Figure 12 - Daylight Map – APT 5.05

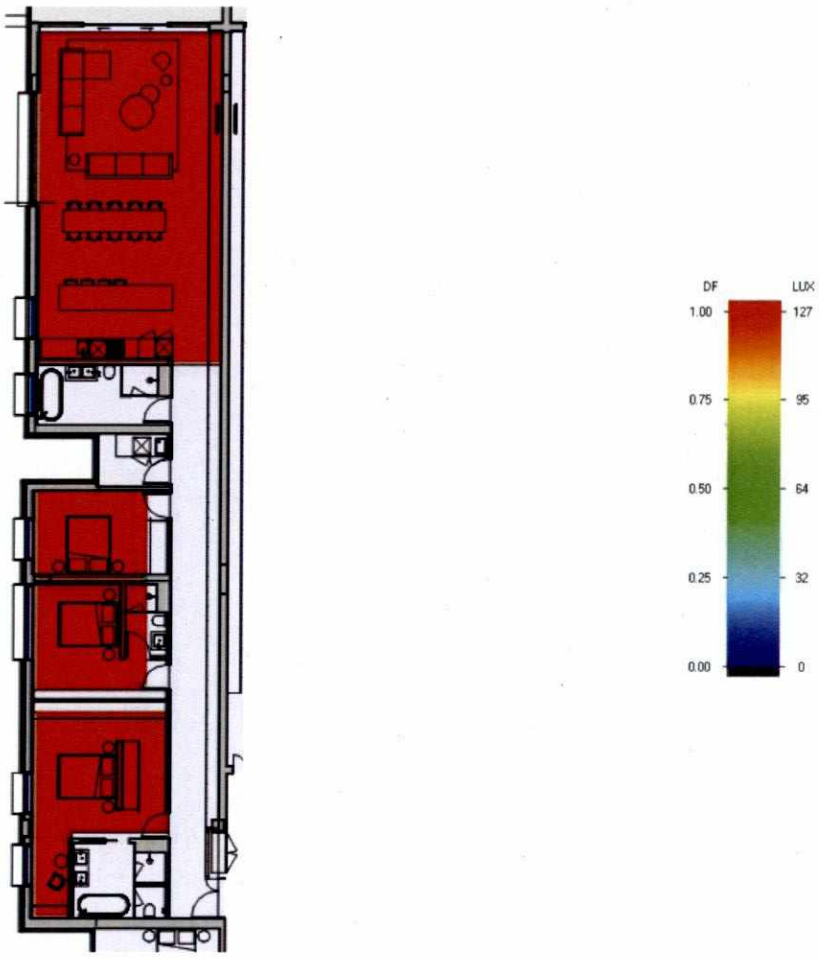


Figure 13 - Daylight Map – APT 6.02

Overall Estimated Building Results

Estimated % of apartment living areas compliant with BESS 1.1	81% (47 out of 58)	Compliant: 2.01-2.08; 3.01-3.10; 3.12; 3.14; 3.16; 4.01-4.10; 4.12; 4.14; 4.16; 5.01-5.09; 6.01-6.04.
Estimated % of bedrooms compliant with BESS 1.2	88% (111 out of 126)	Compliant: 2.01-2.03; 2.08; 2.10-2.13; 3.01-3.03; 3.08; 3.10-3.16; 4.01-4.03; 4.08; 4.10-4.16; 5.01-5.09; 6.01-6.04. 1 Bedroom Non-Compliant: 2.04-2.07; 2.09; 3.04-3.07; 3.09; 4.04-4.07; 4.09.

Conclusion

The development has been assessed and it has been determined that 81% of apartment living areas and 88% of apartment bedrooms will achieve the daylight factors as prescribed under BESS.

Appendix B: Renewable Energy

Inputs Solar PV

Peak Wattage of System	30.0 kWp
Azimuth	0 degrees
Inclination	30 degrees

Outputs Solar PV

Electricity Produced per Year	43,249	kWh
No. Panels Required	86	
Total Roof Area Required	215	sqm
Annual Carbon Savings	56,656	kg CO2

Economic Output

Cost of System	45,000	$
Annual Savings	8,650	$
Simple Payback	5	Years

Appendix C: WSUD Response

Site layout Plan

The following architectural mark-up illustrates the rainwater collection and impervious areas of the proposed development site.

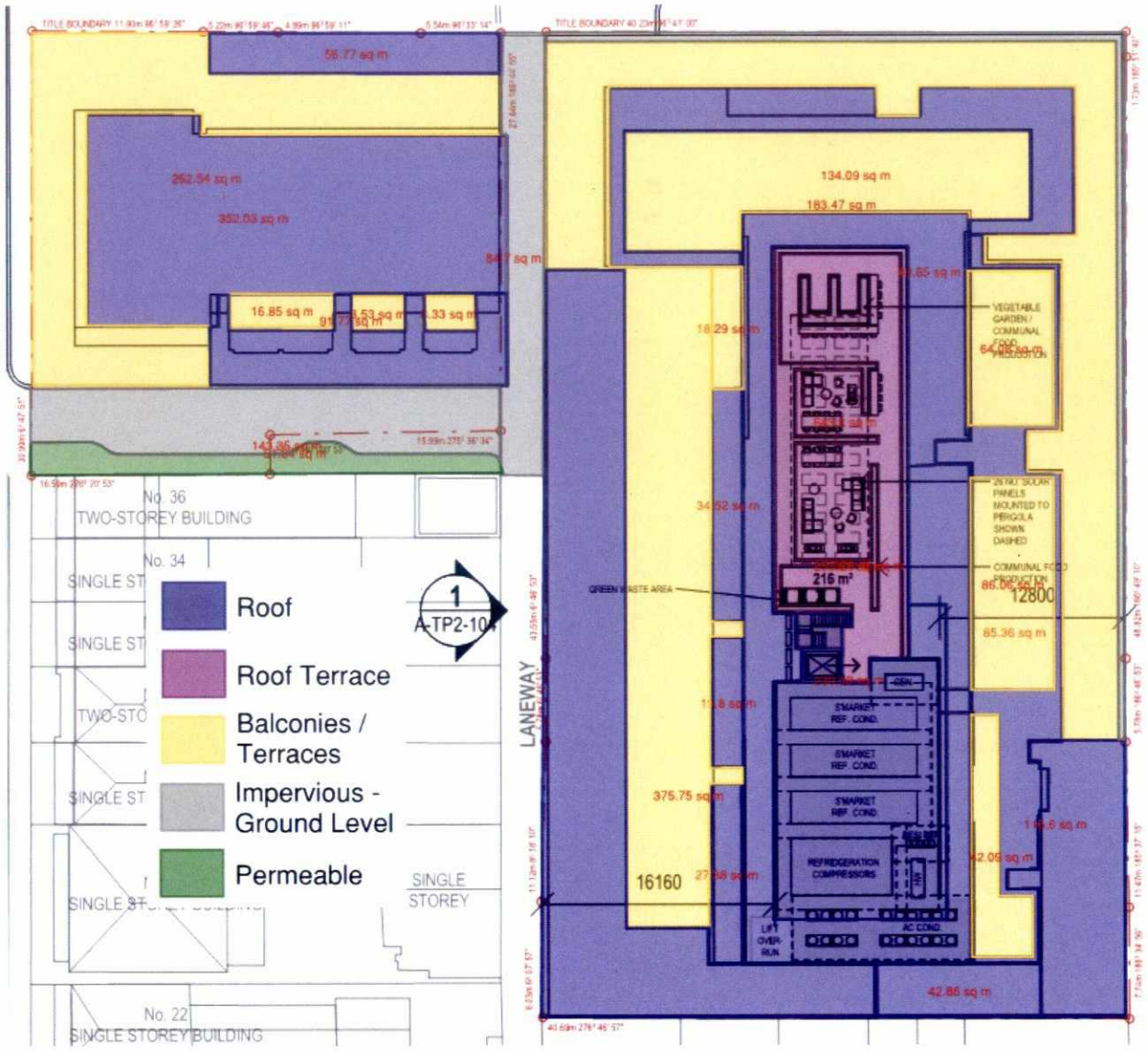


Figure 1 - Mark-up of water catchment and impervious areas

STORM Rating Report

A STORM rating of ≥100% can be achieved by implementing the following initiatives:

- Rainwater is to be collected from the roofs, rooftop terrace and balconies and directed into the 35,000 litre rainwater tank. All WC's are to be connected to the rainwater tank.

