



## ESD in the Planning Permit Application Process

Yarra City Council's planning permit application process includes Environmentally Sustainable Development (ESD) considerations. This is now supported by the ESD Local Policy Clause 22.17 of the Yarra Planning Scheme, entitled *Environmentally Sustainable Development*.

The Clause 22.17 requires all eligible applications to demonstrate best practice in ESD, supported by the Built Environment Sustainability Scorecard (BESS) web-based application tool, which is based on the Sustainable Design Assessment in the Planning Process (SDAPP) program.

As detailed in Clause 22.17, this application is a 'large' planning application as it meets the category *Non-residential 1. 1,000m<sup>2</sup> or greater*.

## What is a Sustainable Management Plan (SMP)?

An SMP is a detailed sustainability assessment of a proposed design at the planning stage. An SMP demonstrates best practice in the 10 Key Sustainable Building Categories and;

- Provides a detailed assessment of the development. It may use relevant tools such as BESS and STORM or an alternative assessment approach to the satisfaction of the responsible authority; and
- Identifies achievable environmental performance outcomes having regard to the objectives of Clause 22.17 (as appropriate); and
- Demonstrates that the building has the design potential to achieve the relevant environmental performance outcomes, having regard to the site's opportunities and constraints; and
- Documents the means by which the performance outcomes can be achieved.

An SMP identifies beneficial, easy to implement, best practice initiatives. The nature of larger developments provides the opportunity for increased environmental benefits and the opportunity for major resource savings. Hence, greater rigour in investigation is justified. It may be necessary to engage a sustainability consultant to prepare an SMP.

## Assessment Process:

The applicant's town planning drawings provide the basis for Council's ESD assessment. Through the provided drawings and the SMP, Council requires the applicant to demonstrate best practice.



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## Assessment Summary:

Responsible Planner:	Lara Fiscalini
ESD Advisor:	Gavin Ashley
Date:	30.04.2020
Subject Site:	PLN19/0931 1 Latrobe Avenue, Alphington VIC 3078
Site Area:	Approx. 3,560 m <sup>2</sup>
Project Description:	3-5 storey building comprising 15 townhouses, 52 apartments and 12 lofts with basement car parking.
Pre-application meeting(s):	Unknown
Documents Reviewed:	<ul style="list-style-type: none"> <li>Wetlap Residential Development, Cover Page and Drawing List [Rev D – 12.03.20], Techne Architecture &amp; Interior Design</li> <li>Sustainable Management Plan Part 1 &amp; 2 [Rev C – 11.12.19], Cundall</li> <li>Preliminary Daylight Modelling [27.03.20], Cundall</li> </ul>

**The standard of the ESD does not meet Council's Environmental Sustainable Design (ESD) standards.** Should a permit be issued, the following ESD commitments (1) and deficiencies (2) should be conditioned as part of a planning permit to ensure Council's ESD standards are fully met.

*Furthermore, it is recommended that all ESD commitments (1), deficiencies (2) and the outstanding information (3) are addressed in an updated SMP report and are clearly shown on Condition 1 drawings. ESD improvement opportunities (4) have been summarised as a recommendation to the applicant.*

### (1) Applicant ESD Commitments:

- Metering and monitoring strategy applied.
- Building User Guide will be provided to building occupants with the intent to reduce energy and water consumption.
- Commitment to prepare a site-specific Environmental Management Plan with a target to divert 70% of demolition and construction waste landfill.
- The project aims to reduce potable water consumption (using the BESS calculator) by 25% through efficient fixtures and appliances, stormwater harvesting and reuse, drought tolerant landscaping and water-efficient building services (i.e. HVAC).
- Proposal to achieve a 10% reduction in GHG emissions through design.
- Reverse-cycle split-system AC units with a minimum cooling EER >3.0 and heating COP >3.2 will be installed in each apartment.
- Energy Efficient lighting throughout, with a proposed illumination power density (W/m<sup>2</sup>) 20% lower than BCA allowances.
- A STORM report with a 101% STORM score has been submitted that demonstrates best practice and relies on 1,920m<sup>2</sup> of roof connected to two 30,000 litre rainwater tanks used for toilet flushing and irrigation.
- 95% of all timber used (and all the structural timber) to be recycled or from a certified source (i.e. FSC, AFS).
- PVC materials to be sourced from an ISO 14001 certified supplier, and plasterboard throughout to have 10% recycled content.
- The development includes 64 secure bicycle parking spaces for residents (townhouses have garages with space for bikes), with an additional 8 visitor parking spaces provided.
- Provision of operational organic waste management.
- >90% of plant species proposed for the landscaping and open spaces will be locally native.
- Roads constructed within the development to use recycled materials.



