



PUBLIC DISCLOSURE STATEMENT

HANSON AUSTRALIA PTY LTD

PRODUCT CERTIFICATION

CY2022

Australian Government

Climate Active Public Disclosure Statement



NAME OF CERTIFIED ENTITY	Hanson Australia Pty Ltd and its related companies Hanson Construction Materials Pty Ltd, Hymix Australia Pty Ltd, Alex Fraser Asphalt Pty Ltd, Recycling Industries Pty Ltd, Queensland Recycling Pty Ltd and Pioneer North Queensland Pty Ltd						
REPORTING PERIOD	1 January 2022 – 31 December 2022 Arrears report and projected for 2023						
DECLARATION	<p><i>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.</i></p>  <table><tr><td>Name of signatory</td><td>Phil Schacht</td></tr><tr><td>Position of signatory</td><td>Chief Executive</td></tr><tr><td>Date</td><td>21 April 2023</td></tr></table>	Name of signatory	Phil Schacht	Position of signatory	Chief Executive	Date	21 April 2023
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Date	21 April 2023						



Australian Government
Department of Climate Change, Energy,
the Environment and Water

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Version March 2023.



1.CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	6,531 tCO ₂ -e
THE OFFSETS USED	100% VCU's
RENEWABLE ELECTRICITY	N/A
CARBON ACCOUNT	Prepared by: Hanson
TECHNICAL ASSESSMENT	22/12/2021 Emily Townsend thinkstep-anz Next technical assessment due: December 2024 (unless scope changes)
THIRD PARTY VALIDATION	Not required – EPD Pathway used

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2. CARBON NEUTRAL INFORMATION

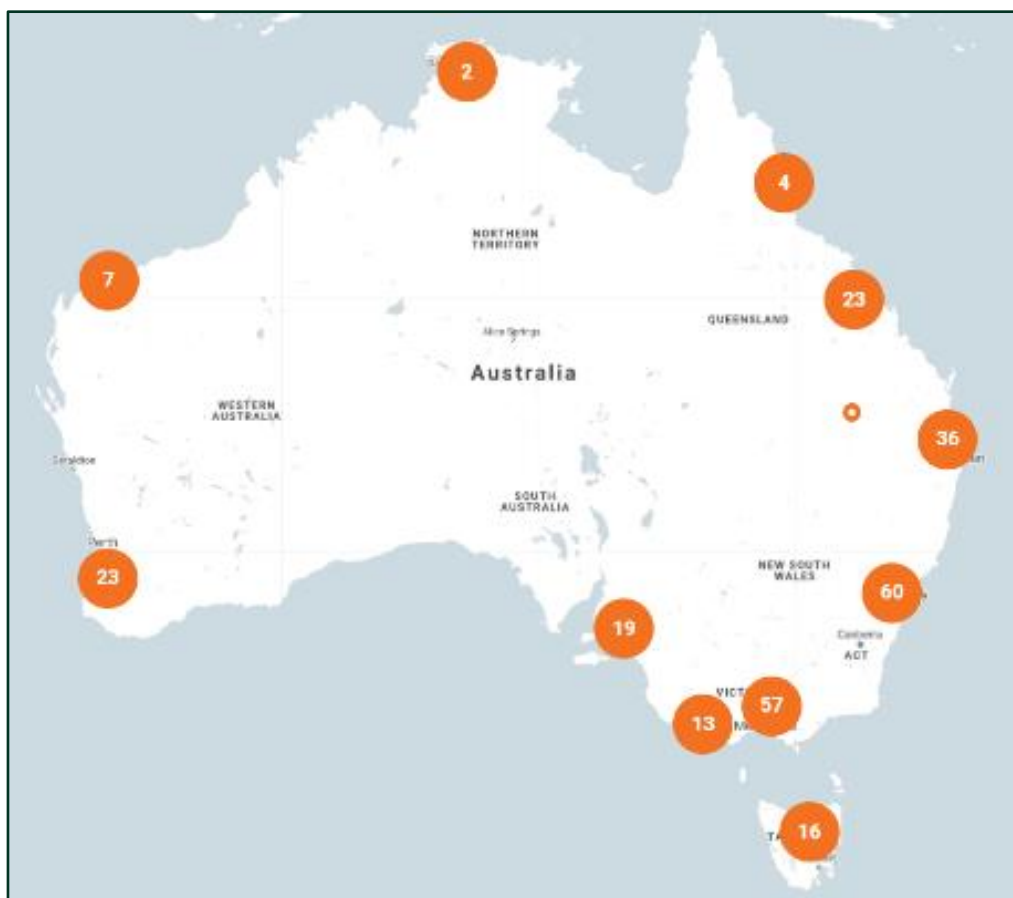
Description of certification

This certification covers ready mixed concrete (RMC) products produced and sold by Hanson in Australia. Climate Active certification is an option we provide to our customers to support the development of carbon neutral projects as part of our CO₂ reduction journey.