Melbourne Water has developed the Stormwater Treatment Objective- Relative Measure (STORM) Calculator as a method of simplifying the analysis of stormwater treatment methods. The STORM Calculator displays the amount of treatment that is required to meet best practice targets, using WSUD treatment measures.

The best practice standards have been set out in the Urban Stormwater Best Practice Environmental Management Guidelines (Victoria Stormwater Committee, 1999) for reduction in total suspended solids (TSS), total phosphorus (TP) and total nitrogen (TN) loads.

The STORM Result is provided below:

Melbourne Water. **STORM Rating Report**

TransactionID:	707273
Municipality:	YARRA
Rainfall Station:	YARRA
Address:	27-49A Best Street
	North Fitzroy
	VIC 3068
Assessor:	GIW
Development Type:	Residential - Mixed Use
Allotment Site (m2):	3,865.00
STORM Rating %:	100

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
Roof	1,896.00	Rainwater Tank	15,000.00	50	92.50	68.70
Roof Terrace	256.00	Rainwater Tank	10,000.00	25	170.00	82.00
Balconies	1,334.00	Rainwater Tank	15,000.00	50	118.60	69.60
Impervious - GF	278.00	None	0.00	0	0.00	0.00

WSUD Strategy

The development will include the provision of a 35,000 litre rainwater tank and associated pump in the basement garage. The rainwater tank is to be connected to all WC's.

Suitable filtration is to be introduced to ensure stormwater collected off trafficable areas meets the quality requirements

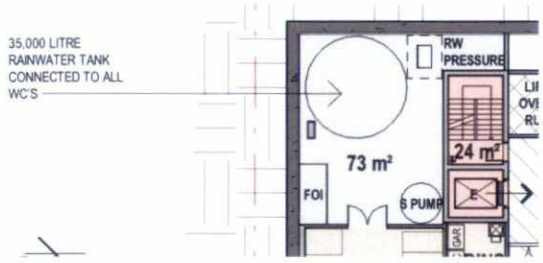


Figure 2 – Location Rainwater Tank

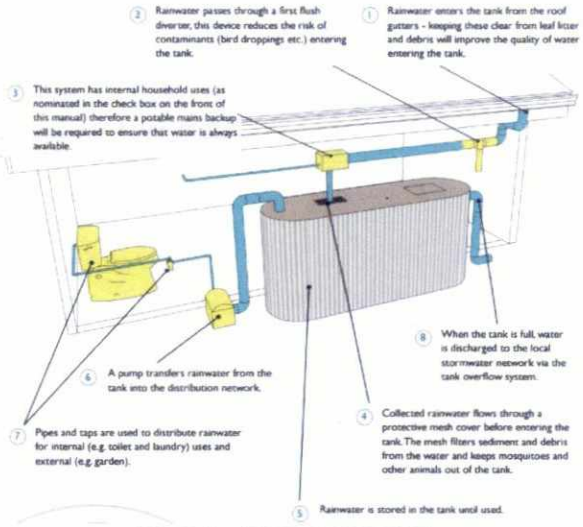


Figure 3 – Cross-section Tank (City of Port Phillip)

Rainwater Reuse

Inputs

Catchment Area	3,486 sqm
Number of Bedrooms	150
Bin Washout	No
Irrigation Area	0 sqm
Tank Capacity	35,000 Litre

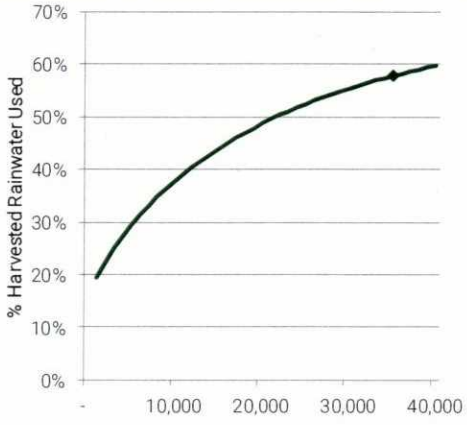
Outputs

% Served by Rainwater	72.3%
% Harvested Rainwater Used	59.3%
Total Potable Water Saved	791,489 Litre

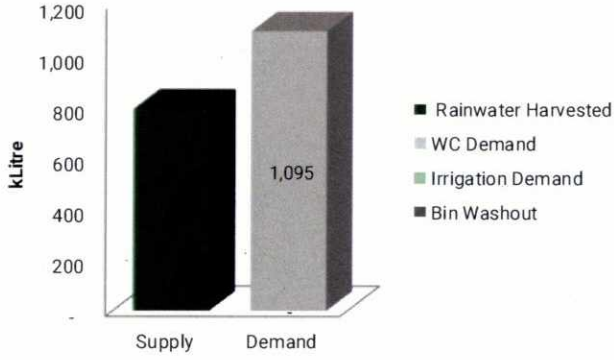
Rainwater Balance (Monthly Averages)

Month	Rainwater Harvested (L)	Irrigation Demand (L)	WC Demand (L)	Bin Washout (L)
Jan	59,296	0	93,000	0
Feb	58,063	0	84,000	0
Mar	57,153	0	93,000	0
Apr	63,045	0	90,000	0
May	64,046	0	93,000	0
Jun	70,943	0	90,000	0
Jul	59,917	0	93,000	0
Aug	74,389	0	93,000	0
Sep	75,033	0	90,000	0
Oct	68,960	0	93,000	0
Nov	78,240	0	90,000	0
Dec	62,145	0	93,000	0
Total	791,228	0	1,095,000	0
Equivalent STORM tool		0		0

Tank Sizing



Supply-Demand



Site Management Statement

Prevention of litter, sediments and pollution entering the stormwater system in the construction phase is to be addressed through introduction of the following initiatives:

- Buffer strips to pervert stormwater runoff.
- Gravel sausage filters at stormwater inlets to prevent silt, mud or any other site contaminant from entering the stormwater system.
- Silt fences under grates at surface entry inlets to prevent sediment from entering the stormwater system.
- Temporary rumble grids to vibrate mud and dirt off vehicles prior to leaving the site.
- The site is to be kept clean from any loose rubbish or rubble.
- Introduction of offsite construction for building elements where deemed appropriate.

The builder is to include these initiatives in the construction management plan and address these during site induction of relevant contractors.

