PUBLIC DISCLOSURE STATEMENT

BORAL CONSTRUCTION MATERIALS LTD

PRODUCT CERTIFICATION

FY2021–22

Australian Government

Climate Active
Public Disclosure Statement

An Australian Government Initiative

NAME OF CERTIFIED ENTITY	Boral Construction Materials Ltd
REPORTING PERIOD	Financial year: 1 July 2021 – 30 June 2022 Arrears report
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.*  Mary Ann van Bodegraven Head of Sustainability 31 October 2022

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

Version March 2022.

1.CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	67 tCO_2-e
THE OFFSETS BOUGHT	100% ACCUs
RENEWABLE ELECTRICITY	0%
TECHNICAL ASSESSMENT	Date: 05 May 2020 Name: Rob Rouwette Organisation: start2see Pty Ltd Next technical assessment due: 31 October 2023
THIRD PARTY VALIDATION	The carbon footprints are based on our Environmental Product Declarations, which have been independently verified by Andrew D. Moore of Life Cycle Logic.

Contents

2. CARBON NEUTRAL INFORMATION

Description of certification

As part of Boral's commitment to sustainability, Boral has obtained an opt-in Carbon Neutral product certification for its pre-mixed concrete products produced in Australia. This product certification aligns with the Boral Australia Pre-Mix Concrete Environmental Product Declarations (EPDs). Released in 2021 and 2022, our range of EPDs captures a large number of product variations (i.e. mix designs) including some of Boral's lower carbon, high performance pre-mixed concrete products such as ENVISIA®. This is also complemented with some more conventional mix designs produced at key Boral concrete batch plants across New South Wales (NSW) and the Australian Capital Territory (ACT), Queensland (QLD), South Australia (SA), Tasmania (TAS), Victoria (VIC) and Western Australia (WA).

"Boral is committed to continually improve our processes to minimize, and where possible eliminate, environmental risks to achieve our goal of Zero Harm Today."

The EPDs help us support our customers in delivering on their sustainability goals by providing externally verified transparent and comparable information about life-cycle environmental impact of a range of our pre-mix concrete products. The life cycle assessment (LCA) from the EPD is also being built into a carbon calculator, which can be used to determine the life cycle greenhouse gas emissions of any given concrete product type and of any quantity. The EPD and carbon calculator LCA methodology is in accordance with the international standards ISO 14025, ISO 14040 and ISO 14044 and has been verified to be compliant with EN 15804. As such, the carbon accounting within the EPD and carbon calculator closely aligns with those principles set out in the Climate Active Product and Services Standards. The streamlined EPD certification pathway with Climate Active has therefore been adopted to cover the scope of this carbon neutral certification.

The emissions reported in this document are for FY2022, which is our second year of reporting. FY2022 is also the first year in which our certification is expanded from NSW/ACT to our national concrete business.

Product description

Boral is the largest integrated construction materials company in Australia, with a leading position underpinned by strategically located quarry reserves and an extensive network of operating sites.

Boral Concrete is a supplier to infrastructure, industrial, commercial and residential building projects combining technical expertise and on-site capability. Boral Concrete has over 220 pre-mix concrete plants around Australia producing a wide range of concrete mixes in metropolitan and country areas.

Boral's focus is on reducing the environmental footprint of our operations as well as meeting the needs of our customers who are increasingly looking to use more sustainable products. We are increasing our investment in innovation to enable us to expand our products and solutions that have a lower carbon footprint and thereby positively contribute to an effective transition to a lower carbon economy. Boral's ENVISIA® and Envirocrete® products underpin this improved sustainable concrete range. These products contain Supplementary Cementitious Materials (SCM) to reduce the high emissions associated with cement content in the manufacturing process. These products, however, do not compromise on performance outperforming conventional concretes in terms of shrinkage. These products are captured within the scope of Boral Australia's range of Pre-Mix Concrete EPDs and subsequently this carbon neutral certification.

