



Linea™ Weatherboard – Nundah Scandi Barn, QLD

Environmental Product Declaration

In accordance with ISO 14025 and EN 15804+A1 for
Fibre cement products from
James Hardie Australia Pty Ltd

Programme: The International EPD® System – www.environdec.com

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Programme information

Programme

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Product category rules (PCR)

PCR 2012:01 Construction Products and Construction Services,
Version 2.2, 2019-03-03

PCR review was conducted by

The Technical Committee of the International EPD® System.
Chair: Massimo Marino. Contact via: info@environdec.com

Independent third-party verification of the declaration and data,
according to ISO 14025:2006:

☐ EPD process certification ☒ EPD verification

Third party verifier

Kimberly Robertson, Catalyst Ltd



Approved by EPD Australasia

Procedure for follow-up of data during EPD validity involves third
party verifier:

☒ Yes ☐ No

The EPD owner has the sole ownership, liability, and responsibility for
the EPD. EPDs within the same product category but from different
programmes may not be comparable. EPDs of construction products
may not be comparable if they do not comply with EN 15804.

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Name and location of production site

Carole Park (QLD) and Rosehill (NSW)



Introduction

Globally, buildings and construction account for nearly 40% of energy-related carbon dioxide (CO₂) emissions whilst having significant impact on our natural habitats. Carbon emissions, commonly referred to as embodied carbon, are released not only during operational life but also during the manufacturing, transportation, construction and end of life phases of all built assets – buildings and infrastructure. According to the World Green Building Council, embodied carbon in buildings contributes around 11% of all global carbon emissions.

For everyone working in the construction industry, meeting the needs of our society without breaching the earth's ecological boundaries will demand a paradigm shift in our behaviour. At James Hardie, together with our customers, we work to deliver products that are resource efficient and low impact across all phases of the product life cycle.

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About James Hardie

James Hardie understands building professionals and serves them with innovative building products and solutions. As the world's largest manufacturer of fibre cement, James Hardie empowers its people to innovate and capitalise on the company's global scale.

Always driven to find a better way to build, James Hardie applies a continuous improvement mindset to research and development, manufacturing and sales.

James Hardie helps inspire and deliver beautifully designed homes and buildings that are durable, functional, and easy to build. The improvement in liveability and streetscape benefits homeowners and communities, alike.

James Hardie fibre cement products are deemed non-combustible and are resistant to damage from moisture, termites, rotting and warping when installed and maintained correctly. They are impact resistant, low maintenance and highly durable.

Shaping a Sustainable Future at James Hardie

Embedded in a foundation of Zero Harm, James Hardie's approach to sustainability puts people first with a focus on safety. Investing in a culture of safety strives to ensure our employees and business partners get home safely to their families, every day.

James Hardie's disciplined approach to Lean manufacturing delivers both strong operational and sustainability performance. From cultivating teamwork and empowerment in our people to resource conservation and waste reduction in our processes, James Hardie helps build better homes, with less. This in turn enables James Hardie to continue to invest in developing sustainable and thriving communities around the globe.

During fiscal year 2020, we continued our relentless drive to improve our ESG processes and practices. In doing so, we have made significant progress on our sustainability reporting journey.



Integrated approach to sustainability

James Hardie is undertaking a transformation to deliver greater value to stakeholders. Our global strategy for value creation embeds the sustainability principles and practices that inform our ESG strategy.

The leadership position we earn within the market every day extends to our sustainability objectives and our aim to be a leader in sustainability performance and reporting.

- We deliver long-term value through our responsibly produced line of high-quality, built-to-last products.
- Product design and innovation considers sustainability-related impacts and ongoing enhancements.
- Lean Manufacturing promotes resource conservation and waste reduction.
- Our people are at the heart of all we do. Fostering high levels of engagement and a culture in which people can thrive promotes shared success.
- The Zero Harm foundation prioritise the safety of our products and employees, partners, customers and communities.



In the coming years, we will continue to develop our sustainability strategy and define the next steps in our Environmental, Social & Governance (ESG) journey. Future areas of advancement include improving the quality of our sustainability reporting and Carbon Disclosure Project (CDP) submission using recognised frameworks (GRI Standards, SASB Sustainability Accounting Standards and TCFD recommendations), growing our internal ESG team, strengthening systems, setting targets, and planning initiatives to meet them.

Commitment to environmental reporting

James Hardie use recognised standards and methods as the basis for communicating relative environmental credentials with clients and stakeholders. James Hardie understands its role in providing standardised, trusted

and comprehensive data and information. James Hardie was an early adopter of Life Cycle Analysis (LCA). See James Hardie Technical Bulletin: 08, December 2011 for details. James Hardie was also an early adopter of Environmental Product Declarations in Australia, publishing third party verified life cycle information and data for our external claddings range in 2017. We believe this leadership position and transparency will not only set an example for industry, but also help all building professionals make better and more informed decisions.

James Hardie has decided to adopt the Global Reporting Initiatives (GRI) framework. GRI will provide a framework to report on material topics, their relative impacts and how they are managed, and is the most widely adopted framework for Environmental, Social and Governance reporting.



Linea™ Weatherboard – The Farm Estate, WA

Our long history of using life cycle assessment

As part of James Hardie's long-standing commitment to reducing environmental impacts of our products we have been working with Life Cycle Assessment (LCA) since 1999. LCA is an internationally standardised method for identifying and quantifying the impact of a product across its life cycle – from raw material extraction through to disposal/recycling/reuse. LCA provides James Hardie with the information to focus on the processes and materials that make the biggest contribution to the environmental impact of our products.

Overcoming challenges together

There are several major challenges for industry to be able to deliver buildings with lower life cycle carbon and environmental impacts, healthier environments for the occupants, ethical labour practices in supply chains and resilience against extreme weather events. James Hardie strives for continual improvements to manufacturing processes to reduce the environmental impact of our products over their full life cycle, and research has shown that our lightweight and durable products often have significant advantages and potential to contribute to a low carbon, low resource and resilient built environment.

To support this, James Hardie's Engineering Solutions Team work with architects and builders to assist them in arriving at bespoke solutions in conjunction with the MyHardies professional web portal that contains practical tools, resources and information. James Hardie's Estimations Team assist with ensuring minimal on-site wastage by helping designers optimise sheet layout and designs for maximum coverage and minimum wastage.

How the EPD can be used in the Green Star rating scheme

James Hardie's credentials, information and transparency can be used to obtain credit points under GBCA's Green Star rating tools, specifically relevant to the Life Cycle Impacts and Responsible Building Materials credits.

Green Star is the most commonly applied voluntary green building rating scheme in Australia. It is run by the Green Building Council of Australia (GBCA) with strong support from the built environment sector, government and academia.

James Hardie's fibre cement products and this EPD may help Green Star registered projects gain points in:

- Green Star® – Design and As Built:
 - » Credit 19A Life Cycle Impacts with up to 7 points available.
 - » Credit 21 Sustainable Products with up to 3 points available (James Hardie's EPD contributes with a Sustainability Factor of 0.75).
- Green Star® – Interiors:
 - » Credit 19 Life Cycle Assessment with up to 19 points available.
 - » Credit 21 Sustainable Products with up to 19 points available (James Hardie's EPD contributes with a Sustainability Factor of 0.75).

For projects using any of the above Green Star rating tool, up to an additional 3 points are available if Credit 19 is extended to reduce the embodied carbon through the Responsible Carbon Impact innovation challenge.

BPI Rating information for James Hardie's products can be found at <https://bpirating.com.au/search?keyword=james+hardie>



ExoTec Vero™ Façade Panel and System – 18 at Chatswood, NSW

LCA information

Product information

James Hardie building products provide a complete solution for creating well-designed homes. Made of fibre reinforced cement, they are available in numerous profiles and finishes for a range of interior and exterior building applications. There are 27 products included in this EPD. Table 4 presents them, their thickness, mass and intended uses, which are external cladding, eaves & soffits, weatherboard, building façade, commercial flooring, structural flooring, internal lining and decking.

TABLE 2 – PRODUCTS INCLUDED IN THE EPD

Product	Thickness (mm)	Mass (kg/m ²)	Type of use
HardieFlex™ sheet	4.5	6.4	External cladding
	6.0	8.7	External cladding
HardieFlex™ eaves	4.5	6.4	Eaves & soffits
HardieTex™ blue board system	7.5	10.6	External cladding
EasyLap™ panel	8.5	12.0	External cladding
PrimeLine™ weatherboard	9.0	12.7	Weatherboard
HardiePlank™ weatherboard	7.5	10.6	Weatherboard
PanelClad™ sheet	6.0	8.5	External cladding
ExoTec™ fixing system	9.0	16.1	Building façade
ComTex™ panel	9.0	12.7	Building façade
Scyon™ Matrix™ cladding	8.0	11.3	External cladding
Scyon™ Stria™ cladding	14.0	17.8	External cladding/ Weatherboard
Scyon™ Linea™ cladding	16.0	20.3	Weatherboard
Scyon™ Axon™ cladding	9.0	11.8	External cladding
HardiePanel™ compressed sheet	15.0	27.3	Commercial flooring
	18.0	32.8	Commercial flooring
	24.0	43.7	Commercial flooring
Scyon™ Secura™ interior flooring	19.0	26.8	Structural flooring
Scyon™ Secura™ exterior flooring	19.0	26.8	Structural flooring
	22.0	28.0	Structural flooring
PineRidge™ lining	6.0	8.5	Internal lining
Villaboard™ lining	6.0	8.5	Internal lining
	9.0	12.7	Internal lining
	12.0	16.9	Internal lining
Versilux™ lining	4.5	6.4	Internal lining
	6.0	8.5	Internal lining
HardieDeck™	19.0	34.6	Decking

UN CPC code: 37570

Geographical scope: Australia

Product life cycle overview

Details of LCA study

Declared unit

1m² of installed panel in Australia

Reference service life

The typical fibre cement building product life (Reference Service Life) is assumed to be the life of the building or typically 50+ years. For the purpose of this study, the default assessment was conducted over 50 years of use, excluding consideration of how the fibre cement influences the operational energy performance of the building.

Time representativeness

Data for the LCA is based on raw material requirements, manufacture and distribution for the year April 2016 – March 2017.