Maintenance Program

The following maintenance requirements are to be programmed to ensure the rainwater tank operates effectively:

Item	Description	Maintenance Interval
Gutters and downpipes	Eave and box gutters are to be inspected and cleaned to prevent large debris from being washed into rainwater tank.	3 monthly
First flush system (as applicable)	Inspect and clean excess sediment from diverter chamber to prevent blockages.	3 monthly
Tank contents	Siphon the tank to inspect contents. If sludge is present, a plumber will be required to drain tank contents and clean the tank.	2 to 3 years
Tank structure	Inspect tank externally for leaks	Yearly
Pump system	Inspect pump wiring, plumbing and check for smooth operation.	6 monthly
Plumbing	Plumbing and fixtures connected to the rainwater tank is to be inspected for leaks.	Yearly

Appendix D: BESS Assessment

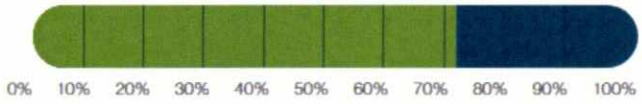
27-49A Best St, Fitzroy North, Fitzroy North 3068 Fitzroy North

Site area: 3865 m^2 · Building Floor Area: 11557 m^2 ·
Date of Assessment: 19 Dec 2018 · Version: V3, 1.5.1-B157 ·
Applicant: info@giw.com.au

Project number
18060
Published
http://bess.net.au/projects/18060

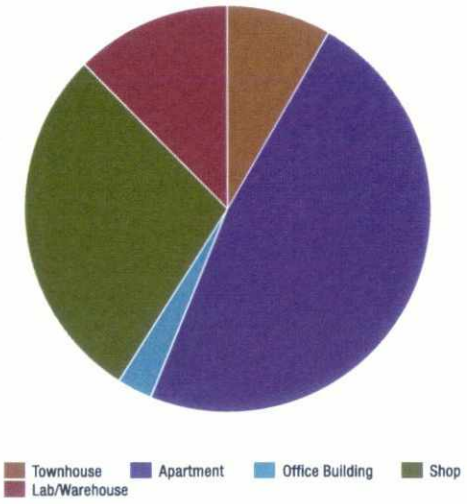
Your BESS score is

+ 70%



% of Total	Category	Score	Pass
2 %	Management	53 %	
6 %	Water	75 %	✔
17 %	Energy	63 %	✔
13 %	Stormwater	100 %	✔
8 %	IEQ	50 %	✔
7 %	Transport	78 %	
3 %	Waste	66 %	
2 %	Urban Ecology	53 %	
8 %	Innovation	90 %	

Building Composition



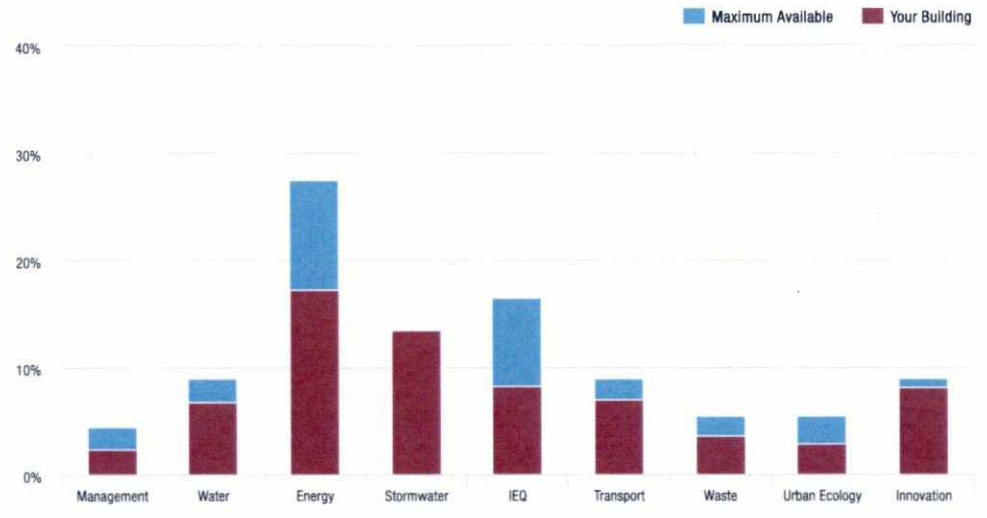
Dwellings

Type	Name	Quantity	Area
Townhouse	TH01-TH08	8	120 m^2
Apartment	APT Type 1A	6	68 m^2
Apartment	APT Type 2A	4	75 m^2
Apartment	APT Type 2B	8	87 m^2
Apartment	APT Type 2C	3	79 m^2
Apartment	APT Type 2D	3	70 m^2
Apartment	APT Type 2E	3	79 m^2
Apartment	APT Type 2F	6	102 m^2
Apartment	APT Type 2G	3	86 m^2
Apartment	APT Type 2H	2	72 m^2
Apartment	APT Type 2I	1	101 m^2
Apartment	APT Type 2J	1	89 m^2
Apartment	APT Type 2K	1	92 m^2
Apartment	APT Type 3A	6	121 m^2
Apartment	APT Type 3B	2	106 m^2
Apartment	APT Type 3C	2	97 m^2
Apartment	APT Type 3D	1	116 m^2
Apartment	APT Type 3E	1	118 m^2
Apartment	APT Type 3F	1	122 m^2
Apartment	APT Type 3G	1	215 m^2
Apartment	APT Type 3H	1	105 m^2
Apartment	APT Type 3I	1	249 m^2
Apartment	APT Type 3J	1	92 m^2

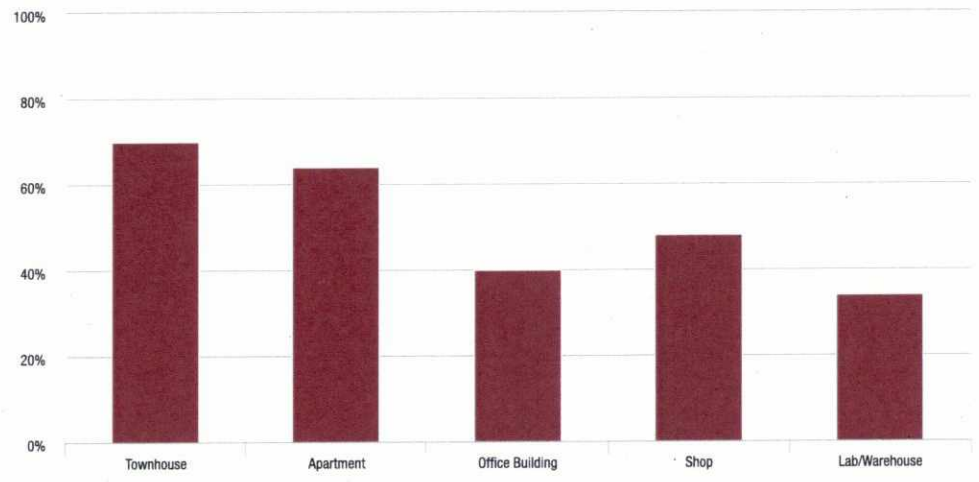
Non-Residential Spaces

Office Building	324 m^2
Shop	3,304 m^2
Lab/Warehouse	1,436 m^2

How did this Development Perform in each Environmental Category?



How does each Dwelling or Non-Residential Space type perform?



Sustainable design commitments by category

The sustainable design commitments for this project are listed below. These are to be incorporated into the design documentation and subsequently implemented.

Management

53% - contributing 2% to overall score

Credit	Disabled	Scoped out	Score
Management 2.2 Thermal Performance Modelling - Multi-Dwelling Residential			100 %
Management 2.4 Thermal Performance Modelling - Non-Residential			100 %
Management 3.1 Metering			100 %
Management 3.2 Metering			100 %
Management 3.3 Metering			100 %
Management 4.1 Building Users Guide			100 %

Management 2.2 Thermal Performance Modelling - Multi-Dwelling Residential 100%

Score Contribution	This credit contributes 13% towards this section's score.
Aim	To encourage and recognise developments that have used modelling to inform passive design at the early design stage

Questions

Have preliminary NatHERS ratings been undertaken for all thermally unique dwellings?