## (2) Application ESD Deficiencies:

- The daylight access in all typologies is inadequate. The development needs to be redesigned to provide daylight to dwellings which exceeds  $DF > 1$  for 80% of the living areas. Currently the development is well below this standard.
- The shading strategy is inadequate. Target additional treatments on the western façade for lofts on Lv. 1 & 2, and apartments on Lv. 3 & 4, and habitable windows along the northern façade (of the apartment building).
- Increase target for townhouses to 6.5 NatHERS.
- Confirm provision of HVAC equipment to townhouses and lofts, and increase target to within 1 star of best available.

## (3) Outstanding Information:

- Clarify provision natural cross-ventilation in townhouses.
- Confirm provision of external views across development.
- Provide information on how performance against the GHG target will be documented.
- Confirm provision of hot water to loft dwellings, and consider use of heat pumps for an electric only building.
- Confirm ventilation strategy for basement carpark.
- Confirm provision of 25kW rooftop solar system, and provide an assessment of energy generation and emission reduction potential.
- Confirm water metering for separate dwellings and common areas.
- Confirm provision and re-issue STORM report. The SMP identifies 1x 48kL rainwater tank and 1x 12kL rainwater tank, while the STORM report claims 2x 30kL rainwater tanks, and the architectural plans show 1x 48kL rainwater tank in the basement however no 12kL rainwater tank is present. (plans, p. 6)
- Confirm recycled content (by cost or weight) and consider conducting an LCA to articulate benefits (see below).
- Update SMP with information on surrounding car share facilities.
- Confirm provision and location of EV bay on plans, and consider increasing provision or wiring additional spaces for future provision.
- Confirm, and ensure EMP contains targets to recycle or reuse 80+% of demolition and construction waste.
- Provide an operational WMP that articulates waste generation and reduction strategies for the building.
- Confirm strategy to manage green waste (onsite or collection) within WMP to be provided.
- Confirm details within site-specific Environmental Management Plan.
- Provide a Landscape Management Plan that details the planting schedule for ground floor, balcony and rooftop areas – including consideration of UHI and climate adaptation and maintenance required.
- Include details of strategies to manage UHI within Landscape Management Plan (see above).

## (4) ESD Improvement Opportunities

- Consider conducting a Life Cycle Assessment (LCA) to identify reductions in embodied carbon (i.e. through recycled gypsum, or road base when confirmed).
- Consider a small pallet of materials and construction techniques that can assist in disassembly.
- Consider a green roof or wall to improve the ecological value of this site.
- Consider the Head contractor to have ISO 14001 accreditation.

## Further Recommendations:

The applicant is encouraged to consider the inclusion of ESD recommendations, detailed in this referral report. Further guidance on how to meet individual planning conditions has been provided in reference to the individual categories. The applicant is also encouraged to seek further advice or clarification from Council on the individual project recommendations.

# 1. Indoor Environment Quality (IEQ)

## Objectives:

- to achieve a healthy indoor environment quality for the wellbeing of building occupants.
- to provide a naturally comfortable indoor environment will lower the need for building services, such as artificial lighting, mechanical ventilation and cooling and heating devices.

Issues	Applicant's Design Responses	Council Comments	CAR*
Natural Ventilation and Night Purging	Operable windows are present in all dwellings, providing natural cross-ventilation for 48% of apartments, and 100% of lofts.  No information provided for townhouses, or strategy for night purging.	Clarify provision natural cross-ventilation in townhouses.	3
Daylight & Solar Access	The BESS report identifies 90% of apartments have access to an external window, with preliminary daylight modelling indicating a DF > 1 achieved (on average) in 27% of Lofts, 50% of apartments, and 60% of townhouses assessed.	The daylight access in all typologies is inadequate. The development needs to be redesigned to provide daylight to dwellings which exceeds DF > 1 for 80% of the living areas. Currently the development is well below this standard.	2
External Views	No information provided.	Confirm provision of external views across development.	3
Hazardous Materials and VOC	At least 95% of all internal sealants, paints, adhesives and carpets to meet the T-VOC limits identified in the Green Star Technical Manual. (SMP2, p. 3)	Satisfactory.	1
Thermal Comfort	Regularly occupied areas to exceed BCA Section J requirements for insulation and glazing. Use of balconies to create shading barrier and operable windows to facilitate ventilation.	Target additional treatments on the western façade for lofts on Lv. 1 & 2, and apartments on Lv. 3 & 4, and habitable windows along the northern façade (of the apartment building).	2

