

FY25 Net Zero Transition Plan

Basis of preparation

Methodology and assumptions behind
Landcom's FY25 Net Zero Transition
Plan

June 2026

Issue: Final

Issue date: 24 June 2026

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Contents

1	Introduction	5
1.1	Strategic ambitions of Landcom's Net Zero Transition Plan	5
2	Standards, alignment and scope	7
2.1	Standards and frameworks	7
2.2	Alignment with GHG Protocol Corporate Accounting and Reporting Standard	8
2.3	Areas for improvement	9
3	Methodologies and Assumptions	10
3.1	Carbon Inventory Development	10
3.1.1	Reporting period	10
3.1.2	Emissions Boundary	10
3.1.3	Control approach	12
3.1.4	Inventory Development and Data Quality	13
3.1.5	Data sources and calculation methodologies	14
3.1.6	Base years emissions	20
3.1.7	FY25 emissions inventory, emission factors	22
3.1.8	Climate-related physical and transition risk analysis	26
3.2	Key assumptions, impacts, dependencies and trade-offs	29
3.3	Calculation methodologies and assumptions	30
3.3.1	Corporate Operations	30
3.3.2	Construction (Upfront Embodied Scope 3 emissions)	30
3.3.3	Communities Operations (Downstream Embodied Scope 3 emissions)	36
4	Targets and Performance	41
4.1	Targets	42
4.1.1	FY25-FY29 (Short-term) NZTP Targets	43
4.1.2	FY30-FY50 (Medium and Long-term) Targets	43
4.2	FY25 Performance	44
4.2.1	Corporate Operations (Scope 1, 2 and 3)	44
4.2.3	Construction (Upfront Embodied Scope 2 and 3 emissions)	46
4.2.4	Communities Operations (Scope 3 Downstream Embodied Emissions)	47
4.3	Reporting activities	48
4.4	Performance, progress measurement, tracking and reporting methodologies	49
5	Implementation and next steps	50
5.1	Changes to Landcom's Business Model, Products and Services	50

5.2	Engagement with value chain	51
5.3	Engagement with industry	51
5.4	Engagement with other stakeholders.....	51
5.4.1	First Nations peoples	51
5.4.2	Government	52
5.4.3	Local communities	52
5.5	Policies and conditions.....	53
5.6	Financial planning	54
5.7	Next Steps.....	55
Appendix A: Summary of Historical Carbon Offset Retirement.....		56
Appendix B: Rationale for emissions boundary setting		57

List of Figures

Figure 1: Excerpt from Landcom's FY24-FY29 Strategic Plan.....	6
Figure 2: Landcom's Material Greenhouse Gas Emissions Categories & Scopes	11
Figure 3: Data quality and confidence spectrum.....	13
Figure 4: FY25-29 (Short term) Targets.....	43
Figure 5: FY30-FY50 (Medium and Long-term) Targets.....	43

List of Tables

Table 1: Mapping of NZTP Disclosures to IFRS S2 Principles, Elements and Sub-Elements	7
Table 2: FY25 NZTP alignment to the GHG Protocol Corporate Accounting and Reporting Standard	8
Table 3: Data sources, calculation methods and rationale for greenhouse gas emissions.....	15
Table 4: Base year emissions by activity and scope	20
Table 5: FY25 emission inventory, emission factors and base year	22
Table 6: NSW average 2009-2050 projected change (NARCLIM 2.0).....	26
Table 7: Relative 2040 unmitigated risk exposure of potential climate-related transition risks across transition scenarios	28
Table 8: Description of LCA Product Stages included in Upfront Embodied Scope 3 emissions benchmark.....	30
Table 9: FY25 Construction Benchmark inputs, assumptions, LCA stages and emission factors by typology	31
Table 10: Upfront carbon emission proxy values by typology	32
Table 11: Standalone dwelling (House) GWP by Construction Component.....	32
Table 12: Standalone dwelling (House) GWP by Construction Material.....	33
Table 13: Apartment GWP by Construction Component	34
Table 14: Apartment GWP by Construction Material	34
Table 15: Civil Infrastructure GWP by Construction Components	35
Table 16: Civil Infrastructure GWP by Construction Material	35
Table 17: FY25 Business as usual modelling assumptions.....	36

Table 18. PV system information reporting requirements.....	38
Table 19. Site data reporting requirements	39
Table 20. Modelling considerations reporting requirements	39
Table 21. Communities Operations key modelling limitations, data-entry methodology, and considerations	40
Table 22. Corporate Operations GHG emissions performance CY2019-FY25	44
Table 23. FY25 Upfront Embodied Carbon High-Level Estimated Performance	46
Table 24. FY25 challenges and opportunities	47
Table 25. FY25 Communities Operations High-Level Estimated Performance.....	47
Table 26. Each products and associated decarbonisation initiatives aimed at different customer groups:	50
Table 27: Strategic Contribution of Policy, Strategy and Governance Interventions	53
Table 28. Examples of Decarbonisation Initiatives supporting mitigation and adaptation of climate-related financial risk categories	54
Table 29. Summary of Historical Carbon Offset Retirement.....	56
Table 30. Summary of FY25 Relevancy Assessment.....	58

1 Introduction

Landcom, a government-owned corporation, operates in New South Wales (NSW), and is engaged in land and property development. Our scope spans sustainable community creation and housing affordability. We began our journey towards net zero in 2017 and continue to refine and mature our approach year-on-year. For us, net zero emissions refer to achieving an overall balance between greenhouse gas (GHG) emissions produced by Landcom and our partners and the GHG emissions removed from the atmosphere over a period of time. Net zero is not the same as carbon neutral, or net zero carbon.

The following Basis of Preparation articulates the overarching principles, methodologies and assumptions that underpin the carbon accounting for Landcom's Net Zero Transition Plan. It directly supports the modelling undertaken to understand and project Landcom's net zero transition as well as our project-specific modelling. It is based on industry best practice and aligns with current NSW Government requirements – representing the position in which Landcom sits, between government and industry.

As this is our first year collating our business-wide Scope 1, 2 and 3 emissions, setting interim net zero targets, and estimating our Construction and Communities Operations Scope 3 emissions enabled within the financial year, we expect ongoing improvements in our emissions tracking and reporting methodologies over time. The Basis of Preparation Report is designed to support a meaningful understanding and comparison of Landcom's GHG emissions over time, and will document any changes made to the measurement approach, inputs and assumptions each year (for that reporting period) including the rationale for those changes.

This Basis of Preparation should be read in conjunction with the greenhouse gas emissions data as disclosed in our Net Zero Transition Plan and as articulated through our annual reporting.

1.1 Strategic ambitions of Landcom's Net Zero Transition Plan

Landcom's Net Zero Transition Plan (NZTP) describes Landcom's strategic decarbonisation ambitions, and how we plan to adapt and grow as the global economy transitions to net zero, aligned with NSW Government targets. These include:

- **Deliver net zero emissions across the full value chain by 2050**, achieving deep emissions reductions (at least 90%) across Scope 1, 2 and material Scope 3 emissions, with a declining and limited role for offsets, consistent with global best practice and NSW Government targets.
- **Embed climate and nature considerations into core business decisions**, integrating climate-related physical and transition risks, financial impacts and nature-based opportunities into governance, strategy, investment decisions, project delivery and divestment pathways.
- **Lead market transformation in the built environment**, by enabling uptake of all-electric communities, low-carbon materials, distributed energy solutions and innovative design, while using Landcom's scale and procurement leverage to influence suppliers and industry partners to decarbonise; and
- **Create resilient, affordable and future-ready communities**, enabling a transition to net zero that targets tangible benefits for customers and communities—lower cost of living pressures, improved climate resilience, healthier environments, and a just transition that aims to support vulnerable populations.

The strategic ambitions of Landcom's NZTP are enabled through Landcom's FY24-FY29 Strategic Plan; embedding Landcom's long-term horizon of achieving net zero emissions by 2050 across all business activities, as shown in Figure 1 below.

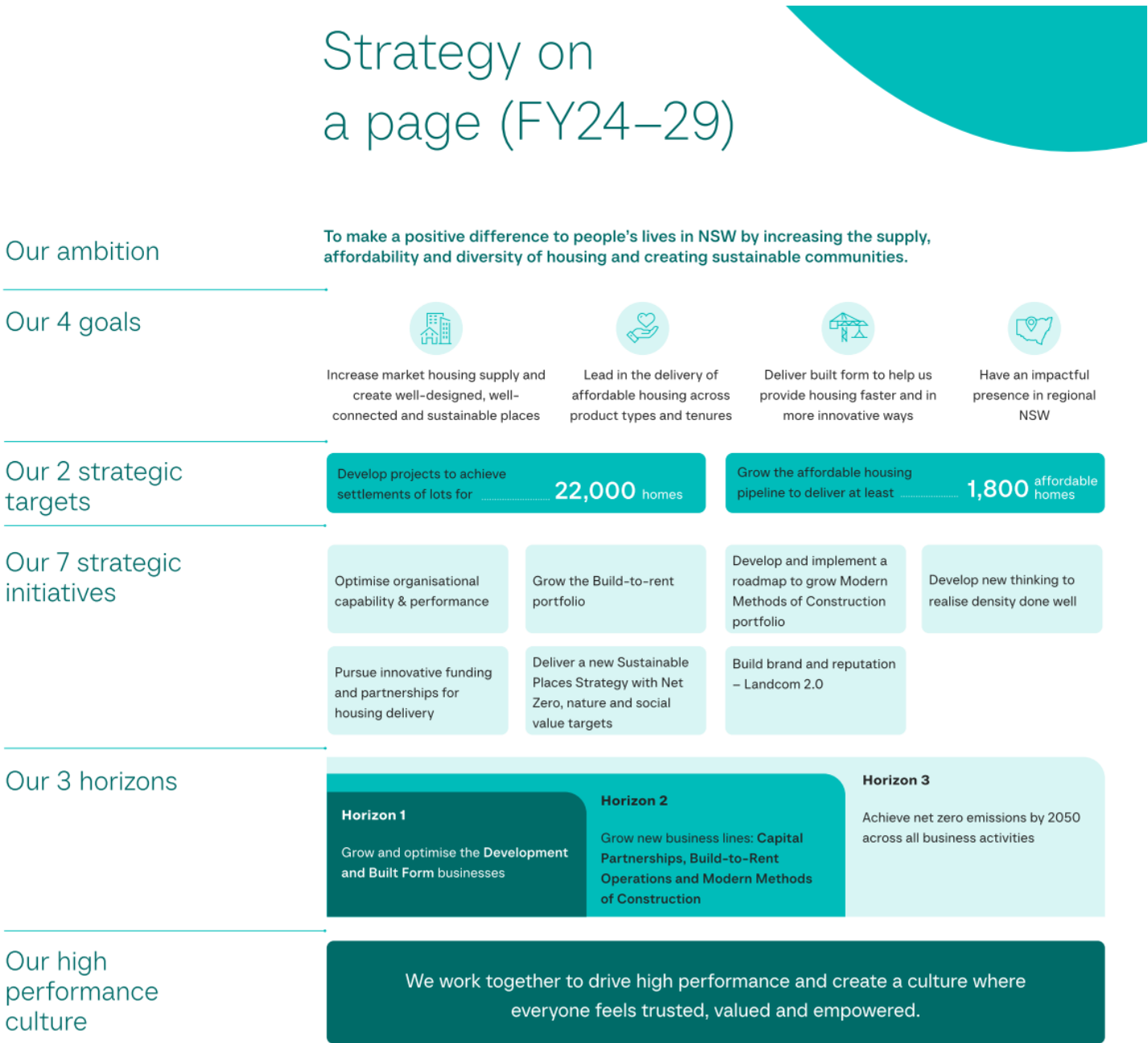


Figure 1: Excerpt from Landcom's FY24-FY29 Strategic Plan

2 Standards, alignment and scope

2.1 Standards and frameworks

For our first year, Landcom has developed Transition Plan reporting with reference to several relevant standards and frameworks including:

- Greenhouse Gas Protocol: A Corporate Accounting Reporting Standard
- Climate Active Carbon Neutral Organisation Standard
- (former) Taskforce on Climate-related Financial Disclosure
- Treasury (TPG 24-33): Reporting framework for climate-related financial disclosures
- Transition Plan Taskforce Disclosure Framework (IFRS, 2023)

This involves addressing all material sources of Landcom's emissions, including emissions it directly controls (scope 1, 2) and emissions from its supply chain (scope 3). We recognise that there will be some sources of emissions where it will not be feasible to eliminate fully, or at least within the timeframe of our ambition. In these instances, permanent removal through nature-based offsets will be used.

Table 1: Mapping of NZTP Disclosures to IFRS S2 Principles, Elements and Sub-Elements

Principles	Element	Sub-Element	Disclosure location
Ambition	1. Foundations	1.1 Strategic Ambition	BoP Section 1.1
		1.2 Business model and value chain	BoP Section 5.1-0
		1.3 Key assumptions and external factors	BoP Section 3.2
Action	2. Implementation Strategy	2.1 Business operations	NZTP Action Plan
		2.2 Products and services	BoP Section 3.1, 3.2 and 5.2-5.6
		2.3 Policies and conditions	BoP Section 5.5
		2.4 Financial planning	BoP Section 5.6
	3. Engagement Strategy	3.1 Engagement with value chain	BoP Section 0
		3.2 Engagement with industry	BoP Section 5.3
		3.3 Engagement with government, public sector, communities, and civil society	BoP Section 5.4
	4. Metrics & Targets	4.1 Governance, engagement, business and operational metrics and targets	NZTP Action Plan TPG24-33
		4.2 Financial metrics and targets	TPG24-33
		4.3 GHG metrics and targets	BoP Section 4.1
		4.4 Carbon credits	BoP Appendix A: Summary of Historical Carbon Offset Retirement
	5. Governance	5.1 Board oversight and reporting	TPG24-33

5.2 Management roles, responsibility and accountability	TPG24-33
5.3 Culture	BoP Section 1.1
5.4 Incentives and remuneration	BoP Section 5.2
5.5 Skills, competencies and training	TPG24-33 / NZTP Action Plan

2.2 Alignment with GHG Protocol Corporate Accounting and Reporting Standard

Since 2019 – Landcom has reported its Scope 1, 2 and select Scope 3 emissions for our corporate activities through independent verification by Climate Active. To improve year-on-year measurement improvements and enable a net zero transition, our reporting scope has expanded to incorporate all material activities and associated Scope 1, 2 and 3 emissions. Accurately estimating the entire carbon footprint of Landcom's indirect and direct activities is resource intensive and complex, but a goal that we will continue to pursue as we transition towards net zero. Data collection is currently highly manual, time consuming and costly to collect and analyse. We will look to automate this process in coming years to improve timeliness, accuracy and consistency of reporting.

Landcom is committed to open and transparent reporting – acknowledging where there are gaps or inconsistency in our data. Our emissions data will continue to be updated to improve alignment to the globally recognised Greenhouse Gas Protocol – Accounting and Reporting Principles. We have sought independent assurance and technical support to validate and enhance quality control within this Basis of Preparation document – aiming for continual improvement and refinement as we understand and address the full scope of our emissions profile.

Table 2: FY25 NZTP alignment to the GHG Protocol Corporate Accounting and Reporting Standard

Relevance	Completeness	Consistency	Transparency	Accuracy
Selecting an inventory boundary that reflects the full spectrum of Landcom's activities <i>Ongoing</i> Ensuring the GHG data supports informed decision-making <i>Ongoing</i> Consider organisational structure, operational activities, emissions sources and geographical locations to accurately represent Landcom's emissions profile <i>Ongoing</i>	Include all material emissions sources and activities within our emissions boundary <i>In progress</i> Ensure accounting is robust and comprehensive <i>In progress</i> Identifying all direct and indirect Scope 1 and 2 emissions, accounting for all significant emission sources, estimating emission sources where data is not readily available <i>Ongoing</i> Transparently documenting any exclusions or data limitations with the aim of addressing gaps and estimates over time. <i>Ongoing</i>	Maintaining consistent accounting practices, boundaries, calculation methods and data sources within the inventory, enabling meaningful comparisons of emissions performance over time. <i>In progress</i> Documenting adjustments to methodologies or boundary definitions and justifying changes to preserve the integrity of trend analysis and reliable performance benchmarking. <i>Ongoing</i>	Clearly disclosing and explaining the methodologies, assumptions, data sources and calculation tools used to develop our GHG inventories, providing sufficient detail to enable others to evaluate and replicate our results. <i>Ongoing</i> Transparent documentation and reporting to create credibility, enable verification, and aid stakeholder understanding of the context and reliability of emissions data presented. <i>Ongoing</i>	Aim to quantify GHG emissions as accurately as possible, minimising uncertainties and ensuring that estimates are neither systematically over nor understated. <i>In progress</i> Using robust data sources, credible emissions factors and sound measurement techniques to improve the data confidence. <i>Ongoing</i>

Detailed information on methodologies and assumptions has been provided in the following sections:

3.3.1: Corporate Operations

3.3.2: Construction and Design

3.3.3: Communities Operations

2.3 Areas for improvement

The development of the FY25 Net Zero Transition Plan (NZTP) highlighted opportunities to further strengthen Landcom's emissions strategy and climate-related reporting, as the organisation continues to evolve its operating model and build maturity in climate disclosures. Ongoing priority areas for improvement include:

- Continual improvements to emissions methodologies and boundaries, documenting consistent calculation approaches (particularly for Scope 3 and custom metrics) and updating Basis of Preparation documentation accordingly;
- Enhancing emissions data governance and systems through clearer data ownership, standardised processes, and transition from spreadsheet-based tracking to integrated systems to improve accuracy, auditability, and reliability of emissions data;
- Strengthening target setting and performance tracking by refining absolute and intensity-based targets, and streamlining monitoring, review, and accountability mechanisms across systems and processes;
- Improving the completeness and balance of emissions reporting by progressively updating emissions base years to support year-on-year performance monitoring and reporting, and continuing to transition towards measured, high-quality data where possible.