Carbon neutral products are available to Boral customers on an opt-in basis. This will allow carbon neutral certification to be applied on a project and/or client basis. The type and quantity of concrete products supplied to a project and/or client can be agreed with carbon offset requirements determined using the EPDs or carbon calculator. The total carbon emissions inventory to be offset will be assessed annually based on the quantity of carbon neutral certified products sold.

The functional unit is defined as *1 cubic metre (m^3) of pre-mix concrete (as ordered by client) with a given strength grade and identifying characteristics*.

The functional unit covers the cradle-to-gate life cycle of our products. Downstream life cycle stages (i.e. gate-to-grave) are outside the scope of our current EPDs and therefore this carbon account. The impact of downstream life cycle stages (e.g. transport to construction site, construction, use, disposal) is relatively minor compared to the cradle-to-gate emissions, but shall not be considered zero.

3.EMISSIONS BOUNDARY

Inside the emissions boundary

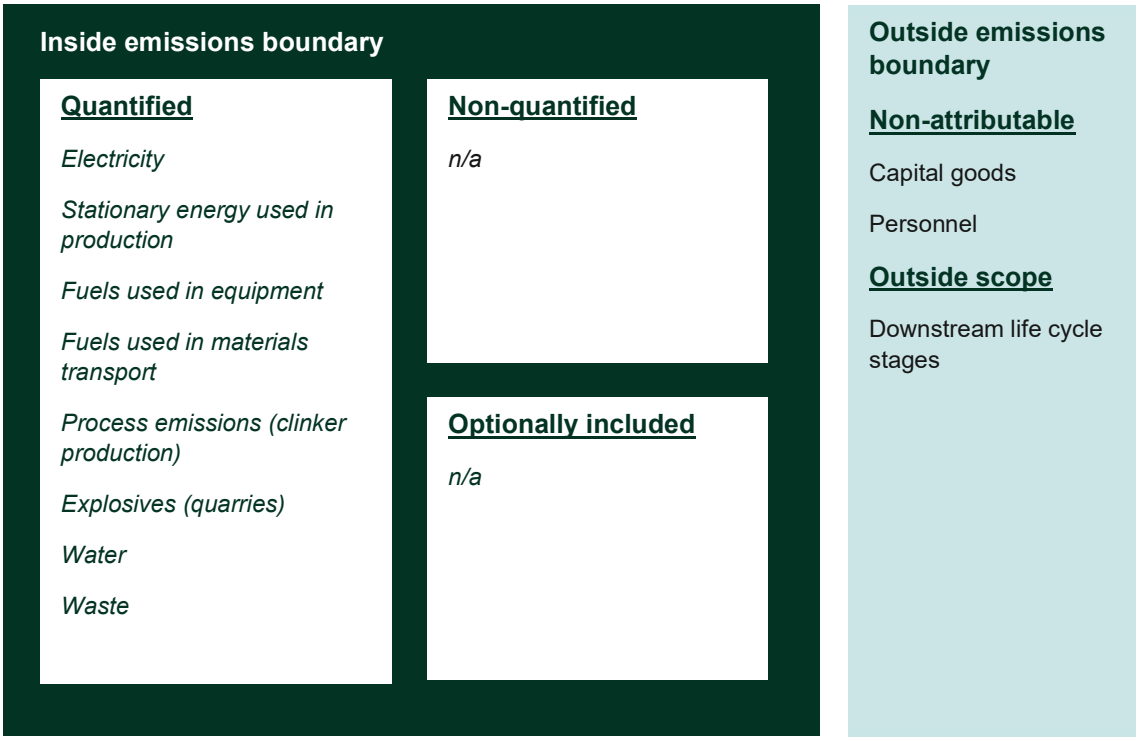
All emission sources listed in the emissions boundary are part of the carbon neutral claim.

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.

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 in Appendix D.

