimensions 11.4 cm x 10.5 cm x 9.8 cm

The sample consisted of a mixture of clayish soil, stones, sandstones, plant matter and fragments of plaster.

No asbestos detected.

Sample No. 4. ASET38822/ 42002 / 4. P06 - SP02 - My03491.

Approx dimensions 10.5 cm x 9.7 cm x 9.5 cm

The sample consisted of a mixture of clayish soil, stones, sandstones, plant matter and fragments of plaster.

No asbestos detected.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

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Sample No. 5. ASET38822 / 42002 / 5. P06 - SP03B - My03493.

Approx dimensions 10.6 cm x 10.2 cm x 9.7 cm

The sample consisted of a mixture of sandy clayish soil, stones, sandstones, plant matter and fragments of plaster.

No asbestos detected.

Sample No. 6. ASET38822 / 42002 / 6. P06 - SP04 - My03494.

Approx dimensions 10.7 cm x 10.2 cm x 9.5 cm

The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and bitumen.

No asbestos detected.

Analysed and reported by,

A handwritten signature in black ink, appearing to read "Laxman Dias", is written over a light blue horizontal line.

Laxman Dias. BSc
Analyst / Approved Identifier
Approved Signatory



Accredited for compliance with ISO/IEC 17025.

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation covers only the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

All samples indicating " No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 417048-S
 Client Reference RIVERSTONE 43210
 Received Date May 05, 2014

Client Sample ID			P05-L01	P05-L02	P05-L03	P06-L02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-My03482	S14-My03483	S14-My03484	S14-My03486
Date Sampled			May 03, 2014	May 03, 2014	May 03, 2014	May 03, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	120	< 50	< 50	-
TRH C29-C36	50	mg/kg	240	77	60	-
TRH C10-36 (Total)	50	mg/kg	360	77	60	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	91	89	88	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	310	100	< 100	-
TRH >C34-C40	100	mg/kg	120	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P05-L01 Soil S14-My03482 May 03, 2014	P05-L02 Soil S14-My03483 May 03, 2014	P05-L03 Soil S14-My03484 May 03, 2014	P06-L02 Soil S14-My03486 May 03, 2014
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	127	118	125	108
p-Terphenyl-d14 (surr.)	1	%	157	151	161	140
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	-	< 0.2	< 0.2	-
Toxaphene	1	mg/kg	-	< 1	< 1	-
Dibutylchlorendate (surr.)	1	%	-	116	114	-
Tetrachloro-m-xylene (surr.)	1	%	-	79	83	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	< 0.5	-
Total PCB	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibutylchlorendate (surr.)	1	%	-	116	114	-
Heavy Metals						
Arsenic	2	mg/kg	16	11	12	5.7
Cadmium	0.4	mg/kg	2.3	2.3	16	< 0.4
Chromium	5	mg/kg	48	28	33	12
Copper	5	mg/kg	200	18	26	25
Lead	5	mg/kg	230	44	120	41
Mercury	0.05	mg/kg	0.06	< 0.05	< 0.05	0.11
Nickel	5	mg/kg	30	6.4	5.8	< 5
Zinc	5	mg/kg	570	190	190	84

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P05-L01 Soil S14-My03482 May 03, 2014	P05-L02 Soil S14-My03483 May 03, 2014	P05-L03 Soil S14-My03484 May 03, 2014	P06-L02 Soil S14-My03486 May 03, 2014
% Moisture	0.1	%	4.8	11	18	9.7
Asbestos (% weight as per WA Guidelines)			-	See Attached	-	See Attached

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	P06-SP01A Soil S14-My03488 May 03, 2014	P06-SP02 Soil S14-My03491 May 03, 2014	P06-SP03B Soil S14-My03493 May 03, 2014	P06-SP04 Soil S14-My03494 May 03, 2014
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	55	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	62	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	120	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	90	86	81	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			P06-SP01A	P06-SP02	P06-SP03B	P06-SP04
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-My03488	S14-My03491	S14-My03493	S14-My03494
Date Sampled			May 03, 2014	May 03, 2014	May 03, 2014	May 03, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	119	112	120	116
p-Terphenyl-d14 (surr.)	1	%	154	144	152	149
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchloroendate (surr.)	1	%	126	121	112	106
Tetrachloro-m-xylene (surr.)	1	%	80	93	73	81
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchloroendate (surr.)	1	%	126	121	112	106
Heavy Metals						
Arsenic	2	mg/kg	9.7	3.3	< 2	3.3
Cadmium	0.4	mg/kg	< 0.4	1.1	< 0.4	< 0.4
Chromium	5	mg/kg	19	16	5.8	12
Copper	5	mg/kg	220	77	12	34
Lead	5	mg/kg	20	510	47	150
Mercury	0.05	mg/kg	< 0.05	0.08	< 0.05	0.08
Nickel	5	mg/kg	13	6.8	< 5	< 5
Zinc	5	mg/kg	47	590	74	120
% Moisture						
% Moisture	0.1	%	13	22	11	13
Asbestos (% weight as per WA Guidelines)						
Asbestos (% weight as per WA Guidelines)			See Attached	See Attached	See Attached	See Attached

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	May 09, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	May 07, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	May 09, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	May 09, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	May 07, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	May 07, 2014	28 Day
Metals M8 - Method: LTM-MET-3040_R0 TOTAL AND DISSOLVED METALS AND MERCURY IN WATERS BY ICP-MS	Sydney	May 07, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	May 07, 2014	28 Day

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Phone +61 2 9500 8400
NATA # 1261 Site # 20794

Brisbane
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Murrarie QLD 4172
Phone +61 7 3802 4600
NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 417048
Report #: 02 8245 0300
Phone:
Fax:

Received: May 5, 2014 2:50 PM
Due: May 12, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Laboratory where analysis is conducted					
Melbourne Laboratory - NATA Site # 1254 & 14271					
Sydney Laboratory - NATA Site # 18217					
Brisbane Laboratory - NATA Site # 20794					
External Laboratory					
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
P05-L01	May 03, 2014		Soil	S14-My03482	
P05-L02	May 03, 2014		Soil	S14-My03483	X
P05-L03	May 03, 2014		Soil	S14-My03484	X
P06-L01	May 03, 2014		Soil	S14-My03485	
P06-L02	May 03, 2014		Soil	S14-My03486	X
P06-L03	May 03, 2014		Soil	S14-My03487	
P06-SP01A	May 03, 2014		Soil	S14-My03488	X
P06-SP01B	May 03, 2014		Soil	S14-My03489	
P06-SP01C	May 03, 2014		Soil	S14-My03490	X
P06-SP02	May 03, 2014		Soil	S14-My03491	X
Asbestos (% weight as per WA Guidelines)					
				X	
HOLD					
				X	
Polycyclic Aromatic Hydrocarbons					
				X	
Organochlorine Pesticides					
				X	
Metals M8					
				X	
BTEX					
				X	
Polychlorinated Biphenyls (PCB)					
				X	
Total Recoverable Hydrocarbons					
				X	
BTEX and Volatile TRH					
				X	
JBS&G Suite 2					
				X	

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 Site # 1254 & 14271

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Brisbane
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 Murrarie QLD 4172
 Phone +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 417048
Report #: 02 8245 0300
Phone:
Fax:

Received: May 5, 2014 2:50 PM
Due: May 12, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

			JBS&G Suite 2																
			BTEX and Volatile TRH				X												
			Total Recoverable Hydrocarbons				X												
			Polychlorinated Biphenyls (PCB)				X												
			BTEX				X												
			Metals M8				X												
			Organochlorine Pesticides				X												
			Polycyclic Aromatic Hydrocarbons				X												
			HOLD				X												
			Asbestos (% weight as per WA Guidelines)						X										
			% Moisture			X													
			Laboratory where analysis is conducted																
			Melbourne Laboratory - NATA Site # 1254 & 14271																
			Sydney Laboratory - NATA Site # 18217																
			Brisbane Laboratory - NATA Site # 20794																
			External Laboratory																
P06-SP03A	May 03, 2014	Soil	S14-My03492																
P06-SP03B	May 03, 2014	Soil	S14-My03493			X													
P06-SP04	May 03, 2014	Soil	S14-My03494			X													
TRIP SPIKE	May 02, 2014	Water	S14-My03495																
TRIP BLANK	May 02, 2014	Water	S14-My03496																

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
BTEX						
Benzene	mg/kg	< 0.1		0.1	Pass	
Toluene	mg/kg	< 0.1		0.1	Pass	
Ethylbenzene	mg/kg	< 0.1		0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2		0.2	Pass	
o-Xylene	mg/kg	< 0.1		0.1	Pass	
Xylenes - Total	mg/kg	< 0.3		0.3	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/kg	< 0.5		0.5	Pass	
Acenaphthylene	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5		0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5		0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Chrysene	mg/kg	< 0.5		0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5		0.5	Pass	
Fluoranthene	mg/kg	< 0.5		0.5	Pass	
Fluorene	mg/kg	< 0.5		0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/kg	< 0.1		0.1	Pass	
4,4'-DDD	mg/kg	< 0.05		0.05	Pass	
4,4'-DDE	mg/kg	< 0.05		0.05	Pass	
4,4'-DDT	mg/kg	< 0.05		0.05	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	82			70-130	Pass	
TRH C10-C14	%	79			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	103			70-130	Pass	
Toluene	%	96			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	101			70-130	Pass	
o-Xylene	%	100			70-130	Pass	
Xylenes - Total	%	101			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	104			70-130	Pass	
TRH C6-C10	%	90			70-130	Pass	
TRH >C10-C16	%	87			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	109			70-130	Pass	
Acenaphthylene	%	104			70-130	Pass	
Anthracene	%	110			70-130	Pass	
Benz(a)anthracene	%	109			70-130	Pass	
Benzo(a)pyrene	%	103			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&i)fluoranthene	%	97	70-130	Pass			
Benzo(g,h,i)perylene	%	90	70-130	Pass			
Benzo(k)fluoranthene	%	112	70-130	Pass			
Chrysene	%	110	70-130	Pass			
Dibenz(a,h)anthracene	%	100	70-130	Pass			
Fluoranthene	%	107	70-130	Pass			
Fluorene	%	109	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	100	70-130	Pass			
Naphthalene	%	98	70-130	Pass			
Phenanthrene	%	106	70-130	Pass			
Pyrene	%	101	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	76	70-130	Pass			
4,4'-DDD	%	77	70-130	Pass			
4,4'-DDE	%	92	70-130	Pass			
4,4'-DDT	%	73	70-130	Pass			
a-BHC	%	78	70-130	Pass			
Aldrin	%	80	70-130	Pass			
b-BHC	%	81	70-130	Pass			
d-BHC	%	72	70-130	Pass			
Dieldrin	%	72	70-130	Pass			
Endosulfan I	%	79	70-130	Pass			
Endosulfan II	%	74	70-130	Pass			
Endosulfan sulphate	%	79	70-130	Pass			
Endrin	%	76	70-130	Pass			
Endrin aldehyde	%	82	70-130	Pass			
Endrin ketone	%	78	70-130	Pass			
g-BHC (Lindane)	%	75	70-130	Pass			
Heptachlor	%	87	70-130	Pass			
Heptachlor epoxide	%	77	70-130	Pass			
Hexachlorobenzene	%	108	70-130	Pass			
Methoxychlor	%	118	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	80	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic	%	99	70-130	Pass			
Cadmium	%	96	70-130	Pass			
Chromium	%	105	70-130	Pass			
Copper	%	104	70-130	Pass			
Lead	%	96	70-130	Pass			
Mercury	%	94	70-130	Pass			
Nickel	%	103	70-130	Pass			
Zinc	%	99	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	S14-My03482	CP	%	86	70-130	Pass	
TRH C10-C14	S14-My03482	CP	%	97	70-130	Pass	
Spike - % Recovery							
BTEX				Result 1			
Benzene	S14-My03482	CP	%	91	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Toluene	S14-My03482	CP	%	86		70-130	Pass	
Ethylbenzene	S14-My03482	CP	%	85		70-130	Pass	
m&p-Xylenes	S14-My03482	CP	%	91		70-130	Pass	
o-Xylene	S14-My03482	CP	%	90		70-130	Pass	
Xylenes - Total	S14-My03482	CP	%	91		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S14-My03482	CP	%	95		70-130	Pass	
TRH C6-C10	S14-My03482	CP	%	97		70-130	Pass	
TRH >C10-C16	S14-My03482	CP	%	109		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-My03482	CP	%	118		70-130	Pass	
Acenaphthylene	S14-My03482	CP	%	115		70-130	Pass	
Anthracene	S14-My03482	CP	%	113		70-130	Pass	
Benz(a)anthracene	S14-My03482	CP	%	122		70-130	Pass	
Benzo(a)pyrene	S14-My03482	CP	%	106		70-130	Pass	
Benzo(b&j)fluoranthene	S14-My03482	CP	%	108		70-130	Pass	
Benzo(g,h,i)perylene	S14-My03482	CP	%	92		70-130	Pass	
Benzo(k)fluoranthene	S14-My03482	CP	%	120		70-130	Pass	
Chrysene	S14-My03482	CP	%	120		70-130	Pass	
Dibenz(a,h)anthracene	S14-My03482	CP	%	108		70-130	Pass	
Fluoranthene	S14-My03482	CP	%	124		70-130	Pass	
Fluorene	S14-My03482	CP	%	120		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-My03482	CP	%	104		70-130	Pass	
Naphthalene	S14-My03482	CP	%	120		70-130	Pass	
Phenanthrene	S14-My03482	CP	%	109		70-130	Pass	
Pyrene	S14-My03482	CP	%	118		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	S14-My03482	CP	%	81		70-130	Pass	
Cadmium	S14-My03482	CP	%	86		70-130	Pass	
Chromium	S14-My03482	CP	%	76		70-130	Pass	
Copper	S14-My02495	NCP	%	110		70-130	Pass	
Lead	S14-My03482	CP	%	70		70-130	Pass	
Mercury	S14-My03482	CP	%	94		70-130	Pass	
Nickel	S14-My03482	CP	%	96		70-130	Pass	
Zinc	S14-My02495	NCP	%	82		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	S14-Ap23000	NCP	%	83		70-130	Pass	
4,4'-DDD	S14-Ap23000	NCP	%	85		70-130	Pass	
4,4'-DDE	S14-Ap23000	NCP	%	104		70-130	Pass	
4,4'-DDT	S14-Ap23000	NCP	%	62		70-130	Fail	Q08
a-BHC	S14-Ap23000	NCP	%	82		70-130	Pass	
Aldrin	S14-Ap23000	NCP	%	91		70-130	Pass	
b-BHC	S14-Ap23000	NCP	%	80		70-130	Pass	
d-BHC	S14-Ap23000	NCP	%	80		70-130	Pass	
Dieldrin	S14-Ap23000	NCP	%	77		70-130	Pass	
Endosulfan I	S14-Ap23000	NCP	%	85		70-130	Pass	
Endosulfan II	S14-Ap23000	NCP	%	75		70-130	Pass	
Endosulfan sulphate	S14-Ap23000	NCP	%	64		70-130	Fail	Q08
Endrin	S14-Ap23000	NCP	%	77		70-130	Pass	
Endrin aldehyde	S14-Ap23000	NCP	%	69		70-130	Fail	Q08