### \* Council Assessment Ratings:

- 1 – Design Response is **SATISFACTORY**; 2 – Design Response is **NOT SATISFACTORY**  
 3 – **MORE INFORMATION** is required; 4 – **ESD IMPROVEMENT OPPORTUNITIES**

### References and useful information:

SDAPP Fact Sheet: [1. Indoor Environment Quality](#)  
 Good Environmental Choice Australia Standards [www.geca.org.au](http://www.geca.org.au)  
 Australian Green Procurement [www.greenprocurement.org](http://www.greenprocurement.org)  
 Residential Flat Design Code [www.planning.nsw.gov.au](http://www.planning.nsw.gov.au)  
 Your Home [www.yourhome.gov.au](http://www.yourhome.gov.au)

## 2. Energy Efficiency

### Objectives:

- to ensure the efficient use of energy
- to reduce total operating greenhouse emissions
- to reduce energy peak demand
- to minimize associated energy costs.

Issues	Applicant's Design Responses	Council Comments	CAR*
NCC Energy Efficiency Requirements Exceeded	Regularly occupied areas to exceed BCA Section J requirements for insulation and glazing, with building fabric details provided. (SMP2, p. 5)	Satisfactory	1
Thermal Performance	The proposal is targeting an average NatHERS rating of 6.5-stars for apartments and lofts, and 6.0-stars for townhouses.	Increase target for townhouses. To 6.5 NatHERS.	2
Greenhouse Gas Emissions	The proposal has articulated a benchmark of reducing GHG emission by 10%.	Provide information on how performance against this target will be documented.	3
Hot Water System	Domestic HWS will be 6-star gas instantaneous for apartments and solar HW heaters for townhouses.	Confirm provision to loft dwellings, and consider use of heat pumps for an electric only building.	3
Peak Energy Demand	No information provided.	Satisfactory	1
Effective Shading	The proposal uses balconies to create an articulated façade and provide shading benefits for some of the building.	The western façade in particular is exposed and a redesign is required to adequately address the potential for significant over heating of apartments (in particular the Loft apartments)	2
Efficient HVAC system	Reverse-cycle split-system AC units with a minimum cooling EER >3.0 and heating COP >3.2 will be installed in each apartment.	Confirm provision to townhouses and lofts, and increase target to within 1 star of best available.	2
Car Park Ventilation	The BESS report is unclear whether the carpark will be natural or mechanically ventilated, however carpark exhausts are evident on the plans. (plans, p. 12) (SMP2, p. 14)	Confirm ventilation strategy for basement carpark.	3
Efficient Lighting	At least 20% improvement in LPD claimed.	Satisfactory.	1
Electricity Generation	Solar generation is not mentioned in the SMP or BESS report, however a 25kW rooftop solar PV system is marked on the plans. (plans, p. 12)	Confirm provision of 25kW rooftop solar system, and provide an assessment of energy generation and emission reduction potential.	3
Other	-	-	

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### References and useful information:

SDAPP Fact Sheet: [2. Energy Efficiency](#)

House Energy Rating [www.makeyourhomegreen.vic.gov.au](http://www.makeyourhomegreen.vic.gov.au)  
Building Code Australia [www.abcb.gov.au](http://www.abcb.gov.au)  
Window Efficiency Rating Scheme (WERS) [www.wers.net](http://www.wers.net)  
Minimum Energy Performance Standards (MEPS) [www.energyrating.gov.au](http://www.energyrating.gov.au)  
Energy Efficiency [www.resourcesmart.vic.gov.au](http://www.resourcesmart.vic.gov.au)

### 3. Water Efficiency

#### Objectives:

- to ensure the efficient use of water
- to reduce total operating potable water use
- to encourage the collection and reuse of rainwater and stormwater
- to encourage the appropriate use of alternative water sources (e.g. grey water)
- to minimise associated water costs.