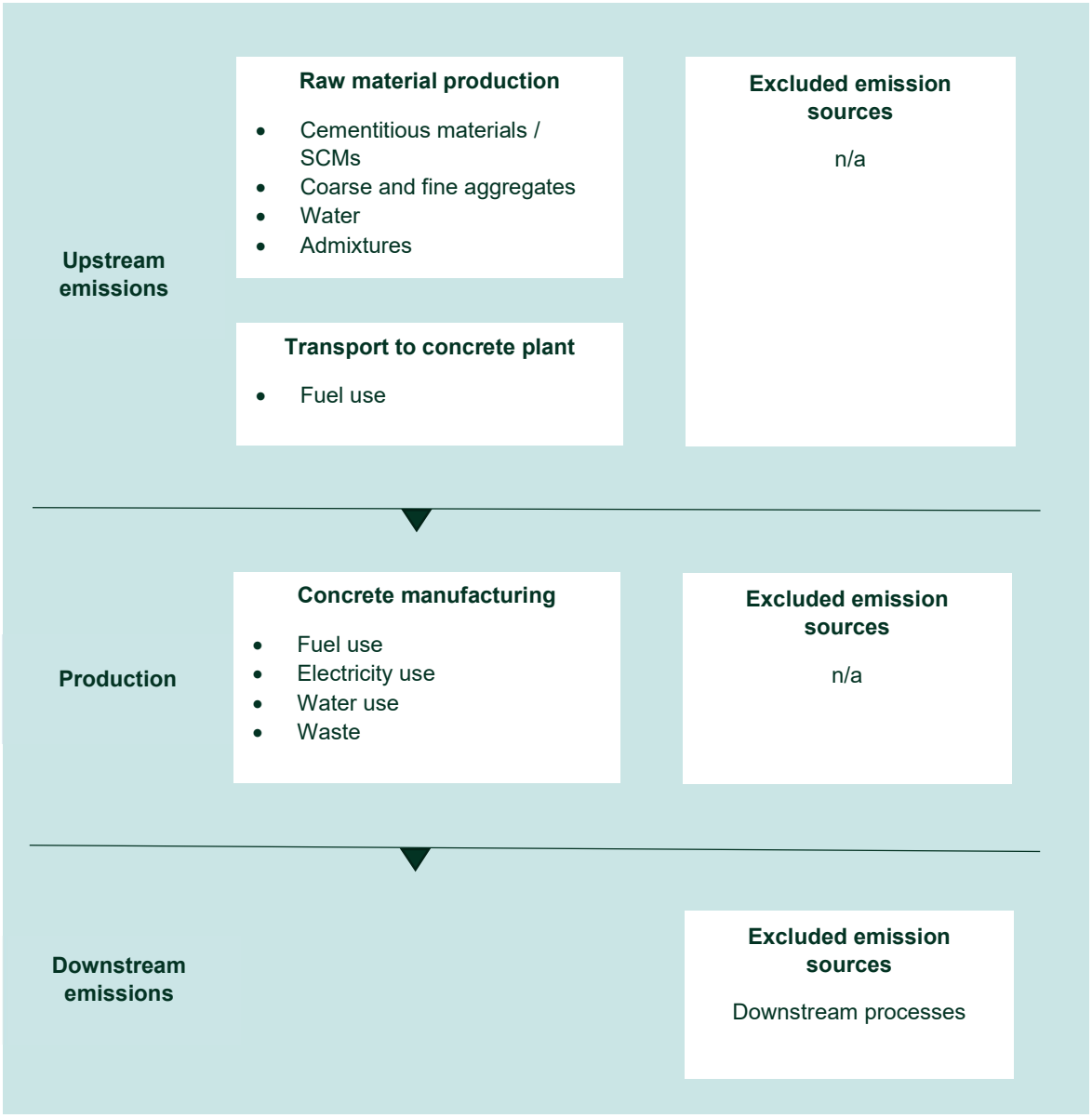


The contribution of capital goods (production equipment and infrastructure) and personnel is outside the scope of the LCA, in line with the Product Category Rules.[1]

[1] International EPD System PCR2012:01 (version 2.33), Product category rules according to ISO 14025 and EN 15804, Combined PCR and PCR Basic Module for Construction products and Construction services, registration number 2012:01, published on 18 September 2020.

