PENRITH CITY COUNCIL

POLICY DOCUMENT

POLICY NAME
Buildings Policy

POLICY NUMBER
OPD 001

DATE ADOPTED
10 February 2014

COUNCIL MINUTE NUMBER
PRC4

ECM NUMBER
7243645

POLICY TYPE
Council

REVIEW DATE
Under Review

RESPONSIBLE DEPARTMENT
Organisational Performance & Development

RELATED DOCUMENTS
Refer to Page 5

Purpose

The purpose of this Policy is to incorporate sustainability principles into the design, construction, refurbishment, and ongoing management of Council's building assets to help ensure they are well designed, fit for purpose, comfortable, efficient, and environmentally sound.

Through the implementation of this Policy, Council will ensure our buildings are designed for the long term, maximise resource efficiency and reduce ongoing operational costs.

Policy Statement

It is Council policy to design, construct, manage, maintain, operate, renew and upgrade new and existing buildings sustainably and in a way that ensures buildings are robust, safe and efficient.

Scope

The Policy applies to all Council owned and operated buildings that are either under the direct management of Council, managed by a management committee, or under the control of lessees and licences.

The Policy is applicable to all building projects/works associated with:

- The design and construction of new Council buildings; and
- The refurbishment, extension, retrofit, maintenance and management of existing buildings until their final demolition.

The policy is relevant to:

- All Council staff, management bodies, contractors and sub-contractors involved in the design, construction, refurbishments, maintenance, retrofits and management of Council's building assets;
- Tender specifications, contract development and purchasing decisions to complete and maintain capital works and building improvement projects (as required); and
- Works in-kind, as part of Voluntary Planning Agreements (VPA) and Section 94 plans that include buildings that will transfer to Council ownership.

POLICY:

Objectives

The objectives of this Policy are to:

- Create well designed, robust structures that maintain a safe and comfortable environment for staff and visitors;
- Reduce the environmental impacts and improve the resource efficiency of Council buildings;
- Encourage the use of renewable energy sources and sustainable building materials;
- Provide a healthy indoor environment to enhance occupant health and wellbeing;
- Reduce the operational and maintenance costs associated with Council buildings; and
- Demonstrate leadership to the community by adopting and promoting sustainable building design and management practices.

This policy recognises that improving the sustainability of our buildings is not limited to design and construction, but incorporates ongoing operational practices. This will be achieved by:

- Providing a framework to embed sustainability into the everyday practices of staff, management bodies, and occupants of Council owned buildings;
- Promoting behaviour change through information and training; and
- Monitoring the consumption of resources and the installation of sustainable assets at individual facilities.

Application of the Policy

In applying this policy, Council will ensure that due consideration is given to the environmental, financial, social, and governance aspects of all works surrounding the design, construction, and ongoing management of Council owned buildings. This will include the incorporation of sustainability principles into documentation such as project briefs, tender documents, contracts, and lease/tenancy agreements where appropriate.

Throughout all stages of design, construction, and ongoing management, project managers are required to consult with stakeholders as appropriate and provide them with feedback on outcomes and the issues addressed.

To ensure this policy is adhered to the project manager will also be responsible for implementing a suitable monitoring program to make sure that all appropriate information is included in project documents, and that contracts and copies of any certification/documentation (e.g. Green Star) are kept on file and referenced as part of a design certification process at ‘practical completion’ of the building.

New Buildings & Refurbishments

It is the policy of Council that all new building projects optimise the use of environmentally appropriate materials in construction, and are made to be resource efficient by incorporating materials, fittings and appliances which minimise ongoing energy and water use. New building projects are also to incorporate universal design principles, elements that improve the comfort of the end user, generate cost savings, utilise the local economy, and demonstrate leadership to the community by adopting and promoting sustainable building design.

The extent of application of this policy and its tools will depend on the size of the project. The detail and complexity of sustainability requirements in facilities will be proportionate to their size and end use.

For large capital works projects, including new Council buildings and substantial refurbishment of Council buildings, for example those that are completed as Capital Improvements projects, Council will:

- Achieve the equivalent of a 5-star Green Star rating or higher for all new Council building projects where an applicable tool exists (formal certification is not required);
- Undertake formal Green Star certification for designated 'showcase constructions', where Council will deliberately trial new technologies, innovations or more ambitious targets. Where this is the case, this should be identified before the project budget has been allocated so the appropriate resources can be applied to the project. This will be used to highlight/recognise the ESD performance of these leading buildings; and
- Where an applicable Green Star rating/assessment tool doesn't exist, meet all mandatory criteria and at least 30% of the desirable criteria in Council's Sustainable Building Design Checklist (Appendix 1).