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin ketone	S14-Ap23000	NCP	%	64			70-130	Fail	Q08
g-BHC (Lindane)	S14-Ap23000	NCP	%	77			70-130	Pass	
Heptachlor	S14-Ap23000	NCP	%	93			70-130	Pass	
Heptachlor epoxide	S14-Ap23000	NCP	%	80			70-130	Pass	
Hexachlorobenzene	S14-Ap23000	NCP	%	124			70-130	Pass	
Methoxychlor	S14-Ap23000	NCP	%	82			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1260	S14-Ap23000	NCP	%	90			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-My03482	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S14-My03482	CP	mg/kg	< 20	24	31	30%	Fail	Q15
TRH C15-C28	S14-My03482	CP	mg/kg	120	150	24	30%	Pass	
TRH C29-C36	S14-My03482	CP	mg/kg	240	320	30	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-My03482	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-My03482	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-My03482	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-My03482	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-My03482	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-My03482	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-My03482	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-My03482	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S14-My03482	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S14-My03482	CP	mg/kg	310	400	27	30%	Pass	
TRH >C34-C40	S14-My03482	CP	mg/kg	120	180	43	30%	Fail	Q15
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S14-My03482	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-My03482	CP	mg/kg	16	20	23	30%	Pass
Cadmium	S14-My03482	CP	mg/kg	2.3	2.7	15	30%	Pass
Chromium	S14-My03482	CP	mg/kg	48	62	25	30%	Pass
Copper	S14-My02495	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Lead	S14-My03482	CP	mg/kg	230	270	14	30%	Pass
Mercury	S14-My03482	CP	mg/kg	0.06	0.08	24	30%	Pass
Nickel	S14-My03482	CP	mg/kg	30	31	4.0	30%	Pass
Zinc	S14-My03482	CP	mg/kg	570	560	1.0	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S14-Ap23000	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S14-Ap23000	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S14-Ap23000	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S14-Ap23000	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-Ap23000	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S14-Ap23000	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S14-Ap23000	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S14-Ap23000	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S14-Ap23000	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S14-Ap23000	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Comments

NB: Asbestos analysis subcontracted to ASET, reference number ASET38822/ 42002, NATA accreditation number 14484.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons Laboratory Manager

Final report - this Report replaces any previously issued Reports

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 417048-W
 Client Reference RIVERSTONE 43210
 Received Date May 05, 2014

Client Sample ID			TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water
Eurofins mgt Sample No.			S14-My03495	S14-My03496
Date Sampled			May 02, 2014	May 02, 2014
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	0.02	mg/L	78%	< 0.02
BTEX				
Benzene	0.001	mg/L	85%	< 0.001
Toluene	0.001	mg/L	76%	< 0.001
Ethylbenzene	0.001	mg/L	73%	< 0.001
m&p-Xylenes	0.002	mg/L	81%	< 0.002
o-Xylene	0.001	mg/L	79%	< 0.001
Xylenes - Total	0.003	mg/L	80%	< 0.003
4-Bromofluorobenzene (surr.)	1	%	101	71
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
TRH C6-C10	0.02	mg/L	79%	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	-	< 0.02

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	May 05, 2014	7 Day
BTEX - Method: E029/E016 BTEX	Sydney	May 05, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	May 05, 2014	7 Day

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test		Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Method Blank									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions									
TRH C6-C9		mg/L	< 0.02			0.02	Pass		
Method Blank									
BTEX									
Benzene		mg/L	< 0.001			0.001	Pass		
Toluene		mg/L	< 0.001			0.001	Pass		
Ethylbenzene		mg/L	< 0.001			0.001	Pass		
m&p-Xylenes		mg/L	< 0.002			0.002	Pass		
o-Xylene		mg/L	< 0.001			0.001	Pass		
Xylenes - Total		mg/L	< 0.003			0.003	Pass		
Method Blank									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
TRH C6-C10		mg/L	< 0.02			0.02	Pass		
TRH C6-C10 less BTEX (F1)		mg/L	< 0.02			0.02	Pass		
LCS - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions									
TRH C6-C9		%	111			70-130	Pass		
LCS - % Recovery									
BTEX									
Benzene		%	99			70-130	Pass		
Toluene		%	88			70-130	Pass		
Ethylbenzene		%	86			70-130	Pass		
m&p-Xylenes		%	92			70-130	Pass		
o-Xylene		%	91			70-130	Pass		
Xylenes - Total		%	92			70-130	Pass		
LCS - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
TRH C6-C10		%	106			70-130	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions									
TRH C6-C9		S14-My00527	NCP	%	86		70-130	Pass	
Spike - % Recovery									
BTEX									
Benzene		S14-My00527	NCP	%	89		70-130	Pass	
Toluene		S14-My00527	NCP	%	77		70-130	Pass	
Ethylbenzene		S14-My00527	NCP	%	73		70-130	Pass	
m&p-Xylenes		S14-My00527	NCP	%	82		70-130	Pass	
o-Xylene		S14-My00527	NCP	%	80		70-130	Pass	
Xylenes - Total		S14-My00527	NCP	%	82		70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
TRH C6-C10		S14-My00527	NCP	%	80		70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions									
TRH C6-C9		S14-My00827	NCP	mg/L	< 0.02	Result 2 < 0.02	RPD <1	30%	Pass

Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	S14-My00827	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Toluene	S14-My00827	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Ethylbenzene	S14-My00827	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
m&p-Xylenes	S14-My00827	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
o-Xylene	S14-My00827	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Xylenes - Total	S14-My00827	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C10	S14-My00827	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C10 less BTEX (F1)	S14-My00827	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

Authorised By

Jean Heng	Client Services
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

(Final report - this Report replaces any previously issued Report)

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Sample Receipt Advice

Company name: **JBS & G (NSW & WA) Pty Ltd**
Contact name: Thomas Harding
Client job number: RIVERSTONE 43210
COC number: Not provided
Turn around time: 5 Day
Date/Time received: May 5, 2014 2:50 PM
Eurofins | mgt reference: **417048**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
 - Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 10 degrees Celsius.
 - All samples have been received as described on the above COC.
 - COC has been completed correctly.
 - Attempt to chill was evident.
 - Appropriately preserved sample containers have been used.
 - All samples were received in good condition.
 - Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
 - Organic samples had Teflon liners.
 - Sample containers for volatile analysis received with zero headspace.
 - Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Asbestos conducted at ASET | Labelling discrepancy: P06-L01/L02/L03 labelled as P05-L01/L02/L03 as per COC; Samples labelled as P06 on jars logged in as P05 as per COC

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Thomas Harding - tharding@jbsg.com.au.

Eurofins | mgt Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis
NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

38 Years of Environmental Analysis & Experience



CERTIFICATE OF ANALYSIS

105367

Client:

JBS & G (NSW & WA) Pty Ltd
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: T Harding, K Sharp

Sample log in details:

Your Reference: **43210, Riverstone**
No. of samples: 1 soil
Date samples received / completed instructions received 20/02/14 / 20/02/14

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date: 27/02/14 / 26/02/14
Date of Preliminary Report: Not issued

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Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:



Jacinta Hurst
Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference:	UNITS	105367-1
Your Reference	-----	QC01/A
Date Sampled	-----	18/02/2014
Type of sample		soil
Date extracted	-	21/02/2014
Date analysed	-	22/02/2014
TRHC ₆ - C ₉	mg/kg	<25
TRHC ₆ - C ₁₀	mg/kg	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	98

svTRH (C10-C40) in Soil		
Our Reference:	UNITS	105367-1
Your Reference	-----	QC01/A
Date Sampled	-----	18/02/2014
Type of sample		soil
Date extracted	-	21/02/2014
Date analysed	-	22/02/2014
TRHC ₁₀ - C ₁₄	mg/kg	57
TRHC ₁₅ - C ₂₈	mg/kg	170
TRHC ₂₉ - C ₃₆	mg/kg	320
TRH>C ₁₀ -C ₁₆	mg/kg	74
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	74
TRH>C ₁₆ -C ₃₄	mg/kg	360
TRH>C ₃₄ -C ₄₀	mg/kg	140
Surrogate o-Terphenyl	%	91

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	105367-1 QC01/A 18/02/2014 soil
Date extracted	-	21/02/2014
Date analysed	-	22/02/2014
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Benzo(a)pyrene TEQNEPMB1	mg/kg	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE
Surrogate p-Terphenyl-d14	%	87

Organochlorine Pesticides in soil	UNITS	105367-1
Our Reference:	-----	QC01/A
Your Reference	-----	18/02/2014
Date Sampled		soil
Type of sample		
Date extracted	-	21/02/2014
Date analysed	-	22/02/2014
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCMX	%	87

PCBs in Soil		
Our Reference:	UNITS	105367-1
Your Reference	-----	QC01/A
Date Sampled	-----	18/02/2014
Type of sample		soil
Date extracted	-	21/02/2014
Date analysed	-	22/02/2014
Arochlor 1016	mg/kg	<0.1
Arochlor 1221	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1
Surrogate TCLMX	%	87

Acid Extractable metals in soil		
Our Reference:	UNITS	105367-1
Your Reference	-----	QC01/A
Date Sampled	-----	18/02/2014
Type of sample		soil
Date digested	-	21/02/2014
Date analysed	-	21/02/2014
Arsenic	mg/kg	10
Cadmium	mg/kg	<0.4
Chromium	mg/kg	22
Copper	mg/kg	13
Lead	mg/kg	26
Mercury	mg/kg	<0.1
Nickel	mg/kg	8
Zinc	mg/kg	75

Moisture		
Our Reference:	UNITS	105367-1
Your Reference	-----	QC01/A
Date Sampled	-----	18/02/2014
Type of sample		soil
Date prepared	-	21/02/2014
Date analysed	-	24/02/2014
Moisture	%	21

Asbestos ID - soils		
Our Reference:	UNITS	105367-1
Your Reference	-----	QC01/A
Date Sampled	-----	18/02/2014
Type of sample		soil
Date analysed	-	26/02/2014
Sample mass tested	g	Approx 45g
Sample Description	-	Brown fine-grained soil and debris
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected

MethodID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note Naphthalene is determined from the VOC analysis.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

Client Reference: 43210, Riverstone

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Soil						Base II Duplicate II %RPD		
Date extracted	-			21/02/2014	[NT]	[NT]	LCS-6	21/02/2014
Date analysed	-			22/02/2014	[NT]	[NT]	LCS-6	22/02/2014
TRHC ₆ - C ₉	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-6	130%
TRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-6	130%
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	LCS-6	131%
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	LCS-6	128%
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-6	127%
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	LCS-6	131%
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-6	130%
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	110	[NT]	[NT]	LCS-6	113%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
svTRH(C10-C40) in Soil						Base II Duplicate II %RPD		
Date extracted	-			21/02/2014	[NT]	[NT]	LCS-5	21/02/2014
Date analysed	-			22/02/2014	[NT]	[NT]	LCS-5	22/02/2014
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-5	117%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-5	119%
TRHC ₂₈ - C ₃₆	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-5	92%
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-5	117%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-5	119%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-5	112%
Surrogate o-Terphenyl	%		Org-003	90	[NT]	[NT]	LCS-5	119%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			21/02/2014	[NT]	[NT]	LCS-6	21/02/2014
Date analysed	-			22/02/2014	[NT]	[NT]	LCS-6	22/02/2014
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-6	106%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-6	110%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-6	105%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-6	102%

Client Reference: 43210, Riverstone

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-6	106%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-6	92%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	[NT]	[NT]	LCS-6	83%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	87	[NT]	[NT]	LCS-6	86%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			21/02/2014	[NT]	[NT]	LCS-6	21/02/2014
Date analysed	-			22/02/2014	[NT]	[NT]	LCS-6	22/02/2014
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-6	91%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-6	82%
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-6	89%
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-6	97%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-6	91%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-6	87%
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-6	88%
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-6	89%
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-6	99%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-6	89%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%		Org-005	90	[NT]	[NT]	LCS-6	82%

Client Reference: 43210, Riverstone

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			21/02/2014	[NT]	[NT]	LCS-6	21/02/2014
Date analysed	-			21/02/2014	[NT]	[NT]	LCS-6	22/02/2014
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	LCS-6	92%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-006	90	[NT]	[NT]	LCS-6	78%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			21/02/2014	[NT]	[NT]	LCS-4	21/02/2014
Date analysed	-			21/02/2014	[NT]	[NT]	LCS-4	21/02/2014
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-4	101%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	LCS-4	105%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-4	103%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-4	103%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-4	101%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-4	100%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-4	102%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-4	103%

Client Reference: 43210, Riverstone

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Moisture				
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Asbestos ID - soils				
Date analysed	-			[NT]

Report Comments:

Asbestos ID was analysed by Approved Identifier: Paul Ching
Asbestos ID was authorised by Approved Signatory: Paul Ching

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

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For VOCs in water samples, three vials are required for duplicate or spike analysis.

