Australian Government

# Climate Active Carbon Neutral Public Disclosure Summary



# Lendlease Building Contractors Pty Ltd

Reporting Period: 1 July 2018 – 30 June 2019

## Declaration

To the best of my knowledge, the information provided in this Public Disclosure Summary is true and correct and meets the requirements of the Climate Active Carbon Neutral Standard.

| | |
|---|---|
| Signature | Date 4/3/2020 |
| Name of Signatory: Bill Alexandrakis | |
| Position of Signatory: General Manager, Vic, Building | |

| | |
|---|---|
| Carbon neutral certification category | Service |
| Date of most recent external verification/audit | 19 December 2019 |
| Auditor | Pangolin Associates (Christopher Wilson) |
| Auditor assurance statement link | |

Australian Government
Department of Industry, Science, Energy and Resources

# 1. Carbon neutral information

## 1A. Introduction

Lendlease is a leading international property and infrastructure group with core expertise in shaping cities and creating strong connected communities. Our vision is to create the best places; places that inspire and enrich the lives of people around the world.

Founded in Sydney in 1958 by Dutch immigrant and innovator Dick Dusseldorp, Lendlease was born out of a vision to create a company that could successfully combine the disciplines of construction, development and investment.

As one of Australia's top construction companies, we are recognised for market leading project management, design and construction services. We have delivered for clients across a range of sectors including residential, commercial, education, retail, health and defence.

At Lendlease, sustainability is at the heart of our vision to create the best places. We have a long and proud history of giving equal emphasis to environmental, social and economic outcomes. As part of our global commitment to climate action, Lendlease has committed to decarbonising our construction business. To support this goal, we have developed a four-step strategy involving the following:

1. Refreshing our site sustainability standards to focus on initiatives that directly reduce emissions;
2. Offsetting 100% of any remaining emissions from construction activity across all building sites in Australia, starting retrospectively for FY19[1];
3. Partnering with clients and industry groups to lead the uptake of low embodied carbon materials; and;
4. Supporting supplier innovation in low carbon manufacturing techniques.

Lendlease will work with its industry partners to deliver a certified carbon neutral construction service on an opt-in basis. In this first instance, we have partnered with Monash University to deliver the construction of the Woodside Building for Technology and Design as carbon neutral in accordance with the Climate Active Carbon Neutral Standard for Products and Services.

Construction of the five-story, smart-technology enabled building commenced November 2018 and is due for completion April 2020. The development is intended as a 'living laboratory' in which students and researchers will pursue the development of new sustainably energy technology. The building has been designed to maximise energy efficiency and is also targeting Passive House.

This Public Disclosure Statement (PDS) sets the base reporting period (1 July 2018 to 30 June 2019) for the Woodside Building for Technology and Design. The defined boundary includes greenhouse gas emissions associated with construction activities that occur on the project site from the time of site establishment through to practical completion, including the activities of subcontractors.

[1] Lendlease Building currently offsets Scope 1 and Scope 2 emissions from construction activities across all building sites in Australia. Carbon neutral certification against the CACNS for Products & Services requires additional Scope 3 emissions to also be included in the emissions boundary. Our opt-in carbon neutral construction service provision offsets the remaining Scope 3 emissions in line with the CACNS for Products & Services.

## Carbon Accounting Methodology

The methods used for collating data, performing calculations and preparing the inventory are in accordance with the following standards:

- Climate Active Carbon Neutral Standard for Products & Services
- National Greenhouse and Energy Reporting (Measurement) Determination 2008

Emissions factors used in the inventory are derived from the National Greenhouse Accounts (NGA) Factors in accordance with "Method 1" from the National Greenhouse and Energy Reporting (measurement) Determination 2008.

The greenhouse gases considered within the inventory are carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), perfluorocarbons (PFCs), hydrofluorocarbons (HCFCs and HFCs) and Sulphur hexafluoride ($SF_6$).

## Functional Unit

The functional unit quantifies the service delivered by the system and defines what is being assessed in the certification. The functional unit for this certification is defined as the operational emissions associated with constructing one square meter of gross floor area (GFA), with emission intensity assessed across projects on the basis of kg CO2-e / $m^2$ of GFA. This does not include embodied emissions.

## 1B. Emission sources within certification boundary

The system boundary includes the emissions associated with construction activities occurring within the project site during the construction period, which is defined to be the period between site establishment through to practical completion. The emissions considered within the certification boundary is illustrated in the Figure 1. Where emissions are considered non quantifiable or an allowable exclusion, the exclusion is clearly stated and justified.

