



Moreland
City Council

Post-construction **'Sustainability Management Plan'** Report

Project

Moreland City Council– Sample Post-Construction
SMP Compliance & Implementation Report

Client

Moreland City Council
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engineering

SAMPLE

Revision Schedule			
No.	Date	Description	Author
DRAFT	30/06/2021	Draft Checklist	HT/WL
A	16/07/2021	Sample Report	WL/HT
B	21/07/2021	Final Sample Report	WL/HT

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1 Introduction

1.1 Purpose

This document is to be used to provide guidance in confirming the Environmentally Sustainable Design (ESD) initiatives of the endorsed Sustainability Management Plan (SMP) were successfully implemented and constructed on-site within the Moreland Development.



1.2 General

This document sets out guidance and provides indicative sample material for a Post-Construction Sustainability Management Plan (SMP) Implementation Report to assist the awarded Contractor in demonstrating to Moreland City Council that the sustainability objectives listed in the Project's Endorsed SMP have been satisfied in accordance with the following planning permit conditions:

1. *All works must be undertaken in accordance with the endorsed Sustainability Management Plan (SMP) to the satisfaction of the Responsible Authority. No alterations to the Sustainability Management Plan (SMP) may occur without the written consent of the Responsible Authority.*
2. *Prior to the occupation of any dwelling approved under this permit, a report from the author of the Sustainability Management Plan (SMP) report, approved pursuant to this permit, or similarly qualified person or company, must be submitted to the Responsible Authority. **The report must be to the satisfaction of the Responsible Authority and must confirm that all measures specified in the approved Sustainability Management Plan (SMP) have been implemented in accordance with the approved Plan.***

Note that the documentation and information provided in this Report are indicative of the general types of supporting evidence that is required within the Post-Construction SMP Report. It should not be used when preparing your project specific Report. Preparation of project specific reports should be completed by a suitably qualified professional.

1.3 Instructions

To successfully complete this Report and demonstrate compliance with the Moreland City Council's objectives for ensuring Sustainability targets are appropriately met, projects must provide Supporting Evidence that each sustainability initiative within the SMP has been implemented as stipulated above.

This Report is only one example of the types of information and presentation that can be submitted to Moreland City Council. Sample project documentation and photos have been taken from various projects to provide an overview of the types of developments and sustainability initiatives that may be encountered.

Due care should be taken by each project's qualified professional to ensure that supporting evidence is site-specific and relevant to the project when preparing a project specific Post-Construction SMP Implementation Report. Evidence on each initiative shall be sufficient to verify to Council that the SMP initiative has been implemented.

It is recommended that the Contractor thoroughly review the Endorsed SMP and prepare a plan as to how each initiative will be documented prior to commencing construction. Consideration shall be given to the timing of when evidence is best collected.

1.4 Supporting Evidence and Documentation

Documentation acts as evidence to confirm how the Contractor and Project Teams meet the relevant Endorsed SMP requirements, and supports all claims being made to satisfy Sustainability Initiatives. The supporting documentation provided must be specific to the project and stage of delivery.

Examples and expectations of different documentation types are as follows:

- Photographs taken on site with date and time stamped as evidence. Include full name of the file and the type of file saved as if electronically submitted.
- As-Built or As-Installed Drawings. Include full name of the file, the revision and the type of file saved as if electronically submitted. For Construction status drawings can be provided in lieu of As-Built drawings providing they have been stamped and signed by the Head Contractor as As-Built.
- Specifications– Extracts from documentation such as Mechanical Schedules shall be clearly identified (e.g. circled or highlighted).
- Installed equipment product datasheet of the exact model that has been installed.
- Report Extracts – i.e commissioning results pertaining to the installed equipment.

Documentation provided must be clear and legible for review.

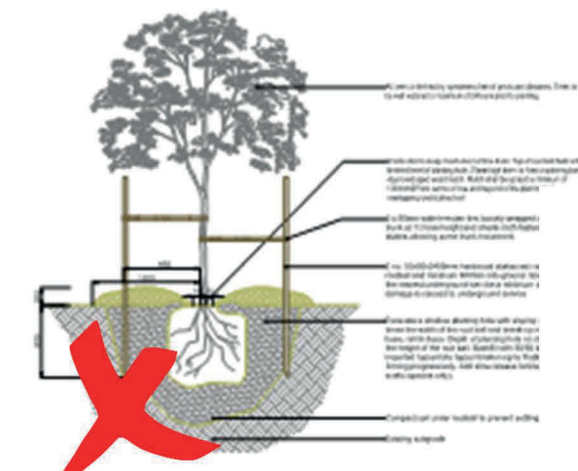


Figure 1 Poor quality image extract

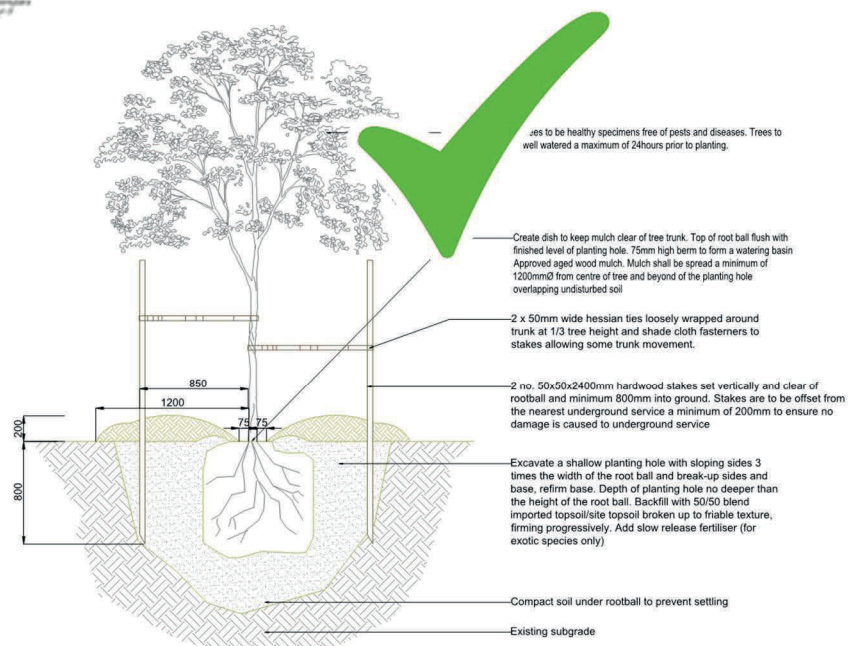


Figure 2 High quality image extract from documentation

2 SMP Implementation Checklist

1.MANAGEMENT

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

1.1 Thermal Performance – Residential

All dwellings within the development shall achieve an overall Project NatHERS rating of **6.5 Star** average and that no individual dwellings falls below the **5 Star** minimum rating requirement.

All individual dwellings shall satisfy the maximum allowable annual cooling load as set out in Table B4 of Planning Scheme 55.07-1 Standard B35 for the respective climate zone.

Example Documentation Required

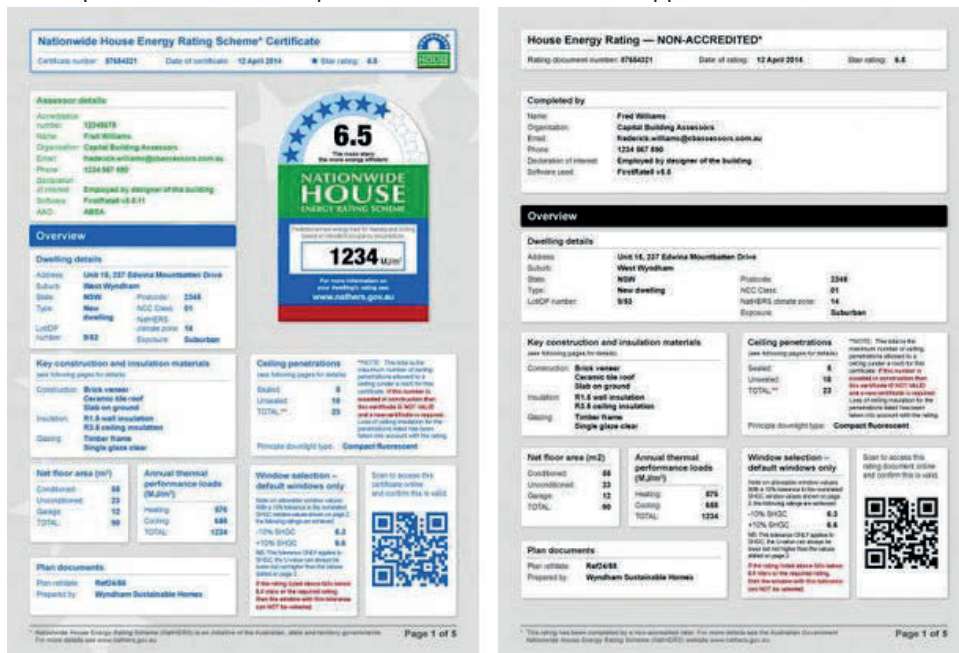
- Development NatHERS Group Certificate
- NatHERS Certificates certified by an Accredited Professional.

The following information shall be provided if above is not available:

1. Documentation is to include a summary of the building fabric assumptions.
2. Product datasheets indicating the performance of the Building Fabric:
 - R-values of insulation
 - Total System Glazing Performance (Ut & SHGC)
3. Photos of insulation installed.
4. Final NatHERS Report by suitably qualified professional.

Documentation Provided [To be Completed by the Builder or Developer's Qualified Professional]

1. Development NatHERS Group Certificate extract. Refer to Appendix A: Final NatHERS Assessment Report.



The image displays two examples of NatHERS certificates. The left certificate is a 'Nationwide House Energy Rating Scheme Certificate' for a 6.5 star rating, issued to a house at 1234 Mj/m². It includes details such as the assessor's name (Fred Williams), the house's address (Unit 16, 237 Edwin Mountbatten Drive, West Wyndham, NSW), and a table of key construction and insulation materials. The right certificate is a 'House Energy Rating - NON-ACCREDITED' certificate for a 6.5 star rating, also issued to a house at 1234 Mj/m². It includes details such as the assessor's name (Fred Williams), the house's address (Unit 16, 237 Edwin Mountbatten Drive, West Wyndham, NSW), and a table of key construction and insulation materials. Both certificates include a QR code for more information.

2. Individual Dwelling NatHERS Certificate demonstrating cooling loads meeting Standard B35.

Nationwide House Energy Rating Scheme

NatHERS Certificate No. DSP4VFJN9P

Generated on 18 Dec 2020 using FirstRate5: 5.3.0a (3.21)

Property

Address Example Street

Lot/DP -

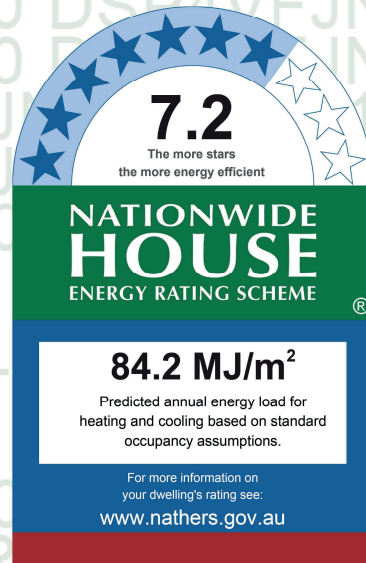
NCC Class* Class 2

Type New Home

Plans

Main plan Construction Issue

Prepared by Example Arch



Construction and environment

Assessed floor area (m²)*

Conditioned* 71

Unconditioned* 1.8

Total 72.8

Garage -

Exposure type

exposed

NatHERS climate zone

62, Box Hill

Thermal performance

Heating

79.6

MJ/m²

Cooling

4.6

MJ/m²



Accredited assessor

Name Accredited Professional

Business name

Email

Phone

Accreditation No.

Assessor Accrediting Organisation

DMN

Declaration of interest Declaration completed: no conflicts

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit <https://www.fr5.com.au/QRCodeLanding?PublicId=DSP4VFJN9P> When using either link, ensure you are visiting www.FR5.com.au.



National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements.

The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

MANAGEMENT

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

1.2 Thermal Performance - Non-Residential

The Project shall demonstrate at least a 10% improvement over the minimum requirement in NCC 2019 Section J energy efficiency requirement. Efficient double glazing and insulation will be required in order to achieve Section J compliance.

Example Documentation Required

1. Documentation such as a JV3 report and/or a Final Section J facade assessment that demonstrates the minimum energy efficiency have been achieved or exceeded.

The following information shall be provided if above is not available:

1. Documentation is to include a summary of the building fabric assumptions.
2. Product datasheets indicating the performance of the building fabric:
 - R-values of insulation
 - Total System Glazing Performance (U_t & SHGC_t)
3. Photo evidence of insulation installed.

Documentation Provided [To be filled by Developer]

1. JV3 Modelling Results extract indicating the percentage energy consumption reduction of the proposed building against the reference building. Refer to Appendix B: Final JV3 Modelling Report.

JV3 Compliance Report

Example Street

Table 5: JV3 results summary

	S1: Reference Building DTS Envelope DTS Services	S2: Proposed Building Proposed Envelope DTS Services	S3: Proposed Building w/ efficient services Proposed Envelope Proposed heating & cooling
Estimated Annual Energy Consumption	281,354 kWH	268,350 kWH	243,357 kWH
Percent Reduction	-	-4.62%	-13.51%

2. Photographic evidence of R3.5 rigid board ceiling insulation to exposed roof level.



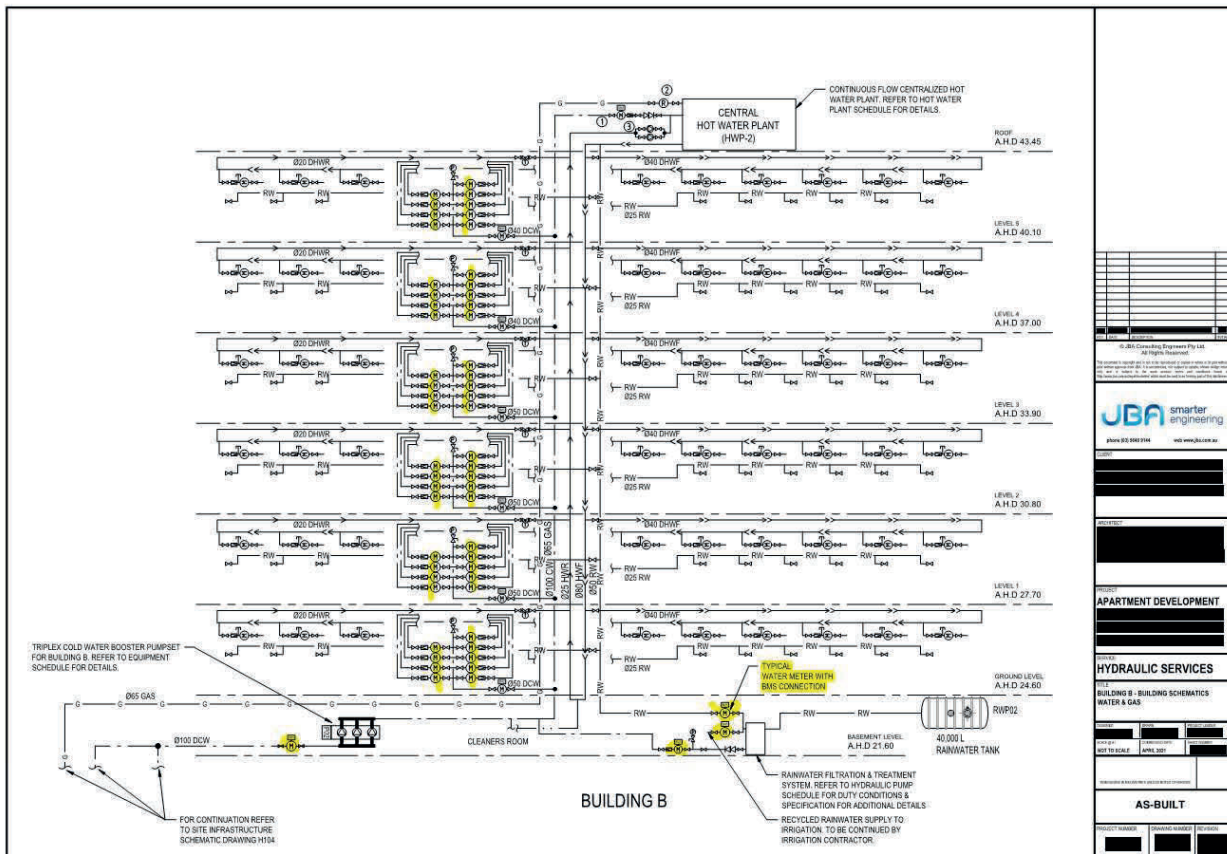
3. Photographic evidence of R2.0 rigid board floor insulation to carpark soffit.



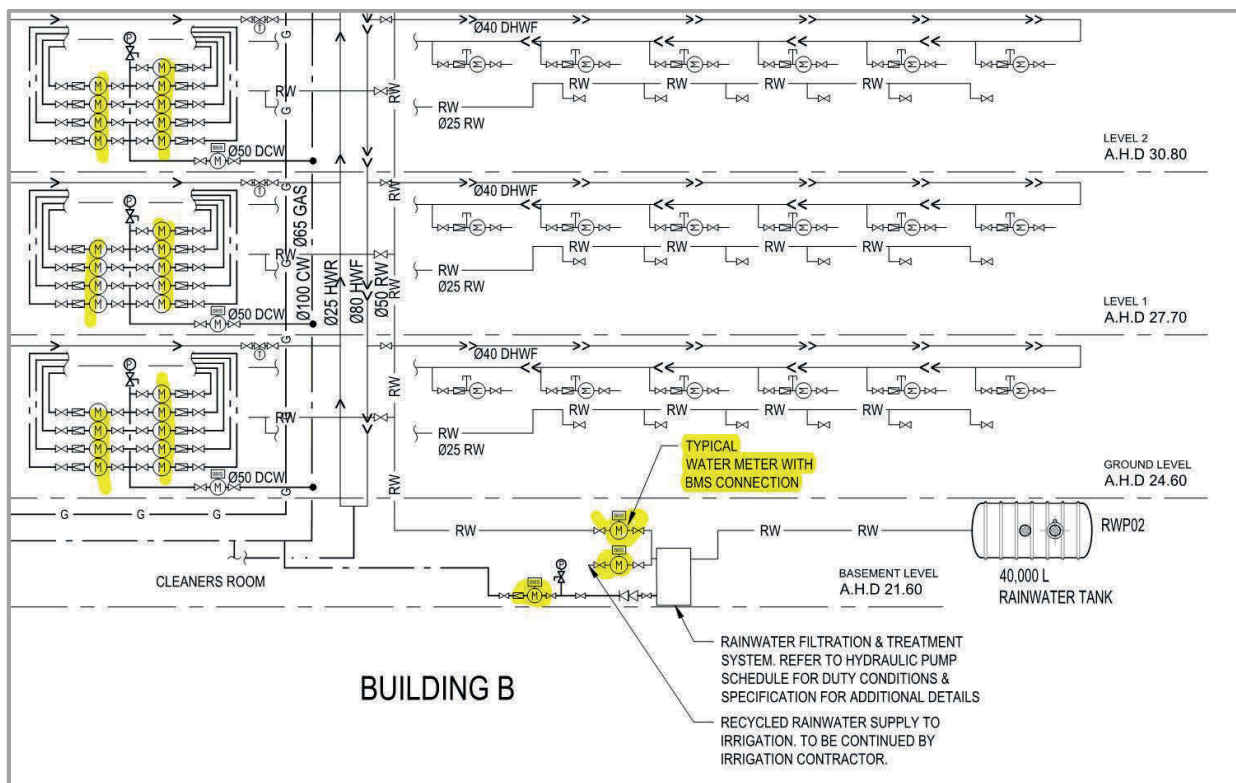
4. Photographic evidence of R2.5 external wall insulation.