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Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

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When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.



CHAIN OF CUSTODY

PROJECT NO.: 43210 PROJECT NAME: Riverstone SEND REPORT TO: T. Harding & K. Sharp DATE NEEDED BY: Standard turn around COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:	LABORATORY BATCH NO.: SAMPLERS: K. Sharp & T. Creese PHONE: SYDNEY 02 82450300 EMAIL: tharding@jbsg.com.au + ksharp@jbsg.com.au QC LEVEL: NEPM (2013)	SEND INVOICE TO: G. NG METHOD OF SHIPMENT: TRANSPORT CO. CONSIGNMENT NOTE NO. TRANSPORT CO. CONSIGNMENT NOTE NO.
RECEIVED BY: Elbing 18/02/14 DATE: 17:00 NAME: Elbing OF: 245 NAME: Creese OF: 245 COOLER SEAL - Yes <input type="checkbox"/> No <input type="checkbox"/> Intact <input type="checkbox"/> Broken <input type="checkbox"/> COOLER TEMP: 13.00 deg C COOLER SEAL - Yes <input type="checkbox"/> No <input type="checkbox"/> Intact <input type="checkbox"/> Broken <input type="checkbox"/> COOLER TEMP: 13.00 deg C		

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	JBS&G SPECIFIC SUITES										NOTES							
						J01	J02	J03	J04	J05	J06	J07	J08	J09	J10		J11	J12					
P03-L03: 0-0.1	Soil	18/1/14																					
P01-L01: 0-0.1																							
P04-L02: 0-0.1																							
P04-L02: 0.3-0.4																							
P17-S01A																							
P17-S01B																							
P17-S01C																							
P04-S01																							
P09-S02																							
P09-S03																							
P03-S01																							
Rinote	water																						
Tap spk	water																						
Tap tank	water																						
Drain	Soil																						
Geo/A	Soil																						

Special for Environmental Br. analysis

Analysis Recd. 18/02/14 10:20 Grit

J01 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J02 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J03 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J04 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J05 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J06 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J07 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J08 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J09 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J10 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J11 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J12 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)

J01 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J02 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J03 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J04 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J05 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J06 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J07 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J08 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J09 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J10 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J11 - TM(BTEX)/PAH(A), Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)
 J12 - TM(BTEX)/PAH(T)rac Lev(B)/As, Cd, Cr, Ni, Pb, Zn, Hg, Phenolics (Total)

CERTIFICATE OF ANALYSIS

105519

Client:

JBS & G (NSW & WA) Pty Ltd
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: T Harding, K Sharp

Sample log in details:

Your Reference: **43210, Riverstone**
No. of samples: 4 soils
Date samples received / completed instructions received 24/02/14 / 20/03/14

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date: 21/03/14 / 21/03/14
Date of Preliminary Report: None Issued

NATA accreditation number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:



Jacinta Hurst
Laboratory Manager

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	105519-1 Q04A 20/02/2014 soil	105519-2 Q05A 20/02/2014 soil
Date extracted	-	20/03/2014	20/03/2014
Date analysed	-	20/03/2014	20/03/2014
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Benzo(a)pyrene TEQNEPMB1	mg/kg	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	83	104

Acid Extractable metals in soil	UNITS	105519-1	105519-2
Our Reference:	-----	Q04A	Q05A
Your Reference	-----	20/02/2014	20/02/2014
Date Sampled		soil	soil
Type of sample			
Date digested	-	20/03/2014	20/03/2014
Date analysed	-	21/03/2014	21/03/2014
Arsenic	mg/kg	10	10
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	15	17
Copper	mg/kg	23	8
Lead	mg/kg	62	16
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	8	4
Zinc	mg/kg	52	14

Client Reference: 43210, Riverstone

Moisture			
Our Reference:	UNITS	105519-1	105519-2
Your Reference	-----	Q04A	Q05A
Date Sampled	-----	20/02/2014	20/02/2014
Type of sample		soil	soil
Date prepared	-	20/03/2014	20/03/2014
Date analysed	-	21/03/2014	21/03/2014
Moisture	%	18	12

MethodID	Methodology Summary
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.

Client Reference: 43210, Riverstone

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			20/03/2014	105519-1	20/03/2014 20/03/2014	LCS-4	20/03/2014
Date analysed	-			20/03/2014	105519-1	20/03/2014 20/03/2014	LCS-4	20/03/2014
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	LCS-4	97%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	LCS-4	107%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	LCS-4	103%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	LCS-4	100%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	LCS-4	105%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	LCS-4	98%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	105519-1	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	105519-1	<0.05 <0.05	LCS-4	110%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	105519-1	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	106	105519-1	83 98 RPD: 17	LCS-4	107%

Client Reference: 43210, Riverstone

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base Duplicate %RPD		
Date digested	-			20/03/2014	105519-1	20/03/2014 20/03/2014	LCS-1	20/03/2014
Date analysed	-			21/03/2014	105519-1	21/03/2014 21/03/2014	LCS-1	21/03/2014
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	105519-1	10 10 RPD: 0	LCS-1	95%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	105519-1	<0.4 <0.4	LCS-1	102%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	105519-1	15 17 RPD: 12	LCS-1	101%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	105519-1	23 20 RPD: 14	LCS-1	99%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	105519-1	62 53 RPD: 16	LCS-1	100%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	105519-1	<0.1 <0.1	LCS-1	84%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	105519-1	8 7 RPD: 13	LCS-1	101%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	105519-1	52 43 RPD: 19	LCS-1	101%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Moisture				
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]

QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate	Spike Sm#	Spike % Recovery
PAHs in Soil			Base + Duplicate + %RPD		
Date extracted	-	[NT]	[NT]	105519-2	20/03/2014
Date analysed	-	[NT]	[NT]	105519-2	20/03/2014
Naphthalene	mg/kg	[NT]	[NT]	105519-2	95%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	105519-2	105%
Phenanthrene	mg/kg	[NT]	[NT]	105519-2	101%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	105519-2	98%
Pyrene	mg/kg	[NT]	[NT]	105519-2	102%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	105519-2	95%
Benzo(b+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	105519-2	105%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	105519-2	87%

Client Reference: 43210, Riverstone

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	105519-2	20/03/2014
Date analysed	-	[NT]	[NT]	105519-2	21/03/2014
Arsenic	mg/kg	[NT]	[NT]	105519-2	87%
Cadmium	mg/kg	[NT]	[NT]	105519-2	89%
Chromium	mg/kg	[NT]	[NT]	105519-2	88%
Copper	mg/kg	[NT]	[NT]	105519-2	97%
Lead	mg/kg	[NT]	[NT]	105519-2	85%
Mercury	mg/kg	[NT]	[NT]	105519-2	94%
Nickel	mg/kg	[NT]	[NT]	105519-2	86%
Zinc	mg/kg	[NT]	[NT]	105519-2	86%

Report Comments:

Asbestos ID was analysed by Approved Identifier: Not applicable for this job
 Asbestos ID was authorised by Approved Signatory: Not applicable for this job

INS: Insufficient sample for this test PQL: Practical Quantitation Limit NT: Not tested
 NA: Test not required RPD: Relative Percent Difference NA: Test not required
 <: Less than >: Greater than LCS: Laboratory Control Sample

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For VOCs in water samples, three vials are required for duplicate or spike analysis.

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Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

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Send to
Envirolab



CHAIN OF CUSTODY

PROJECT NO.: 43210		LABORATORY BATCH NO.:	
PROJECT NAME: Riverstone		SAMPLERS: K. Sharp & T. Creese	
SEND REPORT TO: T. Harding & K. Sharp		PHONE: SYDNEY 02 82450300 EMAIL: tharding@jbsg.com.au + ksharp@jbsg.com.au	
DATE NEEDED BY: Standard turn around		QC LEVEL: NEPM (2013)	
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:			
SEND INVOICE TO: G. NG			
RELINQUISHED BY:		METHOD OF SHIPMENT:	
NAME: Kato Sharp		CONSIGNMENT NOTE NO.	
DATE: 2012/14		TRANSPORT CO.	
NAME: Sean		CONSIGNMENT NOTE NO.	
DATE: 2012/14		TRANSPORT CO.	
Container & Preservable Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Preserv.; C = Sodium Hydroxide Preserv.; VC = Hydrochloric Acid Preserv.; VS = Sulfuric Acid Preserv.; Z = Zinc Preserv.; E = EDTA Preserv.; ST = Sterile Bottle; O = Other		MSO Form 013 - Chain of Custody - envirolab.mgt	
OF: JBS&G		RECEIVED BY:	
NAME: Sean		NAME: Sean	
DATE: 2012/14		DATE: 20/2/14	
OF: Envirolab		DATE: 20/2/14	
		COOLER SEAL - Yes No Intact Broken	
		COOLER TEMP deg C	
		COOLER SEAL - Yes No Intact Broken	
		COOLER TEMP deg C	

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	JBS&G SPECIFIC SUITES								NOTES:		
						B10	B11	B12	B2A	B2B	B3/3B1	B3/3B2	B3/3B3		B3/3B4	
1	Soil	20/2/14		Bag + Jar + Ice												
2	Soil															
3	Soil															
4	Soil															

 Envirolab 12 Ashley St Chastwood NSW 2067 Ph: (02) 9544 4300	Job No: 125315 Date Received: 24/2/14 Time Received: 10:50 Received by: K Title: Analyst Location: Envo Signature: [Signature] Security Officer: K
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B10 - TRH/BTEX/PAH/OCPP/OPP/AL/CD/CR/CO/NL/PB/Zn/Hg
 B11 - TRH/BTEX/PAH/OCPP/PCB/AL/CD/CR/CO/NL/PB/Zn/Hg/TCLP/PAH & 6 Metals
 B12 - TRH/BTEX/PAH/OCPP/PCB/AL/CD/CR/CO/NL/PB/Zn/Hg/TCLP/PAH & 6 Metals
 B2A - TRH/BTEX/PAH/OCPP/PCB/AL/CD/CR/CO/NL/PB/Zn/Hg/TCLP/PAH & 6 Metals
 B2B - TRH/BTEX/PAH/OCPP/PCB/AL/CD/CR/CO/NL/PB/Zn/Hg/TCLP/PAH & 6 Metals
 B3/3B1 - TRH/BTEX/PAH/OCPP/PCB/AL/CD/CR/CO/NL/PB/Zn/Hg/TCLP/PAH & 6 Metals
 B3/3B2 - TRH/BTEX/PAH/OCPP/PCB/AL/CD/CR/CO/NL/PB/Zn/Hg/TCLP/PAH & 6 Metals
 B3/3B3 - TRH/BTEX/PAH/OCPP/PCB/AL/CD/CR/CO/NL/PB/Zn/Hg/TCLP/PAH & 6 Metals
 B3/3B4 - TRH/BTEX/PAH/OCPP/PCB/AL/CD/CR/CO/NL/PB/Zn/Hg/TCLP/PAH & 6 Metals

Aileen Hie

From: Thomas Harding [THarding@jbsg.com.au]
Sent: Thursday, 20 March 2014 2:56 PM
To: Jacinta Hurst
Cc: Aileen Hie; Bianca Shnaiderman
Subject: Riverstone Analysis
Attachments: 105519 coc.pdf

Due 21/3

105519.

Hi Jacinta,

I am trying to find out if you received samples for analysis for the Riverstone project (43210) for the above COC. Specifically, for QC04A and QC05A. The rest did not require analysis.

I believed that an updated COC for analysis should have been provided to you which ticked QC04A and QC05A for analysis of PAHs and heavy metals.

Can you confirm whether this occurred?

If not, do you still have these samples? And if so can you place them on for that analysis on a 24hour turnaround please?

Thanks you.

Regards

Tom



Tom Harding | Hydrogeologist | JBS&G
Sydney | Melbourne | Adelaide | Perth | Brisbane
Level 1, 50 Margaret Street Sydney NSW 2000

T: 02 8245 0300 | M: 0418 560 381 | www.jbsg.com.au

Contaminated Land | Groundwater Remediation | Auditing and Compliance | Assessments and Approvals | Occupational Hygiene and Monitoring

If you would like to send through large electronic files (>25MB), please use JBS&G's secure internet-based file delivery system located at <http://dropbox.yousendit.com/JBSG>. Place 'Tom Harding - Sydney' in the subject.