Product process diagram

The following diagram covers the cradle-to-gate life cycle stages of concrete. Downstream life cycle stages are not included as the concrete can be used for a large number of potential applications in infrastructure projects or industrial, commercial and residential building projects. Furthermore, full life cycle LCAs show that downstream stages typically contribute only marginally to pre-mix concrete's GHG emissions.[2]



Data management plan for non-quantified sources

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

[2] For example, see figure 2 in: R Frischknecht et al 2019 IOP Conf. Ser.: Earth Environ. Sci. 323 012037

4.EMISSIONS REDUCTIONS

Our Purpose, Sustainability Framework, and emissions reduction strategy

In FY2021 Boral established a new company Purpose of **Creating a world future generations will be proud of.** This Purpose talks to our role in meeting the challenges of a changing world and the expectations of future generations, and Sustainability and our decarbonisation plans are central to achieving this.

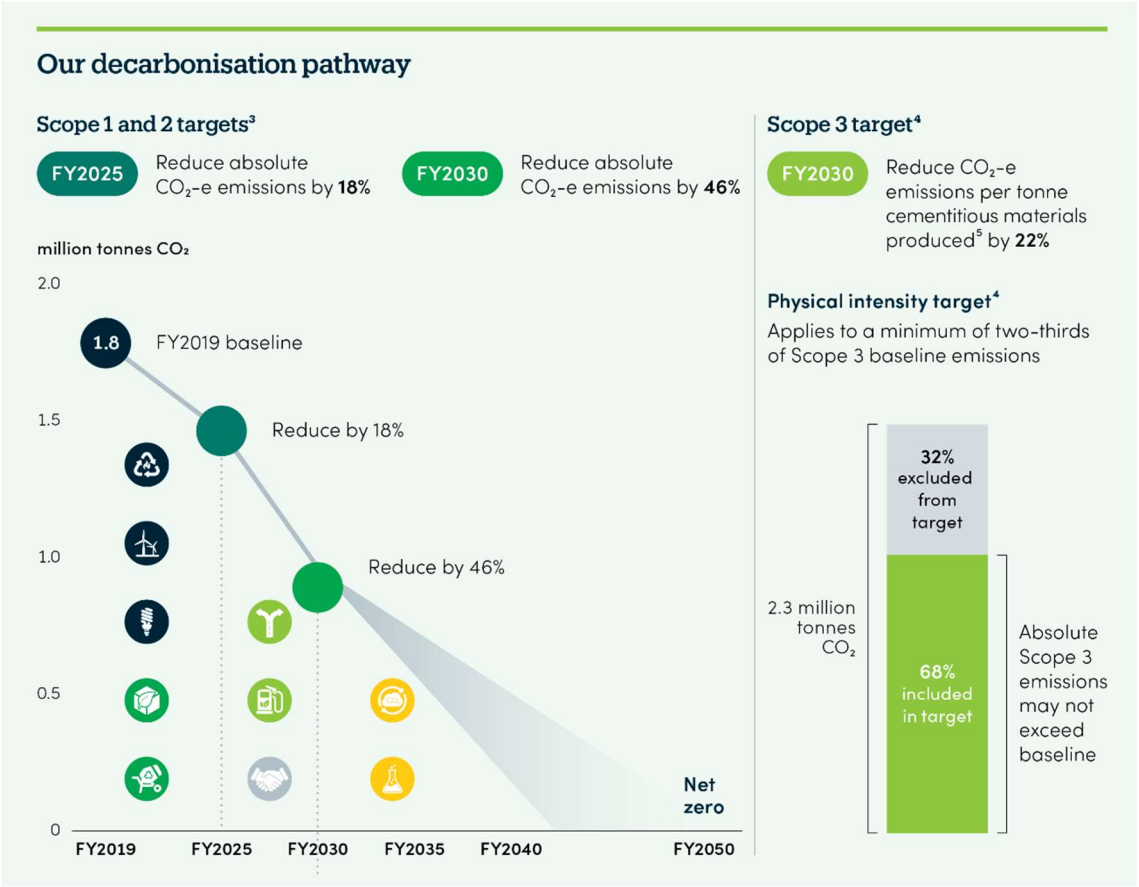
Our **Sustainability Framework**, established in FY2021, sets out our commitment to achieving this across four focus areas. The Framework is underpinned by our commitment to a high standard of corporate governance, responsible business conduct, effective risk management and Boral's Values which inform everything we do.