3 Methodologies and Assumptions

3.1 Carbon Inventory Development

3.1.1 Reporting period

Landcom's NZTP reporting period aligns with the 2024–25 financial year (FY25), covering the period from 1 July 2024 to 30 June 2025. Landcom applies an organisational boundary based on operational control, capturing emissions and transition-related actions associated with assets, projects and operations over which Landcom has decision-making authority during the reporting period. FY25 data has been compiled using the best available activity data and approved emissions factors applicable to the reporting year, providing a transparent basis for tracking progress against Landcom's net zero commitments, reporting on changes to methodologies within the reporting year, and informing future transition planning.

3.1.2 Emissions Boundary

Reporting boundaries determine who is responsible for emissions, how they are reported and managed. To expand our boundary to encompass the communities we help deliver, we have identified a range of emissions sources across Scopes 1, 2 and 3 as shown in Figure 2. This boundary expansion is in line with the GHG Protocol Corporate Standard to fully define the scope of direct and indirect emissions to be accounted for from Landcom's operations.

In general:

- Our Scope 1 emissions arise from our fleet vehicles, as well as emissions from stationary fuel use and refrigerant leakage associated with sales centres and office tenancies;
- Our Scope 2 emissions arise from our upstream electricity use for our offices, sales centres, owned assets and temporary electrical infrastructure developed as part of public domain works;
- Our Scope 3 emissions arise from our corporate purchases and activities, indirect goods and services associated with the design and planning of new communities, land use change and land development supply chains, residents' downstream construction activities, and operational energy and water-related emissions downstream of Landcom's active role in enabling and/or developing new communities.

Our most substantial greenhouse gas emissions result from upstream and downstream Scope 3 activities that occur outside of our corporate footprint. Among these emissions, we anticipate that the primary contributors will be alterations in land use through vegetation clearing, the necessary civil works for land development, and the continual activities of our residential and business customers residing and working in the communities we establish.

We understand that we cannot address all these emissions alone, or in isolation. Emissions reduction will require collaboration with our delivery partners, suppliers, stakeholders and customers across our entire supply and value chain.

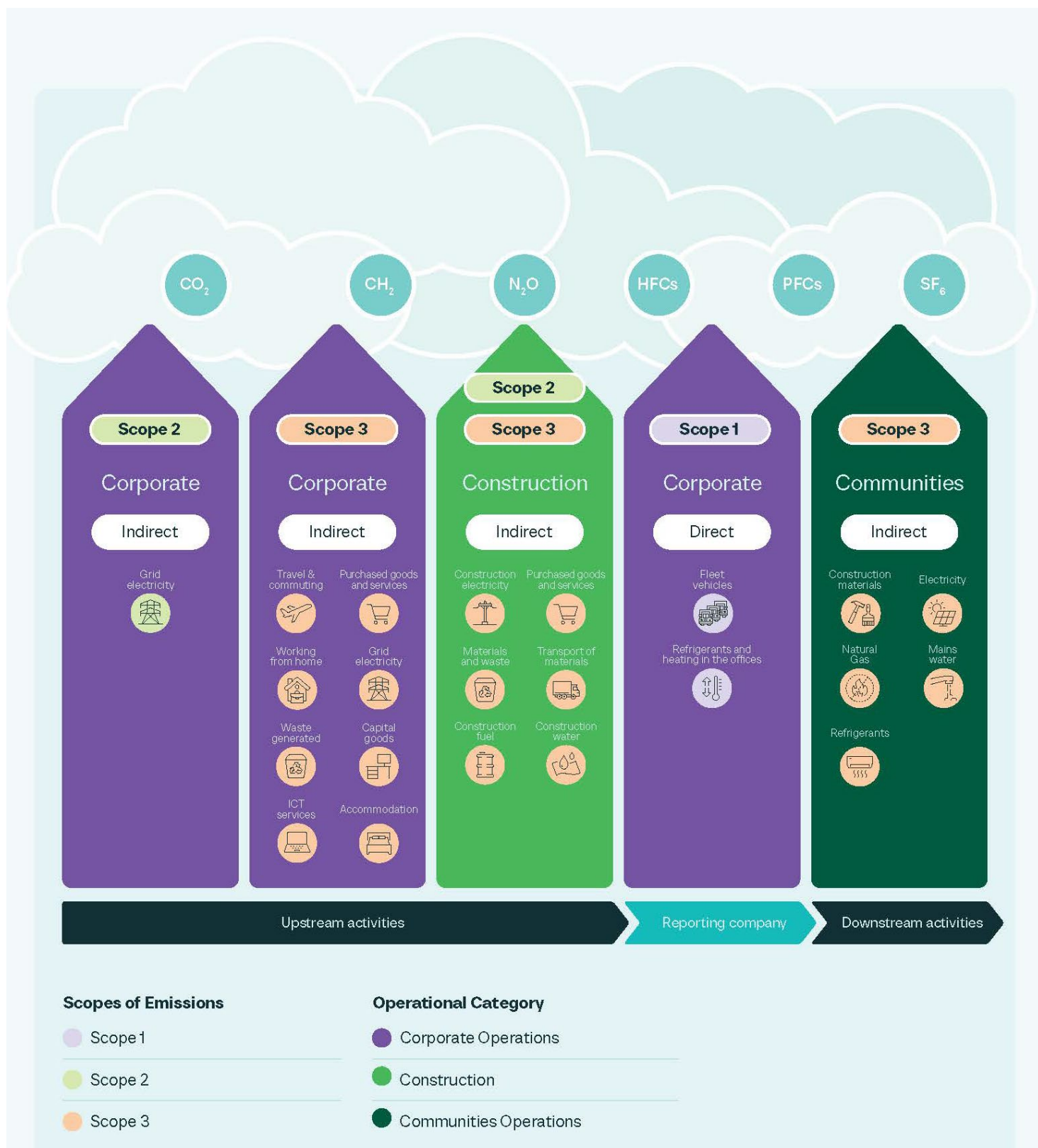


Figure 2: Landcom's Material Greenhouse Gas Emissions Categories & Scopes

In order to establish our emission boundary, we performed a thorough evaluation of the GHG Scope 3 Standard¹, using the Relevancy Test and Transition Risk and Opportunity Assessment. As a result of this analysis, we pinpointed eight reporting categories material to Landcom's operational control and material emissions footprint, while seven were considered non-material and irrelevant. A comprehensive overview of all 15 categories, along with the rationale for their inclusion or exclusion, can be found in Appendix B: Rationale for emissions boundary setting.

3.1.3 Control approach

We have developed our carbon inventory using the operational control approach, understanding that Landcom enables communities. This approach allows for accountability in emissions arising from our activities that generate an economic profit, supports our work with climate-related risks and opportunities and continues our maturity in tracking and benchmarking carbon performance. This approach aligns with the GHG Emissions Accounting and Reporting guidelines recommendations and, due to the nature of government operations, alignment with National Greenhouse and Energy Reporting (NGER) Scheme – reducing the risk of duplicated reporting of emissions.

Landcom operates as a single statutory corporation and does not have any controlled entities or subsidiaries. The NZTP applies to all relevant activity and projects during the FY25 reporting period that:

- were directly or indirectly undertaken by Landcom and/or contractors engaged by Landcom;
- were enabled by Landcom's settlement of land with a third-party which has been approved and/or prepared for development.

As a master developer, Landcom uses various delivery structures:

- **Owner/Master Developer:** Landcom owns the land, manages master planning, approvals, and development works. Land is sold as vacant lots (residential, commercial, industrial).
- **Project Delivery Agreement (PDA):** Landcom owns the land and tenders for a partner to manage and undertake development works. The partner acts as a head contractor and is paid upon sale of individual lots.
- **Reverse Project Delivery Agreement (RPDA):** Landcom does not own the land but develops it on behalf of another government agency or private land owner. Planning, construction, and/or sales are undertaken by Landcom. Revenue from sales goes to the landowner; Landcom invoices for costs and fees.

Due to these varied structures, Landcom's influence over project outcomes differs. For example, our ability to implement NZTP targets is greater when acting as Owner/Master Developer than under a Reverse Project Delivery Agreement, where environmental commitments require negotiation with partners. For a full list of Landcom's active projects see our website [here](#).

¹https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf. This document will be referred to as the GHG Scope 3 Standard.

3.1.4 Inventory Development and Data Quality

Landcom uses globally recognised carbon accounting methodologies to develop our inventory. Our preference – to ensure high levels of confidence in our data – is to transition towards measured data (most preferred) and reduce reliance on industry benchmarks (lower preference). Our financial year disclosures for Communities (Upfront) and Communities (Operations) emissions are starting at a low to medium level of accuracy, but anticipate that over time, more of our emissions sources will trend towards measured data (see Section 3.1.5 for more information on data quality and confidence for each material emissions category in Landcom’s FY25 Inventory). As we trend to more measured data, and automated direct collection methods to reduce manual handling, we anticipate data confidence will increase over time.

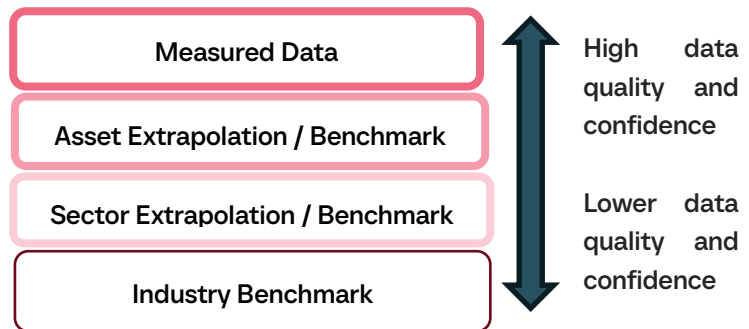
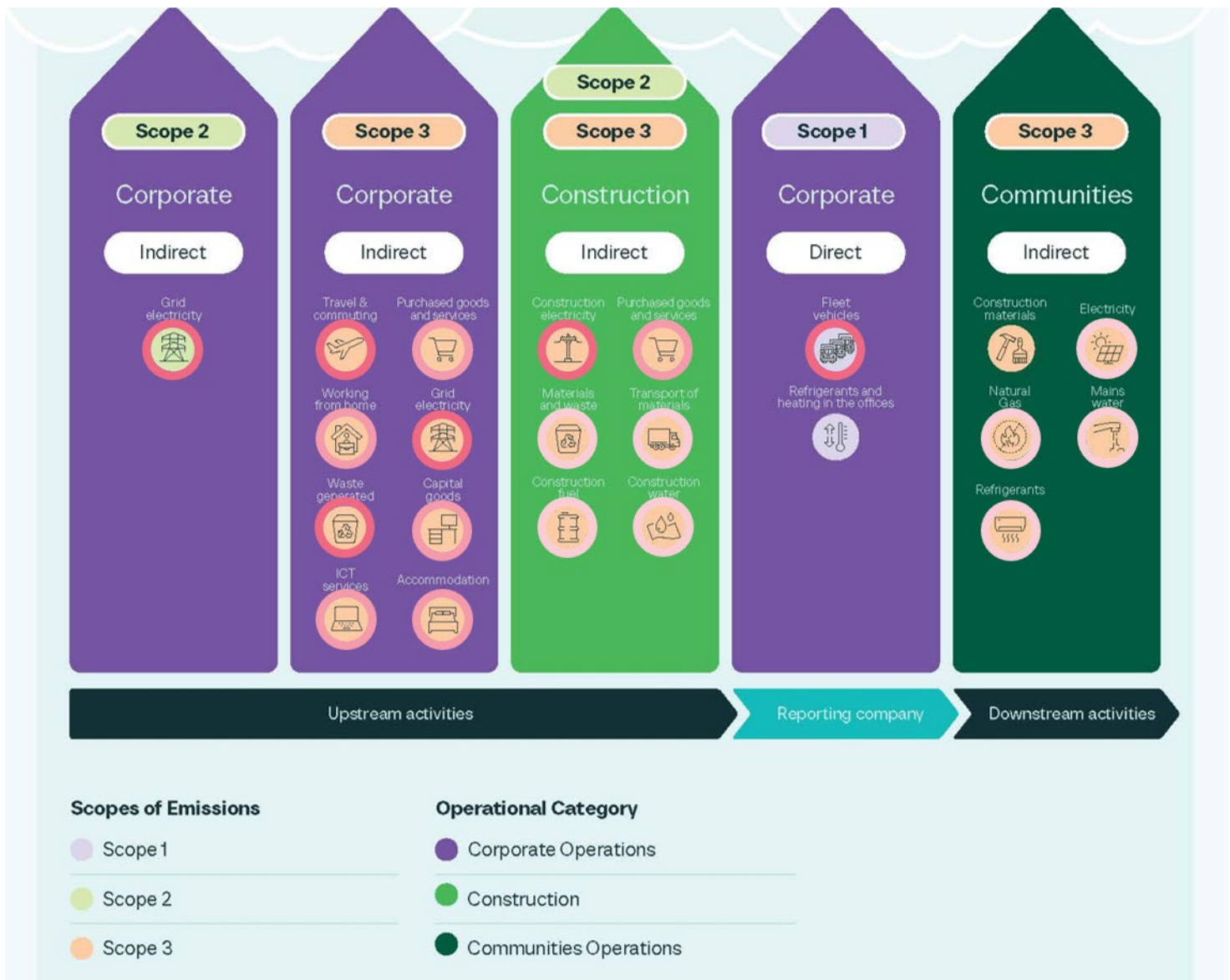


Figure 3. Data quality and confidence spectrum



3.1.5 Data sources and calculation methodologies

To calculate Landcom's direct emissions, we use our activity data (e.g. quantifiable metrics and quantities from emissions sources such as fuel use, electricity bills or bills of quantities) and multiply by the relevant industry-recognised emissions factor. These come from best-practice sources including the National Greenhouse Accounts Factors, AusLCI database, or other industry-relevant or Government-supplied sources, as documented in Table 3 and Table 5. We will update this list of data sources and emissions factors as required to ensure we are using best-practice emissions factors where possible.

All emissions are reported in CO₂-e. This includes the carbon dioxide equivalent emissions for the following greenhouse gas emissions where available:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Fluorinated gases including:
 - Hydrofluorocarbons (HFCs)
 - Perfluorocarbons (PFCs)
 - Sulfur hexafluoride (SF₆)
 - Various other refrigerant gases

While from an emissions disclosure perspective, all emissions are reported in tCO₂-e, we will continue to evaluate individual sources of emissions to address their root emissions. For example, methane is more potent over a short-period and is targeted by priority decarbonisation initiatives, as are refrigerants in appliances such as heat pumps that can be specified or influenced within Landcom's operational control.

Table 3 summarises the data sources, GHG Protocol-aligned calculation methodologies and rationale applied across Scope 1, 2 and 3 emissions. Method selection is guided by data availability, with a preference for primary activity data where available and the use of secondary or proxy approaches where required to ensure completeness.