Hanson Australia Pty Ltd, together with its related companies Hanson Construction Materials Pty Ltd, Hymix Australia Pty Ltd, Alex Fraser Asphalt Pty Ltd, Recycling Industries Pty Ltd, Queensland Recycling Pty Ltd and Pioneer North Queensland Pty Ltd (collectively referred to as Hanson), are leaders in the Australian construction materials industry. We service local communities with aggregates, concrete, asphalt and recycled construction and demolition waste through our network of sites around the country.

Hanson is part of the global Heidelberg Materials (HM) group, one of the world's largest integrated manufacturers of building materials and solutions, with leading market positions in aggregates, cement and ready-mixed concrete, and with 51,000 employees at nearly 3,000 locations in over 50 countries. At the centre of actions lies the responsibility for the environment. As a front runner on the path to carbon-neutrality, Heidelberg Materials develops material solutions for the future. The strength of its global network and diverse team is leveraged to address the challenges of climate change across all business lines. Across the group, there is significant investment in product research and development, particularly in reducing CO₂ in cement and concrete, and operational investment, such as numerous carbon capture projects at [various stages of implementation](#). Heidelberg Materials is committed to the UN Sustainable Development Goals and is working to improve sustainability outcomes for our people and the planet.

“Climate Active Certification is an practical step for us to support our customers to achieve strong sustainability performance.”



Product description

The functional unit for this certification is defined as 1 cubic meter(M³) of ready-mix concrete/t CO₂-e.

The certification is being managed through the EPD (environmental product declaration) pathway. Hanson holds process certification to produce bespoke cradle to grave EPDs for customer projects.

With Hanson's range of low carbon RMC mixes, our project EPDs and Climate Active certification, we are supporting customers to achieve more sustainable outcomes throughout the construction process and across the product lifecycle on an opt-in basis.

Hanson operates an integrated network of operations in all Australian states and territories. Through our Customer Service Centre based in Brisbane, deliveries in all metropolitan areas are optimized through a computerized algorithm. Over 20 years, this has allowed us to maximise the benefit of our network for customer service and efficiency. Subject to the product application, supplementary cementitious materials (SCMs) are employed to reduce CO₂ in cement. SCMs primarily include fly ash from coal fired power stations and slag from steel production. These materials are used to replace cement, significantly reducing the embodied carbon of the RMC product.

Hanson has a long history of employing SCMs in RMC products. While it is standard to use SCMs in most applications, the extent to which it occurs is influenced by technical and practical factors. For this reason, Hanson works with customers to design and select mixes based on their requirements, assisting them in

choosing low carbon concrete options where possible. Most of the concrete operations around Australia have the capacity to incorporate SCMs to meet customer demands.

Under the Climate Active certification, customers will have the option to opt-in to carbon neutral products. EPDs will be employed to calculate the CO₂ and annually this report will be updated to reflect the mix range covered. Given the significant variation in concrete mix design, it is impractical to list all possible options.

3.EMISSIONS BOUNDARY

Inside the emissions boundary

All emission sources listed in the emissions boundary are part of the carbon neutral claim.

Quantified emissions have been assessed as 'attributable processes' that become the product, make the product and carry the product through its life cycle. These have been quantified in the carbon inventory.

Non-quantified emissions have been assessed as attributable and are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. All material emissions are accounted for through an uplift factor. Further detail is available at Appendix C. There are no no-quantified emissions.

Outside the emissions boundary

Non-attributable emissions have been assessed as not attributable to a product or service. They can be **optionally included** in the emissions boundary and therefore have been offset, or they can be listed as outside of the emissions boundary (and are therefore not part of the carbon neutral claim). Further detail is available at Appendix D. No non-attributable emissions outside of the emissions boundary have been assessed.

