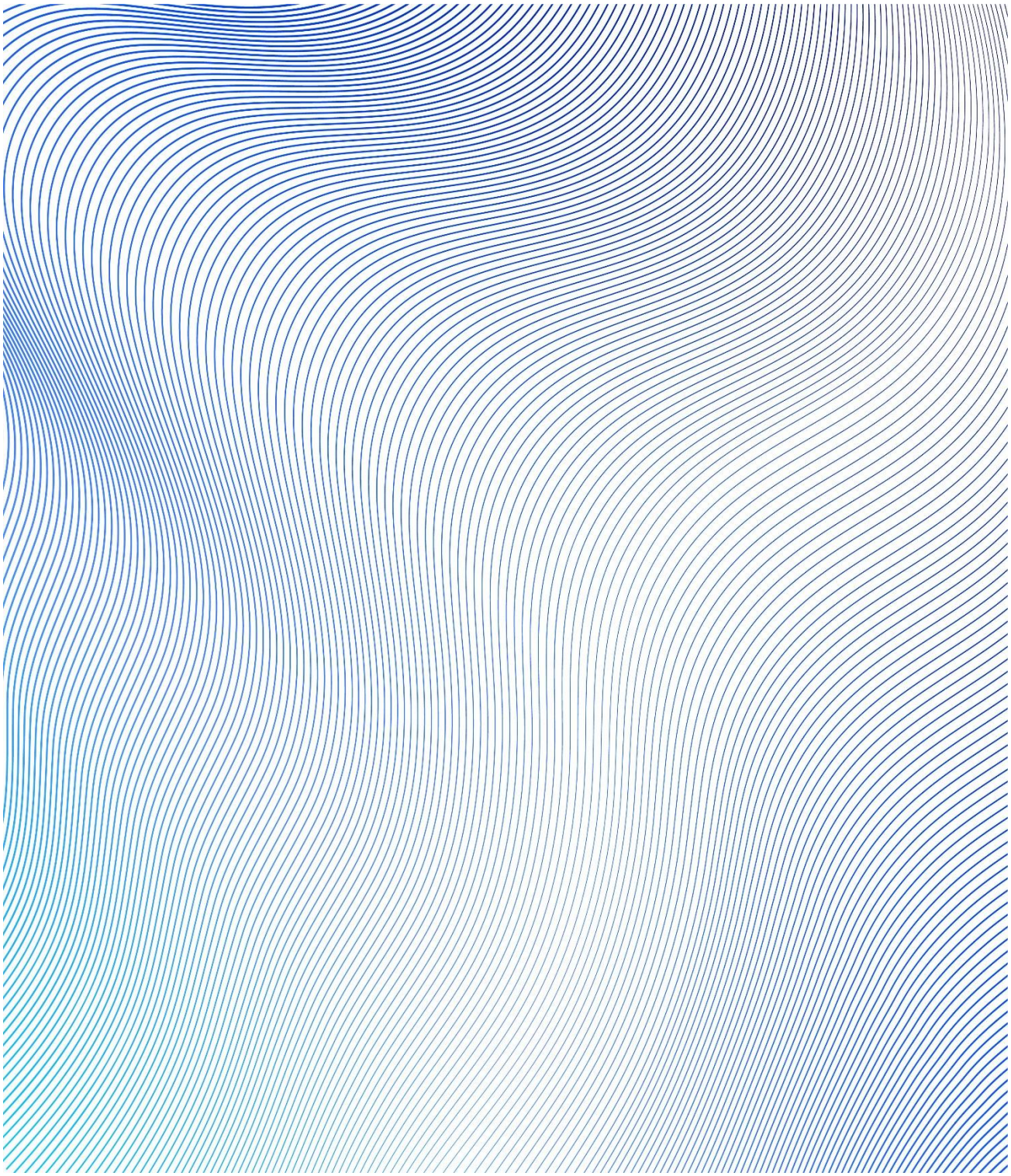
610101 – Botany Aquatic Centre

Sustainability Management Plan

November 2024



Introba

Issue	Description	Date (DD.MM.YY)	Prepared By	Signed Off
01	Issued to address council DA comments	27.09.24	DAA	RH
02	Final	11.10.24	AK	RH
03	Update to amend wording in Table 1	05.11.24	DAA	RH

Project Office

Level 12, 77 Pacific Highway
North Sydney NSW 2060
+61 2 9431 9431

introba.com

Project Contact:

David Arnott

David.Arnott@introba.com

V1.0

Table of Contents

1 Introduction

This Sustainability Management Plan has been prepared by Introba to support a Development Application (DA) for the redevelopment of Botany Aquatic Centre. The proposed Botany Aquatic Centre is a new indoor / outdoor swimming pool facility, gymnastic facility, amenities, community space and with existing picnic area and carpark area. Bayside Council is the proponent for the DA.

1.1 Site Description

The subject site is located on the corner of Myrtle Street and Jasmine Street, Botany as highlighted in Figure 1.

The site has a primary frontage to Myrtle Street to the south and is bounded by Big Picture Australia Pty Ltd to the north, Booralee park to the west, and railway line to the east.

The surrounding context of the site is predominately low and medium density residential, with Mascot Arcade Shopping Centre and a number of smaller business premises and shop-top housing located immediately to the south of the site across Myrtle Street, with Botany Public School located 1000m to the south-west.

Figure 1 *- Site aerial (Source: Google Maps)*

1.2 Project Description

This DA seeks development consent for:

- Demolition of existing buildings and structures within the site.
- Site preparation works, including termination or relocation of site services and infrastructure, tree removal and the erection of site protection fencing.
- Construction of the new Botany Aquatic Centre, including:
  - An outdoor 50M competition pool.
  - An indoor learn to swim pool.
  - An indoor 25M lap pool.
  - Adventure slides/major water play/splash pad.
  - A new building including entrance, amenities, and change rooms and café.
  - A new Grandstand.
  - A local indoor health and fitness gym space.
  - A new community/child minding space.
- Car parking, including a combination of staff and visitor spaces, accessed via Jasmine Street and Lord Street.
- Public domain works within the site, including new landscaping and tree planting.

1.3 Purpose Of This Report

The Sustainability Management Plan provides a consolidated statement of ambition and implementation opportunities for the targeted sustainability initiatives of Botany Aquatic Centre.

This iteration of the report has been prepared in support of the Development Application and address comments received by council, as they relate to the sustainability initiatives embedded within the proposal. The key areas included in this report are:

- Sustainability Ambition
- Sustainable Buildings SEPP
- Baysides DCP ESD requirements

1.4 Reference Information

The project's architectural documentation prepared by Co-op Studio has been used in the preparation of this report. Inputs have also been coordinated with all relevant Consultants.

