



Embodied Emissions Reporting

132 McCredie Road Guildford West NSW 2161

Goodman Property Services (Aust) Pty Ltd

Prepared by:

SLR Consulting Australia

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Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
v1.0	10 March 2025	Prameena Karunairaj	Dr Neihad Al-Khalidy	Dr Neihad Al-Khalidy
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Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Goodman Property Services (Aust) Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.



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1.0 Introduction

SLR Consulting have been engaged by Goodman Property Services (Aust) Pty Ltd to prepare an Embodied Emissions Materials Form for the development at 132 McCredie Road, Guildford West NSW 2161.

Embodied emissions refer to the greenhouse gases (GHGs) emitted during the lifecycle of construction materials, from extraction and manufacturing through to transportation, installation, and disposal. Unlike operational emissions, which arise from building use, embodied emissions are locked within the materials themselves and are released as a result of production and handling processes. This distinction is crucial as embodied emissions contribute significantly to a building's total carbon footprint, especially in the early stages. Managing these emissions is essential for aligning construction projects with sustainability and carbon-reduction targets. As a result, evaluating and minimizing embodied emissions has become a critical part of sustainable building practices.

2.0 Embodied Emissions Reporting

The NSW State Environmental Planning Policy (Sustainable Buildings SEPP) 2022 establishes a framework to encourage sustainable building practices and reduce environmental impacts across NSW. It mandates embodied emissions measurement and reporting for all building types and materials, recognizing the significant role these emissions play in Australia's carbon footprint. Research by the Green Building Council of Australia revealed that embodied emissions accounted for 16% of the built environment's emissions in 2019, a figure projected to reach 85% by 2050 without proactive measures. As buildings become more energy-efficient and the power grid incorporates more renewables, managing embodied emissions is essential for achieving Australia's 2050 net-zero target. This policy underscores the need for immediate action in tracking and reducing emissions within the construction sector.

Furthermore, as per the Secretary's Environmental Assessment Requirements (SEARs) issued for the Project Pluto Data Centre (SSD-69223466) dated 4 April 2024, the project is required to update an Embodied Emissions Form.

3.0 Embodied Emissions Materials Form

The Embodied Emissions Materials Form is designed to systematically capture data related to these emissions, helping stakeholders track and quantify the impact of material choices. By completing this form, project teams can submit essential data on material use and emissions factors, allowing for a standardized assessment process. This information aids in comparing alternative materials and understanding their carbon impacts on the overall project. The form integrates data across the project's materials inventory, focusing on major contributors to embodied emissions like concrete, steel, and timber. Ultimately, this reporting contributes to transparency and supports more sustainable decision-making across the construction industry.

4.0 Methodology

The methodology for assessing embodied emissions involves collaboration between SLR Consulting and the project team to gather and analyze materials information.

The various documents that have been reviewed are listed below:



- SSDA architectural drawings.
- Inputs from Cost Consultant

Below quantities of materials as relevant for the project and the stage it is in are fed into the Embodied Emissions Materials Form:

- Structure
- Envelope
- Permanent Internal Walls and Doors
- External Works
- Building services

The information required to update the Embodied Emissions Materials Form has been collected from the project QS consultant. As the design is further developed, quantities and costs of more materials will be captured and this form will be updated.

The Embodied Emissions Materials Form is signed off by a suitably qualified professional and is included in the appendix of this report.

Sincerely,

SLR Consulting Australia



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Reviewed by

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5.0 Feedback

At SLR, we are committed to delivering professional quality service to our clients. We are constantly looking for ways to improve the quality of our deliverables and our service to our clients. Client feedback is a valuable tool in helping us prioritise services and resources according to our client needs.

To achieve this, your feedback on the team's performance, deliverables and service are valuable and SLR welcome all feedback via <https://www.slrconsulting.com/en/feedback>. We recognise the value of your time and we will make a \$10 donation to our Charity Partner - Lifeline, for every completed form.



Appendix A Embodied Emissions Materials Form



NABERS Embodied emissions materials form

New non-residential developments must complete this form

From 1 October 2023, all new non-residential developments must report on embodied emissions using this form in NSW, where the NSW government's State Environmental Planning Policy (Sustainable Buildings SEPP) 2022 applies. You must disclose the amounts of key materials at the development application and construction certificate stages.

[More on the Sustainable Buildings SEPP](#)

Embodied carbon emissions are generated across the full life cycle of a building from "cradle to grave". Embodied carbon made up 16% of the whole-of-life carbon footprint of Australia's buildings in 2019 [1]. The purpose of this form is to report on material quantities only, to support project team discussions about potential reduction in emissions from key materials. The form does not include embodied emissions factors. This reporting form will be updated to reflect the NABERS Embodied Carbon tool when it's available in 2024.

Step 1: About the building

In the 'About the building' tab, you will add the location, function, and type of building you are planning to construct. You will also need to add information that describes the building, including gross floor area, number of floors, area of carpark, and more. Collecting this information will allow the NSW Government to compare similar buildings.

Step 2: Quantity of materials

In the 'Quantity of materials' tab, you will add the amounts of materials that you will use to construct your building. You only need to complete those fields relevant to your building. Leave fields that aren't relevant to your building blank. We recognise that there will be uncertainty, particularly at DA stage, so please use your best estimates where information is unknown (e.g., based on past projects).

How much do I need to include?

You must include all parts of the building delivered by the main contractor, covering at least 80% of the total materials bill. For example, if you spent \$100,000 on materials, you need to include the material amounts of at least \$80,000 of those materials in this form.

Wherever possible, consider materials costs only, not labour, plant or equipment. However, where you cannot split out the materials costs, please simply be consistent in the way the costs are reported throughout the spreadsheet.