Inside emissions boundary

Quantified

Production

- Electricity
- Fuel use in mobile plant
- Fuel used in fixed plant
- Waste
- Water

Transport fuel used in

- Road fleet
- Trains
- Ships

Cement specific

- Process emissions

Use

- Carbonation

End of Life (deconstruction, recycling, transport, landfill)

- Electricity
- Fuel use in mobile plant
- Fuel used in fixed plant
- Waste
- Water
- Carbonation

Non-quantified

N/A

Outside emission boundary

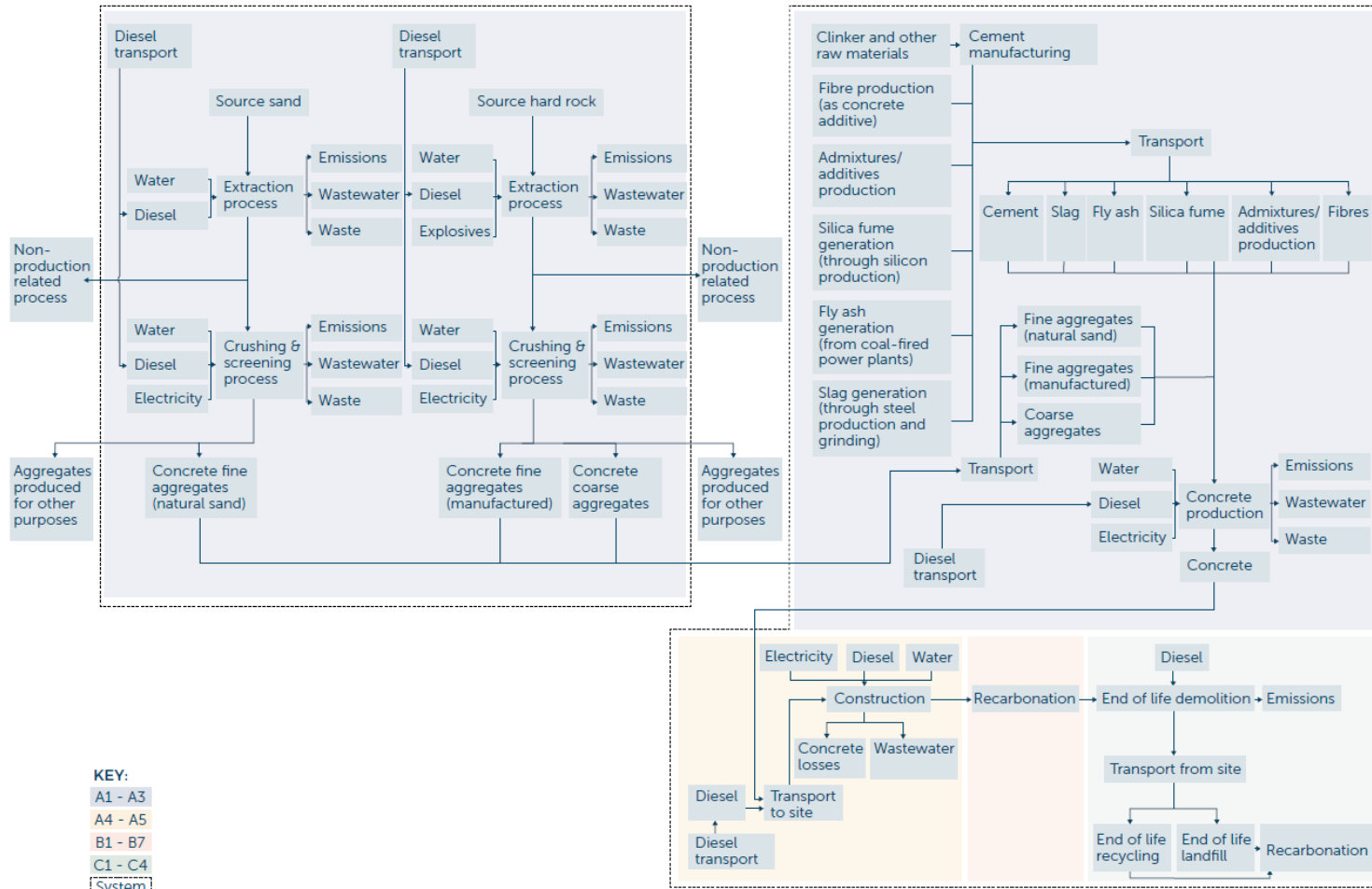
Non-attributable

Personnel

Capital Goods

Product/service process diagram

LIFE CYCLE ASSESSMENT



The lifecycle analysis captures the full cradle to grave emission inventory for the RMC product. As the lifecycle stages beyond the gate are outside Hanson's control, estimates based on reliable industry and government information have been employed.

4.EMISSIONS REDUCTIONS

Emissions reduction strategy

Hanson is a member of the global Heidelberg Materials group (HM). Globally, HM was the first cement business to set targets with the Science Based Targets initiative (SBTi), more recently committing to the [“Business Ambition for 1.5°C”](#). Further, HM is a CDP Climate B list business and was also awarded an A-rating for Water Security in 2022. HM has joined the United Nation's “Race to Zero” campaign and, in the [2022 Sustainability Report](#), continued to integrate the Taskforce for Climate-Related Financial Disclosure (TCFD) reporting. A more detailed report of rating results can be found in the published [2022 Sustainability Report](#).