1.5 Limitations

This plan identifies the pathway to achieving the sustainability ambitions and commitments for 2 Myrtle St, however actual performance ultimately depends on the final design, construction and operation of the buildings.

The analysis and performance presented in this plan and its appendices is based on best available information at the time of writing, but is subject to change through tender, value engineering and construction.

2 Sustainability Ambition

The sustainability ambition for the project was derived through a series of workshops with the design team to uncover the key themes that are critical for this project to incorporate to become a value-adding development. A key part of this process was to undertake a Multi Criteria Analysis (MCA). This analysis provided guidance in relation to energy saving measures and their impact in supporting Bayside Council's ambition for a low energy building. Design strategies were proposed by Introba as options for the Botany Aquatic Centre (BAC). The MCA process then sort to recommend the main strategies / technologies which warrant further investigation to test their viability for inclusion at the BAC.

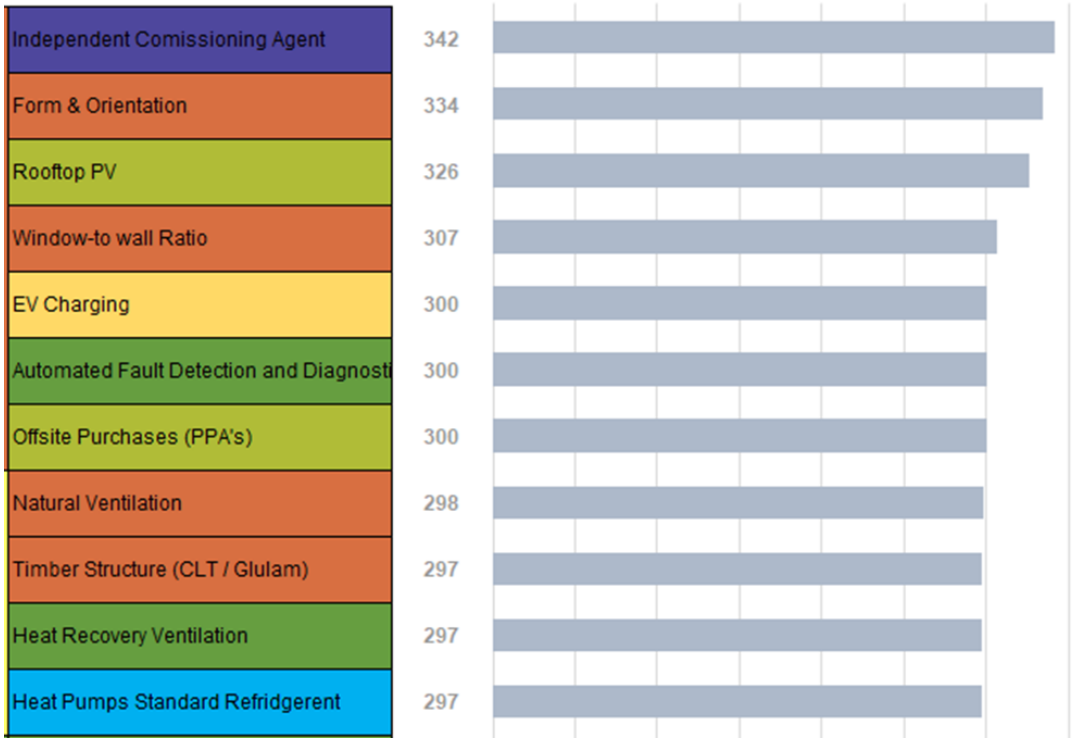


***Figure 2** – Highest scoring MCA items*

Having reviewed all the strategies and technologies on a per discipline basis, the figure above presents the highest scoring items that met the clients brief, based on the key project drivers that they value for delivering a low energy building. These items are being further investigated and reviewed during the design development and although not all of these items are likely to be adopted the process provides useful insight to the project overall strategic direction, which ultimately informed the initiatives which follow in this report.

3 Sustainable Buildings SEPP

The Sustainable Buildings SEPP commenced on the 1 Oct 2023. Section 3.2 specifically list requirements for Development consent for non-residential development. **Table 1** below outlines how the project responds to many of the themes outlined through our ESD strategy:

Relevant Sustainability Section of the SEPP	Design Response
3.2 (1) (a) the minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials	*All construction and demolition waste that can be recycled using conventional methods will be recycled. Operation waste will be addressed in accordance with the operation waste management plan SO581.*
3.2 (1) (b) a reduction in peak demand for electricity, including through the use of energy efficient technology	*The building has set a "fabric-first" efficiency strategy relying on a high performing façade and external shading to minimise heating and cooling peak and annual demands. The project will include design initiatives such as smart lighting controls, heat recovery for HVAC systems, sub-metering with BMS and the provision of substantial PV. The project will also consider the engagement of an Independent Commissioning Agent to ensure all systems and operating optimally*
3.2 (1) (c) a reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design	*As above, the project has been designed around a higher performance façade that seeks to minimise heating and cooling whilst still providing high quality views and daylight. The façade leverages efficient exterior shading to reduce peak cooling and a specification for high-performing glazing, wall performance and reduced air leakage rates.*
3.2 (1) (d) the generation and storage of renewable energy	*The project has incorporated a significant amount of PV and also mode provision in the electrical and structural design for additional PV to be added onto available roof top areas at a later date. Storage was investigated for the project but given the typically high energy demands of aquatic centre it was determined that the energy generated on-site would be consumed by the facility and as such the cost benefit of storage was not feasible.*
3.2 (1) (e) the metering and monitoring of energy consumption	*Check metering will be provided for electrical power, lighting and mechanical services. Check monitoring will be provided for on-site electrical energy generation. Check metering will be provided for water use including; irrigation, pool use and other on-site water use. Check monitoring will be provided for on-site rooftop rainwater harvesting.*
3.2 (1) (f) the minimisation of the consumption of potable water	*Rainwater tanks will be provided to capture water from the building roof. Harvested rainwater will be supplied to the building from the rainwater tank for WC flushing, concourse/bin room, roof, and grease arrestor washdown, and irrigation demands. The project is also setting minimum WELS ratings to further reduce potable water demands and the landscape design has provided for native and low water use species.*
3.2 (2) Development consent must not be granted to non-residential development unless the consent authority is satisfied the embodied emissions attributable to the	*The project team has assessed the bill of quantities and completed the NABERS Embodied emissions materials form. See* ***Appendix A.***