Townhouse	Apartment
Yes	Yes

Management 2.4 Thermal Performance Modelling - Non-Residential 100%

Score Contribution	This credit contributes 5% towards this section's score.
Aim	To encourage and recognise developments that have used modelling to inform passive design at the early design stage
Notes	Section J glazing assessment has been undertaken, but does not meet 10% reduction. Energy efficiency targets will be achieved through application of JV3 energy modelling.

Questions

Has a preliminary Section J glazing assessment been undertaken?

Office Building	Shop	Lab/Warehouse
Yes	Yes	Yes

Management 3.1 Metering 100%

Score Contribution	This credit contributes 5% towards this section's score.
Aim	To provide building users with information that allows monitoring of energy and water consumption

Questions

Have utility meters been provided for all individual dwellings?

Apartment
Yes

Management 3.2 Metering 100%

Score Contribution	This credit contributes 5% towards this section's score.
Aim	To provide building users with information that allows monitoring of energy and water consumption

Questions

Have utility meters been provided for all individual commercial tenants?

Office Building	Shop	Lab/Warehouse
Yes	Yes	Yes

Management 3.3 Metering 100%

Score Contribution	This credit contributes 11% towards this section's score.
Aim	To provide building users with information that allows monitoring of energy and water consumption

Questions

Have all major common area services been separately submetered?

Apartment	Office Building	Shop	Lab/Warehouse
Yes	Yes	Yes	Yes

Management 4.1 Building Users Guide 100%

Score Contribution	This credit contributes 12% towards this section's score.
Aim	To encourage and recognise initiatives that will help building users to use the building efficiently

Questions

Will a building users guide be produced and issued to occupants?

Project wide
Yes

Water

75% - contributing 6% to overall score

Credit	Disabled	Scoped out	Score
Water 1.1 Potable Water Use Reduction (Interior Uses)			50 %
Water 2.1 Rainwater Collection & Reuse (Additional Uses)			100 %
Water 3.1 Water Efficient Landscaping			100 %
Water 4.1 Building Systems Water Use Reduction			100 %

Water Approachs

What approach do you want to use Water?	Use the built in calculation tools

Project Water Profile Questions

Are you installing a rainwater tank?	Yes

Water fixtures, fittings and connections

	Office Building	Shop	Lab/Warehouse
Showerhead	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)	Scope out
Bath	Scope out	Scope out	Scope out
Kitchen Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 5 Star WELS rating	Scope out	Scope out
WC	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Washing Machine Water Efficiency	Scope out	> 3 Star WELS rating	Scope out
Rainwater connected to: Toilets	Yes	Yes	Yes

	TH01-TH08	APT Type 1A	APT Type 2A
Showerhead	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)
Bath	Medium Sized Contemporary Bath	Scope out	Scope out
Kitchen Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
WC	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Washing Machine Water Efficiency	> 3 Star WELS rating	> 3 Star WELS rating	> 3 Star WELS rating
Rainwater connected to: Toilets	Yes	Yes	Yes

	APT Type 2B	APT Type 2C	APT Type 2D
Showerhead	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)
Bath	Scope out	Scope out	Scope out
Kitchen Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating

	APT Type 2B	APT Type 2C	APT Type 2D
WC	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Washing Machine Water Efficiency	> 3 Star WELS rating	> 3 Star WELS rating	> 3 Star WELS rating
Rainwater connected to: Toilets	Yes	Yes	Yes

	APT Type 2E	APT Type 2F	APT Type 2G
Showerhead	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)
Bath	Scope out	Scope out	Scope out
Kitchen Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
WC	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Washing Machine Water Efficiency	> 3 Star WELS rating	> 3 Star WELS rating	> 3 Star WELS rating
Rainwater connected to: Toilets	Yes	Yes	Yes

	APT Type 2H	APT Type 2I	APT Type 2J
Showerhead	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)
Bath	Scope out	Scope out	Scope out
Kitchen Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
WC	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Washing Machine Water Efficiency	> 3 Star WELS rating	> 3 Star WELS rating	> 3 Star WELS rating
Rainwater connected to: Toilets	Yes	Yes	Yes

	APT Type 2K	APT Type 3A	APT Type 3B
Showerhead	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)
Bath	Scope out	Scope out	Scope out
Kitchen Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
WC	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Washing Machine Water Efficiency	> 3 Star WELS rating	> 3 Star WELS rating	> 3 Star WELS rating
Rainwater connected to: Toilets	Yes	Yes	Yes

	APT Type 3C	APT Type 3D	APT Type 3E
Showerhead	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)
Bath	Scope out	Scope out	Scope out
Kitchen Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
WC	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Washing Machine Water Efficiency	> 3 Star WELS rating	> 3 Star WELS rating	> 3 Star WELS rating
Rainwater connected to: Toilets	Yes	Yes	Yes

	APT Type 3F	APT Type 3G	APT Type 3H

	APT Type 3F	APT Type 3G	APT Type 3H
Showerhead	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)
Bath	Scope out	Medium Sized Contemporary Bath	Medium Sized Contemporary Bath
Kitchen Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
WC	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Washing Machine Water Efficiency	> 3 Star WELS rating	> 3 Star WELS rating	> 3 Star WELS rating
Rainwater connected to: Toilets	Yes	Yes	Yes

	APT Type 3I	APT Type 3J
Showerhead	3 Star WELS (> 6.0 but <= 7.5)	3 Star WELS (> 6.0 but <= 7.5)
Bath	Medium Sized Contemporary Bath	Scope out
Kitchen Taps	> 5 Star WELS rating	> 5 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 5 Star WELS rating	> 5 Star WELS rating
WC	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	> 5 Star WELS rating	> 5 Star WELS rating
Washing Machine Water Efficiency	> 3 Star WELS rating	> 3 Star WELS rating
Rainwater connected to: Toilets	Yes	Yes

Rainwater Tanks

	Tank 1
What is the total roof area connected to the rainwater tank? Square Metres	3486.0
Tank Size Litres	35000.0

Water 1.1 Potable Water Use Reduction (Interior Uses) 50%

Score Contribution	This credit contributes 50% towards this section's score.
Aim	Water 1.1 Potable water use reduction (interior uses) What is the reduction in total water use due to efficient fixtures, appliances, and rainwater use? To achieve points in this credit there must be >25% potable water reduction. You are using the built in calculation tools. This credit is calculated from information you have entered above.
Criteria	Percentage reduction in potable water use

Questions

Percentage Achieved ? Percentage %

Project wide

%

Calculations

Annual Water Consumption (kL) (Reference)

Project wide

20266

Annual Water Consumption (kL) (Proposed)

Project wide

14360

% Reduction in Potable Water Consumption Percentage %

Project wide

29 %

Water 2.1 Rainwater Collection & Reuse (Additional Uses) 100%

Score Contribution	This credit contributes 25% towards this section's score.
Aim	What is the additional reduction in potable (mains) water use due to rainwater harvesting? Additional water uses for rainwater include non-potable demands such as irrigation, pools, commercial process uses and taps for washdown. Note: tank water will only be available for additional uses if it not required for internal uses. If the property uses an alternative water source, the alternative water source is deemed to meet 90% of additional non-potable water use requirements. You are using the built in calculation tools. This credit is calculated from information you have entered above in the rainwater tanks section.
Criteria	What is the additional reduction in potable (mains) water use due to using rainwater or an alternative water source?

Questions

Percentage Achieved ? Percentage %

Project wide

%

Calculations

Rainwater collection & reuse (additional uses) Percentage %

Project wide

100 %

Water 3.1 Water Efficient Landscaping 100%

Score Contribution	This credit contributes 12% towards this section's score.
Aim	Are water efficiency principles used for landscaped areas? This includes low water use plant selection (e.g. xeriscaping) and specifying water efficient irrigation (e.g. drip irrigation with timers and rain sensors). Note: food producing landscape areas and irrigation areas connected to rainwater or an alternative water source are excluded from this section.