Database(s) and LCA software used

SimaPro (v8.4) was used for the LCA modelling, using background data from:

1. The Australian National Life Cycle Inventory Database [AusLCI] (2016)
2. Ecoinvent 3.3 database (Ecoinvent Centre, 2016)

Allocation

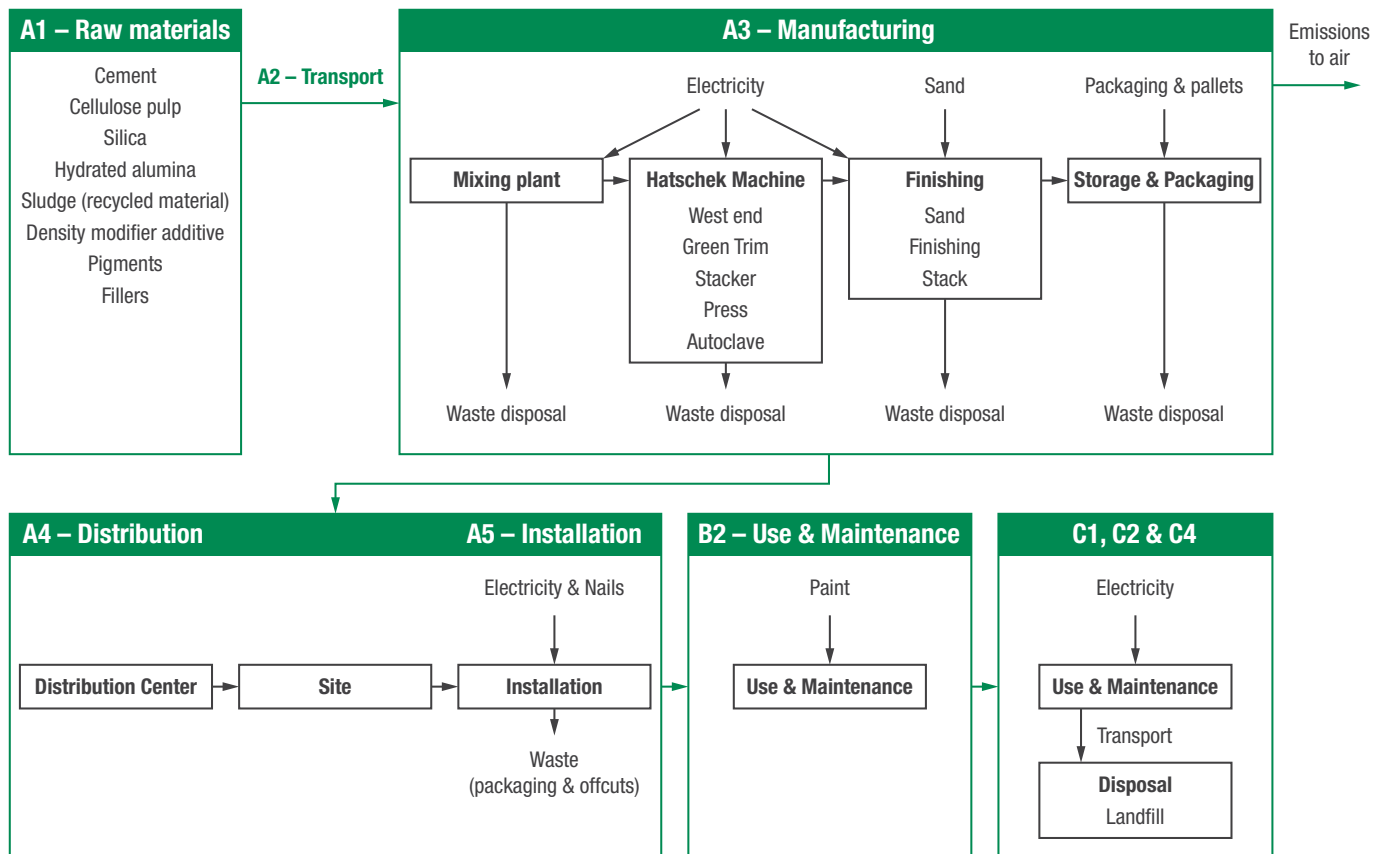
Allocation to co-products was not necessary since the manufacture of boards does not generate co-products to allocate to.

Data on inputs was measured by James Hardie per m² board produced. Allocation of inputs and outputs was done on a kg basis and converted to m² with area density information tables

Cut off criteria

Cut off criteria follow the product category rules of construction products, including 95% of total inflows to the upstream and core modules. Small amount exclusions include infrastructure, construction and production equipment not directly consume in the production process and personnel-related impacts.

FIGURE 2 – LIFE CYCLE DIAGRAM OF JAMES HARDIE'S PRODUCTS



Product life cycle overview (continued)

Description of system boundaries and excluded lifecycle stages

The scope of the LCA is from cradle to gate with options. Life cycle stages included are presented in the figure below. Modules A1 (Raw material supply), A2 (Transport of raw materials) and A3 (Manufacturing) are mandatory and modelled with own data and information from suppliers. Except for Module A4 (Transport to consumers) that also relies on own sales data, the other five modules have been modelled based on installation, maintenance and lifespan specifications of our products, with the following assumptions:

- Module A5 (Installation): Electricity (power tool usage) and accessories (joints, screws, coating and sealant) necessary to install the products. Model also includes packaging waste and product waste due to damaged panels and cuttings.
- Module B2 (Maintenance): Only repainting of products is necessary, every 5, 10 or 15 years depending on the product.
- Module C1 (Deconstruction & demolition): Electricity for deconstruction is assumed the same as the installation.
- Module C2 (Transport of end of life): Distance to landfill estimated from likely construction sites within major cities to main landfill sites for the area.
- Module C4 (Disposal): Conservative assumption that all products go to landfill as the end of life destination.

TABLE 3 – SCOPE OF THE EPD

Product stage			Construction		Use stage							End of life stage			
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Raw material supply	Transport	Manufacturing	Transport	Installation	Material emissions	Maintenance	Repair	Replacement	Refurbishment	Operational energy	Operational water	Deconstruction/ Demolition	Transport	Waste processing	Disposal
X	X	X	X	X	MND	X	MND	MND	MND	MND	MND	X	X	MND	X

X – module included in EPD **MND** – Module not declared (does not indicate zero impact result)

The following life cycle stages have not been assessed, as they are deemed not applicable for James Hardie fibre cement products.

Cladding:

- Material emissions from usage (B1): There are no expected emissions from the installed panels.
- Repair (B3): The installed panels are not repaired, at least not according to any systematic and/or foreseeable regime over the product service life, the amount of repair is assumed to be zero for the purpose of this LCA.
- Replacement (B4): The installed panels are not replaced, at least not according to any systematic and/or foreseeable regime over the product service life, the amount of replacement is assumed to be zero for the purpose of this LCA.
- Refurbishment (B5): The installed panels are not refurbished, at least not according to any systematic and/or foreseeable regime over the product service life, the amount of refurbishment is assumed to be zero for the purpose of this LCA.

Data quality

Data quality for the foreground data was assessed in terms of geographic and temporal representativeness. All data sources for modules A1 to A4 are considered good quality, while A5, B2, C1, C2 and C4 are considered medium quality, since they rely on assumptions according to expert knowledge based on product characteristics of installation, maintenance and lifespan.

TABLE 4 – DATA QUALITY

Module	Collected foreground data	Source	Year	Quality
General	- Production volumes per plant - Product dimensions - Product density	James Hardie	2017	First hand data. Good.
A1	Raw material quantities (feedmix)	James Hardie	2017	First hand data. Good.
A2	- Location of suppliers - Location of manufacture plants	James Hardie – distances calculated with Google Maps®	2017	First hand data. Good.
A3	- Energy inputs - Waste outputs - Packaging use	James Hardie	2017	First hand data. Good.
	Direct emissions to air	- National Pollutant Inventory (report supplied by James Hardie) - Subtracted on-site fuel use emissions, based on AusLCI emission factors, to avoid double counting.	2017	First hand data. Good.
A4	Sales data	James Hardie Distances calculated with GoogleMaps®	2017	First hand data, good.
A5	Inputs for installation process	Assumptions based on product specification provided by James Hardie	2017	Second hand data, medium.
B2	Inputs for maintenance	Assumptions based on product specification provided by James Hardie	2017	Second hand data, medium.
C1	Inputs for deconstruction & demolition	Assumptions based on product specification provided by James Hardie	2017	Second hand data, medium.
C2	Distance to end of life destination	Assumption	2017	Second hand data, medium.
C4	End of life destination	Assumptions based on product specification provided by James Hardie	2017	Second hand data, medium.

Assumptions and limitations

TABLE 5 – ASSUMPTIONS AND LIMITATIONS

Assumption or limitation	Potential impact on LCA results	Discussion
Raw material data for panel production is based on generic information	Significant	The EN 15804 standard permits generic data for upstream processes, however, this is where the main impacts are for panels across the life cycle. The LCI includes supplier specific data for the main components.
Exclusion of employees, capital good and infrastructure	Minor	Environmental impacts relating to personnel, infrastructure and production equipment not directly consumed in the process are excluded from the system boundary as per the Product Category Rules (2012:01 Construction products and construction services).
End of life scenario	Low to moderate, conservative	For simplicity and lacking comprehensive data and statistics on the fate of used panels, all panels are assumed to be disposed in landfill after use.
Impact threshold and truncation error	Unknown, this study has not attempted to quantify the truncation error	Impact thresholds and truncation error is a perennial issue for all process-based LCIs. Exclusion of multiple small components in an LCI (even if individually they are below a small chosen % level) can lead to non-negligible overall impacts. This is particularly true when comparing very different options, as is the case of the different types of wall systems.

Content declaration

Product

TABLE 6 – CONTENT DECLARATION

Assumption or limitation	Potential impact on LCA results	Discussion
Sand	Silica	7631-86-9
Portland cement	Various- nothing hazardous	-
Cellulose pulp	Cellulose	9004-34-6
Hydrated alumina	Aluminium hydroxide	21645-51-2
Sludge (from internal recycling) and water	-	-

Table 6 lists the main materials used to produce fibre cement. For construction product EPDs compliant with EN 15804, the content declaration shall list, as a minimum, substances contained in the products that are listed in the “Candidate List of Substances of Very High Concern for Authorisation” when their content exceeds the limits for registration with the European Chemicals Agency.

Environmental performance

The environmental indicators considered in this EPD are listed in the table below. All further tables from this point will contain the abbreviation only.

TABLE 7 – ENVIRONMENTAL INDICATORS

Impact Category	Abbreviation	Measurement Unit
Potential Environmental Impacts		
Global warming potential	GWP	kg CO ₂ eq.
Depletion potential of the stratospheric ozone layer	ODP	kg CFC 11 eq.
Acidification potential	AP	kg SO ₂ eq.
Eutrophication potential	EP	kg PO ₄ ³⁻ eq.
Formation potential of tropospheric ozone	POCP	kg C ₂ H ₄ eq.
Abiotic depletion potential (elements)	ADPE	kg Sb eq.
Abiotic depletion potential (fossil resources)	ADPF	MJ, net calorific value
Resource Use		
Primary energy resources – Renewable	PERE	MJ, net calorific value
Use of renewable primary energy resources used as raw materials	PERM	MJ, net calorific value
Total use of renewable primary energy resources	PERT	MJ, net calorific value
Use of non-renewable primary energy excluding raw materials	PENRE	MJ, net calorific value
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ, net calorific value
Total use of non-renewable primary energy resources	PENRT	MJ, net calorific value
Use of secondary material	SM	kg
Use of renewable secondary fuels	RSF	MJ, net calorific value
Use of non-renewable secondary fuels	NRSF	MJ, net calorific value
Use of net fresh water	FW	m ³

Impact Category	Abbreviation	Measurement Unit
Output Categories		
Hazardous waste disposed	HWD	kg
Non-hazardous waste disposed	NHWD	kg
Radioactive waste disposed	RWD	kg
Components for reuse	CRE	kg
Materials for recycling	MRE	kg
Materials for energy recovery	MER	MJ
Exported energy	EE	MJ

The following tables present the environmental information produced using LCA, based on modelling using background data. For products produced at both Carole Park and Rosehill, the average environmental performance-related information is presented in this section. Those results presented as INA refer to indicator not assessed due to data not available (only for non-mandatory modules).