Issues	Applicant's Design Responses	Council Comments	CAR*
Minimising Amenity Water Demand	Minimum WELS star rating of fixtures: <ul style="list-style-type: none"> <li>• Taps: 5 star</li> <li>• Toilets: 4 star</li> <li>• Showers: 3 star</li> <li>• Dishwashers 4 star</li> </ul>	Satisfactory	1
Water for Toilet Flushing	60,000L of rainwater storage provided, with use for irrigation and flushing toilets.	Satisfactory	1
Water Meter	Separate water metering for all tenants and major common area uses has been proposed.	Confirm water metering for separate dwellings and common areas.	3
Landscape Irrigation	60,000L of rainwater storage provided, with use for irrigation and flushing toilets.	Satisfactory.	1
Other	No water-based air-conditioning systems and fire-test water capture and reuse to be provided.  An additional 12,000 L rainwater tank has been provided for the 12 townhouses (800L each).	Good.	1

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#### References and useful information:

SDAPP Fact Sheet: [3. Water Efficiency](#)

Water Efficient Labelling Scheme (WELS) [www.waterrating.gov.au](http://www.waterrating.gov.au)

Water Services Association of Australia [www.wsaa.asn.au](http://www.wsaa.asn.au)

Water Tank Requirement [www.makeyourhomegreen.vic.gov.au](http://www.makeyourhomegreen.vic.gov.au)

Melbourne Water STORM calculator [www.storm.melbournewater.com.au](http://www.storm.melbournewater.com.au)

Sustainable Landscaping [www.ourwater.vic.gov.au](http://www.ourwater.vic.gov.au)



## 4. Stormwater Management

### Objectives:

- to reduce the impact of stormwater runoff
- to improve the water quality of stormwater runoff
- to achieve best practice stormwater quality outcomes
- to incorporate Water Sensitive Urban Design principles.

Issues	Applicant's Design Responses	Council Comments	CAR*
STORM Rating	A STORM report with a 101% STORM score has been submitted that demonstrates best practice and relies on 1,920m <sup>2</sup> of roof connected to two 30,000 litre rainwater tanks used for toilet flushing and irrigation.	Confirm provision and re-issue STORM report. The SMP identifies 1x 48kL rainwater tank and 1x 12kL rainwater tank, while the STORM report claims 2x 30kL rainwater tanks, and the architectural plans show 1x 48kL rainwater tank in the basement however no 12kL rainwater tank is present. (plans, p. 6)	3
Discharge to Sewer	-	-	-
Stormwater Diversion	The stormwater runoff from an area of 1,920 m <sup>2</sup> will be retained for irrigation and toilet flushing.	Satisfactory.	1
Stormwater Detention	-	-	-
Stormwater Treatment	-	-	-
Others	-	-	-

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### References and useful information:

SDAPP Fact Sheet: [4. Stormwater Management](#)  
 Melbourne Water STORM calculator [www.storm.melbournewater.com.au](http://www.storm.melbournewater.com.au)  
 Water Sensitive Urban Design Principles [www.melbournewater.com.au](http://www.melbournewater.com.au)  
 Environmental Protection Authority Victoria [www.epa.vic.gov.au](http://www.epa.vic.gov.au)  
 Water Services Association of Australia [www.wsaa.asn.au](http://www.wsaa.asn.au)  
 Sustainable Landscaping [www.ourwater.vic.gov.au](http://www.ourwater.vic.gov.au)

## 5. Building Materials

### Objectives:

- to minimise the environmental impact of materials used by encouraging the use of materials with a favourable lifecycle assessment.

Issues	Applicant's Design Responses	Council Comments	CAR*
Reuse of Recycled Materials	Recycled content has been identified for timber, constructed roads and plasterboard.	Confirm recycled content (by cost or weight) and consider conducting an LCA to articulate benefits (see below).	3
Embodied Energy of Concrete and Steel	No claims for reduction in embodied energy made, however recycled materials to be considered for construction of roads (within development), and plasterboard to contain 10% recycled gypsum.	Consider conducting a Life Cycle Assessment (LCA) to identify reductions in embodied carbon (i.e. through recycled gypsum, or road base when confirmed).	4
Sustainable Timber	95% of all timber used (and all the structural timber) to be recycled or from a certified source (i.e. FSC, AFS).	Satisfactory.	1
Design for Disassembly	No information has been provided.	Consider a small pallet of materials and construction techniques that can assist in disassembly.	4
PVC	PVC products to be sourced from an ISO 14001 certified supplier.	Satisfactory.	1

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### References and useful information:

SDAPP Fact Sheet: [5. Building Materials](#)

Building Materials, Technical Manuals [www.yourhome.gov.au](http://www.yourhome.gov.au)

Embodied Energy Technical Manual [www.yourhome.gov.au](http://www.yourhome.gov.au)

Good Environmental Choice Australia Standards [www.geca.org.au](http://www.geca.org.au)

Forest Stewardship Council Certification Scheme [www.fsc.org](http://www.fsc.org)

Australian Green Procurement [www.greenprocurement.org](http://www.greenprocurement.org)

## 6. Transport

### Objectives:

- to minimise car dependency
- to ensure that the built environment is designed to promote the use of public transport, walking and cycling.