Table 3: Data sources, calculation methods and rationale for greenhouse gas emissions

Business Unit	Scope & Category	Activity	Data Source (Reporting Activity)	Calculation methodology	Calculation approach ²	Rationale
Corporate Operations	Scope 1 – Mobile combustion	Fleet fuel use	Fleet emissions are derived from data obtained through Fleet Intelligence, SG Fleet's external reporting portal, which provides verified fuel consumption and vehicle activity records used in the emissions calculations.	Activity based method	Fuel consumptions (L) x NGA Factors	Primary fuel data available from fleet provider
	Scope 2 – Purchased electricity	Electricity use	Electricity consumption emissions are based on data sourced directly from utility invoices received during the reporting period.	Activity based method	Electricity consumption (kWh) x NGA factors	Actual electricity consumption data available
	Scope 3 – Category 1 – Purchased goods and services	Purchased goods and services	Emissions are calculated using spend data sourced from Landcom's financial systems, with actual expenditure used to derive spend-based emission estimates across applicable categories.	Spend-based method	Spend (\$AUD) x EEIO factors	Supplier data unavailable; spend is complete and auditable
	Scope 3 – Category 5 – Waste generated in operations	Recycling Landfill waste	General waste information obtained from the base building waste management portal, which provides recorded waste volumes for the reporting period. Confidential waste information obtained from the confidential data destruction service	Activity based method	Waste volumes (kg) x NGA factors	Measured waste data available

² For emission factors refer Table 5

Business Unit	Scope & Category	Activity	Data Source (Reporting Activity)	Calculation methodology	Calculation approach ²	Rationale
			provider, based on recorded secure disposal volumes.			
	Scope 3 – Category 6 – Business travel	Transport (air) – Short haul flight	Travel data is sourced directly from FCM, Landcom's travel management supplier, via their reporting portal.	Activity based method	Distance/nights × DEFRA factors	Supplier travel data available
		Transport (air) – Long haul flight				
		Business travel				
	Scope 3 – Category 7 – Employee commuting	Employee commuting	Employee location details (postcode) obtained directly from Landcom's employee record portal and used to estimate commuting emissions. The methodology applies Landcom's current working-from-home policy to determine the proportion of days employees are expected to commute to the workplace. Commuting distances are estimated using employee postcode information and standardised travel assumptions, with emissions derived by applying relevant emission factors to the calculated travel activity.	Average-data method	Modelled distance × factors	No primary survey; proxy modelling used
		Remote work	Remote-work assumptions are based on Landcom's current remote work policy. The methodology applies Landcom's current working-from-home policy to determine the	Average-date method	Remote work days × factors	No primary survey; proxy modelling used

Business Unit	Scope & Category	Activity	Data Source (Reporting Activity)	Calculation methodology	Calculation approach ²	Rationale
			proportion of days employees are expected to work from home, with emissions derived by applying a derived emission factor incorporating remote work heating and cooling and electricity demands from monitor, laptop and lighting.			
Communities (Upfront)	Scope 2	Purchased electricity ³	Electricity consumption emissions are based on data sourced directly from utility invoices received during the reporting period.	Activity based method	Electricity consumption (kWh) × NGA factors	Actual electricity consumption data available
	Scope 3 – Category 1 – Purchased goods and services	Postage, cleaning services, business services, ICT services, telecommunications, education and training, advertising and marketing, other purchased goods and services, office equipment, printing & stationary, subscriptions and periodicals and retail purchases	Emissions are calculated using spend data sourced from Landcom's financial systems, with actual expenditure used to derive spend-based emission estimates across applicable categories.	Spend-based method	Spend (\$AUD) × EEIO factors	Supplier data unavailable; spend is complete and auditable

³ Note: Construction electricity is also included in a Landcom LCA benchmark estimate in Scope 1 – Category 2 – Capital Goods (Upfront embodied emissions from housing and infrastructure produced).

Business Unit	Scope & Category	Activity	Data Source (Reporting Activity)	Calculation methodology	Calculation approach ²	Rationale
	Scope 3 – Category 2 – Capital Goods (Upfront embodied emissions from housing and infrastructure produced)	Extraction/processing of raw materials, production of construction materials and transport of raw materials to manufacturer	Upfront carbon emissions were derived from a detailed analysis of three typologies—apartment, single dwelling and civil construction—using actual data from a relevant Landcom projects. The study established three base emission values, which are then applied consistently across other projects.	Hybrid / LCA-based method	Benchmark LCA applied	High materiality; LCA improves accuracy
		Transport of construction materials to site				
		Contractor fuel/energy use during construction, site processes and construction waste				
	Scope 3 – Category 5 – Waste generated in operations	Waste generated in potable water treatment	Emissions are based on water consumption data sourced directly from utility invoices received during the reporting period.	Activity based method	Water consumption (L) x AusLCI factors	Actual water consumption data available
		Waste generated in recycled water treatment				
		Waste generated in wastewater treatment				
Communities (Downstream)	Scope 3 – Category 11 – Use of sold products	Landcom resident operational energy use	Third-party integrated GHG emissions modelling tool is used to model project-level deliverables, with the resulting calculations	Model-based method	Emission modelling	Long-term emissions

Business Unit	Scope & Category	Activity	Data Source (Reporting Activity)	Calculation methodology	Calculation approach ²	Rationale
			forming the basis for deriving operational energy use.			require modelling
		Landcom resident operational water use	Third-party integrated GHG emissions modelling tool is used to model project-level deliverables, with the resulting calculations forming the basis for deriving operational water use.			

3.1.6 Base years emissions

Selecting a Base Year provides us with the basis from which to measure and report against our activities to reduce emissions over time. Landcom has opted to align with the NSW Government Sustainable Operations Policy guidance when selecting the base year emissions for Corporate Operations emissions (reporting Scope 1 and 2 emissions reductions from a 2018/19 base year). For our first-year reporting on portfolio-wide Communities (Upfront) and Communities Operations, we are prioritising progress over perfection; reporting a first year high-level asset base year emissions disclosure that will be refined with improvements in measuring and reporting methodologies over time. This provides a high-level estimate of our FY25 indirect GHG emissions, enabling us to understand and implement meaningful opportunities to influence decarbonisation of our supply chain, even where operational control is currently limited.

Table 4: Base year emissions by activity and scope

Activity category	Scope of emissions	Base year	CY19	CY24	FY25
Corporate Operations	Scope 1	CY19	Base year emissions are directly comparable		
	Scope 2	CY19	Base year emissions are directly comparable		
	Scope 3	CY19	Base year emissions are partially comparable ⁴		
Communities (Upfront)	Scope 2	FY25	No directly comparable Base Year data disclosed. Underway.		First year high-level asset base year emissions disclosure.
	Scope 3	FY25			
Communities Operations	Scope 3	FY25	No directly comparable Base Year data disclosed. Underway.		First year high-level asset base year emissions disclosure.

Corporate Operations Base Year Emissions

Starting in CY18, Landcom established its organisational emissions boundary and inventory as part of the Climate Active process. Landcom's corporate operations have historically been Carbon Neutral Certified under the Climate Active scheme, including the net impact from the purchase and retirement of Carbon Credits. This covers our material corporate operational emissions for CY19-CY24, and residual Scope 1 and 2 emissions for FY25.

In FY25, we adjusted our Corporate Operations boundary to better align Scope 3 emissions categorisation with defined business activity categories. This has enabled a clearer distinguishment between the emissions enabled by our project related activities; a core component of Landcom's functions which is inherently dynamic and responsive to market, policy and Government related conditions. This has allowed us to gain a deeper understanding of our upstream and downstream Scope 3 emissions, including their relative contribution to our

⁴ CY19-CY24 Corporate Operations emissions data have been developed in accordance with Climate Active methodologies and reported in Landcom's annual Climate Active Public Disclosure Statements. Minor differences in methodologies and emissions factors are estimated to result in <10% variability in emissions results.

financial year emissions performance, set portfolio-wide targets aligned to NSW Government targets, and start to better understand our value chain.

To enhance year-on-year comparability of Corporate Operations emissions, a recalculation of Landcom's CY19 Corporate Operations base year emissions has been conducted to align with FY25 NZTP reporting boundaries. Landcom's CY25 Climate Active Certification submission is in the queue to be assessed at the time of publication. In future years, Landcom will seek to adjust CY19 base year data to a FY19 base year, to enable a clearer understanding of our Corporate Operations emissions trajectory and relative performance over time.

Communities (Upfront) Base Year Emissions

Due to Landcom's development-related emissions (Communities Upfront) being directly tied to year-on-year fluctuations on housing delivery numbers, an absolute baseline is not well suited, as relative changes in annual emissions would not clearly demonstrate decarbonisation performance. Instead, a better baseline for Communities (upfront) involves reporting line items like construction and civil works separately, with emissions intensity targets tied to a benchmark reference case for each typology of material development activities associated with the settlement of communities within a given financial year. This approach is ongoing and under development, and will allow emission factor reductions per unit to be tracked against specific targets over time, as the emissions under Scope 3, Category 2 (Capital Goods) are once off, lumpy and relate to hectares of land developed and dwellings built (tied to the sale of developable land and/or land and housing packages in Landcom communities).

Communities (Operations) Base Year Emissions

Communities (Operations) emissions are reported under Scope 3, Category 11 (Use of Sold Products) and represent the ongoing operational emissions associated with completed dwellings delivered within Landcom communities. Historically, Landcom has reported on in-scope projects' downstream Communities Operations emissions using a reference development standard applied to current-year grid emission factors. While this approach provides a consistent annual benchmark, it does not rely on a fixed historical base year and therefore is less appropriate for measuring performance change against Landcom's own delivery history as we transition to net zero. For the FY25 NZTP, we have transitioned to a fixed base year (FY25) approach, with Communities (Operations) emissions reported for all dwelling settlements delivered on a per-annum basis. Future year reporting will seek to re-calculate a comparable FY19 base year and integrate a per-dwelling emissions intensity target; establishing a stable and auditable baseline, normalising for variations in dwelling delivery volumes, and enabling like-for-like comparison of operational emissions performance over time, consistent with the Greenhouse Gas Protocol.

3.1.7 FY25 emissions inventory, emission factors

Table 5 shows Landcom’s review of the material GHG emission categories in alignment with the GHG Protocol including the priority for measurement and disclosure, measure, unit, greenhouse gases measured and the associated emissions factor. Findings from early investigations on Landcom specific projects can be found further below, particularly around Scope 3 emissions.

Table 5: FY25 emission inventory, emission factors and base year

Business Unit	Scope & Category	Activity	Priority for disclosure	Measure	Unit	Emissions factor source		Emissions factor (kgCO ₂ -e)	Greenhouse gases included	FY25 tCO ₂ -e
Corporate Operations	Scope 1	Mobile combustion	High	Petrol	L	Australian National Greenhouse Accounts Factors - 2024		2.31	CO ₂ , CH ₄ , N ₂ O	0.31
				Ethanol	L			2.08		2.11
	Scope 1	Stationary combustion	High	Natural Gas	MJ			0.01		0
	Scope 2	Purchased electricity	High	Grid Electricity EV Charging	kWh			0.63		6
				Grid Electricity	kWh			0.66		16.10
				Green Power ⁵	kWh	Market-based		0		0
						Location-based		0.66		124.83
	Scope 3 – Category 1 – Purchased goods and services	Purchased goods and services	High	Spend record for Purchased Goods and Services	\$AUD	Customized Emission factor ⁶	Computer and Computer Peripheral Retailing (FootprintLabs ID: eb031c9a-4b11-45f2-90be-97b118b0d3a8)	0.011524866	Calculated on GDP spend against all GHGs.	1,361.98
							Furniture Retailing (FootprintLabs ID: 987b4dca-fe73-46eb-b1e3-6c676411007d)	0.014325572		
							Clothing Retailing (FootprintLabs ID: b68af53d-636a-4ccb-9551-ef6a2d28a373)	0.0217700857		
							Stationery_Goods_Retailing (FootprintLabs ID: eef4cbf7-8938-4acd-bc30-5ede8ac640e5)	0.018126411		
							Business_and_Professional_Association_Services (FootprintLabs ID: 35d84f15-94b4-4e25-bb07-9171909989c5)	0.037102325		
							Other_Information_Services (FootprintLabs ID: 3f78ffab-2037-4bce-bfbc-9be24a08d588)	0.03795644		
							Residential_Property_Operators (FootprintLabs ID: e2d3d4e4-ed4d-4f57-8865-26fead1d5221)	0.068135385		
							Investigation_and_Security_Services (FootprintLabs ID: 071354ad-ee58-4d91-a5a7-22e1cf899afd)	0.069058103		
							General_Insurance (FootprintLabs ID: f6b09838-221f-4bcb-9c89-740e9a6b29ae)	0.075962923		
							Adult_Community_and_Other_Education (FootprintLabs ID: e6c57f3e-3150-4fd2-b1b3-a830485db827)	0.079083972		
							Other_Automotive_Repair_and_Maintenance (FootprintLabs ID: cb3d2d7b-ec06-426b-b0fc-7cef2e9d23be)	0.085961599		
							Employment_Placement_and_Recruitment_Services (FootprintLabs ID: 865c84ef-96b6-47b7-9b99-7fc3d67e059a)	0.088119998		

⁵ This includes registered Green Power, direct LGC/PPAs or other agreements that guarantee zero emissions electricity.

⁶ FootprintLabs emission factors are customised, modelled estimates based on life-cycle assessment methodologies and public reference data.

Corporate_Head_Office_Management_Services (FootprintLabs ID: 5fb27f93-1f70-455a-abb6-b82be858c72c)	0.093776392
Management_Advice_and_Related_Consulting_Services (FootprintLabs ID: 343f1950-f52c-48f2-ae20-d046c596131b)	0.093776392
Office_Administrative_Services (FootprintLabs ID: be1deacc-b7d6-4ebf-9258-1ce6324efd1a)	0.093776392
Other_Administrative_Services_n.e.c. (FootprintLabs ID: c6033652-2ef2-4119-95ee-df6e0803749d)	0.093776392
Building_and_Other_Industrial_Cleaning_Services (FootprintLabs ID: c57b5522-1eb5-41b5-96d9-40a1c799ad1d)	0.094808526
Computer_System_Design_and_Related_Services (FootprintLabs ID: b6c1915b-ef20-4051-aba5-8dcfb4cc9183)	0.103322708
Engineering_Design_and_Engineering_Consulting_Services (FootprintLabs ID: 0926f49f-5e5b-4826-9ad6-582ba018f232)	0.115493016
Architectural_Services (FootprintLabs ID: e568f528-bdac-49a9-97f6-88a1ec7f454a)	0.119342725
Surveying_and_Mapping_Services (FootprintLabs ID: 64b61b70-6b0e-46f7-acb6-623997ea54a0)	0.119880108
Other_Telecommunications_Services (FootprintLabs ID: 90661ce1-6aad-4956-b2b1-3cf41e9457fe)	0.121527603
Real_Estate_Services (FootprintLabs ID: e9d2260a-ab6a-4269-bdb0-2689eab4dd58)	0.122601417
Accounting_Services (FootprintLabs ID: 79fc588a-24ad-450d-8b4a-3b2872869898)	0.124399738
Legal_Services (FootprintLabs ID: ff13c0b3-768c-499d-85d1-ef3da6ead062)	0.124400631
Parking_Services (FootprintLabs ID: 62fb30f1-1a1b-42ad-8fe9-33c0d5501cb9)	0.135794168
Advertising_Services (FootprintLabs ID: e72fd470-0f73-4b12-b0e4-4d4cc6c2d9ba)	0.136878127
Magazine_and_Other_Periodical_Publishing (FootprintLabs ID: 955d7b85-be5b-47c5-834f-ed445f88ce54)	0.137109173
Software_Publishing (FootprintLabs ID: 408e10f3-84a0-4f72-ad99-bb1ea8e518f9)	0.162128622
OTHER_SERVICES (FootprintLabs ID: 803d502b-d31a-463a-9ef0-bb2df1f62dbd)	0.16607984
Other_Machinery_and_Equipment_Repair_and_Maintenance (FootprintLabs ID: da1d13e8-c357-4944-b824-ac49eeb3e907)	0.168621354
Repair_and_Maintenance (FootprintLabs ID: 72feb92-334c-4240-a348-f1776a1f2034)	0.172324081
Other_Repair_and_Maintenance_n.e.c. (FootprintLabs ID: b600c620-5f5c-44e8-a90f-1fda4a05afa6)	0.1737623

						Land_Development_and_Subdivision (FootprintLabs ID: 7eccb82f-a6f3-4513-b4b1-bbdcc1408e6f)	0.186963128			
						Site_Preparation_Services (FootprintLabs ID: 4a1dabe1-2fdf-4e24-8cd6-b19cccec689a)	0.186963128			
						Printing (FootprintLabs ID: be23bb9a-8f36-4ce5-ab91-27b5bc7a6ac2)	0.239236389			
						Cafes_and_Restaurants (FootprintLabs ID: a9ffd383-6385-44b5-9235-97da23667768)	0.240034515			
						Food_and_Beverage_Services (FootprintLabs ID: 1127929b-4dc4-4e92-ba35-41ddd0037144)	0.254840343			
						Non-Residential_Building_Construction (FootprintLabs ID: 8a29c578-f39a-465a-b903-d7a3d57aa8c9)	0.262141723			
						Postal_Services (FootprintLabs ID: 261b7329-6ee5-4bd3-86d6-c7c68a1f8ef9)	0.691865203			
						Road_Freight_Transport (FootprintLabs ID: 25a37680-7bda-4d1e-b518-fd37e752d89d)	1.083293969			
	Scope 3 – Category 5 – Waste generated in operations	Recycling	Medium	Volume of waste recycling produced	kg	Australian National Greenhouse Accounts Factors 2024	0	CH ₄ , N ₂ O		
		Landfill waste		Volume of general waste produced	kg		1.3			
	Scope 3 – Category 6 – Business travel	Transport (air)	Low	Short Haul Flights	km	UK Greenhouse gas reporting: conversion factors 2025	0.32	CO ₂ , CH ₄ , N ₂ O		
		Transport (air)		Long Haul Flights	km		0.26			
		Business travel		Accommodation	room nights		35			
				Car Rental	Reported emissions		1			
	Scope 3 – Category 7 – Employee commuting	Employee commuting	Low	Employee Commuting	work days	https://help.kinesis.org/en/articles/4331047-employee-commuting-australia-valid-from-01-july-2024	5.931			
		Remote work		Remote Work	work days	https://help.kinesis.org/en/articles/13567009-work-from-home-australia-valid-from-01-july-2024	0.652			
Communities (Upfront)	Scope 3 – Land use, and land use change and forestry (LULUCF)	Biogenic removals and storage (e.g., afforestation, reforestation, forest restoration, urban tree planting).	Medium	Land clearing for Greenfields development and sequestration from material restored and regenerated vegetation on-site	Factors specific to vegetation class and potential maximum biomass class	National Inventory Report 2023 (DCCEEW, 2025)	Land use change calculator under development – to be aligned with GHG Protocol Land Sector and Removals Guidance when released.			
	Scope 2	Purchased electricity ⁷	High	GreenPower	kWh	GreenPower	0	CO ₂ , CH ₄ , N ₂ O	0	
	Scope 2			Grid Electricity	kWh	Australian National Greenhouse Accounts Factors 2004	0.66		28.01	

⁷ Note: Construction electricity is also included in a Landcom LCA benchmark estimate in Scope 1 – Category 2 – Capital Goods (Upfront embodied emissions from housing and infrastructure produced).