Relevant Sustainability Section of the SEPP	Design Response
development have been quantified.	*In response to council comments which state* *This document does not address the requirements of section 3.2(2) of the SB SEPP, as the embodied emissions have not been quantified in accordance with the definition of "embodied emissions" given within Schedule 4 of the SB SEPP, and reproduced below:* *embodied emissions, attributable to development, means the greenhouse gas emissions resulting from the materials used to construct a building that forms part of the development, including emissions from the following—* *(a) the extraction of raw materials that are used to construct the building,* *(b) transporting materials to be manufactured,* *(c) the manufacture of the materials used to construct the building.* *The Department of Planning and Environment has issued an Embodied Emission Technical Note to provide guidance to the industry to meet this new requirement. The technical note states that "*The NABERS emissions framework is in development and will be integrated when available to support national consistency*" and "*From 1 October 2023, applicants for nonresidential development types must complete the NABERS Embodied Emissions Material Form. This is an interim reporting tool, designed for ease of transition to the NABERS Embodied Emissions Framework when it and the related online tool is released in mid-2024.*" So we while we agree that the intention for future projects is to report on A1-A3 emissions, the current guidance from the department of planning is that the NABERS Embodied Emissions form (which does not quantify A1-A3 emissions) is appropriate. Our completed form is compliant insofar as the minimum coverage of 80% has been exceeded in all categories. Furthermore the form does not provide the ability to specifically input emissions associated with extraction, transportation etc.* *As such while we can appreciate the source of the definition provided is also taken from the SB SEPP 2022, we would expect further resources to be supplied (like the NABERS form) if these items needed to be specifically quantified.* *Therefore, we believe that what has been provided meets the requirement of 3.2 (2) of the NSW Sustainable Buildings SEPP.*

Table 1 *Responses to relevant Section of Sustainable Buildings SEPP*

4 Bayside DCP 2022 – 3.3 Energy and Environmental Sustainability

This section of the report responds directly the Bayside DCP 2022 Requirements 3.3 Energy and Environmental Sustainability. The approach below responds to each section of 3.3 but does not isolate each objective and control individually. Rather it provides a summary of the integrated approach taken by the project which addressed each of the individual items listed in the DCP.

4.1 General Controls (3.3.1)

The following initiatives have been incorporated in the design which address the DCP general requirements for energy and water efficiency.

4.1.1 Passive Design Strategy

Building Fabric – An integrated approach to façade design, with the specification of a high performance façade including shading and low-e double pane glazing; designing out thermal bridges and constructing an airtight façade.

Natural Ventilation – Where possible natural ventilation has been incorporated to minimise mechanical ventilation and active cooling. Noting that the unique internal conditions required by the pool hall limit the practicality of where natural ventilation can be effective in the reduction of energy consumption.

Solar Control – Direct Solar gains are to be controlled throughout; maximised in the pool hall for passive heating; minimised elsewhere reducing the cooling load and improving thermal comfort. However, this should not compromise high levels of daylight throughout the building. Horizontal shading is provided to the north and vertical shading to the east and west are most effective.

4.1.2 Energy Efficiency Strategies

All-Electric – The development will be all-electric and any fossil fuel requirement, such as hot water generation, will be eliminated.

Low-energy lighting –The lighting design will meet illumination power density as required by the NCC Section J. Energy-efficient LED lighting sources will be provided to increase the overall power efficiency and lower recurring cost. Flexible switching systems, motion detectors and daylight sensors will be provided for control lighting where appropriate and economical.

Energy Metering and Monitoring – Electricity meters will be provided, and major services will be sub-metered as required by NCC Section J. Meters are to be located in easy access to facilitate regular monitoring and maintenance.

Given the size and the scale of mechanical services systems required for the development, it is proposed to provide Building Management and Control System (BMCS) for control and monitoring of all mechanical systems, as well as monitoring of other engineering services within the building.

BMCS is also proposed to be utilised as a facility for data acquisition from various utility meters and sub-meters on site. Data can then be harvested by the cloud-based utility management system with machine learning capabilities for automatic fault detection and diagnostics.

Renewable energy – Please refer below layout for space zoned for PV panel installation. Approx. 1000 sqm of roof area is zoned for PV panel installation including future installation.

Based on the available roof space, it is estimated to install PV panels can generate power over 150kW but considering the saleable generation credits STC (Small Scale Technology Certificate) for less than 99kW it is proposed to install solar PV capacity of circa 99kW.

