Australian Government

Climate Active Program

Public Disclosure Statement

NAME OF CERTIFIED ENTITY: Frasers Property AHL Ltd

REPORTING PERIOD: 1 July 2018 – 30 June 2019

Declaration

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

Signature: DocuSigned by: Mark Gleeson 295A4CE93230445...	**Date:** 01 - May - 2020
Name of Signatory: Mark Gleeson	
Position of Signatory: Executive General Manager	

Australian Government

Department of the Environment and Energy

1. Carbon neutral information

1A. Introduction

Frasers Property AHL Limited is one of Australia's leading diversified property groups and is the Australian division of Frasers Property Limited. The company has over 90 years' heritage in Australia with activities covering the development of residential land, housing and apartments, commercial, retail and industrial properties, investment property ownership and management, and property management. Its well-established hospitality business owns and operates serviced apartments and hotels in over 70 cities across Asia, Australia, Europe, Middle East and Africa.

Frasers Property Australia published 'A Different Way', a strategy for sustainable business growth in 2016 and commits to implementing the ambition through a range of initiatives, which include aligning with science-based targets for our whole business to be net zero carbon by 2028.

Frasers Property Australia intends to certify 10 house archetypes in Frasers Property's Minnippi Quarter community in Carina, Queensland as Carbon Neutral Homes product under the Climate Active program. The house archetypes range from 2 to 4 bedrooms, as well as 2 to 3 stories. All houses are intended to be a home for an individual or family where potential buyers may opt-in to include the offset program. Hereafter, townhouses included in the offset program is referred to as Carbon Neutral Homes.

This Public Disclosure Summary (PDS) summarizes the carbon footprint of Minnippi Quarter Carbon Neutral Homes. The methods applied, data inventory quality, assumptions, and results are presented in the following sections.

Unit of Analysis

The functional unit was set to m^2 gross floor area (GFA) of Carbon Neutral Homes, defined as consisting of building materials and fittings, as per the final design of each townhouse type. The functional unit includes the embodied greenhouse gas emissions only for each townhouse within the Minnippi Quarter development.

In essence, this analysis has been conducted on the greenhouse gas emissions associated with the materials used to build and fit-out a Carbon Neutral Home, the transport of these materials to the construction site, and the construction of a home using these materials. This analysis does not include the operation and end-of-life of the homes after construction. Nor does it include site preparation, landscaping, driveways, fencing, or infrastructure associated with the broader Minnippi Quarter Development, such as roads, sewers and water lines.

A diagram showing inclusions and exclusions is given in section 1C.

Type of inventory

The life cycle assessment (LCA) which was undertaken to quantify the greenhouse gas emissions uses a cradle-to-site and including construction approach. This approach is equivalent to stages A1-A5 as defined by EN 15978:2011 (refer Figure 1) and includes raw materials supply, transport and manufacturing in the product stage (A1-3), as well as transport and the construction-installation process in the construction process stage (A4-5). The use stage (B1-5) and end-of-life stage (C1-3) emissions are excluded from the assessment to minimize uncertainties and avoid inaccuracies. Reuse, recovery and recycling-potential (D) have also not been considered in this study. Frasers Property Australia will clearly communicate this approach.