In summary

Potential environmental impact

- Modules A1-A3 (cradle to gate) have the higher contribution to most of potential environmental impacts, ranging from 21% to 57%. The highest impact categories are global warming potential, acidification potential, eutrophication potential and abiotic resource depletion potential- fossil fuels. Specifically, A1-A2 (raw material supply and transport) have slightly higher impact than A3. For the first module, Portland cement is the main contributor, while for the second is the energy in the manufacturing of the products that has the higher contribution, for global warming potential.
- Module B2 – maintenance has a higher impact than Modules A1-A3 for abiotic resource depletion potential – elements (48%) and ozone depletion potential (45%), due to the acrylic varnish for re-painting.
- The impact of Module A5 – installation ranges from 12% to 20%, the highest corresponding to abiotic resource depletion potential – elements and fossil fuel (20% and 19% respectively), because of the initial paint and the installation electricity in the process.
- Module A4 – average transport to Australian consumers, has the second highest contribution acidification potential (23%). The rest of impact categories range from 4% to 15%, depending on impact. Sea shipments have a higher impact contribution to this module.
- The end of life stages (Modules C1, C2 and C4) have low impact contribution, around 0.1% to 5% on average for the different impact categories.

Potential environmental impact

TABLE 8

Potential environmental impacts of 1m² HardieFlex™ sheet 4.5mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	4.46E+00	6.74E-01	1.66E+00	1.15E+00	2.03E-01	1.36E-02	1.27E-01
ODP	kg CFC 11 eq.	6.65E-08	7.17E-08	4.99E-08	1.19E-07	2.53E-10	1.71E-09	1.07E-08
AP	kg SO ₂ eq.	1.25E-02	8.13E-03	3.30E-03	3.69E-03	2.74E-04	4.39E-05	5.17E-04
EP	kg PO ₄ ³⁻ eq.	2.99E-03	8.62E-04	9.59E-04	1.71E-03	9.38E-05	9.52E-06	1.30E-04
POCP	kg C ₂ H ₄ eq.	6.73E-04	2.87E-04	2.95E-04	3.07E-04	7.54E-06	2.83E-06	3.18E-05
ADPE	kg Sb eq.	2.23E-06	1.01E-06	2.54E-06	4.67E-06	1.83E-07	4.18E-08	5.20E-07
ADPF	MJ, net calorific value	4.12E+01	9.24E+00	2.18E+01	2.12E+01	2.30E+00	2.02E-01	1.84E+00

TABLE 9

Potential environmental impacts of 1m² HardieFlex™ sheet 4.5mm eaves

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	4.16E+00	5.47E-01	1.66E+00	1.15E+00	2.03E-01	1.36E-02	1.27E-01
ODP	kg CFC 11 eq.	6.11E-08	5.86E-08	4.99E-08	1.19E-07	2.53E-10	1.71E-09	1.07E-08
AP	kg SO ₂ eq.	1.17E-02	6.45E-03	3.30E-03	3.69E-03	2.74E-04	4.39E-05	5.17E-04
EP	kg PO ₄ ³⁻ eq.	2.81E-03	6.90E-04	9.59E-04	1.71E-03	9.38E-05	9.52E-06	1.30E-04
POCP	kg C ₂ H ₄ eq.	6.55E-04	2.29E-04	2.95E-04	3.07E-04	7.54E-06	2.83E-06	3.18E-05
ADPE	kg Sb eq.	2.02E-06	8.46E-07	2.54E-06	4.67E-06	1.83E-07	4.18E-08	5.20E-07
ADPF	MJ, net calorific value	3.97E+01	7.52E+00	2.18E+01	2.12E+01	2.30E+00	2.02E-01	1.84E+00

TABLE 10

Potential environmental impacts of 1m² Versilux™ lining 4.5mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	4.35E+00	1.09E-01	1.66E+00	1.53E+00	2.03E-01	1.36E-02	1.27E-01
ODP	kg CFC 11 eq.	6.41E-08	1.38E-08	4.99E-08	1.59E-07	2.53E-10	1.71E-09	1.07E-08
AP	kg SO ₂ eq.	1.34E-02	3.54E-04	3.30E-03	4.91E-03	2.74E-04	4.39E-05	5.17E-04
EP	kg PO ₄ ³⁻ eq.	3.12E-03	7.67E-05	9.59E-04	2.28E-03	9.38E-05	9.52E-06	1.30E-04
POCP	kg C ₂ H ₄ eq.	7.36E-04	2.28E-05	2.95E-04	4.10E-04	7.54E-06	2.83E-06	3.18E-05
ADPE	kg Sb eq.	2.25E-06	3.37E-07	2.54E-06	6.23E-06	1.83E-07	4.18E-08	5.20E-07
ADPF	MJ, net calorific value	4.07E+01	1.62E+00	2.18E+01	2.83E+01	2.30E+00	2.02E-01	1.84E+00

TABLE 11

Potential environmental impacts of 1m² HardieFlex™ sheet 6mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	5.92E+00	5.44E-01	1.66E+00	1.15E+00	2.03E-01	1.79E-02	1.68E-01
ODP	kg CFC 11 eq.	9.23E-08	6.23E-08	4.99E-08	1.19E-07	2.53E-10	2.26E-09	1.41E-08
AP	kg SO ₂ eq.	1.76E-02	4.62E-03	3.30E-03	3.69E-03	2.74E-04	5.79E-05	6.81E-04
EP	kg PO ₄ ³⁻ eq.	4.13E-03	5.69E-04	9.59E-04	1.71E-03	9.38E-05	1.25E-05	1.71E-04
POCP	kg C ₂ H ₄ eq.	8.61E-04	1.84E-04	2.95E-04	3.07E-04	7.54E-06	3.73E-06	4.19E-05
ADPE	kg Sb eq.	3.08E-06	1.16E-06	2.54E-06	4.67E-06	1.83E-07	5.51E-08	6.85E-07
ADPF	MJ, net calorific value	5.40E+01	7.72E+00	2.18E+01	2.12E+01	2.30E+00	2.66E-01	2.42E+00

TABLE 12

Potential environmental impacts of 1m² PineRidge™ lining 6mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	5.95E+00	2.72E-01	1.66E+00	1.15E+00	2.03E-01	1.79E-02	1.68E-01
ODP	kg CFC 11 eq.	9.62E-08	3.43E-08	4.99E-08	1.19E-07	2.53E-10	2.26E-09	1.41E-08
AP	kg SO ₂ eq.	1.87E-02	8.80E-04	3.30E-03	3.69E-03	2.74E-04	5.79E-05	6.81E-04
EP	kg PO ₄ ³⁻ eq.	3.86E-03	1.70E-04	4.94E-04	5.82E-04	7.59E-05	1.12E-05	1.49E-04
POCP	kg C ₂ H ₄ eq.	9.13E-04	5.67E-05	2.95E-04	3.07E-04	7.54E-06	3.73E-06	4.19E-05
ADPE	kg Sb eq.	3.21E-06	8.38E-07	2.54E-06	4.67E-06	1.83E-07	5.51E-08	6.85E-07
ADPF	MJ, net calorific value	5.38E+01	4.04E+00	2.18E+01	2.12E+01	2.30E+00	2.66E-01	2.42E+00

TABLE 13

Potential environmental impacts of 1m² Villaboard™ lining 6mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	5.38E+00	5.08E-01	1.66E+00	1.53E+00	2.03E-01	1.79E-02	1.68E-01
ODP	kg CFC 11 eq.	7.66E-08	5.16E-08	4.99E-08	1.59E-07	2.53E-10	2.26E-09	1.41E-08
AP	kg SO ₂ eq.	1.50E-02	7.28E-03	3.30E-03	4.91E-03	2.74E-04	5.79E-05	6.81E-04
EP	kg PO ₄ ³⁻ eq.	3.57E-03	7.25E-04	9.59E-04	2.28E-03	9.38E-05	1.25E-05	1.71E-04
POCP	kg C ₂ H ₄ eq.	7.64E-04	2.44E-04	2.95E-04	4.10E-04	7.54E-06	3.73E-06	4.19E-05
ADPE	kg Sb eq.	2.73E-06	5.55E-07	2.54E-06	6.23E-06	1.83E-07	5.51E-08	6.85E-07
ADPF	MJ, net calorific value	5.09E+01	6.82E+00	2.18E+01	2.83E+01	2.30E+00	2.66E-01	2.42E+00

Potential environmental impact (continued)

TABLE 14

Potential environmental impacts of 1m² PanelClad™ sheet 6mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	5.82E+00	1.13E+00	1.66E+00	1.15E+00	2.03E-01	1.79E-02	1.68E-01
ODP	kg CFC 11 eq.	8.21E-08	1.33E-07	4.99E-08	1.19E-07	2.53E-10	2.26E-09	1.41E-08
AP	kg SO ₂ eq.	1.48E-02	7.86E-03	3.30E-03	3.69E-03	2.74E-04	5.79E-05	6.81E-04
EP	kg PO ₄ ³⁻ eq.	3.65E-03	1.07E-03	9.59E-04	1.71E-03	9.38E-05	1.25E-05	1.71E-04
POCP	kg C ₂ H ₄ eq.	7.23E-04	3.39E-04	2.95E-04	3.07E-04	7.54E-06	3.73E-06	4.19E-05
ADPE	kg Sb eq.	2.76E-06	2.73E-06	2.54E-06	4.67E-06	1.83E-07	5.51E-08	6.85E-07
ADPF	MJ, net calorific value	5.46E+01	1.62E+01	2.18E+01	2.12E+01	2.30E+00	2.66E-01	2.42E+00

TABLE 15

Potential environmental impacts of 1m² Versilux™ lining 6mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	5.44E+00	1.67E+00	1.66E+00	1.53E+00	2.03E-01	1.79E-02	1.68E-01
ODP	kg CFC 11 eq.	8.37E-08	2.07E-07	4.99E-08	1.59E-07	2.53E-10	2.26E-09	1.41E-08
AP	kg SO ₂ eq.	1.70E-02	6.90E-03	3.30E-03	4.91E-03	2.74E-04	5.79E-05	6.81E-04
EP	kg PO ₄ ³⁻ eq.	3.93E-03	1.27E-03	9.59E-04	2.28E-03	9.38E-05	1.25E-05	1.71E-04
POCP	kg C ₂ H ₄ eq.	8.63E-04	3.85E-04	2.95E-04	4.10E-04	7.54E-06	3.73E-06	4.19E-05
ADPE	kg Sb eq.	2.91E-06	4.86E-06	2.54E-06	6.23E-06	1.83E-07	5.51E-08	6.85E-07
ADPF	MJ, net calorific value	5.02E+01	2.45E+01	2.18E+01	2.83E+01	2.30E+00	2.66E-01	2.42E+00

TABLE 16

Potential environmental impacts of 1m² HardieTex™ blue board system 7.5mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	6.61E+00	7.02E-01	2.86E+00	1.53E+00	2.03E-01	1.79E-02	1.68E-01
ODP	kg CFC 11 eq.	9.96E-08	7.58E-08	8.25E-08	1.59E-07	2.53E-10	2.26E-09	1.41E-08
AP	kg SO ₂ eq.	1.84E-02	7.99E-03	7.89E-03	4.91E-03	2.74E-04	5.79E-05	6.81E-04
EP	kg PO ₄ ³⁻ eq.	4.41E-03	8.67E-04	1.81E-03	2.28E-03	9.38E-05	1.25E-05	1.71E-04
POCP	kg C ₂ H ₄ eq.	8.78E-04	2.87E-04	5.63E-04	4.10E-04	7.54E-06	3.73E-06	4.19E-05
ADPE	kg Sb eq.	3.30E-06	1.14E-06	4.65E-06	6.23E-06	1.83E-07	5.51E-08	6.85E-07
ADPF	MJ, net calorific value	6.28E+01	9.68E+00	4.24E+01	2.83E+01	2.30E+00	2.66E-01	2.42E+00