Enter the costs of materials (excluding labour, plant, equipment, margins and taxes) for:

- (1) Structure (substructure and superstructure) within the envelope of the building. Also include any ancillary buildings that are necessary for the main building to function (for example, plant that is in a separate building).
- (2) Envelope (cladding, curtain walls, roofing, windows, doors etc.)
- (3) Permanent internal walls and doors. At minimum, this should include all structural walls.
- (4) External works (hard landscaping, carparks, etc.) outside of the building envelope.

Enter the **cost materials** (excluding labour, plant, equipment, margins and taxes) for:

- (5) Building services (mechanical, electrical, plumbing, vertical transport, etc.) required to run the core of the building. Exclude special equipment required by a particular tenant.

You must enter the amounts of materials in SI units (commonly known as the metric system). These are generally consistent across the various products on the market. However, you might need to convert the units of some materials (for example, convert volume to kg).

Step 3: Certifier details

In the 'Certifier' tab you will add the details of the person who has entered data, and the person who has certified the accuracy of the data. The certifier must be a quantity surveyor, designer, engineer or NABERS assessor.

Step 4: Attach to approval

Attach this Excel spreadsheet to your development application or construction certificate application.

The data collected in this form will be used by the NSW Government to inform future policy development.

Help!

If you have general questions about reporting on the embodied emissions of your building, you should contact your local council or consent authority.

If you have technical questions about this spreadsheet, please contact NABERS:
nabers@environment.nsw.gov.au

[1] Green Building Council of Australia, 2021, <https://new.gbca.org.au/news/gbca-news/gbca-and-thinkstep-release-embodied-carbon-report/>

Step 1: About the building

Fill out blue cells

Building location and site data	Value	Unit	Note	Comment
Building address	132 McCredie Road			
Postcode	2161		Required	Postcode of building
Town/city	GUILDFORD + 4 other localities		Town/city/suburb/region automated from postcode (may not give exact town name)	Town/city/suburb/region of the building site.
Distance to nearest major city/town		km	Enter for rural/regional locations only	Declare the shortest route by road to your site from the centre of your nearest major city (>100,000 people). The route must be traversable by a semitrailer truck.
Project stage	Development Application		Required	Stage of development
New build or major renovation?	New build		Required	
Brownfield or greenfield site?	Brownfield		Required	

Floor area by NCC building classification	Gross (GFA)	Net (NLA/NSA/UFA)	Unit	Note	
Please enter all floor areas relevant to your building. Leave areas blank if not applicable. Please enter Gross Floor Area (GFA) for all building classifications. Please also enter the corresponding net area (Net Lettable Area, Net Sellable Area or Usable Floor Area) where it is commonly used for that building classification.					
Class 1a: Detached residential buildings	0	0	m ²	Required for Class 1a: Detached residential houses, townhouses	Gross Floor Area (GFA), as defined by the AIQS Australian Cost Management Manual
Class 1b: Boarding houses and hostels	0	0	m ²	Required for Class 1b: Boarding house, guest house, hostel	Net area (Net Lettable Area, Net Sellable Area, Usable Floor Area), as defined by the PCA's Method of Measurement
Class 2: Multi-unit residential buildings	0	0	m ²	Required for Class 2: Multi-unit residential, including apartment buildings	Architect to put NLA/NSA/UFA
Class 3: Other residential buildings	0	0	m ²	Required for Class 3: Other residential buildings	
Class 4: Residential inside non-residential	0	0	m ²	Required for Class 4: Residential building inside a non-residential building, e.g., caretaker residence	
Class 5: Office buildings	2,877	0	m ²	Required for Class 5: Office building	
Class 6: Retail buildings	0	0	m ²	Required for Class 6: Retail building, e.g., shop, restaurant, café	
Class 7a: Carparks	0	0	m ²	Required for Class 7a: Carparks	
Class 7b: Warehouse-type buildings	73,747	0	m ²	Required for Class 7b: Warehouses, wholesalers and storage facilities	
Class 8: Industrial buildings	0	0	m ²	Required for Class 8: Industrial buildings, e.g., factories and workshops	
Class 9a: Healthcare buildings	0	0	m ²	Required for Class 9a: Healthcare, e.g., hospitals, clinics, day surgeries	
Class 9b: Civic buildings	0	0	m ²	Required for Class 9b: Civic buildings, e.g., theatres, civic centres, train stations	
Class 9c: Aged care and personal care buildings	0	0	m ²	Required for Class 9c: Aged care and personal care	
Class 10a: Non-habitable buildings	0	0	m ²	Required for Class 10a: Non-habitable buildings including sheds, carports and private garages	
Class 10b: Miscellaneous structures	0	0	m ²	Required for Class 10b: Miscellaneous structures, including fences, masts, antennas, retaining walls and swimming pools	
Class 10c: Bushfire shelters	0	0	m ²	Required for Class 10c: Bushfire shelters not attached to a Class 1a building	
Total	76,624	0	m²	Required: Sum of m ² inputs must be more than 0.	

Project information	Value	Unit	Note	
Total cost of project	\$ 1,114,474,328.16	AUD excl. GST	Required	Include labour, materials, transport, plant, equipment and professional fees. Exclude GST, land, finance, escalation and other costs. Total project cost incl. net construction cost, preliminaries, margin, design, authority fees and contingency.
Building design life	50	years	Required	If uncertain, enter 50 years
Estimated envelope life		years	Optional	
Estimated replacement cycle for mechanical services		years	Optional	
Estimated replacement cycle for vertical transportation		years	Optional	

Dimensions of the building and the site	Value	Unit	Note	
Site area	72,109	m ²	Required	Total area of site to external boundary.
Shared services or infrastructure	No		Required	Indicate if there are shared services that the building utilises, or shared foundations, basement or podium
Building footprint area	28,653	m ²	Required	Total floor area of the ground floor measured to the outside edge of the floorplate.
Typical floor area (if different to building footprint area)		m ²	Only needed if different to row above	
Typical floor perimeter	732	m	Required	
Area of external carpark (not included in GFA)	1,219	m ²	Required. Enter 0 if not applicable.	
Area of external hardstand (not included in GFA)	12,413	m ²	Required. Enter 0 if not applicable.	
Area of other hard landscaping (not included in GFA)	0	m ²	Required. Enter 0 if not applicable.	Include all other impervious areas. For example, patios, paths and driveways (not already included in carparks and hardstands above).
Number of floors/storeys above ground, including ground floor	2	no.	Required	
Number of floors/storeys below ground	0	no.	Required. Enter 0 if not applicable.	
Number of floors/storeys of car parking	0	no.	Required. Enter 0 if not applicable.	
Total height above ground	26	m	Required	Measured from the average finished grade to the highest point of the building, excluding protrusions (lighting rods, masts, chimneys, etc.)