For smaller capital works projects and minor refurbishment, for example those projects that are completed as part of the ongoing Asset Renewal program, Council will:

- Meet all mandatory criteria and at least 30% of the desirable criteria in Council's Sustainable Building Design Checklist (Appendix 1), within the scope of works.

The scope of all works will be decided with due consideration of Council's Building Asset Management Plan and the future life expectancy of built assets to ensure that the level of investment is appropriate to the future plans for the building.

Retrofits and Maintenance Works

Council will ensure works to existing Council buildings will:

- Implement all mandatory items and at least 30% of the desirable criteria from the Sustainable Building Maintenance & Operations Checklist (Appendix 2) that are within the scope of works; and
- Implement site specific actions identified in Council's Energy & Water Efficiency Plans.

The upgrade of existing buildings will be undertaken as part of an ongoing program utilising funding from maintenance budgets and sources such as grants and the Sustainability Revolving Fund where appropriate. No timeframe has been set for the compliance of existing buildings as this will be dependent on available funding.

The scope of all works will be decided with due consideration of Council's Building Asset Management Plan and the future life expectancy of built assets to ensure that the level of investment is appropriate to the future plans for the building.

Management and Operational Performance

It is the policy of Council that the management and operational practices of existing Council buildings are undertaken in a sustainable manner.

To achieve this Council will:

- Develop and implement site specific Building User Guides as appropriate and provide training to relevant staff/ volunteers;
- Ensure buildings are managed with a sustainable approach to water and energy conservation and waste minimisation;
- Ensure that where relevant staff, management bodies, and building occupants are trained in building systems and that relevant permanent instruction signage is installed;
- Develop a list of low impact cleaning products to be used within the building by building users and cleaning staff, and include this list in the Building User Guide;

- Monitor the generation of waste and recyclable materials;
- Use Council's Data Management System (DMS) to monitor the use of energy and water, and investigate/address an significant increase in consumption; and
- Use Council's Asset Management System (AMS) to track the installation and upgrade of sustainable fixtures and appliances in buildings.

Policy review

The Policy is effective from date of adoption and will be reviewed after a period of four years.

Related Policies / Legislation

This Policy is to be read in conjunction with the following documents:

Council Documents

- Sustainable Purchasing Supply Policy
- Crime Prevention Through Environmental Design Development Control Plan
- Water Sensitive Urban Design Policy
- Building Asset Management Plan

External Documents

- Building Code of Australia
- Green Building Council of Australia – Green Star rating tools

Definitions & Abbreviations

Green Star	Green Star is a comprehensive, voluntary environmental rating system that evaluates the environmental design and construction of buildings. Green Star was developed for the property industry in order to standardise, and promote sustainable building practices. Green Star covers nine different categories of buildings that assess the environmental impact that is a direct consequence of a projects site selection, design, construction and maintenance. Projects are awarded one of the following ratings: 4 Stars (Best Practice), 5 Stars (Australian Excellence) or 6 Stars (World Leadership).
Energy Star	Energy Star (trademarked ENERGY STAR) is an international standard that independently certifies the energy–efficiency of appliances (such as kitchen and laundry appliances, air conditioners and televisions) and applies an Energy Star rating. Products are rated from 1 to 5 stars based on comparative assessment of the appliance's energy efficiency and estimated annual energy consumption (usually kilowatt hours/year). The greater the number of stars the higher the energy-efficiency.
Universal Design	Universal design refers to broad-spectrum ideas meant to produce buildings, products and environments that are inherently usable to all people irrespective of age, size or ability.
Crime Prevention Through Environmental Design	Crime prevention through environmental design (CPTED) is a multi-disciplinary approach to deterring criminal behaviour through environmental design.
Water Sensitive Urban Design (WSUD)	Water Sensitive Urban Design (WSUD) is the sustainable management of water in urban areas through intelligent and integrated design. It takes into account all of the elements of the urban water cycle including; potable (drinking quality) water, rainwater, wastewater, stormwater and groundwater. WSUD aims to mimic natural systems to support healthy ecosystems and minimise negative impacts on the natural water cycle and receiving waterways.