## Process Map

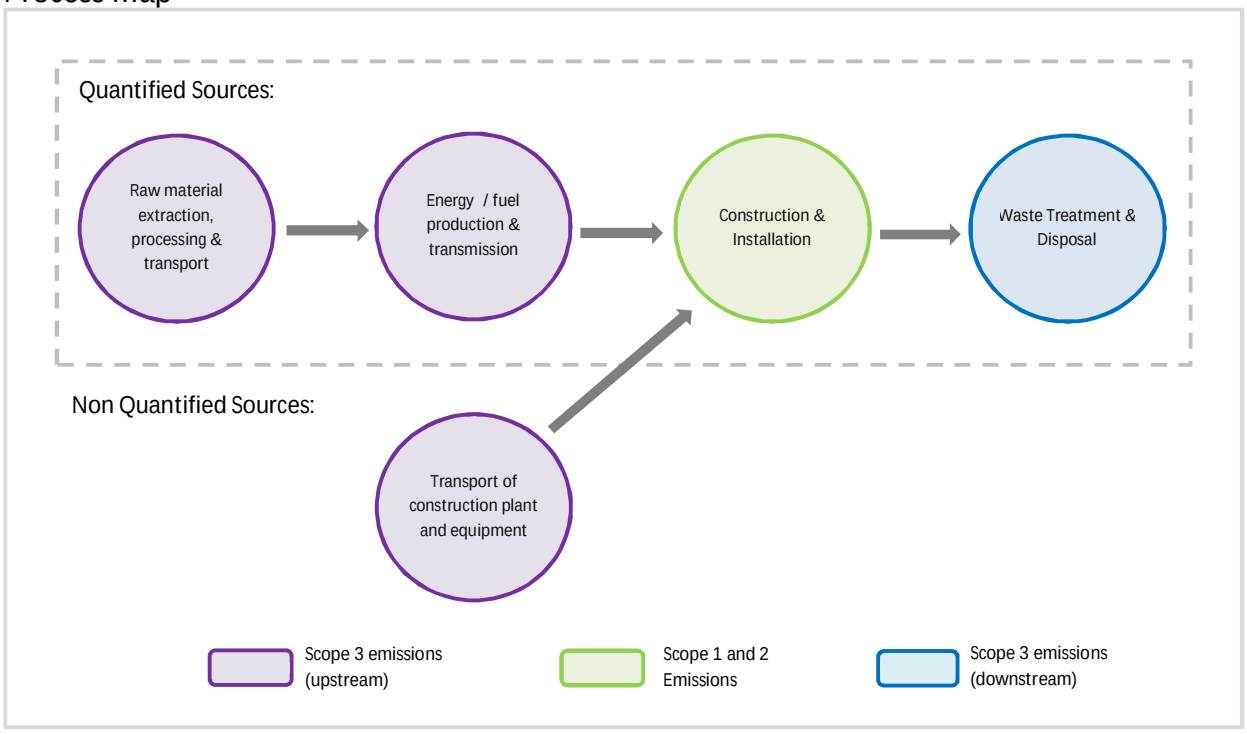



Figure 1 Construction Service Process Flow

## Attributable (Quantified) sources

The following emission sources have been assessed within the provisions of the CACNS for Products and Services:

Table 1 Quantified Emission Sources

| Scope | Emissions Source |
|---|---|
| Scope 1 | • Diesel consumption (Stationary plant and equipment)<br>• Petrol consumption (Stationary plant and equipment)<br>• Natural gas consumption |
| Scope 2 | • Grid supplied electricity |
| Scope 3 | • Electricity losses through transmission and distribution<br>• Natural gas losses through extraction and distribution<br>• Diesel emissions from extraction, production and transportation<br>• Petrol emissions from extraction, production and transportation<br>• Construction waste third party disposal and treatment |

## Excluded (Non-quantified) sources

The following emission sources have been excluded in line with the provisions of the CACNS for Products and Services. The impact of not quantifying these sources is not expected to materially affect the overall total emissions. The excluded emission sources and justification of exclusion are defined in Table 2.

Table 2 Excluded Emission Sources

| Emission Source | Justification of Exclusion |
|---|---|
| Transport of construction plant and equipment to site | A data gap exists – primary and secondary data cannot be collected or extrapolated and proxy data cannot be determined to fill the data gap. Furthermore, we estimate the emissions from transport of construction plant and equipment to the site to be minimal. |