Structural material choices	Value	Unit	Note	
Foundation type	Slab-on-ground		Required	
Frame type (dominant)	Reinforced concrete		Required	
Suspended floor type (typical)	Reinforced concrete		Only needed for multi-storey buildings	
Describe low carbon materials specified in your building (e.g. green concrete, low carbon bricks)	N/A		Required	To be advised by sustainability consultant
Describe recycled content specified in your building (e.g. recycled steel)	N/A		Required	To be advised by sustainability consultant

Step 2: Quantity of materials

Complete all blue cells that are applicable to the building. Leave items that aren't applicable blank.

Fill out blue cells

Material category	Sub-category 1	Sub-category 2	Sub-category 3	Value	Unit of measure	Comment	AIQS ACMM Code	ICMS3 (Level 3 Codes Construction)
Structure								
The structural parts of the building that are below ground (substructure) and above ground (superstructure). This includes fill below the substructure, foundations, basement levels, suspended floors, wall structure, roof structure, stairs, lift shafts and balconies. It excludes external areas such as hardstands, carparks, patios, etc.								
Coverage of structural material spend	-	-	-	80	%	Required. Coverage of spend for structural elements entered below. Minimum requirement = 80%. Exclude head contractor preliminaries and margins.		
Concrete in-situ	≤10 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	01_SB or 02-11	02 or 03
Concrete in-situ	>10 MPa to ≤20 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	01_SB or 02-11	02 or 03
Concrete in-situ	>20 MPa to ≤32 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	01_SB or 02-11	02 or 03
Concrete in-situ	>32 MPa to ≤40 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	01_SB or 02-11	02 or 03
Concrete in-situ	>40 MPa to ≤50 MPa	-	-	40,327.0	m³	Please enter reinforcing steel as part of "Reinforcing steel" below	01_SB or 02-11	02 or 03
Concrete in-situ	>50 MPa to ≤60 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	01_SB or 02-11	02 or 03
Concrete in-situ	>60 MPa to ≤80 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	01_SB or 02-11	02 or 03
Concrete in-situ	>80 MPa to ≤100 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	01_SB or 02-11	02 or 03
Concrete in-situ	>100 MPa	-	-	268.0	m³	Please enter reinforcing steel as part of "Reinforcing steel" below	01_SB or 02-11	02 or 03
Concrete pre-cast panel	-	-	-	9,710.0	m³	Please enter reinforcing steel in relevant line items below. If not known at DA stage, please make your best estimate. If not known at CC stage, please ask your supplier.	01_SB or 02-11	02 or 03
Concrete block	Hollow core	-	-		m³	Enter as cubic metres, calculated as (area in m²) * (thickness in mm / 1000). Please include all block fill concrete and all reinforcing steel in relevant line items above/below.	01_SB	02 or 03
Concrete block/brick	Solid	-	-		m³	Enter as cubic metres, calculated as (area in m²) * (thickness in mm / 1000)	01_SB	02 or 03
Concrete block/brick	Solid AAC	-	-		m³	Solid Aerated Autoclaved Concrete (AAC) block. Enter as cubic metres, calculated as (area in m²) * (thickness in mm / 1000).	01_SB	02 or 03
Mortar	-	-	-		kg		01_SB	02 or 03
Reinforcing steel	Bar & mesh	-	-	28,140	kg	Include all reinforcing steel bar/mesh in the building's structure in this row. Usually this is calculated as kg/m² per concrete element and then summed. Example: 10 m² of 40 MPa concrete @ 100 kg/m² + 5 m² of 50 MPa concrete @ 150 kg/m² = 1,750 kg reinforcing steel.	01_SB or 02-11	02 or 03
Reinforcing steel	Fibre & strand	-	-	28,124	kg	Include all steel fibre reinforcing and steel strand in the building's structure in this row.	01_SB or 02-11	02 or 03
Structural steel	Hot rolled structural	-	-	458	t	Examples include universal beams, universal columns and welded beams	01_SB	02 or 03
Structural steel	Cold formed structural	-	-		t	Examples include C purlins, Z purlins and all light gauge steel framing	01_SB	02 or 03
Structural steel	Other welded structural	-	-		t		01_SB	02 or 03
Structural steel	Plate	-	-		t	Include any allowance for connections here	01_SB	02 or 03
Structural steel	Sheet	-	-		t		01_SB	02 or 03
Stainless steel	-	-	-		t	Primarily for engineered timber structure connections	02_11	02 or 03
Reinforced concrete piles	Concrete	-	-	69	m³	Please enter reinforcing steel in the line below. If not known at DA stage, please make your best estimate. If not known at CC stage, please ask your supplier.	01_SB	02 or 03
Reinforced concrete piles	Steel reinforcing	-	-	17,250	kg	If not known at DA stage, please make your best estimate. If not known at CC stage, please ask your supplier.	01_SB	02 or 03
Steel piles	-	-	-		t	Where concrete and reinforcing steel are also used, enter these in the rows above.	01_SB	02 or 03
Timber poles/piles	-	-	-		m³	Where concrete and reinforcing steel are also used, enter these in the rows above.	01_SB	02 or 03
Timber (solid)	Sawn softwood	-	-		m³		02_11	02 or 03
Timber (solid)	Sawn hardwood	-	-		m³		02_11	02 or 03
Timber (engineered)	CLT	-	-		m³		02_11	02 or 03
Timber (engineered)	Glulam	-	-		m³		02_11	02 or 03
Timber (engineered)	LVL	-	-		m³		02_11	02 or 03
Timber (engineered)	OSB	-	-		m³	Enter as cubic metres, calculated as (area of wall in m²) * (thickness in mm / 1000)	02_11	02 or 03
Brick	Heat cured	-	-		m³	Enter as cubic metres, calculated as (area of wall in m²) * (thickness in mm / 1000)	02_11	02 or 03
Structural Insulated Panel (SIP)	Steel outer	-	-		m²		01_SB	02 or 03
Structural Insulated Panel (SIP)	Aluminium outer	-	-		m²		01_SB	02 or 03
Structural Insulated Panel (SIP)	Engineered timber outer	-	-		m²		01_SB	02 or 03
Fill	-	-	-		t	Include purchased material only. Exclude site-won material.	01_SB	01
Sand & gravel	-	-	-		t	Include purchased material only. Exclude site-won material and sand/gravel in concrete.	01_SB	01
Waterproofing membrane	Bituminous	-	-		m²		01_SB	01 or 02 or 03
Waterproofing membrane	Polyethylene	-	-	28,653	m²		01_SB	01 or 02 or 03
Other structural (Describe and add unit >>)		-	-			Please enter a description for any structural material that does not fit a predefined classification		
Other structural (Describe and add unit >>)		-	-			Please enter a description for any structural material that does not fit a predefined classification		
Other structural (Describe and add unit >>)		-	-			Please enter a description for any structural material that does not fit a predefined classification		