Questions

Will water efficient landscaping be installed?

Project wide

Yes

Water 4.1 Building Systems Water Use Reduction 100%

Score Contribution	This credit contributes 12% towards this section's score.
Aim	Will the project minimise water use for building systems such as evaporative cooling and fire testing systems?

Questions

Where applicable, have measures been taken to reduce potable water consumption by >80% in the buildings air-conditioning chillers and when testing fire safety systems?

Project wide

	Yes

Energy

63% - contributing 17% to overall score

Credit	Disabled	Scoped out	Score
Energy 1.1 Thermal Performance Rating - Non-Residential			12 %
Energy 1.2 Thermal Performance Rating - Residential			49 %
Energy 2.1 Greenhouse Gas Emissions			100 %
Energy 2.3 Electricity Consumption			100 %
Energy 2.4 Gas Consumption			84 %
Energy 2.5 Wood Consumption			N/A
Energy 3.1 Carpark Ventilation			100 %
Energy 3.2 Hot Water			84 %
Energy 3.3 External Lighting			100 %
Energy 3.4 Clothes Drying			100 %
Energy 3.5 Internal Lighting - Residential Single Dwelling			100 %
Energy 3.6 Internal Lighting - Residential Multiple Dwellings			100 %
Energy 3.7 Internal Lighting - Non-Residential			100 %
Energy 4.1 Combined Heat and Power (cogeneration / trigeneration)			N/A
Energy 4.2 Renewable Energy Systems - Solar			28 %

Dwellings Energy Approachs

What approach do you want to use for Energy?	Use the built in calculation tools

Project Energy Profile Questions

Are you installing a solar photovoltaic (PV) system?	Yes
Gas Supply	Natural Gas

Dwelling Energy Profiles

	TH01-TH08	APT Type 1A	APT Type 2A
Below the floor is	Ground or Carpark	Another Occupancy	Another Occupancy
Above the ceiling is	Another Occupancy	Another Occupancy	Another Occupancy
Exposed sides	2	1	1
NatHERS Annual Energy Loads - Heat MJ/sqm	58.3	58.3	58.3
NatHERS Annual Energy Loads - Cool MJ/sqm	19.3	19.3	19.3
NatHERS star rating	7.2	7.2	7.2
Type of Heating System	D Reverse cycle space	D Reverse cycle space	D Reverse cycle space
Heating System Efficiency	3 Star	3 Star	3 Star
Type of Cooling System	Refrigerative space	Refrigerative space	Refrigerative space
Cooling System Efficiency	3 Stars	3 Stars	3 Stars
Type of Hot Water System	H Gas Storage 7 star	H Gas Storage 7 star	H Gas Storage 7 star
Clothes Line	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain
Clothes Dryer	H Clothes dryer 3 stars	H Clothes dryer 3 stars	H Clothes dryer 3 stars

	APT Type 2B	APT Type 2C	APT Type 2D
Below the floor is	Another Occupancy	Another Occupancy	Another Occupancy
Above the ceiling is	Another Occupancy	Another Occupancy	Another Occupancy
Exposed sides	1	1	1
NatHERS Annual Energy Loads - Heat MJ/sqm	58.3	58.3	58.3
NatHERS Annual Energy Loads - Cool MJ/sqm	19.3	19.3	19.3
NatHERS star rating	7.2	7.2	7.2
Type of Heating System	D Reverse cycle space	D Reverse cycle space	D Reverse cycle space
Heating System Efficiency	3 Star	3 Star	3 Star
Type of Cooling System	Refrigerative space	Refrigerative space	Refrigerative space
Cooling System Efficiency	3 Stars	3 Stars	3 Stars
Type of Hot Water System	H Gas Storage 7 star	H Gas Storage 7 star	H Gas Storage 7 star
Clothes Line	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain
Clothes Dryer	H Clothes dryer 3 stars	H Clothes dryer 3 stars	H Clothes dryer 3 stars

	APT Type 2E	APT Type 2F	APT Type 2G
Below the floor is	Another Occupancy	Another Occupancy	Another Occupancy
Above the ceiling is	Another Occupancy	Another Occupancy	Another Occupancy
Exposed sides	1	1	1
NatHERS Annual Energy Loads - Heat MJ/sqm	58.3	58.3	58.3
NatHERS Annual Energy Loads - Cool MJ/sqm	19.3	19.3	19.3
NatHERS star rating	7.2	7.2	7.2
Type of Heating System	D Reverse cycle space	D Reverse cycle space	D Reverse cycle space
Heating System Efficiency	3 Star	3 Star	3 Star
Type of Cooling System	Refrigerative space	Refrigerative space	Refrigerative space
Cooling System Efficiency	3 Stars	3 Stars	3 Stars
Type of Hot Water System	H Gas Storage 7 star	H Gas Storage 7 star	H Gas Storage 7 star
Clothes Line	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain
Clothes Dryer	H Clothes dryer 3 stars	H Clothes dryer 3 stars	H Clothes dryer 3 stars

	APT Type 2H	APT Type 2I	APT Type 2J
Below the floor is	Another Occupancy	Another Occupancy	Another Occupancy
Above the ceiling is	Another Occupancy	Another Occupancy	Another Occupancy
Exposed sides	1	1	1
NatHERS Annual Energy Loads - Heat MJ/sqm	58.3	58.3	58.3
NatHERS Annual Energy Loads - Cool MJ/sqm	19.3	19.3	19.3
NatHERS star rating	7.2	7.2	7.2
Type of Heating System	D Reverse cycle space	D Reverse cycle space	D Reverse cycle space
Heating System Efficiency	3 Star	3 Star	3 Star
Type of Cooling System	Refrigerative space	Refrigerative space	Refrigerative space
Cooling System Efficiency	3 Stars	3 Stars	3 Stars
Type of Hot Water System	H Gas Storage 7 star	H Gas Storage 7 star	H Gas Storage 7 star
Clothes Line	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain
Clothes Dryer	H Clothes dryer 3 stars	H Clothes dryer 3 stars	H Clothes dryer 3 stars

	APT Type 2K	APT Type 3A	APT Type 3B
Below the floor is	Another Occupancy	Another Occupancy	Another Occupancy
Above the ceiling is	Another Occupancy	Another Occupancy	Another Occupancy
Exposed sides	1	1	1
NatHERS Annual Energy Loads - Heat MJ/sqm	58.3	58.3	58.3
NatHERS Annual Energy Loads - Cool MJ/sqm	19.3	19.3	19.3
NatHERS star rating	7.2	7.2	7.2
Type of Heating System	D Reverse cycle space	D Reverse cycle space	D Reverse cycle space
Heating System Efficiency	3 Star	3 Star	3 Star
Type of Cooling System	Refrigerative space	Refrigerative space	Refrigerative space
Cooling System Efficiency	3 Stars	3 Stars	3 Stars
Type of Hot Water System	H Gas Storage 7 star	H Gas Storage 7 star	H Gas Storage 7 star
Clothes Line	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain
Clothes Dryer	H Clothes dryer 3 stars	H Clothes dryer 3 stars	H Clothes dryer 3 stars