A crucial component of the work to reduce CO₂ is the global commitment from HM to produce CO₂ neutral concrete [no later than 2050](#). This is driving significant action globally across all HM businesses.

In pursuit of the target, the Australian key action areas:

- [Targeting 50% of our revenues](#) coming from sustainable products by 2030, being low CO₂ or high recycled content, or a combination of both.
- Reducing our Scope 2 emissions through renewable energy agreements and optimizing electricity usage with a [target of 65% reduction](#) by 2030 from a 2016 base, aligned with our science-based targets.
- Developing circular alternatives for half of our concrete products - aiming for full coverage.
- Promotion of low carbon concrete to our customers in achieving their CO₂ reduction ambitions.
- Reducing emissions from transport on a per unit per km basis through ongoing investment in more efficient fleet and investment in new technologies as they become available in Australia.

For sales and transport, internal targets have been set which are not yet publicly communicated. Our internal CO₂ reduction road maps are reported to the global senior management quarterly and contain a range of actions, most of which cannot be included here due to competitive sensitivities.

These planned actions are in the context of a long history of continually improving our business. Through ongoing investment in our fleet, we have reduced transport CO₂ per unit per km delivered by nearly 1% per year on average since 2005. Investment in innovative IT solutions has supported the reduction of CO₂ in products by leveraging algorithms to optimize mixes. Ongoing investment in plants has positioned the business to be ready to supply low carbon concrete in most operations, with plans to address operations not currently set up for SCM utilisation.

Targets are annually reviewed. As an RMC producer, about 80-85% CO₂ is in cement. We are working with our cement supplier (a Joint Venture) on progressing emissions reductions. We do not have operational control over the cement business.

Emissions reduction actions

Heidelberg Materials (HM) has recently [reaffirmed](#) and further tightened their climate targets to reduce cementitious material related emissions. The previously communicated goal to reduce CO₂ emissions in 2030 compared to the base year of 1990 by 33% was raised to 47%. At the same time, HM continues to broaden the expansion of Carbon Capture projects globally. In September 2022, HM announced the largest carbon capture project to date in Indiana, USA. Once operating, this facility will capture approx. 95% of the cement plant's CO₂. This corresponds to an annual emission reduction of approx. 2 million tonnes of CO₂.

Hanson, as an RMC producer, further increases the use of SCMs beyond conventional boundaries and invests in new materials technology. We are striving to increase the percentage of high SCM content mixes and are developing low carbon mixes to match most applications.

Beyond materials, Hanson is constantly investing in its fleet to reduce transport related emissions. In 2022, Hanson replaced approximately 100 trucks by models with higher EURO emission ratings. The increased loading capacity of those models will reduce the overall carbon emissions per kg material and result in less truck movement.

5.EMISSIONS SUMMARY

Emissions over time

Emissions since base year			
		Total tCO ₂ -e	Emissions intensity of the functional unit
Base year/Year 1:	2021	5,268	0.432
Year 2:	2022	6,531	0.396

Significant changes in emissions

Due to the nature of the opt-in option, customer projects can be added to Hanson's Climate Active certification. Any new project will result in a significant baseline increase compared to previous years, especially if there is only a small number of projects listed. The opposite effect will be observed if a project finishes. Mix design choices, project sizes, geographical location and construction type all influence baselines and final outcomes.

Emission source name	Current year (tCO ₂ -e)	Previous year (tCO ₂ -e)	Detailed reason for change
Barangaroo R3 project	1,374	0	New project

Use of Climate Active carbon neutral products and services

N/A

Emissions summary

Having achieved process EPD certification, Hanson will be creating primarily bespoke EPDs on a project by project basis at the customer's request. This allows for location-based buildup of project specific mixes from specific plants and representative materials. The LCA is cradle to grave and for the purposes of the emissions summary each stage is grouped and A1-A3 (Production) is split from A4-A5 (Construction) for visibility of the cradle to gate.

The tables below show all mixes specified for each project, including the anticipated volume over the project lifespan, the impacts per life cycle stage in tCO₂e/m³, and the total expected emissions across the project lifespan. Given that volumes of specific mixes can change over the duration of the project, some products have been allowed for with a nominal 1m³ in anticipation of use.

The actual volumes used will be reviewed over the course of the project and any differences in total emissions will be accounted for. The volumes delivered to the project to date are provided in the second table below. Note that total calculated emissions may not sum due to rounding in displayed data.