This email message is intended only for the addressee(s) and contains information that may be confidential and/or copyright. If you are not the intended recipient please delete this email immediately. Use, disclosure or reproduction of this email by anyone other than the intended recipient(s) is strictly prohibited. No representation is made that this email or any attachments are free of viruses and the recipient is responsible for undertaking appropriate virus scanning. Any advice provided in or attached to this email is subject to [limitations](#).

CERTIFICATE OF ANALYSIS

105631

Client:

JBS & G (NSW & WA) Pty Ltd
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: T Harding, K Sharp

Sample log in details:

Your Reference: **43210, Riverstone**
No. of samples: 2 soils
Date samples received / completed instructions received 25/02/14 / 25/02/14

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date: 4/03/14 / 4/03/14
Date of Preliminary Report: Not issued
NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:



Jacinta Hurst
Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference:	UNITS	105631-2
Your Reference	-----	QC09A
Date Sampled	-----	21/02/2014
Type of sample		soil
Date extracted	-	28/02/2014
Date analysed	-	03/03/2014
TRHC ₆ - C ₉	mg/kg	<25
TRHC ₆ - C ₁₀	mg/kg	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	93

svTRH(C10-C40) in Soil		
Our Reference:	UNITS	105631-2
Your Reference	-----	QC09A
Date Sampled	-----	21/02/2014
Type of sample		soil
Date extracted	-	28/02/2014
Date analysed	-	01/03/2014
TRHC ₁₀ - C ₁₄	mg/kg	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100
Surrogate o-Terphenyl	%	90

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	105631-2 QC09A 21/02/2014 soil
Date extracted	-	28/02/2014
Date analysed	-	01/03/2014
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Benzo(a)pyrene TEQNEPMB1	mg/kg	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE
Surrogate p-Terphenyl-d14	%	90

Organochlorine Pesticides in soil	UNITS	105631-2
Our Reference:	-----	QC09A
Your Reference	-----	21/02/2014
Date Sampled		soil
Type of sample		
Date extracted	-	28/02/2014
Date analysed	-	03/03/2014
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCMX	%	99

PCBs in Soil		
Our Reference:	UNITS	105631-2
Your Reference	-----	QC09A
Date Sampled	-----	21/02/2014
Type of sample		soil
Date extracted	-	28/02/2014
Date analysed	-	03/03/2014
Arochlor 1016	mg/kg	<0.1
Arochlor 1221	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1
Surrogate TCLMX	%	99

Acid Extractable metals in soil		
Our Reference:	UNITS	105631-2
Your Reference	-----	QC09A
Date Sampled	-----	21/02/2014
Type of sample		soil
Date digested	-	28/02/2014
Date analysed	-	28/02/2014
Arsenic	mg/kg	10
Cadmium	mg/kg	<0.4
Chromium	mg/kg	28
Copper	mg/kg	8
Lead	mg/kg	33
Mercury	mg/kg	<0.1
Nickel	mg/kg	5
Zinc	mg/kg	43

Moisture		
Our Reference:	UNITS	105631-2
Your Reference	-----	QC09A
Date Sampled	-----	21/02/2014
Type of sample		soil
Date prepared	-	28/02/2014
Date analysed	-	1/03/2014
Moisture	%	14

Asbestos ID - soils		
Our Reference:	UNITS	105631-2
Your Reference	-----	QC09A
Date Sampled	-----	21/02/2014
Type of sample		soil
Date analysed	-	3/03/2014
Sample mass tested	g	Approx 50g
Sample Description	-	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected

MethodID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note Naphthalene is determined from the VOC analysis.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

Client Reference: 43210, Riverstone

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Soil						Base II Duplicate II %RPD		
Date extracted	-			28/02/2014	[NT]	[NT]	LCS-7	28/02/2014
Date analysed	-			03/03/2014	[NT]	[NT]	LCS-7	03/03/2014
TRHC ₆ - C ₉	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-7	125%
TRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-7	125%
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	LCS-7	110%
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	LCS-7	125%
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-7	128%
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	LCS-7	132%
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-7	130%
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	114	[NT]	[NT]	LCS-7	126%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
svTRH(C10-C40) in Soil						Base II Duplicate II %RPD		
Date extracted	-			28/02/2014	[NT]	[NT]	LCS-7	28/02/2014
Date analysed	-			01/03/2014	[NT]	[NT]	LCS-7	01/03/2014
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-7	93%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-7	100%
TRHC ₂₈ - C ₃₆	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-7	96%
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-7	93%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-7	100%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-7	96%
Surrogate o-Terphenyl	%		Org-003	92	[NT]	[NT]	LCS-7	123%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			28/02/2014	[NT]	[NT]	LCS-7	28/02/2014
Date analysed	-			01/03/2014	[NT]	[NT]	LCS-7	01/03/2014
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-7	101%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-7	109%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-7	102%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-7	98%

Client Reference: 43210, Riverstone

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-7	105%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-7	94%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	[NT]	[NT]	LCS-7	104%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	95	[NT]	[NT]	LCS-7	98%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			28/02/2014	[NT]	[NT]	LCS-7	28/02/2014
Date analysed	-			03/03/2014	[NT]	[NT]	LCS-7	03/03/2014
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-7	133%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-7	108%
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-7	94%
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-7	105%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-7	127%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-7	108%
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-7	92%
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-7	91%
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-7	123%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-7	104%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%		Org-005	102	[NT]	[NT]	LCS-7	105%

Client Reference: 43210, Riverstone

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			28/02/2014	[NT]	[NT]	LCS-7	28/02/2014
Date analysed	-			03/03/2014	[NT]	[NT]	LCS-7	03/03/2014
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	LCS-7	96%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-006	102	[NT]	[NT]	LCS-7	95%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			28/02/2014	[NT]	[NT]	LCS-12	28/02/2014
Date analysed	-			28/02/2014	[NT]	[NT]	LCS-12	28/02/2014
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-12	100%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	LCS-12	107%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-12	105%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-12	106%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-12	102%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-12	89%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-12	104%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-12	104%

Client Reference: 43210, Riverstone

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Moisture				
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Asbestos ID - soils				
Date analysed	-			[NT]

Report Comments:

Asbestos: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.

Asbestos ID was analysed by Approved Identifier: Paul Ching
 Asbestos ID was authorised by Approved Signatory: Paul Ching

INS: Insufficient sample for this test

PQL: Practical Quantitation Limit

NT: Not tested

NA: Test not required

RPD: Relative Percent Difference

NA: Test not required

<: Less than

>: Greater than

LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.



Send no
Enviros

CHAIN OF CUSTODY

PROJECT NO: 43210
 PROJECT NAME: 12 WBS
 SEND REPORT TO: [unclear]
 DATE RECEIVED BY: SMC
 COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL: SEND INVOICE TO [unclear]

LABORATORY BATCH NO. [unclear]
 SAMPLES: 1 C, 1 B, 1 G
 PHONE: 07 82459000 EMAIL: [unclear]
 QC LEVEL: [unclear]

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	PH	NOTES
1-0001A	Soil	21/2/14		Bag, jar, 100		
2-0001A	"	"		"		

RELINQUISHED BY: NAME: K. Simpson DATE: 21/2/14
 OF: JBS&G
 RECEIVED BY: NAME: J. Hill DATE: 24/2/14
 OF: JBS&G

FOR RECEIVING LAB USE ONLY:
 COOLER SEAL - Yes No
 COOLER TEMP - deg C
 COOLER SEAL - Yes No
 COOLER TEMP - deg C

Handwritten notes: 105631, 25/2/14, 16/55, JMM, [unclear]

CERTIFICATE OF ANALYSIS

105813

Client:

JBS & G (NSW & WA) Pty Ltd

Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: Tom Harding

Sample log in details:

Your Reference: **43210, Riverston**
No. of samples: 3 Soils
Date samples received / completed instructions received 27/02/2014 / 27/02/2014

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date: 6/03/14 / 6/03/14
Date of Preliminary Report: Not Issued

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Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:



Jacinta Hurst
Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference:	UNITS	105813-3
Your Reference	-----	QC16A
Date Sampled	-----	25/02/2014
Type of sample		Soil
Date extracted	-	28/02/2014
Date analysed	-	04/03/2014
TRHC ₆ - C ₉	mg/kg	<25
TRHC ₆ - C ₁₀	mg/kg	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	101

svTRH(C10-C40) in Soil		
Our Reference:	UNITS	105813-3
Your Reference	-----	QC16A
Date Sampled	-----	25/02/2014
Type of sample		Soil
Date extracted	-	28/02/2014
Date analysed	-	01/03/2014
TRHC ₁₀ - C ₁₄	mg/kg	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100
Surrogate o-Terphenyl	%	91

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	105813-1 QC14A 25/02/2014 Soil	105813-2 QC15A 25/02/2014 Soil	105813-3 QC16A 25/02/2014 Soil
Date extracted	-	28/02/2014	28/02/2014	28/02/2014
Date analysed	-	01/03/2014	01/03/2014	01/03/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQNEPMB1	mg/kg	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	0.22	NIL (+)VE
Surrogate p-Terphenyl-d14	%	91	91	92

Organochlorine Pesticides in soil	UNITS	105813-3
Our Reference:	-----	QC16A
Your Reference	-----	25/02/2014
Date Sampled		Soil
Type of sample		
Date extracted	-	28/02/2014
Date analysed	-	03/03/2014
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCMX	%	101

PCBs in Soil		
Our Reference:	UNITS	105813-3
Your Reference	-----	QC16A
Date Sampled	-----	25/02/2014
Type of sample		Soil
Date extracted	-	28/02/2014
Date analysed	-	03/03/2014
Arochlor 1016	mg/kg	<0.1
Arochlor 1221	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1
Surrogate TCLMX	%	101

Acid Extractable metals in soil				
Our Reference:	UNITS	105813-1	105813-2	105813-3
Your Reference	-----	QC14A	QC15A	QC16A
Date Sampled	-----	25/02/2014	25/02/2014	25/02/2014
Type of sample		Soil	Soil	Soil
Date digested	-	28/02/2014	28/02/2014	28/02/2014
Date analysed	-	28/02/2014	28/02/2014	28/02/2014
Arsenic	mg/kg	10	8	7
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	30	23	20
Copper	mg/kg	16	25	21
Lead	mg/kg	63	110	39
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	5	16	12
Zinc	mg/kg	140	140	68

Client Reference: 43210, Riverston

Moisture				
Our Reference:	UNITS	105813-1	105813-2	105813-3
Your Reference	-----	QC14A	QC15A	QC16A
Date Sampled	-----	25/02/2014	25/02/2014	25/02/2014
Type of sample		Soil	Soil	Soil
Date prepared	-	28/02/2014	28/02/2014	28/02/2014
Date analysed	-	01/03/2014	01/03/2014	01/03/2014
Moisture	%	12	17	17

Asbestos ID - soils NEPM*		
Our Reference:	UNITS	105813-3
Your Reference	-----	QC16A
Date Sampled	-----	25/02/2014
Type of sample		Soil
Date analysed	-	6/03/2014
Sample mass tested	g	687.35g
Sample Description	-	Brown fine-grained soil
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected
ACM Presence Absence	-	NONE
Fibrous Asb(FA)/Asb Fines(AF)	-	>2mm, 80%
Asbestos ww%* Note	-	<0.001%*

MethodID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
ASB-007	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit between 0.01g/kg (0.001% w/w) to 0.1g/kg (0.01% w/w). This form of analysis is outside the scope of NATA accreditation. Note: The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres.