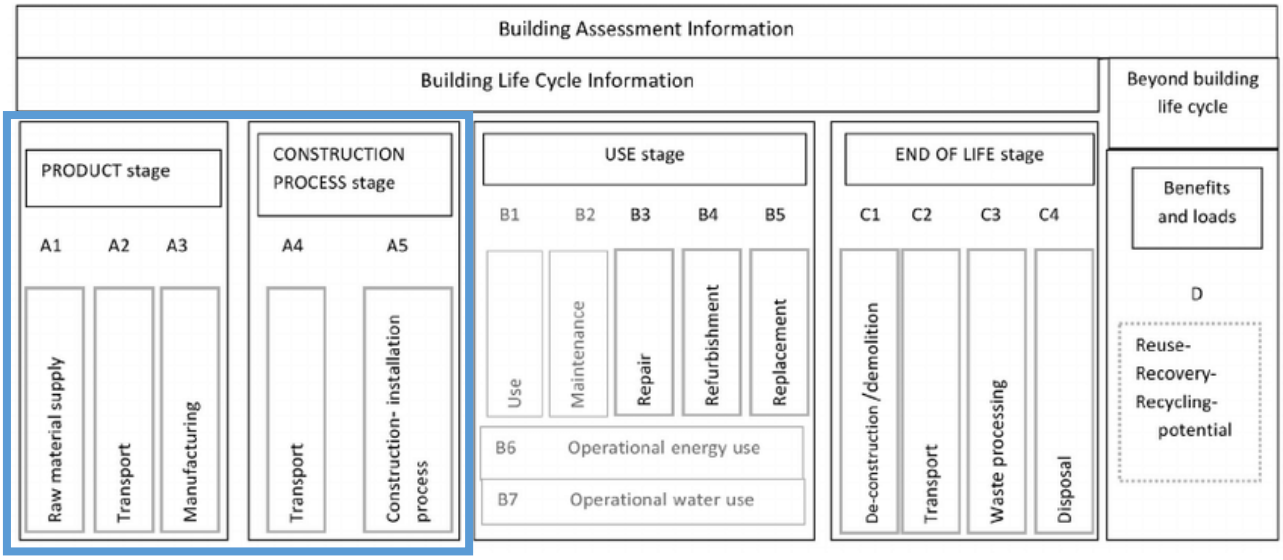


Figure 1: LCA stages. A1-5 have been considered in this assessment.

Standards & Methodology

This inventory has been prepared based on the *Climate Active Carbon Neutral Standard (CACNS) for Products and Services* and the *Greenhouse Gas Protocol: Product Life Cycle Accounting and reporting Standard*.

The Greenhouse Gas (GHG) account covers the six GHGs covered by the Kyoto Protocol: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF_6). All emissions are reported in tonnes of carbon dioxide equivalent (tCO_2-e).

The LCA which was undertaken to quantify emissions was conducted in accordance with all relevant aspects of ISO 14040:2006, ISO 14044:2006+A1:2018 and EN 15978:2011. Through compliance with these standards, the LCA is also considered to have de facto complied with the GHG Protocol.

1B. Emission sources within certification boundary

Product definition and functional unit

The certified product is Carbon Neutral Homes within the Minnippi Quarter development. There are 10 townhouse archetypes in the Minnippi Quarter development, varying from 2 to 4 bedrooms and 2 to 3 stories. Each townhouse archetype contains a garage, kitchen, living room, and dining room and is equipped with interior finishes and kitchenware. The townhouse archetypes vary in the gross floor area (GFA), ranging from 119 m^2 to 234 m^2 (Table 1).

Frasers Property Australia estimates the take-up of the Carbon Neutral Homes product to be 5% of total sales, or 9 Carbon Neutral homes across the entire 22-month sales period. This is based on research regarding leading consumer carbon offset schemes in Australia, such as within the aviation industry. Both major airlines in Australia, Qantas and Virgin, have promoted their products as being purchased by approximately 10% of their customers. To account for factors including the Carbon Neutral Homes project being the first of its kind in the Australian residential property industry and the higher investment cost of this product compared to flight offsets, we have estimated approximately 5% of Minnippi Quarter clients purchasing opting in to this offset program. For the purpose of this assessment, it has been assumed that the sale of carbon neutral homes will be evenly distributed between the archetypes.

There were no sales of Carbon Neutral Homes in the base year of FY18-19.

Sales are predicted to take place for 4 months from March to June of the first certification year, FY19-20. Based on projected sales of 8 townhouses per month, of which 5% would be carbon neutral, it is assumed that in the 4 months of sales in FY19-20, 1.6 Carbon Neutral Homes will be sold.

Based on this, the gross floor area (GFA) of Carbon Neutral Homes projected to be sold in FY19-20 and thus forward offset is 296.5m^2.

Table 1. Carbon Neutral Homes Sales Projections			
Archetype	Gross floor area (GFA) of a single townhouse (m^2)	Projected Carbon Neutral Homes sales in FY19-20	Projected Carbon Neutral Homes GFA sales in FY19-20 (m^2)
A	196	0.16	31.4
B	190	0.16	30.4
C	190	0.16	30.4
D	154	0.16	24.6
E	191	0.16	30.6
F	119	0.16	19.0
G	182	0.16	29.1
H	193	0.16	30.9
I	234	0.16	37.4
J	204	0.16	32.6
Total		**1.6**	**296.5**

Following the FY19-20 reporting period, Frasers Property Australia will perform a reconciliation and true-up forecast Carbon Neutral Home sales against actual sales by house archetype. Given that each archetype is composed of different quantities of each material, the emissions per m^2 gross floor area (GFA) of Carbon Neutral Homes differs by archetype. Therefore, the total emissions per m^2 GFA of Carbon Neutral Homes is anticipated to differ from year-to-year based on the relative quantities of each archetype sold.