Scope 3 – Category 1 – Purchased goods and services	Purchased goods and services	High	See corporate emissions factors	See corporate emissions factors	See corporate emissions factors.	See corporate emissions factors.	See corporate emissions factors.	1,639
Scope 3 – Category 2 – Capital Goods (Upfront embodied emissions from housing and infrastructure produced)	Extraction/processing of raw materials, production of construction materials and transport of raw materials to manufacturer	High	LCA A1-A3 Product Stages – Raw material supply, manufacturing of construction products and transport of raw materials	# Houses	Landcom LCA benchmark	77,886	CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆	23,498
				# Apartments		74,156		99,073
				Hectares of civil infrastructure		77,229		1,556
	Transport of construction materials to site		LCA A4 Product Stage – Transport to site	Houses	Landcom LCA benchmark	12,537		3,782
				Apartments		4,330		5,785
				Hectares of civil infrastructure		41,010		826
	Contractor fuel/energy use during construction, site processes and construction waste		LCA A5 Product Stage – Construction / installation	Houses	Landcom LCA benchmark	13,117		3,957
				Apartments		6,821		9,113
				Hectares of civil infrastructure		132,913		2,676
Scope 3 – Category 5 – Waste generated in operations	Waste generated in potable water treatment	Medium	Construction Potable Water Use	kL	Water and Wastewater, Sydney from AusLCI v1.35 Published Processes, CN assumption	2.07	CH ₄ , N ₂ O*	27
	Waste generated in recycled water treatment		Construction Recycled Water Use	kL		0		0
	Waste generated in wastewater treatment		Construction Waste Water use	kL		1.87		11
	Landcom resident operational energy use	High	LCA B6 Product Stage – Grid Electricity Use Of Sold Products	kWh	NGA Factors 2024 & 2025. AEMO ISP 2026–2050. AEMO ISP 2050 carried forward for remaining years.	3.88	CO ₂ , CH ₄ , N ₂ O	
	Landcom resident operational water use	High	LCA B7 Product Stage – Water Use Of Sold Products	kL	AusCL. 60 Year (Design Life) emissions related to water usage for construction under use-of-sold goods.	124.2	CH ₄ , N ₂ O*	
	Landcom resident operational gas energy use	High	LCA B7 Product Stage – Gas Use Of Sold Products	Natural Gas	Australian National Greenhouse Accounts Factors – 2024	0.01	CO ₂ , CH ₄ , N ₂ O	6,288

* Note: From NGA Factors – Emissions from the waste sector are predominantly CH₄, however small amounts of CO₂ and N₂O are also generated. Emissions of CO₂ generated from solid waste disposal and wastewater treatment and discharge are considered to be of biogenic origin (e.g. paper, wood) and do not need to be estimated. For example, when landfills recover methane for flaring or combustion, the CO₂ emitted is not considered because it is seen as part of the natural carbon cycle.

⁸ Note: Waste generated from treatment of water used during construction phase has been captured separately from Landcom's LCA Benchmark.

3.1.8 Climate-related physical and transition risk analysis

Landcom's climate-related physical and transition risk analysis is currently being updated to integrate newly emerging climate data, best-practice guidelines and Government and industry recommendations. A high-level corporate scenario risk analysis, along with a portfolio analysis of project-related risks, have informed how Landcom will respond to multiple potential climate scenarios and plan for a future characterised by greater volatility, reduced predictability, recurring shocks and emerging challenges and opportunities. The analysis considers the change in key climate variables associated with material physical climate risks from FY25 to FY50, and identified transition risks up to FY40, drawing on three potential future climate transition scenarios ranging from low, intermediate and high emissions scenarios.

Climate-related physical and transition scenario analysis informs our understanding and planned response to future risks and opportunities that arise, as summarised in Table 6 and Table 7 below. The full list of Landcom's disclosed climate-related risks and opportunities can be found in Landcom's FY25 TPG24-33 Disclosure.

Physical risk scenario analysis

Table 6: NSW average 2009-2050 projected change (NARCLIM 2.0)

Climate variable	SSP1-2.5	SSP2-4.5	SSP5-8.5	Potential unmitigated climate-related risk exposures to Landcom
Warming potential	+1.2 degree	+1.6 degree	+2.0 degree	
Extreme heat	+5-10 days over 35 degrees	+10-20 days over 35 degrees	+20-30 days over 35 degrees	- Rising average temperatures with increasing heatwaves. - Elevated overnight and peak temperatures. • Health and safety impacts due to thermal stress. - Infrastructure failure due to capacity constraints. - Nature and biodiversity loss. - Increased energy and water demand
Bushfire	+2-4 severe fire weather days (FFDI>50)	+4-7 severe fire weather days (FFDI>50)	+7-10 severe fire weather days (FFDI>50)	- Rising average temperatures with prolonged periods of drought. - Damage or destruction of buildings and infrastructure due to fire exposure. - Health and safety impacts due to exposure smoke and direct fire threat.
Extreme rainfall & flooding	+5% extreme rainfall intensity – higher flash-flood risk	+10% extreme rainfall intensity, riverine and urban flooding more severe	+15% extreme rainfall intensity, major flood events more severe	- Increase rainfall events with insufficient drainage system capacity. - Increased rainfall resulting in increased natural water system levels resulting in flash flooding. - Health and safety impacts due to access, egress and trip and slip hazards. - Infrastructure damage due to overland flow and drainage system overtopping. - Ecosystem and health and safety impact due to diminished water quality.
Drought	~10% decline in average annual rainfall	~15% decline in average annual rainfall		Prolonged periods of dry weather becoming increasingly common.

	across NSW, increasing drought likelihood	across NSW, increasing drought likelihood and severity		• Insufficient water utility infrastructure due to population growth. • Water stringency requirements leading to reduced amenity and landscaping damage. • Soil moisture reduction leading to structural damage.
Extreme storms, hail and wind	Slight increase in severe storm intensity, especially associated with increasing frequency of east coast low systems.	Moderate increase in severe convective storms and damaging winds.	Higher intensity storms with stronger wind gusts and rain-driven impacts.	• Increasing number and severity of storms with cyclonic winds. • Increasing hail events. • Health and safety impacts due to windblown debris. • Structural, services, and envelope damage due to increased wind loads. • Infrastructure failure including communication, and energy supply systems
Sea level rise and coastal flooding	~6–8cm sea-level rise, more frequent estuarine flooding in low-lying areas	~10–12cm sea-level rise, estuarine floods increase in frequency, coastal over wash expands and erosion hazards increasingly threaten built assets	~15–18cm sea-level rise, increase in intensity and frequency of severe flooding, coastal erosion and overwash.	• Sea level rise leading to increased coastal seawater inundation. • Infrastructure and asset damage due to flooding. • Increased maintenance for infrastructure due to saltwater intrusion.

Transition risk scenario analysis (2022–2040 projected change)

In FY22 Landcom undertook high-level financial modelling to consider the baseline current and anticipated financial impacts of climate-related transition risks to Landcom's business operations, including economic modelling for the transition risks identified in Table 7. Analysis of Landcom's transition risk exposure across three transition scenarios has been developed to support FY25 transition planning, using the below colour scale to summarise the relative risk exposure across the three scenarios. Future updates to Landcom's Transition Risk Modelling will seek to understand the benefits and avoided costs enabled under Landcom's NZTP, forming a quantitative estimate of the transition risk mitigation and adaptation that can inform future business planning, future updates to the NZTP and ongoing business decision-making.

Relative risk exposure scale

Highest exposure risk		Lowest exposure risk
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Table 7. Relative 2040 unmitigated risk exposure of potential climate-related transition risks across transition scenarios

Risk category	SSP1-2.5	SSP2-4.5	SSP5-8.5	Potential climate-related risk exposures
Carbon price in supply chain				- Government policy enacting carbon pricing mechanisms to reduce greenhouse gas emissions. - Increased cost within the supply chain from international carbon pricing.
Increased green infrastructure and carbon neutrality requirements				- Changes to industry standards and regulation for buildings and construction. - More stringent green building and carbon neutrality requirements.
Increased price of carbon offsets				- Changes to industry standards and regulation for buildings and construction. - Increased demand for offsets in carbon neutral economy inflating the price.
Increased high temperature days				- Commercial liability regarding disclosure of climate-related risks. - Reduction in number of safe temperature working days on construction sites.
Board Directors' liability for climate action				- Commercial liability regarding disclosure of climate-related risks. - Increased liability for directors of climate action.
Green lending requirements on buyers				- Commercial liability regarding disclosure of climate-related risks. - Increase lending requirements considering climate impacts or mitigation strategies.
Increase in insurance premiums to buyers				- Financial institutions, reading market signals, require low emissions and/or disclosure of climate-related risks as part of financing conditions. - Physical impacts of climate change increase risk profile of locations.
Decarbonisation requirements of construction industry				- Financial institutions, reading market signals, require low emissions and/or disclosure of climate-related risks as part of financing conditions. - Greater identification of carbon intensive industries inviting greater scrutiny.
Greater risk profile at Landcom developments				- Insurance-related costs - Climate impacts create a greater risk profile at locations.
Insurance premium impact to Landcom				- Increasing insurance costs or inability to insure some future activities. - Landcom climate vulnerabilities increase risk profile from climate-related physical risks.
Electricity storage infrastructure requirements				- Transformation of energy sector. - Shift in storage infrastructure requirements. - Increasing costs and constrained supply chains.
Electric vehicle infrastructure requirements				- Transformation of energy sector. - Shift in electric vehicle infrastructure requirements. - Increasing costs of electricity supply.

3.2 Key assumptions, impacts, dependencies and trade-offs

To keep global warming below 2°C, we need to act faster. Australia is stepping up: the Federal Government aims to cut emissions by 43% by 2030 and reach net zero by 2050. NSW is targeting at least a 50% cut by 2030, 70% by 2035, and net zero by 2050. These targets are embedded in the strategic ambitions of the NZTP.

Around the world, the shift to a low-carbon economy is accelerating. Investment in renewable energy, electrification, and clean technologies is growing, and projects that manage climate risks are becoming essential to attracting investors. Landcom is proud to lead the way – creating climate resilient communities and homes that help NSW thrive in a changing world. The pace of Australia’s decarbonisation journey will impact the relative costs associated with decarbonisation initiatives, policies that influence transition-related risks and opportunities, and the frequency and intensity of climate-related weather events affecting physical climate-related risks and opportunities identified in the NZTP.

Most of the homes and buildings standing today will still be here in 2050. That means millions of households will need to make big changes – switching to clean electricity, improving energy efficiency, and choosing low-carbon materials for their homes. These decisions won’t happen in isolation; they’ll come at a time of housing shortages, rising cost of living, and limited developable land, all while the urgency to tackle climate change grows. The NZTP considers these potential trade-offs by balancing compliance-led decarbonisation (e.g. emission reductions targets and contracted requirements) with incentive-led decarbonisation (eg. the use of Sustainability Rebates to reduce upfront costs of decarbonising new homes).

Over the medium to long-term future, we anticipate challenges we can’t fully predict, such as the rise of new technologies (e.g. generative AI), biodiversity loss, and supply chain disruptions from extreme weather. These forces will also shape potential future policy and regulatory changes, economic factors, future climate scenario trajectories, and ultimately how we deliver our NZTP. That’s why our plan is designed to adapt. We will review it every year, updating priorities to embrace new ideas, technologies, and partnerships—so we can keep delivering the best outcomes for people, the planet and the prosperity of our communities. This will enable the NZTP to remain flexible, dynamic and responsive to changes in the key assumptions and external factors underlying our scenario analysis and financial planning. Mitigating delivery risks associated with these assumptions, external factors and dependencies is expected to support Landcom’s financial position, performance and cash flows against climate-related risk exposures over the short, medium and long-term as we continue to implement strategies and initiatives that address material climate risks and adapt to changing economic conditions.

In particular, decarbonisation of Landcom’s downstream products and services will require navigating key dependencies and uncertainties including the availability of low-carbon materials at scale, supplier capability and data quality, regulatory settings, and evolving industry methodologies for measuring embodied and downstream emissions. Decarbonising downstream communities will continue to involve navigating trade-offs in the design process, and potential financial impacts associated with changes to products and services include potential increases in upfront capital costs from low-carbon materials and design changes. Consideration is given to the corresponding climate-related opportunities such as reduced operating costs for customers, improved asset resilience, and alignment with policy and market expectations alongside consideration of Landcom’s Strategic Goals.

More information on the current and anticipated financial effects of Landcom’s NZTP Strategic Ambitions can be found in our latest TPG24–33 Climate-Related Financial Disclosure (Appendix 2 in Landcom’s [Annual Report](#)).

3.3 Calculation methodologies and assumptions

3.3.1 Corporate Operations

Emissions from corporate operations are measured using direct activity sources (Utility Bills, Corporate Travel Management Reports, Expense Reports) multiplied by emission factors that are sourced in line with the GHG Protocol. Emissions factors and the emissions boundary are specified in Table 5 and data sources are specified in Table 3. Prior-year Climate Active disclosures have been prepared using Climate Active reporting methodologies (available on the Climate Active website and disclosed in Landcom's CY19-CY24 Public Disclosure Statements).

3.3.2 Construction (Upfront Embodied Scope 3 emissions)

Operational carbon has been the focus of policy and industry action for years, while upfront carbon remains largely overlooked. In FY25, we developed a high-level estimate of the upfront embodied carbon intensity (Communities Construction) of a Landcom benchmark for standalone dwellings, apartment dwellings and civil infrastructure based on a study undertaken by an engaged third-party consultant to:

- Quantify the embodied carbon for sub-division, apartment and single-dwelling typologies.
- Highlight high-impact components for prioritised intervention.
- Inform design and material decisions to achieve measurable reductions for Landcom's portfolio.

Key context for this model is the scope of emissions measured in this assessment: A1- A5 (upfront carbon), shown in Table 8 below.

Table 8. Description of LCA Product Stages included in Upfront Embodied Scope 3 emissions benchmark

LCA Product Stage	Description
A1-A5 (in-scope)	Product and construction stages, including raw material extraction, manufacturing, transport to site, and installation.
B1-B6+ (see Section 3.3.3 for Use Stage)	Use stage, which includes the operation of the building or product, as well as maintenance, repair, replacement, refurbishment, and operational energy and water use.
C1-C4 (out of scope ⁹)	End-of-life stage, covering deconstruction or demolition, transport of waste, waste processing for reuse or recycling, and final disposal.

The modelling conducted is focused on providing general representations of three (3) different construction typologies typical for Landcom, to inform high-level carbon projections, and understand the relative scale of our Scope 3 emissions. As a result, these models are not comprehensive life cycle assessments, instead they have been designed to inform generalised projections and support the development of Landcom's NZTP.

To account for unique challenges provided by each typology, different modelling strategies were used as part of the analysis. To enable consistency across the models, a common material data source was maintained across all models. The considered scope for this modelling was informed by the GBCA calculation guide¹⁰ (p10-12), all aspects of the cold and warm shells were considered with any demolition works and internal furnishings excluded.

⁹ See Appendix 1 for detailed emissions reporting boundary rationale

¹⁰ [GBCA calculation guide](#)

For the typologies where cost data was available (sub-division and apartment), a cost adjusted GWP total has been provided. Since cost is not directly related to carbon intensity, use of this cost adjusted result is to generate a high-level estimate. It should be noted that some materials have negative correlations between cost and carbon, meaning there are many instances of increasing expensive material possessing minimised carbon intensities, such as recycled bricks, timber finishes or landscaping. Adjustments to embodied carbon modelling for unaccounted cost items or material helps reduce the potential for under-estimating the total emissions associated, however due to the variable correlations between cost and carbon, this cost scaled approach provides an estimate only.

