PUBLIC DISCLOSURE STATEMENT

KNAUF GYPSUM PTY LTD

PRODUCT CERTIFICATION
FY2023–24

Australian Government

Climate Active
Public Disclosure Statement

An Australian Government Initiative

NAME OF CERTIFIED ENTITY	Knauf Gypsum Pty Ltd
REPORTING PERIOD	Financial year 1 July 2023 – 30 June 2024 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.*
	Thanh Huynh R&D, Engineering Services Director 3/12/2024 *Note: you can submit this document to Climate Active unsigned. The Climate Active team will invite you to sign this document once they have completed their review.*

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

Version 9.

1. CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	32 tCO_2-e
CARBON OFFSETS USED	100% VER
RENEWABLE ELECTRICITY	N/A
CARBON ACCOUNT	Prepared by: thinkstep-anz
TECHNICAL ASSESSMENT	2024-09-27 Emily Townsend thinkstep-anz Next technical assessment due: FY 2027 PDS
THIRD PARTY VALIDATION	Not required – EPD pathway used

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2. CERTIFICATION INFORMATION

Description of product certification

This product certification is for Knauf Gypsum Pty Ltd, which is one of the largest manufacturers of plasterboard and joint compounds in Australia. Manufactured on a continuous production line, plasterboard is comprised of a specially formulated gypsum core, encased between paper liners. Locally manufactured Knauf plasterboard products utilise naturally occurring gypsum and recycled paper.

Plasterboard sheets are commonly available in 1200 mm and 1350 mm widths and have recessed longitudinal edges facilitating a smooth, seamless joint finish. Knauf supplies a range of plasterboard with various properties such as fire, water, sound, impact, mould resistance.

This certification uses the Environmental Product Declaration (EPD) Streamlined Pathway. Knauf's EPD was published in 2024 under the EPD Australasia, available at Knauf Plasterboard | EPD Australasia (epd-australasia.com). The EPD was produced in accordance with EN 15804, ISO 14025 and PCR 2019 Construction products and construction services v1.3.3 of 2024-03-01 of the International EPD® System.

- Declared unit: 1m^2 of installed plasterboard
- Offered as: Opt-in product
- Life cycle: Cradle-to-grave

Use phase life cycle stages (Modules B1-B7) are excluded as they are either not relevant or dependent on particular scenarios and are best modelled at the building level.

The responsible entity for this product certification is Knauf Gypsum Pty Ltd, ABN 84 004 231 976.

This Public Disclosure Statement includes information for FY2023-24 reporting period. This is the first year of certification.

Description of business

Knauf Gypsum Pty Ltd is one of the largest manufacturers of plasterboard and joint compounds in Australia. Knauf Gypsum Pty Ltd was formerly known as USG Boral, it is now owned 100% by the Knauf Group based in Germany. Knauf has three plasterboard production sites in Australia: Camellia, NSW; Port Melbourne, VIC; and Pinkenba, QLD.

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' of a product or service. These attributable processes are services, materials and energy flows that become the product or service, make the product or service and carry the product or service through its life cycle. These attributable emissions 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 at Appendix D.

Inside emissions boundary

Quantified

Production of raw materials by third parties, including:

- Gypsum
- Paper
- Additives
- Water

Transportation

- Transport fuel (used in road fleet, trains and ship)

Manufacturing operations including:

- Electricity
- Natural gas
- LPG
- Diesel
- Tap water
- Rain water
- Rejected products
- Cardboard waste
- General waste

Transport of product (diesel) to customer, installation materials (plater, tape, screws) and disposal of installation waste.

Disposal of product waste at the end of life.