TABLE 17

Potential environmental impacts of 1m² HardiePlank™ weatherboard 7.5mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	7.26E+00	3.86E+00	1.66E+00	1.15E+00	2.03E-01	2.22E-02	2.08E-01
ODP	kg CFC 11 eq.	1.02E-07	3.91E-07	4.99E-08	1.19E-07	2.53E-10	2.80E-09	1.75E-08
AP	kg SO ₂ eq.	1.85E-02	5.59E-02	3.30E-03	3.69E-03	2.74E-04	7.18E-05	8.45E-04
EP	kg PO ₄ ³⁻ eq.	4.54E-03	5.55E-03	9.59E-04	1.71E-03	9.38E-05	1.56E-05	2.12E-04
POCP	kg C ₂ H ₄ eq.	8.36E-04	1.87E-03	2.95E-04	3.07E-04	7.54E-06	4.63E-06	5.20E-05
ADPE	kg Sb eq.	3.43E-06	4.11E-06	2.54E-06	4.67E-06	1.83E-07	6.84E-08	8.51E-07
ADPF	MJ, net calorific value	6.81E+01	5.18E+01	2.18E+01	2.12E+01	2.30E+00	3.30E-01	3.01E+00

TABLE 18

Potential environmental impacts of 1m² Scyon Matrix™ cladding 8mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	1.04E+01	5.67E-01	1.66E+00	1.15E+00	2.03E-01	2.36E-02	2.22E-01
ODP	kg CFC 11 eq.	1.28E-07	7.03E-08	4.99E-08	1.19E-07	2.53E-10	2.98E-09	1.86E-08
AP	kg SO ₂ eq.	2.94E-02	2.40E-03	3.30E-03	3.69E-03	2.74E-04	7.65E-05	9.00E-04
EP	kg PO ₄ ³⁻ eq.	7.03E-03	4.35E-04	9.59E-04	1.71E-03	9.38E-05	1.66E-05	2.26E-04
POCP	kg C ₂ H ₄ eq.	1.33E-03	1.32E-04	2.95E-04	3.07E-04	7.54E-06	4.93E-06	5.54E-05
ADPE	kg Sb eq.	4.43E-06	1.65E-06	2.54E-06	4.67E-06	1.83E-07	7.28E-08	9.06E-07
ADPF	MJ, net calorific value	1.02E+02	8.35E+00	2.18E+01	2.12E+01	2.30E+00	3.51E-01	3.20E+00

TABLE 19

Potential environmental impacts of 1m² EasyLap™ panel 8.5mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	7.41E+00	4.88E+00	1.66E+00	1.15E+00	2.03E-01	2.51E-02	2.35E-01
ODP	kg CFC 11 eq.	1.04E-07	4.85E-07	4.99E-08	1.19E-07	2.53E-10	3.16E-09	1.97E-08
AP	kg SO ₂ eq.	1.84E-02	7.50E-02	3.30E-03	3.69E-03	2.74E-04	8.11E-05	9.54E-04
EP	kg PO ₄ ³⁻ eq.	4.57E-03	7.30E-03	9.59E-04	1.71E-03	9.38E-05	1.76E-05	2.40E-04
POCP	kg C ₂ H ₄ eq.	8.36E-04	2.47E-03	2.95E-04	3.07E-04	7.54E-06	5.23E-06	5.88E-05
ADPE	kg Sb eq.	3.42E-06	4.43E-06	2.54E-06	4.67E-06	1.83E-07	7.72E-08	9.61E-07
ADPF	MJ, net calorific value	7.16E+01	6.49E+01	2.18E+01	2.12E+01	2.30E+00	3.72E-01	3.40E+00

Potential environmental impact (continued)

TABLE 20

Potential environmental impacts of 1m² Scyon Axon™ cladding 9mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	6.94E+00	4.26E+00	1.66E+00	1.15E+00	2.03E-01	2.47E-02	2.32E-01
ODP	kg CFC 11 eq.	1.29E-07	4.32E-07	4.99E-08	1.19E-07	2.53E-10	3.12E-09	1.94E-08
AP	kg SO ₂ eq.	2.31E-02	6.12E-02	3.30E-03	3.69E-03	2.74E-04	7.99E-05	9.40E-04
EP	kg PO ₄ ³⁻ eq.	5.28E-03	6.09E-03	9.59E-04	1.71E-03	9.38E-05	1.73E-05	2.36E-04
POCP	kg C ₂ H ₄ eq.	1.07E-03	2.05E-03	2.95E-04	3.07E-04	7.54E-06	5.15E-06	5.79E-05
ADPE	kg Sb eq.	4.23E-06	4.61E-06	2.54E-06	4.67E-06	1.83E-07	7.61E-08	9.46E-07
ADPF	MJ, net calorific value	6.19E+01	5.71E+01	2.18E+01	2.12E+01	2.30E+00	3.67E-01	3.35E+00

TABLE 21

Potential environmental impacts of 1m² ComTex™ panel and fixing system 9mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	7.16E+00	2.44E+00	1.66E+00	1.53E+00	2.03E-01	2.65E-02	2.49E-01
ODP	kg CFC 11 eq.	1.27E-07	2.91E-07	4.99E-08	1.59E-07	2.53E-10	3.34E-09	2.08E-08
AP	kg SO ₂ eq.	2.34E-02	1.49E-02	3.30E-03	4.91E-03	2.74E-04	8.58E-05	1.01E-03
EP	kg PO ₄ ³⁻ eq.	5.33E-03	2.17E-03	9.59E-04	2.28E-03	9.38E-05	1.86E-05	2.54E-04
POCP	kg C ₂ H ₄ eq.	1.08E-03	6.81E-04	2.95E-04	4.10E-04	7.54E-06	5.53E-06	6.21E-05
ADPE	kg Sb eq.	4.08E-06	6.24E-06	2.54E-06	6.23E-06	1.83E-07	8.17E-08	1.02E-06
ADPF	MJ, net calorific value	6.47E+01	3.52E+01	2.18E+01	2.83E+01	2.30E+00	3.94E-01	3.59E+00

TABLE 22

Potential environmental impacts of 1m² Villaboard™ lining 9mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	7.93E+00	5.61E-01	1.66E+00	1.53E+00	2.03E-01	2.65E-02	2.49E-01
ODP	kg CFC 11 eq.	1.13E-07	6.64E-08	4.99E-08	1.59E-07	2.53E-10	3.34E-09	2.08E-08
AP	kg SO ₂ eq.	2.22E-02	3.81E-03	3.30E-03	4.91E-03	2.74E-04	8.58E-05	1.01E-03
EP	kg PO ₄ ³⁻ eq.	5.28E-03	5.24E-04	9.59E-04	2.28E-03	9.38E-05	1.86E-05	2.54E-04
POCP	kg C ₂ H ₄ eq.	1.01E-03	1.66E-04	2.95E-04	4.10E-04	7.54E-06	5.53E-06	6.21E-05
ADPE	kg Sb eq.	3.98E-06	1.37E-06	2.54E-06	6.23E-06	1.83E-07	8.17E-08	1.02E-06
ADPF	MJ, net calorific value	7.50E+01	8.08E+00	2.18E+01	2.83E+01	2.30E+00	3.94E-01	3.59E+00

TABLE 23

Potential environmental impacts of 1m² PrimeLine™ weatherboard 9mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	8.96E+00	1.87E+00	1.66E+00	1.15E+00	2.03E-01	2.65E-02	2.49E-01
ODP	kg CFC 11 eq.	1.29E-07	2.17E-07	4.99E-08	1.19E-07	2.53E-10	3.34E-09	2.08E-08
AP	kg SO ₂ eq.	2.32E-02	1.47E-02	3.30E-03	3.69E-03	2.74E-04	8.58E-05	1.01E-03
EP	kg PO ₄ ³⁻ eq.	5.60E-03	1.88E-03	9.59E-04	1.71E-03	9.38E-05	1.86E-05	2.54E-04
POCP	kg C ₂ H ₄ eq.	1.02E-03	6.04E-04	2.95E-04	3.07E-04	7.54E-06	5.53E-06	6.21E-05
ADPE	kg Sb eq.	4.70E-06	4.21E-06	2.54E-06	4.67E-06	1.83E-07	8.17E-08	1.02E-06
ADPF	MJ, net calorific value	8.59E+01	2.67E+01	2.18E+01	2.12E+01	2.30E+00	3.94E-01	3.59E+00

TABLE 24

Potential environmental impacts of 1m² ExoTec™ façade panel & fixing system 9mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	9.95E+00	2.68E+00	1.88E+00	1.15E+00	2.03E-01	3.35E-02	3.14E-01
ODP	kg CFC 11 eq.	1.71E-07	3.16E-07	5.61E-08	1.19E-07	2.53E-10	4.23E-09	2.63E-08
AP	kg SO ₂ eq.	3.18E-02	1.84E-02	3.71E-03	3.69E-03	2.74E-04	1.08E-04	1.27E-03
EP	kg PO ₄ ³⁻ eq.	7.47E-03	2.52E-03	1.11E-03	1.71E-03	9.38E-05	2.35E-05	3.20E-04
POCP	kg C ₂ H ₄ eq.	1.41E-03	7.98E-04	3.23E-04	3.07E-04	7.54E-06	6.99E-06	7.85E-05
ADPE	kg Sb eq.	5.64E-06	6.50E-06	3.20E-06	4.67E-06	1.83E-07	1.03E-07	1.28E-06
ADPF	MJ, net calorific value	9.46E+01	3.85E+01	2.44E+01	2.12E+01	2.30E+00	4.97E-01	4.54E+00

TABLE 25

Potential environmental impacts of 1m² Villaboard™ lining 12mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	1.03E+01	1.10E+00	1.66E+00	1.53E+00	2.03E-01	3.51E-02	3.30E-01
ODP	kg CFC 11 eq.	1.35E-07	1.39E-07	4.99E-08	1.59E-07	2.53E-10	4.43E-09	2.76E-08
AP	kg SO ₂ eq.	2.54E-02	3.57E-03	3.30E-03	4.91E-03	2.74E-04	1.14E-04	1.34E-03
EP	kg PO ₄ ³⁻ eq.	6.28E-03	7.74E-04	9.59E-04	2.28E-03	9.38E-05	2.46E-05	3.36E-04
POCP	kg C ₂ H ₄ eq.	1.06E-03	2.30E-04	2.95E-04	4.10E-04	7.54E-06	7.33E-06	8.23E-05
ADPE	kg Sb eq.	4.81E-06	3.40E-06	2.54E-06	6.23E-06	1.83E-07	1.08E-07	1.35E-06
ADPF	MJ, net calorific value	9.97E+01	1.64E+01	2.18E+01	2.83E+01	2.30E+00	5.22E-01	4.76E+00

Potential environmental impact (continued)

TABLE 26

Potential environmental impacts of 1m² Scyon Stria™ cladding 14mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	1.30E+01	1.07E+00	1.66E+00	1.15E+00	2.03E-01	4.20E-02	3.94E-01
ODP	kg CFC 11 eq.	1.94E-07	1.14E-07	4.99E-08	1.19E-07	2.53E-10	5.30E-09	3.30E-08
AP	kg SO ₂ eq.	3.71E-02	1.32E-02	3.30E-03	3.69E-03	2.74E-04	1.36E-04	1.60E-03
EP	kg PO ₄ ³⁻ eq.	8.72E-03	1.39E-03	9.59E-04	1.71E-03	9.38E-05	2.95E-05	4.02E-04
POCP	kg C ₂ H ₄ eq.	1.52E-03	4.62E-04	2.95E-04	3.07E-04	7.54E-06	8.77E-06	9.85E-05
ADPE	kg Sb eq.	6.57E-06	1.57E-06	2.54E-06	4.67E-06	1.83E-07	1.29E-07	1.61E-06
ADPF	MJ, net calorific value	1.17E+02	1.47E+01	2.18E+01	2.12E+01	2.30E+00	6.24E-01	5.70E+00