Table 9. FY25 Construction Benchmark inputs, assumptions, LCA stages and emission factors by typology

Construction Typology	Benchmark Inputs	Benchmark assumptions	LCA Product Stage	LCA cost coverage ¹¹	FY25 emissions factor ¹²	Proportion of total CO2-e
Apartment building (per dwelling)	Based on Green Star 'reference building' templates. Adjustments made to Proposed design: _Concrete spec based on GSB 'reference building templates'	Assumes 67.5sqm apartments (ie mostly 1 bed, 2 bed and some 3 bed). Non-apartment GFA is assumed to be an additional 15% on top of apt area GFA.	A1-A3	73%	47,076	87%
			A4		2,749	5%
			A5		4,330	8%
Standalone House (per dwelling)	Based on Standard Ibiza 2 home (Mac Jones). Adjustments made to standard practice: _Standard concrete slab	Assumed 250sqm in size in 'dwellings'.	A1-A3		77,893	75%
			A4		12,538	12%
			A5		13,118	13%
Civil Infrastructure (/hectare of subdivision)	Adjustments made to standard practice: _Standard spec concrete (kerbs and footpath) _Standard road base and asphalt _Standard diesel	Applies a per hectare estimate from a 25.9 hectare Landcom Benchmark case study LCA	A1-A3	87%	64,150	31%
			A4		34,038	16%
			A5		110,318	53%

A1-A5 Life Cycle Analysis modelling undertaken in eTool LCA software and methodologies have been heavily influenced by existing GBCA guidance around assessing upfront carbon emissions in the Australian built environment. eTool modelling involves using a project cost plan to assign eTool 'templates' to best describe the carbon impact of construction material or component. Given that the eTool template library is not comprehensive, standard components such as structural concrete are easily modelled, while specialised elements like raingardens may not have pre-defined templates. Where templates were unavailable, custom templates were developed using best practice methodologies and material inputs available within eTool.

The material chosen for assessing business as usual "Reference" models were derived from the GBCA Upfront Carbon Emissions calculation guide (interim). Similarly for decisions around model boundary conditions and

¹¹ LCA cost coverage is the proportion of a project's total cost items that are included in the lifecycle assessment, showing which components and stages are accounted for in the model.

¹² Landcom cost-adjusted benchmark

treatment of carbon sequestering building materials, the modelling takes advice from the calculation guide (p.13). These materials can only be modelled as 0 Global Warming Potential (GWP) products, with no negative GWP permitted for carbon sequestering materials. Cost plan items assessed to contribute less than 1% of the project total GWP were excluded from modelling.

The greenhouse gases included in emissions benchmarks for Construction (Upfront Embodied Scope 3) are measured on a 100-year time horizon (GWP100) as per IPCC Sixth Assessment Report (IPCC 2021) using GHG Protocol GWP100 values¹³.

Table 10. Upfront carbon emission proxy values by typology

Asset type	FY25 asset benchmark upfront carbon emissions intensity	Short-term improved performance benchmark	Relative emissions reduction intensity	Source of FY25 asset benchmark upfront carbon emissions proxy value
Standalone dwelling	414.2 kgCO ₂ -e/m ²	392.7 kgCO ₂ -e/m ²	5%	Rapid-LCA of Landcom standalone dwelling (standard volume home build)
Apartment	1,098.4 kgCO ₂ -e/m ²	1,067.3 kgCO ₂ -e/m ²	3%	Rapid LCA of Landcom-contracted apartment building
Civil works	252,557kgCO ₂ -e/Ha	242,480 kgCO ₂ -e/Ha	4%	Rapid LCA of Landcom-contracted civil construction

Top carbon impacts by construction component and material per typology

Effectively reducing the total upfront carbon of project homes requires focus on the major contributing building elements. Targeting these key elements will allow Landcom to plan and implement effective upfront carbon reduction strategies that helps in achieving a lower total upfront carbon footprint. By concentrating on these high carbon impact construction components and materials, priority decarbonisation initiatives have been developed to inform reductions in the overall upfront carbon footprint of our Communities Construction activities.

The tables below summarise the top carbon impacts by construction process and material per typology.

Standalone Dwelling

Table 11. Standalone dwelling (House) GWP by Construction Component

Construction Component	Proportion of total GWP
Lowest Floor - Waffle Pod Slab, 30MPa, Stable Soils, 1.0% Reo (m2)	28%
Roof - TimberTruss/SteelSheeting/25degreePitch	18%
Solar PV System Residential - Zone 3 (Perth Sydney etc)	13%
Windows, Residential Aluminium Double Glaze, fly screen	10%

¹³https://ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%28Feb 16 2016%29_1.pdf

Wall, Internal, Framed, Timber Stud Plasterboard and paint finish	7%
Other Templates (Aggregated)	5%
Utilities Connection to Site Residential	4%
Substructure - Sand infill & compaction, 150yrs (m3)	3%
Battery - Lithium Ion LiFePO4 (using lead as proxy), No Assembly (kWh)	3%
Wall, External, Framed, Timber 140mm studs with battens, insulation, plasterboard and paint internal finish, fibre cement clad Hardie Axon™ (9mm)	2%
Standard 1st Bathroom - WC/Shower-bath/Basin/WallTiles	2%
Electrical Fittings - sockets power points wiring embodied only (m2)	2%
Floor Covering - Carpet (glue down/Nylon)	2%
Kitchen Medium sized (incl Equipment)	1%
Standard Heat Pump (HWS_App)	1%

Table 12. Standalone dwelling (House) GWP by Construction Material

Construction Material	Proportion of total GWP
Concrete Reinforced 1.0% Reinforcement Portland Cement Blends 30 MPa	22%
Plaster and Mineral Derived Products 100% Primary Gypsum Plasterboard 12mm Sheets	12%
Other Elements (Aggregated)	11%
Glazing Windows Aluminium Framed No Thermal Break Double Glaze Domestic 50% Opening	11%
Finished Products Electrical Goods Solar PV Panels Monocrystalline	9%
Ferrous Metals Steel Coated Sheet Zinc Coated & Coloured Sheet 0.43mm	7%
Insulation Rigid Foams and Boards Polystyrene Unspecified EPS	6%
Metals (Non-Ferous) Aluminium Unspecified	6%
Gases Refrigerants R-744 (CO2)	3%
Generic Proxy Material Zero Impact Material	3%
Metals (Non-Ferous) Copper Unspecified	2%
Insulation Blankets and Batts Glass Fibre Batts R 4.0	2%
Bulk Aggregates Sands and Soils Sand Unspecified	2%
Ferrous Metals Steel General Unspecified	1%
Carpets and Floor Coverings Carpet Nylon Medium Use	1%

Apartment

Table 13. Apartment GWP by Construction Component

Construction Component	Proportion of total GWP
Other Components (Aggregated)	19%
[GSB] Concrete Floors - Poured Concrete - upper floors, 40MPa, 20% SCM, reo 100kg/m3 (m3)	16%
[GSB] Walls - Poured Concrete - 50MPa, 30% SCM, reo 325kg/m3 (m3) ([GSB] Walls - Poured Concrete - 50MPa, 30% SCM, reo 325kg/m3 (m3))	12%
Fittings and Furnishings components (A\$ spent) (Fittings and Furnishings components (A\$ spent))	8%
[GSB] Concrete Frame - Poured Concrete - Frames/Columns/Beams, 40MPa, 20% SCM, reo 200kg/m3 (m3) ([GSB] Concrete Frame - Poured Concrete - Frames/Columns/Beams, 40MPa, 20% SCM, reo 200kg/m3 (m3))	7%
[GSB] Slab at Grade Foundations - Poured Concrete - 40MPa, 20% SCM, reo 50kg/m3 (m3) ([GSB] Slab at Grade Foundations - Poured Concrete - 40MPa, 20% SCM, reo 50kg/m3 (m3))	7%
[GSB] Blockwork Wall - 190mm hollow concrete block, core filled 20MPa, reo 15kg/m3 (m2) ([GSB] Blockwork Wall - 190mm hollow concrete block, core filled 20MPa, reo 15kg/m3 (m2))	6%
Louvre aluminium screen (by area) (Louvre aluminium screen (by area))	5%
CFC Panel cementitious core 50mm (CFC Panel cementitious core 50mm)	4%
[GSB] Concrete Frame - Concrete Beams - Poured Concrete - 50MPa, 30% SCM, reo 220kg/m3 (m3)	3%
[GSB] Internal Partition Wall - 13mm PB, 92mm steel stud, 92mm mineral wool, 13mm PB (m2) ([GSB] Internal Partition Wall - 13mm PB, 92mm steel stud, 92mm mineral wool, 13mm PB (m2))	3%
Internal wall lining plasterboard 16mm (Internal Wall - 45mm Steel Frame, painted plasterboard lining (m2))	3%
Roof - Structural Insulated Panel, Steel Skinned, 75mm (m2) (50 years)	2%
External Door - Commercial, Double Glazed, Sliding, with hardware (m2) (External Door - Commercial, Double Glazed, Sliding, with hardware (m2))	2%
External Works - 90mm Limestone Paving, 150 yrs (m2) (External Works - 90mm Limestone Paving, 150 yrs (m2))	2%

Table 14. Apartment GWP by Construction Material

Construction Material	Proportion of total GWP
Concrete Unreinforced Supplementary Cementitious Material Blends 40 MPa 20% SCM	24%
Other Materials (Aggregated)	21%
Ferrous Metals Steel Reinforcement bar Unspecified	14%
Concrete Unreinforced Supplementary Cementitious Material Blends 50 MPa 30% SCM	8%
Metals (Non-Ferous) Aluminium Unspecified	6%
Ferrous Metals Steel Stainless Unspecified	4%
Glazing Windows Aluminium Framed Thermal Break Double Glaze Commercial Fixed	4%
Plaster and Mineral Derived Products 100% Primary Gypsum Plasterboard 12mm Sheets	3%

Bricks, Blocks and Pavers Light Weight Blocks Aerated Autoclaved Concrete Blocks	3%
Metals (Non-Ferous) Aluminium Sheet	3%
Plaster and Mineral Derived Products 100% Primary Gypsum Plasterboard Unspecified Sheets	2%
Concrete Unreinforced Portland Cement Blends 20 MPa	2%
Ferrous Metals Steel General Unspecified	2%
Timber Sustainably Sourced Plywood Unspecified	2%
Glazing Windows Aluminium Framed No Thermal Break Single Glaze Domestic 50% Opening	2%

Civil infrastructure

Table 15. Civil Infrastructure GWP by Construction Components

Construction Component	Proportion of total GWP
Bulk earthworks – cut (used on site) (Bulk earthworks – cut (used on site))	23%
External Drainage – Excavation & Backfilling, Assembly only (External Drainage – Excavation & Backfilling, Assembly only (m3))	14%
Other Components (Aggregated)	14%
(TS) Asphalt Paved Road, 30yrs (m2) ((TS) Asphalt Paved Road, 30yrs (m2))	9%
100mm PVC Pipe – Excavated and Backfilled (100mm PVC Pipe – Excavated and Backfilled)	6%
External Works – Concrete Paving, poured in-situ, 125mm thick (External Works – Concrete Paving, poured in-situ, 125mm thick)	5%
600mm Poly Storm water Pipes (Corrugated) (600mm Poly Storm water Pipes (Corrugated))	4%
External Works – Planting, Small Tree (External Works – Planting, Small Tree)	4%
Sewerage – Trapped Gully Pit, 1200mm dia, precast concrete, 25MPa, 3% reo (Sewerage – Trapped Gully Pit, 1200mm diameter, precast concrete, 25MPa, 3% reo.	4%
Communication cabling – Stage 9 Civil Bushmead (Communication cabling – Stage 9 Civil Bushmead)	4%
Box Culvert (1200x900x1220)–crown/base (Box Culvert (1200x900x1220)–crown/base)	4%
External Works – Compactor/Roller for leveling, Assembly only, 150 yrs (m2) (External Works – Compactor/Roller for leveling, Assembly only, 150 yrs (m2))	3%
375mm Poly Storm water Pipes (Corrugated) (375mm Poly Storm water Pipes (Corrugated))	3%
Chain link fencing (m2) (Chain link fencing (m2))	2%
Precast Concrete – Unreinforced, External Works, Retaining Walls, 40MPa (m3) (Precast Concrete – Unreinforced, External Works, Retaining Walls, 40MPa (m3))	2%

Table 16. Civil Infrastructure GWP by Construction Material

Construction Material	Proportion of total GWP
Plastics Polypropylene Injection Moulding	21%

Concrete Unreinforced Portland Cement Blends 25 MPa	16%
Bulk Aggregates Sands and Soils Aggregate Gravel (High quality e.g. blasted crushed and screened)	11%
Concrete Unreinforced Portland Cement Blends 40 MPa	10%
Other Materials (Aggregated)	8%
Plastics Polyvinyl Chloride (PVC) PVC Pipe	7%
Bulk Aggregates Sands and Soils Aggregate Quarried limestone	7%
Ferrous Metals Steel Coated Sheet Galvanised (zinc coated)	4%
Metals (Non-Ferous) Copper Wire	4%
Concrete Unreinforced Portland Cement Blends Unspecified	3%
Ferrous Metals Steel Reinforcement bar Unspecified	3%
Metals (Non-Ferous) Aluminium Extruded	2%
EPD-Iplex PVC Pressure Pipes 2017	2%
Bulk Aggregates Sands and Soils Sand Unspecified	1%
Plastics High Density Polyethylene (HDPE) Unspecified	1%

3.3.3 Communities Operations (Downstream Embodied Scope 3 emissions)

Every Landcom project is unique and requires a bespoke approach to environmental sustainability. Landcom utilises a third-party integrated GHG emissions modelling tool for modelling Landcom's Communities Operations to identify opportunities for performance improvements and estimate the environmental performance of master plans, precinct-scale development and redevelopment projects, development applications and re-zonings.

Landcom's Sustainable Places Strategy previously reported the planned downstream operational GHG emissions (Communities Operations) reductions for planned projects within Landcom's portfolio across their project lifetime (60 years). Landcom's NTZP seeks to account for annual GHG emissions aligned to the Operational Control method, estimating the annual emissions from our dwellings divested in a given financial year. As a result, we are currently updating our modelling for all Landcom's planned Communities Operations to include annual project staging and incorporate Building Sustainability Index (BASIX) and Nationwide House Energy Rating Scheme (NatHERS) Certificates for dwelling settlements where available.

A third-party integrated GHG emissions modelling tool has been used to model the FY25 planned delivery scenario; incorporating emissions reduction initiatives embedded within the plan, designs and requirements for all dwellings settled during the reporting period. A FY25 reference case model has also been developed for each project, supporting analysis of relative emissions intensity reductions from minimum requirements under FY25 planning controls as shown in Table 17 below.

Table 17: FY25 Business as usual modelling assumptions

Technology	FY25 Business as Usual Reference Case Assumptions
Thermal Design (NatHERS)	7-star average

Lighting	Standard (Halogen, T8 or Compact FI)
Space heating & cooling	3-Star RC
Hot water system	Heat pump
Ceiling fans	No
Water Fixtures and fittings	Toilet – 3-star
	Showerhead – 3 Star
	Kitchen Taps – 4-star
	Other Taps – 4-star
Appliances	Dishwasher: 3.5-star Energy, 4.5-star Water
	Clothes washer: 4-star Energy, 4.5-star Water
	Electric cooktop
	2 star Energy Clothes dryer
Solar PV	No
Water reuse	No

Energy and Water Demand

Modelling calculations are formed for energy and water consumption of an entered precinct through hourly modelling, for a complete year. The significant advantage of this approach is that not only can the user obtain peak demand, the tool can examine the result by going through the transparent, high-resolution calculation procedures.

An overview of these calculations is provided below:

1. **Heating and cooling demand** (incorporating NatHERS zone and thermal rating, local hourly dry bulb temperature, dwelling floor space, hourly weekday and weekend diversified occupancy and energy source and efficiency of selected heating and cooling system).
2. **Water demand** (incorporating occupancy, hourly water demand profile based on weekday and weekend hourly demand profiles, local hourly rainfall patterns under a representative meteorological year, efficiency of water systems, water fixtures and appliances, percent rooftop used for rainwater capture, tank storage and use).
3. **Lighting and appliances demand** (hourly diversified load based on incorporating occupancy and efficiency of selected lighting and appliances).

Renewable Energy (Solar Photovoltaic)

Modelling calculations are formed for solar photovoltaic (PV) generation following the Green Star Photovoltaic Modelling Guidelines, using the following assumptions:

Base Data

Typical Meteorological Year (TMY) insolation data from the Bureau of Meteorology, based on weather stations representing the Australian NatHERS climate zones. Panel properties and specification metrics from System Advisor Model (SAM), reflecting typical panel performance expected for a local installation.

PV Panel Modelling Algorithm

PV modelling methodologies follow the California Energy Commission (CEC) 6 Parameter Photovoltaic Module Model. The same algorithm is utilised by System Advisor Model software, which is an approved PV modelling software by the Green Star Photovoltaic Modelling Guidelines.

All panel generation is modelled to assume optimal generation conditions, i.e. no shading and optimal tilt and orientation angles. Performance degradation over the lifespan of PV panels is not explicitly calculated. Instead, the annual generation calculated from the CEC 6 Parameter model is calibrated to the published generation guide under the Small-scale Renewable Energy Scheme, which predicts panels' long term total electricity generation based on geographical location. This inherently accounts for losses from component de-rating.

The detailed source and algorithm explanations on the PV modelling and prediction are listed below. Each of the core reporting items in the guideline has been outlined in Table 18, Table 19 and Table 20 below.

