

National Technical Standards

Version 4

Using this document

The guide below provides useful tips on how to use this document easily and efficiently.

Masterplanned Communities – Ecosystems

Ecosystems

To achieve certification in the Ecosystems element, a **project** must achieve:

- all of the requirements under Aquatic ecosystems (1.1);
- all of the requirements under Soil health (1.2);
- all of the requirements under Earthworks (1.3); and
- 1.4.1 and 1.4.2 and **18 credits** from 1.4.3-1.4.27 under Urban ecology (1.4).

Note: If Federal or State approval is required (EPBC approval etc), then this approval must be in place before certification in the Ecosystems element can be given.

1.1 Aquatic ecosystems

Intent: To ensure sustainable management of water resources within, impacted or drawn upon by the project and the preservation of the ecological function of the local area's aquatic ecosystems.

Requirement: Achieve **each** of the following:

Criteria	Required Supporting Documentation
<p style="font-size: x-small; margin-bottom: 5px;">1.1.1 Provide a stormwater management plan which demonstrates:</p> <ul style="list-style-type: none"> • protection and enhancement of natural surface and groundwater hydrological regime including riparian zones and buffers (where relevant depending on site) in consideration of the stability, ecological integrity and functionality of stormwater receiving environments and groundwater dependent ecosystems (GDE's). This includes incorporating and protecting any significant natural aquatic ecosystem features into the project design; • incorporation of integrated water cycle management principles (surface water, groundwater, water quality) into project design including water sensitive urban design devices. Set quantifiable water quality targets which exceed planning/ legislative requirements and verify design through accepted modelling (e.g. MUSIC). Recognition can also be given for stormwater reuse (such as infill sites) where appropriate water treatment measures and infrastructure are to be utilised; • appropriate drainage to protect both water cycle and infrastructure; and • incorporation of adequate stormwater management provisions during and post construction to avoid enhanced risk of flooding and flood damage and to reduce risk of pollution entering waterways. Design and construct to limit the post-project peak one-year ARI event discharge to the receiving waterway to the pre-project peak one-year ARI event discharge, for sites that are upstream of erodible waterways. Must also consider impact on and from adjacent sites. 	<p style="font-size: x-small; margin-bottom: 5px;">Stormwater management plan/ integrated water cycle management plan/better urban water management plan/groundwater modelling assessment.</p>

Innovation

The following criteria details the requirements for certification of the Ecosystems element. However, EnviroDevelopment recognises that a **project** may include innovative sustainability measures which achieve an equivalent or greater sustainability benefit to a specific requirement. Innovation credits are awarded at the discretion of the National EnviroDevelopment Board of Management. Any claims for innovation credits must be accompanied by an outline of the measure and relevant supporting documentation to verify the sustainability benefit.

Development Type
Identifies the relevant development type and the relevant element.

Element
Identifies the relevant element.

Element Requirements
Details everything that needs to be achieved for certification in the element.

Criteria Sections and Technical Intent
Details the subject and intent of the element subsection.

Supporting Documentation
Provides detail on the type of supporting documentation you need to respond to the criteria.

Technical Criteria
Details the technical requirements necessary for certification.

The process

Our certification process has been developed and is routinely refined to ensure that each project's journey through the certification process is smooth, efficient and connected.

01. Expression of interest

- Meeting to discuss EnviroDevelopment and its applicability to the project.
- Access to EnviroDevelopment National Technical Standards and Application template.
- Overview of resources available to assist in preparation of submission.
- Copy of Application Spreadsheet and Fee Schedule.

02. Project registration

- Registration fee payable.
- Site specific workshop with developer and/or project team on the application of EnviroDevelopment and how the standards apply to the project.
- Anticipate scheduling for National EnviroDevelopment Board of Management review.
- Access to EnviroDevelopment application advice.
- Access to EnviroDevelopment team to undertake application on behalf of submitter.

03. Application submission

- Respond to any requests for further information following submission.
- Draft comments provided to applicant, with opportunity to respond / clarify prior to Board review.
- Commence early discussions on media release and announcement event.

04. Board review

- Respond to any requests for further clarification (if required).

05. Certification decision

- Licensing document, logos, and statutory declaration provided for signing.
- Announcement event / media announcement coordinated.
- Framed EnviroDevelopment certificate provided.
- Project added to the list of EnviroDevelopment certified projects on the website.
- Supplied with EnviroDevelopment marketing material.
- Certification fee payable.

06. Ongoing certification (Annual)

- Project specific support to build the project's EnviroDevelopment branding strategy.
- Annual recertification process undertaken.
- Recertification fee payable.