2. As-Built Hydraulic Services Schematic Drawings dated 1 Jan 2020 illustrating individual water metering.



3. As-Built Hydraulic Services Schematic Drawings dated 1 Jan 2020 close up extract.



4. Photo evidence of installed electricity and water meters.



1. MANAGEMENT

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

1.4 Building Users Guide

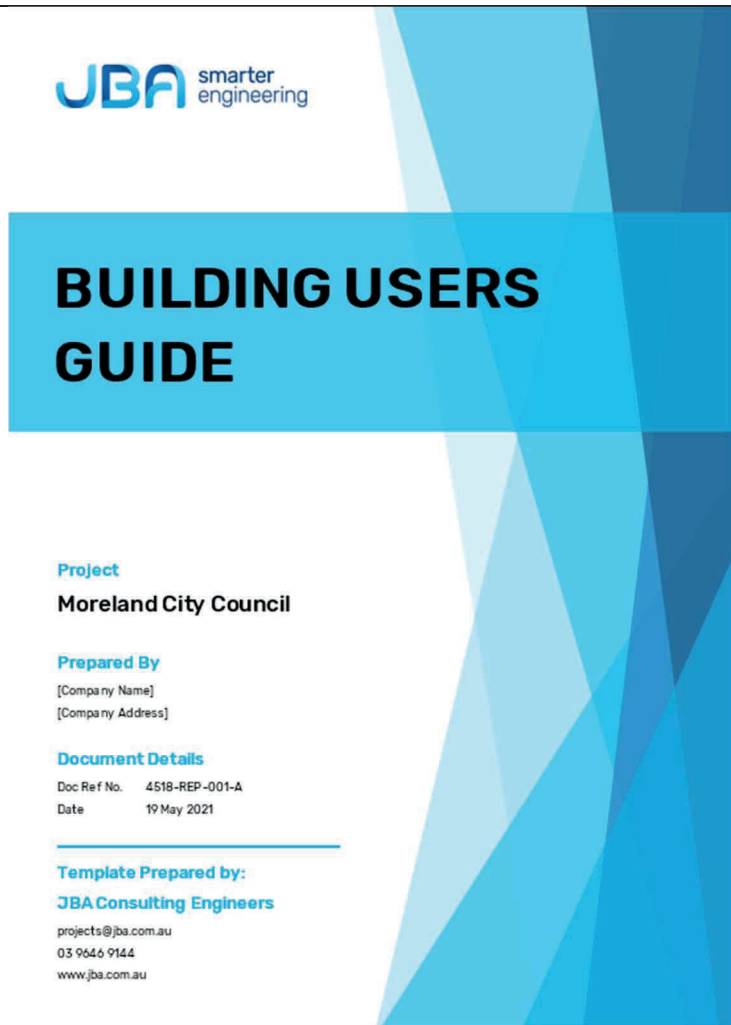
A Building Users' Guide shall be developed and made available to all building occupants. The Building Users' Guide shall use non-technical language and be targeted to building occupants. It can be a simple booklet and/or a combination of interpretative signage throughout the development.

Example Documentation Required

- A commitment statement that a Building Users' Guide will be developed and provided to all building occupants.
- A copy of the issued Building Users' Guide.

Documentation Provided

1. A Building User's Guide has been developed and will be provided to the Building Manager & tenants upon handover.



2. WATER

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

2.1 Potable Water Use Reduction

The Project is committed to high efficiency fixtures and fittings which shall have the following WELS ratings:

- Kitchen Taps – 5 stars
- Bathroom Taps – 5 stars
- Toilet – 4 stars
- Urinals – 4 stars
- Showers – 3 stars (≥ 6.0 but ≤ 7.5)
- Dishwasher & washing machine – 4 stars (if provided by developer)

A 40,000 litres rainwater tank shall be installed to collect rainwater from roof areas (approximately 1,850 m²). Collected rainwater shall be used for all toilets within the development.

Example Documentation Required

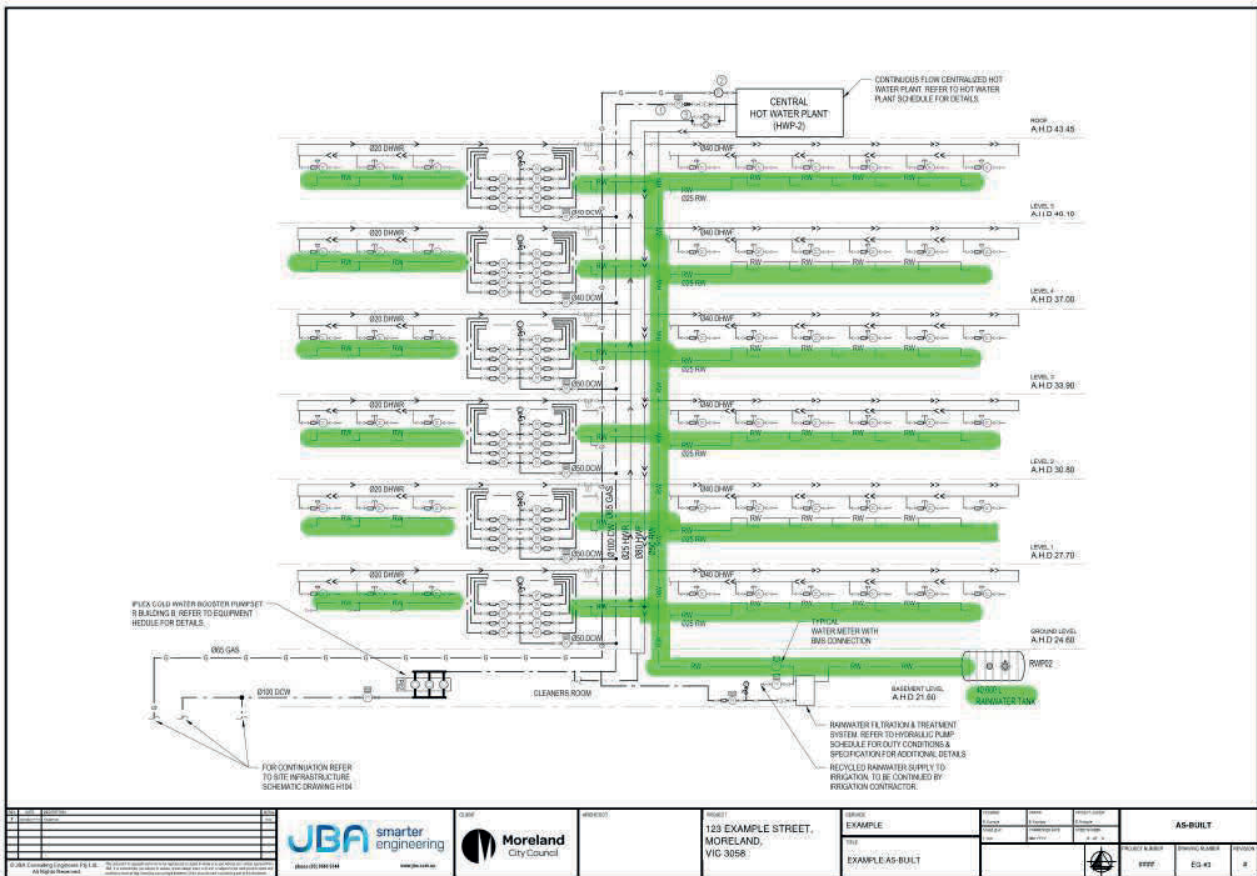
- As built drawings showing:
 - Rainwater tank(s), drawn at the correct size and labelled as connected to (X) number of toilets, irrigation or other re-use opportunities
 - All catchment area and treatment system connected.
 - Annotation regarding water efficient fixtures and appliances.
- For construction specification outlining the specified WELS rated fixture model and the manufacturer's data sheet.
- Photos of installed rainwater tank and sanitary fixtures with WELS efficiency tags.

Documentation Provided

1. Architectural Specification Extract including all specified fixtures and appliances.

E4	Fully integrated dishwasher	Miele (Immer Besser)		Code: G 4283 Vi Description: 60cm Fully Integrated Dishwasher Finish: Same as cabinetry (integrated) 3 star energy rated 4 star WELS rated Water Consumption: 14 litres per cycle	Kitchen – Apartments	Harvey Norman Commercial Name: Melissa Goodheer Melissa.Goodheer@hcn.harveynorman.com 0429 892 676
F1	Sink mixer tap	ASTRA WALKER		Name: Icon Sink Mixer Code: A69.08.V2.11 Finish: French Gold 5 Star Water Rating 5.0 L/min	Kitchen Tap – Apartments	Harvey Norman Commercial Leerah Khor 0432 022 434
F2	Sink	FRANKE		Name: Kubus Granite Single Bowl Code: KBG119-SS-6PW Finish: Polar White Dimensions: 500mm	Kitchen sink – Apartments	Harvey Norman Commercial Leerah Khor 0432 022 434
F3	Laundry Trough	CLARK		Name: Utility 16 Litre Compact Laundry Tub & Cabinet Code: F6611 Finish: White/stainless steel Dimensions: W300 x D500 x H900mm	Laundry – Apartments	Harvey Norman Commercial Leerah Khor 0432 022 434

- As-built drawings indicating location of rainwater tank(s), drawn at the correct size and noted connected to (X) number of toilets, irrigation or other re-use opportunities.



- Photo evidence of installed rainwater tank (40kL) and sanitary fixtures with WELS efficiency tags (following page).



2. WATER

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

2.2 Water Efficient Landscaping

All landscape within the Project shall be water efficient landscaping/xeriscaping.

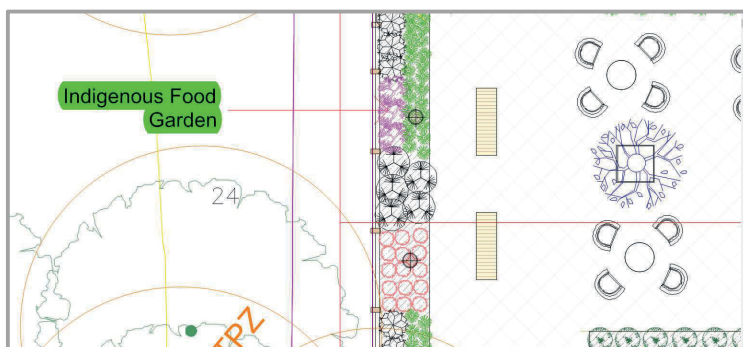
A water efficient garden should have no irrigation system and not require watering after an initial period when plants are getting established.

Example Documentation Required

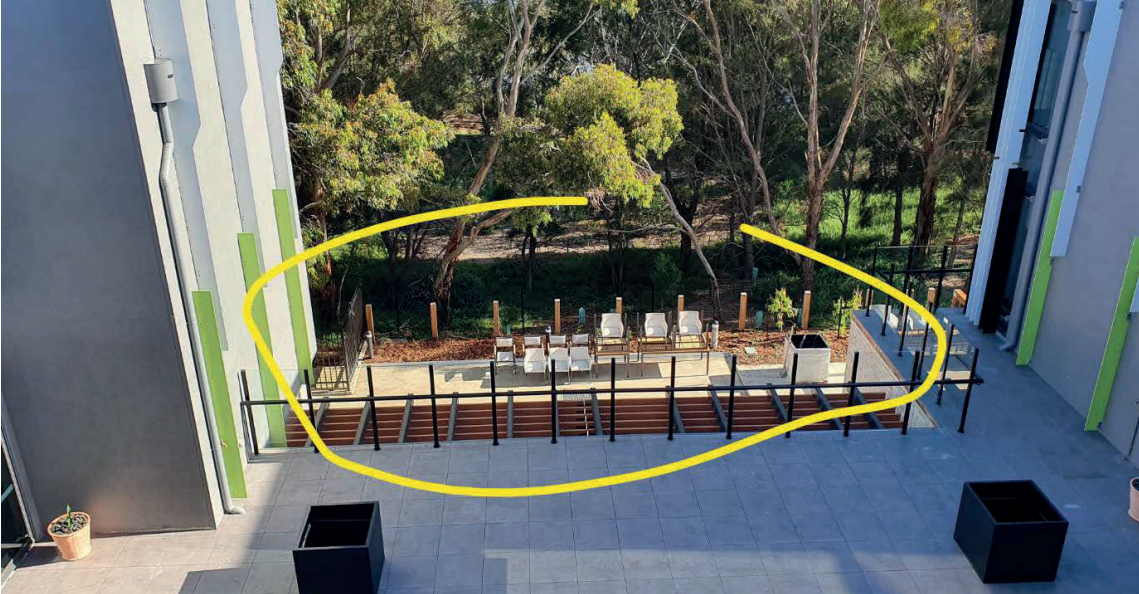
- Fully detailed landscape plan and/or drawings that highlight:
 - The selected native and/or drought-resistant species.
 - Water efficient irrigation system and/or re-use of rainwater for irrigation.

Documentation Provided

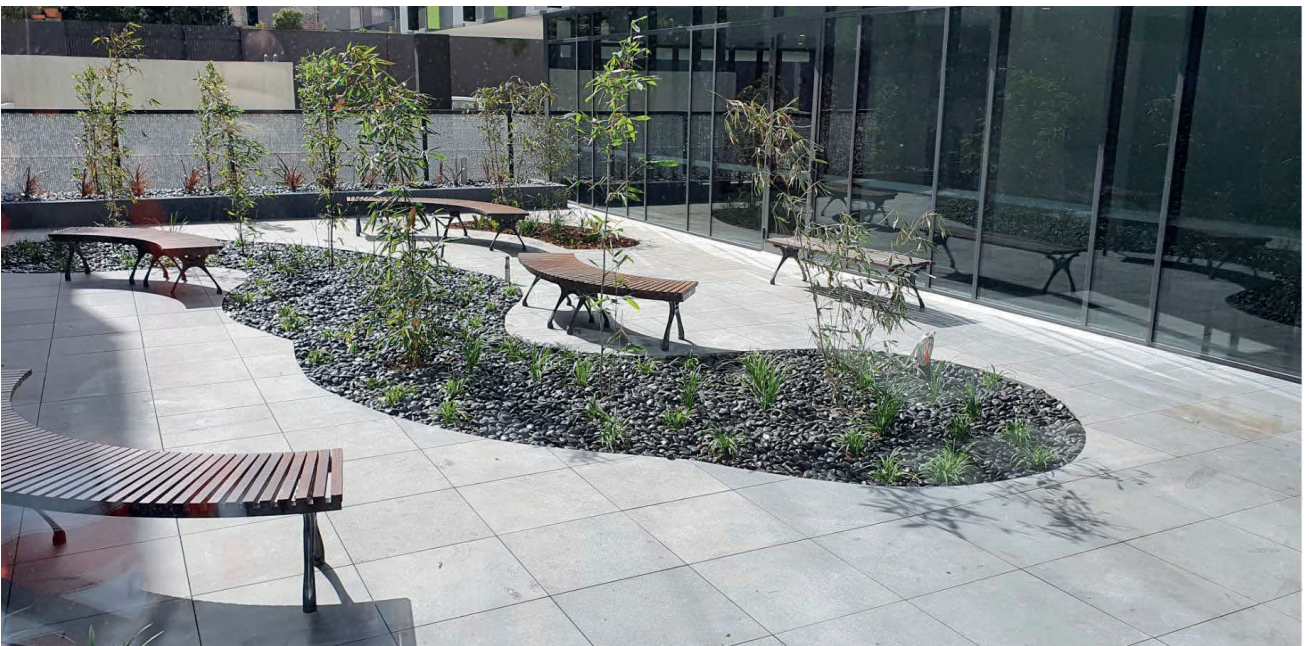
1. As-built Landscape plan highlighting the indigenous garden.



2. Photo evidence of the indigenous garden.



3. Photo evidence of waterless garden.



2. WATER

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

2.3 Building Systems Water Use Reduction

The Project shall demonstrate a potable water usage reduction of > 80% for building systems i.e. building air-conditioning chillers and testing of fire safety systems.

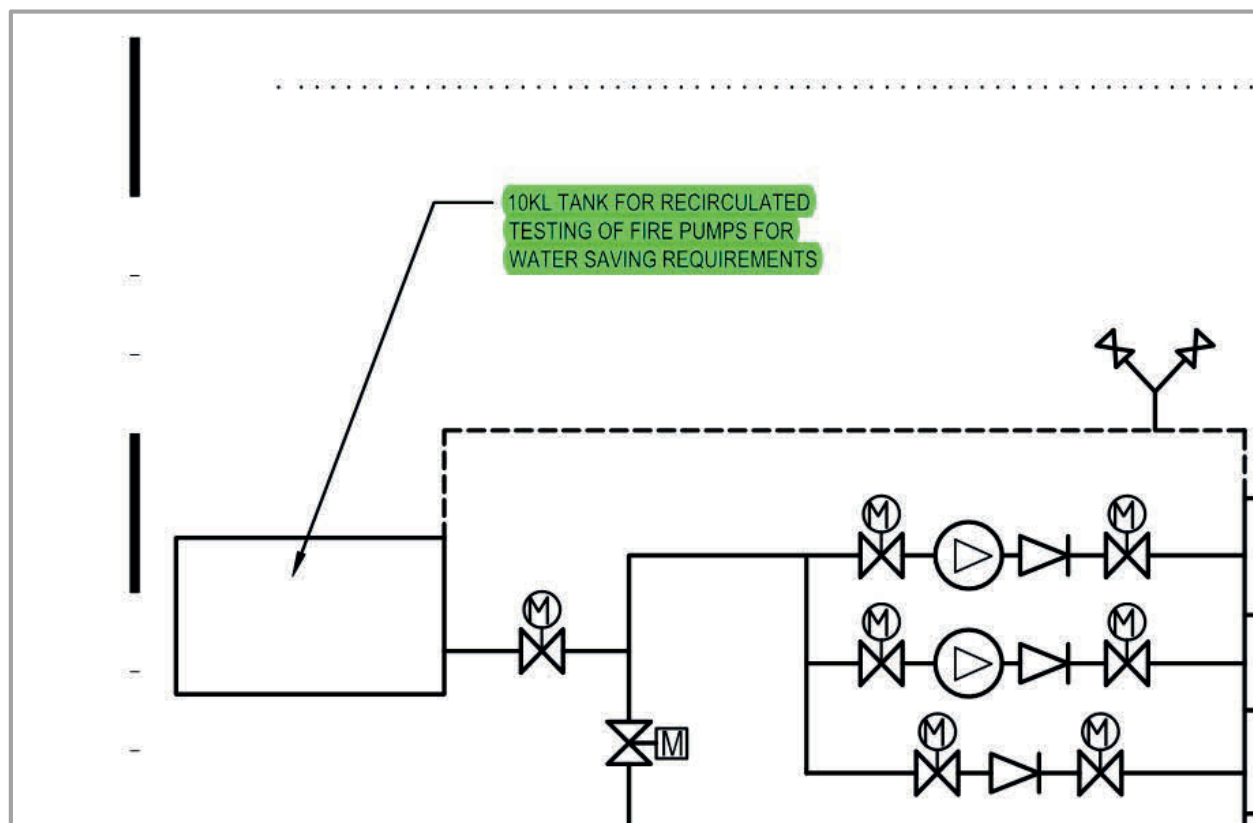
This includes collecting test water for re-use, either with the fire test system or for another fit-for purpose use. 'Fire testing systems' refers to testing of hydrants, hose reels, sprinklers. Refer to VBA PN-61-2018.