Issues	Applicant's Design Responses	Council Comments	CAR*
Minimising the Provision of Car Parks	69 car parking spaces for residents, and 6 for visitors provided in the basement.	Satisfactory.	1
Bike Parking Spaces	52 bicycle parking spaces are provided for apartment residents, 12 for loft residents and an additional 8 for visitors.	Satisfactory.	1
End of Trip Facilities	No end of trip facilities have been provided.	Satisfactory as the development is all residential	1
Car Share Facilities	No information has been provided.	Update SMP with information on surrounding car share facilities.	3
Electric vehicle charging	One EV parking/charge station to be provided.	Confirm provision and location of EV bay on plans, and consider increasing provision or wiring additional spaces for future provision.	3
Green Travel Plan	No information has been provided.	Satisfactory as the development is all residential	1

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### References and useful information:

SDAPP Fact Sheet: [6. Transport](#)

Off-setting Car Emissions Options [www.greenfleet.com.au](http://www.greenfleet.com.au)

Sustainable Transport [www.transport.vic.gov.au/doi/internet/icy.nsf](http://www.transport.vic.gov.au/doi/internet/icy.nsf)

Car share options [www.yarracity.vic.gov.au/Parking-roads-and-transport/Transport-Services/Carsharing/](http://www.yarracity.vic.gov.au/Parking-roads-and-transport/Transport-Services/Carsharing/)

Bicycle Victoria [www.bv.com.au](http://www.bv.com.au)

## 7. Waste Management

### Objectives:

- to ensure waste avoidance, reuse and recycling during the design, construction and operation stages of development
- to ensure long term reusability of building materials.
- to meet Councils' requirement that all multi-unit developments must provide a Waste Management Plan in accordance with the *Guide to Best Practice for Waste Management in Multi-unit Developments 2010*, published by Sustainability Victoria.

Issues	Applicant's Design Responses	Council Comments	CAR*
Construction Waste Management	The proposal identifies the need for a site-specific Environmental Management Plan (EMP) to be developed prior to construction, and a target to divert at least 70% of demolition and construction waste from landfill.	Confirm, and ensure EMP contains targets to recycle or reuse 80+% of demolition and construction waste.	3
Operational Waste Management	An operational Waste Management Plan (WMP) has not been provided.	Provide an operational WMP that articulates waste generation and reduction strategies for the building.	3
Storage Spaces for Recycling and Green Waste	An area of 20 m <sup>2</sup> has been provided in the basement for waste storage and management – with the SMP identifying the inclusion of garden/green waste.	Confirm strategy to manage green waste (onsite or collection) within WMP to be provided.	3
Others	-	-	-

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### References and useful information:

SDAPP Fact Sheet: [7. Waste Management](#)

Construction and Waste Management [www.sustainability.vic.gov.au](http://www.sustainability.vic.gov.au)

Preparing a WMP [www.epa.vic.gov.au](http://www.epa.vic.gov.au)

Waste and Recycling [www.resourcesmart.vic.gov.au](http://www.resourcesmart.vic.gov.au)

Better Practice Guide for Waste Management in Multi-Unit Dwellings (2002)

[www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

Waste reduction in office buildings (2002) [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

## 8. Urban Ecology

### Objectives:

- to protect and enhance biodiversity
- to provide sustainable landscaping
- to protect and manage all remnant indigenous plant communities
- to encourage the planting of indigenous vegetation.

Issues	Applicant's Design Responses	Council Comments	CAR*
On Site Topsoil Retention	Strategies (blankets, silt fences, and drain filters) to be implemented during construction to reduce top soil erosion.	Confirm details within site-specific Environmental Management Plan.	3
Maintaining / Enhancing Ecological Value	Details regarding the provision of vegetation have not been provided.	Provide a Landscape Management Plan that details the planting schedule for ground floor, balcony and rooftop areas – including consideration of UHI and climate adaptation and maintenance required.	3
Heat Island Effect	No information has been provided.	Include details of strategies to manage UHI within Landscape Management Plan (see above).	3
Other	The site is within 400m of Alphington Park in addition to a number of smaller 'pocket parks' designated for the Alphington paper Mill masterplan, and thus will be exceptionally serviced from an open space point of view.	Good.	1
Green wall, roofs, facades	No information has been provided.	Consider a green roof or wall to improve the ecological value of this site.	4