Envelope

The skin of the building that separates the internal building from the external environment. This includes the roof cladding, wall cladding, windows, doors and internal/external shading. It also includes insulation and the internal wall lining of envelope walls.

Coverage of envelope material spend	-	-	-	80	%	Required. Coverage of spend for the envelope items you have entered below. Minimum requirement = 80%. Exclude head contractor preliminaries and margins.		
Roof cladding	Profiled steel	-	-		m²	Enter as m² of roof area. Exclude allowances for overlap in the roofing sheets. This row includes all metal-coated and pre-painted steel sheets where steel is the base metal. Examples include: galvanised steel, zinc-aluminium (zincalume) coated steel and zinc-aluminium-magnesium (ZAM) coated steel, whether painted or unpainted.	05_RF	03 or 04

Roof cladding	Profiled aluminium	-	-	19,620	m ²	Enter as m ² of roof area. Exclude allowances for overlap in the roofing sheets. This row also includes pre-painted aluminium sheets.	05_RF	03 or 04
Roof cladding	Profiled zinc	-	-		m ²	Enter as m ² of roof area. Exclude allowances for overlap in the roofing sheets. This row also includes pre-painted zinc sheets.	05_RF	03 or 04
Roof cladding	Membrane	-	-	19,620	m ²	Enter as m ² of roof area. Exclude allowances for overlap in the membrane sheets.	05_RF	03 or 04
Roof cladding	Tiles (traditional clay)	-	-		m ²	Enter as m ² of roof area. Exclude allowances for overlap between the tiles.	05_RF	03 or 04
Roof cladding	Tiles (concrete)	-	-		m ²	Enter as m ² of roof area. Exclude allowances for overlap between the tiles.	05_RF	03 or 04
Roof cladding	Other (Please describe >>)					Please enter a description for any roofing that does not fit a predefined classification	05_RF	03 or 04
Wall cladding	Bricks (heat cured)	-	-		m ²	Enter as m ² of wall area. Heat-cured bricks use a kiln or furnace to raise the brick temperature above ambient temperature during curing process.	06_EW	03 or 04
Wall cladding	Bricks (air dried)	-	-		m ²	Enter as m ² of wall area. Air-dried bricks are cured using ambient temperature.	06_EW	03 or 04
Wall cladding	Bricks (under fired)	-	-		m ²	Enter as m ² of wall area.	06_EW	03 or 04
Wall cladding	Bricks (concrete)	-	-		m ²	Enter as m ² of wall area	06_EW	03 or 04
Wall cladding	Mortar and render	-	-		kg		06_EW	03 or 04
Wall cladding	Profiled steel	-	-		m ²	Enter as m ² of wall area. Exclude allowances for overlap in the cladding sheets, offcuts, etc. This row includes all metal-coated and pre-painted steel sheets where steel is the base metal. Examples include: galvanised steel, zinc-aluminium (zincalume) coated steel and zinc-aluminium-magnesium (ZAM) coated steel, whether painted or unpainted.	06_EW	03 or 04
Wall cladding	Profiled aluminium	-	-	5,521	m ²	Enter as m ² of wall area. Exclude allowances for overlap in the cladding sheets, offcuts, etc. This row also includes pre-painted aluminium sheets.	06_EW	03 or 04
Wall cladding	Profiled zinc	-	-		m ²	Enter as m ² of wall area. Exclude allowances for overlap in the cladding sheets, offcuts, etc. This row also includes pre-painted zinc sheets.	06_EW	03 or 04
Wall cladding	GRC cladding	-	-		m ²	Enter as m ² of wall area. GRC = Glass Reinforced Concrete.	06_EW	03 or 04
Wall cladding	Timber weatherboards	-	-		m ²	Enter as m ² of wall area. Exclude allowances for overlap between weatherboards, offcuts, etc.	06_EW	03 or 04
Wall cladding	Fibre cement board	-	-		m ²	Enter as m ² of wall area. Exclude allowances for offcuts, etc.	06_EW	03 or 04
Wall cladding	Terracotta	-	-		m ²	Enter as m ² of wall area. Exclude allowances for offcuts, etc.	06_EW	03 or 04
Wall cladding	Brick tiles / veneers	-	-		m ²	Enter as m ² of wall area. Exclude allowances for offcuts, etc.	06_EW	03 or 04
Wall cladding	Plasterboard	-	-		m ²	Enter as m ² of wall area. Exclude allowances for offcuts, etc. Include both external wall linings and internal wall linings for envelope walls.	12_WF or 06_EW	03 or 04
Wall cladding	Plywood	-	-		m ²	Enter as m ² of wall area. Exclude allowances for offcuts, etc. Include both external wall linings and internal wall linings for envelope walls.	12_WF or 06_EW	03 or 04
Wall cladding	Other (Please describe >>)				m ²	Please enter a description for any wall cladding that does not fit a predefined classification	06_EW or 12_WF	03 or 04