Example Documentation Required

- As built drawings showing location of fire test system water tank and specifications including tank capacity and intended re-use.
- Mechanical Specifications indicating no water-based heat rejection system i.e. evaporative cooling systems.
- Photos of mechanical system installed and fire test water tank.

Documentation Provided

1. As built drawings & extracts showing location of fire test system water tank and specifications including tank capacity and intended re-use.

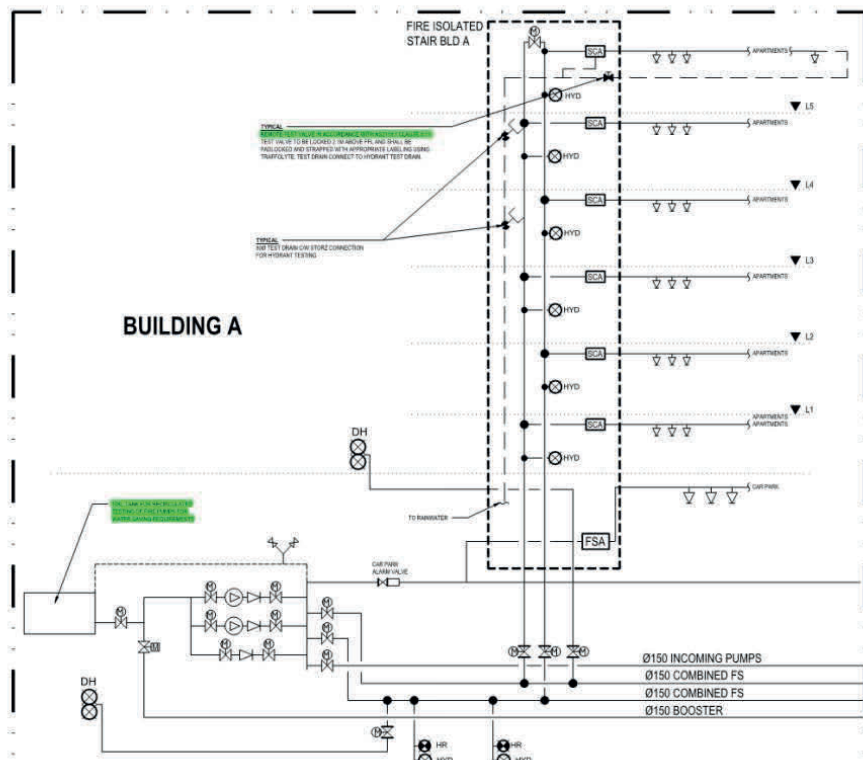
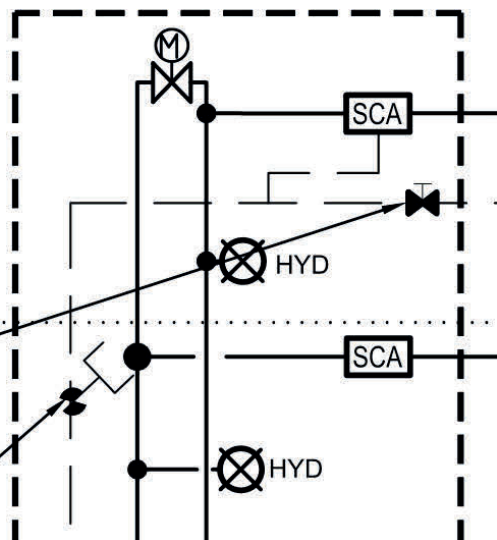


FIRE ISOLATED STAIR BLD A

TYPICAL

REMOTE TEST VALVE IN ACCORDANCE WITH AS2118.1 CLAUSE 8.11.

TEST VALVE TO BE LOCKED 2.1M ABOVE FFL AND SHALL BE PADLOCKED AND STRAPPED WITH APPROPRIATE LABELING USING TRAFFOLYTE. TEST DRAIN CONNECT TO HYDRANT TEST DRAIN.



REVISIONS <table><thead><tr><th>NO.</th><th>DESCRIPTION</th><th>DATE</th></tr></thead><tbody><tr><td>1</td><td>ISSUED FOR TENDER</td><td>10/10/2023</td></tr><tr><td>2</td><td>REVISED TO REFLECT COMMENTS</td><td>15/10/2023</td></tr></tbody></table>			NO.	DESCRIPTION	DATE	1	ISSUED FOR TENDER	10/10/2023	2	REVISED TO REFLECT COMMENTS	15/10/2023	 smarter engineering 123 EXAMPLE STREET, MORELAND, VIC 3058 0300 725 7000 (VIC) www.jba.com.au		 Moreland City Council	PROJECT 123 EXAMPLE STREET, MORELAND, VIC 3058	SERVICE EXAMPLE TITLE EXAMPLE AS-BUILT	<table><thead><tr><th>REVISION</th><th>DATE</th><th>DESCRIPTION</th><th>PROJECT NUMBER</th></tr></thead><tbody><tr><td>1</td><td>10/10/2023</td><td>ISSUED FOR TENDER</td><td>0000</td></tr><tr><td>2</td><td>15/10/2023</td><td>REVISED TO REFLECT COMMENTS</td><td>EG-03</td></tr></tbody></table>	REVISION	DATE	DESCRIPTION	PROJECT NUMBER	1	10/10/2023	ISSUED FOR TENDER	0000	2	15/10/2023	REVISED TO REFLECT COMMENTS	EG-03	AS-BUILT <table><thead><tr><th>PROJECT NUMBER</th><th>DRAWING NUMBER</th><th>REVISION</th></tr></thead><tbody><tr><td>0000</td><td>EG-03</td><td>1</td></tr></tbody></table>	PROJECT NUMBER	DRAWING NUMBER	REVISION	0000	EG-03	1
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2. Mechanical Specifications indicating no water-based heat rejection system i.e. evaporative cooling systems.

BUILDING	A							
APARTMENTS SERVED	TYPE A	TYPE F	TYPE K	TYPE D	TYPE E	TYPE G	TYPE C	TYPE O
INDOOR UNIT NOMINATION	AC-1			AC-2			AC-3	
MANUFACTURER	DAIKIN			DAIKIN			DAIKIN	
TYPE	WALL MOUNTED			WALL MOUNTED			WALL MOUNTED	
INDOOR UNIT	FTXS35LVMA			FTXS46LVMA			FTXS50LVMA	
COOL (KW)	3.5			4.6			5	
HEAT (KW)	4			5.1			6	
SUPPLY AIR L/S	188			203			305	
RETURN AIR L/S	188			203			305	
OUTDOOR AIR L/S	NATURAL VENTILATION			NATURAL VENTILATION			NATURAL VENTILATION	
AIR ON °CDB/°CWB	24 / 17			24 / 17			24 / 17	
INDOOR UNIT SIZE (HxWxD)	295x800x215			295x800x215			340x1050x248	
INDOOR UNIT PHASE	1			1			1	
INDOOR UNIT WEIGHT (Kg)	10			10			14	
OUTDOOR UNIT NOMINATION	CU-1			CU-2			CU-3	
OUTDOOR UNIT	RXS35LVMA			RXS46LVMA			RXS50LVMA	
OUTDOOR UNIT PHASE / AMPS	1			1			1	
OUTDOOR UNIT SIZE (HxWxD)	550x765x285			735x825x300			735x825x300	
OUTDOOR UNIT WEIGHT (Kg)	34			46			46	

3. Photos of waterless heat rejection HVAC system installed.



3. ENERGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

3.1 Thermal Performance Rating - Non-Residential

The Project shall demonstrate at least a (Insert committed % improvement) improvement over the minimum requirement in NCC 2019 Section J energy efficiency requirement, validated by:

- A Section J Parts J1 - J3 DTS assessment or;
- Energy modelling - JV3, NABERS or Green Star.

Example Documentation Required

- Section J DTS Assessment or Performance Modelling Report (JV3, NABERS or Green Star) compliance by a Qualified Professional.
- If a Performance Assessment relies on proposed services to demonstrate a XX% improvement in energy efficiency, provide the following:
 - Installed heating and cooling system CoP/EER.
 - Water heating system energy efficiency.

The following information shall be provided if above is not available:

- Documentation is to include a summary of the building fabric assumptions.
- Product datasheets indicating the performance of the building fabric:
 - R-values of insulation
 - Total System Glazing Performance (Ut & SHGC)
- Photos of insulation installed and air sealing of building fabric.

Documentation Provided

1. Final Section J Report for Building Permit provided by JBA Consulting Engineers.

Section J Part -	Section J Compliance
Part J1 – Building Fabric - J1.0 Deemed-to-Satisfy provisions - J1.1 Application of part - J1.2 Thermal construction – general - J1.3 Roof and ceiling construction - J1.4 Roof lights - J1.5 Walls and glazing - J1.6 Floors	
<i>Part J2 - Glazing in NCC2016 has been removed. Glazing provisions are now included as part of Part J1 of NCC2019</i>	
Part J3 – Building Sealing - J3.0 Deemed-to-Satisfy provisions - J3.1 Application of part - J3.2 Chimneys and flues - J3.3 Roof lights - J3.4 Windows and doors - J3.5 Exhaust fans - J3.6 Construction of ceilings, walls and floors - J3.7 Evaporative coolers	

2. Architectural for construction documentation indicating the specified insulation R-values and glazing specification.

Floor insulation schedule

Property	A	B	C	D
Application	Under suspended concrete slab	Under suspended concrete slab	Under suspended concrete slab	Under suspended concrete slab
Type/Product	'Kingspan' K10 FM G2 Soffit board Non-combustible Rigid thermoset phenolic insulation	'Kingspan' K10 FM G2 Soffit board Non-combustible Rigid thermoset phenolic insulation	'Kingspan' K10 FM G2 Soffit board Non-combustible Rigid thermoset phenolic insulation	'Kingspan' K10 FM G2 Soffit board Non-combustible Rigid thermoset phenolic insulation
Location	Under ground floor suspended concrete slab. (Car park / basement areas below).	Under Level 1 Office suspended concrete slabs (Where exposed to external or unconditioned space below)	Upper level suspended concrete slabs (Externally under balcony / terrace tiling where internal apartment	Upper level suspended concrete slabs (Externally under balcony / terrace tiling where Level 1 Office below).

Property	A	B	C	D
			below).	
R-value ($\text{m}^2 \text{K/W}$)	Min R2.0 added insulation Refer to Section J report by JBA	Min R2.0 added insulation Refer to Section J report by JBA	Min R1.4 added insulation Refer to Section J report by JBA	Min R3.5 added insulation Refer to Section J report by JBA
Thickness (mm)	50mm	50mm	30mm	70mm
R_w rating				
Compressive strength (kPa)	>100kPa at 10% compression	>100kPa at 10% compression	>100kPa at 10% compression	>100kPa at 10% compression
Rigid cellular sheet class				

GL-02	Vision Double Glazing - Low E (Acoustic)	Viridian	Double glazed Low-E High Performance Glass 6.38 Clear /12 Argon /10.38 Comfort Plus Product: Comfort Plus Colour - Clear Spacers - Black Awning Windows and Doors: Total U-value 3.1 W/m ² K (or less) SHGC = 0.39 (or within ±5%) VLR-O: < 20% Sliding Windows and Fixed Windows Total U-value 3.1 W/m ² K (or less) SHGC = 0.49 (or within ±5%) VLR-O: < 20% Acoustic rating - Refer to Acoustic Report.
GL-02A	Spandrel Double Glazing - Low E (Acoustic)	Viridian	Double glazed Low-E High Performance Glass 6.38 Clear /12 Argon /10.38 Comfort Plus Product: Comfort Plus Colour - Clear Spacers - Black Fixed Windows Total U-value 3.1 W/m ² K (or less) SHGC = 0.49 (or within ±5%) VLR-O: < 20% Acoustic rating - Refer to Acoustic Report.

3. ENERGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

3.2 Thermal Performance Rating - Residential

The Project's residential dwellings shall achieve a minimum NatHERS rating of 6.5 Stars and meet Moreland City Council's cooling load requirements as set out in Planning Scheme 55.07-1 Standard B35 Table B4 and validated by a NatHERS energy modelling by an Accredited Professional.

Example Documentation Required

- Development NatHERS Group Certificate
- NatHERS Certificates certified by an Accredited Professional.

The following information shall be provided if above is not available:

- Documentation is to include a summary of the building fabric assumptions.
- Product datasheets indicating the performance of the Building Fabric:
 - R-values of insulation
 - Total System Glazing Performance (Ut & SHGC)
- Photos of insulation installed and air sealing of building fabric.

If using the BESS built-in Deemed-to-Satisfy method, provide the following as built drawings highlighting the following information:

- Heating and cooling system type and energy Star rating.
- Water heating system energy efficiency.
- Solar Photovoltaic system peak efficiency.
- Type of clotheslines if provided.
- Clothes dryer energy efficiency if provided.

Documentation Provided

1. Development NatHERS Group Certificate extract. Refer to Appendix A: Final NatHERS Assessment Report.

The left screenshot shows a 'Nationwide House Energy Rating Scheme Certificate' for a 6.5 star rating. It includes details for the assessor (Fred Williams), the house (1234 MJ/m²), and the rating (6.5). The right screenshot shows a 'House Energy Rating - NON-ACCREDITED' report for a similar house, also showing a 6.5 star rating and detailed construction and insulation materials.

2. Individual Dwelling NatHERS Certificate demonstrating cooling loads meeting Standard B35.

Nationwide House Energy Rating Scheme

NatHERS Certificate No. DSP4VFJN9P

Generated on 18 Dec 2020 using FirstRate5: 5.3.0a (3.21)

Property

Address Example Street

Lot/DP -

NCC Class* Class 2

Type New Home

Plans

Main plan Construction Issue

Prepared by Example Arch

Construction and environment

Assessed floor area (m²)*	Exposure type
Conditioned* 71	exposed
Unconditioned* 1.8	NatHERS climate zone
Total 72.8	62, Box Hill
Garage -	

Thermal performance

Heating	Cooling
79.6	4.6
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit <https://www.fr5.com.au/QRCodeLanding?PublicId=DSP4VFJN9P> When using either link, ensure you are visiting www.FR5.com.au.

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.



7.2
The more stars
the more energy efficient

NATIONWIDE HOUSE
ENERGY RATING SCHEME

84.2 MJ/m²
Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see:
www.nathers.gov.au

Accredited assessor

Name Accredited Professional

Business name

Email

Phone

Accreditation No.

Assessor Accrediting Organisation

DMN

Declaration of interest Declaration completed: no conflicts

3. ENERGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

3.3 Air Permeability

The Project has targeted a maximum air permeability rate of $20.0 \text{ m}^3/(\text{h.m}^2)$ at 25 Pa for residential dwellings. Attention to detail should be given by the Builder to sealing all cracks and services penetrations including all doors, windows, and roof lights (if applicable). The permeability rate will be verified through Air Permeability Testing of at minimum 10% of all dwellings.

Example Documentation Required

- Air Tightness Testing Report illustrating compliant results.

Documentation Provided

1. Air Tightness Test Report results extract.

Air Permeability Testing Summary

Project Address:	1 Moreland Road, Brunswick
Project Name:	Moreland City – Residential Development
Test Date: 01/01/2021	By: Ms. Moreland

Report Information	
Report Name	(4495) Moreland Test Report
Number of Dwelling Tested	5 out of 20 (25%)

Results					
Dwelling #	G02	G03	101	104	204
Volume (m3)	375	300	370	300	300
Floor Area (m2)	125	100	123	100	100
Permeability $\text{m}^3/(\text{h.m}^2)$ at 25 Pa	11.2	9.9	13.2	8.7	8.2
SMP Target Satisfied?	Pass	Pass	Pass	Pass	Pass

2. Photo evidence of air sealing.



3. Photo evidence of final air tightness testing at project competition.



3. ENERGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

3.4 Carpark Ventilation

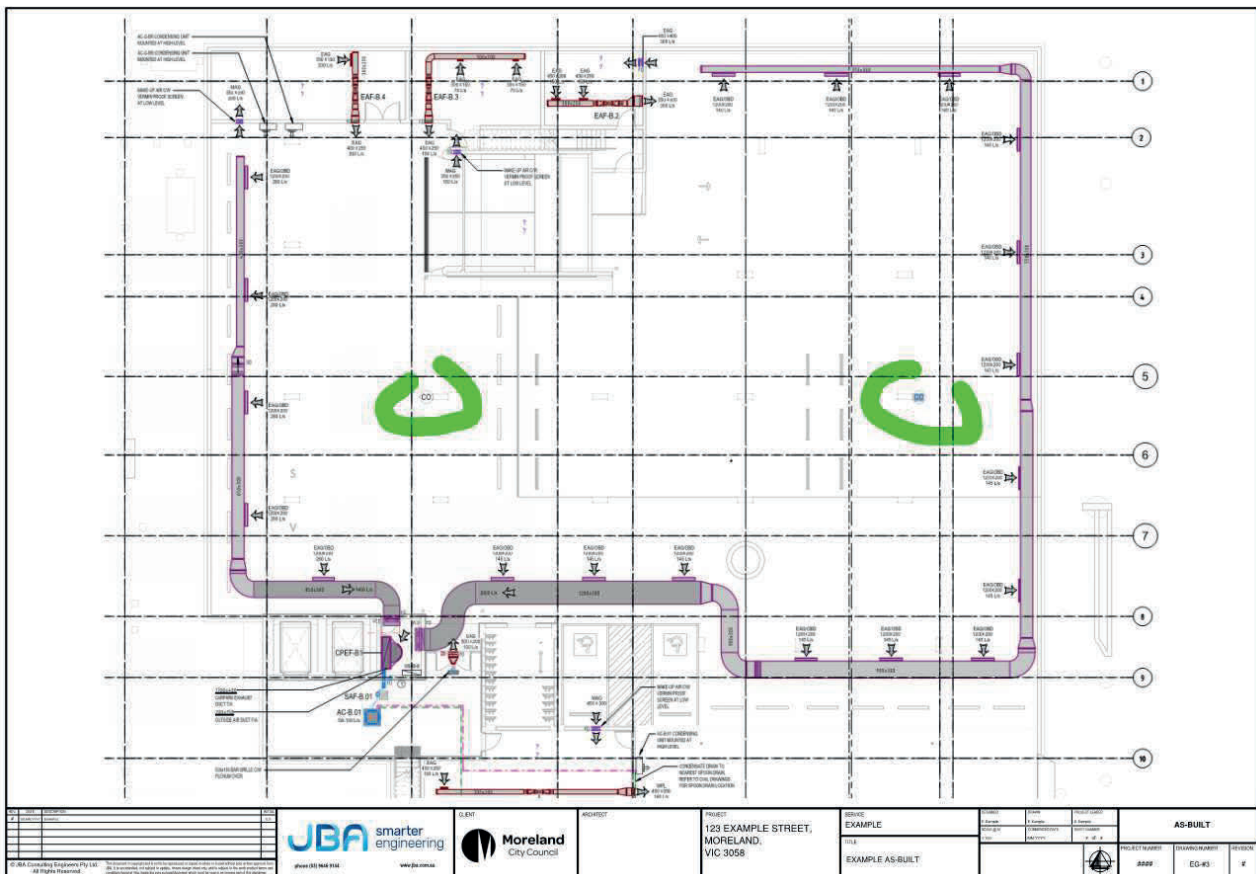
Carpark ventilation system shall be provided with CO Monitoring system if not naturally ventilated.