Non-quantified

N/A

Optionally included

N/A

Outside emission boundary

Non-attributable

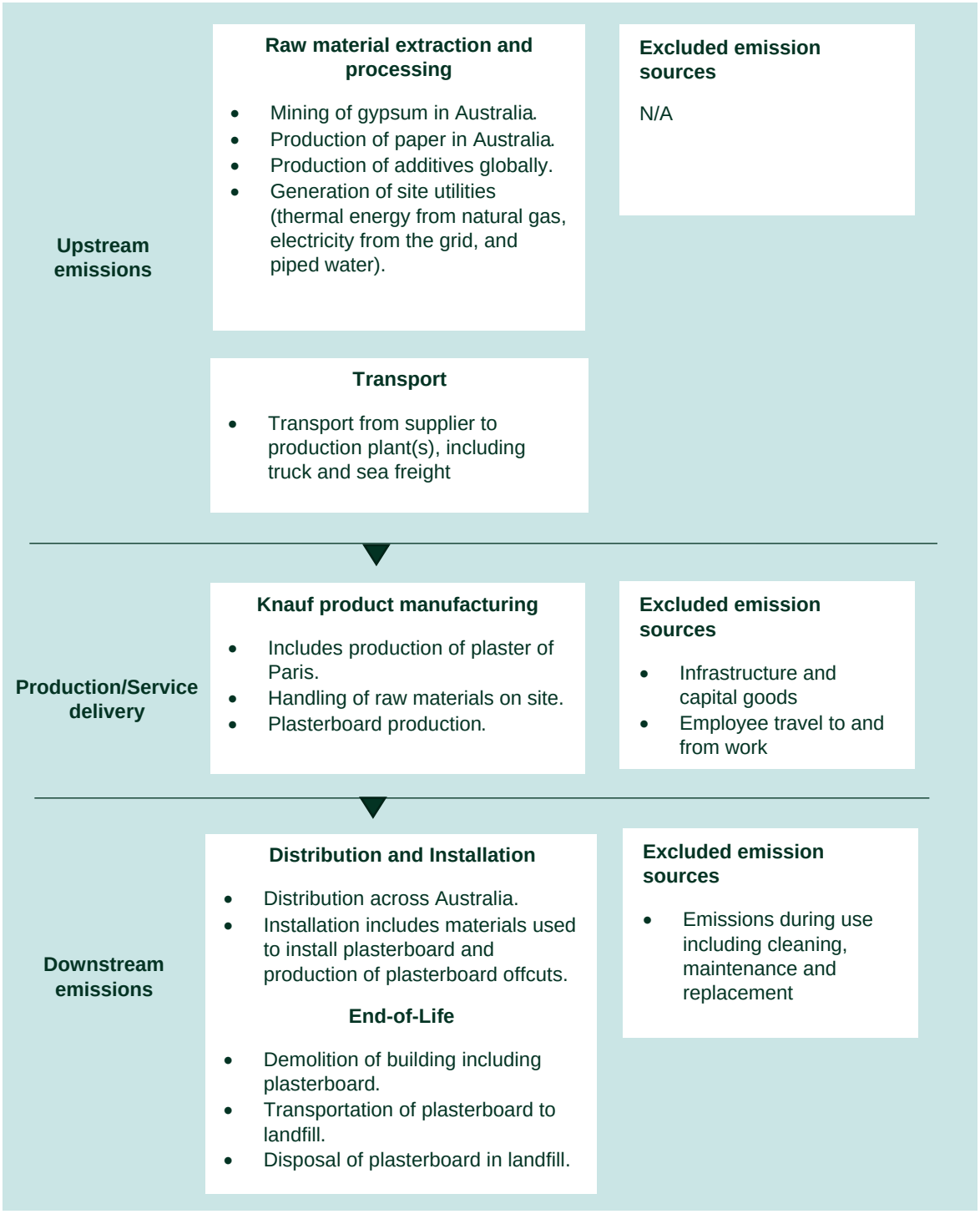
Infrastructure and capital goods

Employee travel to and from work

Emissions during use including cleaning, maintenance and replacement

Product / Service process diagram

Cradle-to-grave boundary

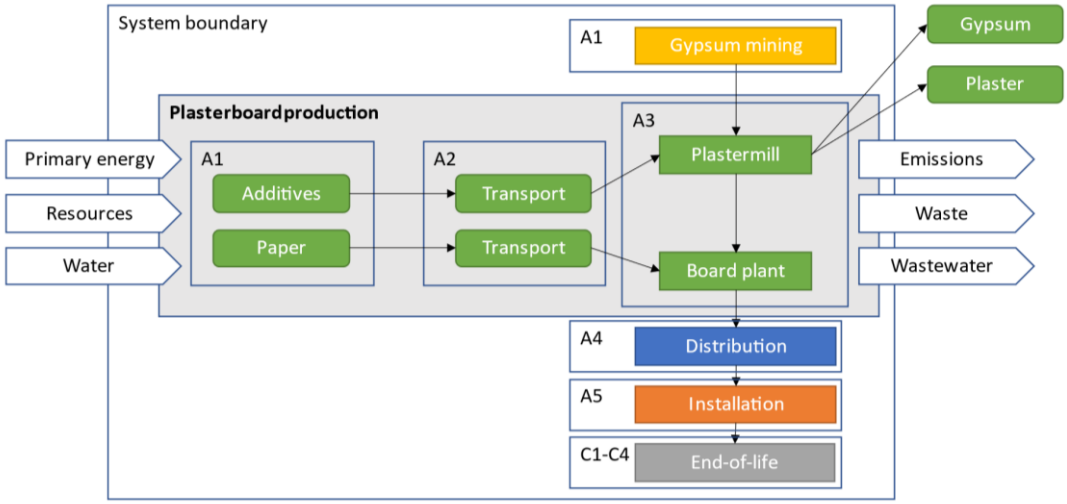


Product manufacturing

The manufacturing of plasterboard starts with the mining of gypsum in Australia, production of paper in Australia, production of additives, generation and transmission of electricity in Australia, and generation of thermal energy from natural gas.