Following the true-up, Frasers Property Australia will make the necessary adjustments to offsetting volumes. If Frasers Property Australia has underestimated Carbon Neutral Home sales volumes, Frasers Property Australia will retire additional carbon offsets, and if the Carbon Neutral Home sales volumes have been overestimated, surplus offsets will be banked for use in future years.

The summary of product definition is as follows:

Table 2. Product definition	
Product name	Minnippi Quarter Carbon Neutral Homes
Functional unit	m^2 gross floor area (GFA) of Carbon Neutral Homes, defined as consisting of building materials and fittings, as per the final design of each townhouse type. The functional unit includes the embodied energy only for each townhouse within the Minnippi Quarter development

Attributable processes and emission sources

A summary of emission sources from the emission scope perspectives are presented in Table 3. Frasers Property Australia includes all direct (Scope 1) and indirect (Scope 2) emission sources in the product emission boundary. It also includes emission sources from the materials and transportation of materials (Scope 3).

Table 3. Emission sources by scope	
Scope	Emission source
1	Fuel use in construction - combustion
2	Electricity use in construction
3	Concrete – foundations Concrete – formwork Foundation reinforcement steel Roofing steel General steel Structural steel Structural timber Processed timber – building Processed timber - fitout Cladding / finishes Walls Insulation Doors / glazing External paints Plastic Paint Kitchen fitout Bathroom fitout Appliances Electricals Transportation of materials to construction site Employee commuting Reticulated water usage (supply and treatment) Fuel use in construction - well-to-tank emissions Electricity use in construction - transmission and distribution losses

Processes included in the product emission boundary by life cycle stage are summarized in Table 4. The emissions accounted for relating to each material include raw materials acquisition, pre-processing, and production process prior to transportation to the construction site.

Table 4. Emission sources by life cycle stage	
Life cycle stage	Emission source
Material acquisition & pre-processing	Concrete – foundations Concrete – formwork Foundation reinforcement steel Roofing steel General steel Structural steel Structural timber Processed timber – building Processed timber - fitout Cladding / finishes Walls Insulation Doors / glazing External paints Plastic Paint Kitchen fitout Bathroom fitout Appliances Electricals Fuel use in construction – well-to-tank emissions Reticulated water use (supply and treatment)
Upstream distribution	Transportation of materials to construction site Fuel use in construction – well-to-tank emissions Reticulated water use (supply and treatment) Electricity use in construction - transmission and distribution losses
Production (i.e. construction)	Fuel use in construction - combustion Electricity consumption in construction Construction employee commuting Reticulated water use (supply and treatment)

Excluded processes and emission sources

The emission sources on Table 5 have been not been quantified as they meet all exclusion conditions as set out in the Climate Active Carbon Neutral Standard for Products & Services.

Table 5. Summary of excluded emission sources			
Emission source	Scope	Life cycle stage	Justification for exclusion
Small fitout materials – towel rings and rails, toilet roll holder, shower shelf, floor waste, townhouse numbering, washing machine and dishwasher points, power points and data/telephone outlets and coax for television, LED strip lighting, NBN conduit and terminations and mechanical vents to external walls.	3	Material acquisition & pre-processing	Assessed as immaterial with an emission factor data gap in line with s2.3.1 of CACNS for Products & Services. These emission sources have been estimated to be immaterial based on the small quantities of materials used per home. Moreover, accurate emission factors were unable to be found or estimated for these emission sources.
Machinery impacts (production, maintenance, transport and disposal)	3	Material acquisition & pre-processing	Assessed as immaterial with an activity data gap in line with s2.3.1 of CACNS for Products & Services. Information on machinery impacts was unknown at the time of the study, meaning highly uncertain data would have been used. It was considered that the transport impacts of plant and machinery would be negligible by comparison to the remaining calculated impacts.

Non-Attributable processes and emission sources (outside certification boundary)

The life cycle stages in Table 6 and the corresponding emission sources are considered non-attributable.