Boral was the first in the global construction materials industry to set FY2030 science-based Scope 1 and 2 targets aligned with limiting global warming to 1.5°C. These targets, validated by the Science Based Targets initiative (SBTi), are:

- 18% reduction in absolute Scope 1 and 2 emissions by FY2025 compared to a FY2019 baseline
- 46% reduction in absolute Scope 1 and 2 emissions by FY2030 compared to a FY2019 baseline
- 22% reduction in relevant Scope 3 emissions per tonne of cementitious materials by FY2030 compared to a FY2019 baseline

We are also committed to net zero carbon emissions by no later than 2050.

Our decarbonisation pathway and levers are shown below.



Our decarbonisation levers

We have established a detailed decarbonisation pathway based on five key levers. The pathway is being reviewed and refined as we move forward and is contingent on cost-effective and available technologies.

1 Energy	**Alternative kiln fuels:** Transition Berrima Cement kiln fuel away from coal, increasing energy derived from alternative fuels from 15% to 60%, and explore hydrogen and renewable gas
	Renewable energy: Aim to transition to power supply from renewable sources
	Energy efficiency: Improve energy efficiency by 5% to 10%
2 Cementitious intensity	**Lower carbon concrete:** Increase use of supplementary cementitious materials
	Kiln feed and cement plant optimisation: Implement processes to increase cement plant efficiency
3 Transport	**Optimise supply chain:** Optimise supply chain logistics and routes
	Renewable fuels: Explore and implement alternative fuels for Boral and contractor fleets including electrification, biofuels, and hydrogen
4 Sourcing	**Lower carbon supply chain:** Prioritise lower CO_2-e intensity suppliers, including for imported clinker
5 CCUS	**Mineralised carbon products:** Pilot and implement a mineralised carbon product stream
	Carbon capture use and storage: Explore and implement emerging CCUS technologies

Cementitious intensity reduction, including lower carbon concrete is a key driver in our decarbonisation pathway. Our lower carbon concrete range includes ENVISIA®, Envirocrete® Plus, and Envirocrete®. Our lower carbon concretes use our distinctive proprietary - ZEP® technology – plus expertise in concrete mix design to replace cement used in concrete with supplementary cementitious materials. We also tailor carbon neutral solutions for customers using the Australian Climate Active Carbon Neutral Standard.

Further information on our lower carbon concrete products and our decarbonisation plans can be found in our Sustainability Report 2022 pages 30-33, 42-43, and 45.

Emissions reduction actions

The emissions associated with concrete products are mostly dependent on the raw materials used. We are making our low-carbon products available in more locations and our EPDs assist our customers in choosing the lowest carbon option for their needs.

Further information on our progress on decarbonisation can be found in our *Sustainability Report 2022*, pages 42-43.

5.EMISSIONS SUMMARY

Emissions over time

Emissions since base year			
		Total tCO_2-e	**Emissions intensity of the functional unit**
Base year:	2020-21 (projected)	160	0.250 t CO_2e/m^3
Base year:	2020-21 (true-up)	167	0.227 t CO_2e/m^3
Current year:	2021-22 (arrears)	67	0.208 t CO_2e/m^3

Significant changes in emissions

The total emissions for the carbon neutral certified products have changed somewhat from the previous year, as they depend directly on the volume and type of concrete that was sold under our opt-in program. In FY22, we sold a smaller quantity of carbon neutral certified concrete with lower average GHG intensity per m^3 of concrete compared to FY21.

Use of Climate Active carbon neutral products and services

No Climate Active carbon neutral products or services have been used in the cradle-to-gate production of our concrete.