Windows & doors	Aluminium frame	Single glazed	-		m ²	Include all single glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Aluminium frame	Double glazed	-	1,304	m ²	Include all double glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Aluminium frame	Triple glazed	-		m ²	Include all triple glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Timber frame	Single glazed	-		m ²	Include all single glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Timber frame	Double glazed	-		m ²	Include all double glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Timber frame	Triple glazed	-		m ²	Include all triple glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	uPVC frame	Single glazed	-		m ²	Include all single glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	uPVC frame	Double glazed	-		m ²	Include all double glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	uPVC frame	Triple glazed	-		m ²	Include all triple glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Frameless	Single glazed	-		m ²	Include all single glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Frameless	Double glazed	-		m ²	Include all double glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Frameless	Triple glazed	-		m ²	Include all triple glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Other (Please describe >>)					Please enter a description for any windows or doors that do not fit a predefined classification	07_WW or 08_ED	03 or 04
Curtain wall	Single skin façade	Glazed panel	Single glazed		m ²	Please declare all single-skin façade area in this section. All double-skin façade area should be entered in the next section. Include all single glazing, including standard, toughened, laminated and low-E	06_EW	03 or 04
Curtain wall	Single skin façade	Glazed panel	Double glazed		m ²	Include all double glazing, including standard, toughened, laminated and low-E	06_EW	03 or 04
Curtain wall	Single skin façade	Glazed panel	Triple glazed		m ²	Include all triple glazing, including standard, toughened, laminated and low-E	06_EW	03 or 04
Curtain wall	Single skin façade	Opaque panel	Perforated Aluminium cladding		m ²		06_EW	03 or 04
Curtain wall	Single skin façade	Opaque panel	GRC cladding		m ²	GRC = Glass-fibre Reinforced Concrete	06_EW	03 or 04
Curtain wall	Single skin façade	Opaque panel	Insulated shadow box		m ²		06_EW	03 or 04
Curtain wall	Single skin façade	Opaque panel	Terracotta		m ²		06_EW	03 or 04
Curtain wall	Single skin façade	Opaque panel	Stone cladding		m ²		06_EW	03 or 04
Curtain wall	Double skin façade	Glazed panel	Single glazed		m ²	Please declare all double-skin façade area in this section. Please declare as the area of the curtain wall and do not enter the inner and outer skins twice.	06_EW	03 or 04
Curtain wall	Double skin façade	Glazed panel	Double glazed		m ²	The type of glazing refers to the building's envelope wall, not including the outer skin	06_EW	03 or 04
Curtain wall	Double skin façade	Glazed panel	Triple glazed		m ²	The type of glazing refers to the building's envelope wall, not including the outer skin	06_EW	03 or 04
Curtain wall	Double skin façade	Opaque panel	Aluminium cladding		m ²		06_EW	03 or 04
Curtain wall	Double skin façade	Opaque panel	GRC cladding		m ²	GRC = Glass-fibre Reinforced Concrete	06_EW	03 or 04
Curtain wall	Double skin façade	Opaque panel	Insulated shadow box		m ²		06_EW	03 or 04
Curtain wall	Double skin façade	Opaque panel	Brick cladding		m ²		06_EW	03 or 04
Curtain wall	Double skin façade	Opaque panel	Stone cladding		m ²		06_EW	03 or 04
Curtain wall	Other (Please describe >>)					Please enter a description for any curtain wall that does not fit a predefined classification	06_EW	03 or 04
Curtain wall	Other (Please describe >>)							
Stick-framed wall system	Aluminium frame	Glazed section	Single glazed		m ²	Include all single glazing, including standard, toughened, laminated and low-E	06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Glazed section	Double glazed		m ²	Include all double glazing, including standard, toughened, laminated and low-E	06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Glazed section	Triple glazed		m ²	Include all triple glazing, including standard, toughened, laminated and low-E	06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Opaque section	Aluminium cladding		m ²		06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Opaque section	GRC cladding		m ²	GRC = Glass-fibre Reinforced Concrete	06_EW	03 or 04