Acronyms

AS	Australian Standard
BCA	Building Code of Australia
CoP	Coefficient of Performance
CPTED	Crime Prevention Through Environmental Design
DCP	Development Control Plan
EMP	Environmental Management Plan
HVAC	Heating, Ventilation and Air Conditioning
NCC	National Construction Code
WELS	Water Efficiency Labelling Scheme
WSUD	Water Sensitive Urban Design

Appendix 1: Sustainable Building Design Checklist

M – Mandatory D- Desirable

	Action	Multilevel Carparks	Public Toilets & Amenity Blocks	Other Buildings
1. Planning & Design				
1.1	The design is to incorporate Universal Design principles.	M	M	M
1.2	Structures are to be robust, strong enough to resist vandalism.	M	M	M
1.3	Individual water, electricity and gas meters are required for all separate buildings. Install sub-meters with the capability for remote monitoring on all new developments where there are multiple tenancies/uses.	M	M	M
1.4	Open area of screen permits surveillance. Ensure aperture openings inhibit access.		M	M
1.5	Install external shading (a UV rating of 96% or better) where significant external activities occur, for example play areas and seating areas.			M
1.6	A storage facility must be provided for the collection of waste and recyclables (minimum is paper/cardboard, recyclable containers and organics).			M
1.7	The site of the proposed building must consist of land that has previously been built upon/developed.	D	D	D
1.8	New structures are to be located in clear view of public and not obstruct views to or from public spaces, assisting with passive surveillance.	D	D	D
1.9	An internal specialist and/or NSW Police is to be consulted with for a CPTED assessment of the proposed design (as per the agreed Protocol for the Review of Development Applications).	D	D	D
1.10	Height of structure to eliminate access onto roof. Eaves height 2700mm minimum.	D	D	D
1.11	Ensure new structures are linked to existing facilities. Refer to AS1428.1 for path requirement.	D		D
1.12	Provide designated spaces for fuel-efficient cars or car sharing (or similar) schemes.	D		D
1.13	Bicycle storage/racks to be provided for 10% of staff and/or visitors (including appropriate signage).			D

	Action	Multilevel Carparks	Public Toilets & Amenity Blocks	Other Buildings
1.14	Provide adequate bicycle storage/racks for cyclists (with appropriate signage).	D		
1.15	The proposed site must be within 650m of a public transport node (bus stop, train station etc.).			D
1.16	Showers and adequate change facilities to be provided.			D
1.17	The passive and active environmental design features of the proposed design must be reviewed and assessed by an independent environmental design expert.			D
1.18	Install vertical and/or rooftop gardens.			D
1.19	Install renewable energy technology on-site (e.g. solar panels, solar thermal, wind generation).			D
2. Materials & Appliances				
2.1	Materials are to be robust and fit for purpose. Installation to be sturdy, as per manufacturer's recommendations or as per Structural Engineer's details.	M	M	M
2.2	Metal structures to be manufactured from galvanised steel. Structure to be medium to heavy duty construction and to be designed and certified by a qualified structural engineer.	M	M	M
2.3	Colours to be used must be sourced from standard colour catalogues. The use of standard colours assists with availability for maintenance.	M	M	M
2.4	Finishes selected to be robust and easily maintained while in-situ.	M	M	M
2.5	Low maintenance and non slip finish required. Non slip finishes to comply with the current Building Code and other statutory requirements.	M	M	M
2.6	Sheet materials to be standard modules.		M	M
2.7	Use of low-VOC paints, adhesives and floor coating/sealants for internal surfaces (minimum of 90% used to allow for specialist applications). All floor coverings (carpets) installed must also be low-VOC.			M
2.8	Standard component sizes are preferred. Non standard component sizes should only be used to eliminate safety issues.	D	D	D
2.9	All materials selected to assist with future maintenance and life cycle of the building.	D	D	D

	Action	Multilevel Carparks	Public Toilets & Amenity Blocks	Other Buildings
2.10	The materials selected for the following basic building components must fulfil all six of Ecospecifier's Assessment Criteria (i.e. —reduces energy/greenhouse, protects habitat and land, preserves resources, protects human health, reduces pollution and other vital signs): • Sub-structure/foundations; • Ground floor (structure); • Upper floors (structure); • External walls (structure and cladding); • Internal walls/partitions and party walls; • Roofs (structure and cladding); • Ceilings; • Windows (including frame) ; • External doors; and • Stairs (structure).	D	D	D
2.11	The materials selected for the following finishing elements must fulfil all six of Ecospecifier's Assessment Criteria (i.e. —reduces energy/greenhouse, protects habitat and land, preserves resources, protects human health, reduces pollution and other vital signs): • 2nd fix timber (e.g. architraves, skirtings, fascias etc.); • Composite timber products (e.g. kitchen and wardrobe carcases, built-in shelves etc.); • Floor finishes/coverings; • Internal doors; • Stair balustrades; • Boundary fences; and • External hard surfaces.			D
2.12	All composite wood products (particleboard, MDF, veneers, etc.) installed must be low emission formaldehyde with a formaldehyde classification of Super E0, E0 or E1.			D
2.13	Where Energy Star and WELS ratings have been established for appliances, a minimum of 4 star energy rating and/or 3 Star WELS rating must be used (e.g. for dishwashers & refrigerators).			M
3. Lighting				
3.1	All internal lights to be energy efficient and comply with Section J of BCA.	M	M	M