Product emissions summary

Table 2

Emission source category	tonnes CO_2-e *
Raw materials (cement, slag, fly-ash, ZEP®, aggregates, admixtures, water)	90-95%
Transport of raw materials to the concrete plant	5-10%
Concrete production process	1-3%

** The contribution of emission sources is provided in percentages to indicate the varying contribution depending on concrete mix designs.*

No uplift factors have been applied.

Concrete supplied to a single project in Canberra made up the total volume of carbon neutral concrete sold in FY22. To demonstrate commitment to carbon neutrality for FY23, Boral has purchased a significant quantity of offsets in advance.

Emissions intensity per functional unit	~0.208 t CO_2e
Number of functional units to be offset (certified)	323 m^3
Total emissions to be offset (certified)	67 t CO_2e

6.CARBON OFFSETS

Offsets retirement approach

Offset purchasing strategy: In arrears		
1.	Total offsets previously forward purchased and banked for this report	833 t CO_2e
2.	Total emissions liability to offset for this report	67 t CO_2e
3.	Net offset balance for this reporting period	-766 t CO_2e
4.	Total offsets to be forward purchased to offset the next reporting period	0 t CO_2e
5.	Total offsets required for this report	67 t CO_2e

Co-benefits

n/a

Eligible offsets retirement summary

Offsets cancelled for Climate Active Carbon Neutral Certification											
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 (%)**
Blinky Forest Carbon Project[3]	ACCUs	ANREU	5 May 2021	3,778,000,186 – 3,778,001,185 (A hyperlink is not available; instead evidence of the retired offsets has been provided to Climate Active)	2018/19	n/a	1,000	167	766	67	100%
									Total offsets retired this report and used in this report	67	
									Total offsets retired this report and banked for future reports	766	

Type of offset units	Quantity (used for this reporting period claim)	Percentage of total
Australian Carbon Credit Units (ACCUs)	67	100%

[3] This project establishes permanent native forests through assisted regeneration from in-situ seed sources (including rootstock and lignotubers) on land that was cleared of vegetation and where regrowth was suppressed for at least 10 years prior to the project having commenced.

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) Summary

N/A

APPENDIX A: ADDITIONAL INFORMATION

N/A.

APPENDIX B: ELECTRICITY SUMMARY

Electricity emissions are calculated using a location-based approach, in line with our NGER reporting.

Note: concrete production makes up only 1-3% of the GHG emissions of pre-mix concrete (mainly electricity and diesel use on-site) and using a location-based or market-based approach won't materially affect the footprint of our products.

We have not used the Climate Active electricity calculator, as the footprint of our products is determined in our EPDs.

APPENDIX C: INSIDE EMISSIONS BOUNDARY

Non-quantified emission sources

There are no non-quantified emission sources within this product LCA.

Excluded emission sources

Attributable emissions sources can be excluded from the carbon inventory, but still considered as part of the emissions boundary if they meet **all three of the below criteria**. An uplift factor may not necessarily be applied.

1. A data gap exists because primary or secondary data cannot be collected **(no actual data).**
2. Extrapolated and proxy data cannot be determined to fill the data gap (**no projected data**).
3. An estimation determines the emissions from the process to be **immaterial**).

	No actual data	No projected data	Immaterial
N/A			

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 the organisation's electricity, stationary energy and fuel emissions

2. **Influence** The responsible entity has the potential to influence the reduction of emissions from a particular source.

3. **Risk** The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.

4. **Stakeholders** Key stakeholders deem the emissions from a particular source are relevant.

5. **Outsourcing** The emissions are from outsourced activities previously undertaken within the organisation's boundary, or from outsourced activities typically undertaken within the boundary for comparable organisations.

Emission sources tested for relevance	(1) Size	(2) Influence	(3) Risk	(4) Stakeholders	(5) Outsourcing
Capital goods	No	No	No	Limited	No
Personnel	No	No	No	No	No

An Australian Government Initiative

Climate Active