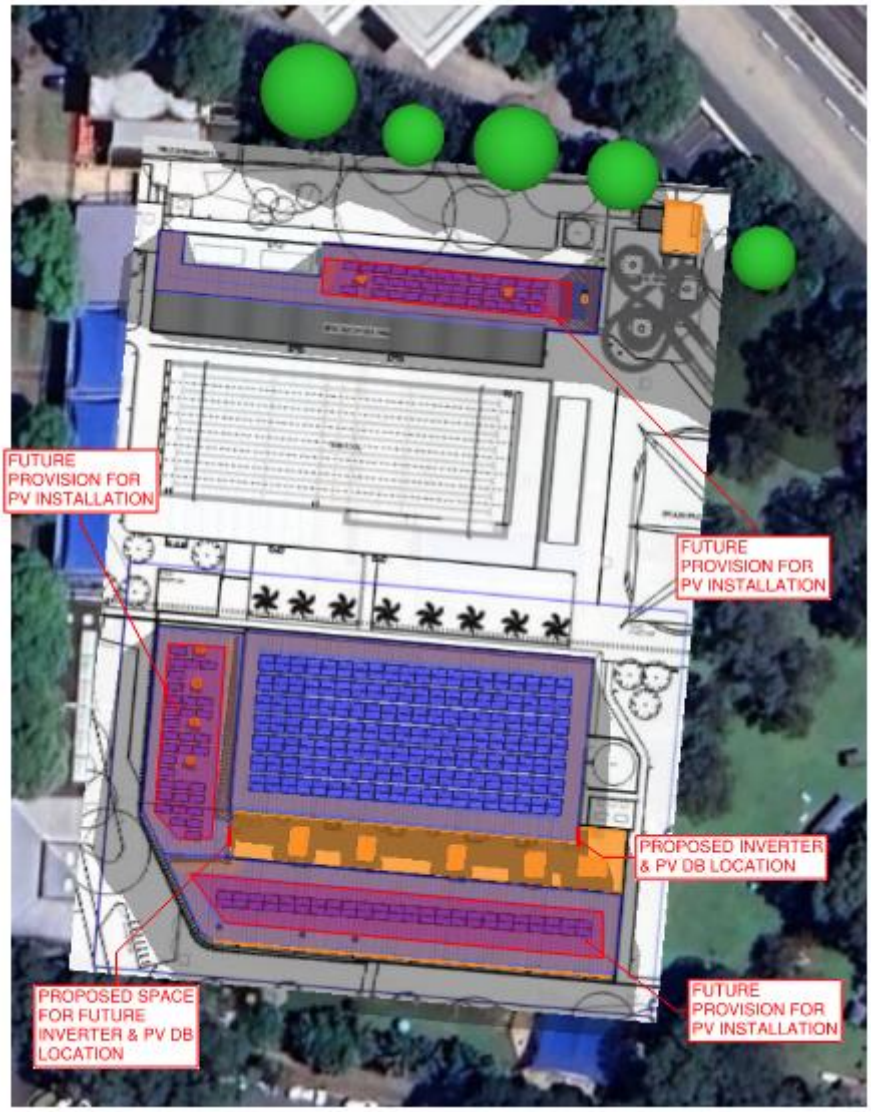


Figure 3 *– Proposed PV array*

4.1.3 Key Water Efficiency Strategies

Water sensitive planting & irrigation – Landscape design will incorporate water sensitive planting including drought tolerant, native plant species. An efficient irrigation system will be specified for the project. Collected rainwater will be used for irrigation.

Water metering and monitoring – Water metering will be done separately for the following uses and to meet the NCC requirements:

- Mains water
- Irrigation
- Rainwater supply
- Major internal uses (as required)

Rainwater harvesting – Rainwater tanks will be provided to capture water from the building roof. Harvested rainwater will be supplied to the building from the rainwater tank for WC flushing, concourse/bin room, roof,

and grease arrestor washdown, and irrigation demands. Dedicated pumps and filtration equipment will be provided for rainwater supply and treatment. The image below indicates the proposed location of the rainwater tank.

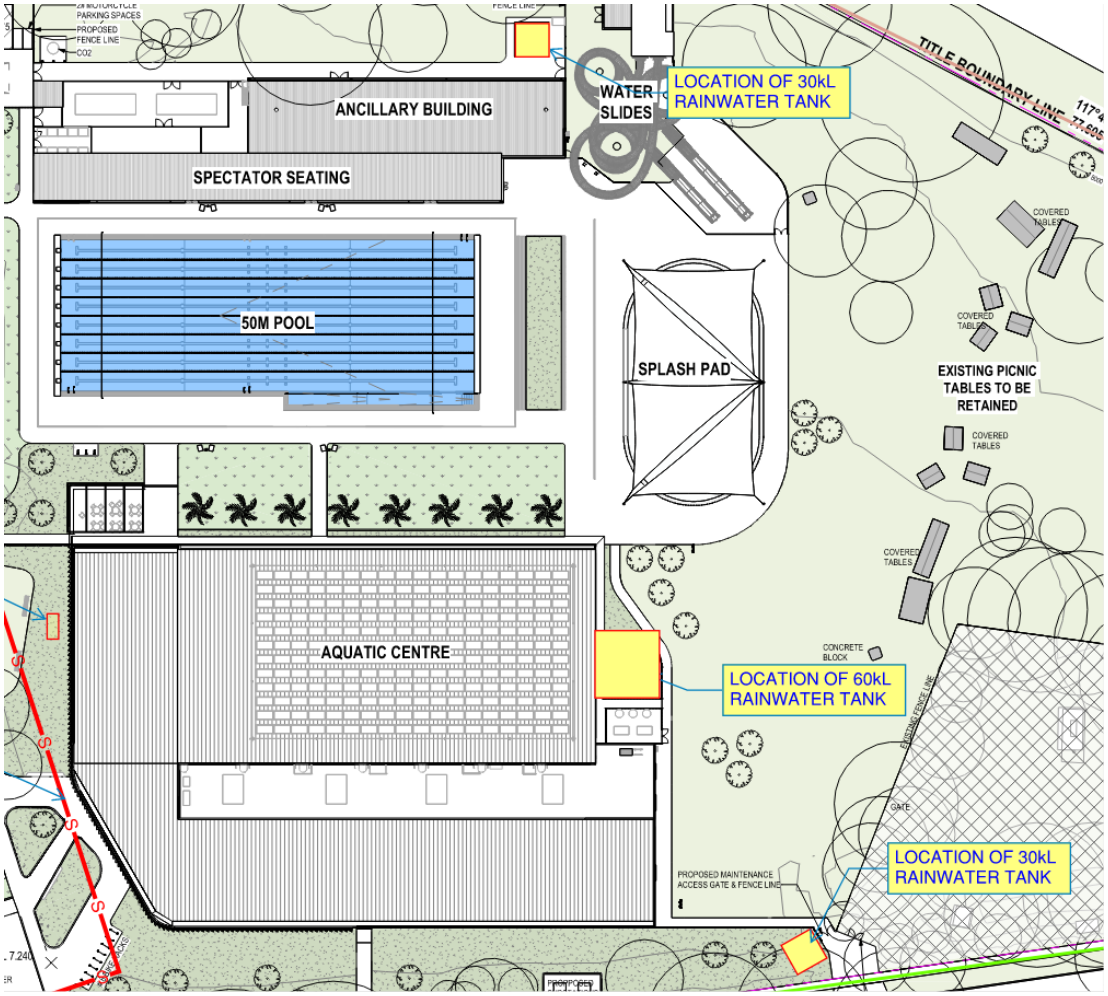


***Figure 4** – Proposed rainwater tanks*

Water Efficient fixtures and fitting - Minimum WELS ratings to further reduce potable water demands as below:

	Min WELS Target
Taps	5 Star
Urinals	5 Star
Toilets	4 Star
Showers	3 Star

***Table 2** Minimum WELS ratings*

4.2 Natural Daylight and Ventilation (3.3.2)

In addition to items listed above in 4.1.1 Passive Design Strategy, the following initiatives have been incorporated in the design which address the DCP general requirements for natural daylight and ventilation.

Ceiling heights – The project is compliant with the stated minimum ceiling heights of C1 in this section of the DCP

Daylight and views – Daylight and outdoor views are a crucial part of a healthy indoor environment and provide a connection to the outside environment. Good access to natural light is essential to occupant wellbeing. Effective daylighting improves light quality and lowers the reliance on artificial lighting, lowering energy consumption.