TABLE 27

Potential environmental impacts of 1m² HardiePanel™ compressed sheet 15mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	2.02E+01	3.65E+00	1.66E+00	0	2.03E-01	5.63E-02	5.28E-01
ODP	kg CFC 11 eq.	3.22E-07	4.41E-07	4.99E-08	0	2.53E-10	7.10E-09	4.42E-08
AP	kg SO ₂ eq.	6.24E-02	2.08E-02	3.30E-03	0	2.74E-04	1.82E-04	2.14E-03
EP	kg PO ₄ ³⁻ eq.	1.27E-02	2.89E-03	4.94E-04	0	7.59E-05	3.51E-05	4.68E-04
POCP	kg C ₂ H ₄ eq.	2.42E-03	9.83E-04	2.95E-04	0	7.54E-06	1.17E-05	1.32E-04
ADPE	kg Sb eq.	1.05E-05	9.64E-06	2.54E-06	0	1.83E-07	1.73E-07	2.16E-06
ADPF	MJ, net calorific value	1.79E+02	5.31E+01	2.18E+01	0	2.30E+00	8.35E-01	7.62E+00

TABLE 28

Potential environmental impacts of 1m² Scyon Linea™ cladding 16mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	1.52E+01	1.96E+00	1.66E+00	1.15E+00	2.03E-01	4.20E-02	3.94E-01
ODP	kg CFC 11 eq.	2.04E-07	1.89E-07	4.99E-08	1.19E-07	2.53E-10	5.30E-09	3.30E-08
AP	kg SO ₂ eq.	3.86E-02	3.26E-02	3.30E-03	3.69E-03	2.74E-04	1.36E-04	1.60E-03
EP	kg PO ₄ ³⁻ eq.	9.25E-03	3.09E-03	9.59E-04	1.71E-03	9.38E-05	2.95E-05	4.02E-04
POCP	kg C ₂ H ₄ eq.	1.49E-03	1.05E-03	2.95E-04	3.07E-04	7.54E-06	8.77E-06	9.85E-05
ADPE	kg Sb eq.	7.23E-06	1.32E-06	2.54E-06	4.67E-06	1.83E-07	1.29E-07	1.61E-06
ADPF	MJ, net calorific value	1.44E+02	2.57E+01	2.18E+01	2.12E+01	2.30E+00	6.24E-01	5.70E+00

TABLE 29

Potential environmental impacts of 1m² HardiePanel™ compressed sheet 18mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	2.43E+01	4.90E+00	1.66E+00	0	2.03E-01	6.74E-02	6.32E-01
ODP	kg CFC 11 eq.	3.86E-07	5.70E-07	4.99E-08	0	2.53E-10	8.50E-09	5.30E-08
AP	kg SO ₂ eq.	7.48E-02	3.73E-02	3.30E-03	0	2.74E-04	2.18E-04	2.56E-03
EP	kg PO ₄ ³⁻ eq.	1.52E-02	4.53E-03	4.94E-04	0	7.59E-05	4.21E-05	5.61E-04
POCP	kg C ₂ H ₄ eq.	2.85E-03	1.55E-03	2.95E-04	0	7.54E-06	1.41E-05	1.58E-04
ADPE	kg Sb eq.	1.26E-05	1.12E-05	2.54E-06	0	1.83E-07	2.08E-07	2.58E-06
ADPF	MJ, net calorific value	2.15E+02	7.00E+01	2.18E+01	0	2.30E+00	1.00E+00	9.13E+00

TABLE 30

Potential environmental impacts of 1m² Scyon Secura™ interior flooring 19mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	2.03E+01	3.92E+00	1.66E+00	0	2.03E-01	5.53E-02	5.18E-01
ODP	kg CFC 11 eq.	3.11E-07	4.21E-07	4.99E-08	0	2.53E-10	6.97E-09	4.34E-08
AP	kg SO ₂ eq.	5.54E-02	4.53E-02	3.30E-03	0	2.74E-04	1.79E-04	2.10E-03
EP	kg PO ₄ ³⁻ eq.	1.20E-02	4.67E-03	4.94E-04	0	7.59E-05	3.45E-05	4.60E-04
POCP	kg C ₂ H ₄ eq.	2.04E-03	1.62E-03	2.95E-04	0	7.54E-06	1.15E-05	1.29E-04
ADPE	kg Sb eq.	1.11E-05	6.20E-06	2.54E-06	0	1.83E-07	1.70E-07	2.12E-06
ADPF	MJ, net calorific value	1.91E+02	5.39E+01	2.18E+01	0	2.30E+00	8.21E-01	7.49E+00

TABLE 31

Potential environmental impacts of 1m² Scyon Secura™ exterior flooring 19mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	2.08E+01	2.11E+00	1.66E+00	0	2.03E-01	5.53E-02	5.18E-01
ODP	kg CFC 11 eq.	4.98E-07	2.08E-07	4.99E-08	0	2.53E-10	6.97E-09	4.34E-08
AP	kg SO ₂ eq.	5.70E-02	3.27E-02	3.30E-03	0	2.74E-04	1.79E-04	2.10E-03
EP	kg PO ₄ ³⁻ eq.	1.24E-02	3.08E-03	4.94E-04	0	7.59E-05	3.45E-05	4.60E-04
POCP	kg C ₂ H ₄ eq.	2.17E-03	1.08E-03	2.95E-04	0	7.54E-06	1.15E-05	1.29E-04
ADPE	kg Sb eq.	1.25E-05	1.83E-06	2.54E-06	0	1.83E-07	1.70E-07	2.12E-06
ADPF	MJ, net calorific value	1.99E+02	2.79E+01	2.18E+01	0	2.30E+00	8.21E-01	7.49E+00

Potential environmental impact (continued)

TABLE 32

Potential environmental impacts of 1m² HardieDeck™ system 19mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	1.89E+01	1.02E+01	1.66E+00	1.91E+00	2.03E-01	7.11E-02	6.67E-01
ODP	kg CFC 11 eq.	3.56E-07	1.08E-06	4.99E-08	1.98E-07	2.53E-10	8.97E-09	5.59E-08
AP	kg SO ₂ eq.	6.27E-02	1.24E-01	3.30E-03	6.14E-03	2.74E-04	2.30E-04	2.71E-03
EP	kg PO ₄ ³⁻ eq.	1.46E-02	1.31E-02	9.59E-04	2.85E-03	9.38E-05	4.98E-05	6.80E-04
POCP	kg C ₂ H ₄ eq.	2.51E-03	4.37E-03	2.95E-04	5.12E-04	7.54E-06	1.48E-05	1.67E-04
ADPE	kg Sb eq.	1.15E-05	1.50E-05	2.54E-06	7.79E-06	1.83E-07	2.19E-07	2.72E-06
ADPF	MJ, net calorific value	1.76E+02	1.40E+02	2.18E+01	3.54E+01	2.30E+00	1.06E+00	9.63E+00

TABLE 33

Potential environmental impacts of 1m² Scyon Secura™ exterior flooring 22mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	2.20E+01	9.05E-01	1.66E+00	0	2.03E-01	5.76E-02	5.40E-01
ODP	kg CFC 11 eq.	5.11E-07	1.05E-07	4.99E-08	0	2.53E-10	7.26E-09	4.52E-08
AP	kg SO ₂ eq.	5.84E-02	7.13E-03	3.30E-03	0	2.74E-04	1.86E-04	2.19E-03
EP	kg PO ₄ ³⁻ eq.	1.27E-02	8.52E-04	4.94E-04	0	7.59E-05	3.59E-05	4.79E-04
POCP	kg C ₂ H ₄ eq.	2.21E-03	2.92E-04	2.95E-04	0	7.54E-06	1.20E-05	1.35E-04
ADPE	kg Sb eq.	1.26E-05	2.03E-06	2.54E-06	0	1.83E-07	1.77E-07	2.20E-06
ADPF	MJ, net calorific value	2.13E+02	1.29E+01	2.18E+01	0	2.30E+00	8.55E-01	7.80E+00

TABLE 34

Potential environmental impacts of 1m² HardiePanel™ compressed sheet 24mm

Potential Environmental impacts	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
GWP	kg CO ₂ eq.	3.23E+01	2.57E+00	1.66E+00	0	2.03E-01	8.96E-02	8.41E-01
ODP	kg CFC 11 eq.	5.15E-07	3.25E-07	4.99E-08	0	2.53E-10	1.13E-08	7.05E-08
AP	kg SO ₂ eq.	9.96E-02	8.32E-03	3.30E-03	0	2.74E-04	2.90E-04	3.41E-03
EP	kg PO ₄ ³⁻ eq.	2.03E-02	1.61E-03	4.94E-04	0	7.59E-05	5.60E-05	7.46E-04
POCP	kg C ₂ H ₄ eq.	3.71E-03	5.37E-04	2.95E-04	0	7.54E-06	1.87E-05	2.10E-04
ADPE	kg Sb eq.	1.67E-05	7.93E-06	2.54E-06	0	1.83E-07	2.76E-07	3.43E-06
ADPF	MJ, net calorific value	2.87E+02	3.82E+01	2.18E+01	0	2.30E+00	1.33E+00	1.21E+01

Use of resources

- Module A1 - A3 has the highest contribution to use of resources, ranging from 36% to 100%. The latter is for use of secondary materials and use of renewable primary energy resources used as raw materials. However, there could be some secondary materials used in other processes that have not being accounted for in this project.
- Modules B2 has the second highest contribution to total use of non- renewable primary energy resources (31%) and fresh water use (28%), because of the acrylic varnish in the painting. Module A5 has the third most relevant impact for the same categories (22% and 9%, respectively).
- The end of life stages (Modules C1, C2 and C4) have low impact contribution (less than 3% for all impacts).

NOTE: INA = indicator not assessed, due to lack of data.