Example Documentation Required

- Provide a written explanation of either the fully natural ventilation or carbon monoxide monitoring, describing how these systems will work, what specifications are required for them to be fully integrated and who is responsible for their implementation throughout the design, procurement and operational phases of the building's life.
- As built drawings highlighting locations of CO monitors/ sensors.
- Provide photographic evidence of CO monitors and/or highlight the CO sensors and monitoring equipment on site and/or floor plans
- Provide photographic evidence of natural ventilation and/or highlight the natural ventilation system on site and/or floor plans

Documentation Provided

1. As built Mechanical documentation and/or plans indicating location of CO sensors and carpark exhaust.



2. Photo evidence of ventilation system and sensors & monitoring systems.



3. ENERGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

3.5 Lighting Sensors

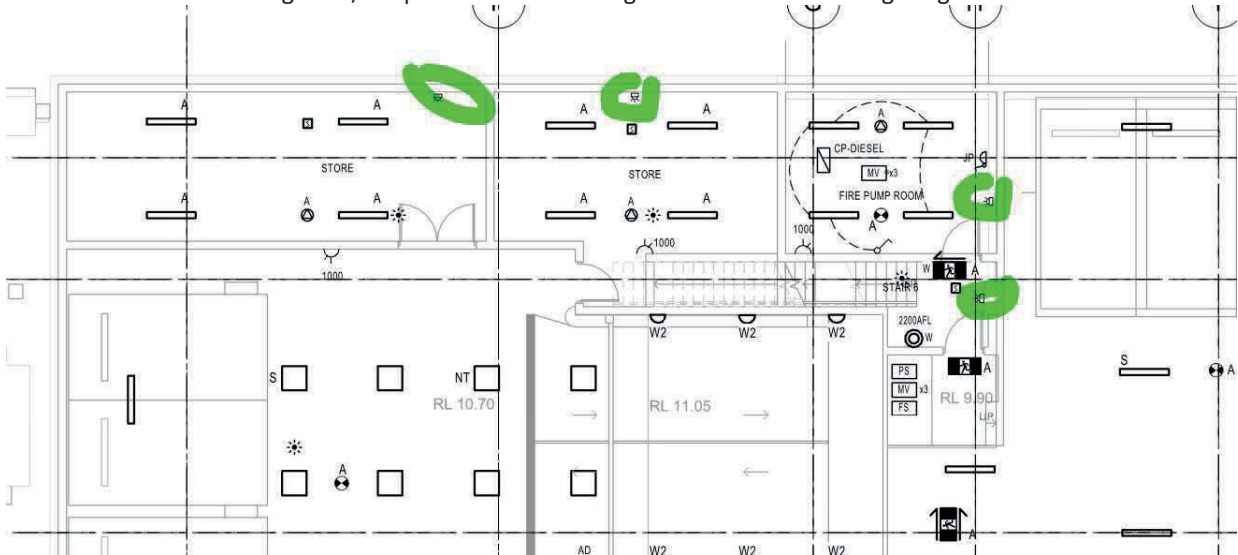
The operations of Back of House (BOH), Store and Carpark lighting shall be controlled by motion detectors.

Example Documentation Required

- As-built drawings highlighting location of external lighting motion detector.
- As-built electrical services schematic drawings illustrating lighting strategy with motion detection system.

Documentation Provided

1. Electrical drawings and/or Specifications showing locations of external lighting sensors.



2. Photo evidence of lighting sensors.



3. ENERGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

3.6 Internal Lighting

The maximum illumination power density in at least 90% of areas shall meet the requirements of NCC 2019 Section J Table J6.2a.

This will be achieved through the use of energy efficient LED lighting and automation/sensor controls.

Example Documentation Required

- Section J6 Report indicating the proposed lighting design achieving the maximum illumination power density as outlined in NCC 2019 Section J Table J6.2a.
- Lighting manufacturer's specification datasheet and/or architectural interior fittings Specification.
- As built Electrical services documentation and/or plans.

Documentation Provided

1. As built Electrical services drawings / Specification.

Light Fitting Type	Description	Image
W1	• 6W Wall mounted recessed LED fitting • Opal glass diffuser • Colour temperature 3 000°K • Cri>80 • Est Lighting Wever & Ducre SMILE version 1	
W4	• Wall mounted LED fitting • 112mm diameter sphere • Opal glass diffuser • Colour temperature 3 000°K • Cri>80 • IP44 • Wall mounted 2600AFL. (Confirm on site) • FLOS MINI Glo Ball	
WL4	• Specialised Lighting Solutions • 6W LED wall recess mounted light fitting with 3000/4000K lamp, IP65 rated • SLW406 (400 lumens)	
LS1	• Hanging Pergola Light suspended from Pergola • 20 W LED suspended mounted round downlight • Refer to Landscape Architect Lighting Schedule	

2. Section J6 Report / Calculations.

Main Menu
LIGHTING CALCULATOR FOR USE WITH J6.2(b) VOLUME ONE (First issued with NCC 2014)
Multiple Lighting Systems Calculator
Help screen

Building name/description
 Example Building

Classification
 Class 6

Number of rows preferred in table below
 6 (as currently displayed)

ID	Description	Floor area of the space	Perimeter of the space	Floor to ceiling height	Design Illumination Power Load	Space	Adjustment Factor One			Adjustment Factor Two			OVERALL DESIGN PASSES		
							Adjustment Factors	Dimming Percentages	Design Lumen Depreciation Factor	Adjustment Factors	Dimming Percentages	Design Lumen Depreciation Factor	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used	
1	B.Parking	459.6 m²	123 m	2.8 m	632 W	Carpark - general	b)Motion detector							3226 W	45% of 15%
2	B.Parking 15m	96.0 m²	43 m	2.8 m	472 W	Carpark - entry zone (first 20 m of travel)	b)Motion detector							3463 W	33% of 15%
3	B.Store01	128.0 m²	53 m	2.8 m	80 W	Storage with shelving no higher than 75% of the height of the aisle lighting	b)Motion detector							1440 W	6% of 15%
4	B.Store02	47.1 m²	30 m	2.8 m	120 W	Storage with shelving higher than 75% of the height of the aisle lighting	b)Motion detector							758 W	8% of 15%
5	B.Laundry	7.4 m²	11 m	2.8 m	72 W	Toilet, locker room, staff room, rest room and the like	b)Motion detector							84 W	5% of 15%
6	B.Corridor	12.5 m²	17 m	2.8 m	40 W	Corridors	b)Motion detector							188 W	3% of 15%
						Total								1416 W	
														Total	9159 W

IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THE LIGHTING CALCULATOR

The Lighting Calculator has been developed by the ABCB to assist in developing a better understanding of lighting energy efficiency parameters. While the ABCB believes that the Lighting Calculator, if used correctly, will produce accurate results, the calculator is provided "as is" and without any representation or warranty of any kind, including that it is fit for any purpose or of merchantable quality, or functions as intended or at all. Your use of the Lighting Calculator is entirely at your own risk and the ABCB accepts no liability of any kind.

if inputs are valid



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3. ENERGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

3.7 Renewable Energy Generation

A Photovoltaic (PV) rooftop renewable energy array has been installed that is 16.8kW_p capacity. Solar hot water is provided through evacuated tubes located on the rooftop.

Example Documentation Required

- Photo evidence of installed renewable energy system.
- PV specification datasheets.
- As built electrical services documentation and/or plans.

Documentation Provided

1. Photo evidence of installed 16.8kW_p photovoltaic array laid flat on rooftop (56 modules x 300W).



2. PV module datasheet.



KuPower

HIGH EFFICIENCY POLY MODULE

CS3K-295 | 300 | 305 | 310 | 315 | 320P (IEC1000V)



MBB **SBB**

MORE POWER

-  Low power loss in cell connection
-  Low NMOT: $42 \pm 3^\circ\text{C}$
Low temperature coefficient (Pmax): $-0.36\% / ^\circ\text{C}$
-  Better shading tolerance

MORE RELIABLE

-  Minimizes micro-crack impacts
-  Lower hot spot temperature
-  Heavy snow load up to 5400 Pa,
wind load up to 3600 Pa*

25 years linear power output warranty*

12 years enhanced product warranty on materials and workmanship*

*According to the applicable Canadian Solar Limited Warranty Statement.

MANAGEMENT SYSTEM CERTIFICATES

ISO 9001:2015 / Quality management system
ISO 14001:2015 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / CE / CQC / MCS / INMETRO
UL 1703 / IEC 61215 performance: CEC listed (US)
UL 1703: CSA / IEC 61701 ED2: VDE / IEC 62716: VDE / IEC 60068-2-68: SGS
Take-e-way
Canadian Solar recycles panels at the end of life cycle.







* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. No. 1 module supplier for quality and performance/price ratio in IHS Module Customer Insight Survey. As a leading PV project developer and manufacturer of solar modules with over 40 GW deployed around the world since 2001.

* For detailed information, please refer to the Installation Manual.

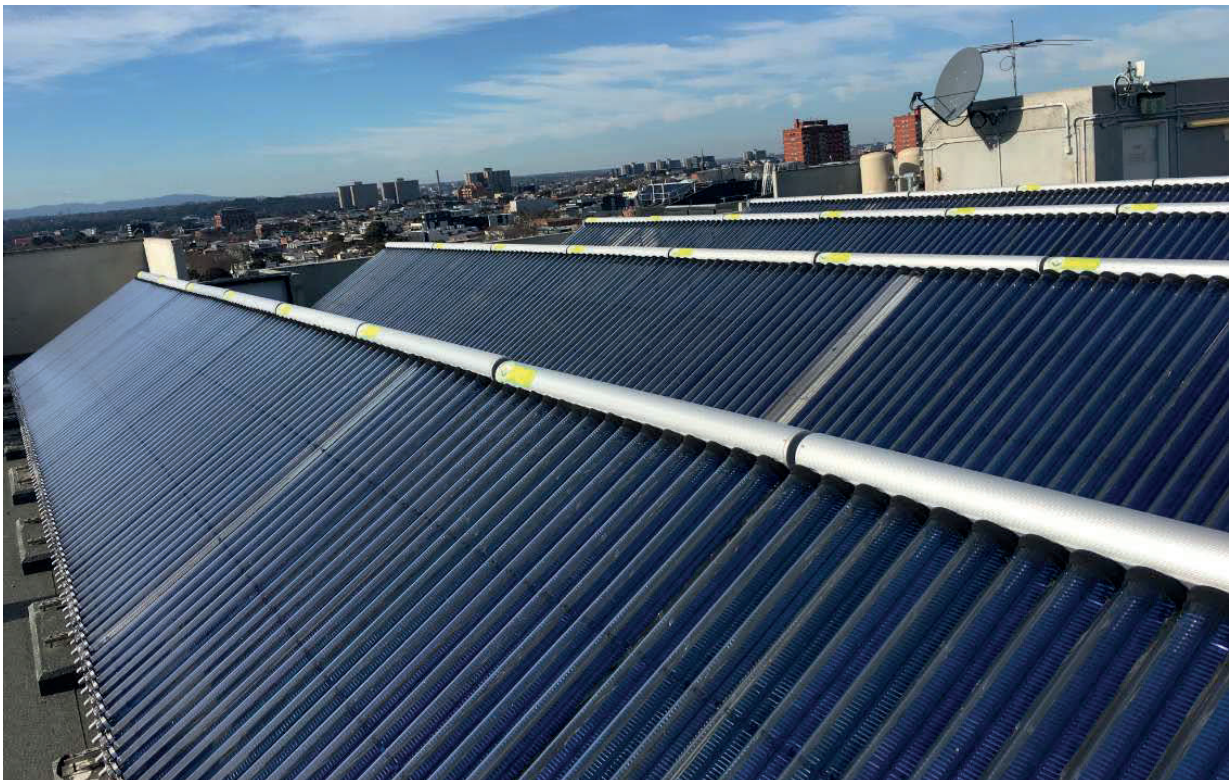
CANADIAN SOLAR INC.
Canadian Solar MSS (Australia) Pty Ltd., 44 Stephenson St, Cremorne VIC 3121, Australia
sales.au@canadiansolar.com, www.canadiansolar.com/au

JBA Consulting Engineers
www.jba.com.au
03 9646 9144

3. Photo of SMA inverters.



4. Photos of solar domestic Hot Water (DHW) rooftop system.





4. STORMWATER

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

4.1 Stormwater Treatment

The Project's Stormwater management strategy will achieve a minimum STORM rating of $\geq 100\%$ or equivalent modelling results (e.g., MUSIC *) . This will be achieved with a 10,000 litres rainwater tank which will be installed to collect rainwater from roof areas (approximately 800 m²). Collected rainwater shall be used for all toilets within the development. In addition, at least 500m² impervious surfaces shall be treated with a minimum of 5m² raingarden or equivalent treatment system. Pervious paving will be provided to visitor car parking areas.

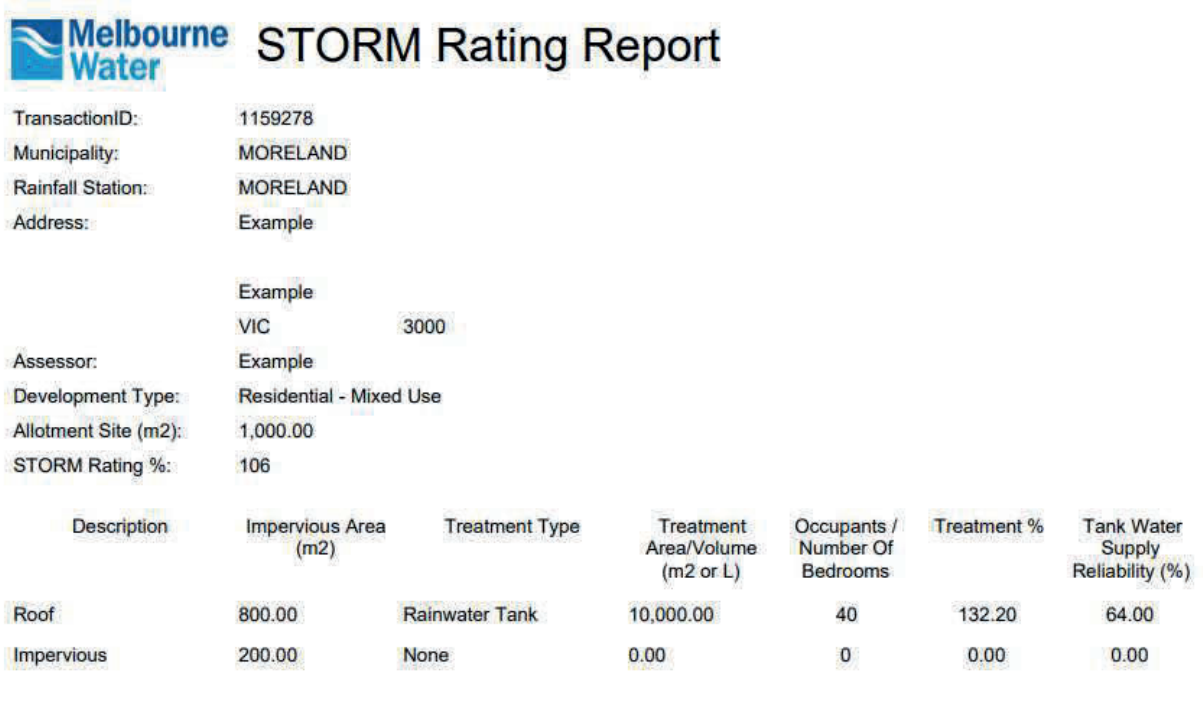
*Consult with the relevant council to determine which tool is most appropriate for your development.

Example Documentation Required

- STORM or MUSIC report
- As built drawings indicating catchment areas, slope of paved surfaces to treatment systems, construction details of proposed treatment systems, e.g., raingardens.
- As built landscape drawings indicating appropriate planting within and adjacent to treatment systems.
- Photo evidence of installed stormwater treatment system, raingarden, rainwater tank.