Submitting an application: What you need to know

The basics

Each project should demonstrate compliance with the essential requirements as featured in this booklet.

To be recognised as a certified EnviroDevelopment, projects must meet at least four of the elements as part of a certification.

EnviroDevelopment applications will be processed within six to eight weeks of receipt of all documentation and supporting information.

Criteria

- If a particular criteria is not relevant to the project, mark the column 'not applicable' and provide reasoning why the criteria is not applicable or feasible in this instance. If a requirement is not addressed at all, with no reasoning provided, it will be determined by the National EnviroDevelopment Board of Management that this requirement has not been met.
- Examples used within the element criteria are
- Not exclusive and are intended as a compliance guide only.
- Each requirement is equal to one credit, unless otherwise stated.
- When the EnviroDevelopment National Technical Standards are reviewed and a revised set of standards is released, a certified EnviroDevelopment is required to demonstrate how the project's future stages will comply with the revised EnviroDevelopment Technical Standards. The revised standards will not apply retrospectively (i.e. to those dwellings/buildings already approved/built) and applicants will not be required to undertake further baseline studies such as further ecological assessment studies. The National EnviroDevelopment Board of Management shall retain the right to vary or amend the application of this requirement at its absolute discretion.

When should I apply?

- You should make contact with your local EnviroDevelopment Coordinator as early as possible to discuss the project and its eligibility.
- Usually, EnviroDevelopment applications are processed at least three months prior to the release of the first phase of the project for sale or commencement of leasing.
- You can delay the commencement of the term of your project's EnviroDevelopment license by up to six months to coincide with a specific project milestone.
- Preliminary certification may be available to projects that choose to apply for certification prior to receiving a development approval/planning permit.
- Where a project has obtained preliminary EnviroDevelopment certification (subject to the final development approval), supplementary documentation must be submitted after the development approval/planning permit is received, highlighting any changes made since the preliminary certification.

What do I need to provide?

An application for EnviroDevelopment certification should include:

- a completed Application Template (available from your local EnviroDevelopment Coordinator or by emailing info@envirodevelopment.com.au); and
- supporting documentation that clearly demonstrates compliance and future delivery of initiatives to satisfy the EnviroDevelopment standards.

Costs Associated with EnviroDevelopment Certification

An EnviroDevelopment fee schedule is available from your local EnviroDevelopment Coordinator or by emailing info@envirodevelopment.com.au

Recertification fee – 20% of the original certification fee (payable annually until project elects to let certification lapse).

Annual Recertification Process

To renew EnviroDevelopment certification, the developer will be required to submit, four weeks before the renewal date:

- a completed renewal form;
- the renewal fee;
- signed statement; and
- all appropriate documentation detailing any changes in the project that may affect the basis upon which the EnviroDevelopment license was granted from the time of the initial certification to the end of the period of renewal.

EnviroDevelopment Compliance

The following information details EnviroDevelopment's compliance mechanisms and procedures to ensure the integrity of EnviroDevelopment certification and the continued compliance of certified projects.

- EnviroDevelopment certified projects may be subject to random site checks.
- At the National EnviroDevelopment Board of Management's discretion, further information may be requested from the project at any stage during its certification.
- Developers of EnviroDevelopment certified projects must advise the UDIA within 10 business days of any changes made, or proposed to be made, to the proposed or existing project which may affect eligibility for EnviroDevelopment certification.

- If the National EnviroDevelopment Board of Management has concerns regarding compliance with the standards (or any aspect of the certification) or breach of the licensing agreement, the UDIA will advise the developer (licensee) of these concerns and request evidence of compliance within 10 business days of the notice.
- EnviroDevelopment certification may be revoked if the National EnviroDevelopment Board of Management is not satisfied that the certified EnviroDevelopment is meeting the requirements and the spirit of EnviroDevelopment. In the instance of non-conformance, the licence will be revoked and the application and licensing fees will not be refunded. There may also be cause to make public statements about such non-compliance to protect the broader integrity of EnviroDevelopment.
- The developer may be declared by the National EnviroDevelopment Board of Management to be ineligible for EnviroDevelopment certification for any project for a period of two years if found to breach the agreement or provide incorrect or false statements. Similarly, any third parties or consultants found to be providing substantially incorrect or false statements or evidence for the purpose of EnviroDevelopment certification may be declared by the National EnviroDevelopment Board of Management to be ineligible to provide evidence for EnviroDevelopment certification for a period of two years.
- The use of the EnviroDevelopment logo system is protected and action will be taken against persons or organisations found to be fraudulently representing a project, or a component of a project, as an EnviroDevelopment, or fraudulently representing any other product as EnviroDevelopment certified or endorsed.
- EnviroDevelopment certification is not an alternative to compliance with all Federal, State and Local legislative and regulatory requirements. EnviroDevelopments must fulfil all relevant legislative and regulatory requirements.