TABLE 35

Use of resources of 1m² HardieFlex™ sheet 4.5mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	2.36E+01	8.20E-02	1.97E+00	5.70E-01	9.78E-02	1.39E-03	2.22E-02
PERM	MJ, net calorific value	7.26E+00	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	3.09E+01	8.20E-02	1.97E+00	5.70E-01	9.78E-02	1.39E-03	2.22E-02
PENRE	MJ, net calorific value	2.65E+01	8.87E+00	1.94E+01	2.08E+01	1.07E+00	1.99E-01	1.92E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	2.65E+01	8.87E+00	1.94E+01	2.08E+01	1.07E+00	1.99E-01	1.92E+00
SM	kg	1.95E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	6.49E-02	2.59E-03	1.28E-02	2.80E-02	4.09E-04	7.88E-05	6.03E-04

TABLE 36

Use of resources of 1m² HardieFlex™ sheet 4.5mm eaves

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	2.03E+01	6.63E-02	1.97E+00	5.70E-01	9.78E-02	1.39E-03	2.22E-02
PERM	MJ, net calorific value	6.16E+00	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	2.65E+01	6.63E-02	1.97E+00	5.70E-01	9.78E-02	1.39E-03	2.22E-02
PENRE	MJ, net calorific value	2.42E+01	7.23E+00	1.94E+01	2.08E+01	1.07E+00	1.99E-01	1.92E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	2.42E+01	7.23E+00	1.94E+01	2.08E+01	1.07E+00	1.99E-01	1.92E+00
SM	kg	1.60E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	6.13E-02	2.14E-03	1.28E-02	2.80E-02	4.09E-04	7.88E-05	6.03E-04

Use of resources (continued)

TABLE 37

Use of resources of 1m² Versilux™ lining 4.5mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	2.16E+01	1.12E-02	1.97E+00	7.60E-01	9.78E-02	1.39E-03	2.22E-02
PERM	MJ, net calorific value	6.57E+00	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	2.82E+01	1.12E-02	1.97E+00	7.60E-01	9.78E-02	1.39E-03	2.22E-02
PENRE	MJ, net calorific value	1.82E+01	1.61E+00	1.94E+01	2.77E+01	1.07E+00	1.99E-01	1.92E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	1.82E+01	1.61E+00	1.94E+01	2.77E+01	1.07E+00	1.99E-01	1.92E+00
SM	kg	1.66E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	6.90E-02	0.00E+00	1.28E-02	3.74E-02	4.09E-04	7.88E-05	6.03E-04

TABLE 38

Use of resources of 1m² HardieFlex™ sheet 6mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	3.12E+01	6.21E-02	1.97E+00	5.70E-01	9.78E-02	1.84E-03	2.93E-02
PERM	MJ, net calorific value	9.67E+00	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	4.09E+01	6.21E-02	1.97E+00	5.70E-01	9.78E-02	1.84E-03	2.93E-02
PENRE	MJ, net calorific value	2.99E+01	7.50E+00	1.94E+01	2.08E+01	1.07E+00	2.63E-01	2.52E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	2.99E+01	7.50E+00	1.94E+01	2.08E+01	1.07E+00	2.63E-01	2.52E+00
SM	kg	2.60E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	8.93E-02	2.53E-03	1.28E-02	2.80E-02	4.09E-04	1.04E-04	7.95E-04

TABLE 39

Use of resources of 1m² PineRidge™ lining 6mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	3.12E+01	2.79E-02	1.97E+00	5.70E-01	9.78E-02	1.84E-03	2.93E-02
PERM	MJ, net calorific value	9.67E+00	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	4.09E+01	2.79E-02	1.97E+00	5.70E-01	9.78E-02	1.84E-03	2.93E-02
PENRE	MJ, net calorific value	2.52E+01	3.99E+00	1.94E+01	2.08E+01	1.07E+00	2.63E-01	2.52E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	2.52E+01	3.99E+00	1.94E+01	2.08E+01	1.07E+00	2.63E-01	2.52E+00
SM	kg	2.60E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	9.25E-02	1.58E-03	1.28E-02	2.80E-02	4.09E-04	1.04E-04	7.95E-04

TABLE 40

Use of resources of 1m² Villaboard™ lining 6mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	2.84E+01	6.43E-02	1.97E+00	7.60E-01	9.78E-02	1.84E-03	2.93E-02
PERM	MJ, net calorific value	8.76E+00	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	3.71E+01	6.43E-02	1.97E+00	7.60E-01	9.78E-02	1.84E-03	2.93E-02
PENRE	MJ, net calorific value	3.28E+01	6.49E+00	1.94E+01	2.77E+01	1.07E+00	2.63E-01	2.52E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	3.28E+01	6.49E+00	1.94E+01	2.77E+01	1.07E+00	2.63E-01	2.52E+00
SM	kg	2.21E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	8.22E-02	1.70E-03	1.28E-02	3.74E-02	4.09E-04	1.04E-04	7.95E-04

TABLE 41

Use of resources of 1m² PanelClad™ sheet 6mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	3.11E+01	1.25E-01	1.97E+00	5.70E-01	9.78E-02	1.84E-03	2.93E-02
PERM	MJ, net calorific value	9.67E+00	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	4.08E+01	1.25E-01	1.97E+00	5.70E-01	9.78E-02	1.84E-03	2.93E-02
PENRE	MJ, net calorific value	4.22E+01	1.59E+01	1.94E+01	2.08E+01	1.07E+00	2.63E-01	2.52E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	4.22E+01	1.59E+01	1.94E+01	2.08E+01	1.07E+00	2.63E-01	2.52E+00
SM	kg	2.60E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	8.11E-02	5.62E-03	1.28E-02	2.80E-02	4.09E-04	1.04E-04	7.95E-04

TABLE 42

Use of resources of 1m² Versilux™ lining 6mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	2.84E+01	1.74E-01	1.97E+00	7.60E-01	9.78E-02	1.84E-03	2.93E-02
PERM	MJ, net calorific value	8.76E+00	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	3.72E+01	1.74E-01	1.97E+00	7.60E-01	9.78E-02	1.84E-03	2.93E-02
PENRE	MJ, net calorific value	2.29E+01	2.42E+01	1.94E+01	2.77E+01	1.07E+00	2.63E-01	2.52E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	2.29E+01	2.42E+01	1.94E+01	2.77E+01	1.07E+00	2.63E-01	2.52E+00
SM	kg	2.21E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	8.79E-02	0.00E+00	1.28E-02	3.74E-02	4.09E-04	1.04E-04	7.95E-04

Use of resources (continued)

TABLE 43

Use of resources of 1m² HardieTex™ blue board system 7.5mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	3.31E+01	8.44E-02	2.16E+00	7.60E-01	9.78E-02	1.84E-03	2.93E-02
PERM	MJ, net calorific value	1.03E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	4.34E+01	8.44E-02	2.16E+00	7.60E-01	9.78E-02	1.84E-03	2.93E-02
PENRE	MJ, net calorific value	4.08E+01	9.32E+00	4.18E+01	2.77E+01	1.07E+00	2.63E-01	2.52E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	4.08E+01	9.32E+00	4.18E+01	2.77E+01	1.07E+00	2.63E-01	2.52E+00
SM	kg	2.67E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	9.82E-02	2.81E-03	4.05E-02	3.74E-02	4.09E-04	1.04E-04	7.95E-04

TABLE 44

Use of resources of 1m² HardiePlank™ weatherboard 7.5mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	3.87E+01	4.90E-01	1.97E+00	5.70E-01	9.78E-02	2.28E-03	3.63E-02
PERM	MJ, net calorific value	1.21E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	5.08E+01	4.90E-01	1.97E+00	5.70E-01	9.78E-02	2.28E-03	3.63E-02
PENRE	MJ, net calorific value	5.25E+01	4.93E+01	1.94E+01	2.08E+01	1.07E+00	3.26E-01	3.13E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	5.25E+01	4.93E+01	1.94E+01	2.08E+01	1.07E+00	3.26E-01	3.13E+00
SM	kg	3.25E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.01E-01	1.28E-02	1.28E-02	2.80E-02	4.09E-04	1.29E-04	9.86E-04

TABLE 45

Use of resources of 1m² Scyon Matrix™ cladding 8mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	3.61E+01	5.95E-02	1.97E+00	5.70E-01	9.78E-02	2.43E-03	3.87E-02
PERM	MJ, net calorific value	1.09E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	4.70E+01	5.95E-02	1.97E+00	5.70E-01	9.78E-02	2.43E-03	3.87E-02
PENRE	MJ, net calorific value	4.19E+01	8.24E+00	1.94E+01	2.08E+01	1.07E+00	3.47E-01	3.34E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	4.19E+01	8.24E+00	1.94E+01	2.08E+01	1.07E+00	3.47E-01	3.34E+00
SM	kg	2.85E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.50E-01	3.16E-03	1.28E-02	2.80E-02	4.09E-04	1.37E-04	1.05E-03

TABLE 46

Use of resources of 1m² EasyLap™ panel 8.5mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	3.74E+01	6.29E-01	1.97E+00	5.70E-01	9.78E-02	2.58E-03	4.10E-02
PERM	MJ, net calorific value	1.16E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	4.90E+01	6.29E-01	1.97E+00	5.70E-01	9.78E-02	2.58E-03	4.10E-02
PENRE	MJ, net calorific value	5.66E+01	6.15E+01	1.94E+01	2.08E+01	1.07E+00	3.68E-01	3.54E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	5.66E+01	6.15E+01	1.94E+01	2.08E+01	1.07E+00	3.68E-01	3.54E+00
SM	kg	3.03E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.04E-01	1.52E-02	1.28E-02	2.80E-02	4.09E-04	1.45E-04	1.11E-03

TABLE 47

Use of resources of 1m² Scyon Axon™ cladding 9mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	4.42E+01	5.39E-01	1.97E+00	5.70E-01	9.78E-02	2.54E-03	4.04E-02
PERM	MJ, net calorific value	1.39E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	5.81E+01	5.39E-01	1.97E+00	5.70E-01	9.78E-02	2.54E-03	4.04E-02
PENRE	MJ, net calorific value	3.11E+01	5.44E+01	1.94E+01	2.08E+01	1.07E+00	3.63E-01	3.49E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	3.11E+01	5.44E+01	1.94E+01	2.08E+01	1.07E+00	3.63E-01	3.49E+00
SM	kg	3.28E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.19E-01	0.00E+00	1.28E-02	2.80E-02	4.09E-04	1.43E-04	1.10E-03

TABLE 48

Use of resources of 1m² ComTex™ panel and fixing system 9mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	3.94E+01	2.65E-01	1.97E+00	7.60E-01	9.78E-02	2.72E-03	4.34E-02
PERM	MJ, net calorific value	1.23E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	5.17E+01	2.65E-01	1.97E+00	7.60E-01	9.78E-02	2.72E-03	4.34E-02
PENRE	MJ, net calorific value	3.14E+01	3.45E+01	1.94E+01	2.77E+01	1.07E+00	3.89E-01	3.74E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	3.14E+01	3.45E+01	1.94E+01	2.77E+01	1.07E+00	3.89E-01	3.74E+00
SM	kg	3.21E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.16E-01	0.00E+00	1.28E-02	3.74E-02	4.09E-04	1.54E-04	1.18E-03

Use of resources (continued)

TABLE 49

Use of resources of 1m² Villaboard™ lining 9mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	4.12E+01	6.19E-02	1.97E+00	7.60E-01	9.78E-02	2.72E-03	4.34E-02
PERM	MJ, net calorific value	1.29E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	5.41E+01	6.19E-02	1.97E+00	7.60E-01	9.78E-02	2.72E-03	4.34E-02
PENRE	MJ, net calorific value	4.67E+01	7.90E+00	1.94E+01	2.77E+01	1.07E+00	3.89E-01	3.74E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	4.67E+01	7.90E+00	1.94E+01	2.77E+01	1.07E+00	3.89E-01	3.74E+00
SM	kg	3.24E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.22E-01	2.81E-03	1.28E-02	3.74E-02	4.09E-04	1.54E-04	1.18E-03

TABLE 50

Use of resources of 1m² PrimeLine™ weatherboard 9mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	4.63E+01	2.11E-01	1.97E+00	5.70E-01	9.78E-02	2.72E-03	4.34E-02
PERM	MJ, net calorific value	1.45E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	6.08E+01	2.11E-01	1.97E+00	5.70E-01	9.78E-02	2.72E-03	4.34E-02
PENRE	MJ, net calorific value	6.76E+01	2.60E+01	1.94E+01	2.08E+01	1.07E+00	3.89E-01	3.74E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	6.76E+01	2.60E+01	1.94E+01	2.08E+01	1.07E+00	3.89E-01	3.74E+00
SM	kg	3.90E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.28E-01	8.94E-03	1.28E-02	2.80E-02	4.09E-04	1.54E-04	1.18E-03