Table 18. PV system information reporting requirements

Item	Parameter	Description
A1	PV Technology	Mono-crystalline silicon
A2	Description of PV Components	Referencing LG Electronics LG3201N1C-G4 for core specifications and electrical properties
A3	Photovoltaic Efficiency	Nominal efficiency of 18% under 1000W/m2 irradiance and 25°C ambient temperature
A4	Performance Degradation	Not explicitly calculated, instead, the annual generation calculated from the CEC 6 parameter model is calibrated to the published generation guide under the Small-scale Renewable Energy Scheme, which predicts panels' long term total electricity generation based on geographical location, inherently taking into account the loss from component de-rating.
A5	Mounting Type	Fixed
A6	Inverter information	A constant 95% efficiency is used in the modelling
A7	Single Line Diagram	N/A
A8	Layout Drawings	N/A
A9	On-Site Shading	No shading assuming roof top panel mounting.

Table 19. Site data reporting requirements

Item	Parameter	Description
B1	Location	Determined by Lat/Long of the project location
B2	Third Party Data Source	ACADS-BSG Australian Climatic Data RMY (Reference Meteorological Year) for hourly temperature, insulation and humidity
B3	Climatic Data Type	TMY (Typical Meteorological Year) format, a collation of selected weather data for project location
B4	Hourly Climatic Data	Hourly interval time-series data

Table 20. Modelling considerations reporting requirements

Item	Parameter	Description
C1	Modelling software	System Advisor Model (SAM), utilising the CEC6 (California Energy Commission 6 Parameter) Photovoltaic Module Model algorithm
C2	Tilt Angle	Using the latitude as tilt angle
C3	Azimuth	0° (North facing)
C4	Shading	No shading
C5	PV Array Losses	Please refer to item A4 - Performance Degradation
C6	Cell Temperature Losses	0.4%/°C

Peak demand

Drawing on interactions between the energy and water calculations, modelling involves calculating the peak demand based on a diversified electricity demand profile for a precinct. This is undertaken through the following steps:

1. Calculate the total annual electricity consumption for each end use (in kWh per year), as outlined in *Energy and Water Demand* above.
2. This total demand is then distributed across every hour of the year with a load profile generated for each specific diversified end use.
3. All end uses (non-thermal, hot water, heating and cooling) are then summed together for each hour of the year.
4. The calculations locate the peak event for that year.

Key modelling limitations, data-entry methodology, assumptions and considerations

To support project-level estimates of our downstream Communities Operations emissions for our FY25 NZTP, detailed emissions modelling has been undertaken for all FY25 dwelling settlements for FY25. Emissions associated with Landcom's Communities Operations are indirect and outside of Landcom's direct control; relating to the emissions associated with the operations of communities that Landcom has divested to third-parties (other developers, landholders and/or home builders) in the given financial year. Due to the indirect nature of emissions

in this category, assumptions have been made where detailed data is not available. These have been summarised in Table 21 below.

Table 21. Communities Operations key modelling limitations, data-entry methodology, and considerations

Modelling limitation	Data-entry methodology and considerations																		
Appliance/fixture rating is not specified	When appliance and fixture rating are not specified, standard modelling platform default ratings are used for modelling. All household appliances are included unless there is a clear rationale for exclusion (e.g., Build-to-Rent projects may exclude washing machines if these are not provided by the developer).																		
Specified minimum appliance/fixture efficiency rating is not readily available on the market	Where appliance efficiency ratings are not readily available on the market, the star rating is rounded down to the nearest realistic rating (e.g., if 4-star air conditioners are not available and the next available product on the NSW market is 2-star, then a 2-star unit is assumed rather than rounding up to 6-star).																		
When an appliance star rating is not available and only the heating and cooling EER values are provided	When the star rating is not available and only the heating and cooling EER values are provided, it is because Australia no longer uses EER/COP to calculate star ratings. After the 2019 GEMS update, the former EER-based method was replaced with seasonal performance metrics (TCSPF for cooling and HSPF for heating), which account for real climate conditions and replace EER/COP in determining efficiency. Daikin also notes that the old Energy Rating Label and the new Zoned Energy Rating Label cannot be compared because the calculation methods are completely different. Therefore, an official EER-to-star conversion is no longer available. Where only EER values were provided, an approximate conversion based on historical manufacturer data has been used to estimate the approximate star-level rating for applicable appliances. <table><tr><th>EER Range</th><th>Approx. Cooling Star Level</th><th>Approx. Heating Star Level</th></tr><tr><td>2.5 – 3.0</td><td>~1.5 – 2 stars</td><td>~2.8 – 3.2</td></tr><tr><td>3.1 – 3.4</td><td>~2 – 2.5 stars</td><td>~3.2 – 3.5</td></tr><tr><td>3.5 – 3.7</td><td>~2.5 – 3 stars</td><td>~3.5 – 3.7</td></tr><tr><td>3.8 – 4.0</td><td>~3 – 4 stars</td><td>~3.8 – 4.0</td></tr><tr><td>4.1 – 4.5</td><td>~4 – 5 stars</td><td>~4.0 – 4.5</td></tr></table>	EER Range	Approx. Cooling Star Level	Approx. Heating Star Level	2.5 – 3.0	~1.5 – 2 stars	~2.8 – 3.2	3.1 – 3.4	~2 – 2.5 stars	~3.2 – 3.5	3.5 – 3.7	~2.5 – 3 stars	~3.5 – 3.7	3.8 – 4.0	~3 – 4 stars	~3.8 – 4.0	4.1 – 4.5	~4 – 5 stars	~4.0 – 4.5
EER Range	Approx. Cooling Star Level	Approx. Heating Star Level																	
2.5 – 3.0	~1.5 – 2 stars	~2.8 – 3.2																	
3.1 – 3.4	~2 – 2.5 stars	~3.2 – 3.5																	
3.5 – 3.7	~2.5 – 3 stars	~3.5 – 3.7																	
3.8 – 4.0	~3 – 4 stars	~3.8 – 4.0																	
4.1 – 4.5	~4 – 5 stars	~4.0 – 4.5																	
Relevant BASIX certificates are not presently available	Pre-approved BASIX certificates should be used for ‘actual’ scenario whenever available. If not available, hierarchy of document quality applies as follows: Minimum requirements outlined in Residential Design Guidelines > Divestment contract requirements > ESD Report Commitments made, tied to DA/SSDA approvals > Sustainability Rebate commitments> minimum Assumptions (only where no other supporting evidence exists)																		
Floor and/or roof areas are not specified	When the floor area was based on modelling platform assumptions and the roof area was not provided, default roof-area assumptions for each building type were applied as follows: Detached Houses: Detached houses typically include pitched roofs and eaves, which generally result in a roof area slightly larger than the ground floor. However, for consistency in modelling, the roof area was assumed to be equal to the floor area.																		

- **Attached Houses** (Terrace / Townhouse): Attached houses are commonly two to three storeys. For these dwellings, the roof area was assumed to be approximately 33–50% of the total floor area.
- **Low-Rise and Mid-Rise Apartments:** For these apartment buildings, approximate roof-area percentages were applied based on the number of storeys, as shown in the table below.

Storeys	Approx. Roof Area (% of Total GFA)
3 storeys	~33%
4 storeys	~25%
5 storeys	~20%
6 storeys	~17%

Rainwater tank provision is unclear	Where the Design Guideline or other project documents specify a rainwater tank but do not indicate a size, an average market-available tank size is used for modelling. Typical residential rainwater tanks range from approximately 3,000 L to 15,000 L; therefore, the minimum value within this range is adopted for modelling purposes.
Asset-level delivery evidence is presently unavailable	‘Business as Usual’ assumptions (see Table 17) are applied when detailed project information, such as the number of bedrooms or other key dwelling parameters, is not specified. When delivery evidence for an item is not available, the NCC minimum-compliance scenario assumptions are applied. This reflects what would ordinarily be delivered today for projects subject to the current Sustainable Buildings SEPP requirements.
Uncertainty regarding future infrastructure provision	Where additional future infrastructure is yet to be planned, designed and/or confirmed, it is excluded from the model and deemed out of scope. If such infrastructure is delivered in the future under Landcom’s operational control, the models will be updated accordingly, and any resulting changes in reported annual emissions will be documented in the “Basis of Preparation report”.

4 Targets and Performance

Over the past five calendar years, Landcom has made concerted efforts to reduce Corporate Operations emissions down from CY19 gross emissions of 2,6661 tCO₂-e, to 1,564 tCO₂-e in FY25. As we increase the scope and coverage of our emissions boundary and begin to address a larger proportion of our value chain, we expect our reported absolute emissions to rise substantially in the short-term, before falling over time.

As we are both expanding our boundary to encompass our full value chain and identify remaining emissions factors through research and pilot projects, ongoing changes to our performance measurement and baselining is required to support accurate emissions tracking across all activities. As such, the degree of confidence and accuracy of our emissions performance tracking varies across emissions categories (see Section 3.1.4 for more information on reporting year data quality).

While we continue to expand our emissions tracking, monitoring and reporting frameworks, Landcom’s FY25 NZTP and associated Basis of Preparation Report represent an uplift in the quality and veracity of our emissions performance reporting. Emissions reduction performance described in the sections below is composed of both

projected and measured emissions performance against a base year (where complete data is available); using real data from projects where we have been trialling lifecycle assessments, while forward projections rely on best estimates at the time of drafting. We will continue to enhance the and streamline our emissions performance reporting over time.

We have sought limited third-party assurance on our emissions reported and claims made in this Basis or Preparation Report and corresponding NZTP. As we report on our progress annually, we will describe material year-on-year changes with a clear rationale for the change provided – be it emissions reduction actions, or why the emissions rose.

In FY25, our biggest emissions reductions resulted from:

- **Corporate Operations:** Green Power procured for Landcom's offices, 156,281.28 kWh and 324,68.92 kWh sites, as well as transitioning Landcom's fleet towards hybrid or fully electric options;
- **Communities (Upfront and Downstream Operations):** While FY25 represents the first year of portfolio-wide reporting under the NZTP activity category boundaries, in-scope projects under Landcom's Sustainable Places Strategy targets and methodologies have been reported in Landcom's FY25 Sustainability Report, including planned and designed reductions in upfront and operational carbon for buildings prior to construction. Future years' NZTP reporting will incorporate portfolio-wide year-on-year emissions performance for these activity categories.

4.1 Targets

Landcom first committed to accelerated actions in 2018 towards a 2028 leadership target for carbon neutral emissions. We have demonstrated and continue to push for accelerated action that aligns Landcom with leaders in the industry and supports our sustained effort in reducing emissions.

Section 4.1.1 and 4.1.2 shows Landcom's short-term targets (FY25-FY29) for Scope 1 and 2 emissions, and medium-long term net zero targets across all scopes, aligned to the NSW Government's Net Zero targeted reductions.

Scope 1 and 2 emissions target a 50% reduction in Gross Emissions on a 2018-19 base year, aligned to NSW Net Zero Government Operations Policy targets. Landcom's year-on-year Scope 3 emissions will be largely impacted by variability in construction and sales, external factors including grid decarbonisation, as well as the uptake of decarbonisation initiatives to reduce the emissions intensity of the dwellings and infrastructure we deliver. We will seek to develop short-term intensity-based dwellings targets in coming years from measuring the relative emission reductions for the emissions intensity per dwelling across Construction and Design (Upfront) and Communities Operations (Downstream) activities, and will consider intensity targets for each dwelling delivered that captures the emission reduction potential from density done well (GHG emissions per/m²). No intensity-based targets have been applied to these activity categories for FY25, and a first-year base year estimate has been developed associated with financial year economic activity (settlement of developable land) to enable analysis of emissions hot spots and future reporting of year-on-year emissions performance change over time.

Landcom's Net Zero Transition Pathway will continue to be modelled and refined over coming years, including improving our project-level carbon transition pathways to FY50, enhancing data quality across all emission scopes, improving the accuracy of our emission reduction pathway from known decarbonisation initiatives, and revising our FY30 and FY35 targets accordingly.

4.1.1 FY25-FY29 (Short-term) NZTP Targets

FY25 NZTP Targets (Short-term)	Scope	Baseline gross tCO2-e	FY25 Target	Target type	FY25 gross tCO2-e
Corporate Operations	Scope 1 & 2	8.55 (2019)	50%	Absolute	16.11
	Scope 3	2,653 (2019)	Monitor	First year expanded reporting boundary	1,562
Construction and Design	Scope 1 & 2	FY25	50%	Absolute	13.89
	Scope 3	FY25	Monitor	First year high-level portfolio estimate based on asset benchmark	155,278
Communities Operations	Scope 3	FY25			171,961

Figure 4. FY25-29 (Short term) Targets

4.1.2 FY30-FY50 (Medium and Long-term) Targets

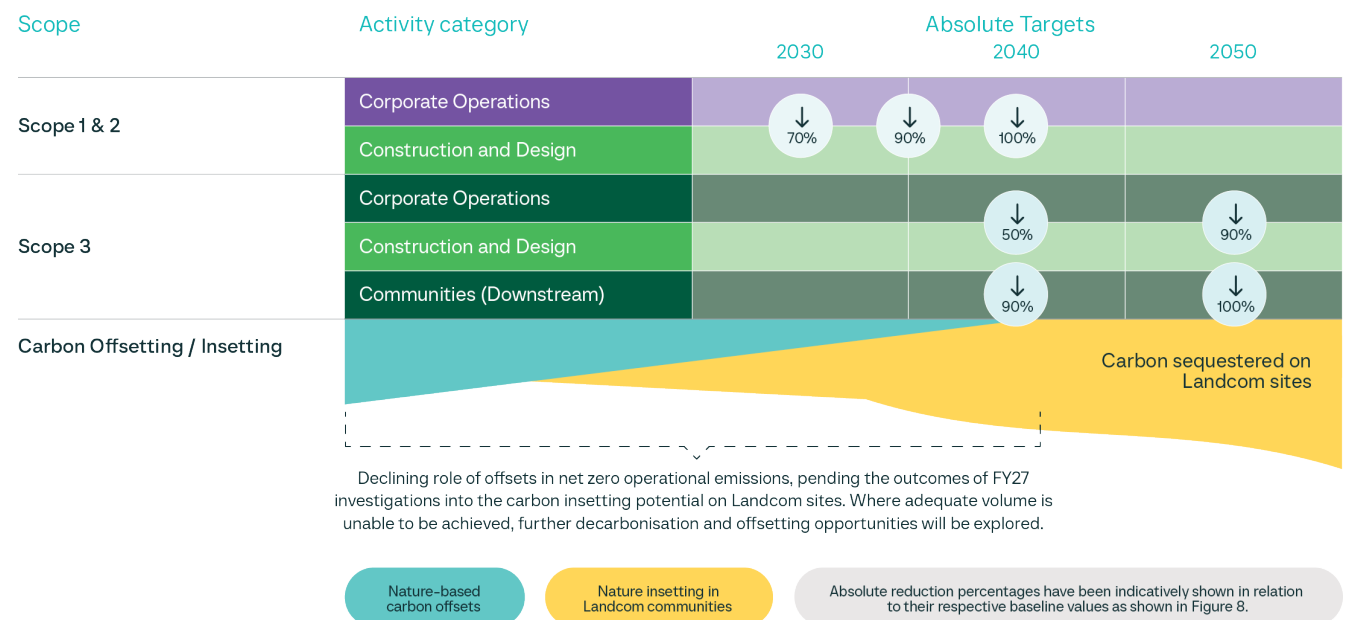


Figure 5. FY30-FY50 (Medium and Long-term) Targets

4.2 FY25 Performance

4.2.1 Corporate Operations (Scope 1, 2 and 3)

Landcom's Scope 1 direct GHG emissions are derived from our operated assets measured in tCO₂-e. Scope 2 refers to indirect GHG emissions from the generation of purchased electricity, steam, heat or cooling that is consumed by our operated assets and is calculated using the market-based method measured in 14.18 tCO₂-e. Under a location-based method, Scope 2 emissions for FY25 would be 114.7tCO₂-e as the location-based method does not factor in the emissions reductions from Landcom's Green Power agreement. Both values have been reported in Table 22 below.

Due to FY25 being Landcom's first financial year disclosure under our expanded boundary, our CY19 Corporate Operations GHG emissions have been recalculated under the new expanded boundary, improving the year-on-year comparability of reported Corporate Operation emissions.

Table 22. Corporate Operations GHG emissions performance CY2019-FY25

Emissions scope and method	CY2019 (tCO ₂ e)	FY25 (tCO ₂ e)	% change
Scope 1 emissions	8.55	1.93	-77%
Scope 2 emissions (market-based method)	0	14.18	Increased from zero
Previous disclosure boundary Scope 2 emissions (market-based)	0	11.11 ¹⁴	
Scope 2 emissions (location-based method)	27.48	147.7	>100% increase
Previous disclosure boundary Scope 2 emissions (location-based)	27.48	109.72	
Scope 3 emissions	2,652.73 ¹⁵	1,561.85	-41%
Carbon offsets ¹⁶	2,414	1,402	
Total Net Scope 1, 2 & 3 emissions (market-based)	CY19 boundary expansion 247.58	176	-29%
Total Gross Scope 1, 2 & 3 (market-based)	recalculation 2,661	1,578	-41%

¹⁴ Scope 2 (market-based) emissions disclosed under Landcom's FY25 NZTP are 14.18 t CO₂-e, up from 11.11 t CO₂ e reported in Landcom's FY25 TPG24-33 disclosure. The increase reflects minor differences in Scope 2 accounting methodologies and the inclusion of additional electricity meters previously outside Landcom's Corporate Operations reporting boundary. These meters relate to sales offices that have since been incorporated into Corporate Operations, while remaining ad hoc on-site energy use continues to be reported within Landcom's Projects boundary.