Gypsum is then transported via road to port and shipped in a bulk carrier via sea to Camelia, NSW, Port Melbourne, VIC, and Pinkenba, QLD. Transport from port to production plant is via truck. Transport for paper and all other additives is a mixture of truck and sea freight.

Plasterboard is manufactured by heating gypsum in a plaster mill (known as calcination) to remove moisture and produce plaster of Paris. The dry plaster powder is then mixed with water and additives to give each board its desired properties. The mixture is rolled out to a uniform thickness and paper is added to the top and bottom faces. The board is then dried, converting the plaster back to gypsum, and cut to size ready for distribution to customer.



Distribution and Installation

The plasterboards are distributed from Knauf manufacturing sites to distribution centres. An average distribution model is applied, which includes the distribution through Knauf's distribution centres across Australia.

Plasterboard installation includes the materials used to install the plasterboard (jointing compound, jointing tape, and screws) and the production of plasterboard offcuts from installation, which are assumed to be landfilled.

End-of-life

The whole building is demolished, including the plasterboard, using a 100-kW construction excavator. Waste plasterboard is then transported to both landfill and facility to process plasterboard waste for recycling. Disposal of plasterboard in landfill.

4. EMISSIONS REDUCTIONS

Emissions reduction strategy

Background

Architects and builders need safer, faster and less costly ways to build. Building owners need better running buildings with lower operating costs. The need for sustainable construction to address global environmental challenges is growing fast. That's why, throughout Knauf's long history, we have continually developed innovative wall and ceiling products and systems for our customers. Thinking in generations and working sustainably have been key attributes of the Knauf family business.

Emissions Reduction Targets

Knauf aims to be an industry leader in sustainable construction. We plan to invest heavily to cost-efficiently decarbonise operations, to build a business that is both sustainable and profitable in the long term.

Globally, Knauf has set some ambitions targets.

By 2032, against a 2021 baseline year, we aim to:

- Reduce Scope 1 emissions from our production sites by 50%;
- Reduce Scope 2 emissions from our production sites by 50%;
- Reduce Scope 3 emissions by 30%;
- Send zero production waste to landfill;
- Reduce water use in production by 20%; and
- Be a leader in Circular Economy.

Ultimately, Knauf aims to be net-zero by 2045, five years ahead of the Paris agreement.

Emissions Reduction Strategy

Scope 1 and 2 emissions

To achieve our emissions targets, our key levers are:

1. Cutting energy

Initially, we are focusing on making our processes more efficient. Some examples of efficiency actions include:

- Conducting energy audits to identify improvement areas;
- Focus on continuous improvement such as scrap minimization;
- Improving insulation on dryers and mills to avoid heat loss;
- Educating staff to ensure energy is not being used when not producing;
- Switching to more energy efficient equipment;
- Reducing air leaks; and
- Improving heat recovery

Annually, each plant has KPIs set to achieve energy reductions based on action plans developed for the year. These action plans align with our global targets (above) and allow us to monitor and track progress.

2. Switching to renewables

There are two major emissions sources associated with plasterboard production, natural gas (Scope 1) and electricity (Scope 2). This has been confirmed with an LCA. Between now and 2032, we will focus on transitioning to renewables to replace these major emissions sources where viable.

3. Innovating sustainable products and processes

Knauf is working on technologies and innovations that make our products better, our operations more efficient and which decrease our CO_2 footprint.

An example of innovation is formulation improvements. By optimising formulations, there is opportunity to reduce energy and water consumption during production.

Globally, the Knauf group is on the same sustainability journey. As a result, we are able to share from learnings and experiences across the group. An example of innovation across the group is in our Yokkaichi Plant (Japan) where fully recycled gypsum board has been developed.

Scope 3 Emissions

Sustainable building is not only dependent on our own operations but is also connected to our wider supply chain. That relates specifically to scope 3 emissions, indirect emissions which are not directly owned. Purchased goods are a major part of our scope 3 savings potential. We are engaging closely with our suppliers to assist with defining an action plan to jointly reduce our emissions. Additionally, by reviewing our LCA results, we can identify raw materials that have a high CO_2 impact and search for viable alternatives.

Waste and Water

Currently, no plasterboard scrap from production site is sent to landfill. Separate to this, we are continuously identifying waste streams (e.g. timber and steel) that can be separated and recycled or reused.

To achieve our target of 20% reduction in water withdrawal between 2021 and 2032, we are increasing water recycling across our production sites. Additionally, we are optimising formulations and processes to reduce the water demand of our products.