	Action	Multilevel Carparks	Public Toilets & Amenity Blocks	Other Buildings
3.2	All external lights to be energy efficiency with appropriate controls (e.g. daylight sensor/timer switch).	M	M	M
3.3	Light from all external light fittings must not be directed upwards (without falling on a surface with the aim of illuminating it) or beyond the site boundaries.	M	M	M
3.4	Occupancy sensor lighting installed in facilities and rooms that are intermittently used or have variable occupancy.			M
3.5	The roof-lights of all spaces that are occupied (excluding service areas e.g. laundry, kitchen, bathroom, storage, etc.) are to be fitted with either external or internal glare control/shading devices that can be adjusted by building users.			M
3.6	All fluorescent and compact fluorescent lamps installed in occupied areas (excluding service areas e.g. laundry, kitchen, bathroom, storage, etc.) must be installed with high frequency ballasts.			D
3.7	The electric lighting of all occupied spaces over 50m² (excluding service areas e.g. laundry, kitchen, bathroom, storage, etc.) must be zoned so as to allow separate control for each area. Lighting controls must be labelled, centrally located and accessible to occupants. Use of daylight to be maximised.			D
4.	**Heating, Ventilation and Cooling (HVAC)**			
4.1	If HVAC systems are required, inverter type air conditioners are to be installed with a CoP >3.5 or Energy Star rating >3.5 (at the appropriate size), and with wall mounted timer control buttons.			M
4.2	All occupied rooms must be separately zoned so as to provide individual heating and cooling control for each area. Heating and cooling controls must be operated via a wall mounted timer control button, set to an optimal performance depending on building use (usual is between 22ºC in winter and 24ºC in summer), with temperature controls locked (encased) and not accessible to building occupants.			M
4.3	Any refrigerants used in HVAC systems must have an Ozone Depleting Potential (ODP) of zero (e.g. R410a, R407c and R134a).			M
4.4	If a car park is enclosed and a mechanical ventilation system is to be installed, carbon monoxide/dioxide sensors linked to variable speed ventilation fans must be installed in appropriate locations.	M		M
5.	**Plumbing & Drainage**			

	Action	Multilevel Carparks	Public Toilets & Amenity Blocks	Other Buildings
5.1	Ensure new work does not increase drainage problems. If gutters are not provided, concrete or bitumen areas are to extend past eaves where there is stormwater runoff to provide controlled runoff (unless alternative methods of water collection can be achieved).	M	M	M
5.2	All water fixtures to be a minimum 4 Star WELS rating (e.g. shower heads, taps).	M	M	M
5.3	Hot Water Systems >100 litres to be energy efficient solar, gas or heat pump systems. Storage systems to be set at 65-70^{o}C.			M
5.4	Install rainwater tank and suitable pump to irrigate gardens and flush toilets, with sizing in accordance with the WSUD Policy.		D	M
5.5	A minimum of 25% of the site's hard external surfaces must consist of permeable paving. For car parks, if it is enclosed, a minimum of 25% of the car park's hard surfaces must consist of permeable paving.	D		D
6. Roofs & Guttering				
6.1	Roof structures are to be trafficable.	M	M	M
6.2	Install Roof Access System to comply with the current requirements of Australian Standards (AS) and the National Construction Code (NCC).	M	M	M
6.3	If guttering is required ensure design requires low maintenance. Stormwater from roof is to be collected in dishes, grated drains or WSUD elements below roof perimeter area where possible.	M	M	M
6.4	Preferably no eaves gutter or box gutters.	D	D	
6.5	Roof structures are to be suitable for renewable energy technology.	D		D
6.6	Install extraction/whirlybird roof ventilation equipment.			D
7. Windows & Doors				
7.1	Doors to be robust. Solid timber doors exposed to the exterior are to be clad with metal as appropriate. Metal Grille doors to be robust, to be mindful of safety between grille spacing.	M	M	M
7.2	Door locks to be protected where possible whilst providing easy access for authorised users.	M	M	M
7.3	All keying to Councils master keying system.	M	M	M