TABLE 51

Use of resources of 1m² ExoTec™ façade panel & fixing system 9mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	5.69E+01	2.96E-01	2.07E+00	5.70E-01	9.78E-02	3.44E-03	5.48E-02
PERM	MJ, net calorific value	1.79E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	7.47E+01	2.96E-01	2.07E+00	5.70E-01	9.78E-02	3.44E-03	5.48E-02
PENRE	MJ, net calorific value	4.40E+01	3.76E+01	2.11E+01	2.08E+01	1.07E+00	4.92E-01	4.73E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	4.40E+01	3.76E+01	2.11E+01	2.08E+01	1.07E+00	4.92E-01	4.73E+00
SM	kg	3.47E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.74E-01	0.00E+00	1.48E-02	2.80E-02	4.09E-04	1.94E-04	1.49E-03

TABLE 52

Use of resources of 1m² Villaboard™ lining 12mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	5.40E+01	1.13E-01	1.97E+00	7.60E-01	9.78E-02	3.61E-03	5.75E-02
PERM	MJ, net calorific value	1.70E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	7.09E+01	1.13E-01	1.97E+00	7.60E-01	9.78E-02	3.61E-03	5.75E-02
PENRE	MJ, net calorific value	7.87E+01	1.62E+01	1.94E+01	2.77E+01	1.07E+00	5.16E-01	4.96E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	7.87E+01	1.62E+01	1.94E+01	2.77E+01	1.07E+00	5.16E-01	4.96E+00
SM	kg	4.28E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.49E-01	6.40E-03	1.28E-02	3.74E-02	4.09E-04	2.04E-04	1.56E-03

TABLE 53

Use of resources of 1m² Scyon Stria™ cladding 14mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	6.16E+01	1.31E-01	1.97E+00	5.70E-01	9.78E-02	4.32E-03	6.88E-02
PERM	MJ, net calorific value	1.93E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	8.09E+01	1.31E-01	1.97E+00	5.70E-01	9.78E-02	4.32E-03	6.88E-02
PENRE	MJ, net calorific value	6.47E+01	1.41E+01	1.94E+01	2.08E+01	1.07E+00	6.17E-01	5.93E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	6.47E+01	1.41E+01	1.94E+01	2.08E+01	1.07E+00	6.17E-01	5.93E+00
SM	kg	5.92E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.85E-01	4.09E-03	1.28E-02	2.80E-02	4.09E-04	2.44E-04	1.87E-03

TABLE 54

Use of resources of 1m² HardiePanel™ compressed sheet 15mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	9.59E+01	3.95E-01	1.97E+00	0	9.78E-02	5.78E-03	9.21E-02
PERM	MJ, net calorific value	3.03E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	1.26E+02	3.95E-01	1.97E+00	0	9.78E-02	5.78E-03	9.21E-02
PENRE	MJ, net calorific value	8.32E+01	5.21E+01	1.94E+01	0	1.07E+00	8.26E-01	7.94E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	8.32E+01	5.21E+01	1.94E+01	0	1.07E+00	8.26E-01	7.94E+00
SM	kg	8.93E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	2.94E-01	0.00E+00	1.28E-02	0	4.09E-04	3.26E-04	2.50E-03

Use of resources (continued)

TABLE 55

Use of resources of 1m² Scyon Linea™ cladding 16mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	7.02E+01	2.57E-01	1.97E+00	5.70E-01	9.78E-02	4.32E-03	6.88E-02
PERM	MJ, net calorific value	2.21E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	9.23E+01	2.57E-01	1.97E+00	5.70E-01	9.78E-02	4.32E-03	6.88E-02
PENRE	MJ, net calorific value	1.11E+02	2.42E+01	1.94E+01	2.08E+01	1.07E+00	6.17E-01	5.93E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	1.11E+02	2.42E+01	1.94E+01	2.08E+01	1.07E+00	6.17E-01	5.93E+00
SM	kg	6.76E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	1.99E-01	5.55E-03	1.28E-02	2.80E-02	4.09E-04	2.44E-04	1.87E-03

TABLE 56

Use of resources of 1m² HardiePanel™ compressed sheet 18mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	1.15E+02	5.49E-01	1.97E+00	0	9.78E-02	6.92E-03	1.10E-01
PERM	MJ, net calorific value	3.63E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	1.51E+02	5.49E-01	1.97E+00	0	9.78E-02	6.92E-03	1.10E-01
PENRE	MJ, net calorific value	9.97E+01	6.82E+01	1.94E+01	0	1.07E+00	9.90E-01	9.51E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	9.97E+01	6.82E+01	1.94E+01	0	1.07E+00	9.90E-01	9.51E+00
SM	kg	1.07E+01	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	3.53E-01	0.00E+00	1.28E-02	0	4.09E-04	3.91E-04	2.99E-03

TABLE 57

Use of resources of 1m² Scyon Secura™ interior flooring 19mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	1.34E+02	4.72E-01	1.97E+00	0	9.78E-02	5.67E-03	9.04E-02
PERM	MJ, net calorific value	4.29E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	1.77E+02	4.72E-01	1.97E+00	0	9.78E-02	5.67E-03	9.04E-02
PENRE	MJ, net calorific value	1.47E+02	5.19E+01	1.94E+01	0	1.07E+00	8.12E-01	7.80E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	1.47E+02	5.19E+01	1.94E+01	0	1.07E+00	8.12E-01	7.80E+00
SM	kg	8.96E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	3.25E-01	1.55E-02	1.28E-02	0	4.09E-04	3.20E-04	2.45E-03

TABLE 58

Use of resources of 1m² Scyon Secura™ exterior flooring 19mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	1.34E+02	2.72E-01	1.97E+00	0	9.78E-02	5.67E-03	9.04E-02
PERM	MJ, net calorific value	4.29E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	1.77E+02	2.72E-01	1.97E+00	0	9.78E-02	5.67E-03	9.04E-02
PENRE	MJ, net calorific value	1.55E+02	2.65E+01	1.94E+01	0	1.07E+00	8.12E-01	7.80E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	1.55E+02	2.65E+01	1.94E+01	0	1.07E+00	8.12E-01	7.80E+00
SM	kg	8.96E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	3.36E-01	6.48E-03	1.28E-02	0	4.09E-04	3.20E-04	2.45E-03

TABLE 59

Use of resources of 1m² HardieDeck™ system 19mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	1.20E+02	1.24E+00	1.97E+00	9.50E-01	9.78E-02	7.30E-03	1.16E-01
PERM	MJ, net calorific value	3.83E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	1.59E+02	1.24E+00	1.97E+00	9.50E-01	9.78E-02	7.30E-03	1.16E-01
PENRE	MJ, net calorific value	8.56E+01	1.34E+02	1.94E+01	3.47E+01	1.07E+00	1.04E+00	1.00E+01
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	8.56E+01	1.34E+02	1.94E+01	3.47E+01	1.07E+00	1.04E+00	1.00E+01
SM	kg	7.44E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	3.45E-01	0.00E+00	1.28E-02	4.67E-02	4.09E-04	4.12E-04	3.16E-03

TABLE 60

Use of resources of 1m² Scyon Secura™ exterior flooring 22mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	1.34E+02	1.02E-01	1.97E+00	0	9.78E-02	5.91E-03	9.42E-02
PERM	MJ, net calorific value	4.27E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	1.77E+02	1.02E-01	1.97E+00	0	9.78E-02	5.91E-03	9.42E-02
PENRE	MJ, net calorific value	1.68E+02	1.26E+01	1.94E+01	0	1.07E+00	8.45E-01	8.12E+00
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	1.68E+02	1.26E+01	1.94E+01	0	1.07E+00	8.45E-01	8.12E+00
SM	kg	9.11E+00	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	3.43E-01	4.32E-03	1.28E-02	0	4.09E-04	3.34E-04	2.56E-03

Use of resources (continued)

TABLE 61

Use of resources of 1m² HardiePanel™ compressed sheet 24mm

Use of resources	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
PERE	MJ, net calorific value	1.53E+02	2.64E-01	1.97E+00	0	9.78E-02	9.20E-03	1.47E-01
PERM	MJ, net calorific value	4.84E+01	INA	INA	INA	INA	INA	INA
PERT	MJ, net calorific value	2.01E+02	2.64E-01	1.97E+00	0	9.78E-02	9.20E-03	1.47E-01
PENRE	MJ, net calorific value	1.33E+02	3.78E+01	1.94E+01	0	1.07E+00	1.32E+00	1.26E+01
PENRM	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
PENRT	MJ, net calorific value	1.33E+02	3.78E+01	1.94E+01	0	1.07E+00	1.32E+00	1.26E+01
SM	kg	1.43E+01	INA	INA	INA	INA	INA	INA
RSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
NRSF	MJ, net calorific value	0	INA	INA	INA	INA	INA	INA
FW	m ³	4.71E-01	0	1.28E-02	0.00E+00	4.09E-04	5.20E-04	3.98E-03



Axon™ Cladding – Caringbah House, NSW

Waste production and output flows

- Module A1-A3 has the highest contribution to hazardous waste disposed (76%), mostly because of the pulp as a raw material.
- Module C4 has the highest contribution to non- hazardous waste disposed (88%), because of the selection of the conservative scenario that all the products go to landfill at the end of their lives.
- Module B2 had the highest contribution to radioactive waste disposed (76%). Module A5 has the second most important contribution in the same impact, with 20%. In both cases the impact is created by acrylic varnish in the paint.

NOTE: Radioactive waste is declared in EPDs as it is present in almost every supply chain, and is not something specifically produced by James Hardie in the manufacture of fibre cement products. It can be noted that the total quantities of hazardous and radioactive waste in the life cycle is less than 0.01 grams over 50 years per functional unit.

NOTE: INA = indicator not assessed, due to lack of data.