¹⁵ Landcom's CY19 Scope 3 emissions have been recalculated in 2026 to reflect Landcom's change in reporting boundaries, considering relevant and material activities under FY25 reporting boundaries and a resulting increase of reported emissions of 247.55 tCO₂-e.

¹⁶ Due to a once-off overlap in Landcom's emissions reporting boundaries across multiple frameworks within the reporting year, carbon offsets retired for FY25 have been purchased to offset our Scope 1 and 2 emissions disclosed in Landcom's TPG24-33 climate-related financial disclosures. Additional Carbon Offsets have been purchased in arrears to neutralise our remaining CY24 and CY25 Corporate Operations emission aligned with Climate Active Carbon Neutral certification methodologies. Carbon Offsets applied to CY24 and CY25 have been incorporated into Landcom's FY25 NZTP inventory proportionately to the overlap in reporting periods; applying 50% of the ACCUs retired within each calendar year to the FY25 NZTP inventory. Future years' reporting will seek to consolidate offset purchases to improve business efficiency as well as clarity and accuracy of reporting. See Appendix A for further details.

<i>Total Net Scope 1, 2 & 3 emissions</i>	<i>Previous disclosure boundary</i>	0	27.96
<i>Total Gross Scope 1, 2 & 3 emissions</i>		2,414	1,578

Landcom's reported absolute gross and net emissions have changed relative to the 2019 base year due to:

- Scope 2 emissions in FY25 were driven largely by the temporary use of Level 17 within the existing office premises during renovation works, as well as grid electricity consumed for electric vehicle charging.
- Landcom's business model is driven by largely scope 3 emissions. Between 2019-2025, Landcom expanded our Scope 3 boundary to account for additional corporate-related activities including purchased goods and services, professional services, waste, travel and investments – categories that naturally grow as the project pipeline expands;
- Major pipeline expansion from 2023 onwards, including Build-to-Rent pilots, new regional projects, and accelerated development to address the NSW housing crisis, all leading to higher Scope 3 emissions.
- Each additional project that Landcom explores requires:
 - More early planning, design, consulting and engineering services.
 - More corporate support for Projects team delivery and reporting.
 - More temporary site operations including Sales Centres, Demonstration Homes, Site Offices and Sheds.
- Increased maintenance and insurance costs for major projects, reflecting higher operational costs across Landcom's growing development pipeline
- Increased staff motor vehicle allowances, due to data discrepancies in Landcom's CY23 emissions profile (~2.5% impact, offset in arrears in FY24)
- In 2024, Landcom's expenditure on ICT hardware and office equipment increased significantly due to a major office refurbishment. Emissions reductions activities included:
 - 95% waste diversion
 - 51% reuse of recovered items
 - 100% e-waste diversion from landfill
- A reduction in offset use for Scope 3 emissions under a Financial Year accounting method; due to a once-off overlap in Landcom's emissions reporting boundaries across multiple frameworks within the reporting year, described further in Footnote 18.

CY2019 previously reported Gross Scope 1 and 2 emissions are originally derived from Landcom's CY19 Climate Active Certification, reported in the CY19 Public Disclosure Statement (PDS) available on the Climate Active website. Landcom's published PDS identify some of Landcom's emission reduction actions to-date, including (but not limited to) GreenPower certified electricity, our commitment to no-gas reticulation in new developments, flexible working arrangements and procurement of electric fleet vehicles. We will continue to explore how procurement, staff behaviour and addressing our supply chain, can build on our early success and accelerate action towards a low-carbon economy.

4.2.3 Construction (Upfront Embodied Scope 2 and 3 emissions)

We have continued to mature our approach to Scope 3 through investing in low carbon materials (such as concrete and asphalt) and increasing our understanding of our supply chain and the biggest sources of emissions. We have modelled these interventions on a project-by-project basis, allowing us to better understand not only the volume of Scope 3 emissions, but also to quantify our projected emissions reduction efforts. Continual feedback from projects enables us to better evaluate the effectiveness of decarbonisation efforts and allows us to plan for future risks (and opportunities) in upcoming projects.

Table 23. FY25 Upfront Embodied Carbon High-Level Estimated Performance

Scope	Activity category	Activity type	Base year		FY25 high-level estimated emissions ¹⁷
			Description	tCO ₂ -e	tCO ₂ -e
Scope 2	Construction & Design	Purchased electricity	FY25		13.89
Scope 3		Purchased goods and services		FY25	4,975
		Capital goods		FY25 asset-level benchmark	~150,265
		• Standalone dwellings			~113,971
		• Apartments			~31,237
		• Site Preparation and Infrastructure			~5,057
	Construction & Design	Waste generated in operations		FY25	37.6

By analysing the portfolio-wide asset benchmark upfront embodied carbon emissions performance for FY25 and developing targets to address Communities (Upfront) emissions for future years, we are dedicated to addressing the most significant source of our global impact. Significant FY25 Construction and Design emissions include:

- **Scope 2:** Purchased electricity for site operations due to discrepancies in retailer billing and energy contract requirements that led to the purchase of grid-energy instead of Green Power equivalent to 13.89t CO₂-e.
- **Scope 3:**
 - **Standalone dwelling (house):** Concrete, plaster and mineral derived products, roofing, metals, solar PV systems and windows
 - **Apartments:** Concrete, fittings and furnishings, windows and metals
 - **Civil infrastructure:** bulk earthworks, drainage, PVC and plastics, concrete, asphalt and aggregates

¹⁷ Estimates have been rounded to the nearest 10 tonnes to account for lower data quality and confidence

Table 24. FY25 challenges and opportunities

Challenges	Opportunities
In our sector, while methodologies for measuring and reporting on Scope 1 and 2 emissions are clear, the same cannot be said for Scope 3 upfront emissions. This challenge arises because Scope 3 emissions can be beyond our direct control and require further engagement with supply chains to decarbonise.	Expanding the digitisation, collection and reporting of Scope 3 emissions data across our supply chains.
Challenging the construction industry and long-term asset owners to adopt low-carbon materials.	Pilot and scale new low and zero carbon building and materials solutions.
Incomplete data for upfront carbon emission- solution.	Continue to work with our supply chain partners and through various industry groups to address this challenge.

4.2.4 Communities Operations (Scope 3 Downstream Embodied Emissions)

Communities Operations emissions have seen targeted reductions each year under Landcom's Sustainable Places Strategy, targeting an emissions intensity reduction against a defined reference case for in-scope projects. Pilot programs such as Residential Design Guidelines and Sustainability Rebates help incentivise homeowners to reduce their operational carbon emissions through investment in energy-efficient appliances, better built dwellings and the use of renewable energy. Continual feedback through projects enables us to better evaluate the effectiveness of decarbonisation efforts and allows us to plan for future risks (and opportunities) in upcoming developments.

In 2021, Landcom committed to delivering all new communities as all-electric, a commitment that has driven significant decarbonisation of the emissions enabled in new communities in Landcom's development pipeline. For FY25, two legacy projects (acquired prior to Landcom's 2021 commitment) including Green Square and Thornton, concluded settlements for 196 dwellings that did not specify all-electric outcomes at the time of settlement, contributing to an estimated 6,290 tCO₂-e enabled downstream emissions. While the enabled dwellings are yet to be constructed, the operational emissions have been modelled conservatively to the minimum requirements under planning controls. Continuing to maintain Landcom's commitment to all-electric communities for all new projects acquired will enable further avoidance of downstream operational emissions, as well as the broader co-benefits for residents derived from living in an all-electric household.

Table 25. FY25 Communities Operations High-Level Estimated Performance

Scope	Activity category	Activity type	Base year		FY25 high-level estimated emissions ¹⁸
			Description	tCO ₂ -e	
Scope 3		Enabled Grid Electricity Use			127,960

¹⁸ Estimates have been rounded up to the nearest 10 tonnes to account for lower data quality and confidence

Communities Operations (Downstream)	Enabled Gas Energy Use	First-year asset-level benchmark	6,290
	Enabled Water Use		37,720

In FY25, the operational efficiency and on-site renewable energy generation committed during dwelling and superlot settlements, contributed to estimated reductions in operational GHG emissions through a range of mechanisms, including:

- Design measures that reduce operational energy use and improve thermal comfort;
- Enhanced operational efficiency of appliances and fixtures, implemented through Residential Design Guidelines, ESD Report commitments included in planning approvals, Green Star certification and Sustainability Rebates;
- Sustainability commitments incorporated into superlot divestment agreements; and
- The NSW Government's increase in energy efficiency and thermal comfort standards implemented through the Sustainable Buildings State Environmental Planning Policy.

Landcom's Communities (Operations) emissions are reported under Scope 3, Category 11 (Use of Sold Products). For FY25, Communities (Operations) emissions performance is estimated and monitored for all dwellings settled during the reporting year, providing a complete base year emissions estimate for FY25, reporting a per-dwelling per-annum total and average portfolio GHG emissions estimate for FY25. As such, FY25 Communities Operations emission reporting represents an interim reporting approach and establishes an initial reference point rather than a trend over time. In future reporting periods, Landcom intends to transition to a fixed historical (FY19) base-year, intensity-based approach to target-setting. This will enable like-for-like comparison of operational emissions performance over time, while normalising for changes in delivery volumes and supporting robust target-setting, consistent with the Greenhouse Gas Protocol.

4.3 Reporting activities

Reporting activities for Landcom's Corporate Operations are tied to financial expenditure within a given financial year for material emissions categories (as shown in 3.1 and 3.2).

Reporting activities for Communities (Upfront) and Communities (Operations) are tied to financial year dwelling projections developed for the first year of net zero reporting using FY26 business plans and financial data. These projections outline the annual distribution of lots and apartments from FY25 to FY30, with Development teams engaged to validate assumptions where necessary due to the evolving nature of Landcom projects. Long-term forecasts aligned with Landcom's financial planning, extending from FY30 to FY50, have been developed for forecasting and reporting purposes, aligned to annual financial reporting process.

Land development and civil infrastructure reporting activities are tied to project-specific development footprints, measured in hectares. While the vast proportion of upfront carbon emissions are generated in the first year of construction, (noting that construction cycles, timings and stagings are subject to change), associated reporting activities have been distributed across the timeline of the project based on the total hectares of that project and proportionate to the dwelling-delivery percentage for that financial year. For example, a 100ha development to be delivered over 10 years may deliver 20% of dwellings in a given financial year (Dwellings reporting activities), and 20ha of associated land development and civil infrastructure works (Civil Infrastructure reporting activities) are

assigned to the corresponding financial year. This process is reported on for each financial year of reporting activities over the life of that project.

Note: Landcom cannot currently verify all downstream reporting activities undertaken by third-parties. Sustainability reporting requirements for Landcom divestments will continue to be refined to enable a clearer line of sight and accountability over the downstream emissions enabled by Landcom's development settlements. As such, FY25 reported emissions estimates and associated reporting activities represent the best-available information at the time of settlement. We will continue to build on our internal capabilities and improve the accuracy of our downstream Scope 3 reporting activities, with the aim of reporting adjustments in future years' where downstream delivery differs from projected outcomes.

4.4 Performance, progress measurement, tracking and reporting methodologies

Progress against the NZTP is measured through a structured and consistent framework that integrates stakeholder engagement, data validation, and systematic performance monitoring.

Actual performance data are obtained through ongoing engagement with development teams and corporate teams across the organisation. These teams provide project-level Construction activity data and Corporate Operations activity data for relevant activities, aligned with reporting boundaries, and data requirements. The data collected is reviewed by Landcom's in-house Sustainability team for completeness and accuracy prior to being used for progress assessment.

Validated data is then processed through third-party integrated GHG emissions modelling platforms. These platforms are used to calculate emissions performance across all activity streams, assess decarbonisation outcomes, and monitor progress against interim milestones and long-term net zero targets. Outputs from these platforms form the basis for consistent and quantitative measurement of progress at both organisational and precinct scales.

Corporate Operations progress is measured and tracked annually by Landcom's in-house Sustainability Team. Project-level progress is tracked during regular meetings with project teams, and decarbonisation initiatives are identified and considered throughout the project lifecycle to prioritise initiatives that are efficient and cost-effective for project teams to implement and identify if further action is required to achieve Landcom's targets. This is the primary mechanism for communicating project sustainability objectives, defining data tracking methodologies, and recording performance against agreed targets.

Project-level progress is further tracked through a Sustainability Strategy Tracking Sheet maintained for a number of Landcom projects. As we continue to streamline and integrate internal reporting systems, all active Landcom projects will adopt a Sustainability Strategy that is integrated into broader project planning and reporting frameworks. This approach will enable transparent, repeatable, and auditable progress measurement, support early identification of delivery risks, and facilitate regular communication with project teams to enable continued alignment with the strategic ambitions of Landcom's NZTP.

5 Implementation and next steps

5.1 Changes to Landcom's Business Model, Products and Services

As a commercial venture – with a clear focus on community – Landcom needs to clearly identify its customers, understand their needs and requirements, and target its activities accordingly. As we deliver build-to-rent and other residential built form projects in future years, our range of customers will grow to also include renters and investors in housing developments. Across all our products, we seek to embed sustainability. Our aim is to create innovative and productive places that demonstrate global standards of liveability, resilience, inclusion, affordability and environmental quality.

Table 26. Each products and associated decarbonisation initiatives aimed at different customer groups:

Customer group	Decarbonisation initiatives (ongoing and new)
Enabling infrastructure for new communities	• Sustainability requirements embedded in Tender documentation and construction contracts • Sustainability Bonds for street trees in select developments
Retail customers purchase our retail land lots to build their home or investment property	• Residential Design Guidelines inclusions relating to energy efficiency, thermal comfort, climate resilience, renewable energy provision and other climate-related matters • Sustainability Rebates incentivising energy efficiency, thermal comfort and/or climate resilient design measures • Sustainability requirements embedded in relevant DA/SSDA approvals • Direct customer education and engagement relating to climate-related matters
Builders buy builder lots to be developed and on-sold to their retail customers	• Residential Design Guidelines inclusions relating to energy efficiency, thermal comfort, climate resilience, renewable energy provision and other climate-related matters • Sustainability Rebates incentivising energy efficiency, thermal comfort and/or climate resilient design • Sustainability requirements embedded in Tender documentation and Contracts of Sale
Private developers and community housing providers purchase our superlots.	• Sustainability requirements embedded in relevant DA/SSDA approvals • Sustainability requirements embedded in Tender documentation and Contracts of Sale, with Sustainability Bonds to financially incentivise compliance for select developments • Direct engagement, justification, and reporting compliance relating to climate-related contracted matters

While Table 25 outlines how decarbonisation initiatives are embedded across current products and customer groups, Landcom's NZTP represents a broader evolution in how the organisation creates and delivers value. Under the NZTP, Landcom is accelerating its transition from a traditional land development model toward an integrated, low-carbon development model that emphasises whole-of-life value creation, sustainability led product differentiation, and expanded delivery models (including Build-to-Rent and institutional partnerships), with a growing focus on delivering net zero ready communities and managing carbon proactively in early design processes and business decision-making.

This transition extends across Landcom's value chain. Upstream, procurement and supplier engagement embed low carbon requirements; in planning and design, net zero targets are applied at a precinct scale; and in delivery, construction practices evolve toward electrification and reduced embodied carbon. Downstream, enhanced

sustainability outcomes improve value for customers and communities. Collectively, these changes place Landcom as a catalyst for broader market transformation in the built environment, as outlined in Section 1.1.

5.2 Engagement with value chain

Landcom engages with its value chain to identify, assess and manage climate-related risks and opportunities, and to support delivery of its net zero transition objectives. Landcom integrates climate considerations into procurement processes, development agreements and partnerships, and uses guidance, data sharing and ongoing engagement to encourage alignment with its NZTP while maintaining flexibility to respond to market capability and innovation over time. This includes:

- working collaboratively with developers, contractors, suppliers, local councils, utilities, waste recyclers and community stakeholders to set clear sustainability expectations, improve emissions performance, and strengthen climate resilience across projects;
- integrating sustainability criteria into tender evaluation processes to incentivise competitive and innovative approaches to delivering on Landcom's net zero goals, prioritising initiatives that decarbonise high-emitting activities including during tender evaluation of construction-related contracts and divestment of masterplanned communities, including quantitative and qualitative targets for high-emissions construction components, such as concrete, asphalt and machinery;
- collaboration and information sharing to support compliance with sustainability criteria during negotiations with third-party development partners, with further enforcement further by the use of positive covenant and bonds, tied to the delivery of sustainability and other design commitments.

5.3 Engagement with industry

Landcom has a strong history of climate-related industry engagement, including ongoing collaboration and engagement with climate-related Peak Bodies and industry research groups including Green Building Council of Australia, NS, the Committee for Sydney, Universities, Climate Active, United Nations Global Compact, Materials and Embodied Carbon Leaders Alliance, Ausgrid, Endeavour Energy, Clean Energy Finance Corporation and others.