Documentation Provided

1. STORM Report



Melbourne Water **STORM Rating Report**

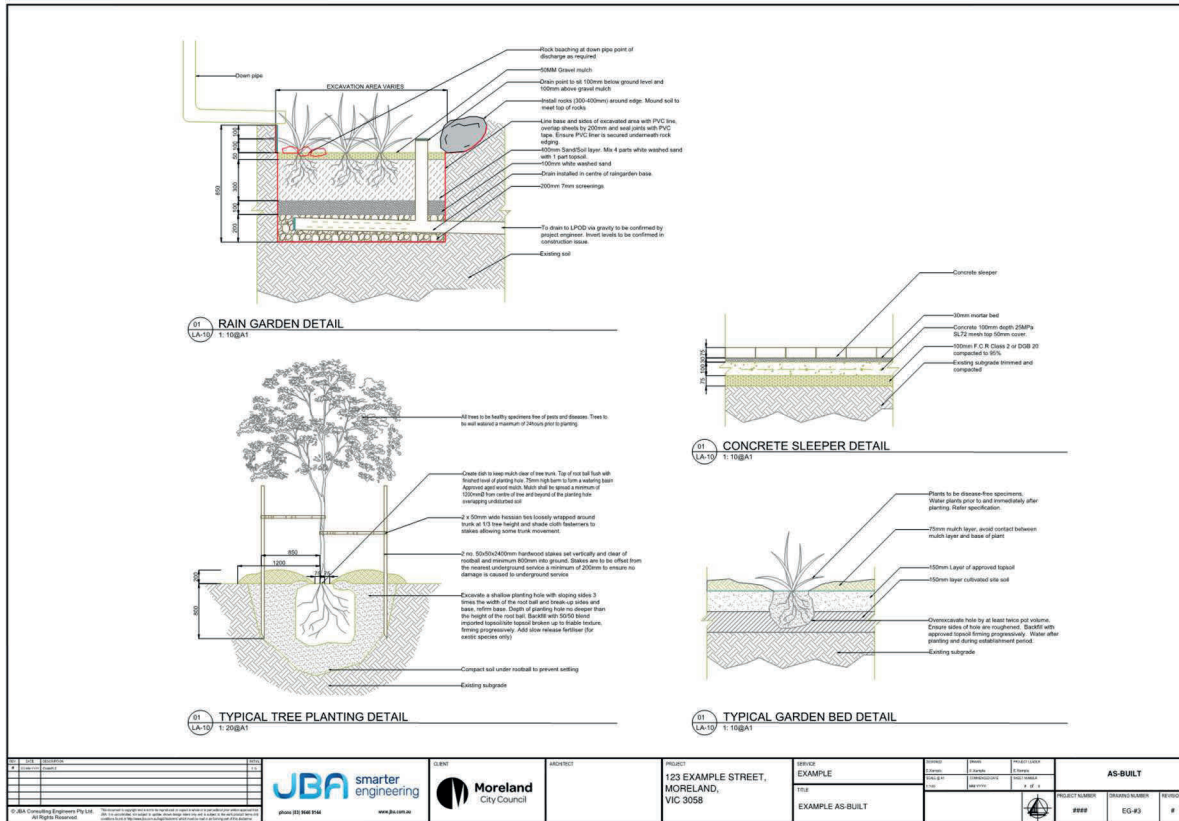
TransactionID: 1159278
Municipality: MORELAND
Rainfall Station: MORELAND
Address: Example

Example
VIC 3000

Assessor: Example
Development Type: Residential - Mixed Use
Allotment Site (m2): 1,000.00
STORM Rating %: 106

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
Roof	800.00	Rainwater Tank	10,000.00	40	132.20	64.00
Impervious	200.00	None	0.00	0	0.00	0.00

2. As-built landscape drawings highlighting construction detail of 5m² raingarden with gravity discharge to LPOD.



3. Photos of pipework for rainwater to toilets and irrigation.



4. Photo evidence of installed rainwater tank (10kL connected to all rooftops)



5. INDOOR ENVIRONMENT QUALITY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

5.1 Daylight Access – Multi-Residential & Non-Residential

Residential

The Project is committed to provide best practice daylight amenities to all habitable areas. If BESS Deemed-to-Satisfy methodology is applied, the following conditions shall be satisfied:

1. All living areas and bedrooms less than 8m deep (5m if south facing)
2. All living areas and bedrooms have a floor-to-ceiling height of $\geq 2.7\text{m}$
3. All glazing to living areas with at least 60% Visible Light Transmittance (VLT).
4. All living areas have external facing windows (not into a courtyard, lightwell or major obstruction).

Non-residential

The Project is committed to provide best practice daylight access to at least 30% floor area of regular use floor space.

If alternative daylight modelling* is provided, supply modelling assumptions and results. Ensure methods meet the requirements of the BESS requirements.

**Consult with the relevant council to determine which tool is most appropriate for your development.*

Example Documentation Required

- Architectural for construction specification indicating the VLT of the glass specified.
- Architectural for construction specification illustrating interior reflectance of finishes

Documentation Provided

1. Daylight Modelling Report highlighting the daylight modelling parameters/assumptions

Modelling Element	Modelled Value
Software	IES-VE 2018
Working Plane	At the floor level
Floor reflectance	30%
Wall reflectance	Internal partition: 70%(inside), 70%(outside) External wall: 70%(inside), 30%(outside)
Ceiling reflectance	80%
Glazing Visible light transmittance (VLT)	Internal glazing: n/a External glazing: 60%
Shading & obstructions	Modelled as per drawings
Sky	Uniform Overcast sky Melbourne weather data (10,000 lux horizontal illuminance)

2. Architectural for construction specification indicating the VLT of the glass specified.

Property	GL-04	GL-04A	GL-05	GL-06
Location	Level 1 Office Vision glazing	Level 1 Office Spandrel glazing	Level 1 Office Obscure glazing	Ground Floor Retail glazing
Total system U-Value (W/m ² .K)	≤ 2.3 (general) ≤ 7.8 (north facing windows only)	≤ 2.3 (general) ≤ 7.8 (north facing windows only)	≤ 2.3 (general) ≤ 7.8 (north facing windows only)	≤ 4.3
Total system SHGC	0.27 (± 5%)	0.27 (± 5%)	0.27 (± 5%)	0.51 (± 5%)
Weighted sound reduction index (R _w or R _w + C _w)	Refer to Acoustic Report	Refer to Acoustic Report	Refer to Acoustic Report	Refer to Acoustic Report
Visible transmittance (T _{vis})	60% min.	0	60% min.	
Reflectance (%)	20% max.	20% max.	20% max.	20% max.
WERS Energy rating%: Heating	T.B.C.	T.B.C.	T.B.C.	T.B.C.
WERS Energy rating%: Cooling	T.B.C.	T.B.C.	T.B.C.	T.B.C.
AWA-AGGA Compliance Certificate	Required	Required	Required	Required
Water penetration resistance (Pa)	1200Pa (min.)	1200Pa (min.)	1200Pa (min.)	1200Pa (min.)
Ultimate limit state (ULS) wind pressure (Pa)	To meet requirements of AS/NZS 1170.2	To meet requirements of AS/NZS 1170.2	To meet requirements of AS/NZS 1170.2	To meet requirements of AS/NZS 1170.2
Openable (free) area (m ²)	To meet requirements of NCC	To meet requirements of NCC	To meet requirements of NCC	To meet requirements of NCC

3. Architectural for construction walls and ceiling paint specification (Dulux Vivid White)

A20.03 APARTMENT - INTERIOR MATERIAL & FINISHES SCHEDULE

PROJECT

Sample Project

PROJECT ADDRESS

XXXX

JOB NO

XXXX

DATE

6/11/2020

REVISION

STAGE

For Construction

Sample Architect

This document is to be read in conjunction with architectural drawings.

CODE	ITEM	LOCATION	DESCRIPTION	FINISH / COLOUR	SUPPLIER	IMAGE
CEILINGS, WALLS & DOORS						
R223	PAINT FINISH	GENERAL WALLS/CEILING	CEILING: Flat acrylic finish - Low VOC paint coloured with Low VOC tinters Walls: Low sheen acrylic finish - Low VOC paint coloured with Low VOC tinters Skirtings/Doors/Archs: Semi Gloss Acrylic surface to be prepared as required, allow for min. 2x coat of color.	White Code: PNZE1	DULUX Contact: Mary Mann Email: mary.mann@dulux.com.au Phone: 0412 532 064	
SK01	SKIRTING	GENERAL SKIRTING	DULUX Size: 12mm x 100mm painted MDF Direct Stick to plasterboard wall	Vivid White Code: PNZE1	DULUX Contact: Mary Mann Email: mary.mann@dulux.com.au Phone: 0412 532 064	
TL01	WALL TILE	POWDER ROOM WALL & SKIRTING (APPLICABLE TO BOTH SCHEME)	CERDOMUS 300x300mm Wall Tiles Rectified Edge, Vertical Orientation Grout Color: white	Polar White Matt Code: OR363	CERDOMUS Contact: Russell Little (M: 0438 490 770) (E: russell@cerdomus.com.au)	
TL02	WALL TILE	BATHROOM WALL / LAUNDRY WALL (APPLICABLE TO BOTH SCHEME)	CERDOMUS 300 x 300 floor/wall tile Rectified Edge Grout Color : TBC	Code: M2006 Sky Midnight Matt	CERDOMUS Contact: Russell Little (M: 0438 490 770) (E: russell@cerdomus.com.au)	
TL03	FEATURE WALL TILE	BATHROOM FEATURE WALL (BLANC SCHEME)	ARTEDOMUS Lungo LUG1 Size: 300 x 300mm (295x286mm actual) Thickness: 8mm Grout Color : TBC	Lungo Code: LUG1 Finish: Bright, Matt and Luster Glazes	ARTEDOMUS Contact: Jaime Russell E: jaime.russell@artedomus.com M: 1300 278 336	
		BATHROOM FEATURE WALL (NERO SCHEME)	ARTEDOMUS Lungo LUG2 Size: 300 x 300mm (295x286mm actual) Thickness: 8mm Grout Color : TBC	Lungo code: LUG2 Finish: Dark, Matt and Luster Glazes	ARTEDOMUS Contact: Jaime Russell E: jaime.russell@artedomus.com M: 1300 278 337	

5. INDOOR ENVIRONMENT QUALITY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

5.2 Ventilation - Non-Residential

The Project is committed to achieve the following ventilation requirement for all non-residential spaces:

a. Natural Ventilation

At least [60% - 100%] of the Project's regular use areas are effectively naturally ventilated.

b. Outdoor Air

Increase in outdoor air (in L/s) of at least [50% - 100%] above AS 1668:2012 is available for all regular use areas.

c. CO₂ concentration

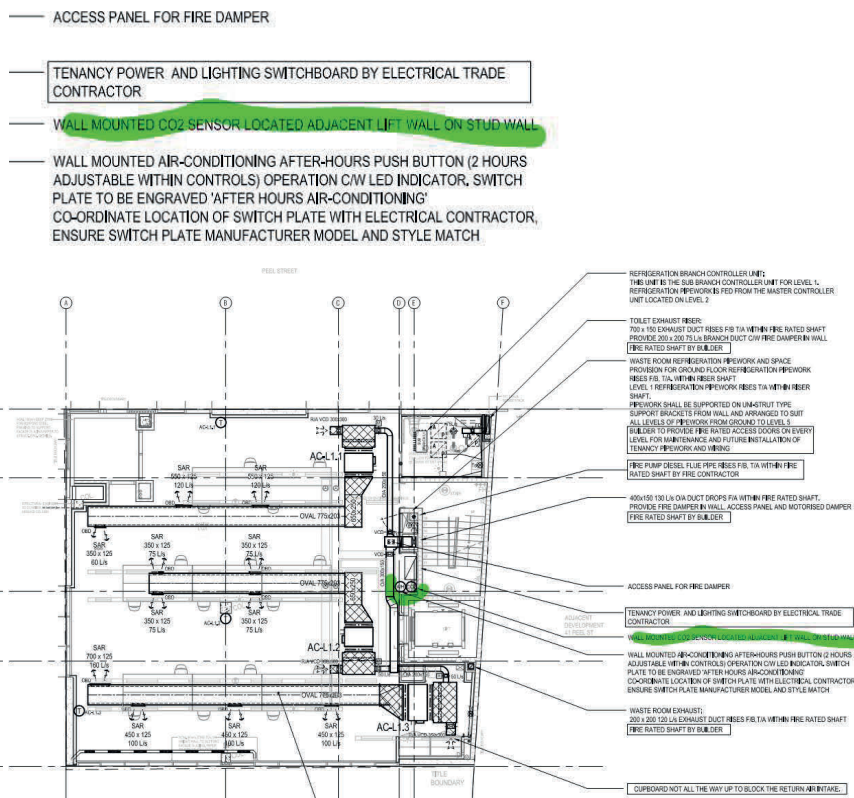
Where the ventilation systems are designed and monitored to maintain a maximum CO₂ concentration of [800ppm-500ppm].

Example Documentation Required

- Architectural documentation for construction Issue highlighting window openings and locations.
- For outdoor air greater than AS 1668:2012, calculated requirement and proposed outdoor air provisions.
- For CO₂ concentrations, proposed approach to achieve this air quality and details of monitoring and control.

Documentation Provided

1. Mechanical as-built issued highlighting CO₂ sensor location on a typical level.



5. INDOOR ENVIRONMENT QUALITY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

5.3 Ventilation - Residential

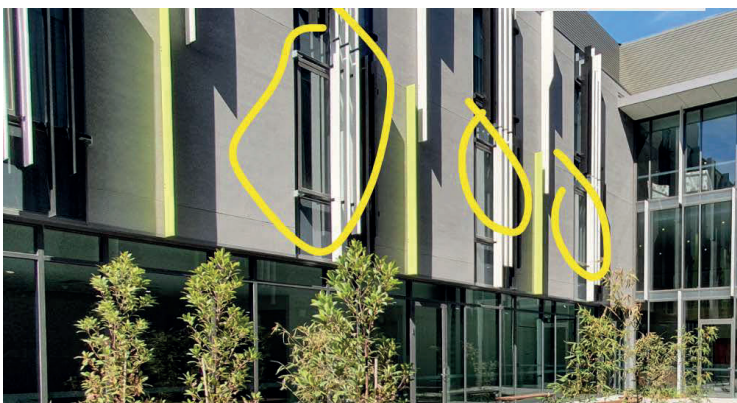
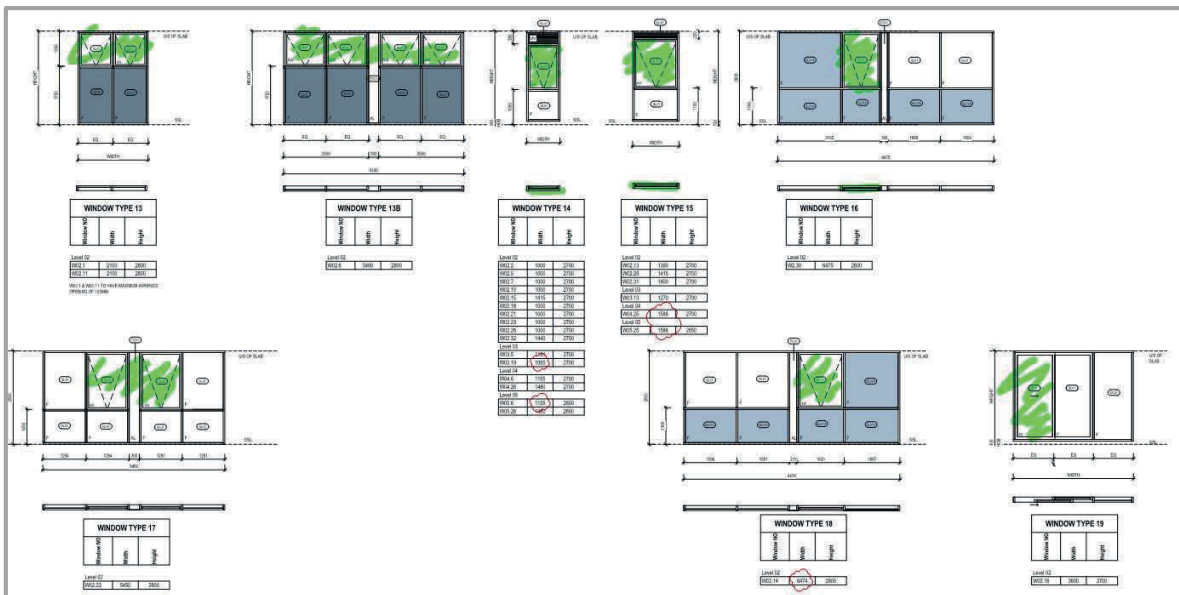
The Project is committed to provide good indoor air quality and reduce cooling load during summer. This can be achieved by providing good natural ventilation to all habitable rooms by introducing natural cross flow ventilation by having operable windows/doors in multiple aspects and adequate room depth for single-sided ventilation.

Example Documentation Required

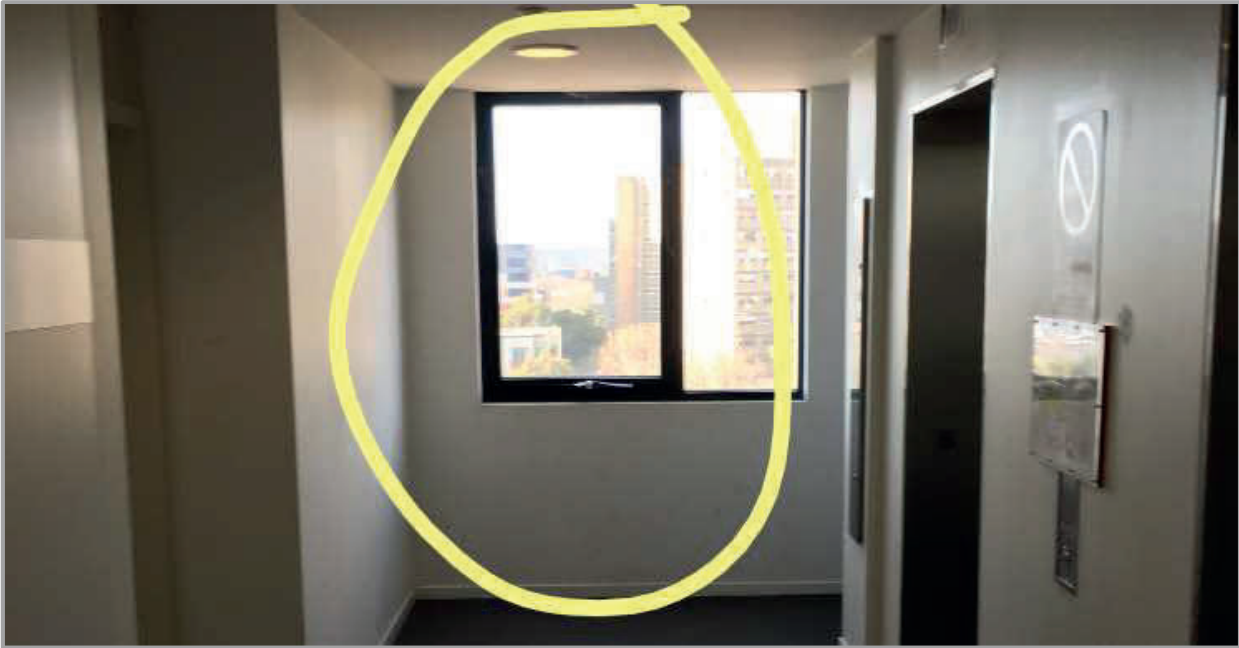
- Architectural documentation for construction Issue highlighting window openings and locations.

Documentation Provided

- Architectural construction issued highlighting location of windows and opening type i.e. window schedule, floor plans and photo.



2. Natural ventilation to corridors



5. INDOOR ENVIRONMENT QUALITY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

5.4 Thermal Comfort - Double Glazing

The Project shall have double glazing (or better) installed for all habitable room windows.

Example Documentation Required

- Provide an energy report by a qualified professional outlining the glazing specification consistent with double-glazed system (total system U-value and Solar Heat Gain Coefficient).
- Provide datasheets of the as-built glazing including:
 - Window total system U-value
 - Window total system Solar Heat Gain Coefficient (SHGC)
 - Thickness
 - Absorptivity
 - Colour

Documentation Provided

1. NatHERS Assessment Report / NatHERS certificates by an accredited professional outlining the glazing specification.

See the following page.