The building façade and the roof are designed to provide adequate amount of daylight within the project. The deep floorplate of the pool hall will receive daylight through the South facing clerestory windows.

4.3 Reflectivity (3.3.3)

Given the size and location of the building a reflectivity report was thought to be non-applicable for the project. The project will however incorporate the following initiatives to manage light reflectivity and minimise glare

- Material specification for durable and easily cleaned surfaces
- Project will ensure glazing selection is not highly reflective
- Inclusion of a considerable amount of roof-top PV which is by it's nature non-reflective

4.4 Rating Tools (3.3.4)

The project team has chosen not to pursue a certified rating i.e. Green Star (NABERS is n/a for a project of this nature) for the project. Instead a decision has been made to focus on the key initiatives that will provide maximum impact for a project of this nature i.e. energy and water efficiency. In addition to this the project is considering a number of additional initiative which strongly align with the Green Star tool, they are.

Low toxicity materials – To minimise the detrimental effects on occupant health and wellbeing, the following specifications are proposed to minimise indoor pollutants such as volatile organic compounds (VOCs) and formaldehyde:

- All interior surface paints will be specified as low VOC;
- All interior sealants and adhesives will be low-VOC except when there is no alternative (PVC cement for example);
- All interior carpets and flooring will be low-VOC;
- Incorporation of low or zero emissions (i.e. E1 or E0) medium density fibreboard (MDF) as opposed to standard MDF; and
- Materials selected for longevity, non-porous, easy to clean, and anti-bacterial qualities.

Electric Vehicle Charging System – The development shall be provided with infrastructure, control and load management systems for a total of 35 No. NCC compliant EV charging stations. While electric vehicle sales represent an increasing proportion of new vehicle sales in Australia, approximately 8% in 2023, electric vehicles presently account for approximately 1% of light vehicles in Australia according to the Electric Vehicle Council of Australia.

It is recommended that two spaces are 'EV Charging Equipped' from day of opening on the basis that the expected mix of site visitors would live close by (so short trips to BAC) and short stays. This facilitates the setup, programming and commissioning of EV charging control and management systems, during base build and allowing for additional chargers to be added to the system in a phased manner in response to EV uptake in Australia, community feedback and which maintains the availability of parking spaces for non electric vehicles until such time as they fitted out with charge points. Energy Assessment (3.3.5)

Construction waste – A target waste diversion percentage is proposed to be included in the contractor requirements for this project. A target of 90% of all demolition and construction waste (by mass) shall be recycled or reused. A Waste Management Plan that describes what materials will be reused on-site or separated for off-site recycling is a very effective way of reducing waste going to landfills and could be implemented by the Contractor.

Building Materials – The use of materials in the construction of buildings results in environmental impacts. These impacts can be minimised by using materials with favourable lifecycle assessments based on a variety of factors. The following initiatives are being considered for the project

- Portland cement will be reduced by at least 30% with Supplementary Cementitious Materials (SCMs) and mix water for all concrete will contain at least 50% captured or reclaimed water (If acceptable to structural engineer and subject to availability). Concrete will also demonstrate fine and/or coarse aggregate substitution.
- Steel for the proposed development will be sourced (subject to availability) from a responsible steel maker.
- Where timber is used, the use of recycled or timber from certified sources (i.e. FSC or PEFC) will be prioritised to ensure the building does not contribute to the deforestation of Australia or other countries from which timber is sourced. Locally sourced and plantation timbers are preferred to those sourced from old-growth forests and from distant locations where ecosystems may be under threat or poorly managed.
- Materials that have been certified or approved by independent bodies such as EPD schemes, Ecospecifier or Good Environmental Choice Australia will be preferred over non-certified products. These rating systems provide an evaluation of various products across a range of environmental performance criteria.

Construction Management Plan – The contractor will be required to prepare and implement a project-specific best practice Environmental Management Plan (EMP) to manage environmental performance, conditions and impacts arising from excavation, demolition and construction. The EMP must cover environmental impacts arising from construction works and must be site-specific.

The Contractor must provide an EMP that is compliant with best practice guidelines and implemented from the beginning of construction works. The requirements for EMPs, as outlined within the NSW Environmental Management Systems Guidelines 2013 or any other equivalent guidelines, are considered best practice.

The Contractor should implement a best practice EMP that includes the following:

- Commitment and policy
- Planning
- Implementation
- Contact information
- Monitoring, evaluation and review

Independent Commissioning Agent – In early workshops an 'Independent commissioning agent' (ICA) was identified as closely aligning with Bayside's Net Zero Energy, Whole of Life (WOL) cost and maintenance ambitions. Studies at the Berkley Centre have shown that ICA's have a 4.5 year median payback, making it one of the most cost effective strategies that can be adopted, and smoothing the handover process for the client. As such we would propose that an ICA is engaged by council for the project.

As a minimum, commissioning requirements to be specified in accordance with the Australian Standards.

Urban heat island reduction – Light colour roofing sheets will be specified. Roofing sheets will be selected to have a minimum initial Solar Reflective Index (SRI) of 64.

4.5 Energy Assessment (3.3.5)

In addition to the initiatives describes above in sections *4.1 – 4.4* the following expands on the projects ambition for energy efficiency.

Energy-efficient electric hot water system – All electric water heating systems within one star of the best available, or 85% or better than the most efficient equivalent capacity unit, will be considered for development.

Sub-metering – The provision of a comprehensive electrical metering system is proposed as per NCC 2022 Section J9D3.2, to facilitate the optimisation of the site's operations and assist in reduction of emissions.

The system shall comply with the NCC 2022 Section J9D3.3 requirement for meters to be interlinked by a communication system that collates the time of use energy consumption data to a single interface monitoring system where it can be stored, analysed, and reviewed.

Proposed Metering Coverage	
Artificial Lighting	Meters on Lighting Sections of DBs
Central Hot Water	Meters on Main Switchboard, Mechanical Switchboards, or relevant Control Panel(s)
Air Conditioning Systems	Meters on Main Switchboard, Mechanical Switchboards, or relevant Control Panel(s)
Ancillary Plant	Meters on Main Switchboard, Mechanical Switchboards, or relevant Control Panel(s)
Pool Plant	Meters on Main Switchboard, Mechanical Switchboards, or relevant Control Panel(s)
EV charging	Meters on Main Switchboard & DB(s)
PV System	Meters on Main Switchboard or relevant Control Panel(s)

***Table 3** Sub-metering strategy*

Building Management and Control System – Given the size and the scale of mechanical services systems required for the development, it is proposed to provide Building Management and Control System (BMCS) for control and monitoring of all mechanical systems, as well as monitoring of other engineering services within the building.