	APT Type 3C	APT Type 3D	APT Type 3E
Below the floor is	Another Occupancy	Another Occupancy	Another Occupancy
Above the ceiling is	Another Occupancy	Another Occupancy	Another Occupancy
Exposed sides	1	1	1
NatHERS Annual Energy Loads - Heat MJ/sqm	58.3	58.3	58.3
NatHERS Annual Energy Loads - Cool MJ/sqm	19.3	19.3	19.3
NatHERS star rating	7.2	7.2	7.2
Type of Heating System	D Reverse cycle space	D Reverse cycle space	D Reverse cycle space
Heating System Efficiency	3 Star	3 Star	3 Star
Type of Cooling System	Refrigerative space	Refrigerative space	Refrigerative space
Cooling System Efficiency	3 Stars	3 Stars	3 Stars
Type of Hot Water System	H Gas Storage 7 star	H Gas Storage 7 star	H Gas Storage 7 star
Clothes Line	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain
Clothes Dryer	H Clothes dryer 3 stars	H Clothes dryer 3 stars	H Clothes dryer 3 stars

	APT Type 3F	APT Type 3G	APT Type 3H
Below the floor is	Another Occupancy	Another Occupancy	Another Occupancy
Above the ceiling is	Another Occupancy	Another Occupancy	Another Occupancy
Exposed sides	1	1	1
NatHERS Annual Energy Loads - Heat MJ/sqm	58.3	58.3	58.3
NatHERS Annual Energy Loads - Cool MJ/sqm	19.3	19.3	19.3
NatHERS star rating	7.2	7.2	7.2
Type of Heating System	D Reverse cycle space	D Reverse cycle space	D Reverse cycle space
Heating System Efficiency	3 Star	3 Star	3 Star
Type of Cooling System	Refrigerative space	Refrigerative space	Refrigerative space
Cooling System Efficiency	3 Stars	3 Stars	3 Stars
Type of Hot Water System	H Gas Storage 7 star	H Gas Storage 7 star	H Gas Storage 7 star
Clothes Line	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain
Clothes Dryer	H Clothes dryer 3 stars	H Clothes dryer 3 stars	H Clothes dryer 3 stars

	APT Type 3I	APT Type 3J
Below the floor is	Another Occupancy	Another Occupancy
Above the ceiling is	Another Occupancy	Another Occupancy
Exposed sides	1	1
NatHERS Annual Energy Loads - Heat MJ/sqm	58.3	58.3
NatHERS Annual Energy Loads - Cool MJ/sqm	19.3	19.3
NatHERS star rating	7.2	7.2
Type of Heating System	D Reverse cycle space	D Reverse cycle space
Heating System Efficiency	3 Star	3 Star
Type of Cooling System	Refrigerative space	Refrigerative space
Cooling System Efficiency	3 Stars	3 Stars
Type of Hot Water System	H Gas Storage 7 star	H Gas Storage 7 star
Clothes Line	C Private outdoor clothesline protected from rain	C Private outdoor clothesline protected from rain
Clothes Dryer	H Clothes dryer 3 stars	H Clothes dryer 3 stars

Non-Residential Spaces Energy Profiles

	Office Building	Shop	Lab/Warehouse
Heating, Cooling & Comfort Ventilation - Electricity - baseline kWh	10000.0	10000.0	10000.0
Heating, Cooling & Comfort Ventilation - Electricity - proposed kWh	8999.0	8999.0	8999.0
Hot Water - Gas - baseline MJ	-	10000.0	-
Hot Water - Gas - proposed MJ	-	8999.0	-

Solar Photovoltaic systems

	PV 1
System Size (lesser of inverter and panel capacity) kW peak	30.0
Orientation (which way is the system facing)?	North
Inclination (angle from horizontal) Angle (degrees)	30.0
Which Building Class does this apply to?	Shop

Energy 1.1 Thermal Performance Rating - Non-Residential 12%

Score Contribution	This credit contributes 16% towards this section's score.
Aim	Reduce reliance on mechanical systems to achieve thermal comfort in summer and winter - improving comfort, reducing greenhouse gas emissions, energy consumption, and maintenance costs.
Criteria	What is the % reduction in heating and cooling energy consumption against the reference case (NCC 2016 BCA Volume 1 Section J)

Questions

Criteria Achieved ?

Shop

Yes

Calculations

Total Improvement Percentage %

Office Building	Shop	Lab/Warehouse
10 %	10 %	10 %

Energy 1.2 Thermal Performance Rating - Residential 49%

Score Contribution	This credit contributes 15% towards this section's score.
Aim	Reduce reliance on mechanical systems to achieve thermal comfort in summer and winter - improving comfort, reducing greenhouse gas emissions, energy consumption, and maintenance costs.
Criteria	What is the average NatHERS rating?

Questions

NATHERS Rating ? Stars

Townhouse	Apartment
6.5	6.5

Calculations

Average NATHERS Rating (Weighted) Stars

Townhouse	Apartment
7.2	7.2

Energy 2.1 Greenhouse Gas Emissions 100%

Score Contribution	This credit contributes 9% towards this section's score.
Aim	Reduce the building's greenhouse gas emissions
Criteria	Are greenhouse gas emissions >10% below the benchmark

Questions

Criteria Achieved ?

Calculations

Reference Building with Reference Services (BCA only) kg CO2

Townhouse	Apartment	Office Building	Shop	Lab/Warehouse
55495.9	329926.0	11900.0	12413.3	11900.0

Proposed Building with Proposed Services (Actual Building) kg CO2

Townhouse	Apartment	Office Building	Shop	Lab/Warehouse
15816.9	92395.8	10708.8	11170.7	10708.8

% Reduction in GHG Emissions Percentage %

Townhouse	Apartment	Office Building	Shop	Lab/Warehouse
71 %	71 %	10 %	10 %	10 %

Energy 2.3 Electricity Consumption 100%

Score Contribution	This credit contributes 9% towards this section's score.
Aim	Reduce consumption of electricity
Criteria	Is the annual electricity consumption >10% below the benchmark

Questions

Criteria Achieved ?

Calculations

Reference kWh

Townhouse	Apartment	Office Building	Shop	Lab/Warehouse
40771.7	241615.6	10000.0	10000.0	10000.0

Proposed kWh

Townhouse	Apartment	Office Building	Shop	Lab/Warehouse
9587.2	56596.1	8999.0	8999.0	8999.0

Improvement Percentage %

Townhouse	Apartment	Office Building	Shop	Lab/Warehouse
76 %	76 %	10 %	10 %	10 %

Energy 2.4 Gas Consumption 84%

Score Contribution	This credit contributes 9% towards this section's score.
Aim	Reduce consumption of electricity
Criteria	Is the annual gas consumption >10% below the benchmark?

Questions

Criteria Achieved ?

Calculations

Reference MJ

Townhouse	Apartment	Shop
135936.5	826094.3	10000.0

Proposed MJ

Townhouse	Apartment	Shop
85876.6	487949.5	8999.0

Improvement Percentage %

Townhouse	Apartment	Shop
36 %	40 %	10 %

Energy 2.5 Wood Consumption N/A

This credit was scoped out: No wood heating system present

Aim	Reduce consumption of wood
Criteria	Is the annual wood consumption >10% below the benchmark?

Energy 3.1 Carpark Ventilation 100%

Score Contribution	This credit contributes 9% towards this section's score.

Questions

If you have a basement carpark, is it either: (a) fully naturally ventilated (no mechanical ventilation system), or (b) use Carbon Monoxide monitoring to control the operation and speed of the ventilation fans

Project wide
Yes

Energy 3.2 Hot Water 84%

Score Contribution	This credit contributes 4% towards this section's score.
Criteria	Does the hot water system use >10% less energy (gas and electricity) than the reference case?

Questions

Criteria Achieved ?

Calculations

Reference MJ

Townhouse	Apartment	Shop
37760.2	229470.6	2777.8

Proposed MJ

Townhouse	Apartment	Shop
23854.6	135541.5	2499.7

Improvement Percentage %

Townhouse	Apartment	Shop
36 %	40 %	10 %

Energy 3.3 External Lighting 100%

Score Contribution	This credit contributes 0% towards this section's score.