Stick-framed wall system	Aluminium frame	Opaque section	Insulated shadow box		m ²		06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Opaque section	Brick cladding		m ²		06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Opaque section	Stone cladding		m ²		06_EW	03 or 04
Stick-framed wall system	Steel frame	Glazed section	Single glazed		m ²	Include all single glazing, including standard, toughened, laminated and low-E	06_EW	03 or 04
Stick-framed wall system	Steel frame	Glazed section	Double glazed		m ²	Include all double glazing, including standard, toughened, laminated and low-E	06_EW	03 or 04
Stick-framed wall system	Steel frame	Glazed section	Triple glazed		m ²	Include all triple glazing, including standard, toughened, laminated and low-E	06_EW	03 or 04
Stick-framed wall system	Steel frame	Opaque section	Aluminium cladding		m ²		06_EW	03 or 04
Stick-framed wall system	Steel frame	Opaque section	GRC cladding		m ²	GRC = Glass-fibre Reinforced Concrete	06_EW	03 or 04
Stick-framed wall system	Steel frame	Opaque section	Insulated shadow box		m ²		06_EW	03 or 04
Stick-framed wall system	Steel frame	Opaque section	Brick cladding		m ²		06_EW	03 or 04
Stick-framed wall system	Steel frame	Opaque section	Stone cladding		m ²		06_EW	03 or 04
Stick-framed wall system	Other (Please describe >>)					Please enter a description for any wall system that does not fit a predefined classification	06_EW	03 or 04
Wall louvre system	Aluminium	-	-		m ²		06_EW	03 or 04
External shading system	Aluminium frame	Aluminium cladding	-		m ²	Please enter as m ² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	GRC cladding	-		m ²	Please enter as m ² of shaded area = linear metres * (width in mm / 1000). GRC = Glass-fibre Reinforced Concrete.	06_EW	03 or 04
External shading system	Aluminium frame	Terracotta cladding	-		m ²	Please enter as m ² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	Stone cladding	-		m ²	Please enter as m ² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	Pre-cast concrete	-		m ²	Please enter as m ² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	Timber	-		m ²	Please enter as m ² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	Glass (opaque)	-		m ²	Please enter as m ² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	Steel	-		m ²	Please enter as m ² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Other (Please describe >>)					Please enter as m ² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
Roller doors	Steel profile	-	-		21 m ²	Please note unit is <u>square metres</u> , not quantity	08_ED	03 or 04
Roller doors	Hardwood over steel	-	-		m ²	Please note unit is <u>square metres</u> , not quantity	08_ED	03 or 04
Roller doors	Softwood over steel	-	-		m ²	Please note unit is <u>square metres</u> , not quantity	08_ED	03 or 04
Revolving doors	Glass/aluminium/steel	-	-		no.		08_ED	03 or 04
Fire-rated doors	Engineered timber	-	-		no.	Please enter as single-leaf equivalent. For double-leaf doors, multiply the quantity by 2.	08_ED	03 or 04
Fire-rated doors	Steel	-	-		27 no.	Please enter as single-leaf equivalent. For double-leaf doors, multiply the quantity by 2.	08_ED	03 or 04
Fire-rated doors	Aluminium/glass	-	-		no.	Please enter as single-leaf equivalent. For double-leaf doors, multiply the quantity by 2.	08_ED	03 or 04
Insulation	Glass wool / fibreglass	-	-		m ²	Please include both wall and ceiling insulation	05_RF or 06_EW	03 or 04
Insulation	Stone wool	-	-		13,552.0 m ²	Please include both wall and ceiling insulation	05_RF or 06_EW	03 or 04
Insulation	Polyester	-	-		m ²	Please include both wall and ceiling insulation	05_RF or 06_EW	03 or 04
Insulation	Expanded polystyrene	-	-		m ²	Please include both wall and ceiling insulation	05_RF or 06_EW	03 or 04
Insulation	Other (Please describe >>)					Please include both wall and ceiling insulation	05_RF or 06_EW	03 or 04
Other (Please describe and add unit >>)		-	-			Please enter a description for any envelope material that does not fit a predefined classification		
Other (Please describe and add unit >>)		-	-			Please enter a description for any envelope material that does not fit a predefined classification		
Other (Please describe and add unit >>)		-	-			Please enter a description for any envelope material that does not fit a predefined classification		

Permanent internal walls and doors

Walls and doors within the building that are either structural or designed to be permanent.

Coverage of material spend on permanent internal walls and doors					80 %	Enter the % coverage of <u>spend</u> for the items you have entered below. There is no minimum requirement: enter what you know. This should include all structural walls. Exclude head contractor preliminaries and margins.		
Interior wall (permanent)	Steel (light framing)	-	-		t	4140.2m2	09_NW	03 or 04
Interior wall (permanent)	Timber framing	-	-		m ²		09_NW	03 or 04
Interior wall (permanent)	AAC panel (reinforced)	-	-		m ²	Panels of autoclaved aerated concrete (AAC) with reinforcing steel. E.g., Hebel.	09_NW or 12_WF	03 or 04
Interior wall (permanent)	Concrete-filled steel panel	-	-		m ²	Panels made from a steel sheet outer with an aerated concrete core. E.g., Speedpanel.	09_NW or 12_WF	03 or 04
Interior wall (permanent)	Plasterboard	-	-		m ²	Enter as single-layer equivalent. If using 2 layers, multiply the area by 2.	09_NW or 12_WF	03 or 04
Interior wall (permanent)	Plywood	-	-		m ²	Enter as single-layer equivalent. If using 2 layers, multiply the area by 2.	09_NW or 12_WF	03 or 04
Interior wall (permanent)	Fibre cement sheet	-	-		m ²	Enter as single-layer equivalent. If using 2 layers, multiply the area by 2.	09_NW or 12_WF	03 or 04
Interior wall (permanent)	Insulation	Rock Wool	-		m ³		09_NW or 12_WF	03 or 04
Interior wall (permanent)	Glass	-	-		m ²		09_NW or 12_WF	03 or 04
Interior wall (permanent)	Other (Please describe >>)	Internal Partitioning; mixed spe	-		44,590.0 m ²	Please enter a description for any internal wall that does not fit a predefined classification	09_NW or 12_WF	03 or 04
Internal door (permanent)	Aluminium/glass	-	-		no.	Please enter as single-leaf equivalent. For double-leaf doors, multiply the quantity by 2.	11_ND	03 or 04
Internal door (permanent)	Timber/glass	-	-		no.	Please enter as single-leaf equivalent. For double-leaf doors, multiply the quantity by 2.	11_ND	03 or 04
Internal door (permanent)	Timber solid lightweight	-	-		no.	Please enter as single-leaf equivalent. For double-leaf doors, multiply the quantity by 2.	11_ND	03 or 04
Internal door (permanent)	Fire resistant	-	-		332 no.	Please enter as single-leaf equivalent. For double-leaf doors, multiply the quantity by 2.	11_ND	03 or 04
Internal door (permanent)	Steel	-	-		no.	Please enter as single-leaf equivalent. For double-leaf doors, multiply the quantity by 2.	11_ND	03 or 04
Internal door (permanent)	Other (Please describe >>)	Elevator Lift Door- Aluminium	-		30 no.	Please enter a description for any internal door that does not fit a predefined classification	11_ND	03 or 04
Other (Ceiling)	Compound Ceiling System	-	-		m ²	Please enter a description for any material that does not fit a predefined classification		
Other (Please describe and add unit >>)		-	-			Please enter a description for any material that does not fit a predefined classification		