BMCS is also proposed to be utilised as a facility for data acquisition from various utility meters and sub-meters on site. Data can then be harvested by the cloud-based utility management system with machine learning capabilities for automatic fault detection and diagnostics.

Heat Recovery in HVAC systems – Heat recovery has been included in the mechanical design due to it's measured benefit on heating and cooling requirements, as outgoing air warms incoming air, while promoting good indoor air quality as the use of recirculated air can be reduced.

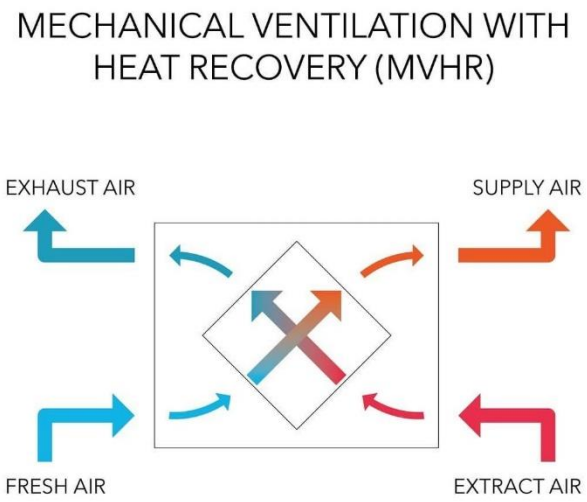


Figure 3 *Heat Recovery Process*

Lighting Controls – Automatic lighting controls shall be provided in accordance with NCC requirements. While this can be achieved via localised automatic controls, a lighting control system is proposed to enhance the client's ability to optimise and fine tune the operation of the lighting installation post occupancy, to further enhance their energy efficiency and assist in the achievement of their climate policy guidelines.

Lighting control for areas such as the Pool Hall, Gym, external pools, etc. shall be developed with the client to provide suitable staff control over lighting in places of public access. Lighting control locations shall be located in staff areas, to avoid misuse and requirements for lockable enclosures where placed in public areas.

External lighting will be controlled by time clocks and photocells, with over-ride facilities at reception. All lighting controls and zoning will be provided in accordance with the requirements of the NCC Section J.

Pool area lighting controls shall be located in secured staff areas.

5 Bayside DCP 2022 – C5 of Part 3.2

The project will meet the objectives identified in the C5 of Part 3.2 as demonstrated below.

Sustainability Measure	*Complies*	*Comments*
Provision of Solar Photovoltaic Cells on the rooftop designed to maximise the coverage of the non-trafficable roof space.	✓	Included. Refer to Section 4.1.2 above
Provision for Electric Vehicle (EV) charging within the parking facility	✓	Included. Refer to Section 4.4 above
Maximisation of non-potable stormwater re-use.	✓	Included. Refer to Section 4.1.3 above
Zoned and sensor-controlled lighting and air conditioning.	✓	Included. Refer to Section 4.1.2 and 4.5 above
Use of LEDs and other low energy flicker free lighting resources.	✓	LEDs to be provided throughout
Use of water saving appliances above and beyond BASIX requirements.	✓	BASIX is n/a to this development, however water efficient fixtures and fittings will be provided throughout. Refer to Section xx above
Provide ample recycling storage rooms.	✓	Provided. Large Refuge Store room provided in Ancillary Building with spatial allowance for multiple waste streams
Extensive use of deep soil landscaping and planters on interior/exterior of the buildings including provision of green walls, green roofs where possible etc.	✓	The landscaping strategy has been carefully considered, working within the constraints of the existing site. Works include new tree, shrub, groundcover and lawn planting. It also includes an area of softscape to be made good along the southern boundary of the site.
Provide separate circuiting for temporary power to minimal stair and corridor lighting.	✓	n/a to project.
Consideration for adoption of sustainable building materials such as timber and the use of blast slag, fly ash or other pozzolan admixtures in concrete to minimise cement and reduce embodied carbon.	✓	Included. Refer to Section 4.4 above
Mitigation of any environmental impacts such as urban heat island effect, overshadowing, wind, air quality and reflectivity.	✓	Included. Refer to Sections 4.3 and 4.4 above

***Table 4** Responses to Bayside DCP 2022 - C5 of Part 3.2*

Appendix A NABERS Embodied Emissions Materials Form

Step 1: About the building

Fill out blue cells

Building location and site data	Value	Unit	Note	Comment
Building address	Botany Aquatic Centre, Myrtle Street and Jasmine Street, B			
Postcode	2019		Required	Postcode of building
Town/city	BANKSMEADOW + 2 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			m²	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			m²	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			m²	Required for Class 2: Multi-unit residential, including apartment buildings	
Class 3: Other residential buildings			m²	Required for Class 3: Other residential buildings	
Class 4: Residential inside non-residential			m²	Required for Class 4: Residential building inside a non-residential building, e.g., caretaker residence	
Class 5: Office buildings			m²	Required for Class 5: Office building	
Class 6: Retail buildings			m²	Required for Class 6: Retail building, e.g., shop, restaurant, café	
Class 7a: Carparks			m²	Required for Class 7a: Carparks	
Class 7b: Warehouse-type buildings			m²	Required for Class 7b: Warehouses, wholesalers and storage facilities	
Class 8: Industrial buildings			m²	Required for Class 8: Industrial buildings, e.g., factories and workshops	
Class 9a: Healthcare buildings			m²	Required for Class 9a: Healthcare, e.g., hospitals, clinics, day surgeries	
Class 9b: Civic buildings	2,953	2,082	m²	Required for Class 9b: Civic buildings, e.g., theatres, civic centres, train stations	
Class 9c: Aged care and personal care buildings			m²	Required for Class 9c: Aged care and personal care	
Class 10a: Non-habitable buildings			m²	Required for Class 10a: Non-habitable buildings including sheds, carports and private garages	
Class 10b: Miscellaneous structures			m²	Required for Class 10b: Miscellaneous structures, including fences, masts, antennas, retaining walls and swimming pools	
Class 10c: Bushfire shelters			m²	Required for Class 10c: Bushfire shelters not attached to a Class 1a building	
Total	2,953	2,082	m²	Required: Sum of m² inputs must be more than 0.	