6.5 Star Rating as of 4 Nov 2020



Certificate Check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page?
Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional Notes

Window and glazed door type and performance

Default* windows

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
				No Data Available	

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
AWS-008-04 A	516 Al Awining Window DG 4/10/4ET	3.8	0.51	0.48	0.54
ALS-003-12 A	76mm ViewMax Sliding Window DG LightBridge_ClrS0_4-8-4	3.2	0.47	0.45	0.49
A&L-013-34 A	Al Sliding Door DG 6Sn/8Ar/4	3.11	0.44	0.42	0.46

Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
BED1	AWS-008-04 A	AW-13	2060	2170	awning	30.0	W	No
ENS	ALS-003-12 A	SL-03	600	1450	sliding	45.0	W	No

2. Architectural specification/documentation annotating the glazing total system U-value and SHGC value.

ESD REQUIREMENTS

BUILDING FABRIC ELEMENT	DESCRIPTION
EXTERNAL WALLS	All external walls will require additional R2.5 insulation to be added (exclude garage walls). Insulation material with minimum 20% recycled material content will be selected
PARTY WALLS	Party walls between townhouses are assumed as double stud walls with R5.0 insulation total (R2.5 to both sides).
INTERNAL WALLS	Internal walls between conditioned spaces and garage require R2.5 added insulation.
FLOORS	Ground floors of all townhouses except for TH09, TH11, TH12, TH16, TH31 & TH31, have been modelled as concrete slab on ground with no insulation required. Ground floors for townhouses TH09, TH11, TH12, TH16, TH31 & TH31, have been modelled as concrete slab on ground with minimum R1.0 added insulation. All first level floors have been modelled as suspended timber.
ROOF INSULATION	The roofs have been modelled as continuous attic roof or flat metal deck roof. All roof construction requires a minimum R6.0 insulation added within the ceiling space (except for roof above garage which requires no insulation added).
WINDOWS AND GLAZING	Awning windows are required to have window system thermal performance values of: Glazing Properties - U value = 3.80, SHGC = 0.52 Fixed windows are required to have window system thermal performance values of: Glazing Properties - U value = 2.20, SHGC = 0.48 Sliding doors are required to have window system thermal performance values of: Glazing Properties - U value = 3.10, SHGC = 0.45 Sliding windows are required to have window system thermal performance values of: Glazing Properties - U value = 3.10, SHGC = 0.45
BUILDING SEALING	All doors and windows to be sealed with weather strips, and exhaust fans and openings to be sealed so to not allow air infiltration into the townhouses Exhaust fans have been assumed in all kitchens, bathrooms, ensuites and laundry.
DOWNLIGHTS	All recessed down light fittings that have openings allowing air to pass through to a ceiling cavity (e.g. Adjustable down lights) shall be fitted with a cover that allows for ceiling insulation to closely enclose the sides and top of the down light

Amendments

No.	Date	Notes
T1	22/11/2019	PRE-TENDER ISSUE
T2	06/12/2019	TENDER ISSUE
B1	26/03/2020	BUILDING PERMIT
C1	24/09/2020	CONSTRUCTION ISSUE
C2	30/10/2020	CONSTRUCTION ISSUE - ENERGY REPORT COORDINATION

2. Photo evidence of external shading devices installed.



5. INDOOR ENVIRONMENT QUALITY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

5.6 Thermal Comfort - Ceiling Fans – Non-Residential

A minimum of 50% of regular use areas in tenancies are serviced by ceiling fans. Ceiling fans are to permanently installed and have a speed controller. The floor area served by a ceiling fan is to be the lessor of:

Manufacturer's recommendations

15sqm for a blade rotation diameter 900mm or greater but less than 1200mm

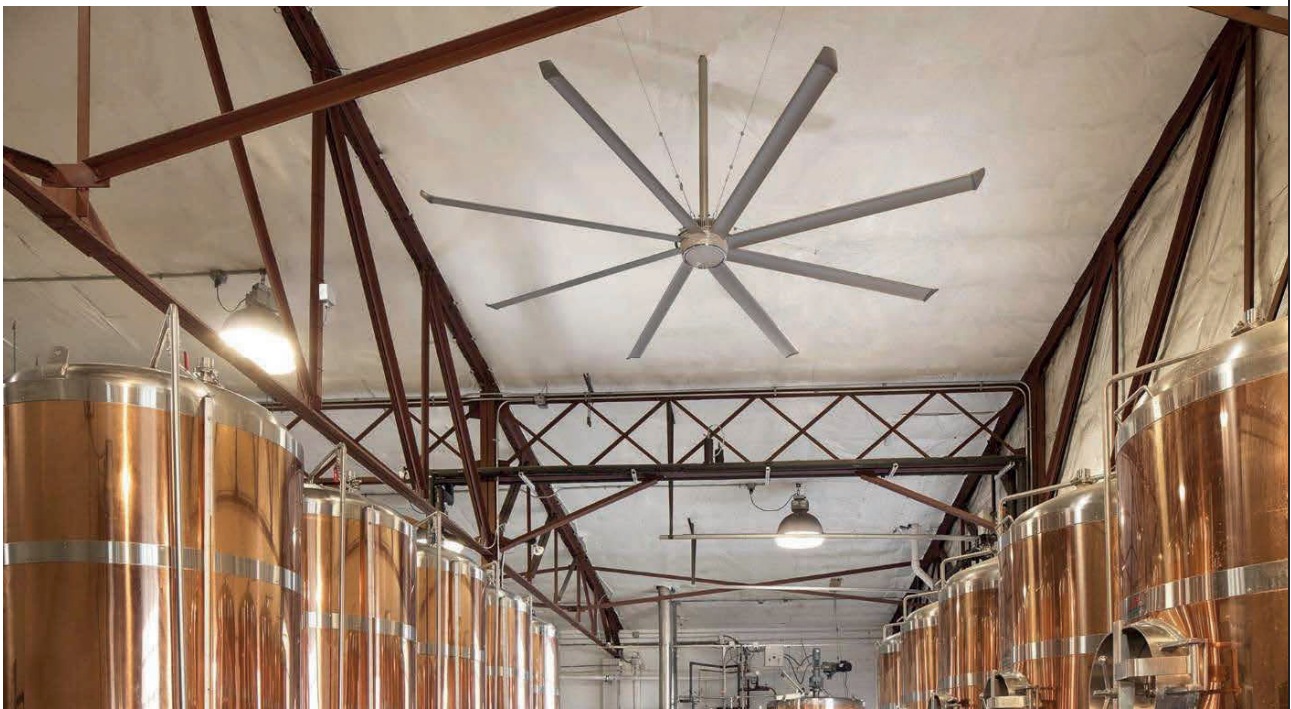
25sqm for a blade rotation diameter of 1200mm or greater

Example Documentation Required

- As built drawings highlighting the location of ceiling fans
- Provide schedule of Ceiling Fans including:
 - Blade rotation diameter.
 - Speed controller.

Documentation Provided

1. Photo evidence of installed Big Ass Ceiling Fan (model Essence) to commercial brewery tenancy.



2. Product Datasheet

TECHNICAL SPECIFICATIONS

ESSENCE

THE BEST FAN FOR A BIG SPACE, INDOORS OR OUT

Pictured with a 2 ft (610 mm) extension tube

Technical Specifications								
Diameter (A)	Weight ¹	Max Speed	Input Power and Required Breaker	Airfoil Clearances ²	Sound at Max Speed ³	IP Rating	Max Operating Temperature	Environment ⁴
8 ft (2.4 m)	75 lb (34 kg)	158 RPM	110–125 VAC, 1 Φ, 50/60 Hz, 10 A	2 ft (0.6 m) on sides	< 35 dBA	IP43	-4°F to 131°F (-20°C to 55°C)	Suitable for indoor or outdoor spaces
12 ft (3.7 m)	88 lb (40 kg)	76 RPM	200–240 VAC, 1 Φ, 50/60 Hz, 10 A	2 ft (0.6 m) below ceiling deck				
14 ft (4.3 m)	96 lb (44 kg)	55 RPM						

Construction Features						
Airfoils	Motor and Drive	Certifications ⁵	Mounting	Accessories	Colors	
Eight anodized Mini-Ellipto airfoils with winglets (black or silver)	Gearless direct drive motor	 UL Standard 507 and CSA Standard 22.2 No. 113 	Standard upper mount installs to bar joists Optional kits allow for mounting to I-beams, solid beams, and purlins	LED Light Wireless Wall Controller	Standard colors are silver and black. Individualize your fan with one of our classic color upgrades, or work with our design consultants to create a shade that's all your own.	

Standard Color Options

White Motor Housing with Silver Trim Silver Motor Housing with Black Trim

LED Light (Optional)

See the Essence LED spec sheet for details.

Control Options

LED Light Wall Controller Wireless Wall Controller (Optional)

5. INDOOR ENVIRONMENT QUALITY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

5.7 Thermal Comfort - Ceiling Fans - Residential

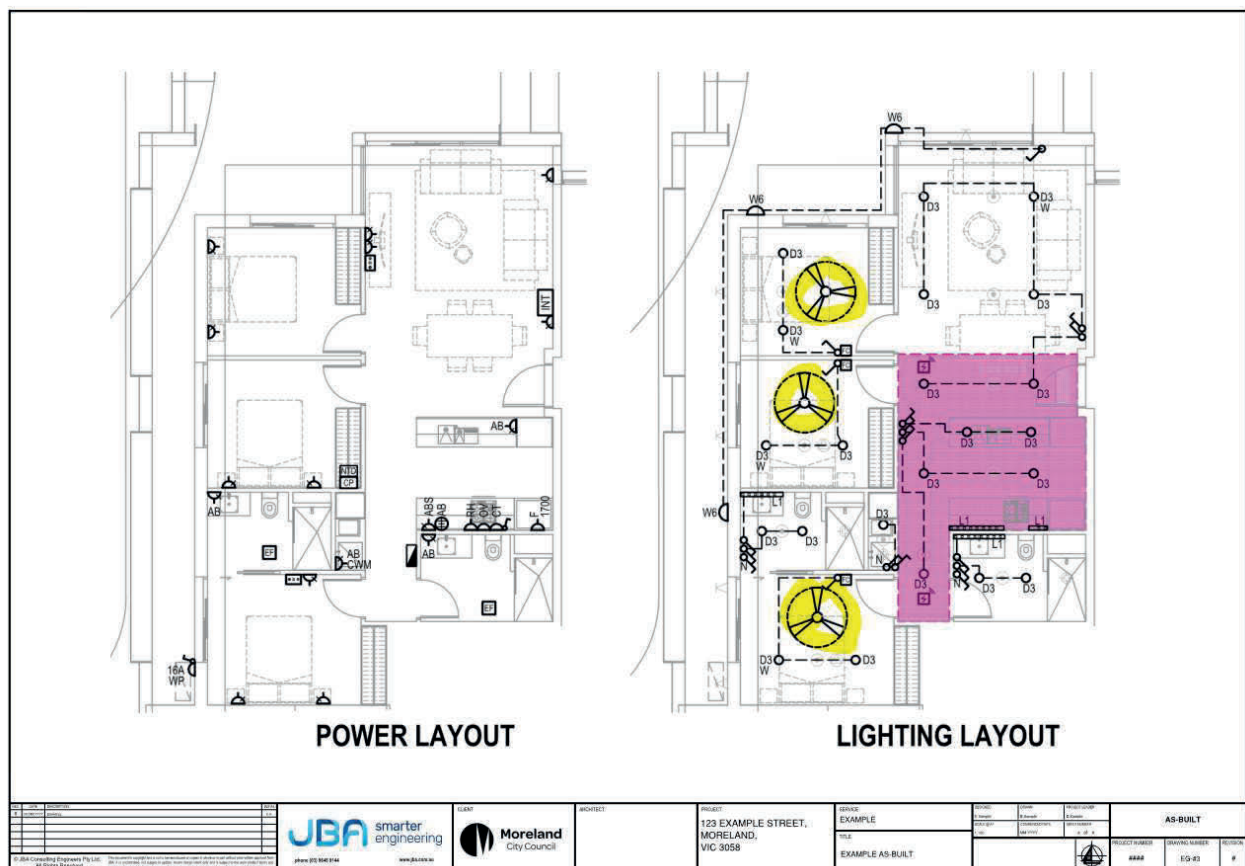
All bedroom that are not provided with by ceiling fans.

Example Documentation Required

- As built drawings highlighting the location of ceiling fans.
- Provide schedule of ceiling fans including:
 - Blade rotation diameter.
 - Speed controller.
- Photos of installed ceiling fans.

Documentation Provided

1. Electrical as-built issued drawings indicating the location of ceiling fans for residential bedrooms.



2. Fanco Breeze AC datasheet.

Technical Data

No Light

CFFCBR3ACWH
White - No Light



CFFCBR3ACBL
Black - No Light



CFFCBR3ACBLK
Black / Koa - No Light



LED Light

CFFCBR3ACLWH
White - LED Light



CFFCBR3ACBL
Black - LED Light



CFFCBR3ACBLK
Black / Koa - LED Light



Accessories

W-CRFCU90WH-LOOM3
White 90cm Rod

W-CRFCU90BL-LOOM3
Black 90cm Rod

W-CRFCU180WH-LOOM3
White 180cm Rod

W-CRFCU180BL-LOOM3
Black 180cm Rod

Key Details

Install Location: Indoor/Outdoor* & Coastal

Motor Type: AC

Blade Material: ABS Plastic

Operation: Wall Control

Reversible: Yes (via motor)

Ceiling Mount Angle: 0-20°

Blade Pitch: 12° (Approx)

About the LED Light

Light Temperature: CCT (3000, 4000 or 6000k)



Light Wattage: 18w

Lumens - 3000k: 1408

Lumens - 4000k: 1501

Lumens - 6000k: 1474

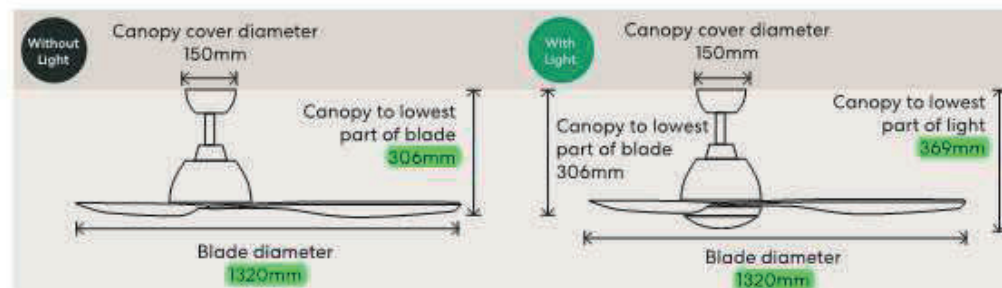
Dimmable: No

Performance

Speed	Motor Wattage	RPM	Airflow
1	18w	107	4,707 m3/hr
2	34w	153	7,132 m3/hr
3	55w	197	9,732 m3/hr

Anti corrosive paint applied on all metal components & ABS blades make this fan suitable for coastal environment installation

Dimensions



*Must be an enclosed outdoor area min 1.5m from edge of eave/roof, fully shielded from wind, rain & direct sunlight.

fanco

6. MATERIALS

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

6.1 Paints and Sealants – Low Volatile Organic Compounds (VOC)

All products of a relevant product type used within the Project shall meet the maximum total indoor pollutant emission limits. The relevant product types are:

- Paints, sealants and adhesives
- Carpets
- Engineered wood

Specify products that meet current GECA, Global GreenTag GreenRate, Carpet Institute Australia Environmental Classification Scheme Level 2, Green Star or WELL standards for TVOC in paints, adhesives and sealants (by volume) and carpets (by area) and for Formaldehyde in engineered wood (by area).

Example Documentation Required

- Demonstration of standards being committed to for each product type.
- Provide manufacturer datasheets used in construction for the following:
 - Paints, sealants and adhesives
 - Carpets
 - Engineered Wood
- Invoice and proof of purchase of products satisfying current GECA, Global GreenTag GreenRate, Carpet Institute Australia Environmental Classification Scheme Level 2, Green Star or WELL standards for TVOC in paints, adhesives and sealants (by volume) and carpets (by area).
- Product certificates that demonstrate certification under recognised product certification scheme or recognised standard.
- Photo evidence of paints used on site.

Documentation Provided

1. Photos of paints, sealants, and adhesives used on site.



2. Contractor VOC Reporting Form illustrating the Green Star VOC SMP requirements are satisfied.

VOC REPORTING FORM

CONTRACTOR: Mr. Biddle
SECTION: Lead Contractor
CONTACT NAME: _____ TEL. NO: _____

PROJECT NAME: Example St.
SPEC: All Paints + Sealants
SUBMITTAL NO: 1

Product type or application	Product name	Vendor or Manufacturer	GreenTag or SCS Certified (Y/N) (provide certificate): Systems Furniture and Seating Only	REQUIRED for ALL field-applied adhesives, sealants, paints & coatings identified in Specs (including those related to MEP work)		
				VOC content ¹ (grams per liter)	Corresponding Green Star VOC limit	Backup documentation ²
1. Prep coat paint	Gold Label	Delux	N	55g/L	65 g/L	Link
2. Interior Paint	Enviro2	Delux	Y	<1g/L	16g/L	Link
3. Sealant	Polyclear Surface Sealer	Ecolour	-	0g/L	250g/L	Link
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

- VOC: Volatile organic compound which vaporizes into a gas at normal room temperatures and is emitted during the use, application, curing, or drying of an adhesive, sealant, paint, or coating product (excludes methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds).
- Submit backup documentation from manufacturer indicating VOC content of the product, defined in either grams per liter, or lbs. per gallon (e.g., MSDS sheet, Product Data Sheet)
- Refer to the Sustainable Design Requirements Spec. for applicable VOC limits and chemical component limitations for adhesives, sealants, paints and architectural coatings.