Summary of Projects delivered for CY2022 Detailed below	DELIVERED VOLUME (m³)	Total emissions tCO ₂ -e
R2 Bar3angaroo	12896	5157.17
R3 Barangaroo	3576.29	1373.8
	16,472.29	6,530.97

No	ALL ANTICIPATED MIXES AND EMISSIONS FOR R2 BARANGAROO PROJECT	VOLUME (m³)	LIFE CYCLE STAGES				Total Lifecycle Unit tCO ₂ - e/m³	Total emissions tCO ₂ -e (estimate)
			A1-A3 Production	A4-A5 Transport & Construction	B1- B7 Use	C1-C4 End of Life		
1	Tower Columns & Wall 100 MPa 32% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	34	617	15.3	-10.6	16.5	0.638	21.7
2	Tower Columns & Wall 100 MPa 53% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	2135	459	13.8	-7.07	20.0	0.486	1,037.1
3	Post Tension 40 MPa 26% Indicative Cement Replacement – GGBFS	7000	370	12.9	-6.05	21.1	0.398	2,785.5
4	Level 2 Podium 40 MPa 27% Indicative Cement Replacement - Fly Ash	1	332	12.5	-5.68	21.4	0.360	0.4
5	Post Tension 50 MPa 25% Indicative Cement Replacement – GGBFS	5000	399	13.2	-6.63	20.5	0.426	2,130.3
6	Tower Columns & Wall 50 MPa 50% Indicative Cement Replacement - Fly Ash/GGBFS Blend	1	287	12.1	-4.28	22.9	0.318	0.3
7	Tower Columns & Wall 50 MPa 28% Indicative Cement Replacement - Fly	180	402	13.2	-6.63	20.6	0.430	77.3

	Ash/GGBFS/Silica Fume Blend							
8	Post Tension 65 MPa 44% Indicative Cement Replacement - GGBFS/Silica Fume Blend	252	418	13.4	-6.46	21.0	0.446	112.4
9	Tower Jumpform - Core 65 MPa 33% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	4650	392	13.1	-6.51	20.5	0.419	1,948.8
10	Tower Jumpform - Core 80 MPa 36% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	5600	424	13.4	-6.98	20.1	0.450	2,522.7
11	Transfer Slab 80 MPa 62% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	354	318	12.4	-4.30	23.1	0.349	123.6
12	Tower Columns & Wall 80 MPa 39% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	800	415	13.3	-6.64	20.7	0.442	353.8
13	Puddle Pour 80 MPa 15% Indicative Cement Replacement - GGBFS/Silica Fume Blend	1	657	15.7	-11.8	15.1	0.676	0.7
14	Puddle Pour 65 MPa 50% Indicative Cement Replacement - GGBFS/Silica Fume Blend	1	403	13.2	-5.96	21.7	0.432	0.4
15	Basement Slabs (RC) 40 MPa 25% Indicative Cement Replacement - Fly Ash/GGBFS Blend	1	324	12.5	-5.17	22.1	0.353	0.4
16	Stairs 40 MPa 25% Indicative Cement Replacement - Fly Ash/GGBFS Blend	1	331	12.5	-5.34	21.8	0.360	0.4
17	Tower Columns & Wall 40 MPa 25% Indicative Cement Replacement – GGBFS	1	343	12.6	-5.57	21.4	0.371	0.4

18	Blockwork Core Infill 25 MPa 50% Indicative Cement Replacement – GGBFS	1	282	12.1	-1.33	22.9	0.316	0.3
19	Puddle Pour 100 MPa 19% Indicative Cement Replacement - GGBFS/Silica Fume Blend	1	710	16.2	-12.7	14.0	0.727	0.7
20	Tower Jumpform - Core 50 MPa 28% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	2740	397	13.2	-6.63	20.6	0.424	1,162.2
21	Tower Columns & Wall 65 MPa 33% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	110	397	13.2	-6.51	20.5	0.424	46.7
22	Tower Columns & Wall 40 MPa 50% Indicative Cement Replacement – GGBFS	200	282	12.1	-1.33	22.9	0.316	63.1
23	Stairs 40 MPa 50% Indicative Cement Replacement - Fly Ash/GGBFS Blend	600	256	11.8	-3.74	23.4	0.287	172.4
24	Basement Slabs (RC) 40 MPa 50% Indicative Cement Replacement - Fly Ash/GGBFS Blend	2637	254	11.8	-3.63	23.8	0.286	753.4
25	Puddle Pour 80 MPa 43% Indicative Cement Replacement - GGBFS/Silica Fume Blend	1	496	14.1	-7.93	19.3	0.521	0.5
		TOTAL VOLUME (m³)					Average CO2- e/m³	Total Project CO2-e
		32,302					0.412	13,315.36