TABLE 62

Waste categories of 1m² HardieFlex™ sheet 4.5mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	1.29E-04	6.89E-06	1.17E-05	2.21E-05	3.26E-07	2.32E-07	2.00E-06
NHWD	kg	3.62E-01	4.88E-02	4.03E-01	1.97E-01	1.17E-02	1.90E-03	6.35E+00
RWD	kg	1.11E-06	3.24E-08	8.91E-06	2.50E-05	4.46E-09	1.07E-09	4.33E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 63

Waste categories of 1m² HardieFlex™ sheet 4.5mm eaves

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	1.11E-04	5.71E-06	1.17E-05	2.21E-05	3.26E-07	2.32E-07	2.00E-06
NHWD	kg	3.76E-01	4.08E-02	4.03E-01	1.97E-01	1.17E-02	1.90E-03	6.35E+00
RWD	kg	9.25E-07	2.68E-08	8.91E-06	2.50E-05	4.46E-09	1.07E-09	4.33E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 64

Waste categories of 1m² Versilux™ lining 4.5mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	1.18E-04	1.87E-06	1.17E-05	2.95E-05	3.26E-07	2.32E-07	2.00E-06
NHWD	kg	4.24E-01	1.53E-02	4.03E-01	2.63E-01	1.17E-02	1.90E-03	6.35E+00
RWD	kg	9.66E-07	8.60E-09	8.91E-06	3.33E-05	4.46E-09	1.07E-09	4.33E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

Waste production and output flows (continued)

TABLE 65

Waste categories of 1m² HardieFlex™ sheet 6mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	1.73E-04	7.08E-06	1.17E-05	2.21E-05	3.26E-07	3.06E-07	2.64E-06
NHWD	kg	5.27E-01	5.44E-02	4.03E-01	1.97E-01	1.17E-02	2.51E-03	8.37E+00
RWD	kg	1.49E-06	3.29E-08	8.91E-06	2.50E-05	4.46E-09	1.41E-09	5.70E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 66

Waste categories of 1m² PineRidge™ lining 6mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	1.74E-04	4.65E-06	1.17E-05	2.21E-05	3.26E-07	3.06E-07	2.64E-06
NHWD	kg	5.75E-01	3.81E-02	4.03E-01	1.97E-01	1.17E-02	2.51E-03	8.37E+00
RWD	kg	1.50E-06	2.14E-08	8.91E-06	2.50E-05	4.46E-09	1.41E-09	5.70E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 67

Waste categories of 1m² Villaboard™ lining 6mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	1.55E-04	4.31E-06	1.17E-05	2.95E-05	3.26E-07	3.06E-07	2.64E-06
NHWD	kg	4.22E-01	2.81E-02	4.03E-01	2.63E-01	1.17E-02	2.51E-03	8.37E+00
RWD	kg	1.46E-06	2.05E-08	8.91E-06	3.33E-05	4.46E-09	1.41E-09	5.70E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 68

Waste categories of 1m² PanelClad™ sheet 6mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	1.70E-04	1.60E-05	1.17E-05	2.21E-05	3.26E-07	3.06E-07	2.64E-06
NHWD	kg	4.02E-01	1.26E-01	4.03E-01	1.97E-01	1.17E-02	2.51E-03	8.37E+00
RWD	kg	1.47E-06	7.43E-08	8.91E-06	2.50E-05	4.46E-09	1.41E-09	5.70E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 69

Waste categories of 1m² Versilux™ lining 6mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	1.57E-04	2.73E-05	1.17E-05	2.95E-05	3.26E-07	3.06E-07	2.64E-06
NHWD	kg	5.20E-01	2.22E-01	4.03E-01	2.63E-01	1.17E-02	2.51E-03	8.37E+00
RWD	kg	1.28E-06	1.26E-07	8.91E-06	3.33E-05	4.46E-09	1.41E-09	5.70E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 70

Waste categories of 1m² HardieTex™ blue board system 7.5mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	1.83E-04	7.55E-06	1.87E-05	2.95E-05	3.26E-07	3.06E-07	2.64E-06
NHWD	kg	5.71E-01	5.45E-02	5.31E-01	2.63E-01	1.17E-02	2.51E-03	8.37E+00
RWD	kg	1.70E-06	3.54E-08	1.41E-05	3.33E-05	4.46E-09	1.41E-09	5.70E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 71

Waste categories of 1m² HardiePlank™ weatherboard 7.5mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	2.13E-04	3.23E-05	1.17E-05	2.21E-05	3.26E-07	3.79E-07	3.28E-06
NHWD	kg	5.02E-01	2.09E-01	4.03E-01	1.97E-01	1.17E-02	3.11E-03	1.04E+01
RWD	kg	1.83E-06	1.54E-07	8.91E-06	2.50E-05	4.46E-09	1.75E-09	7.08E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 72

Waste categories of 1m² Scyon Matrix™ cladding 8mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	2.04E-04	9.25E-06	1.17E-05	2.21E-05	3.26E-07	4.04E-07	3.49E-06
NHWD	kg	1.13E+00	7.51E-02	4.03E-01	1.97E-01	1.17E-02	3.31E-03	1.11E+01
RWD	kg	1.81E-06	4.27E-08	8.91E-06	2.50E-05	4.46E-09	1.86E-09	7.53E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

Waste production and output flows (continued)

TABLE 73

Waste categories of 1m² EasyLap™ panel 8.5mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	2.05E-04	3.75E-05	1.17E-05	2.21E-05	3.26E-07	4.28E-07	3.70E-06
NHWD	kg	5.41E-01	2.31E-01	4.03E-01	1.97E-01	1.17E-02	3.51E-03	1.17E+01
RWD	kg	1.83E-06	1.80E-07	8.91E-06	2.50E-05	4.46E-09	1.97E-09	7.99E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 74

Waste categories of 1m² Scyon Axon™ cladding 9mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	2.47E-04	3.59E-05	1.17E-05	2.21E-05	3.26E-07	4.22E-07	3.64E-06
NHWD	kg	6.69E-01	2.34E-01	4.03E-01	1.97E-01	1.17E-02	3.46E-03	1.16E+01
RWD	kg	1.89E-06	1.71E-07	8.91E-06	2.50E-05	4.46E-09	1.94E-09	7.87E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 75

Waste categories of 1m² ComTex™ panel and fixing system 9mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	2.21E-04	3.61E-05	1.17E-05	2.95E-05	3.26E-07	4.53E-07	3.91E-06
NHWD	kg	7.10E-01	2.87E-01	4.03E-01	2.63E-01	1.17E-02	3.71E-03	1.24E+01
RWD	kg	1.84E-06	1.67E-07	8.91E-06	3.33E-05	4.46E-09	2.08E-09	8.45E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 76

Waste categories of 1m² Villaboard™ lining 9mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	2.28E-04	8.04E-06	1.17E-05	2.95E-05	3.26E-07	4.53E-07	3.91E-06
NHWD	kg	6.32E-01	6.34E-02	4.03E-01	2.63E-01	1.17E-02	3.71E-03	1.24E+01
RWD	kg	2.04E-06	3.73E-08	8.91E-06	3.33E-05	4.46E-09	2.08E-09	8.45E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 77

Waste categories of 1m² PrimeLine™ weatherboard 9mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	2.57E-04	2.52E-05	1.17E-05	2.21E-05	3.26E-07	4.53E-07	3.91E-06
NHWD	kg	6.11E-01	1.96E-01	4.03E-01	1.97E-01	1.17E-02	3.71E-03	1.24E+01
RWD	kg	3.23E-06	1.17E-07	8.91E-06	2.50E-05	4.46E-09	2.08E-09	8.45E-08
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 78

Waste categories of 1m² ExoTec™ façade panel & fixing system 9mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	3.20E-04	3.82E-05	1.50E-05	2.21E-05	3.26E-07	5.72E-07	4.94E-06
NHWD	kg	1.07E+00	3.00E-01	4.39E-01	1.97E-01	1.17E-02	4.69E-03	1.57E+01
RWD	kg	2.18E-06	1.77E-07	9.04E-06	2.50E-05	4.46E-09	2.63E-09	1.07E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 79

Waste categories of 1m² Villaboard™ lining 12mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	2.98E-04	1.89E-05	1.17E-05	2.95E-05	3.26E-07	6.00E-07	5.18E-06
NHWD	kg	6.66E-01	1.55E-01	4.03E-01	2.63E-01	1.17E-02	4.92E-03	1.64E+01
RWD	kg	2.73E-06	8.68E-08	8.91E-06	3.33E-05	4.46E-09	2.76E-09	1.12E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 80

Waste categories of 1m² Scyon Stria™ cladding 14mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	3.48E-04	1.08E-05	1.17E-05	2.21E-05	3.26E-07	7.18E-07	6.20E-06
NHWD	kg	1.10E+00	7.63E-02	4.03E-01	1.97E-01	1.17E-02	5.89E-03	1.97E+01
RWD	kg	3.69E-06	5.10E-08	8.91E-06	2.50E-05	4.46E-09	3.31E-09	1.34E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

Waste production and output flows (continued)

TABLE 81

Waste categories of 1m² HardiePanel™ compressed sheet 15mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	5.47E-04	5.54E-05	1.17E-05	0	3.26E-07	9.61E-07	8.30E-06
NHWD	kg	1.92E+00	4.43E-01	4.03E-01	0	1.17E-02	7.88E-03	2.63E+01
RWD	kg	5.36E-06	2.56E-07	8.91E-06	0	4.46E-09	4.42E-09	1.79E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 82

Waste categories of 1m² Scyon Linea™ cladding 16mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	3.93E-04	1.31E-05	1.17E-05	2.21E-05	3.26E-07	7.18E-07	6.20E-06
NHWD	kg	1.01E+00	7.32E-02	4.03E-01	1.97E-01	1.17E-02	5.89E-03	1.97E+01
RWD	kg	4.89E-06	6.32E-08	8.91E-06	2.50E-05	4.46E-09	3.31E-09	1.34E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 83

Waste categories of 1m² HardiePanel™ compressed sheet 18mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	6.57E-04	6.70E-05	1.17E-05	0	3.26E-07	1.15E-06	9.94E-06
NHWD	kg	2.31E+00	5.21E-01	4.03E-01	0	1.17E-02	9.43E-03	3.15E+01
RWD	kg	6.44E-06	3.11E-07	8.91E-06	0	4.46E-09	5.30E-09	2.15E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 84

Waste categories of 1m² Scyon Secura™ interior flooring 19mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	7.45E-04	4.15E-05	1.17E-05	0	3.26E-07	9.44E-07	8.15E-06
NHWD	kg	1.34E+00	2.98E-01	4.03E-01	0	1.17E-02	7.74E-03	2.58E+01
RWD	kg	6.21E-06	1.95E-07	8.91E-06	0	4.46E-09	4.34E-09	1.76E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 85

Waste categories of 1m² Scyon Secura™ exterior flooring 19mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	7.57E-04	1.58E-05	1.17E-05	0	3.26E-07	9.44E-07	8.15E-06
NHWD	kg	1.40E+00	9.64E-02	4.03E-01	0	1.17E-02	7.74E-03	2.58E+01
RWD	kg	1.38E-05	7.60E-08	8.91E-06	0	4.46E-09	4.34E-09	1.76E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 86

Waste categories of 1m² HardieDeck™ system 19mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	6.81E-04	1.03E-04	1.17E-05	3.69E-05	3.26E-07	1.21E-06	1.05E-05
NHWD	kg	2.01E+00	7.29E-01	4.03E-01	3.29E-01	1.17E-02	9.95E-03	3.32E+01
RWD	kg	4.50E-06	4.87E-07	8.91E-06	4.16E-05	4.46E-09	5.59E-09	2.27E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 87

Waste categories of 1m² Scyon Secura™ exterior flooring 22mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	7.56E-04	1.22E-05	1.17E-05	0	3.26E-07	9.83E-07	8.49E-06
NHWD	kg	1.47E+00	9.46E-02	4.03E-01	0	1.17E-02	8.06E-03	2.69E+01
RWD	kg	1.37E-05	5.66E-08	8.91E-06	0	4.46E-09	4.53E-09	1.83E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA

TABLE 88

Waste categories of 1m² HardiePanel™ compressed sheet 24mm

Waste category	UNIT	A1-A3	A4	A5	B2	C1	C2	C4
HWD	kg	8.76E-04	4.40E-05	1.17E-05	0	3.26E-07	1.53E-06	1.32E-05
NHWD	kg	3.08E+00	3.60E-01	4.03E-01	0	1.17E-02	1.25E-02	4.19E+01
RWD	kg	8.58E-06	2.02E-07	8.91E-06	0	4.46E-09	7.05E-09	2.86E-07
CRE	kg	0	INA	INA	INA	INA	INA	INA
MER	kg	0	INA	INA	INA	INA	INA	INA
MER	MJ	0	INA	INA	INA	INA	INA	INA
EE	MJ	0	INA	INA	INA	INA	INA	INA



ExoTec™ Façade Panel and System – Moira Community Rehabilitation Centre, VIC

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