CONTRACTOR CERTIFICATION:

I, Mr. Biddle a duly authorized representative of Mr. Biddle hereby certify that the material information contained herein is an accurate representation of the material qualifications to be provided by us, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: [Signature] DATE: 1/04/21 p. 1 of 1

3. VOC datasheets.


Datasheet



Typical Properties																																	
Gloss Level	NA	Thinner	Water																														
Colour	White	Components	1																														
Toxicity	Lead free. Dry film is non-toxic and conforms to AS1647, Part 3.	V.O.C. Level	55g/L inclusive of Dulux Low VOC tint (where applicable)																														
Meets GBCA VOC Requirement?	Yes Total Volatile Organic Content (TVOC) values are calculated in accordance to the stated methodology within Green Star Technical Manuals. The TVOC content is theoretically calculated as the sum total of the known VOC values of the product's raw material components. These materials include the base paint plus additional low VOC tint required for non-factory packaged colours.	Touch Dry	30 Minutes																														
Clean Up	 Water																																
Clean Up Description	Clean all equipment with water.																																
Application Method	 Air Spray  Brush  Roller																																
Application Conditions	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Solids By Volume</th> <th>41</th> <th></th> <th></th> </tr> <tr> <th></th> <th>Min</th> <th></th> <th>Max</th> <th>Recommended</th> </tr> </thead> <tbody> <tr> <td>Wet Film Per Coat (microns)</td> <td>244</td> <td></td> <td>244</td> <td>244</td> </tr> <tr> <td>Dry Film Per Coat (microns)</td> <td>100</td> <td></td> <td>100</td> <td>100</td> </tr> <tr> <td>Recoat Time (min)</td> <td>2 Hours</td> <td></td> <td>Indefinite</td> <td></td> </tr> <tr> <td>Theoretical Spread Rate (m²/L)</td> <td>4.1</td> <td></td> <td>4.1</td> <td>4.1</td> </tr> </tbody> </table>				Solids By Volume	41				Min		Max	Recommended	Wet Film Per Coat (microns)	244		244	244	Dry Film Per Coat (microns)	100		100	100	Recoat Time (min)	2 Hours		Indefinite		Theoretical Spread Rate (m ² /L)	4.1		4.1	4.1
	Solids By Volume	41																															
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Dry Film Per Coat (microns)	100		100	100																													
Recoat Time (min)	2 Hours		Indefinite																														
Theoretical Spread Rate (m ² /L)	4.1		4.1	4.1																													



Data Sheet DS 5.01

Product Polyclear

Description Polyclear is a unique and tough hard surface sealer that provides maximum protection. It provides a clear, hard finish for timber and concrete.

Characteristics

- 100% free of volatile organic compounds (VOCs)
- Hard wearing film forming product
- Scrubbable finish
- Low roller spatter
- Exceptional flow and leveling
- No toxic emissions and no odour 1 hour after painting
- Good Environment Choice Australia (GECA) accredited

Colours and Finish

- **Colour** – Clear base, can be tinted to many opaque colours.
- **Finish** – Satin. Sheen Level 20-50 % at 60°

Data

- **Surface Dry** 30 minutes
- **Recoat** 2 hours
- **Fully Cured** 6 days
- **Coverage** All figures are quoted at 23°C and 50% relative humidity.
3 top coats required for floors and 2 for all other surfaces, product covers up to 8-10m² per litre on rough or previously uncoated surfaces and 16m² per litre on smooth surfaces.
- **Film Thickness** Wet: 90 microns, Dry: 55 microns
- **Thinning** Manufactured to ensure optimum cover and finish without dilution. Can be thinned up 10% with water as per Application Advice below.
- **Clean Up** All tools & equipment can be cleaned with water.
- **VOCs** Zero VOC product. Ecolour use zero VOC tints.

6. MATERIALS

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

6.2 Timber – Certified (FSC or PEFC) Timber

Where timber is to be used, such timbers are to accord with the GBCA's 'Essential' criteria for forest certification. This may include FSC and / or PEFC Certification which are both internationally recognised schemes ensuring that timber is sourced from sustainable sources. Alternatively, recycled timber will be used.

Example Documentation Required

- Materials tracking calculator illustrating percent compliant timber purchases compared to total timber purchases.
- Provide manufacturer datasheets for timber products used in the construction including:
 - Flooring
 - Framing
 - Furniture
 - Assemblies
 - Joinery
- FSC Chain of Custody (CoC) Certificates.

Documentation Provided

1. Environmental Materials Contractor Reporting Form - Timber

ENVIRONMENTAL MATERIALS REPORTING FORM

(provide cut sheets for the data below)

PROJECT NAME: Example St

CONTRACTOR: Timber Contractor

SPEC SECTION: Timber

CONTACT NAME: John Smith

TEL. NO:

SUBMITTAL NO:

Product Name	Vendor or Manufacturer	REQUIRED for ALL products identified in Specs CSI 2004 Divisions 3-10, 31.60 Foundations, 32.10 Partitions, 32.30 Site Improvements, and 32.50 Planting. MEP excluded.	Percentage of the product salvaged, refurbished or reused ¹	Recycled Content ² (for concrete, use separate form)		Location and distances from manufacturing point to project site AND raw material harvesting point to project site (miles) ³	Percentage of product that is rapidly renewable ⁴	For all wood-based products ⁵			
				% post-consumer	% pre-consumer			% New wood	% Certified Wood	FSC Tracking COC #	Urea formaldehyde in composites (Y/N)
1. Interior battens	Recycled Timber Inc.	\$254,888	100%	100%	-	Harvest: Manufacture:		0%			
2. Wall board	Fox Timber	\$500,000	-	-	-	Harvest: <u>NSW</u> Manufacture: <u>Melb</u>		100%	100%	COC1234	N
3.						Harvest: Manufacture:					
4.						Harvest: Manufacture:					

CONTRACTOR CERTIFICATION:

I, John Smith, a duly authorized representative of Timber Contractor, hereby certify that the material information contained herein is an accurate representation of the material qualifications to be provided by us, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: John Smith

DATE: 01/01/21

p. 1 of 1

¹ **Salvaged:** Material or product which has been recovered from existing buildings or construction sites and reused in other buildings (e.g., structural beams, doors, brick).

² **Post-Consumer Recycled Content:** Portion of material or product which derives from discarded consumer waste that has been recovered for use as a raw material (e.g., plastic bottles, newspaper).

Pre-Consumer Recycled Content: Portion of material or product which derives from recovered industrial and mfg. materials that are diverted from municipal solid waste for use in a different mfg. process, prior to use by a consumer (e.g., fly-ash in concrete or synthetic gypsum board, both of which are by-products of coal-burning power plants). Note that spills and scraps from the original mfg. process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product do not qualify.

³ **Regional Materials:** Materials are considered regional if harvested AND manufactured within 500 miles of the project site. Materials can travel more than 500 miles, provided materials always remain within a 500 mile radius of project site. For salvaged/recycled materials such as steel, you do not need to provide the original harvesting location, but rather the location the steel was sourced from. Distances are as the crow flies, not actual miles traveled via surface transport.

⁴ **Rapidly Renewable:** Materials and products made from raw materials that are harvested within a 10-year cycle (e.g., bamboo, cork, linoleum, fast-growing poplar, wheatboard, wool carpet).

⁵ **FSC Certified:** Wood-based products which are certified by the Forest Stewardship Council and carry a Chain-of-Custody certificate number from the vendor or manufacturing.

Composite Wood & Agrifiber Products: Any wood based products must not contain added urea-formaldehyde.

2. Chain of custody certificate and photo.



Certificate of Registration

This is to certify that

Fox Timber Imports Pty Ltd T/a Foxtim

"The certified site" has been certified in accordance with the requirements of the Forest Stewardship Council® A.C. using the FSC® Chain of Custody standards* and that Fox Timber Imports Pty Ltd T/a Foxtim of

Unit 2, 62-70 Belmore Road, Punchbowl, Sydney, NSW 2210, AUSTRALIA

is hereby licensed to use the FSC Logo on and sell as FSC certified all products listed on the attached FSC product schedule as **FSC 100% or FSC Mix**.
FSC Controlled Wood may be sold for the purposes of further mixing.

Certificate Registration Code: **SA-COC-003052**

SA-CW-003052

Issue Number 2.0

Licence Code: **FSC-C109570**

Issued By: Soil Association Certification Limited
South Plaza, Marlborough Street
Bristol, BS1 3NX
United Kingdom

Issue Date: **1 February 2017**

Valid until the Renewal Date: **31 January 2022**

Signed on behalf of Soil Association Certification
Kevin Jones
Kevin Jones, Head of Forestry

© 2017 Soil Association Certification Ltd. FSC Licence Code FSC-C109570
*This certificate is only valid for the sale of FSC products where a request for a certificate of registration has been made by the holder of the certificate and the certificate is issued by the Soil Association Certification Limited. The certificate is the property of Soil Association Certification Limited and all copies or reproductions of the certificate shall be destroyed or returned to the Soil Association Certification Limited immediately on request.
Registration of the products, sales or services that are included in the certificate is required for the certificate to be valid. The certificate is not valid for the sale of FSC products where the holder of the certificate is not registered with the Soil Association Certification Limited.
The certificate holder is responsible for ensuring that the products supplied by the certificate holder are FSC certified for FSC controlled wood. Products offered, shipped or sold by the certificate holder may only be used in accordance with the scope of the certificate when the required FSC claim is clearly identified on the packaging and labeling documents.

7. TRANSPORT

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

7.1 Bicycle Parking – Non-residential

The Project shall provide on-site bicycle facilities in convenient and highly visible location. A total of 20 staff & visitor bicycle spaces are provided.

100% of the bicycle parking spaces are designed to park the bicycle horizontally for ease of access. This exceeds Best Practice and requirements detailed in AS2890.3 for Compliant Bicycle Parking.

Example Documentation Required

- Architectural for construction Issue / as-built drawings highlighting the bike storage area on the floor plans indicating with notations what storage system rack will be adopted and what areas need to be allowed for clearance and access to the racks. The overall number of spaces should also be notated.
- Photographic evidence of bike storage facilities.

Documentation Provided

1. Photographic evidence of as-built bike storage area with secure access.





7. TRANSPORT

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

7.2 Bicycle Parking – End-of-Trip Facilities

The Project shall provide on-site End-of-trip facilities in a convenient location easily accessible from the bicycle storage area. The End-of-Trip facility shall include at least:

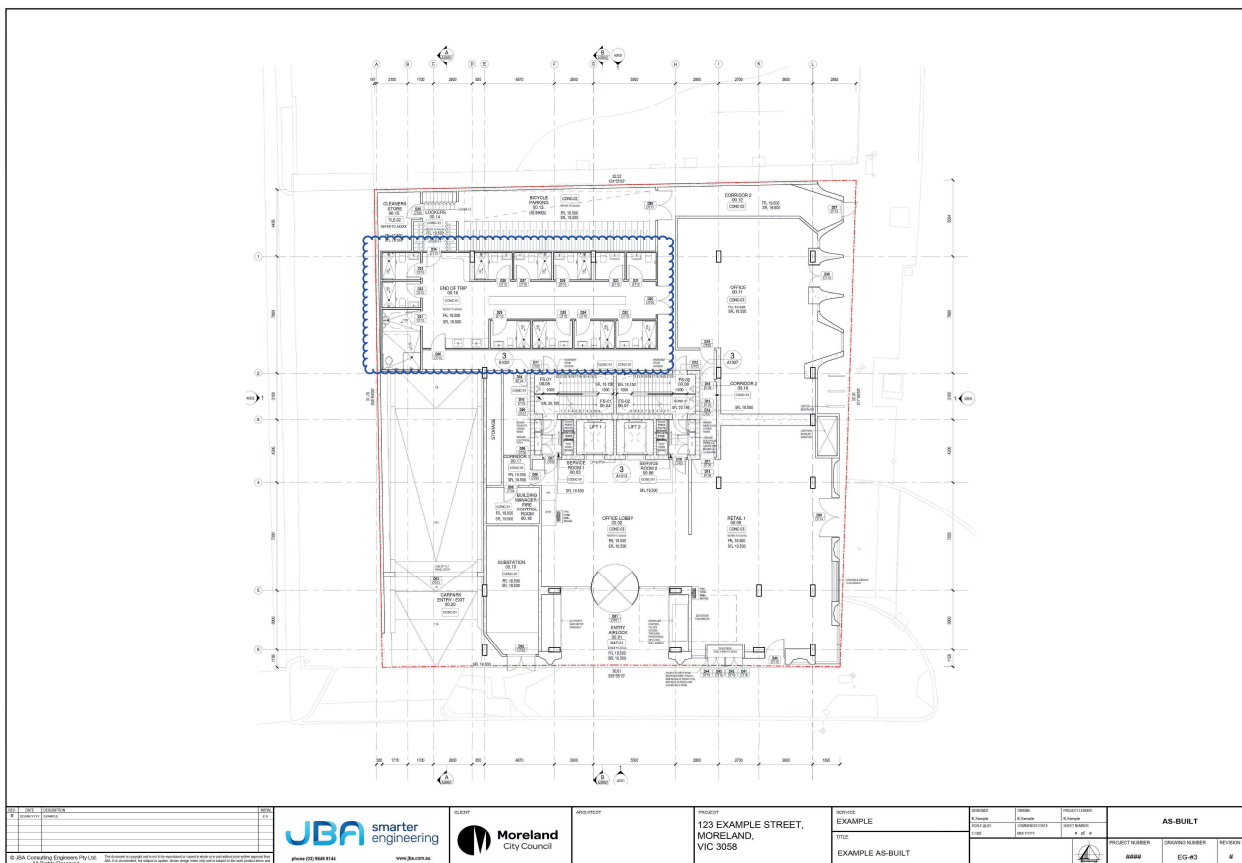
- 50 lockers within the End of Trip (EoT) facilities.
- A total of 8 showers for staff cyclists.

Example Documentation Required

- Architectural for construction Issue / as-built drawings highlighting the end-of-trip facilities provided on the floor plans.
- Photographic evidence of as-built end-of-trip facilities.

Documentation Provided

1. As built drawings highlighting the end-of-trip facilities.



2. Photos of staff lockers and shower.



7. TRANSPORT

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

7.3 Electric Vehicle Infrastructure

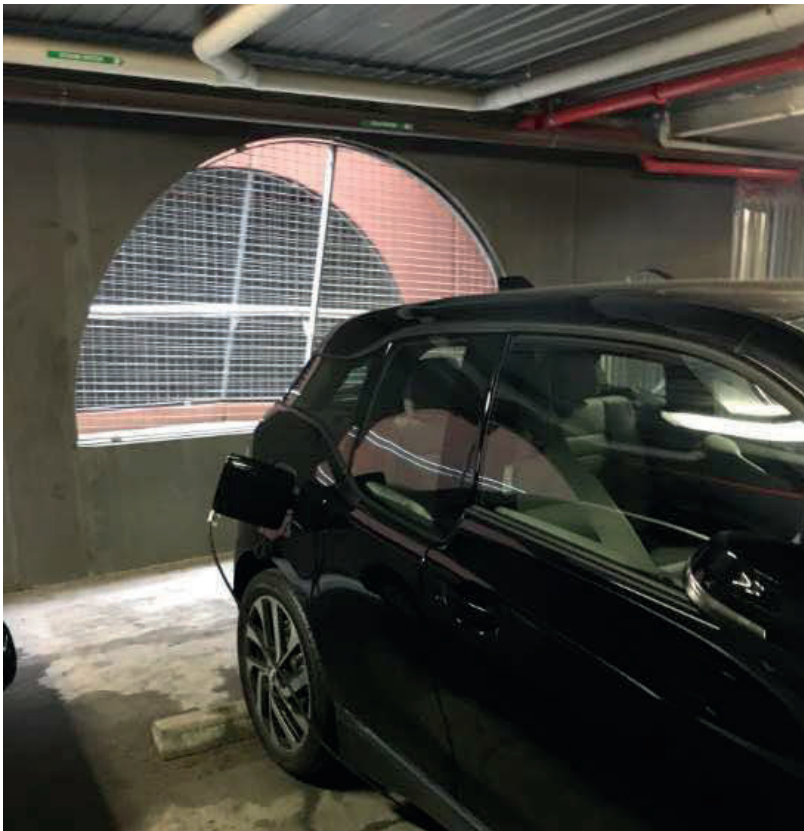
The Project is committed to provide at least 1 electric vehicle 32 Amp charging space or provide Electric vehicle charging power infrastructure to allow for future provision of EV charging by the resident.

Example Documentation Required

- Architectural drawings for construction Issue indicating location of designated electric vehicle parking bay(s) and location of charging infrastructure.
- As built electrical services documentation indicating electrical power provisions for charging infrastructure.
- Photo evidence of installed charging station(s).

Documentation Provided

1. Photo evidence of the 32A charging station in use.



7. TRANSPORT

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

7.4 Car Share Scheme

The project shall ensure a formal car sharing scheme is integrated into the development and provide at least 1 car share vehicle space on-site.

Example Documentation Required

- Architectural drawings for construction Issue highlighting the location of designated car share vehicle space(s).

Documentation Provided

- Photo evidence of designated car share vehicle space provided as part of the development.



8. WASTE

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

8.1 Food and Garden Waste

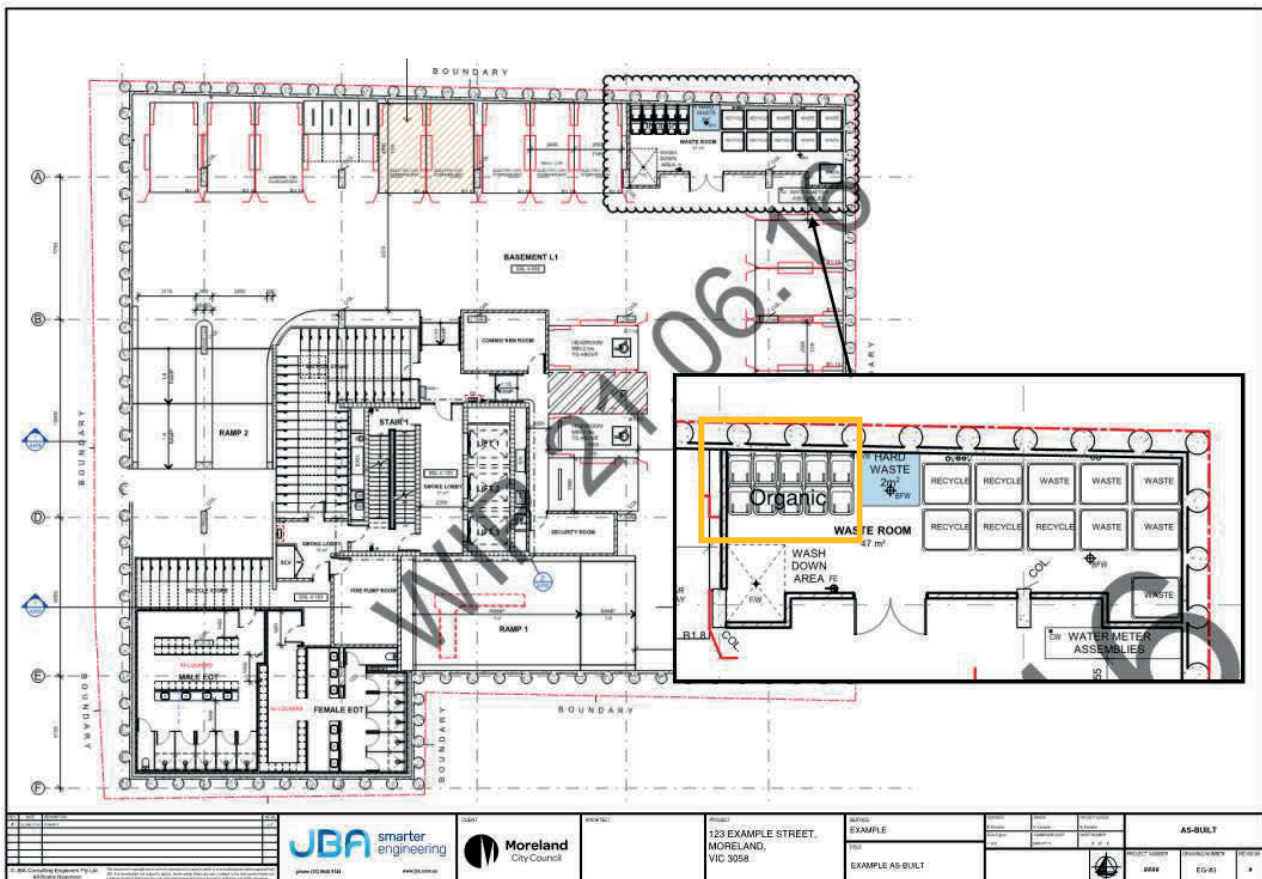
The Project shall provide facilities for on-site management of food and garden waste. This can be in the form of worm farm, compost bins, or organic waste collection service.