Project information	Value	Unit	Note	
Total cost of project	68,760,468	AUD excl. GST	Required	Include labour, materials, transport, plant, equipment and professional fees. Exclude GST, land, finance, escalation and other costs.
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	30,096	m²	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	3,382	m²	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)		m²	Only needed if different to row above	
Typical floor perimeter	374,945	m	Required	
Area of external carpark (not included in GFA)	6,018	m^2	Required. Enter 0 if not applicable.	
Area of external hardstand (not included in GFA)	490	m^2	Required. Enter 0 if not applicable.	
Area of other hard landscaping (not included in GFA)	3,043	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	1	no.	Required	
Number of floors/storeys below ground	0	no.	Required. Enter 0 if not applicable.	
Number of floors/storeys of car parking	1	no.	Required. Enter 0 if not applicable.	
Total height above ground	7.9	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	Piles		Required	
Frame type (dominant)	Steel		Required	
Suspended floor type (typical)	Please select		Only needed for multi-storey buildings	
Describe low carbon materials specified in your building (e.g. green concrete, low carbon bricks)	Glulam timber components. Potential for green concrete.		Required	
Describe recycled content specified in your building (e.g. recycled steel)	recycled steel content for reo/structural steel.		Required	

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	-	-	-	97.5	%	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	-	-	4396.8	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	-	-		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	-	-		m³	Please enter reinforcing steel as part of "Reinforcing steel" below	01_SB or 02-11	02 or 03
Concrete pre-cast panel	-	-	-	180.0	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	-	-	494676.8	kg	**Include all reinforcing steel bar/mesh in the building's structure in this row.** Usually this is calculated as kg/m³ per concrete element and then summed. Example: 10 m³ of 40 MPa concrete @ 100 kg/m³ + 5 m³ of 50 MPa concrete @ 150 kg/m³ = 1,750 kg reinforcing steel.	01_SB or 02-11	02 or 03
Reinforcing steel	Fibre & strand	-	-		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	-	-	4.0	t	Examples include universal beams, universal columns and welded beams	01_SB	02 or 03
Structural steel	Cold formed structural	-	-	40.3	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	-	-		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				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	-	-	95.0	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	-	-		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	-	-	-	93.3	%	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	-	-	6111.0	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	-	-	93.0	m²	Enter as m² 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	-	-		m²	Enter as m² 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	-	-		m²	Enter as m² of roof area. Exclude allowances for overlap in the membrane sheets.	05_RF	03 or 04
Roof cladding	Tiles (traditional clay)	-	-		m²	Enter as m² of roof area. Exclude allowances for overlap between the tiles.	05_RF	03 or 04
Roof cladding	Tiles (concrete)	-	-		m²	Enter as m² 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)	-	-		m²	Enter as m² 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)	-	-		m²	Enter as m² of wall area. Air-dried bricks are cured using ambient temperature.	06_EW	03 or 04
Wall cladding	Bricks (under fired)	-	-		m²	Enter as m² of wall area.	06_EW	03 or 04
Wall cladding	Bricks (concrete)	-	-		m²	Enter as m² of wall area	06_EW	03 or 04
Wall cladding	Mortar and render	-	-		kg		06_EW	03 or 04
Wall cladding	Profiled steel	-	-		m²	Enter as m² 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	-	-		m²	Enter as m² 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	-	-		m²	Enter as m² 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	-	-		m²	Enter as m² of wall area. GRC = Glass Reinforced Concrete.	06_EW	03 or 04
Wall cladding	Timber weatherboards	-	-		m²	Enter as m² of wall area. Exclude allowances for overlap between weatherboards, offcuts, etc.	06_EW	03 or 04
Wall cladding	Fibre cement board	-	-	473.0	m²	Enter as m² of wall area. Exclude allowances for offcuts, etc.	06_EW	03 or 04
Wall cladding	Terracotta	-	-		m²	Enter as m² of wall area. Exclude allowances for offcuts, etc.	06_EW	03 or 04
Wall cladding	Brick tiles / veneers	-	-		m²	Enter as m² of wall area. Exclude allowances for offcuts, etc.	06_EW	03 or 04
Wall cladding	Plasterboard	-	-	1153.0	m²	Enter as m² 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	-	-		m²	Enter as m² 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 >>)	200mm precast concrete	-	718.0	m²	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	-		m²	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	-	470.0	m²	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	-		m²	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	-		m²	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	-		m²	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	-		m²	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	-		m²	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	-		m²	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	-		m²	Include all triple glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Frameless	Single glazed		40.0	m²	Include all single glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Frameless	Double glazed			m²	Include all double glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Frameless	Triple glazed			m²	Include all triple glazing, including standard, toughened, laminated and low-E	07_WW or 08_ED	03 or 04
Windows & doors	Other (Please describe >>)		-		m²	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		m²	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		m²	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		m²	Include all triple glazing, including standard, toughened, laminated and low-E	06_EW	03 or 04
Curtain wall	Single skin façade	Opaque panel	Aluminium cladding		m²		06_EW	03 or 04
Curtain wall	Single skin façade	Opaque panel	GRC cladding		m²	GRC = Glass-fibre Reinforced Concrete	06_EW	03 or 04
Curtain wall	Single skin façade	Opaque panel	Insulated shadow box		m²		06_EW	03 or 04
Curtain wall	Single skin façade	Opaque panel	Brick cladding		m²		06_EW	03 or 04
Curtain wall	Single skin façade	Opaque panel	Stone cladding		m²		06_EW	03 or 04
Curtain wall	Double skin façade	Glazed panel	Single glazed		m²	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. Include all single glazing, including standard, toughened, laminated and low-E.	06_EW	03 or 04
Curtain wall	Double skin façade	Glazed panel	Double glazed		m²	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		m²	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		m²		06_EW	03 or 04
Curtain wall	Double skin façade	Opaque panel	GRC cladding		m²	GRC = Glass-fibre Reinforced Concrete	06_EW	03 or 04
Curtain wall	Double skin façade	Opaque panel	Insulated shadow box		m²		06_EW	03 or 04
Curtain wall	Double skin façade	Opaque panel	Brick cladding		m²		06_EW	03 or 04
Curtain wall	Double skin façade	Opaque panel	Stone cladding		m²		06_EW	03 or 04
Curtain wall	Other (Please describe >>)		-		m²	Please enter a description for any curtain wall that does not fit a predefined classification	06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Glazed section	Single glazed		m²	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		m²	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		m²	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		m²		06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Opaque section	GRC cladding		m²	GRC = Glass-fibre Reinforced Concrete	06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Opaque section	Insulated shadow box		m²		06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Opaque section	Brick cladding		m²		06_EW	03 or 04
Stick-framed wall system	Aluminium frame	Opaque section	Stone cladding		m²		06_EW	03 or 04
Stick-framed wall system	Steel frame	Glazed section	Single glazed		m²	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		m²	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		m²	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		m²		06_EW	03 or 04
Stick-framed wall system	Steel frame	Opaque section	GRC cladding	374.0	m²	GRC = Glass-fibre Reinforced Concrete	06_EW	03 or 04
Stick-framed wall system	Steel frame	Opaque section	Insulated shadow box		m²		06_EW	03 or 04
Stick-framed wall system	Steel frame	Opaque section	Brick cladding		m²		06_EW	03 or 04