Of the total project volume, the following has been delivered to date:

No	DELIVERED MIXES AND EMISSIONS FOR R2 BARANGAROO PROJECT CY 2022	DELIVERED VOLUME (m ³)	Total Lifecycle Unit tCO ₂ -e/m ³	Total emissions tCO ₂ -e
1	Tower Columns & Wall 100 MPa 32% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	672.7	0.638	429.3
2	Tower Columns & Wall 100 MPa 53% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	1148.4	0.486	557.8
3	Post Tension 40 MPa 26% Indicative Cement Replacement – GGBFS	5599.5	0.398	2228.2
4	Level 2 Podium 40 MPa 27% Indicative Cement Replacement - Fly Ash	334.3	0.360	120.4
5	Post Tension 50 MPa 25% Indicative Cement Replacement – GGBFS	546.5	0.426	232.8
6	Tower Columns & Wall 50 MPa 50% Indicative Cement Replacement - Fly Ash/GGBFS Blend	15.2	0.318	4.8
8	Post Tension 65 MPa 44% Indicative Cement Replacement - GGBFS/Silica Fume Blend	202.0	0.446	90.1
9	Tower Jumpform - Core 65 MPa 33% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	1476.4	0.419	618.7
10	Tower Jumpform - Core 80 MPa 36% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	3353.8	0.450	1510.8
11	Transfer Slab 80 MPa 62% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	320.0	0.349	111.8
12	Tower Columns & Wall 80 MPa 39% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	456.0	0.442	201.7
14	Puddle Pour 65 MPa 50% Indicative Cement Replacement - GGBFS/Silica Fume Blend	211.0	0.432	91.1
18	Blockwork Core Infill 25 MPa 50% Indicative Cement Replacement – GGBFS	876.3	0.316	276.6
19	Puddle Pour 100 MPa 19% Indicative Cement Replacement - GGBFS/Silica Fume Blend	98.2	0.727	71.4
21	Tower Columns & Wall 65 MPa 33% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume Blend	1676.9	0.424	711.3
22	Tower Columns & Wall 40 MPa 50% Indicative Cement Replacement – GGBFS	2835.1	0.316	895.0
23	Stairs 40 MPa 50% Indicative Cement Replacement - Fly Ash/GGBFS Blend	678.4	0.287	195.0
24	Basement Slabs (RC) 40 MPa 50% Indicative Cement Replacement - Fly Ash/GGBFS Blend	1314.6	0.286	375.6
25	Puddle Pour 80 MPa 43% Indicative Cement Replacement - GGBFS/Silica Fume Blend	3266.7	0.521	1702.2
		DELIVERED VOLUME (m³)	Average CO₂-e/m³	DELIVERED VOLUME CO₂-e
		25,082	0,426	10,424.8

No	ALL ANTICIPATED MIXES AND EMISSIONS FOR R3 BARANGAROO PROJECT	VOLUME (m ³)	LIFE CYCLE STAGES				Total Lifecycle Unit tCO ₂ -e/m ³	Total emissions tCO ₂ -e (estimate)
			A1-A3 Production	A4-A5 Transport & Construction	B1- B7 Use	C1-C4 End of Life		
1	Reduced Liner 25 MPa - 60% Indicative Cement Replacement - Fly Ash/GGBFS	1	167	10.9	-3.7	22.2	0.197	0.20
2	Column & Wall 50 MPa - 50% Indicative Cement Replacement - Fly Ash/GGBFS	49	280	12.0	-4.3	21.6	0.309	15.15
3	Post Tension 40 MPa - 44% Indicative Cement Replacement - Fly Ash/GGBFS	4412	293	12.1	-4.6	21.4	0.322	1,420.64
4	Post Tension 50 MPa - 43% Indicative Cement Replacement - Fly Ash/GGBFS	1148	288	12.1	-5.1	22.1	0.317	363.58
5	Pump 40 MPa - 25% Indicative Cement Replacement - Fly Ash	508	276	12.0	-5.3	21.5	0.304	154.46
6	Column & Wall 40 MPa - 25% Indicative Cement Replacement - Fly Ash	9	288	12.1	-5.6	21.2	0.316	2.85
7	Pump 65 MPa - 50% Indicative Cement Replacement - GGBFS/Silica Fume	1	339	12.6	-5.7	22.0	0.368	0.37
8	Pump 50 MPa - 25% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume	2485	381	13.0	-6.5	20.5	0.408	1,013.90
9	Pump 80 MPa - 39% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume	1641	408	13.3	-6.6	20.7	0.435	713.57
10	Pump 100 MPa - 53% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume	328	449	13.6	-7.1	18.8	0.474	155.52
11	Pump 100 MPa - 32% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume	1	607	15.2	-10.6	16.5	0.628	0.63
12	Pump 80 MPa - 24% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume	1	570	14.8	-11.7	15.4	0.588	0.59
13	Pump 100 MPa - 19% Indicative Cement Replacement - GGBFS/Silica Fume	1	702	16.1	-12.7	14.0	0.719	0.72
		TOTAL VOLUME (m³)					Average CO₂-e/m³	Total Project CO₂-e
		10,585					0.363	3,842.17