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### References and useful information:

SDAPP Fact Sheet: [8. Urban Ecology](#)

Department of Sustainability and Environment [www.dse.vic.gov.au](http://www.dse.vic.gov.au)

Australian Research Centre for Urban Ecology [www.arcue.botany.unimelb.edu.au](http://www.arcue.botany.unimelb.edu.au)

Greening Australia [www.greeningaustralia.org.au](http://www.greeningaustralia.org.au)

Green Roof Technical Manual [www.yourhome.gov.au](http://www.yourhome.gov.au)

## 9. Innovation

### Objective:

- to encourage innovative technology, design and processes in all development, which positively influence the sustainability of buildings.

Issues	Applicant's Design Responses	Council Comments	CAR*
Significant Enhancement to the Environmental Performance	-	-	-
Innovative Social Improvements	-	-	-
New Technology	-	-	-
New Design Approach	-	-	-
Others	-	-	-

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### References and useful information:

SDAPP Fact Sheet: [9. Innovation](#)

Green Building Council Australia [www.gbca.org.au](http://www.gbca.org.au)

Victorian Eco Innovation lab [www.ecoinnovationlab.com](http://www.ecoinnovationlab.com)

Business Victoria [www.business.vic.gov.au](http://www.business.vic.gov.au)

Environment Design Guide [www.environmentdesignguide.com.au](http://www.environmentdesignguide.com.au)

## 10. Construction and Building Management

### Objective:

- to encourage a holistic and integrated design and construction process and ongoing high performance

Issues	Applicant's Design Responses	Council Comments	CAR*
Building Tuning	No information has been provided.	Provide information in the SMP on building commissioning and tuning.	3
Building Users Guide	A Building Users Guide explaining the sustainability features and intent of the building has been committed to.	Satisfactory.	1
Contractor has Valid ISO14001 Accreditation	No information has been provided (beyond the PVC supplier being certified). (SMP1, p. 8)	Consider the Head contractor to have ISO 14001 accreditation.	4
Construction Management Plan	The proposal identifies the need for a site-specific Environmental Management Plan (EMP) to be developed prior to construction.	Confirm, and ensure EMP contains targets to recycle or reuse 80+% of demolition and construction waste.	3
Others	-	-	-

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### References and useful information:

SDAPP Fact Sheet: [10. Construction and Building Management](#)

ASHRAE and CIBSE Commissioning handbooks

International Organization for standardization – ISO14001 – Environmental Management Systems

Keeping Our Stormwater Clean – A Builder's Guide [www.melbournewater.com.au](http://www.melbournewater.com.au)



## Applicant Response Guidelines

### Project Information:

Applicants should state the property address and the proposed development's use and extent. They should describe neighbouring buildings that impact on or may be impacted by the development. It is required to outline relevant areas, such as site permeability, water capture areas and gross floor area of different building uses. Applicants should describe the development's sustainable design approach and summarise the project's key ESD objectives.

### Environmental Categories:

Each criterion is one of the 10 Key Sustainable Building Categories. The applicant is required to address each criterion and demonstrate how the design meets its objectives.

### Objectives:

Within this section the general intent, the aims and the purposes of the category are explained.

### Issues:

This section comprises a list of topics that might be relevant within the environmental category. As each application responds to different opportunities and constraints, it is not required to address all issues. The list is non-exhaustive and topics can be added to tailor to specific application needs.

### Assessment Method Description:

Where applicable, the Applicant needs to explain what standards have been used to assess the applicable issues.

### Benchmarks Description:

The applicant is required to briefly explain the benchmark applied as outlined within the chosen standard. A benchmark description is required for each environmental issue that has been identified as relevant.

### How does the proposal comply with the benchmarks?

The applicant should show how the proposed design meets the benchmarks of the chosen standard through making references to the design brief, drawings, specifications, consultant reports or other evidence that proves compliance with the chosen benchmark.

### ESD Matters on Architectural Drawings:

Architectural drawings should reflect all relevant ESD matters where feasible. As an example, window attributes, sun shading and materials should be noted on elevations and finishes schedules, water tanks and renewable energy devices should be shown on plans. The site's permeability should be clearly noted. It is also recommended to indicate water catchment areas on roof- or site plans to confirm water re-use calculations.