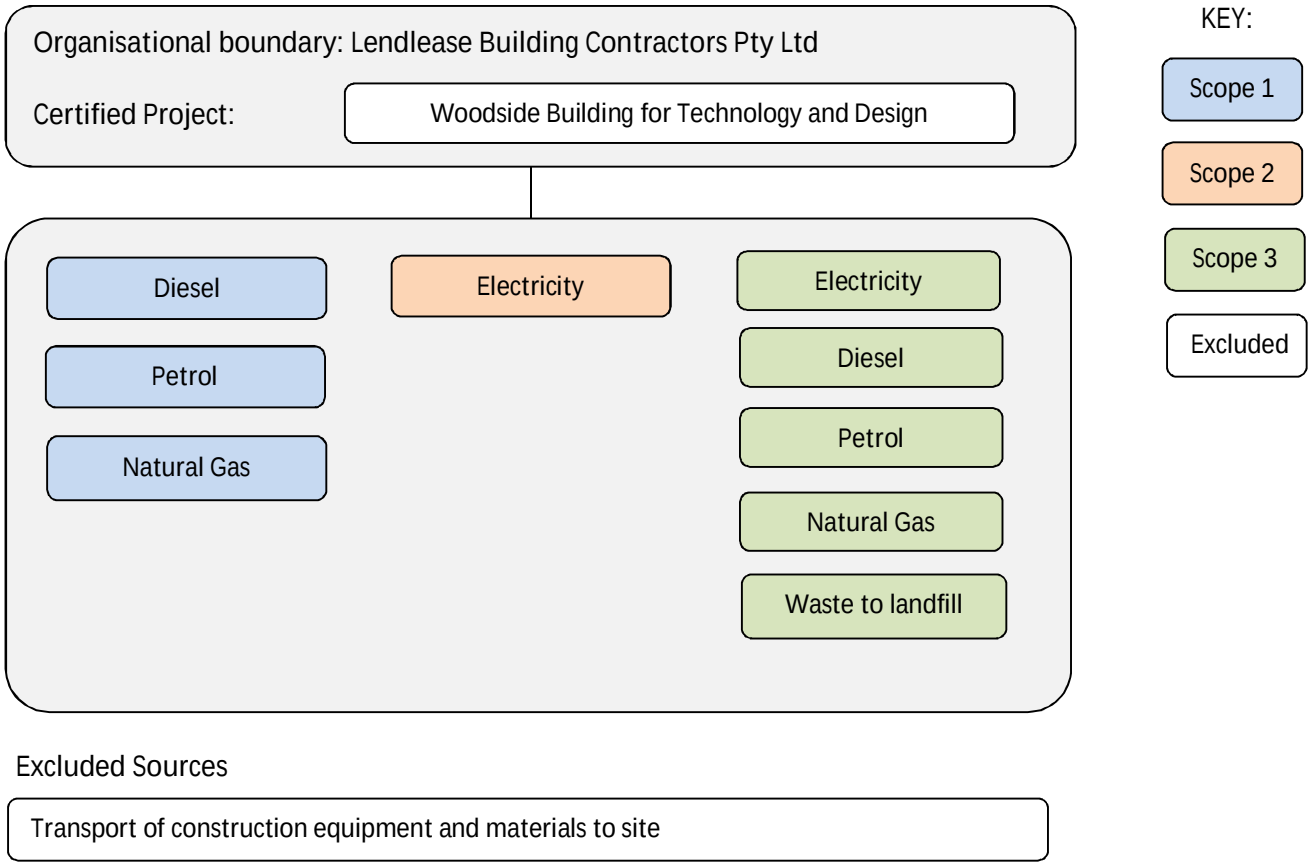
## Non Attributable sources (outside of certification boundary)

The following emission sources are considered non attributable:

Table 3 Non Attributable Emission Sources

| Emission Source | Justification |
|---|---|
| Employee and subcontractor commute to and from site | Our employees and subcontractors generate emissions when travelling to and from our project sites; the travelling process however is not directly connected to the delivery of the construction service and is therefore considered a non-attributable source of emission. |
| Embodied energy of plant and equipment | The embodied energy of plant and equipment is not directly connected to delivery of the construction service, however the fuels and energy consumed by the plant and equipment which delivers our projects is included in the certification boundary. |
| Embodied energy of building materials | Embodied energy in the materials used to construct buildings is outside the scope of certification for a construction service. It is envisaged that embodied energy of building materials may be covered in a separate certification in the future, at which point the embodied energy of the whole, completed building project will be certified under CACNS for Products. |

## 1C. Diagram of the certification boundary




Excluded Sources

Transport of construction equipment and materials to site

## 2. Emissions reduction measures

### 2A. Emissions over time

Not applicable.

### 2B. Emissions reduction strategy

Lendlease has developed a new sustainability framework for 2020 and beyond, including refreshed site sustainability standards. These standards focus on driving initiatives on our project sites that will directly reduce emissions from our construction operations, with a focus on emission reduction opportunities in three key impact areas: Energy, Water and Waste.