Client Reference: 43210, Riverston

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Soil						Base II Duplicate II %RPD		
Date extracted	-			28/02/2014	105813-3	28/02/2014 28/02/2014	LCS-7	28/02/2014
Date analysed	-			04/03/2014	105813-3	04/03/2014 04/03/2014	LCS-7	04/03/2014
TRHC ₆ - C ₉	mg/kg	25	Org-016	<25	105813-3	<25 <25	LCS-7	99%
TRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	105813-3	<25 <25	LCS-7	99%
Benzene	mg/kg	0.2	Org-016	<0.2	105813-3	<0.2 <0.2	LCS-7	104%
Toluene	mg/kg	0.5	Org-016	<0.5	105813-3	<0.5 <0.5	LCS-7	103%
Ethylbenzene	mg/kg	1	Org-016	<1	105813-3	<1 <1	LCS-7	89%
m+p-xylene	mg/kg	2	Org-016	<2	105813-3	<2 <2	LCS-7	100%
o-Xylene	mg/kg	1	Org-016	<1	105813-3	<1 <1	LCS-7	88%
naphthalene	mg/kg	1	Org-014	<1	105813-3	<1 <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	104	105813-3	101 99 RPD: 2	LCS-7	105%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
svTRH(C10-C40) in Soil						Base II Duplicate II %RPD		
Date extracted	-			28/02/2014	105813-3	28/02/2014 28/02/2014	LCS-7	28/02/2014
Date analysed	-			01/03/2014	105813-3	01/03/2014 01/03/2014	LCS-7	01/03/2014
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	105813-3	<50 <50	LCS-7	93%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	105813-3	<100 <100	LCS-7	100%
TRHC ₂₈ - C ₃₆	mg/kg	100	Org-003	<100	105813-3	<100 <100	LCS-7	96%
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	105813-3	<50 <50	LCS-7	93%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	105813-3	<100 <100	LCS-7	100%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	105813-3	<100 <100	LCS-7	96%
Surrogate o-Terphenyl	%		Org-003	92	105813-3	91 90 RPD: 1	LCS-7	123%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			28/02/2014	105813-3	28/02/2014 28/02/2014	LCS-7	28/02/2014
Date analysed	-			01/03/2014	105813-3	01/03/2014 01/03/2014	LCS-7	01/03/2014
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	LCS-7	101%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	LCS-7	109%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	LCS-7	102%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	LCS-7	98%

Client Reference: 43210, Riverston

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	LCS-7	105%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	LCS-7	94%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	105813-3	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	105813-3	<0.05 <0.05	LCS-7	104%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	95	105813-3	92 92 RPD: 0	LCS-7	98%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			28/02/2014	105813-3	28/02/2014 28/02/2014	LCS-7	28/02/2014
Date analysed	-			03/03/2014	105813-3	03/03/2014 03/03/2014	LCS-7	03/03/2014
HCB	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	LCS-7	133%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	LCS-7	108%
Heptachlor	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	LCS-7	94%
delta-BHC	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	LCS-7	105%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	LCS-7	127%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	LCS-7	108%
Dieldrin	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	LCS-7	92%
Endrin	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	LCS-7	91%
pp-DDD	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	LCS-7	123%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	LCS-7	104%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	102	105813-3	101 100 RPD: 1	LCS-7	105%

Client Reference: 43210, Riverston

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			28/02/2014	105813-3	28/02/2014 28/02/2014	LCS-7	28/02/2014
Date analysed	-			03/03/2014	105813-3	03/03/2014 03/03/2014	LCS-7	03/03/2014
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	105813-3	<0.1 <0.1	LCS-7	96%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	105813-3	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	102	105813-3	101 100 RPD: 1	LCS-7	95%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			28/02/2014	105813-3	28/02/2014 28/02/2014	LCS-12	28/02/2014
Date analysed	-			28/02/2014	105813-3	28/02/2014 28/02/2014	LCS-12	28/02/2014
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	105813-3	7 7 RPD: 0	LCS-12	100%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	105813-3	<0.4 <0.4	LCS-12	107%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	105813-3	20 19 RPD: 5	LCS-12	105%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	105813-3	21 21 RPD: 0	LCS-12	106%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	105813-3	39 38 RPD: 3	LCS-12	102%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	105813-3	<0.1 <0.1	LCS-12	91%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	105813-3	12 12 RPD: 0	LCS-12	104%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	105813-3	68 70 RPD: 3	LCS-12	104%

Client Reference: 43210, Riverston

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Moisture				
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Asbestos ID - soils NEPM*				
Date analysed	-			[NT]

Report Comments:

Asbestos in soil:

This report is consistent with the analytical procedures and reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Sample 105813-3; Chrysotile and amosite asbestos identified in matted material (total weight 0.0029g). It is estimated that the matted material contains up to 80% asbestos fibres by weight. This calculates to 0.0023g of asbestos fibres, which in 687.35g of soil is 0.00g/kg (i.e. < reporting limit for the method of 0.1g/kg).

Asbestos ID was analysed by Approved Identifier: Paul Ching
Asbestos ID was authorised by Approved Signatory: Paul Ching

INS: Insufficient sample for this test

PQL: Practical Quantitation Limit

NT: Not tested

NA: Test not required

RPD: Relative Percent Difference

NA: Test not required

<: Less than

>: Greater than

LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Send to
Environmental

CHAIN OF CUSTODY



PROJECT NO.: 43399-43210		LABORATORY BATCH NO.							
PROJECT NAME: Nelson-Riverston		SAMPLERS TC							
SEND REPORT TO: Retina-Corona + Harding		PHONE: 02 82450300							
DATE NEEDED BY: SIDA		EMAIL: ksharp@jbsg.com.au							
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:		QC LEVEL: NEPM (2013)							
		TRAINING@jbsg.com.au							
SAMPLE ID	MATRIX	DATE	TYPE & PRESERVATIVE	PH	Headspace P.H. F.P.H.	Observations	Q.P.F.R.S.	NOTES	
QC14A	1 Soil	2012 21/2	Jar + Bag + Ice		X				
QC15A	2 ↓	↓			X				
QC16A	3 ↓	↓			X				
<p>EMVORQ Environmental Quality Certification Program No. 105883 Date Received: 27-2-14 Time Received: 18:00 Received by: [Signature] Temp: 10°C Ambient Caring technician: [Signature] Security: Intact/Broken</p>									
ACQUIRED BY: K. Sharp		DATE: 27/2/14		RECEIVED BY: J. Clarke		DATE: 18/2/2014		FOR RECEIVING LAB USE ONLY:	
NAME: K. Sharp		DATE: 27/2/14		NAME: J. Clarke		DATE: 18/2/2014		COOLER SEAL - Yes ___ No ___	
NAME: JBS&G		DATE: 27/2/14		NAME: GEORGE ELS		DATE: 27/2/14		COOLER TEMP - 0 deg C	
NAME: JBS&G		DATE: 27/2/14		NAME: GEORGE ELS		DATE: 27/2/14		COOLER SEAL - Yes ___ No ___	
NAME: JBS&G		DATE: 27/2/14		NAME: GEORGE ELS		DATE: 27/2/14		COOLER TEMP - 0 deg C	

Analysis Recd. Ethen W&E Flight 260214 14:05 [Signature]

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 425908-S
 Client Reference RIVERSTONE 43210
 Received Date Jul 22, 2014

Client Sample ID			P11-BH01 0-0.1	P11-BH02 0-0.1	P11-BH03 0-0.1	P03-ACM SP
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-JI19277	S14-JI19278	S14-JI19279	S14-JI19281
Date Sampled			Jul 21, 2014	Jul 21, 2014	Jul 21, 2014	Jul 21, 2014
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	-
TRH C10-C14	20	mg/kg	< 20	-	< 20	-
TRH C15-C28	50	mg/kg	< 50	-	< 50	-
TRH C29-C36	50	mg/kg	72	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	72	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	84	-	80	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			P11-BH01 0-0.1	P11-BH02 0-0.1	P11-BH03 0-0.1	P03-ACM SP
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-JI19277	S14-JI19278	S14-JI19279	S14-JI19281
Date Sampled			Jul 21, 2014	Jul 21, 2014	Jul 21, 2014	Jul 21, 2014
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	-
2-Fluorobiphenyl (surr.)	1	%	123	90	107	-
p-Terphenyl-d14 (surr.)	1	%	112	106	124	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Toxaphene	1	mg/kg	< 1	-	< 1	-
Dibutylchloroendate (surr.)	1	%	90	-	90	-
Tetrachloro-m-xylene (surr.)	1	%	87	-	71	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchloroendate (surr.)	1	%	90	-	90	-
Heavy Metals						
Arsenic	2	mg/kg	12	13	2.1	-
Cadmium	0.4	mg/kg	1.2	1.1	< 0.4	-
Chromium	5	mg/kg	38	39	7.3	-
Copper	5	mg/kg	9.9	5.4	6.2	-
Lead	5	mg/kg	41	20	5.9	-
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Nickel	5	mg/kg	6.0	< 5	< 5	-
Zinc	5	mg/kg	45	17	24	-

Client Sample ID			P11-BH01 0-0.1	P11-BH02 0-0.1	P11-BH03 0-0.1	P03-ACM SP
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S14-JI19277	S14-JI19278	S14-JI19279	S14-JI19281
Date Sampled			Jul 21, 2014	Jul 21, 2014	Jul 21, 2014	Jul 21, 2014
Test/Reference	LOR	Unit				
% Moisture						
	0.1	%	6.5	7.4	5.3	-
Asbestos - WA guidelines						
	0.001	% w/w	see attached	-	see attached	-
Asbestos Absence /Presence						
			-	-	-	see attached

Client Sample ID			P34-BH02 0-0.1	P34-BH03 0-0.1
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S14-JI19283	S14-JI19284
Date Sampled			Jul 21, 2014	Jul 21, 2014
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	-
TRH C10-C14	20	mg/kg	< 20	-
TRH C15-C28	50	mg/kg	< 50	-
TRH C29-C36	50	mg/kg	< 50	-
TRH C10-36 (Total)	50	mg/kg	< 50	-
BTEX				
Benzene	0.1	mg/kg	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	86	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			P34-BH02 0-0.1	P34-BH03 0-0.1
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S14-JI19283	S14-JI19284
Date Sampled			Jul 21, 2014	Jul 21, 2014
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Total PAH	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	106	89
p-Terphenyl-d14 (surr.)	1	%	122	102
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	-
4,4'-DDD	0.05	mg/kg	< 0.05	-
4,4'-DDE	0.05	mg/kg	< 0.05	-
4,4'-DDT	0.05	mg/kg	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-
Toxaphene	1	mg/kg	< 1	-
Dibutylchlorendate (surr.)	1	%	102	-
Tetrachloro-m-xylene (surr.)	1	%	103	-
Polychlorinated Biphenyls (PCB)				
Aroclor-1016	0.5	mg/kg	< 0.5	-
Aroclor-1232	0.5	mg/kg	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-
Total PCB	0.5	mg/kg	< 0.5	-
Dibutylchlorendate (surr.)	1	%	102	-
Heavy Metals				
Arsenic	2	mg/kg	5.0	3.7
Cadmium	0.4	mg/kg	0.6	< 0.4
Chromium	5	mg/kg	13	17
Copper	5	mg/kg	13	20
Lead	5	mg/kg	16	19
Mercury	0.05	mg/kg	< 0.05	< 0.05
Nickel	5	mg/kg	< 5	9.4
Zinc	5	mg/kg	19	65

Client Sample ID			P34-BH02 0-0.1	P34-BH03 0-0.1
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S14-JI19283	S14-JI19284
Date Sampled			Jul 21, 2014	Jul 21, 2014
Test/Reference	LOR	Unit		
% Moisture	0.1	%	6.6	7.7
Asbestos - WA guidelines	0.001	% w/w	see attached	see attached

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Jul 25, 2014	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Jul 25, 2014	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Jul 25, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Jul 25, 2014	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Jul 25, 2014	14 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Jul 25, 2014	28 Day
Metals M8 - Method: LTM-MET-3040_R0 TOTAL AND DISSOLVED METALS AND MERCURY IN WATERS BY ICP-MS	Sydney	Jul 25, 2014	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Jul 25, 2014	28 Day
Asbestos - WA guidelines	Sydney	Jul 22, 2014	0 Day
Asbestos Absence /Presence	Sydney	Jul 22, 2014	0 Day

Melbourne
 3-5 Kingston Town Close
 Oakleigh VIC 3166
 Phone: +61 3 8584 5000
 NATA # 1261
 Site # 1254 & 14271

Sydney
 Unit F6, Building F
 16 Mars Road,
 Lane Cove West NSW 2066
 Phone: +61 2 9500 8400
 NATA # 1261 Site # 18217

Brisbane
 1/21 Sharnwood Place
 Murrarie QLD 4172
 Phone: +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 425908
Report #: 02 8245 0300
Phone:
Fax:

Received: Jul 22, 2014 7:15 AM
Due: Jul 29, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	JBS&G Suite 2 (metals filtered)	JBS&G Suite 2	BTEX and Volatile TRH	Metals M8	Polycyclic Aromatic Hydrocarbons	HOLD	Asbestos Absence /Presence	Asbestos - WA guidelines	% Moisture
Laboratory where analysis is conducted													
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217													
Brisbane Laboratory - NATA Site # 20794													
External Laboratory													
P11-BH01 0-0.1	Jul 21, 2014		Soil	S14-J119277		X							
P11-BH02 0-0.1	Jul 21, 2014		Soil	S14-J119278				X					
P11-BH03 0-0.1	Jul 21, 2014		Soil	S14-J119279					X				
P11-BH03 0.2-0.3	Jul 21, 2014		Soil	S14-J119280						X			
P03-ACM SP	Jul 21, 2014		Soil	S14-J119281							X		
P34-BH01 0-0.1	Jul 21, 2014		Soil	S14-J119282								X	

Melbourne
 3-5 Kingston Town Close
 Oakleigh VIC 3166
 Phone : +61 3 8584 5000
 MATA # 126
 Site # 1254 & 14271

Sydney
 Unit F6, Building F
 16 Mers Road
 Lane Cove West NSW 2066
 Phone : +61 2 9500 8400
 NATA # 1261 Site # 18217

Brisbane
 1/21 Sharnwood Place
 Murrarie QLD 4172
 Phone : +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 425908
Report #: 02 8245 0300
Phone:
Fax:

Received: Jul 22, 2014 7:15 AM
Due: Jul 29, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail														
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271														
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794														
External Laboratory														
P34-BH02 0-0.1	Jul 21, 2014	Soil	S14-J119283	X	X									
P34-BH03 0-0.1	Jul 21, 2014	Soil	S14-J119284	X	X									
P34-BH03 0.2-0.3	Jul 21, 2014	Soil	S14-J119285			X								
RINSATE	Jul 21, 2014	Water	S14-J119286										X	
TRIP SPIKE	Jul 18, 2014	Water	S14-J119287											
TRIP BLANK	Jul 18, 2014	Water	S14-J119288											
				% Moisture	X	X								
				Asbestos - WA guidelines	X	X								
				Asbestos Absence /Presence										
				HOLD	X	X								
				Polycyclic Aromatic Hydrocarbons	X	X								
				Metals M8	X	X								
				BTEX and Volatile TRH										
				JBS&G Suite 2					X					
				JBS&G Suite 2 (metals filtered)										