During FY25, Landcom actively engaged with a range of industry bodies to strengthen its approach to climate risk management, emissions reduction and the transition to net zero, and support knowledge sharing, alignment with best-practice frameworks, and participation in sector-wide initiatives. This engagement supports Landcom's leadership role in advancing climate-resilient, low-carbon outcomes across the NSW land development sector, and signals Landcom's commitment to enabling an economy-wide transition consistent with NSW Government climate objectives.

5.4 Engagement with other stakeholders

5.4.1 First Nations peoples

At Landcom our vision for reconciliation is a nation that recognises, celebrates and respects Aboriginal and Torres Strait Islander peoples as First Australians. Our [2025 Innovate Reconciliation Action Plan](#) (RAP) confirms our commitment to:

- continue to develop and strengthen respectful relationships
- be a culturally inclusive and safe organisation

- create and foster opportunities
- create communities that elevate and reflect the voices of Aboriginal and Torres Strait Islander peoples.

In FY25, Landcom engaged with First Nations stakeholders and/or communities on project climate-related matters including Aboriginal Suppliers and Consultants, Traditional Owners, Elders, Aboriginal community members, Local Aboriginal Corporations and First Nations Working Groups, guided by Landcom's RAP and Connecting with Country Framework.

5.4.2 Government

As a NSW State-Owned Corporation, collaboration with the Government entities is crucial for enabling Landcom's Strategic Ambitions. During FY25, Landcom contributed to NSW Government policy development through direct engagement and formal public disclosures. Ongoing collaboration with agencies has also driven knowledge and data sharing on climate-related risks and opportunities, including and not limited to NSW DCCEEW, DPHI, NSW Net Zero Commission, NSW Reconstruction Authority, Homes NSW, Bradfield Development Authority, NSW Treasury and others.

No formal climate-related submissions were made on government consultations in FY25. Where submissions were made as part of government-led consultations, these were generally provided on a confidential or aggregated basis and are not published by the administering agencies.

5.4.3 Local communities

Landcom engages with local communities on climate-related matters as an integral part of planning, designing and delivering its projects. Engagement focuses on understanding local climate risks, incorporating community knowledge into climate-resilient design, and building shared capability to respond to climate impacts such as heat, flooding, bushfire and extreme weather. These activities support Landcom's broader net zero and climate-resilience objectives and contribute to equitable outcomes for communities across NSW. Landcom's FY25 Annual Report further describes Landcom's engagement with local communities for the reporting year.

Key Engagement Mechanisms

1. Place-based Consultation on Climate Risks and Resilience

Through project-specific engagement processes, Landcom consults communities on climate-related risks relevant to local conditions, including extreme heat, flood exposure, emergency preparedness and access to resilient infrastructure. This often includes local community members, community groups, businesses, advocacy groups and/or stakeholder networks. Community feedback is used to inform land use planning, open space design, water management, housing typologies and infrastructure sequencing.

Examples include:

- community consultation on climate resilience and emergency preparedness in existing and emerging communities;
- engagement during planning and rezoning processes where climate risk assessments (e.g. flooding, heat, bushfire) are publicly exhibited and responded to; and
- feedback loops through consultation outcome reports and responses to submissions.

This approach enables climate risks to be understood in a local context and mitigation measures chosen are socially beneficial as well as technically robust.

See [Home | Join in Landcom](#) for further examples of Landcom’s place-based community consultation activities.

2. Engagement on Sustainable and Low-Carbon Communities

Landcom engages residents and prospective buyers on sustainability and low-carbon living initiatives, including:

- all-electric housing and reduced reliance on fossil fuels;
- design measures that improve thermal comfort and reduce energy demand; and
- access to green space, tree canopy and blue-green infrastructure to mitigate urban heat.

These engagements inform both project design and consumer-facing sustainability guidance, supporting emissions reduction while responding to household cost-of-living considerations.

3. Inclusive Engagement with Priority and Vulnerable Communities

Recognising that climate impacts are not evenly distributed, Landcom applies inclusive engagement practices to enable climate-related considerations to reflect diverse community needs and a Just Transition. This includes:

- tailoring consultation methods to reach renters, social and affordable housing residents and culturally diverse communities;
- incorporating First Nations knowledge where relevant to land, water and climate stewardship; and
- considering compounding climate and social vulnerabilities when designing resilience measures.

See [Landcom and community | Landcom](#) for more information on Landcom’s inclusive community engagement approach.

Integrating climate-related engagement outcomes into decision-making

Feedback is documented through consultation reports and responses to submissions, including those published on the NSW Government Planning Portal; providing transparency and accountability in how community input informs outcomes.

Landcom will continue to strengthen its engagement with local communities on climate-related matters, embedding community insight into climate risk management, resilience planning and the transition to net zero. This engagement is a critical enabler of durable, equitable and place-appropriate climate outcomes across Landcom’s portfolio. Insights from community engagement are integrated into:

- climate and community resilience assessments and adaptive design responses at project level;
- refinement of sustainability initiatives and precinct-wide infrastructure solutions; and
- communication strategies that improve climate literacy and preparedness among residents.

5.5 Policies and conditions

Policy, strategy and governance-related interventions have been identified for short, medium and long-term implementation to drive outcomes contributing to Landcom’s Strategic Ambitions (see NZTP Action Plan, P17). The expected contribution to Landcom’s strategic ambition is summarised in Table 27 below.

Table 27: Strategic Contribution of Policy, Strategy and Governance Interventions

Decarbonisation initiative type	Alignment with the Strategic Ambitions of Landcom’s NZTP
Governance, risk management & corporate-wide policy changes	Embed climate and nature considerations into core business decisions

Strategy & organisational frameworks	Create resilient, affordable and future-ready communities,
Procurement, contracting & supplier-related policy	Lead market transformation in the built environment
Finance, reporting & controls	Deliver net zero emissions across the full value chain by 2050

5.6 Financial planning

The strategic ambitions of Landcom's NZTP will continue to be resourced and planned for during annual financial planning processes across activity streams, aiming to enable value-for-money outcomes alongside decarbonisation. Landcom's climate-related transition risks are detailed in our TPG24-33 Climate-related financial disclosures, published annually in our Annual Report. Future updates to the NZTP and associated Basis of Preparation report will seek to incorporate financial planning improvements resulting from updates to our transition risk modelling, informing refinement of materiality thresholds and exploring the potential future use of point estimates where practical. Internal resourcing will continue to prioritise cost-effective, high-impact initiatives that aim to deliver on the strategic ambitions of the NZTP. Examples of how the NZTP Action Plan supports the mitigation and adaptation to identified risk types are shown in Table 28 below.

Table 28. Examples of Decarbonisation Initiatives supporting mitigation and adaptation of climate-related financial risk categories

Financial impact category	Mitigation initiative example	Adaptation initiative example
Increased capital expenditure	Develop storage, solar and EV agreements for all projects	Business case for roaming grid-scale PV hosting on suitable Landcom land to reduce grid-supplied energy
Changes in operating or maintenance costs	Explore project-specific community energy sharing arrangements to balance on-site energy supply and demand	Quantifiable financial risk and opportunity analysis of decarbonisation pathway and transition scenario impacts
Research and development expenditure	Investigate opportunities for economic uplift of communities aligned with Landcom's net zero pathway	Build capacity of Landcom customers to enable ongoing downstream management of climate risks and GHG emissions, and encourage sustainable energy and water use, and transport behaviour
Changes in the life and valuation of assets	Explore potential partnerships with the Insurance industry to enhance project-related Climate and Community Resilience Assessments and relevant climate-related data.	Maintain relationships with Insurance Council and banks to explore green finance pathways for reduced premiums and financing for our customers
Changes in revenue	Explore opportunities to enable access to Green Finance for net zero demonstration projects	Deliver Design Guidelines for all Affordable Housing projects to enable cheaper financing for affordable, low carbon homes

5.7 Next Steps

Landcom's next steps will seek to strengthen the accuracy, completeness and repeatability of our Transition Plan reporting, with particular emphasis on improving the quality of Scope 3 measurement across our value chain. This is expected to include continuing to run targeted pilots and trials (including project-level LCAs and enhanced precinct modelling), refining base year estimates, references cases and intensity metrics to support comparability over time, and progressively digitising and automating data collection processes that are currently manual and resource-intensive. In parallel, Landcom will continue to mature governance and assurance processes to support transparent, auditable reporting, and to help ensure that material year-on-year changes in emissions performance are clearly explained as our expanded emissions boundary, data confidence and measurement methodologies evolve.

Implementation is intended to remain pragmatic and project-responsive, recognising that not every decarbonisation initiative will be feasible across all projects and delivery models. Landcom will continue to prioritise initiatives based on project context, commercial feasibility, and the relative influence available under different delivery structures, while seeking to embed clear expectations through procurement, contracting, divestment requirements and ongoing engagement with developers, contractors and suppliers—particularly for high-impact materials and activities. Looking ahead, Landcom will also seek to deepen integration of carbon and nature considerations, exploring synergistic opportunities such as reducing and offsetting land clearing through avoidance, on-site retention, and on-site/off-site revegetation and regeneration pathways, to support both net zero outcomes and broader land stewardship objectives.

Appendix A: Summary of Historical Carbon Offset Retirement

Table 29. Summary of Historical Carbon Offset Retirement

	Project name	Type of offset unit	Registry	Date retired	Serial number	Vintage	Total quantity retired	Quantity used in previous reporting periods	Quantity banked for future reporting periods	Quantity used for this reporting period	Percentage of total used this reporting period
<u>CY19</u>	Bundled Wind Power Project in Rajasthan by Orange Renewable Power Private Limited	VCU	VCS	04/12/2020	7365-386890212-386892711-VCU-034-APX-IN-1-1465-01012109-30042019-0	2019	2,500	0	86	2,414	97%
<u>CY20</u>								0	1,551	1,114	93%
<u>CY21</u>								1,114	922	629	100%
<u>CY22</u>	Darling River Eco Corridor 16 (ERF101698)	ACCU	ANREU	28/05/2021	3,810,578,308 – 3,810,580,972	2020–21	2,665	1,743	416	506	100%
								2,249	0	416	52%
<u>CY23</u> ¹⁹				02/04/2023	8,354,211,234 – 8,354,212,233	2023	1,000	0	0	1,000	48%
<u>CY24</u>				30/04/2025	3,802,859,670 – 3,802-860,819	2020–21	1,150	0	21	1,129	98%
<u>FY25</u>	Kenilworth Regrowth Project	ACCU	ANREU	10/10/2025	SN 8341133746 8341133759	2022	14	0	0	14	100%
<u>CY25</u> ²⁰				27/5/2026	SN 9005185777 9005187312	2024	1,536	0	211	1,325	86%
<u>FY25 (in arrears)</u>								1,325	50	161	4%

¹⁹ Although CY23 **emissions to offset were 802 tCO₂-e**, Landcom elected to **retire and use 1,416 ACCUs** in the CY23 claim rather than bank the excess (i.e., **no carry-forward** remaining).

²⁰ Similarly, CY25 emissions were retired in arrears to offset 1,325 tCO₂-e associated with expected Corporate Operations emissions, with an additional 161 ACCUs retired in arrears to account for following changes in the CY25 emissions profile following third-party Technical Assessment and Validation on Landcom’s CY25 Climate Active certification (in line to be assessed by Climate Active at the time of publication), with the remainder to be applied to future years’ emissions.

Appendix B: Rationale for emissions boundary setting

Methodology

The GHG Protocol Scope 3 Standard requires organisations to prioritise Scope 3 categories that are relevant, meaning they are likely to be material, influenceable, important to stakeholders, or critical for achieving climate targets. Applied to Landcom, the relevancy test strongly supports inclusion of several Scope 3 categories due to Landcom's development model, value chain position, and policy context.

Categories rated as high relevance are those that materially contribute to Landcom's emissions profile and present significant transition risks or opportunities, particularly where Landcom can exert strategic influence through planning, procurement and design. Medium- and low-relevance categories are included for completeness, transparency and future capability uplift, with ongoing improvements to data maturity and confidence expected over successive reporting periods.

Although many Scope 3 emissions occur outside Landcom's direct control, Landcom has **significant indirect influence**, which increases relevancy:

- master planning and precinct design decisions,
- sustainability requirements in development agreements and design guidelines,
- procurement specifications and minimum performance standards,
- staging, density, transport integration and infrastructure sequencing.

This level of leverage meets the GHG Protocol test for relevance based on **meaningful opportunity to influence reductions**, even where operational control is absent.

Relevancy assessment

Table 30 summarises Landcom's FY25 Relevancy Assessment findings. The following rating scale has been used:

- High relevance – Material to emissions profile and/or critical to transition strategy
- Medium relevance – Potentially material or strategically important in some circumstances
- Low relevance – Some potential relevance, ability to influence and ability to accurately measure
- Not applicable – Not material or not applicable to Landcom's operating model

Table 30. Summary of FY25 Relevancy Assessment

Scope	Category	Included in FY25 inventory	Material emissions	Ability to influence	Stakeholder / policy expectation	Risk exposure	Reliance on outsourced activities	Alignment with sector guidance	Relevance	Reason for inclusion or exclusion	Data availability	Data maturity	Confidence level
1	Mobile combustion	Y	Y	Y	Y	Y	Y	Y	Y	While the relative small compared to Landcom's indirect Scope 3 emissions, Scope 1 and 2 emissions are considered highly relevant and measurable.	Measured	Established	High
2	Purchased electricity	Y	Y	Y	Y	Y	Y	Y	Y		Measured	Established	High
3	1. Purchased goods and services	Y	Y	Y	N	Y	Y	Y	Y	Emissions from construction materials, civil works and professional services represent a major component of Landcom's value-chain emissions. Landcom exerts material influence through procurement, design standards and development agreements. Category is critical to embodied carbon reduction and transition planning.	Measured	Developing	Medium
3	2. Capital goods	Y	Y	Y	Y	Y	Y	Y	Y	This is an emerging priority category for the industry and supporting Government policy. Infrastructure and built assets delivered or enabled through Landcom projects embody significant long-lived emissions. Planning, design, and specification decisions materially affect outcomes. Inclusion supports whole-of-life emissions management aligned with NSW net zero targets.	Asset Benchmark	Developing	Medium
3	3. Fuel- and energy-related activities (not in Scopes 1–2)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Scope 3 fuel-and energy-related activities are associated with fuel and energy use during design, maintenance and construction activities associated with development projects. As such, these have been captured within Landcom's Category 2 Capital Goods inventory.	See Category 2	See Category 2	See Category 2
3	4. Upstream transportation and distribution	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Transport emissions associated with delivery of construction materials and equipment are embodied within Landcom's Category 2 Capital Goods emissions inventory.	See Category 2	See Category 2	See Category 2
3	5. Waste generated in operations	Y	N	Y	N	Y	Y	Y	Y	Construction and operational waste emissions are embodied within Landcom's Category 2 Capital Goods inventory. Emissions associated with the downstream waste generated in water treatment processes by utility providers is not dominant, however aligns with NSW circular economy and waste reduction priorities. Inclusion supports targeted actions that support climate transition opportunities associated with rainwater harvesting and other non-potable on-site water reuse opportunities.	Measured	Emerging	Medium
3	6. Business travel	Y	N	Y	N	Y	N	Y	Y	Business travel emissions are small relative to development-related Scope 3 categories. Included for completeness and reporting consistency across prior year Corporate Operations emissions disclosures, however a light-touch treatment will be applied due to low materiality to Landcom's overall transition pathway.	Measured	Established	High
3	7. Employee commuting	Y	N	Y	N	Y	N	Y	Y	Employee commuting emissions are small relative to development-related Scope 3 categories. Included for completeness and reporting consistency across prior year Corporate Operations emissions disclosures, with incremental progress targetted by NZTP Action Plan initiatives due to low materiality to Landcom's overall transition pathway.	Estimated	Developing	Low–Medium
3	8. Upstream leased assets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Leased office assets are captured under Scope 2.	N/A	N/A	High

3	9. Downstream transportation and distribution	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Landcom does not distribute physical products to market post-sale. Category is not applicable to Landcom's operating model.	N/A	N/A	High
3	10. Processing of sold products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Landcom does not sell intermediate products requiring further processing. Category is not applicable.	N/A	N/A	High
3	11. Use of sold products	Y	Y	Y	Y	Y	Y	Y	Y	Operational energy and water use from dwellings and precincts delivered by Landcom represent a major source of downstream emissions. Landcom materially influences outcomes through planning controls, sustainability requirements and precinct design. Critical to managing long-term transition risk.	Estimated	Developing	Medium
3	12. End-of-life treatment of sold products	N	Y	Partial	N	Y	N	Y	Y	End-of-life emissions are highly uncertain and temporally remote. Not material to FY25 reporting or current transition decision-making, however a continued focus on Life Cycle Analysis is expected to support high-level estimations of this category in future years.	Monitoring	Emerging	Low
3	13. Downstream leased assets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Landcom does not operate any downstream leased assets (e.g. Build-to-Rent buildings) in FY25. Category 13 Downstream leasing of assets will be reviewed in future years' reporting when Build-to-Rent assets are leased within the reporting year.	Monitoring	Emerging	Medium
3	14. Franchises	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Landcom does not operate franchise arrangements.	N/A	N/A	High
3	15. Investments	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Landcom does not undertake financial investments or provide capital for return. Assets are developed and divested, with downstream emissions addressed under Category 11.	N/A	N/A	High