Further questions?

An EnviroDevelopment Coordinator is available to answer all queries on the certification process, and will provide timely and accurate advice. Contact details for local EnviroDevelopment Coordinators are available via the relevant UDIA state office or at envirodevelopment.com.au. Additional resources, such as case studies, a list of EnviroDevelopment Professionals and facilitation of a workshop discussion specific to a project's EnviroDevelopment application, can also be provided upon request.

Become an Envirodevelopment Professional

The EnviroDevelopment Professional program is designed to provide formal recognition of property development professionals who have undertaken a course in EnviroDevelopment and are part of a sustainability network.

EnviroDevelopment Professionals can assist by:



Being an active member of a project team who is pursuing EnviroDevelopment certification and provide advice on how the project may be eligible for certification.



Providing assistance in coordinating an EnviroDevelopment application.



Providing assistance in collating documentation for an EnviroDevelopment recertification.

A current directory of EnviroDevelopment Professionals is available on the EnviroDevelopment website. To register for training to become an EnviroDevelopment Professional, visit envirodevelopment.com.au.

Enviro
Development
Professional

Which development type are you?

It's really important that you identify which type of development your project is before you go any further in the certification process.



Masterplanned Communities

Projects primarily used for residential purposes and containing more than 1,500 dwellings.



Residential Subdivisions

Projects primarily used for residential purposes and containing less than or equal to 1,500 dwellings.



Seniors Living

Projects primarily used for seniors living or retirement living.



Multi-Unit Residential

Projects with two or more attached dwellings



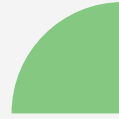
Mixed Use

Projects with two or more attached dwellings.



Industrial

Projects primarily used for industrial purposes.



Retail

Projects primarily used for retail purposes.



Education

Projects primarily used for educational purposes (e.g. primary or secondary school campuses or buildings, university campuses or buildings).



Commercial

Projects primarily used for commercial purposes.



Health and Aged Care

Projects primarily used for healthcare and aged care purposes (e.g. hospitals, medical centres, aged care facilities).

A decorative graphic consisting of several overlapping circles in various shades of blue and white. The circles are arranged in a grid-like pattern, with some overlapping others. The colors range from a deep navy blue to a very light, almost white blue. The overall effect is a modern, geometric design.

05.

Mixed Use

Essential requirements

To be eligible for certification, each project must demonstrate compliance against the following essential requirements:

- a.** Establish a community education program targeting residents/tenants/users which specifically addresses:
- information regarding the waste hierarchy of reduce, reuse, and recycle;
 - energy and water efficiency; and
 - use of environmentally responsible materials, emissions and maintenance.
- Example mechanisms include interpretive signage, fact sheets, and end user manuals.
- b.** Demonstrate that an ecological net gain will be achieved for the project in relation to local native vegetation communities and fauna habitat resources. This must include identifying and implementing appropriate strategies prior to commencement of works.
- c.** Demonstrate that the project has implemented a project specific waste management plan for the demolition, civil works and construction phases of the project.
- d.** Demonstrate that passive design principles have been incorporated in the design of the project.
- e.** Demonstrate how the project will reduce greenhouse gas emissions beyond regulatory requirements.
- f.** Demonstrate how the project will reduce potable water consumption for irrigation.
- g.** Demonstrate how community consultation and feedback has been incorporated into the project's design or activities.



Ecosystems

To achieve certification in the Ecosystems element, a **project** must achieve:

- **all** of the requirements under Aquatic ecosystems (1.1);
- **all** of the requirements under Soil health (1.2);
- **all** of the requirements under Earthworks (1.3); and
- 1.4.1, 1.4.2 and 1.4.3 and **six credits** from 1.4.4-1.4.19 under Urban ecology (1.4).

Note: If Federal or State approval is required (EPBC approval etc), than this approval must be in place before certification in the Ecosystems element can be given.

Innovation

The following criteria details the requirements for certification of the Ecosystems element. However, EnviroDevelopment recognises that a **project** may include innovative sustainability measures which achieve an equivalent or greater sustainability benefit to a specific requirement. Innovation credits are awarded at the discretion of the National EnviroDevelopment Board of Management. Any claims for innovation credits must be accompanied by an outline of the measure and relevant supporting documentation to verify the sustainability benefit.

1.1 Aquatic ecosystems

Intent: To ensure sustainable management of water resources within, impacted or drawn upon by the project and the preservation of the ecological function of the local area's aquatic ecosystems.