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
BTEX						
Benzene	mg/kg	< 0.1		0.1	Pass	
Toluene	mg/kg	< 0.1		0.1	Pass	
Ethylbenzene	mg/kg	< 0.1		0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2		0.2	Pass	
o-Xylene	mg/kg	< 0.1		0.1	Pass	
Xylenes - Total	mg/kg	< 0.3		0.3	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/kg	< 0.5		0.5	Pass	
Acenaphthylene	mg/kg	< 0.5		0.5	Pass	
Anthracene	mg/kg	< 0.5		0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5		0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5		0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5		0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5		0.5	Pass	
Chrysene	mg/kg	< 0.5		0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5		0.5	Pass	
Fluoranthene	mg/kg	< 0.5		0.5	Pass	
Fluorene	mg/kg	< 0.5		0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/kg	< 0.1		0.1	Pass	
4,4'-DDD	mg/kg	< 0.05		0.05	Pass	
4,4'-DDE	mg/kg	< 0.05		0.05	Pass	
4,4'-DDT	mg/kg	< 0.05		0.05	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05		0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05		0.05	Pass	
Endrin	mg/kg	< 0.05		0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05		0.05	Pass	
Endrin ketone	mg/kg	< 0.05		0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05		0.05	Pass	
Heptachlor	mg/kg	< 0.05		0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05		0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05		0.05	Pass	
Methoxychlor	mg/kg	< 0.2		0.2	Pass	
Toxaphene	mg/kg	< 1		1	Pass	
Method Blank						
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	mg/kg	< 0.5		0.5	Pass	
Aroclor-1232	mg/kg	< 0.5		0.5	Pass	
Aroclor-1242	mg/kg	< 0.5		0.5	Pass	
Aroclor-1248	mg/kg	< 0.5		0.5	Pass	
Aroclor-1254	mg/kg	< 0.5		0.5	Pass	
Aroclor-1260	mg/kg	< 0.5		0.5	Pass	
Total PCB	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Heavy Metals						
Arsenic	mg/kg	< 2		2	Pass	
Cadmium	mg/kg	< 0.4		0.4	Pass	
Chromium	mg/kg	< 5		5	Pass	
Copper	mg/kg	< 5		5	Pass	
Lead	mg/kg	< 5		5	Pass	
Mercury	mg/kg	< 0.05		0.05	Pass	
Nickel	mg/kg	< 5		5	Pass	
Zinc	mg/kg	< 5		5	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	%	98		70-130	Pass	
TRH C10-C14	%	85		70-130	Pass	
LCS - % Recovery						
BTEX						
Benzene	%	103		70-130	Pass	
Toluene	%	99		70-130	Pass	
Ethylbenzene	%	90		70-130	Pass	
m&p-Xylenes	%	89		70-130	Pass	
o-Xylene	%	89		70-130	Pass	
Xylenes - Total	%	89		70-130	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	%	83		70-130	Pass	
TRH C6-C10	%	113		70-130	Pass	
TRH >C10-C16	%	91		70-130	Pass	
LCS - % Recovery						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	%	105		70-130	Pass	
Acenaphthylene	%	86		70-130	Pass	
Anthracene	%	118		70-130	Pass	
Benz(a)anthracene	%	87		70-130	Pass	
Benzo(a)pyrene	%	76		70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Benzo(b&j)fluoranthene	%	79			70-130	Pass		
Benzo(g,h,i)perylene	%	84			70-130	Pass		
Benzo(k)fluoranthene	%	106			70-130	Pass		
Chrysene	%	120			70-130	Pass		
Dibenz(a,h)anthracene	%	71			70-130	Pass		
Fluoranthene	%	111			70-130	Pass		
Fluorene	%	97			70-130	Pass		
Indeno(1,2,3-cd)pyrene	%	71			70-130	Pass		
Naphthalene	%	100			70-130	Pass		
Phenanthrene	%	83			70-130	Pass		
Pyrene	%	111			70-130	Pass		
LCS - % Recovery								
Organochlorine Pesticides								
Chlordanes - Total	%	129			70-130	Pass		
4,4'-DDD	%	130			70-130	Pass		
4,4'-DDE	%	123			70-130	Pass		
4,4'-DDT	%	130			70-130	Pass		
a-BHC	%	128			70-130	Pass		
Aldrin	%	127			70-130	Pass		
b-BHC	%	129			70-130	Pass		
d-BHC	%	125			70-130	Pass		
Dieldrin	%	130			70-130	Pass		
Endosulfan I	%	128			70-130	Pass		
Endosulfan II	%	130			70-130	Pass		
Endosulfan sulphate	%	126			70-130	Pass		
Endrin	%	130			70-130	Pass		
Endrin aldehyde	%	120			70-130	Pass		
Endrin ketone	%	127			70-130	Pass		
g-BHC (Lindane)	%	128			70-130	Pass		
Heptachlor	%	126			70-130	Pass		
Heptachlor epoxide	%	127			70-130	Pass		
Hexachlorobenzene	%	128			70-130	Pass		
Methoxychlor	%	130			70-130	Pass		
LCS - % Recovery								
Polychlorinated Biphenyls (PCB)								
Aroclor-1260	%	97			70-130	Pass		
LCS - % Recovery								
Heavy Metals								
Arsenic	%	72			70-130	Pass		
Cadmium	%	82			70-130	Pass		
Chromium	%	88			70-130	Pass		
Copper	%	86			70-130	Pass		
Lead	%	90			70-130	Pass		
Mercury	%	81			70-130	Pass		
Nickel	%	93			70-130	Pass		
Zinc	%	89			70-130	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C10-C14	S14-J118586	NCP	%	76		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
TRH >C10-C16	S14-J118586	NCP	%	80		70-130	Pass	
Spike - % Recovery								

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S14-JI20273	NCP	%	105		70-130	Pass	
Acenaphthylene	S14-JI20273	NCP	%	85		70-130	Pass	
Anthracene	S14-JI20273	NCP	%	119		70-130	Pass	
Benzo(a)anthracene	S14-JI20273	NCP	%	89		70-130	Pass	
Benzo(a)pyrene	S14-JI20273	NCP	%	107		70-130	Pass	
Benzo(b&j)fluoranthene	S14-JI20273	NCP	%	92		70-130	Pass	
Benzo(g,h,i)perylene	S14-JI20273	NCP	%	91		70-130	Pass	
Benzo(k)fluoranthene	S14-JI20273	NCP	%	124		70-130	Pass	
Chrysene	S14-JI20273	NCP	%	122		70-130	Pass	
Dibenz(a,h)anthracene	S14-JI20273	NCP	%	84		70-130	Pass	
Fluoranthene	S14-JI20273	NCP	%	111		70-130	Pass	
Fluorene	S14-JI20273	NCP	%	99		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-JI20273	NCP	%	86		70-130	Pass	
Naphthalene	S14-JI20273	NCP	%	101		70-130	Pass	
Phenanthrene	S14-JI20273	NCP	%	88		70-130	Pass	
Pyrene	S14-JI20273	NCP	%	111		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	S14-JI18766	NCP	%	94		70-130	Pass	
4,4'-DDD	S14-JI18766	NCP	%	115		70-130	Pass	
4,4'-DDE	S14-JI18766	NCP	%	107		70-130	Pass	
4,4'-DDT	S14-JI18766	NCP	%	122		70-130	Pass	
a-BHC	S14-JI18766	NCP	%	98		70-130	Pass	
Aldrin	S14-JI18766	NCP	%	90		70-130	Pass	
b-BHC	S14-JI18766	NCP	%	88		70-130	Pass	
d-BHC	S14-JI18766	NCP	%	84		70-130	Pass	
Dieldrin	S14-JI18766	NCP	%	102		70-130	Pass	
Endosulfan I	S14-JI18766	NCP	%	86		70-130	Pass	
Endosulfan II	S14-JI18766	NCP	%	107		70-130	Pass	
Endosulfan sulphate	S14-JI18766	NCP	%	88		70-130	Pass	
Endrin	S14-JI18766	NCP	%	102		70-130	Pass	
Endrin aldehyde	S14-JI18766	NCP	%	72		70-130	Pass	
Endrin ketone	S14-JI18766	NCP	%	90		70-130	Pass	
g-BHC (Lindane)	S14-JI18766	NCP	%	91		70-130	Pass	
Heptachlor	S14-JI18766	NCP	%	90		70-130	Pass	
Heptachlor epoxide	S14-JI18766	NCP	%	91		70-130	Pass	
Hexachlorobenzene	S14-JI18766	NCP	%	84		70-130	Pass	
Methoxychlor	S14-JI18766	NCP	%	101		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls (PCB)				Result 1				
Aroclor-1260	S14-JI18458	NCP	%	86		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	S14-JI19277	CP	%	88		70-130	Pass	
Cadmium	S14-JI19277	CP	%	98		70-130	Pass	
Chromium	S14-JI19277	CP	%	95		70-130	Pass	
Copper	S14-JI19277	CP	%	104		70-130	Pass	
Lead	S14-JI19277	CP	%	96		70-130	Pass	
Mercury	S14-JI19277	CP	%	89		70-130	Pass	
Nickel	S14-JI19277	CP	%	99		70-130	Pass	
Zinc	S14-JI19277	CP	%	95		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C6-C9	S14-JI19279	CP	%	100			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S14-JI19279	CP	%	103			70-130	Pass	
Toluene	S14-JI19279	CP	%	101			70-130	Pass	
Ethylbenzene	S14-JI19279	CP	%	94			70-130	Pass	
m&p-Xylenes	S14-JI19279	CP	%	94			70-130	Pass	
o-Xylene	S14-JI19279	CP	%	95			70-130	Pass	
Xylenes - Total	S14-JI19279	CP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S14-JI19279	CP	%	89			70-130	Pass	
TRH C6-C10	S14-JI19279	CP	%	111			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-JI19277	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S14-JI18585	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S14-JI18585	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S14-JI18585	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S14-JI19277	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S14-JI19277	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S14-JI19277	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S14-JI19277	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S14-JI19277	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S14-JI19277	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-JI19277	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S14-JI19277	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-JI19277	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S14-JI18585	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S14-JI18585	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S14-JI18585	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S14-JI19294	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S14-JI19294	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S14-JI19294	NCP	mg/kg	1.0	0.90	15	30%	Pass	
Benz(a)anthracene	S14-JI19294	NCP	mg/kg	2.6	2.5	3.0	30%	Pass	
Benzo(a)pyrene	S14-JI19294	NCP	mg/kg	2.3	2.2	6.0	30%	Pass	
Benzo(b&j)fluoranthene	S14-JI19294	NCP	mg/kg	2.3	2.5	5.0	30%	Pass	
Benzo(g,h,i)perylene	S14-JI19294	NCP	mg/kg	1.1	1.1	6.0	30%	Pass	
Benzo(k)fluoranthene	S14-JI19294	NCP	mg/kg	2.0	1.5	24	30%	Pass	
Chrysene	S14-JI19294	NCP	mg/kg	1.9	1.9	4.0	30%	Pass	
Dibenz(a,h)anthracene	S14-JI19294	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S14-JI19294	NCP	mg/kg	4.8	4.5	6.0	30%	Pass	
Fluorene	S14-JI19294	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S14-JI19294	NCP	mg/kg	0.80	0.70	11	30%	Pass	
Naphthalene	S14-JI19294	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S14-JI19294	NCP	mg/kg	2.3	2.2	2.0	30%	Pass	
Pyrene	S14-JI19294	NCP	mg/kg	4.5	4.5	2.0	30%	Pass	

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S14-JI18467	NCP	mg/kg	7.3	5.5	29	30%	Pass
Cadmium	S14-JI18467	NCP	mg/kg	0.40	0.50	13	30%	Pass
Chromium	S14-JI18467	NCP	mg/kg	11	10	9.0	30%	Pass
Copper	S14-JI18467	NCP	mg/kg	21	22	2.0	30%	Pass
Lead	S14-JI18467	NCP	mg/kg	24	25	7.0	30%	Pass
Mercury	S14-JI18585	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Nickel	S14-JI18467	NCP	mg/kg	11	11	3.0	30%	Pass
Zinc	S14-JI18467	NCP	mg/kg	49	48	4.0	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S14-JI19283	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S14-JI19283	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S14-JI19283	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S14-JI19283	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S14-JI19283	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S14-JI19283	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S14-JI19283	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S14-JI19283	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S14-JI19283	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S14-JI19283	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Jean Heng	Client Services
Ivan Taylor	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

~~Final report - this Report replaces any previously issued Report~~

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Thomas Harding

Report 425908-W
 Client Reference RIVERSTONE 43210
 Received Date Jul 22, 2014

Client Sample ID			RINSATE	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-JI19286	S14-JI19287	S14-JI19288
Date Sampled			Jul 21, 2014	Jul 18, 2014	Jul 18, 2014
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	63%	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-36 (Total)	0.1	mg/L	< 0.1	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.02	mg/L	< 0.02	-	< 0.02
TRH C6-C10	0.02	mg/L	< 0.02	76%	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	< 0.001	99%	< 0.001
Toluene	0.001	mg/L	< 0.001	97%	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	90%	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	88%	< 0.002
o-Xylene	0.001	mg/L	< 0.001	91%	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	89%	< 0.003
4-Bromofluorobenzene (surr.)	1	%	98	107	103
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	-	-
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
Indeno(1,2,3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-