	Action	Multilevel Carparks	Public Toilets & Amenity Blocks	Other Buildings
7.4	The opening area (windows/vents) in each occupied space (excluding service areas e.g. laundry, kitchen, bathroom, storage, etc.) must be equivalent to 5% of the gross internal floor area of that space. Spaces between 7 and 15m deep must have openable windows/vents on opposite sides of the space.	M	M	M
7.5	Installed glazing to be a minimum of 10% above BCA Section J2 performance requirements (U-value and Solar Heat Gain Coefficient).			M
7.6	The glazed windows and doors of all spaces that are occupied (excluding service areas e.g. laundry, kitchen, bathroom, storage, etc.) are to be fitted with either external or internal glare control/shading devices that can be adjusted by building users.			M
7.7	Preferred door orientation to swing out, unless otherwise noted by BCA access requirements.	D	D	D
8. Insulation				
8.1	Insulation is to be a minimum of 10% above BCA Section J1 requirements for roof/ceiling, external walls and ground floor/suspended floor.			M
8.2	Insulant products used in the building must have reduced ozone depleting substances including wall, floor, ceiling and roof insulation, acoustic insulation and insulation around the hot water tank, pipework and ductwork (refer to the Ecospecifier website for suitable products).			M
8.3	Insulant products used in the building must have reduced greenhouse gas emissions, including wall, floor, ceiling and roof insulation, acoustic insulation and insulation around the hot water tank, pipework and ductwork (refer to the Ecospecifier website for suitable products).			D
9. Construction Works				
9.1	Base to eliminate trip hazard. Hold down bolts recessed below finished floor level.	M	M	M
9.2	Develop, submit and implement an EMP for the construction works in accordance with Section 4 of the Guideline for the Preparation of Environmental Management Plans (DIPNR 2004).	M	M	M
9.3	No topsoil is to be removed from the site during the construction process (i.e. cut and fill volumes must be balanced on site).	D	D	D
9.4	The engagement of a builder/contractor for construction works that has undertaken the 2-day HIA GreenSmart Professional Training course OR that has similar relevant	D	D	D

	Action	Multilevel Carparks	Public Toilets & Amenity Blocks	Other Buildings
	professional training by an industry association (e.g. Master Builders Australia) OR that has demonstrated experience in the construction of sustainable buildings.			
10. Landscaping & Site Works				
10.1	Use of drought tolerant plantings when landscaping that will not obstruct or impact on the capacity of renewable energy technology.			M
10.2	Local ecology is enhanced with new indigenous plantings or habitat creation via wetland creation, habitat creation or significant revegetation.			D
10.3	Retention of existing on site flora or habitat with the protection of established trees, indigenous grasses, etc.			D
10.4	Fauna habitat enhancement with the provision of urban habitat opportunities (such as nesting boxes, ponds, bird friendly plantings, etc). Decide planting lists and actions in conjunction with NPWS or other local conservation groups.			D
	Action	**Multilevel Carparks**	**Public Toilets & Amenity Blocks**	**Other Buildings**
11. Building Management				
11.1	Develop a Building User Guide and provide training to relevant staff/volunteers.	M		M
11.2	Ensure suitable signage is installed to provide relevant information and directions.	M	M	M
11.3	Undertake stakeholder consultation with the community, internal stakeholders and prospective building users, and provide them with feedback on outcomes and the issues addressed during the consultation exercise.	D	D	D