Requirement: Achieve **each** of the following:

Criteria

Required Supporting Documentation

1.1.1 Provide a stormwater management plan which demonstrates:

- protection and enhancement of natural surface and groundwater hydrological regime including riparian zones and buffers (where relevant depending on site) in consideration of the stability, ecological integrity and functionality of stormwater receiving environments and groundwater dependent ecosystems (GDE's). This includes incorporating and protecting any significant natural aquatic ecosystem features into the project design;
- incorporation of integrated water cycle management principles (surface water, groundwater, water quality) into project design including water sensitive urban design devices. Set quantifiable water quality targets which exceed planning/ legislative requirements and verify design through accepted modelling (e.g. MUSIC). Recognition can also be given for stormwater reuse (such as infill sites) where appropriate water treatment measures and infrastructure are to be utilised;
- appropriate drainage to protect both water cycle and infrastructure; and
- incorporation of adequate stormwater management provisions during and post construction to avoid enhanced risk of flooding and flood damage and to reduce risk of pollution entering waterways. Design and construct to limit the post-project peak one-year ARI event discharge to the receiving waterway to the pre-project peak one-year ARI event discharge, for sites that are upstream of erodible waterways. Must also consider impact on and from adjacent sites.

Stormwater management plan / integrated water cycle management plan / better urban water management plan / groundwater modelling assessment



Criteria

1.1.2 Demonstrate that any herbicide or pesticide use is undertaken in such a way to avoid contamination of aquatic ecosystems. Applicant is to demonstrate that:

- alternative pest control measures have been considered with the intent to avoid/minimise use of pesticides and herbicides;
- any use of herbicides and pesticides can be undertaken safely, with conservation benefit outweighing risk of harm; and
- potential environmental impacts of herbicide/chemical use have been considered and that significant impacts are not anticipated.

Required Supporting Documentation

Statement outlining steps to minimise use of pesticides (including termite control), herbicides and artificial fertilisers and/or weed and pesticide management plan.

1.2 Soil health

Intent: To ensure construction practices retain the ecological integrity of the soil to assist in achieving better environmental.

Requirement: Achieve **each** of the following:

Criteria

1.2.1 Take soil samples in areas that are to be retained for vegetative growth to ensure an understanding of soil characteristics. For soils used for revegetation purposes, the organic content of the soil, pH and nutrient status shall be similar to that of undisturbed native soils of ecosystems that support the appropriate plant species intended for the site.

1.2.2 Unless soil is heavily contaminated, retain insitu or stockpile and reuse all topsoil to best advantage on site. Where topsoil is minimal or absent and subsoil is deemed suitable for amendment, stockpile subsoil on site.

Note: Wherever possible, stockpiles should be no more than 1.5m high with maximum 1:2 batter and once stockpiling completed, covered with a green cover crop to avoid erosion, desiccation and solarisation.

1.2.3 Restrict access to site by vehicles to nominated roadways or parking areas, well away from existing trees or intended public realm areas, to minimise compaction. Rip compacted soil once building works are completed. Ensure building wastes, particularly liquid wastes do not contaminate the soil.

1.2.4 Recycle and reuse all vegetative debris on site (e.g. for topsoil augmentation or composting purposes). If onsite reuse is not feasible, arrangements should be made for green waste to be transported for reuse or disposed of at a fully licensed recycler or reprocessor. There should be no pit burning of green waste on site or disposal to landfill.

1.2.5 Amend, mulch and revegetate soils disturbed during construction as well as soils on the remainder of the site where the site has formerly been used for farming, forestry, industrial, commercial or urban land uses. Demonstrate that soils are suitable for intended purposes.

Required Supporting Documentation

Soil or landscape management plan, including test results.

Evidence in plans of topsoil stockpile location and management requirements.

Construction management plan, identifying access locations.

Statement from developer and registered landscape architect.

Soil or landscape management plan.



1.3 Site analysis and earthworks

Intent: To reduce the disturbance of construction works on the site's natural topography and nearby waterways.

Requirement: Achieve **each** of the following:

Criteria

Required Supporting Documentation

1.3.1 Conduct thorough site analysis prior to planning and design to identify:

- areas of prime ecological significance;
- presence of local native flora and fauna as well as pest species;
- habitat areas and/or connections between habitat areas;
- opportunities for re-vegetation; and
- opportunities for vegetation retention.

Site analysis outlining areas which require protection Ecological Context report/report section and/or Ecological Assessment Report.

The project must adequately consider and preserve significant areas based on the advice of this report.