Client Sample ID			RINSATE	TRIP SPIKE	TRIP BLANK
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S14-JI19286	S14-JI19287	S14-JI19288
Date Sampled			Jul 21, 2014	Jul 18, 2014	Jul 18, 2014
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH	0.001	mg/L	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	93	-	-
p-Terphenyl-d14 (surr.)	1	%	98	-	-
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	< 0.001	-	-
4,4'-DDD	0.0001	mg/L	< 0.0001	-	-
4,4'-DDE	0.0001	mg/L	< 0.0001	-	-
4,4'-DDT	0.0001	mg/L	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	-	-
d-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	-	-
Toxaphene	0.01	mg/L	< 0.01	-	-
Dibutylchloroendate (surr.)	1	%	119	-	-
Tetrachloro-m-xylene (surr.)	1	%	100	-	-
Polychlorinated Biphenyls (PCB)					
Aroclor-1016	0.005	mg/L	< 0.005	-	-
Aroclor-1232	0.005	mg/L	< 0.005	-	-
Aroclor-1242	0.005	mg/L	< 0.005	-	-
Aroclor-1248	0.005	mg/L	< 0.005	-	-
Aroclor-1254	0.005	mg/L	< 0.005	-	-
Aroclor-1260	0.005	mg/L	< 0.005	-	-
Total PCB	0.005	mg/L	< 0.005	-	-
Dibutylchloroendate (surr.)	1	%	119	-	-
Heavy Metals					
Arsenic (filtered)	0.001	mg/L	< 0.001	-	-
Cadmium (filtered)	0.0001	mg/L	< 0.0001	-	-
Chromium (filtered)	0.001	mg/L	< 0.001	-	-
Copper (filtered)	0.001	mg/L	< 0.001	-	-
Lead (filtered)	0.001	mg/L	< 0.001	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	-	-
Nickel (filtered)	0.001	mg/L	< 0.001	-	-
Zinc (filtered)	0.005	mg/L	< 0.005	-	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Jul 24, 2014	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Jul 24, 2014	7 Day
BTEX - Method: E029/E016 BTEX	Sydney	Jul 22, 2014	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Jul 24, 2014	7 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Jul 24, 2014	7 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Jul 24, 2014	7 Day
Metals M8 filtered - Method: E020/E030 Filtered Metals in Water & E026 Mercury	Sydney	Jul 22, 2014	28 Day
Volatile Aromatic Compounds (VAC) - Method: E016 Volatile Aromatic Compounds (VAC)	Sydney	Jul 22, 2014	7 Day

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 Site # 1254 & 14271

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 1/21 Sharnwood Place
 Murrarie QLD 4172
 Phone : +61 7 3802 4600
 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 425908
Report #: 02 8245 0300
Phone:
Fax:

Received: Jul 22, 2014 7:15 AM
Due: Jul 29, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	JBS&G Suite 2 (metals filtered)	JBS&G Suite 2	BTEX and Volatile TRH	Metals M8	Polycyclic Aromatic Hydrocarbons	HOLD	Asbestos Absence /Presence	Asbestos - WA guidelines	% Moisture
Laboratory where analysis is conducted													
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217													
Brisbane Laboratory - NATA Site # 20794													
External Laboratory													
P11-BH01 0-0.1	Jul 21, 2014		Soil	S14-J119277		X							
P11-BH02 0-0.1	Jul 21, 2014		Soil	S14-J119278				X					
P11-BH03 0-0.1	Jul 21, 2014		Soil	S14-J119279					X				
P11-BH03 0.2-0.3	Jul 21, 2014		Soil	S14-J119280						X			
P03-ACM SP	Jul 21, 2014		Soil	S14-J119281							X		
P34-BH01 0-0.1	Jul 21, 2014		Soil	S14-J119282								X	

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 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 425908
Report #: 02 8245 0300
Phone:
Fax:

Received: Jul 22, 2014 7:15 AM
Due: Jul 29, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail		% Moisture	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX and Volatile TRH	JBS&G Suite 2	JBS&G Suite 2 (metals filtered)
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
External Laboratory										
P34-BH02 0-0.1	Jul 21, 2014	Soil	X	X					X	
P34-BH03 0-0.1	Jul 21, 2014	Soil	X	X		X	X			
P34-BH03 0.2-0.3	Jul 21, 2014	Soil			X					
RINSATE	Jul 21, 2014	Water								X
TRIP SPIKE	Jul 18, 2014	Water						X		
TRIP BLANK	Jul 18, 2014	Water						X		

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4,4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0001			0.0001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	79			70-130	Pass	
TRH C10-C14	%	98			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	81			70-130	Pass	
TRH C6-C10	%	89			70-130	Pass	
TRH >C10-C16	%	103			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	101			70-130	Pass	
Toluene	%	103			70-130	Pass	
Ethylbenzene	%	99			70-130	Pass	
m&p-Xylenes	%	100			70-130	Pass	
o-Xylene	%	102			70-130	Pass	
Xylenes - Total	%	101			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	128			70-130	Pass	
Acenaphthylene	%	116			70-130	Pass	
Anthracene	%	121			70-130	Pass	
Benz(a)anthracene	%	70			70-130	Pass	
Benzo(a)pyrene	%	77			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Benzo(b&j)fluoranthene	%	81	70-130	Pass			
Benzo(g,h,i)perylene	%	112	70-130	Pass			
Benzo(k)fluoranthene	%	104	70-130	Pass			
Chrysene	%	126	70-130	Pass			
Dibenz(a,h)anthracene	%	104	70-130	Pass			
Fluoranthene	%	105	70-130	Pass			
Fluorene	%	119	70-130	Pass			
Indeno(1,2,3-cd)pyrene	%	99	70-130	Pass			
Naphthalene	%	127	70-130	Pass			
Phenanthrene	%	102	70-130	Pass			
Pyrene	%	109	70-130	Pass			
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	113	70-130	Pass			
4,4'-DDD	%	125	70-130	Pass			
4,4'-DDE	%	125	70-130	Pass			
4,4'-DDT	%	125	70-130	Pass			
a-BHC	%	125	70-130	Pass			
Aldrin	%	125	70-130	Pass			
b-BHC	%	100	70-130	Pass			
d-BHC	%	100	70-130	Pass			
Dieldrin	%	125	70-130	Pass			
Endosulfan I	%	100	70-130	Pass			
Endosulfan II	%	100	70-130	Pass			
Endosulfan sulphate	%	125	70-130	Pass			
Endrin	%	125	70-130	Pass			
Endrin aldehyde	%	100	70-130	Pass			
Endrin ketone	%	125	70-130	Pass			
g-BHC (Lindane)	%	125	70-130	Pass			
Heptachlor	%	125	70-130	Pass			
Heptachlor epoxide	%	100	70-130	Pass			
Hexachlorobenzene	%	125	70-130	Pass			
Methoxychlor	%	125	70-130	Pass			
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	70	70-130	Pass			
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	103	70-130	Pass			
Cadmium (filtered)	%	102	70-130	Pass			
Chromium (filtered)	%	95	70-130	Pass			
Copper (filtered)	%	97	70-130	Pass			
Lead (filtered)	%	106	70-130	Pass			
Mercury (filtered)	%	106	70-130	Pass			
Nickel (filtered)	%	104	70-130	Pass			
Zinc (filtered)	%	106	70-130	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	S14-J117254	NCP	%	76	70-130	Pass	
Spike - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1			
Naphthalene	S14-J117254	NCP	%	76	70-130	Pass	
TRH C6-C10	S14-J117254	NCP	%	71	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
BTEX				Result 1					
Benzene	S14-JI17254	NCP	%	78			70-130	Pass	
Toluene	S14-JI17254	NCP	%	79			70-130	Pass	
Ethylbenzene	S14-JI17254	NCP	%	79			70-130	Pass	
m&p-Xylenes	S14-JI17254	NCP	%	79			70-130	Pass	
o-Xylene	S14-JI17254	NCP	%	80			70-130	Pass	
Xylenes - Total	S14-JI17254	NCP	%	79			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S14-JI18809	NCP	%	100			70-130	Pass	
Acenaphthylene	S14-JI18809	NCP	%	95			70-130	Pass	
Anthracene	S14-JI18809	NCP	%	77			70-130	Pass	
Benz(a)anthracene	S14-JI18809	NCP	%	80			70-130	Pass	
Benzo(a)pyrene	S14-JI18809	NCP	%	80			70-130	Pass	
Benzo(b&j)fluoranthene	S14-JI18809	NCP	%	93			70-130	Pass	
Benzo(g,h,i)perylene	S14-JI18809	NCP	%	102			70-130	Pass	
Benzo(k)fluoranthene	S14-JI18809	NCP	%	99			70-130	Pass	
Chrysene	S14-JI18809	NCP	%	106			70-130	Pass	
Dibenz(a,h)anthracene	S14-JI18809	NCP	%	107			70-130	Pass	
Fluoranthene	S14-JI18809	NCP	%	92			70-130	Pass	
Fluorene	S14-JI18809	NCP	%	93			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S14-JI18809	NCP	%	82			70-130	Pass	
Naphthalene	S14-JI18809	NCP	%	112			70-130	Pass	
Phenanthrene	S14-JI18809	NCP	%	80			70-130	Pass	
Pyrene	S14-JI18809	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S14-JI18780	NCP	%	105			70-130	Pass	
Cadmium (filtered)	S14-JI18780	NCP	%	102			70-130	Pass	
Chromium (filtered)	S14-JI18780	NCP	%	98			70-130	Pass	
Copper (filtered)	S14-JI18780	NCP	%	77			70-130	Pass	
Lead (filtered)	S14-JI18780	NCP	%	80			70-130	Pass	
Mercury (filtered)	S14-JI18780	NCP	%	79			70-130	Pass	
Nickel (filtered)	S14-JI18780	NCP	%	88			70-130	Pass	
Zinc (filtered)	S14-JI18780	NCP	%	88			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S14-JI16975	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S14-JI18780	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S14-JI18780	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S14-JI18780	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S14-JI16975	NCP	mg/L	0.19	0.18	6.0	30%	Pass	
TRH C6-C10	S14-JI16975	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-JI16975	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	S14-JI18780	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S14-JI18780	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S14-JI18780	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	

Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	S14-JI16975	NCP	mg/L	0.0010	0.0010	3.0	30%	Pass
Toluene	S14-JI16975	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Ethylbenzene	S14-JI16975	NCP	mg/L	0.0070	0.0070	2.0	30%	Pass
m&p-Xylenes	S14-JI16975	NCP	mg/L	0.013	0.012	5.0	30%	Pass
o-Xylene	S14-JI16975	NCP	mg/L	0.0070	0.0070	4.0	30%	Pass
Xylenes - Total	S14-JI16975	NCP	mg/L	0.020	0.019	4.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic (filtered)	S14-JI17888	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Cadmium (filtered)	S14-JI17888	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Chromium (filtered)	S14-JI17888	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)	S14-JI17888	NCP	mg/L	0.0070	0.0070	1.0	30%	Pass
Lead (filtered)	S14-JI17888	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Mercury (filtered)	S14-JI17888	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel (filtered)	S14-JI17888	NCP	mg/L	0.0020	0.0020	9.0	30%	Pass
Zinc (filtered)	S14-JI17888	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Jean Heng	Client Services
Ivan Taylor	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Dr. Bob Symons

Laboratory Manager

~~Final report - this Report replaces any previously issued Report~~

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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Certificate of Analysis



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are
 traceable to Australian/national standards.

JBS & G (NSW & WA) Pty Ltd
 Level 1, 50 Margaret St
 Sydney
 NSW 2000

Attention: Thomas Harding
Report: 425908-S
Client Reference: **RIVERSTONE 43210**
Received Date: 22 July 2014
Date Reported: 29 July 2014

Methodology:

Asbestos ID	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. Bulk samples include building materials, soils and ores.
Subsampling Soil Samples	The whole sample submitted is first dried and then sieved through a 10mm sieve followed by a 2mm sieve. All fibrous matter viz greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) Iron ores - Sampling and Sample preparation procedures is employed. Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis in accordance with AS 4964-2004.
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated and where required interfering organic fibres or matter may be removed by treating the sample for several hours at a temperature not exceeding 400 ± 30°C. The resultant material is then ground and examined in accordance with AS 4964-2004.
Limit of Reporting	The nominal detection limit of the AS4964 method is around 0.01%. The examination of large sample sizes (at least 500 ml is recommended) may improve the likelihood of identifying asbestos material in the greater than 2 mm fraction. The NEPM screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. NOTE: NATA News, September 2011 – page 34, states, "Weighing of fibres is problematic and can lead to loss of fibres and potential exposure for laboratory analysts. To request laboratories to report information which is outside the scope of AS 4964-2004 and the scope of their accreditation is misleading and is most unwise" therefore such values reported are outside the scope of Eurofins mgt NATA accreditation as designated by an asterisk.