Services

Unit of measure

Building services included within the main building contract. If the building components that are the subject of the development application or the construction certificate are base building only, then only enter these items. If you cannot split services by type, please enter them all in the "Other services" category at the bottom. Enter all values as material costs in dollars.

Mechanical services	-	-	-	38,310,781.3	AUD excl. GST	Where possible, enter material costs excluding labour, plant, equipment, margins and taxes	28_SS	05
Vertical transportation	-	-	-	1,300,000.0	AUD excl. GST	Where possible, enter material costs excluding labour, plant, equipment, margins and taxes	28_SS	05

Electrical services	-	-	-	83,365,376.3	AUD excl. GST	Electrical services including the main power supply, backup generators, security and communications. Excluding solar installations.	26_LP	05
Solar photovoltaic installations	-	-	Incl. above	0.0	AUD excl. GST	Where possible, enter material costs excluding labour, plant, equipment, margins and taxes.	26_LP_LPGP	05
Plumbing/hydraulic services	-	-	-	3,021,587.6	AUD excl. GST	Where possible, enter material costs excluding labour, plant, equipment, margins and taxes	18_PD and 19_WS	05 or 06
Fire services	-	-	-	9,627,843.8	AUD excl. GST	Where possible, enter material costs excluding labour, plant, equipment, margins and taxes	25_FPSS04 or 39_XWAW_03 or 41_XF	05
Other services (Please describe)	Security & BMS system	-	-	3,507,733.5	AUD excl. GST	Please group all other services here, meaning that coverage will always be 100% for services. Enter only the material costs (excluding labour, plant, equipment, margins and taxes).	29_SS or multiple	

External works

The materials associated with hard landscaping and outbuildings on the site but outside the building envelope.

This includes hardstands, carparks, driveways, covered walkways, decks, patios, awnings, fences, gates, etc. Soft landscaping should be excluded.

Coverage of spend on external works	-	-	-	80	%	Required. Coverage of spend for external works (excluding soft landscaping) entered below. Minimum requirement = 80%. Exclude head contractor preliminaries and margins.		
Asphalt	-	-	-	2,618	t		33_XR	07
Concrete in-situ	≤10 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	33_XR or 34_XN or 35_XB or 36_XL	07
Concrete in-situ	>10 MPa to ≤20 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	33_XR or 34_XN or 35_XB or 36_XL	07
Concrete in-situ	>20 MPa to ≤32 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	33_XR or 34_XN or 35_XB or 36_XL	07
Concrete in-situ	>32 MPa to ≤40 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	33_XR or 34_XN or 35_XB or 36_XL	07
Concrete in-situ	>40 MPa to ≤50 MPa	-	-	165.0	m³	Please enter reinforcing steel as part of "Reinforcing steel" below	33_XR or 34_XN or 35_XB or 36_XL	07
Concrete in-situ	>50 MPa	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	33_XR or 34_XN or 35_XB or 36_XL	07
Pavers, bricks and blocks	Concrete	-	-		m²		33_XR	07
Pavers, bricks and blocks	Clay	-	-		m²		33_XR	07
Reinforcing steel	Bar & mesh	-	-	19,800.0	kg	Include all reinforcing steel bar/mesh in the external works in this row. Usually this is calculated as kg/m² per concrete element and then summed. Example: 10 m² of 40 MPa concrete @ 100 kg/m² + 5 m³ of 50 MPa concrete @ 150 kg/m³ = 1,750 kg reinforcing steel.	33_XR or 34_XN or 35_XB or 36_XL	07
Reinforcing steel	Fibre & strand	-	-		kg	Include all steel fibre reinforcing and steel strand in the external works in this row.	33_XR or 34_XN or 35_XB or 36_XL	07
Structural steel	-	-	-		t		02_11	07
Structural aluminium	-	-	-		t	Includes structures, louvre systems, etc.	35_XB	07
External roof/wall cladding	Polycarbonate	-	-		m²	Enter as profiled polycarbonate sheet that would ordered, including allowance for overlap	35_XB	07
External roof/wall cladding	PVC	-	-		m²	Enter as profiled PVC sheet that would ordered, including allowance for overlap	35_XB	07
External roof/wall cladding	Bitumen sheet	-	-		m²	Enter as bituminous sheet that would ordered, including allowance for overlap	35_XB	07
External roof/wall cladding	Steel profile	-	-		m²	Enter as profiled steel sheet that would ordered, including allowance for overlap	35_XB	07
Fill	-	-	-		t	Include purchased material only. Exclude site-won material.	33_XR or 34_XN or 35_XB or 36_XL	07
Sand & gravel	-	-	-		t	Include purchased material only. Exclude site-won material and sand/gravel in concrete.	33_XR or 34_XN or 35_XB or 36_XL	07
Timber (solid)	Sawn softwood	-	-		m³		33_XR or 34_XN or 35_XB or 36_XL	07
Timber (solid)	Sawn hardwood	-	-		m³		33_XR or 34_XN or 35_XB or 36_XL	07
Timber (engineered)	CLT	-	-		m³		33_XR or 34_XN or 35_XB or 36_XL	07
Timber (engineered)	Glulam	-	-		m³		33_XR or 34_XN or 35_XB or 36_XL	07
Timber (engineered)	LVL	-	-		m³		33_XR or 34_XN or 35_XB or 36_XL	07
Timber (engineered)	OSB	-	-		m³		33_XR or 34_XN or 35_XB or 36_XL	07
Fabric (awning/sunshade)	-	-	-		m²		35_XB or 36_XL	07
Other (Please describe and add unit >>)		-	-		m	Please enter a description for any external works that does not fit a predefined classification		
Other (Please describe and add unit >>)		-	-			Please enter a description for any external works that does not fit a predefined classification		
Other (Please describe and add unit >>)		-	-			Please enter a description for any external works that does not fit a predefined classification		