Table 6. Summary of non-attributable processes		
Scope	Life cycle stage	Justification for exclusion
Outside of certification boundary		
3	Use	Operational emissions of Carbon Neutral Homes are not attributable to this cradle-to-gate certification. Frasers Property Australia does not have control to influence the operational emissions of Carbon Neutral Homes and there is high uncertainty due to the length of the product's lifetime
3	Transportation and storage of product	Not applicable to Carbon Neutral Homes.
3	End-of-life	The potential emissions from the end-of-life of the Carbon Neutral Homes are not attributable to this cradle-to-gate certification. Moreover, these emissions are difficult to calculate due to the length of product lifetime and lack of information about potential future disposal or building reuse options.
Non-attributable		
3	Land use change	Assessed as non-attributable in line with the relevance test as defined in the Climate Active Guidance Document on Emission Sources for Product and Service Certifications.
3	Site infrastructure	The development's utilities and site infrastructure (e.g. roads, sewer and water lines, drainage, etc) are beyond the scope of the individual townhouse footprint and the functional unit, which considers only the materials and fittings of the Carbon Neutral Homes themselves.
3	Landscaping	Landscaping is beyond the scope of the townhouse footprints and the functional unit, which considers only the materials and fittings of the Carbon Neutral Homes themselves.
3	Fences, driveways, pavement	External fences, driveways and pavements are beyond the scope of the townhouse footprints and the functional unit, which considers only the materials and fittings of the Carbon Neutral Homes themselves.

1C. Diagram of the certification boundary (process map)