Example Documentation Required

- Site plans indicating an area dedicated to on-site management of food and garden waste.
- Operational waste manage plan by suitably qualified professional including details of the organic waste system and who will be responsible for its implementation and management.
- Photos of on-site food and garden waste collection and/or composting.

Documentation Provided

1. As-Built Architectural drawing issue illustrating the location of 10 x 240L organic waste bins located in the basement waste room.



2. Kitchen waste caddy provided to all dwellings for food waste disposal.



3. Photo evidence of the on-site garden waste compost system.



8. WASTE

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

8.2 Convenience of Recycling

Recycling facilities shall be as conveniently located as those for general waste.

Example Documentation Required

- As-built floor plans showing recycling facilities at the point of disposal (i.e. kitchens)
- As-built floor plans showing the location of separate waste and recycling chutes in multi storey developments.
- Photo evidence.

Documentation Provided

1. Photo evidence of the waste management system (comingled recycling and general wastes).



2. Photo evidence of central comingled recycling and general wastes collection area.



3. Operational waste management plan describing the waste management system.

The proposed waste management system for the development is summarized as follow:

Waste Bin Capacity

- Block A will share 3 x 1,100L garbage and 3 x 1,100L recycling bins.
- Block B will share 2 x 1,100L and 1 x 660L garbage and 2 x 1,100L and 1 x 660L recycling bins.
- Block C and Block D Townhouses will have individual 120L garbage and 120L recycling bins to each dwelling.

Bin Storage Area

- Block A and Block B shared bin store will be allocated within the basement.
- Block A and Block B bin store area to allocate a temporary storage area for hard waste nominal area of 1m².
- Block C and Block D Townhouses will have dedicated bin space allocated within their private yard or garage.

Waste Collection and Disposal

- Bin Users are responsible to sort their own waste and place garbage and recyclables in the correct chute/bin.
- All shared bin general waste and recycling waste will be collected on-site by a contracted private collector weekly.
- Block C and Block D Townhouses Bin Users are responsible to move bins to the bin collection area accessible to the Council collector or private contractor on collection day and return the bins after collection on the same day.

8. WASTE

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

8.3 Construction and Demolition waste

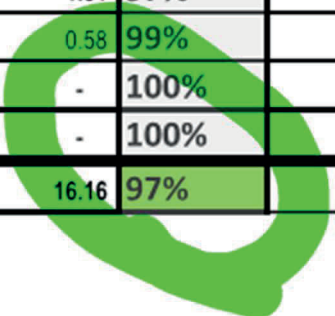
The Project targets an 80% landfill waste diversion for construction and demolition waste.

Example Documentation Required

- Construction management plan demonstrating how the waste diversion targets are met.
- Waste diversion report from waste contractor.
- Monthly haul receipts during demolition and construction.

Documentation Provided

1. Construction Waste Report provided by the waste contractor demonstrating 97% waste diversion.



0.58	99%	Hawk
-	100%	Ha
-	100%	Ha
16.16	97%	

See the following page for monthly details.

ABC WASTE SERVICES

CONSTRUCTION WASTE MANAGEMENT MONTHLY PROJECT PROGRESS REPORT

Project Title:	ABC Hotel	Superintendent:	
Project Size:		CWM Contractor:	
Project Address:		Month/Year:	
Project Number:			

Haul Date	Container/Ticket Number	Total Tonnage (sum of concrete, metal, wood, other and residual)	Concrete Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper & Cardboard Products Tonnage (diverted)	Plastic Tonnage (diverted)	Other Diverted Tonnage (Explain in Comments)	Total Diverted Tonnage (diverted)	Residual or Trash Tonnage (landfilled)	% of Total Tonnage Diverted (diverted)	Name & Location mat. Sent	Comments: If other recycled material please include description of material
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January	Totals																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			</
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9. URBAN ECOLOGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

9.1 Communal Spaces

At least 450m² of common space shall be provided on-site. This includes outdoors or indoors, and include rooftop gardens, communal courtyards with seating and barbeque facilities, gyms, community rooms for use and hire within the building and other spaces where people can gather.

Example Documentation Required

- As-built site and/or floor plan highlighting the location and areas of the common space provided.
- Photos of communal spaces.

Documentation Provided

1. Photo of rooftop communal terrace with productive garden in during construction.



9. URBAN ECOLOGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

9.2 Vegetation

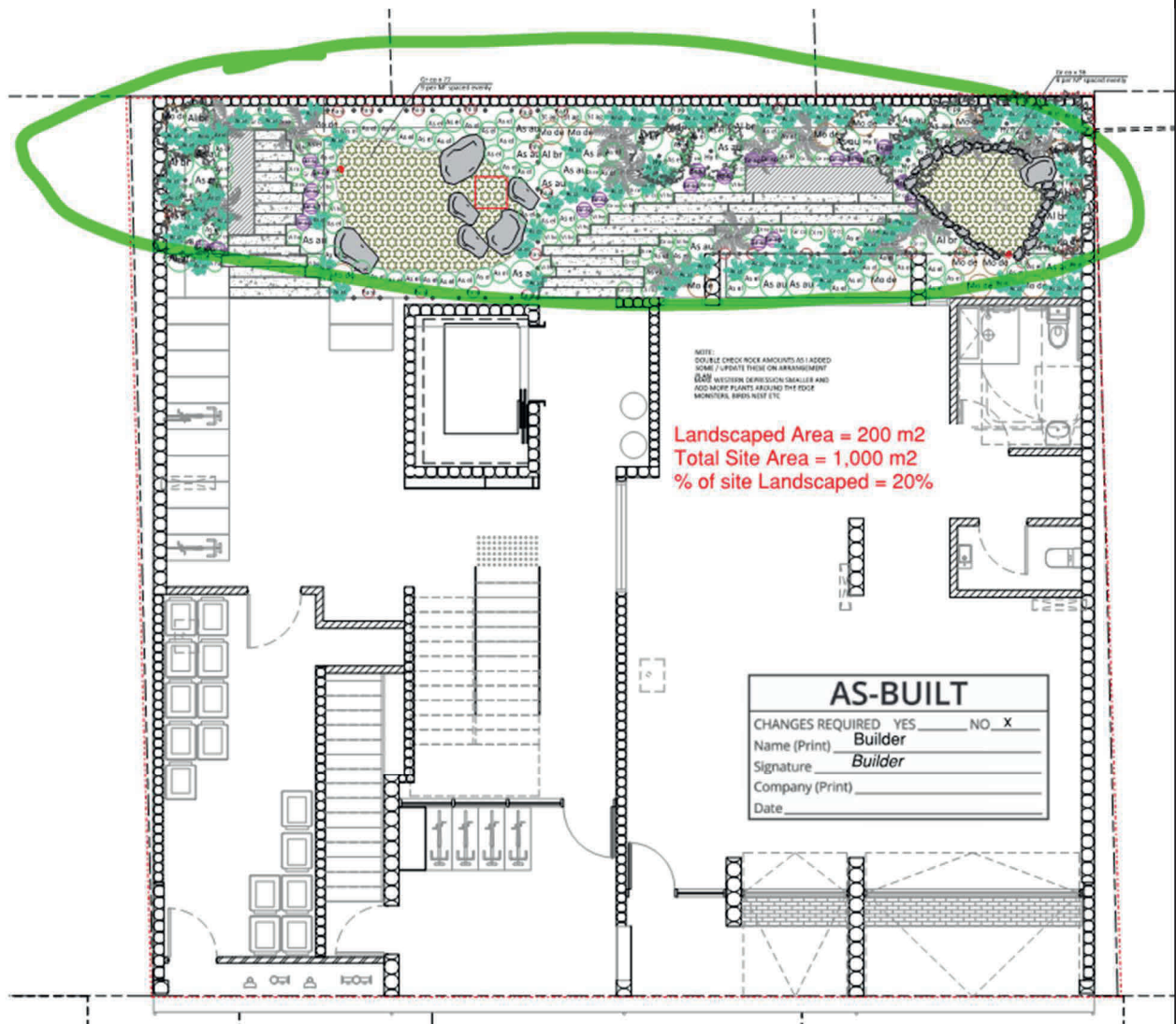
At least 25% of the Project's site area coverage will be vegetated.

Example Documentation Required

- As built landscape plans/ documentation indicating the % vegetated area over total site area.
- Photo evidence of installed landscaping.

Documentation Provided

1. Stamped Landscape plans/ documentation indicating the percentage of vegetated area over site area.



9. URBAN ECOLOGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

9.3 Green Roofs

The Project shall include appropriate use of green roofs to mitigate impact of urban heat island effect.

Example Documentation Required

- Site plans showing the green roof area.
- Photo evidence of installed green roof.

Documentation Provided

1. Photo evidence of green roof planters during construction.



9. URBAN ECOLOGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

9.4 Green Walls and Facades

The Proposed Building's façade shall incorporate concept of a green wall or green façade. This includes green façade with growing climbing plants up and across the façade of a building, either from plants grown in garden beds at its base, or by container planting installed at different levels across the building.

Example Documentation Required

- As-built elevation plans showing the green wall or green façade area.
- Photo evidence of green wall or green facade installation.

Documentation Provided

1. Photo evidence of green wall installation into the ground floor lobby area.



9. URBAN ECOLOGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

9.5 Private Open Space - Balcony/ Courtyard Ecology

All balconies and courtyards shall be provided a water supply (tap) and a floor waste (drain).

Example Documentation Required

- As-built plans showing location of water supply and drainage points.
- As-built hydraulic services documentation indicating location of water supply and drainage points.
- Photo evidence of taps and floor wastes on balconies and courtyards.

Documentation Provided

1. Photo evidence of taps and floor wastes on balconies and courtyards.



9. URBAN ECOLOGY

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

9.6 Food Production - Residential

The Project is committed to provide at least 25m² of food production area.

Example Documentation Required

- As-built drawings showing the area dedicated to food production.
- Landscape documentation indicating the food productive infrastructure has been provided.
- Photo evidence of productive garden(s).

Documentation Provided

1. Photo evidence of productive garden planters



10. INNOVATION

Credit Applicability

[all of development, Class 2 Residential, Class 5 Retail, etc.]

10.1 Innovation –

Review all sustainable development initiatives relating to the design, construction and operation of the proposed development.

Determine whether any of the initiatives proposed are design features or technologies that deliver an improved environmental performance.

Determine whether the design feature or technology is new or not commonly applied in Victoria. If not, is it “innovative” in another way?

Prepare a synopsis of the proposed design feature or technology, including how it is innovative in relation to its introduction to the built environment in Victoria, what the social and/or environmental benefit is and a measure of the benefit if applicable.

Example Documentation Required

- Photo evidence and short description.
- As-built drawings of Innovation initiatives.

Documentation Provided

1. Photo evidence and short description.
2. As-built Drawings of Innovation initiatives.

3 Evidence Document Summary Register

No.	Submitted Document	SMP Initiative Reference
1	Development NatHERS Group Certificate.	1.1 Thermal Performance - Residential
2	Individual Dwelling NatHERS Certificate.	1.1 Thermal Performance - Residential
3	JV3 Modelling Results	1.2 Thermal Performance - Non-Residential
4	Photographic evidence of ceiling/roof, floor and wall insulation	1.2 Thermal Performance - Non-Residential
5	Mechanical As-Built Roof Drawing	1.2 Thermal Performance - Non-Residential
6	Installed HVAC Datasheets	1.2 Thermal Performance - Non-Residential
7	As-Built Electrical Services Schematic Drawings	1.3 Metering (Residential)
8	As-Built Hydraulic Services Schematic	1.3 Metering (Residential)
9	Photo evidence of installed electricity and water meters	1.3 Metering (Residential)
10	Building User Guide Extract	1.4 Building Users Guide
11	Architectural Specification Extract	2.1 Potable Water Use Reduction
12	As-Built Drawings indicating location of rainwater tank	2.1 Potable Water Use Reduction
13	As-Built Hydraulic Schematic	2.1 Potable Water Use Reduction
14	Photo evidence of installed rainwater tank and sanitary fixtures	2.1 Potable Water Use Reduction
15	As-built Landscape plan highlighting the indigenous garden.	2.2 Water Efficient Landscaping
16	Photo evidence of the indigenous garden.	2.2 Water Efficient Landscaping
17	Photo evidence of waterless garden.	2.2 Water Efficient Landscaping
18	As built drawings & extracts	2.3 Building Systems Water Use Reduction
19	Mechanical Specifications	2.3 Building Systems Water Use Reduction
20	Photos of waterless heat rejection HVAC system installed.	2.3 Building Systems Water Use Reduction
21	Final Section J Report for Building Permit	3.1 Thermal Performance Rating - Non-Residential
22	Architectural For Construction documentation	3.1 Thermal Performance Rating - Non-Residential
23	Development NatHERS Group Certificate	3.2 Thermal Performance Rating - Residential
24	Individual Dwelling NatHERS Certificate	3.2 Thermal Performance Rating - Residential
25	Air Permibility Testing Results	3.3 Air Permeability
26	Photo evidence of air sealing.	3.3 Air Permeability
27	Photo evidence of final air tightness testing	3.3 Air Permeability
28	As built Mechanical documentation and/or plans	3.4 Carpark Ventilation
29	Photo evidence of ventilation system	3.4 Carpark Ventilation
30	Electrical drawings and/or Specifications	3.5 Lighting Sensors
31	Photo evidence of lighting sensors.	3.5 Lighting Sensors
32	As built Electrical services drawings / Specification.	3.6 Internal Lighting
33	Section J6 Report / Calculations.	3.6 Internal Lighting

No.	Submitted Document	SMP Initiative Reference
34	Photo evidence of installed photovoltaic array	3.7 Renewable Energy Generation
35	PV module datasheet.	3.7 Renewable Energy Generation
36	Photo of SMA Inverters.	3.7 Renewable Energy Generation
37	Photos of solar Domestic Hot Water (DHW) rooftop system.	3.7 Renewable Energy Generation
38	STORM Report	4.1 Stormwater Treatment
39	As built Landscape drawings highlighting construction detail	4.1 Stormwater Treatment
40	Photos of pipework for rainwater to toilets and irrigation.	4.1 Stormwater Treatment
41	Photo evidence of installed rainwater tank	4.1 Stormwater Treatment
42	Pervious pavers installed to visitor parking.	4.1 Stormwater Treatment
43	Pervious paving construction detail.	4.1 Stormwater Treatment
44	Daylight Modelling Report	5.1 Daylight Access – Multi-Residential & Non-Residential
45	Architectural for Construction Specification	5.1 Daylight Access – Multi-Residential & Non-Residential
46	Architectural for Construction walls and ceiling paint specification	5.1 Daylight Access – Multi-Residential & Non-Residential
47	Mechanical As-Built Issue	5.2 Ventilation - Non-Residential
48	Architectural Construction Issue.	5.3 Ventilation - Residential
49	Natural Ventilation to corridors	5.3 Ventilation - Residential
50	NatHERS Assessment Report / NatHERS Certificates	5.4 Thermal Comfort - Double Glazing
51	Architectural Specification/documentation	5.4 Thermal Comfort - Double Glazing
52	Architectural drawings for Construction Issue	5.5 Thermal Comfort - External Shading
53	Photo evidence of external shading devices installed.	5.5 Thermal Comfort - External Shading
54	Photo evidence of installed Big Ass Ceiling Fan	5.6 Thermal Comfort - Ceiling Fans – Non-Residential
55	Product Datasheet	5.6 Thermal Comfort - Ceiling Fans – Non-Residential
56	Electrical As-Built Issue drawings	5.7 Thermal Comfort - Ceiling Fans - Residential
57	Fanco Breeze AC datasheet.	5.7 Thermal Comfort - Ceiling Fans - Residential
58	Photos of paints, sealants, and adhesives used on site.	6.1 Paints and Sealants – Low Volatile Organic Compounds (VOC)
59	Contractor VOC Reporting Form	6.1 Paints and Sealants – Low Volatile Organic Compounds (VOC)
60	VOC datasheets	6.1 Paints and Sealants – Low Volatile Organic Compounds (VOC)
61	Environmental Materials Contractor Reporting Form	6.2 Timber – Certified (FSC or PEFC) Timber
62	Chain of custody certificate and photo.	6.2 Timber – Certified (FSC or PEFC) Timber
63	Photographic evidence of As-Built Bike Storage Area with secure access.	7.1 Bicycle Parking – Residential and Non-residential

No.	Submitted Document	SMP Initiative Reference
64	As built drawings highlighting the End-of-Trip facilities.	7.2 Bicycle Parking – End-of-Trip Facilities
65	Photos of staff lockers and shower.	7.2 Bicycle Parking – End-of-Trip Facilities
66	Photo evidence of the 32A charging station in use.	7.3 Electric Vehicle Infrastructure
67	Photo evidence of designated car share vehicle space provided as part of the development.	7.4 Car Share Scheme
68	As-Built Architectural drawing	8.1 Food and Garden Waste
69	Kitchen waste caddy photo	8.1 Food and Garden Waste
70	Photo evidence of the garden waste compost system.	8.1 Food and Garden Waste
71	Photo evidence of the waste management system	8.2 Convenience of Recycling
72	Photo evidence of central comingled recycling and general wastes collection area.	8.2 Convenience of Recycling
73	Operational waste management plan describing the waste management system.	8.2 Convenience of Recycling
74	Construction Waste Report provided by the waste contractor	8.3 Construction and Demolition waste
75	Photo of rooftop communal terrace with productive garden in construction.	9.1 Communal Spaces
76	Stamped Landscape plans/ documentation	9.2 Vegetation
77	Photo evidence of green roof as-built.	9.3 Green Roofs
78	Photo evidence of green wall installation into the ground floor lobby area.	9.4 Green Walls and Facades
79	Photo evidence of taps and floor wastes on balconies and courtyards	9.5 Private Open Space - Balcony/ Courtyard Ecology
80	Photo evidence of productive garden planters	9.6 Food Production - Residential
81	Final NatHERS Assessment Report	Appendix A
82	Final JV3 Modelling Report	Appendix B

Appendix A: Final NatHERS Assessment Report

Please see the following pages. [Entire NatHERS Report to be provided]

Appendix B: Final JV3 Modelling Report

Please see the following pages. [Entire NatHERS Report to be provided]