5. EMISSIONS SUMMARY

Use of Climate Active carbon neutral products, services, buildings or precincts

No Climate Active carbon neutral products and services have been used.

Certified brand name	Product/Service/Building/Precinct used
N/A	N/A

Emissions summary

The emission summary is shown per product aggregated from three stages (Production, Construction, and End of life). The summary includes opt-in products of projects Space & Co, Powerhouse Museum, and UTAS Forestry.

Production stage (Module A1-A3):

- Module A1 (raw material supply) includes the mining of gypsum in Australia, production of paper in Australia, production of additives, generation and transmission of electricity in Australia, and generation of thermal energy from natural gas.
- Module A2 (transportation) includes transport of gypsum via road to port and shipping in a bulk carrier via sea to Camellia, NSW, Port Melbourne, VIC, and Pinkenba, QLD. Transport from port to production plant is via truck.
- Module A3 (manufacturing) includes production of plaster of Paris, the handling of raw materials on site and plasterboard production.

Construction stage (Module A4, A5):

- Module A4 (distribution) includes distribution from Knauf manufacturing sites in through its distribution centres. An average distribution model is applied, which includes the distribution through Knauf's distribution centres across Australia.
- Module A5 (installation) includes the materials used to install the plasterboard (jointing compound, jointing tape, and screws).

End of Life (Module C1-C4)

- Module C1 (deconstruction/demolition) includes demolition of the whole building including plasterboards, using a 100-kW construction excavator.
- Module C2 (transport to end-of-life) includes transport of waste plasterboard to both landfill after building's demolition and recovery of plasterboard in recycled gypsum.
- Module C3 (waste processing) includes the processing of plasterboard waste for recycling.
- Module C4 (disposal) includes plasterboard end-of-life in the landfill case.

Total emissions per opt-in products:

Opt-in products	**Total emissions tCO_2-e**
Firestop 13	5.5
Firestop 16	0.8
Multistop 13	2.6
Sheetrock HD 13	18.0
Soundstop 13	3.8
Wetstop 13	1.3
Attributable emissions (tCO_2-e)	32.0

Product emissions summary:

Product / Service offset liability	
Emissions intensity per functional unit	4.41E-03 tCO_2/m^2
Emissions intensity per functional unit including uplift factors	N/A
Number of functional units covered by the certification	7,257.5 m^2
Total emissions (tCO_2-e) to be offset	**32.0**

6. CARBON OFFSETS

Eligible offsets retirement summary

Offsets retired for Climate Active certification

Type of offset units	Quantity used for this reporting period	Percentage of total units used
Verified Emissions Reductions (VERs)	32	100%

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
Indonesia Domestic Biogas Programme of Activities (IDBP) VPA-1	VER	Gold Standard Impact Registry	12/09/2024	GS1-1-ID-GS1174-4-2021-23374-11608-11647	2021	40	0	8	32	100%

Co-benefits

N/A

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) Summary

N/A. No RECs used in this reporting period.

APPENDIX A: ADDITIONAL INFORMATION

N/A.

APPENDIX B: ELECTRICITY SUMMARY

N/A.

APPENDIX C: INSIDE EMISSIONS BOUNDARY

Non-quantified emission sources

The following emissions sources have been assessed as attributable, are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. These emissions are accounted for through an uplift factor. They have been non-quantified due to one of the following reasons:

1. **Immaterial** <1% for individual items and no more than 5% collectively
2. **Cost effective** Quantification is not cost effective relative to the size of the emission but uplift applied.
3. **Data unavailable** Data is unavailable but uplift applied. A data management plan must be put in place to provide data within 5 years.
4. **Maintenance** Initial emissions non-quantified but repairs and replacements quantified.

Relevant non-quantified emission sources	Justification reason
N/A	

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**).

Emissions Source	No actual data	No projected data	Immaterial
Use phase (Modules B1-B7). Plasterboard is a passive building product and does not generally require maintenance in use. If damaged, it would be replaced in full, thus reaching its end-of-life.	Yes	Yes	Yes

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
Infrastructure and capital goods	N	N	N	N	N	Greenhouse gas emissions relating to capital goods, such as infrastructure and production equipment not directly consumed in the processes are excluded from the system boundary, in line with the International EPD System PCR2019:14 (version 1.3.3), Product category rules according to ISO 14025 and EN 15804+A2, Combined PCR and PCR Basic Module for Construction products and Construction services, registration number 2019:14, published on 2024-03-01.
Employee travel to and from work	N	N	N	N	N	Greenhouse gas emissions relating to personnel not directly consumed in the processes are excluded from the system boundary, in line with the International EPD System PCR2019:14 (version 1.3.3), Product category rules according to ISO 14025 and EN 15804+A2, Combined PCR and PCR Basic Module for Construction products and Construction services, registration number 2019:14, published on 2024-03-01.

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