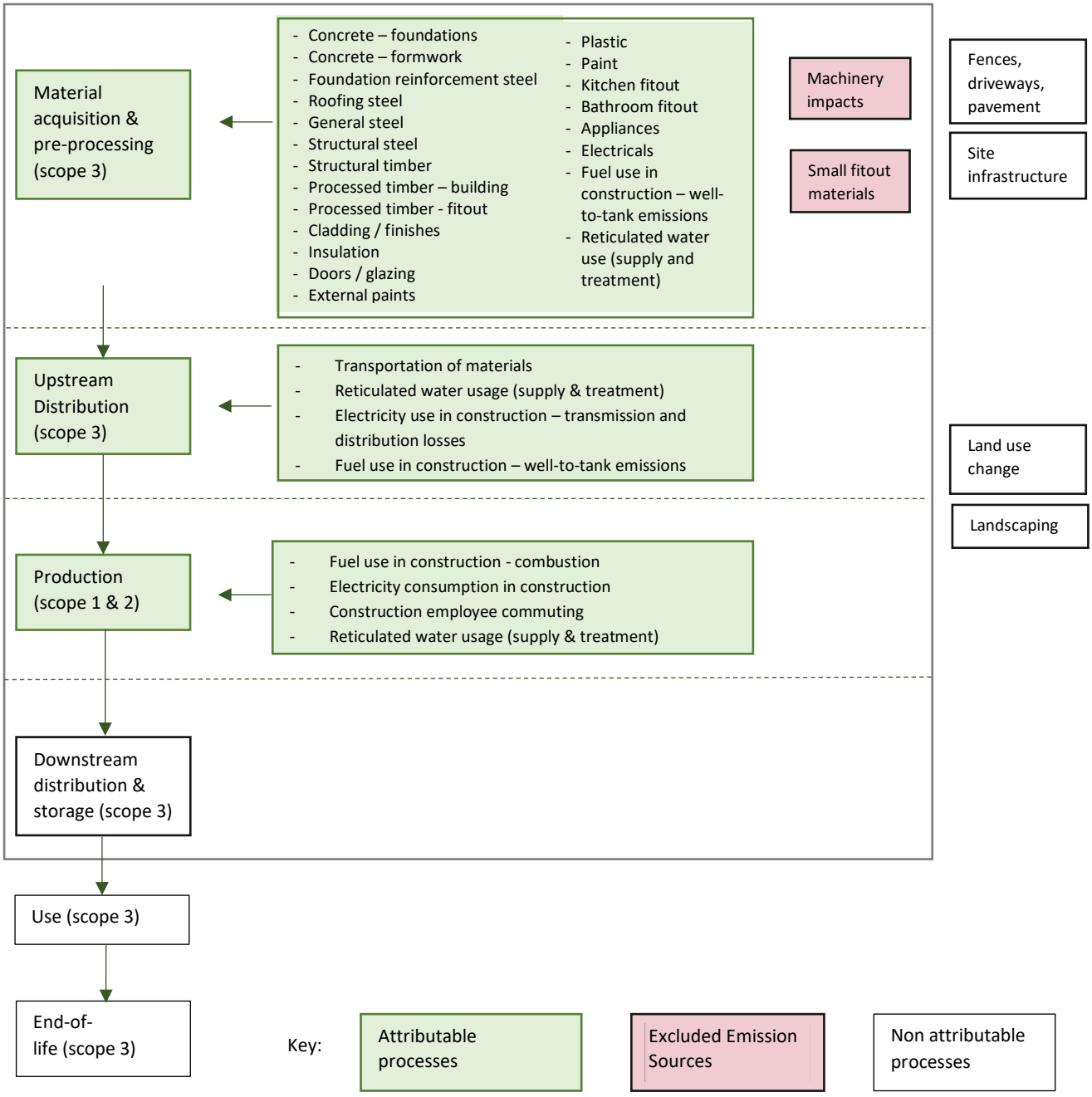


Figure 2: Process map of Carbon Neutral Homes

2. Emissions reduction strategy

In an effort to reduce emissions from the homes, some lower carbon materials such as fibre cement panels were used as cladding in place of higher carbon materials such as bricks. It is acknowledged that, while the emissions from fibre cement panels are approximately 68% lower per m^2 cladding than standard bricks, bricks offer additional functions such as structural support and insulation and other materials have been used to fulfil these functions in the Minnippi Quarter homes.

It is considered that this LCA and carbon inventory for Minnippi Quarter is the first step in developing an emissions reduction strategy for future Frasers Property Australia projects. The LCA undertaken and greenhouse gas inventory produced will be used as a tool to inform future designs.

Having this 'baseline' analysis will allow Frasers Property Australia to make choices during the design stage for future projects and select which have lower embodied carbon. The quantum of emissions able to be reduced in future developments will depend on the nature and scale of these projects, which is not currently known.

For future developments seeking Climate Active Carbon Neutral Product certification, the emission reduction actions will be documented and the emissions reductions estimated so that the effectiveness of the emissions reduction strategy can be monitored over time.

2. Emissions summary

Table 7. Emissions Summary per functional unit			
Scope	Emission source	$kgCO_2e$	tCO_2e^+
1 & 3	Fuel use in construction (both combustion and well-to-tank emissions)	0.00*	0.00*
2 & 3	Electricity consumption in construction (including transmission and distribution losses)	0.00*	0.00*
3	Foundation - concrete	55.98	0.06
3	Foundation - steel	1.11	0.00
3	Structural timber	1.84	0.00
3	Processed timber - building	5.61	0.01
3	Structural steel	1.58	0.00
3	Walls	17.40	0.02
3	Cladding / finishes	22.64	0.02
3	Insulation	2.83	0.00
3	Doors / glazing	53.88	0.05
3	External paints	11.40	0.01
3	Roofing steel	29.20	0.03
3	General steel	57.45	0.06
3	Concrete formwork	1.20	0.00
3	Plastic	0.07	0.00
3	Processed timber - fitout	1.76	0.00
3	Paint	0.05	0.00
3	Kitchen fitout	3.93	0.00
3	Bathroom fitout	8.03	0.01
3	Appliances	33.40	0.03
3	Electricals	2.35	0.00
3	Materials transport - local	0.54	0.00
3	Materials transport - metro	2.84	0.00
3	Materials transport - state	0.01	0.00
3	Materials transport - SE Asia	0.47	0.00
3	Construction employee commuting	22.05	0.02
3	Water usage in construction	0.00*	0.00*
	5% uplift applied as factor of safety to ensure conservative calculations	16.88	0.02
Total Gross Emissions per functional unit			0.35
GreenPower or retired LGCs			nil
Total net emissions per functional unit			0.35
Number of functional units sold in the FY18-19 base year as carbon neutral			nil
Total net emissions for base year (FY18-19)			nil

+Some emission sources with 0.00 tCO_2e appear to contribute no greenhouse gas emissions where there is, in fact, a small amount of emissions which have been lost due to rounding.

*Greenhouse gas emissions associated with stationary fuel use (both combustion and well-to-tank emissions), electricity consumption (including transmission and distribution losses) and water use from construction sites are included within the boundary of Frasers Property Australia's Climate Active Organisation Certification. To avoid double-counting, these emissions have been counted as zero in this emissions inventory. The greenhouse gas emissions calculated and excluded from the boundary are documented in Table 8.