Of the total project volume, the following has been delivered to date:

No.	DELIVERED MIXES AND EMISSIONS FOR R3 BARANGAROO PROJECT CY 2022	DELIVERED VOLUME (m ³)	Total Lifecycle Unit tCO ₂ -e/m ³	Total emissions tCO ₂ -e
1	Reduced Liner 25 MPa - 60% Indicative Cement Replacement - Fly Ash/GGBFS	0.0	0.197	0.0
2	Column & Wall 50 MPa - 50% Indicative Cement Replacement - Fly Ash/GGBFS	41.0	0.309	12.7
3	Post Tension 40 MPa - 44% Indicative Cement Replacement - Fly Ash/GGBFS	603.1	0.322	194.2
4	Post Tension 50 MPa - 43% Indicative Cement Replacement - Fly Ash/GGBFS	1292.0	0.317	409.2
5	Pump 40 MPa - 25% Indicative Cement Replacement - Fly Ash	101.2	0.304	30.8
6	Column & Wall 40 MPa - 25% Indicative Cement Replacement - Fly Ash	0.0	0.316	0.0
7	Pump 65 MPa - 50% Indicative Cement Replacement - GGBFSF/Silica Fume	0.0	0.368	0.0
8	Pump 50 MPa - 25% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume	692.8	0.408	282.7
9	Pump 80 MPa - 39% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume	197.6	0.435	85.9
10	Pump 100 MPa - 53% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume	224.9	0.474	106.6
11	Pump 100 MPa - 32% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume	22.2	0.628	13.9
12	Pump 80 MPa - 24% Indicative Cement Replacement - Fly Ash/GGBFS/Silica Fume	388.5	0.588	228.4
13	Pump 100 MPa - 19% Indicative Cement Replacement - GGBFS/Silica Fume	13.0	0.719	9.4
		DELIVERED VOLUME (m³)	Average CO₂-e/m³	DELIVERED VOLUME CO₂-e
		3,576.29	0.384	1,373.8

6. CARBON OFFSETS

Offsets retirement approach

This certification has taken an in-arrears offsetting approach for CY22 and forward offsetting approach for the duration of a project. The total emission to offset is 17,158 t CO₂-e. The total number of eligible offsets used in this report is 6,531. Of the total eligible offsets used, 5,157 were previously banked and 1,374 were newly purchased and retired. 5,401 are remaining and have been banked for future use.

Co-benefits

For the current period, offsets from multiple projects have been utilized. Some co-benefits of selected carbon offsets are listed below:

- Benefits “Bringing Bush Back” (HIR) in NSW & QLD¹
 - o These carbon farming projects work with landholders to regenerate and protect native vegetation.
 - o The projects help improve marginal land, reduce salinity and erosion and provide income to farmers.
 - o Widespread land clearing has significantly impacted local ecosystems. This degradation and loss of plant species threatens the food and habitat on which other native species rely. Clearing allows weeds and invasive animals to spread and affects greenhouse gas emissions.
 - o The project areas can harbour a number of indigenous plant species which provide important habitat and nutrients for native wildlife.
- Benefits “Winds of change” (Renewable Energy) Project¹
 - o Across India, wind farms introduce clean energy to the grid which would otherwise be generated by coal fired power stations. Wind power is clean in two ways it produces no emissions and also avoids the local air pollutants associated with fossil fuels.
 - o Electricity availability in the regions has been improved, reducing the occurrence of blackouts across the area. The projects support national energy security and strengthen rural electrification coverage.
 - o The boost in local employment by people engaged as engineers, maintenance technicians, 24 hour on site operators and security guards also boosts local economies and village services.