Questions

Is the external lighting controlled by a motion detector?

Townhouse
Yes

Energy 3.4 Clothes Drying 100%

Score Contribution	This credit contributes 2% towards this section's score.
Criteria	Does the combination of clothes lines and efficient dryers reduce energy (gas+electricity) consumption by more than 10%?

Questions

Criteria Achieved ?

Calculations

Reference kWh

Townhouse	Apartment
4866.1	30769.2

Proposed kWh

Townhouse	Apartment
350.5	2216.4

Improvement Percentage %

Townhouse	Apartment
92 %	92 %

Energy 3.5 Internal Lighting - Residential Single Dwelling 100%

Score Contribution	This credit contributes 0% towards this section's score.
Aim	Reduce energy consumption associated with internal lighting

Questions

Does the development achieve a maximum illumination power density of 4W/sqm or less?

Townhouse

Yes

Energy 3.6 Internal Lighting - Residential Multiple Dwellings 100%

Score Contribution	This credit contributes 4% towards this section's score.
Aim	Reduce energy consumption associated with internal lighting

Questions

Is the maximum illumination power density (W/m2) in at least 90% of the relevant Building Class at least 20% lower than required by Table J6.2a of the NCC BCA (2013) Volume 1 Section J (Class 2 to 9) and clause 3.12.5.5 NCC BCA (2013) Volume 2 Section J (Class 1 and 10)

Apartment

Yes

Energy 3.7 Internal Lighting - Non-Residential 100%

Score Contribution	This credit contributes 4% towards this section's score.
Aim	Reduce energy consumption associated with internal lighting

Questions

Is the maximum illumination power density (W/m2) in at least 90% of the relevant building class at least 20% lower than required by Table J6.2a of the NCC 2016 BCA Volume 1 Section J (Class 2 to 9)

Office Building	Shop	Lab/Warehouse
Yes	Yes	Yes

Energy 4.1 Combined Heat and Power (cogeneration / trigeneration) N/A

This credit was scoped out: No cogeneration or trigeneration system in use.

This credit was disabled: No cogeneration or trigeneration system in use.

Aim	Reduce energy consumption
Criteria	Does the CHP system reduce the class of buildings GHG emissions by more than 25%?

Energy 4.2 Renewable Energy Systems - Solar 28%

Score Contribution	This credit contributes 4% towards this section's score.
Aim	To encourage the installation of on-site renewable energy generation
Criteria	Does the solar power system provide 5% of the developments estimated energy consumption?

Questions

Criteria Achieved ?

Stormwater 100% - contributing 13% to overall score

Credit	Disabled	Scoped out	Score
Stormwater 1.1 Stormwater Treatment			100 %

Which stormwater modelling are you using?	Melbourne Water STORM tool

Stormwater 1.1 Stormwater Treatment 100%

Score Contribution	This credit contributes 100% towards this section's score.
Aim	To achieve best practice stormwater quality objectives through reduction of pollutant load (suspended solids, nitrogen and phosphorus)
Criteria	Has best practice stormwater management been demonstrated?

Questions

STORM score achieved

Project wide

100

Flow (ML/year) % Reduction

Project wide

-

Total Suspended Solids (kg/year) % Reduction

Project wide

-

Total Phosphorus (kg/year) % Reduction

Project wide

-

Total Nitrogen (kg/year) % Reduction

Project wide

-

Calculations

Min STORM Score

Project wide

100

IEQ

50% - contributing 8% to overall score

Credit	Disabled	Scoped out	Score
IEQ 1.1 Daylight Access - Living Areas			66 %
IEQ 1.2 Daylight Access - Bedrooms			66 %
IEQ 1.4 Daylight Access - Non-Residential			66 %
IEQ 1.5 Daylight Access - Minimal Internal Bedrooms			100 %
IEQ 3.1 Thermal comfort - Double Glazing			100 %
IEQ 3.3 Thermal Comfort - Orientation			100 %

Are all living areas and bedrooms less than 8m deep (5m if south facing)?	Yes
Do all living areas and bedrooms have a floor-to-ceiling height of at least 2.7m?	Yes
Does all glazing to living areas achieve at least 60% Visible Light Transmittance (VLT)?	Yes
Do all living areas have an external facing window (not into a courtyard, light well or other major obstruction)?	Yes
Does the building(s) comply with the requirements of the building separation tables?	Yes

Dwellings IEQ Approachs

What approach do you want to use for IEQ?	Provide our own calculations

IEQ 1.1 Daylight Access - Living Areas

66%

Score Contribution	This credit contributes 20% towards this section's score.
Aim	To provide a high level of amenity and energy efficiency through design for natural light.
Criteria	What % of living areas achieve a daylight factor greater than 1%

Questions

Percentage Achieved ? Percentage %

Apartment

81 %

IEQ 1.2 Daylight Access - Bedrooms

66%

Score Contribution	This credit contributes 20% towards this section's score.
Aim	To provide a high level of amenity and energy efficiency through design for natural light.
Criteria	What % of bedrooms achieve a daylight factor greater than 0.5%

Questions

Percentage Achieved ? Percentage %

Apartment

88 %

IEQ 1.4 Daylight Access - Non-Residential 66%

Score Contribution	This credit contributes 19% towards this section's score.
Aim	To provide a high level of amenity and energy efficiency through design for natural light.
Criteria	What % of the nominated floor area has at least 2% daylight factor?

Questions

% Achieved ?

Office Building	Shop	Lab/Warehouse
60 %	60 %	60 %

IEQ 1.5 Daylight Access - Minimal Internal Bedrooms 100%

Score Contribution	This credit contributes 6% towards this section's score.
Aim	To provide a high level of amenity and energy efficiency through design for natural light and ventilation.

Questions

Do at least 90% of dwellings have an external window in all bedrooms?

Apartment
Yes

IEQ 3.1 Thermal comfort - Double Glazing 100%

Score Contribution	This credit contributes 2% towards this section's score.
Aim	To provide comfortable indoor spaces and reduce energy needed for heating and cooling

Questions

Is double glazing (or better) used to all living areas and bedrooms?

Townhouse
Yes

IEQ 3.3 Thermal Comfort - Orientation 100%

Score Contribution	This credit contributes 1% towards this section's score.
Aim	To provide comfortable indoor spaces and reduce energy needed for heating and cooling

Questions

Are at least 50% of living areas orientated to the north?

Townhouse
Yes

Transport

78% - contributing 7% to overall score

Credit	Disabled	Scoped out	Score
Transport 1.1 Bicycle Parking - Residential			100 %
Transport 1.2 Bicycle Parking - Residential Visitor			100 %
Transport 1.4 Bicycle Parking - Non-Residential			71 %
Transport 1.5 Bicycle Parking - Non-Residential Visitor			100 %
Transport 1.6 End of Trip Facilities - Non-Residential			71 %
Transport 2.1 Electric Vehicle Infrastructure			100 %
Transport 2.2 Car Share Scheme			100 %

Transport 1.1 Bicycle Parking - Residential

100%

Score Contribution	This credit contributes 13% towards this section's score.
Aim	To encourage and recognise initiatives that facilitate cycling
Criteria	Is there at least one secure bicycle space per dwelling?

Questions

Bicycle Spaces Provided ?

Townhouse	Apartment
8	58

Calculations

Min Bicycle Spaces Required

Townhouse	Apartment
8	58

Transport 1.2 Bicycle Parking - Residential Visitor

100%

Score Contribution	This credit contributes 13% towards this section's score.
Aim	To encourage and recognise initiatives that facilitate cycling
Criteria	Is there at least one visitor bicycle space per 4 dwellings?

Questions

Visitor Bicycle Spaces Provided ?