Table 8. Emissions per functional unit counted as zero to avoid double-counting

Scope	Emission source	$kgCO_2e$	tCO_2e
1 & 3	Fuel use in construction (both combustion and well-to-tank emissions)	0.80	0.00
2 & 3	Electricity consumption in construction (including transmission & distribution losses)	4.13	0.00
3	Water use in construction	0.01	0.00
Total emissions counted as zero to avoid double-counting		4.94	0.00

Carbon offsets

Offset purchasing strategy: forward purchasing

Table 9. Forward purchasing summary	
1. Total offsets previously forward purchased for this reporting period	0 tCO_2e
2. Total offsets required for this reporting period	0 tCO_2e
3. Net offset balance for this reporting period	0 tCO_2e
4. Total offsets to be forward purchased for next reporting period	106 tCO_2e

Forward offsetting calculations been based on the projections described in Section 1B, which predict the sales of 296.5 m^2 of Carbon Neutral Homes sold in the Minnippi Quarter development in FY19-20.

4A. Offsets summary

Table 10. Offsets Summary									
					1. Total offsets required for this report	106			
					2. Offsets retired in previous reports and used in this report	0			
					3. Net offsets required for this report	106			
Project description	Eligible offset unit type	Registry unit retired in	Date retired	Serial numbers (including hyperlink to registry transaction record)	Vintage	Quantity (tonnes CO_2e)	Quantity used for previous report	Quantity to be banked for future years	Offsets to be used for this report
Boobera Human-Induced Regeneration Australia	ACCU	ANREU	26 March 2020	3,792,960,354 - 3,792,960,687 *	2019	334	0	281	53
Kariba Forest Protection Zimbabwe	VCU	VCS	25 March 2020	7990-445820105-445820438-VCU-016-APX-ZW-14-902-01012017-31122017-1	2017	334	0	281	53
					Total offsets retired this report and used in this report:				106
					Total offsets retired this report and banked for future reports:			562	

* A hyperlink to the ANREU registry transaction record is unable to be provided. Evidence of the offset retirement has been provided to Climate Active.

Base year offset: Yes ☐ No ☒

Offsets forward purchased for next reporting period: Yes ☒ No ☐

4B. Offset projects (Co-benefits)

Frasers Property Australia purchased 50% of offsets from South Pole for the Boobera Human-Induced Regeneration project in Australia and 50% of offsets from South Pole for the Kariba Forest Protection project in Zimbabwe.

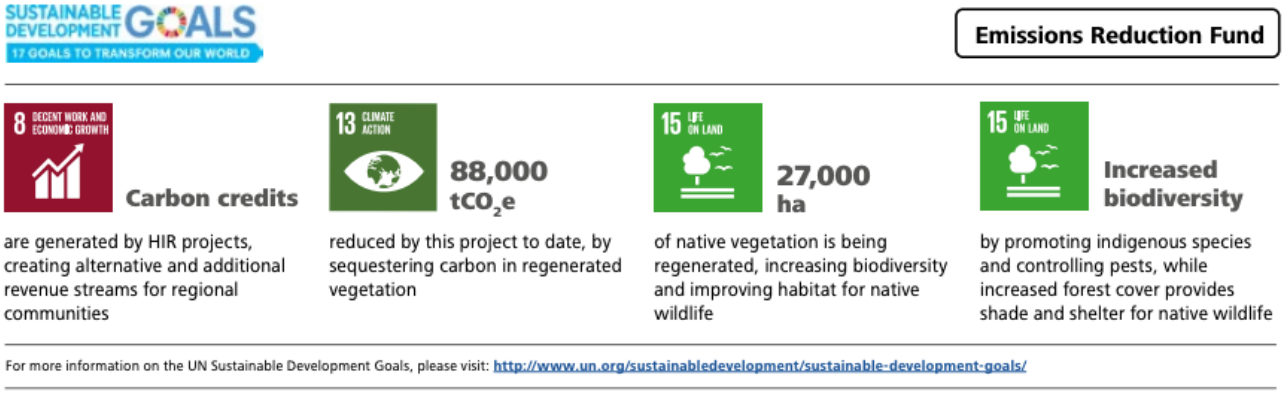
Boobera Human-Induced Regeneration Project

By excluding stock and managing pests across an area of 27,000 hectares, the Boobera Human Induced Regeneration project south of Humeburn in Queensland is restoring native vegetation cover. As trees and shrubs grow, they improve habitat for native species and restore local ecosystem services. They also sequester carbon, creating an alternative revenue stream for rural landholders in the form of Australian Carbon Credit Units (ACCUs).