Site Reference: RIVERSTONE 43210
Date Sampled: 21 July 2014
Report: 425908-S

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
P11-BH01 0-0.1	14-J119277	21 July 2014	Approximate sample mass: 879g Sample consisted of: Brown fine-grained soil, rocks and plant matter	Organic fibres, no asbestos detected at the reporting limit of 0.001% w/w*
P11-BH03 0-0.1	14-J119279	21 July 2014	Approximate sample mass: 741g Sample consisted of: Brown fine-grained soil, rocks and plant matter	Organic fibres, no asbestos detected at the reporting limit of 0.001% w/w*
P03-ACM SP	14-J119281	21 July 2014	Approximate sample dimension: 86mm x 49mm x 4mm Sample consisted of: Beige compressed fibre cement material	Chrysotile and Amosite asbestos detected.
P34-BH02 0-0.1	14-J119283	21 July 2014	Approximate sample mass: 617g Sample consisted of: Brown fine-grained soil, rocks and plant matter	Organic fibres, no asbestos detected at the reporting limit of 0.001% w/w*
P34-BH03 0-0.1	14-J119284	21 July 2014	Approximate sample mass: 868g Sample consisted of: Dark brown fine-grained soil and rocks	Organic fibres, no asbestos detected at the reporting limit of 0.001% w/w*

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos – LTM-ASB-8020	Sydney	29 July 2014	Indefinite

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters is performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis.
7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per kilogram

mg/l: milligrams per litre

µg/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed on fireproofing, troweled on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).

PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substantial degree of damage which increases the potential for fibre release.)
AC	asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios)

QC - ACCEPTANCE CRITERIA

RPD Duplicates:	Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:
Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%
Surrogate Recoveries:	Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and its Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time.
7. Analysis will begin as soon as possible after sample receipt.
8. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
9. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS's.
10. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
11. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Organic samples had Teflon liners	N/A
Sample containers for volatile analysis received with minimal headspace	N/A
Samples received within Holding Time	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Authorised by

Jean Heng	Client Services
Nibha Vaidya	Approved Counter/Identifier
Alex Tam	Approved Counter/Identifier



Glenn Jackson
National Laboratory Manager

Final Report – this report replaces any previously issued Report.

- Indicates Not Requested
- * Indicates NATA accreditation does not cover the performance of this service
- Uncertainty data is available on request

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Melbourne
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 MATA # 126
 Site # 1254 & 14271

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Brisbane
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 NATA # 1261 Site # 20794

Company Name: JBS & G (NSW & WA) Pty Ltd
Address: Level 1, 50 Margaret St
 Sydney
 NSW 2000

Client Job No.: RIVERSTONE 43210

Order No.: 425908
Report #: 02 8245 0300
Phone:
Fax:

Received: Jul 22, 2014 7:15 AM
Due: Jul 29, 2014
Priority: 5 Day
Contact Name: Thomas Harding

Eurofins | mgt Client Manager: Jean Heng

Sample Detail

Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	JBS&G Suite 2 (metals filtered)	JBS&G Suite 2	BTEX and Volatile TRH	Metals M8	Polycyclic Aromatic Hydrocarbons	HOLD	Asbestos Absence /Presence	Asbestos - WA guidelines	% Moisture
Laboratory where analysis is conducted													
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217													
Brisbane Laboratory - NATA Site # 20794													
External Laboratory													
P11-BH01 0-0.1	Jul 21, 2014		Soil	S14-J119277		X							
P11-BH02 0-0.1	Jul 21, 2014		Soil	S14-J119278					X				
P11-BH03 0-0.1	Jul 21, 2014		Soil	S14-J119279								X	
P11-BH03 0.2-0.3	Jul 21, 2014		Soil	S14-J119280						X			
P03-ACM SP	Jul 21, 2014		Soil	S14-J119281							X		
P34-BH01 0-0.1	Jul 21, 2014		Soil	S14-J119282						X			

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Sample Detail		% Moisture	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX and Volatile TRH	JBS&G Suite 2	JBS&G Suite 2 (metals filtered)
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
External Laboratory										
P34-BH02 0-0.1	Jul 21, 2014	Soil	X	X					X	
P34-BH03 0-0.1	Jul 21, 2014	Soil	X	X		X				
P34-BH03 0.2-0.3	Jul 21, 2014	Soil			X					
RINSATE	Jul 21, 2014	Water								X
TRIP SPIKE	Jul 18, 2014	Water						X		
TRIP BLANK	Jul 18, 2014	Water						X		

Appendix M – Summary of Alternative Land Use Scenario Site Assessment Thresholds

Health Based Soil Investigation Criteria and Hydrocarbon Management Limits (all units in mg/kg)

	Limit of Reporting	Laboratory Method	Health Investigation/ Screening Levels			
			Residential – Access HIL-A	Residential – Minimal Access HIL-B	Recreational/ Open Space HIL-C	Commercial industrial HIL-D
METALS						
Arsenic	4.0	ICP-AES (USEPA 200.7)	100	500	300	3000
Cadmium	0.4	ICP-AES (USEPA 200.7)	20	150	90	900
Chromium	1.0	ICP-AES (USEPA 200.7)	100 ¹	500 ¹	300 ¹	3600 ¹
Copper	1.0	ICP-AES (USEPA 200.7)	6000	30 000	17 000	240000
Nickel	1.0	ICP-AES (USEPA 200.7)	400	1200	1200	6000
Lead	1.0	ICP-AES (USEPA 200.7)	300	1200	600	1500
Zinc	1.0	ICP-AES (USEPA 200.7)	7400	60 000	30 000	400000
Mercury (inorganic)	0.1	Cold Vapour ASS (USEPA 7471A)	40 ²	120 ²	80 ²	730 ²
POLYCYCLIC AROMATIC HYDROCARBONS						
Carcinogenic PAHs (as B(a)P TPE) ³	0.028	GCMS (USEPA8270)	3	4	3	40
Total PAHs ⁴	0.4	GCMS (USEPA8270)	300	400	300	4000
BTEX						
Benzene	1.0	Purge Trap-GCMS (USEPA8260)	0.5 ⁵	0.5 ⁵	NL ⁵	3 ⁵
Toluene	1.0	Purge Trap-GCMS (USEPA8260)	160 ⁵	160 ⁵	NL ⁵	NL ⁵
Ethylbenzene	1.0	Purge Trap-GCMS (USEPA8260)	55 ⁵	55 ⁵	NL ⁵	NL ⁵
Total Xylenes	3.0	Purge Trap-GCMS (USEPA8260)	40	40 ⁵	NL ⁵	230 ⁵
TOTAL RECOVERABLE HYDROCARBONS						
F1 C ₆ -C ₁₀	10	TPH Purge Trap-GCMS (USEPA8260)	45 ^{6,7}	45 ⁶	NL ⁶	260 ⁶
F2 >C ₁₀ -C ₁₆	50	TPH Purge Trap-GCMS (USEPA8260)	110 ⁶	110 ⁶	NL ⁶	NL ⁶
F3 >C ₁₆ -C ₃₄	100	Purge Trap-GCFID (USEPA8000)	-	-	-	-
F4 >C ₃₄ -C ₄₀	100	Purge Trap-GCFID (USEPA8000)	-	-	-	-
ORGANOCHLORINE PESTICIDES						
DDT + DDD + DDE	0.3	GCECD (USEPA8140,8080)	240	600	400	3600
Aldrin + Dieldrin	0.2	GCECD (USEPA8140,8080)	6	10	10	45
Chlordane	0.1	GCECD (USEPA8140,8080)	50	90	70	530
Endosulfan	0.3	GCECD (USEPA8140,8080)	270	400	340	2000
Endrin	0.1	GCECD (USEPA8140,8080)	10	20	20	100
Heptachlor	0.1	GCECD (USEPA8140,8080)	6	10	10	50
HCB	0.1	GCECD (USEPA8140,8080)	10	15	10	80
Methoxychlor	0.1	GCECD (USEPA8140,8080)	300	500	400	2500
PCBs						
Total PCBs	0.7	GCECD (USEPA8140,8080)	1	1	1	7
VOLATILE ORGANIC COMPOUNDS						
PCE	1.0	Purge Trap-GCMS (USEPA8260)	2	2	40	8
TCE	1.0	Purge Trap-GCMS (USEPA8260)	0.02	0.02	0.4	0.08
Cis 1,2 DCE	1.0	Purge Trap-GCMS (USEPA8260)	0.08	0.08	2	0.3
VC	1.0	Purge Trap-GCMS (USEPA8260)	0.03	0.03	0.5	0.1
OTHER						
Asbestos	Presence	PLM / Dispersion Staining	No asbestos capable of being detected via the investigation, which comprises both visual identification and sample analysis by a NATA accredited laboratory ⁸			

Notes:

1. Guideline values presented are for Chromium (VI) in absence of total Chromium values. Where total Chromium results are elevated, samples will be analysed for Chromium (VI).
2. Guideline values are for inorganic mercury. Where elevated mercury concentrations are encountered and/or site information suggests the potential presence of elemental mercury and/or methyl mercury, consideration of applicability would be needed.
3. Carcinogenic PAHs calculated as per Benzo(a)pyrene Toxicity Equivalent Factor requirements presented in NEPC (2013)
4. Total PAHs calculated as per requirements presented in NEPC (2013).
5. Soil Health Screening Levels for Vapour Intrusion: Sand Soils. Values presented are those for 0 to <1 m bgs as the most conservative level. Reference should be made to results tables for further detail of levels at greater depths. NL: Non-limiting.
6. Values for F1 C₆-C₉ are obtained by subtracting BTEX (Sum) from laboratory result for C₆-C₉ TRH. Naphthalene is not subtracted as there is separate limits for Naphthalene.
7. No EPA endorsed criteria, The LOR is proposed as a screening level in the absence of endorsed site specific criteria.

Ecological Screening Levels (all units in mg/kg)

	Limit of Reporting	Laboratory Method	ESLs	
			Urban Residential and public open space	Commercial and industrial
Metals				
Arsenic	4.0	ICP-AES (USEPA 200.7)	100	160
Cadmium	0.4	ICP-AES (USEPA 200.7)	-	-
Chromium	1.0	ICP-AES (USEPA 200.7)	190	310
Chromium (VI)	1.0	Alkali leach colorimetric (APHA3500-Cr/USEAP3060A)	-	-
Copper	1.0	ICP-AES (USEPA 200.7)	130	190
Nickel	1.0	ICP-AES (USEPA 200.7)	30	55
Lead	1.0	ICP-AES (USEPA 200.7)	1100	1800
Zinc	1.0	ICP-AES (USEPA 200.7)	180	280
Mercury (inorganic)	0.1	Cold Vapour ASS (USEPA 7471A)	-	-
PAHs				
Benzo(a)pyrene	0.5	GCMS (USEPA8270)	0.7	1.4
Naphthalene	0.1	GCMS (USEPA8270)	170	370
BTEX				
Benzene	1.0	Purge Trap-GCMS (USEPA8260)	50	75
Toluene	1.0	Purge Trap-GCMS (USEPA8260)	85	135
Ethylbenzene	1.0	Purge Trap-GCMS (USEPA8260)	70	165
Total Xylenes	3.0	Purge Trap-GCMS (USEPA8260)	105	180
TPH				
F1 C ₆ -C ₁₀	10	TPH Purge Trap-GCMS (USEPA8260)	180 ¹	215 ¹
F2 >C ₁₀ -C ₁₆	50	TPH Purge Trap-GCMS (USEPA8260)	120 ²	170 ²
F3 >C ₁₆ -C ₃₄	100	Purge Trap-GCFID (USEPA8000)	300	1700
F4 >C ₃₄ -C ₄₀	100	Purge Trap-GCFID (USEPA8000)	2800	3300
OCPs				
DDT	0.1	GCECD (USEPA8140,8080)	180	640

1. Values for F1 C₆-C₉ are obtained by subtracting BTEX (Sum) from laboratory result for C₆-C₉ TRH.
2. Values for F2 >C₁₀-C₁₆ are obtained by subtracting naphthalene from laboratory result for >C₁₀-C₁₆ TRH.
3. Value for Chromium (III) adopted for evaluation of total Chromium in the absence of known Chromium (VI) source.

Appendix N - Survey



1. This plan was prepared for the sole purpose of showing the location of the proposed development and does not constitute a guarantee of any kind. The client is advised that the information contained in this plan is based on the information provided to the consultant and is not a warranty of any kind. The consultant is not responsible for any errors or omissions in this plan.

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DATE: 06/03/2014
SHEET: 1 OF 1
SCALE: 1:1250 (A1)
PROJECT: 1480/58, 1480/59, 1480/31, 1480/32
SHEET: 1 OF 1
SCALE: 1:1250 (A1)

CLIENT MANAGER: SH
CONSULTANT: RM
LEVEL DATUM: A.H.D.
REVISION LEVEL: 27/2/06

TITLE: PLAN SHOWING SITES OF CONTAMINATION
WITHIN THE REVERSION SCHEDULED LANDS

MERIDIAN: MGA
COORDINATES: 562898.88, N 627253.89

DATE: 06/03/2014
SHEET: 1 OF 1
SCALE: 1:1250 (A1)

AUTOCAD REF: PRL1587A_Contamination_148003.dwg

REVISION REF: A

PROJECT: 1480/58, 1480/59, 1480/31, 1480/32

SHEET: 1 OF 1

SCALE: 1:1250 (A1)

CLIENT: URBANSPRO WITH NSW

DATE: 06/03/2014

SHEET: 1 OF 1

SCALE: 1:1250 (A1)

PROJECT: 1480/58, 1480/59, 1480/31, 1480/32

SHEET: 1 OF 1

SCALE: 1:1250 (A1)

CLIENT: URBANSPRO WITH NSW

DATE: 06/03/2014

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PROJECT: 1480/58, 1480/59, 1480/31, 1480/32

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SHEET: 1 OF 1

SCALE: 1:1250 (A1)






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