Step 3: Certifier details

Fill out blue cells

The material quantities must be determined through an itemised list of building materials (such as a bill of quantities) and certified by a quantity surveyor, designer, engineer or NABERS Assessor.

Person that completed this form	Value	Note
Name	Tom Mann	
Company	Trenmor Pty Ltd (Linesight)	
ABN	45 159 106 653	
Profession	Associate - Cost Management	
Qualification or registration	MRICS - 6860258	

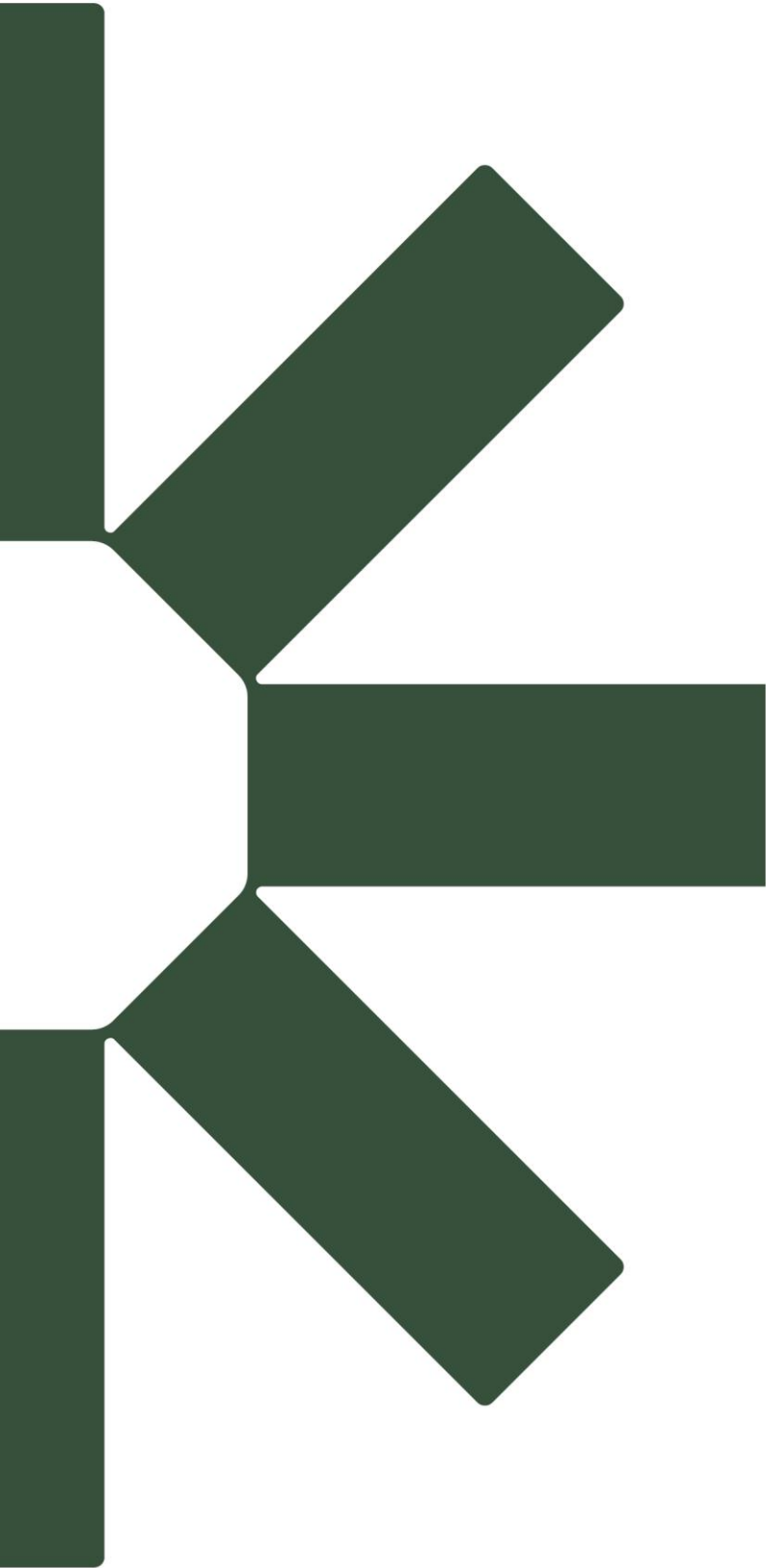
Person that certified the details in this form	Value	Note
Name	Prameena Karunairaj	
Company	SLR Consulting	
ABN	29001584612	
Profession	ESD Consultant	
Qualification or registration	Engineer	

Confirmation of certification	Value	Note
Are 80% of material costs captured for the building's structure, envelope and external works?	Yes	Material quantities and costs have been calculated in consultation with the architects, structural engineer and mechanical engineer to meet the minimum 80% requirement
If no - why not?		

Additional comments from data provider

Additional comments of certifier

Attach this Excel spreadsheet to your development application or construction certificate application.



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