Boobera is a Human-Induced Regeneration (HIR) project, a class of projects which restore land where native forest growth has been suppressed for ten years or more, usually by grazing or feral animals. Project activities include excluding livestock and managing feral animals and non-native plants. By allowing native vegetation to grow and recover, HIR projects sequester carbon and generate Australian Carbon Credit Units (ACCUs) – creating alternative revenue streams that allow graziers to supplement lost agricultural productivity. Once at forest cover, livestock may be reintroduced into the project area in a managed way that does not impact on accumulated carbon

As well as storing carbon in regenerated native tree cover and providing alternative revenue streams for landholders, the HIR method creates a range of local environmental benefits. Excluding stock from the project area and controlling pest flora and fauna allows native species to proliferate as habitat regenerates, while the quality of land and water supply may also be improved as local ecosystem services are restored. As the project approaches tree cover, greater shade benefits not only local wildlife, but also livestock that can be reintroduced into forested areas.

Below is the contribution towards the United Nations Sustainable Development Goals made by the Boobera HIR Project:



View the factsheet for the Boobera Human-Induced Regeneration Project here:
https://a.southpole.com/public/media/302610/2610.pdf

Kariba Forest Protection Project

Since its launch in 2011, the Kariba project has protected nearly 785,000 hectares from deforestation and land degradation, preventing more than 18 million tonnes of carbon dioxide emissions being released into the atmosphere. The project continues to support regional sustainable development and the independence and wellbeing of local communities.

The Kariba Project protects almost 785,000 hectares of forests and wildlife on the southern shores of Lake Kariba, near the Zimbabwe-Zambia border. One of the largest registered REDD+ projects by area, it sits between the Chizarira, Matusadona and Mana Pools National Parks (also a World Heritage Site), and Zambia's Lower Zambezi National Park. The project connects these four national parks and eight safari reserves, forming a giant biodiversity corridor that protects an expansive forest and numerous vulnerable and endangered species – including the African elephant, lion, hippo, lappet-faced vulture and southern ground hornbill.

Kariba is a community-based project, administered by the four local Rural District Councils (RDCs) of Binga, Nyaminyami, Hurungwe and Mbire. As such, the project supports a range of activities beyond environmental protection, promoting the independence and wellbeing of these communities. Improved clinic amenities provide better healthcare, infrastructure including new roads and boreholes improve daily life, and school subsidies are offered to the poorest quartile of the population. Project activities in conservation agriculture, community gardens, beekeeping training, fire management, and ecotourism create jobs and facilitate sustainable incomes, benefiting the entire region.

Below is the contribution towards the United Nations Sustainable Development Goals made by the Kariba Forest Protection Project:

View the factsheet for the Kariba Forest Protection Project here:
https://a.southpole.com/public/media/300990/0990.pdf

5. Use of trade mark

Table 11. Trade mark register	
Where used	Logo type
Carbon Neutral Homes Program Brochure	Certified product
Q&A Sheet	Certified product
Marketing video	Certified product

6. Have you done more?

***A Different way*: Frasers Property Australia's commitment to sustainability**

We care deeply about our people, customers, communities and the planet, as well as our own business. It's why, in early 2016, we launched our new sustainability strategy: *A Different Way*. It is also why we updated our goals in 2018, and will be again in 2020, to be more ambitious.

This strategy is supporting us as we work to deliver better outcomes and achieve our goal of making a real difference when it comes to sustainability. It identifies the issues that affect us - both now and in the future - and outlines the steps we need to take to get great results. We've included some ambitious targets and commitments so we can do our very best.

Sustainability isn't just about the environment. It's about creating communities and places that help real people live, play, shop and work in better ways. It's about being a resilient and responsible business, creating more diverse opportunities for our employees and customers, efficient spaces that allow businesses to thrive, and shopping centres that genuinely serve the needs of local communities - as well as the planet. We want to be smarter and more efficient in the way we use the planet's finite resources, and ultimately, regenerate what we use. It is we why have set the target to 'Make clean energy accessible for all' by 2030.

As a residential community developer, Frasers Property Australia has achieved a minimum of 4 Star Green Star Communities or Design & As Built for all new residential developments after 2018. We envision all development projects to have an integrated water solution, addressing water reuse, quality, and reduced intensity by the end of 2020.

For more information about *A Different Way*, visit https://www.frasersproperty.com.au/a-different-way