Appendix 2: Sustainable Building Maintenance & Operations Checklist

M – Mandatory D- Desirable

	Action	Multilevel Carparks	Public Toilets & Amenity Blocks	Other Buildings
1. Planning & Design				
1.1	A storage facility must be provided for the collection of waste and recyclables (minimum is paper/cardboard, recyclable containers and organics).			M
1.2	Open area of screen permits surveillance. Ensure aperture openings inhibit access.		M	M
1.3	Install external shading (a UV rating of 96% or better) where high significant external activities occur, for example play areas and seating areas.			M
1.4	Install sub-meters with the capability for remote monitoring where there are multiple tenancies/uses.			D
1.5	Provide designated spaces for fuel-efficient cars or car sharing (or similar) schemes.	D		D
1.6	Bicycle storage/racks to be provided for 10% of staff and/or visitors (including appropriate signage).			D
1.7	Provide adequate bicycle storage /racks for cyclists (with appropriate signage).	D		
1.8	Install renewable energy technology on-site (e.g. solar panels).			D
2. Materials & Appliances				
2.1	Materials are to be robust and fit for purpose (e.g. for handrails/grab rails). Installation to be sturdy, as per manufacturer's recommendations or as per Structural Engineer's details.	M	M	M
2.2	Colours to be used must be sourced from standard colour catalogues. The use of standard colours assists with availability for maintenance.	M	M	M
2.3	Use of low-VOC paints, adhesives and floor coating/sealants for internal surfaces (minimum of 90% used to allow for specialist applications). All floor coverings (carpets) installed must also be low-VOC.			M

	Action	Multilevel Carparks	Public Toilets & Amenity Blocks	Other Buildings
2.4	Standard component sizes are preferred. Non standard component sizes should only be used to eliminate safety issues.	D	D	D
2.5	All materials selected to assist with future maintenance and life cycle of the building.	D	D	D
2.6	Where Energy Star and/or WELS ratings are set for appliances, a minimum of 4 Star energy rating and/or 3 Star WELS rating must be used (e.g. for dishwashers & refrigerators).		M	M
2.7	Activate standby power on all PCs.			M
3. Lighting				
3.1	Occupancy sensor lighting installed in facilities and rooms that are intermittently used or have variable occupancy.			D
3.2	All internal lights to be energy efficient and comply with Section J of BCA.	M	M	M
3.3	All external lights to be energy efficiency with appropriate controls (e.g. daylight sensor/timer switch).	M	M	M
4. Heating, Ventilation and Cooling (HVAC)				
4.1	If HVAC systems are required, inverter type air conditioners are to be installed with a CoP >3.5 or Energy Star rating >3.5 (at the appropriate size), and with wall mounted timer control buttons.			M
4.2	Set air conditioning systems to optimal performance depending on building use. This is usually between 22^{o}C in winter and 24^{o}C in summer.			M
5. Plumbing & Drainage				
5.1	Regularly monitor and maintain liquid trade waste and stormwater management systems.			M
5.2	All water fixtures to be a minimum 4 Star WELS rating (e.g. shower head).		M	M
5.3	Hot Water Systems >100 litres to be energy efficient solar, gas or heat pump systems. Storage systems to be set at 65-70^{o}C.			M
5.4	Install rainwater tank and suitable pump to irrigate gardens and flush toilets, with sizing in accordance with the WSUD Policy.		D	M
5.5	When paving is replaced on site, a minimum of 25% of the site's hard external surfaces must consist of permeable paving.			D
6. Roofs & Guttering				

	Action	Multilevel Carparks	Public Toilets & Amenity Blocks	Other Buildings
6.1	Install extraction/whirlybird roof ventilation equipment.			D
7. Windows and Doors				
7.1	Doors to be robust. Solid timber doors exposed to the exterior are to be clad with metal. Metal grille doors to be robust, to be mindful of safety between grille spacing.		M	M
7.2	Door locks to be protected where possible whilst providing easy access for authorised users.		M	M
	Action	**Multilevel Carparks**	**Public Toilets & Amenity Blocks**	**Other Buildings**
8. Insulation				
8.1	Adequately draught-proof all gaps around doors, windows and pipes on air conditioned buildings.		M	M
8.2	Insulant products used in the building must have reduced ozone depleting substances including wall, floor, ceiling and roof insulation, acoustic insulation and insulation around the hot water tank, pipework and ductwork (refer to the Ecospecifier website for suitable products).			M
8.3	Insulant products used in the building must have reduced greenhouse gas emissions, including wall, floor, ceiling and roof insulation, acoustic insulation and insulation around the hot water tank, pipework and ductwork (refer to the Ecospecifier website for suitable products).			D
9. Landscaping & Site Works				
9.1	Use of drought tolerant plantings when landscaping that will not obstruct or impact on the capacity of renewable energy technology.			M
9.2	Where regular irrigation of gardens is required install a drip irrigation system.			D
10. Building Management				
10.1	Update the Building User Guide as appropriate and provide training to relevant staff/volunteers.			M
10.2	Ensure suitable signage is installed to provide relevant information and directions.	M	M	M
10.3	Develop a list of low impact cleaning products to be used within the building by building users and building cleaners, and include the list in the Building User Guide.	M	M	M