Our strategy at Lendlease prioritises emissions avoidance, followed by reduction and then retiring carbon offsets to offset any residual / unavoidable emissions.

### 2C. Emissions reduction actions

The construction service for the Woodside Building for Technology and Design incorporated a number of site sustainability initiatives that contribute to emission reductions including the following:

- The project site sheds included a number of passive design features to reduce heating and cooling load requirements. Awnings were provided on the north and west of the shed and tinted windows were specified to achieve a maximum solar heat gain coefficient (SHGC) of 0.75 to minimise heat gain.
- The site sheds also featured educational and awareness signage aimed at minimizing energy consumption. Examples include clear signage next to air conditioning controllers indicating the optimal set points (19°C in winter and 24°C in summer) and "Lights Out When You Leave" signage next to light switches.
- Master switching and timer control for all non-essential power and lighting provides greater control and reduces out-of-hour energy use.

## 3. Emissions summary

A summary of calculated emissions for the Woodside Building for Technology and Design development for this reporting period is provided in Table 4.

Table 4 Emissions Summary

| Emissions Summary (Absolute) | | |
|---|---|---|
| Scope | Emission source | t $CO_2$-e |
| 1 | Diesel fuel (stationary energy) | 71.74 |
| 1 | Petrol fuel (stationary energy) | 1.58 |
| 1 | Natural Gas distributed in pipeline (Metropolitan) | 0.00 |
| 2 | Purchased grid electricity (VIC) | 88.50 |
| 3 | Purchased grid electricity (Transmission and distribution losses) | 8.27 |
| 3 | Diesel fuel (stationary energy) | 3.68 |
| 3 | Petrol fuel (stationary energy) | 0.08 |
| 3 | Natural Gas distributed in pipeline (Metropolitan) | 0.00 |
| 3 | Waste to landfill (Excluding soils) | 3.13 |
| Total Gross Emissions | | 177 |
| GreenPower or retired LGCs | | 0 |
| Total Net Emissions | | 177 |

3B. Emissions per Functional Unit

The functional unit for this certification is defined as the operational emissions associated with constructing one square meter of gross floor area (GFA), with emission intensity assessed across projects on the basis of kg CO2-e / $m^2$ of GFA. This does not included embodied emissions.

Table 5 Emissions per Functional Unit

| Table 2b. Emissions Summary (Normalised) | | |
|---|---|---|
| Project | Gross Floor Area ($m^2$) | Kg $CO_2$-e / GFA |
| Woodside Building for Technology and Design | 19,000 | 9.32 |

*This baseline reporting period represents 6 months of construction only. This section will be updated in the subsequent reporting period once the project is complete to enable comparison of emissions across our building projects.

# 4. Carbon offsets

## 4A. Offsets summary

A summary of offset retirements that relate to the current reporting year is provided in Table 6.

Table 6 Summary of Offsets Retired

| Offsets Summary | | | | | | |
|---|---|---|---|---|---|---|
| Projects supported by offset purchase | Eligible offset units | Registry | Cancellation date | Serial numbers (including hyperlink to registry transaction record) | Vintage | Quantity |
| Akbuk Wind Farm Project, Turkey (GS436) | GS VER | Gold Standard Registry | 19/12/2019 | GS1-1-TR-GS436-12-2015-7440-6573-6749 | 2015 | 177 |
| Total offsets cancelled | | | | | | 177 |

Table 7 Offsets Banked for Future Use

| Offsets Banked | | | | | | |
|---|---|---|---|---|---|---|
| Projects supported by offset purchase | Eligible offset units | Registry | Cancellation date | Serial numbers (including hyperlink to registry transaction record) | Vintage | Quantity |
| Akbuk Wind Farm Project, Turkey (GS436) | GS VER | Gold Standard Registry | 19/12/2019 | GS1-1-TR-GS436-12-2015-7440-6750-6882 | 2015 | 133 |
| Ceramic Water Purifier, Cambodia | GS VER | Gold Standard Registry | 19/12/2019 | GS1-1-KH-GS1020-16-2013-3699-61-100 | 2013 | 40 |
| Tongliao Biomass Power Plant, China | GS VER | Gold Standard Registry | 19/12/2019 | GS1-1-CN-GS2502-9-2017-6569-38717-39016 | 2017 | 300 |
| Total offsets banked for use future years | | | | | | 473 |

## 4B. Offsets purchasing and retirement strategy

Lendlease has purchased and retired offsets in arrears for the base reporting period 1 July 2018 – 30 June 2019.

## 4C. Offset projects (Co-benefits)

N/A

## 5. Use of trade mark

Lendlease Building Contractors has not yet used the CACNS Trademark.