Stick-framed wall system	Steel frame	Opaque section	Stone cladding		m²		06_EW	03 or 04
Stick-framed wall system	Other (Please describe >>)	Steel Stud - no lining	-	1141.0	m²	Please enter a description for any wall system that does not fit a predefined classification	06_EW	03 or 04
Wall louvre system	Aluminium	-	-	150.0	m²		06_EW	03 or 04
External shading system	Aluminium frame	Aluminium cladding	-		m²	Please enter as m² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	GRC cladding	-		m²	Please enter as m² 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	-		m²	Please enter as m² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	Stone cladding	-		m²	Please enter as m² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	Pre-cast concrete	-		m²	Please enter as m² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	Timber	-		m²	Please enter as m² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	Glass (opague)	-		m²	Please enter as m² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Aluminium frame	Steel	-		m²	Please enter as m² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
External shading system	Other (Please describe >>)		-		m²	Please enter as m² of shaded area = linear metres * (width in mm / 1000)	06_EW	03 or 04
Roller doors	Steel profile	-	-		m²	Please note unit is square metres, not quantity	08_ED	03 or 04
Roller doors	Hardwood over steel	-	-		m²	Please note unit is square metres, not quantity	08_ED	03 or 04
Roller doors	Softwood over steel	-	-		m²	Please note unit is square metres, 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	-	-	6.0	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	-	-	362.0	m²	Please include both wall and ceiling insulation	05_RF or 06_EW	03 or 04
Insulation	Stone wool	-	-		m²	Please include both wall and ceiling insulation	05_RF or 06_EW	03 or 04
Insulation	Polyester	-	-		m²	Please include both wall and ceiling insulation	05_RF or 06_EW	03 or 04
Insulation	Expanded polystyrene	-	-		m²	Please include both wall and ceiling insulation	05_RF or 06_EW	03 or 04
Insulation	Other (Please describe >>)		-		m²	Please include both wall and ceiling insulation	05_RF or 06_EW	03 or 04
Other (Please describe and add unit >>)	PIR insulation 100mm	-	-	1832.6	m²	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				82.8	%	Enter the % coverage of spend 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)	-	-	2.6	t		09_NW	03 or 04
Interior wall (permanent)	Timber framing	-	-		m³		09_NW	03 or 04
Interior wall (permanent)	AAC panel (reinforced)	-	-		m²	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	-	-		m²	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	-	-	2648.0	m²	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	-	-		m²	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	-	-		m²	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	-	-	822.0	m²		09_NW or 12_WF	03 or 04
Interior wall (permanent)	Glass	-	-	141.0	m²		09_NW or 12_WF	03 or 04
Interior wall (permanent)	Other (Please describe >>)	200mm precast	-	175.2	m²	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	-	-	5.0	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	-	-	22.0	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	-	-	1.0	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 >>)		-		no.	Please enter a description for any internal door that does not fit a predefined classification	11_ND	03 or 04
Other (Please describe and add unit >>)	Paint (primer and top coat)	-	-	9486.0		Please enter a description for any material that does not fit a predefined classification		
Other (Please describe and add unit >>)	Ceramic wall tiles	-	-	712.0		Please enter a description for any material that does not fit a predefined classification		
Other (Please describe and add unit >>)	190mm block wall	-	-	85.0		Please enter a description for any material that does not fit a predefined classification		
Other (Please describe and add unit >>)	Render	-	-	128.0	m²	Please enter a description for any material that does not fit a predefined classification		
Other (Please describe and add unit >>)	Operable Wall	-	-	22.0	m²	Please enter a description for any material that does not fit a predefined classification		

Services

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.

					Unit of measure			
Mechanical services	-	-	-	3,010,843.0	AUD excl. GST	Where possible, enter material costs excluding labour, plant, equipment, margins and taxes	28_SS	05
Vertical transportation	-	-	-		AUD excl. GST	Where possible, enter material costs excluding labour, plant, equipment, margins and taxes	28_SS	05
Electrical services	-	-	-	2,377,531.0	AUD excl. GST	Electrical services including the main power supply, backup generators, security and communications. Excluding solar installations. Where possible, enter material costs excluding labour, plant, equipment, margins and taxes.	26_LP	05
Solar photovoltaic installations	-	-	-	160,000.0	AUD excl. GST	Where possible, enter material costs excluding labour, plant, equipment, margins and taxes	26_LP_LPGP	05
Plumbing/hydraulic services	-	-	-	1,458,370.0	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				355,314.0	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)	IT & AV	-	-	50,625.0	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	
Other services (Please describe)	External Services	-	-	1,320,883.0	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	
Other services (Please describe)	Pool Services	-	-	1,493,298.0	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	-	-	-	81.5	%	Required. Coverage of spend for external works (excluding soft landscaping) entered below. Minimum requirement = 80%. Exclude head contractor preliminaries and margins.		
Asphalt	-	-	-	454.3	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	-	-	611.7	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	-	-		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	-	-	56124.8	kg	**Include all reinforcing steel bar/mesh in the external works in this row.** Usually this is calculated as kg/m³ per concrete element and then summed. Example: 10 m³ of 40 MPa concrete @ 100 kg/m³ + 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 >>)	750kL OSD Tank	-	-	1.0	no.	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		
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 Hubbard	Required
Company	Introba	Required
ABN		
Profession	Sustainability Consultant	Required
Qualification or registration	B.Eng (Mech) (Hons)	Required

Person that certified the details in this form	Value	Note
Name	David Barker	Required
Company	Introba	Required
ABN		
Profession	Sustainability Consultant	Required
Qualification or registration	B.Eng (Hon), CPEng	Required

Confirmation of certification	Value	Note
Are 80% of material costs captured for the building's structure, envelope and external works?	Yes	Required
If no - why not?		

Additional comments from data provider
No

Additional comments of certifier
No

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

Introba