¹Tasman Environmental Markets (TEM) Marketing Material 2022

Eligible offsets retirement summary

Offsets cancelled for Climate Active Carbon Neutral Certification – R2 Barangaroo (see below)

Project description	Type of offset units	Registry	Date retired	Serial number (and hyperlink to registry transaction record)	Vintage	Stapled quantity	Eligible quantity (tCO ₂ -e)	Eligible quantity used for previous reporting periods	Eligible quantity banked for future reporting periods	Eligible quantity used for this reporting period	Percentage of total (%)
REDD Project Brazil Nut Concessions in Madre de Dios, Peru,	VCU	Verra	20/12/2021	11011-267309767-267313066-VCS-VCU-263-VER-PE-14-868-01012013-31122014-0	2014	0	3300	0	3300	0	23.6%
REDD Project Brazil Nut Concessions in Madre de Dios, Peru,	VCU	Verra	20/12/2021	11011-267313067-267313766-VCS-VCU-263-VER-PE-14-868-01012013-31122014-0	2014	0	700	0	275	425	5%
Fortaleza Ituxi REDD Project, Brazil	VCU	Verra	20/12/2021	8184-437840-447839-VCS-VCU-1519-VER-BR-14-1654-15122013-14122015-0	2015	0	10,000	5268	0	4,732	71.4%

Offsets cancelled for Climate Active Carbon Neutral Certification – R3 Barangaroo (see below)

KACCU-AUS-Quimby Forest HIR	ACCU	ANREU	12/10/2022	8,323,959,343 8,323,959,484	2021	0	142	0	142	0	4.4%
KACCU-AUS-Quimby Forest HIR	ACCU	ANREU	12/10/2022	8,323,959,485 8,323,959,656	2021	0	172	0	172	0	5.4%
KACCU-AUS-Quimby Forest HIR	ACCU	ANREU	12/10/2022	8,323,958,312 8,323,958,637	2021	0	326	0	326	0	10.2%
Promoting Clean Cooking Solutions for the Disadvantaged Households	VER		14/10/2022	GS1-1-NP-GS6212-16-2020-21408 241 880	2020	0	640	0	640	0	20%

Grid connected bundled wind power project in Gujarat managed by Enercon (India) Limited	VCU	Verra	14/10/2022	9123-VCS-VCU-997-VER-IN-1-370-01012020-31032020-0 69892939 69894858	2020	0	1920	0	546	1374	60%
Total offsets retired this report and used in this report										6,531	
Total offsets retired this report and banked for future reports										5,401	

Type of offset units	Eligible quantity (used for this reporting period)	Percentage of total
Verified Carbon Units (VCUs)	6,531	100%

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) Summary

N/A

APPENDIX A: ADDITIONAL INFORMATION

N/A

APPENDIX B: ELECTRICITY SUMMARY

N/A

APPENDIX C: INSIDE EMISSIONS BOUNDARY

Non-quantified emission sources

N/A

Excluded emission sources

N/A

Data management plan for non-quantified sources

There are no non-quantified sources in the emission boundary that require a data management plan.

APPENDIX D: OUTSIDE EMISSION BOUNDARY

Non-attributable emissions have been assessed as not attributable to a product or service (do not carry, make or become the product/service) and are therefore not part of the carbon neutral claim. To be deemed attributable, an emission must meet two of the five relevance criteria. Emissions which only meet one condition of the relevance test can be assessed as non-attributable and therefore are outside the carbon neutral claim. Non-attributable emissions are detailed below.

1. **Size** The emissions from a particular source are likely to be large relative to other attributable emissions.
2. **Influence** The responsible entity could influence emissions reduction from a particular source.
3. **Risk** The emissions from a particular source contribute to the responsible entity's greenhouse gas risk exposure.
4. **Stakeholders** The emissions from a particular source are deemed relevant by key stakeholders.
5. **Outsourcing** The emissions are from outsourced activities that were previously undertaken by the responsible entity or from outsourced activities that are typically undertaken within the boundary for comparable products or services.

Non-attributable emissions sources summary

Emission sources tested for relevance	Size	Influence	Risk	Stakeholders	Outsourcing	Justification
Personnel	N	N	N	N	N	<p>Size: The emissions are neglectable compared to other attributable emissions.</p> <p>Influence: The influence of the emissions from this source are neglectable compared to the product.</p> <p>Risk: The source is unlikely to be of significant public interest.</p> <p>Stakeholders: Key stakeholders, including the public, are unlikely to consider this a relevant source of emissions for the product.</p> <p>Outsourcing: Not applicable to the EPD pathway .</p>
Capital good	N	N	N	N	N	<p>Size: The emissions are neglectable compared to other attributable emissions.</p> <p>Influence: Not applicable to the EPD pathway.</p> <p>Risk: The source is unlikely to be of significant public interest.</p> <p>Stakeholders: Key stakeholders are unlikely to consider this a relevant source of emissions for the product.</p> <p>Outsourcing; Not applicable to the EPD pathway .</p>



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