Townhouse	Apartment
2	14

Calculations

Min Visitor Bicycle Spaces Required

Townhouse	Apartment
2	14

Transport 1.4 Bicycle Parking - Non-Residential

71%

Score Contribution	This credit contributes 10% towards this section's score.
Aim	To encourage and recognise initiatives that facilitate cycling

Questions

Have the planning scheme requirements for employee bicycle parking been exceeded by at least 50%?

Office Building	Shop	Lab/Warehouse
Yes	Yes	Yes

Transport 1.5 Bicycle Parking - Non-Residential Visitor 100%

Score Contribution	This credit contributes 5% towards this section's score.
Aim	To encourage and recognise initiatives that facilitate cycling

Questions

Have the planning scheme requirements for visitor bicycle parking been exceeded by at least 50%?

Office Building	Shop	Lab/Warehouse
Yes	Yes	Yes

Transport 1.6 End of Trip Facilities - Non-Residential 71%

Score Contribution	This credit contributes 5% towards this section's score.
Aim	To encourage and recognise initiatives that facilitate cycling
Criteria	Adequate bicycle parking has been provided. Is there also: * 1 shower for the first 5 bicycle spaces plus 1 to each 10 bicycles spaces thereafter, * changing facilities adjacent to showers, and * one secure locker per bicycle space in the vicinity of the changing / shower facilities?

Questions

Number of showers provided ?

Office Building	Shop
2	2

Number of lockers provided ?

Office Building	Shop
12	15

Calculations

Min Showers Required

Office Building	Shop	Lab/Warehouse
2	2	2

Min Lockers Required

Office Building	Shop	Lab/Warehouse
1	1	1

Transport 2.1 Electric Vehicle Infrastructure 100%

Score Contribution	This credit contributes 23% towards this section's score.
Aim	To facilitate the expansion of infrastructure to support electric vehicle charging

Questions

Are facilities are provided for the charging of electric vehicles?

Project wide

Yes

Transport 2.2 Car Share Scheme 100%

Score Contribution	This credit contributes 11% towards this section's score.
Aim	To encourage and recognise initiatives that help to minimise the use of private passenger vehicles

Questions

Has a formal car sharing scheme been integrated into the development?

Project wide

Yes

Waste 66% - contributing 3% to overall score

Credit	Disabled	Scoped out	Score
Waste 2.1 - Operational Waste - Food & Garden Waste			100 %
Waste 2.2 - Operational Waste - Convenience of Recycling			100 %

Waste 2.1 - Operational Waste - Food & Garden Waste 100%

Score Contribution	This credit contributes 33% towards this section's score.
Aim	To minimise organic waste going to landfill

Questions

Are facilities provided for on-site management of food and garden waste?

Project wide

Yes

Waste 2.2 - Operational Waste - Convenience of Recycling 100%

Score Contribution	This credit contributes 33% towards this section's score.
Aim	To minimise recyclable material going to landfill

Questions

Are the recycling facilities at least as convenient for occupants as facilities for general waste?

Project wide

Yes

Urban Ecology 53% - contributing 2% to overall score

Credit	Disabled	Scoped out	Score

Urban Ecology 1.1 Communal Spaces	52 %
Urban Ecology 2.1 Vegetation	50 %
Urban Ecology 2.3 Green Walls and Facades	100 %
Urban Ecology 2.4 Private Open Space - Balcony / Courtyard Ecology	100 %
Urban Ecology 3.1 Food Production - Residential	85 %

Urban Ecology 1.1 Communal Spaces 52%

Score Contribution	This credit contributes 10% towards this section's score.
Aim	To encourage and recognise initiatives that facilitate interaction between building occupants
Criteria	Is there at least the following amount of common space measured in square meters : * 1m² for each of the first 50 occupants * Additional 0.5m² for each occupant between 51 and 250 * Additional 0.25m² for each occupant above 251

Questions

Common space provided Square Metres

Apartment
216.0

Calculations

Minimum Common Space Required Square Metres

Apartment	Office Building	Shop	Lab/Warehouse
91	25	220	61

Urban Ecology 2.1 Vegetation 50%

Score Contribution	This credit contributes 47% towards this section's score.
Aim	To encourage and recognise the use of vegetation and landscaping within and around developments
Criteria	How much of the site is covered with vegetation, expressed as a percentage of the total site area.

Questions

Percentage Achieved ? Percentage %

Project wide
10 %

Urban Ecology 2.3 Green Walls and Facades 100%

Score Contribution	This credit contributes 11% towards this section's score.
Aim	To encourage the appropriate use of green roofs, walls and facades to mitigate the impact of the urban heat island effect.

Questions

Does the development incorporate a green wall or facade?

Project wide
Yes

Urban Ecology 2.4 Private Open Space - Balcony / Courtyard Ecology 100%

Score Contribution	This credit contributes 6% towards this section's score.
Aim	Encourage plants to be grown on balconies and courtyards

Questions

Is there a tap and floor waste on every balcony / in every courtyard?

Townhouse	Apartment
Yes	Yes

Urban Ecology 3.1 Food Production - Residential 85%

Score Contribution	This credit contributes 6% towards this section's score.
Aim	To encourage the production of fresh food on-site
Criteria	Is there at least 0.25m² of space per resident dedicated to food production?

Questions

Food Production Area Square Metres

Apartment
34.0

Calculations

Min Food Production Area Square Metres

Townhouse	Apartment
6	34

Innovation 90% - contributing 8% to overall score

Credit	Disabled	Scoped out	Score
Innovation 1.1 Innovation			90 %

Innovations

Description	CO2 Refridgeration	FSC Timber / Low VOC / Low formaldehyde	ESD checkpoint during construction
	The supermarket and liquor store will be provided with state-of-the-art CO2 refrigeration. This will result in approximately 20% energy reduction compared to a conventional refrigeration system and reduce the use of chemical refrigerants.	Where timber is to be used, such timbers are to accord with the GBCA's 'Essential' criteria for forest certification. All internally applied paints adhesives, sealants and carpets are to have a low or ultra-low VOC content. All internally applied engineered wood products are to have low formaldehyde levels.	An ESD professional will be engaged throughout the design and construction process. The ESD professional will perform a minimum of 2 site inspections during the construction phase to ensure suitable implementation of the ESD initiatives. Any deficiencies compared to the endorsed SMP will be escalated to the project manager and resolved.
Points Targeted	2	1	1

	Shutdown Switches	Food Waste Processing	Waste heat reuse

	Shutdown Switches	Food Waste Processing	Waste heat reuse
Description	Shutdown switches connected to all lighting will be provided to all dwellings.	The proposed development will introduce an on-site food digestor. This will result in less bin collection and conversion of food waste into usable compost. The compost will be sold in the store.	The waste heat produced by the refrigeration systems will be reused on-site for pre-heating of office and retail space heating and / or domestic hot water
Points Targeted	1	2	2

Innovation 1.1 Innovation 90%

Score Contribution	This credit contributes 100% towards this section's score.
Criteria	What percentage of the Innovation points have been claimed (10 points maximum)?

Questions

Criteria Achieved ?

Project wide

-

Items to be marked on floorplans

Do not upload your floorplans and elevations into the BESS tool. Instead, please ensure the items below are marked on the plans and provide a document / page reference number in the comments field.

0 / 28 floorplans & elevation notes complete.

Documents and evidence

Based on the information you have entered, the following supporting evidence is required. You can choose to upload supporting documents directly to BESS, or submit a printed version as an appendix to your BESS report. Use the comments field to provide a reference (e.g. page number) if relevant.

0 / 15 supporting evidence documentation complete.

Other Supporting Documents

Please upload any other documents here that may help to support your application.