1.3.2 If identified through site analysis, demonstrate that the project incorporates impact mitigation measures targeting **threatened species** such as Koala (*Phascolarctos cinereus*). Measures include fauna friendly fencing, establishment of refuge habitat, domestic animal management protocols to protect native fauna and traffic calming devices.

Detailed measures with supporting information including Ecological Assessment report.

1.3.3 The project is planned, designed and constructed in manner that achieves a balanced earthworks outcome (no spoil or import). Where spoil is generated it shall be disposed of in a location requiring import and not to landfill.

Statement from engineer.

Note: Projects which require importation of fill for groundwater or other environmental considerations may apply for discretion under this criteria.

1.3.4 Plan, implement and maintain effective erosion and sediment control measures during construction and operation. As a minimum, these should exceed relevant legislative and regulatory requirements.

Erosion and sediment control plan / soil and water management plan, staging plan and **statement of compliance** from an **appropriately qualified professional**.

1.3.5 Ensure appropriate staging of earthworks to ensure bare earthworks are avoided in high-risk areas of the site during dominant rainfall periods and the area and duration of bare earthworks is minimised during construction.

Statement from engineer.

1.3.6 Design and construct street layout to respond sensitively to the existing landform and topography.

Pre and post civil contour maps.

Note: The achievement of this criteria should be balanced with solar orientation and other sustainability considerations including walkability/accessibility outcomes.

1.3.7 Where there is contamination identified on site, employ best practice techniques to remediate contaminants including rehabilitation to meet regulatory requirements and suit future uses.

Where there is contamination identified on site, employ best practice techniques to remediate contaminants including rehabilitation to meet regulatory requirements and suit future uses.



1.4 Urban ecology

Intent: To ensure there is a comprehensive strategy for the project that retains the existing ecological attributes and functions of the site or creates new opportunities for the establishment or restoration of degraded ecosystem values and functions.

Requirement: Achieve **each** of the following:

Criteria

Required Supporting Documentation

1.4.1 Demonstrate that environmental weeds will not be utilised in landscaping works.

Statement from registered landscape architect / horticulturalist.

1.4.2 Reduce urban heat island effect. This needs to be demonstrated through adoption of at least 5 of the following options:

Evidence from environmental science professional, registered landscape architect (or related professional) and plans. Design guidelines should also be included if measures include requirements regarding roof colour.

- reduction of hardstand areas;
- consideration of roof reflectiveness, material and area;
- consideration of road reflectiveness;
- utilisation of different materials for construction (e.g. open-grid pavement);
- incorporation of breezeways and greenways;
- provision of shading to roads, footpaths and bicycle paths;
- maximising vegetative cover;
- WSUD outcomes; and/or
- green (vegetated) or shaded surfaces.

1.4.3 Contribute Green Infrastructure for public and private use within the project. Total Green Infrastructure area must equal 20% of the total site area. Green Infrastructure contribution can only be made up of the following:

Evidence in landscape plans to show total area of Green Infrastructure.

- in ground planting (retained);
- in ground planting (new);
- green wall;
- green facade;
- planters (on structure); or
- green roof.

Requirement: Achieve at least **six credits** from the following options:

1.4.4 Develop a climate change risk assessment for the site which considers the following factors which are directly relevant to the project site including:

Climate change risk assessment report/statement from appropriately qualified professional.

- flooding;
- sea level rise;
- consideration of extreme events;
- biodiversity decline; and
- bushfire hazards.



Criteria

Required Supporting Documentation

1.4.5 Locate on a brownfield site or site that had been significantly modified from its natural state and had little or limited existing ecological value.

2 credits - >75% of the site area has been significantly modified.

3 credits - brownfield site.

Note: This credit is not available for sites that have been cleared of vegetation as part of the current project, or a previous phase of a broader project of which the current project is part, or if the site was cleared of vegetation by the proponent for any reason in the 10 years prior to the EnviroDevelopment application date.

Details of use of site prior to new development including pre-development site photos and statement from environmental professional /registered landscape architect/related professional detailing ecological value of the site prior to development.

1.4.6 The project is a refurbishment (**2 credits**).

Details of existing use and pre and post refurbishment building envelope.

1.4.7 All plant species introduced to the site for landscaping public spaces (excluding those areas designated for turfed recreation areas), or for landscaping private areas prior to sale are locally native. Plant selection should consider flora that provide a diverse range of food resources to fauna. Plant selection that provides resources for limited fauna types/species is to be avoided.

Landscape palette and statement from registered landscape architect.

1 credit - 90% of all plant species

2 credits - 100% of all plant species

Note: In relevant climates, species selected specifically to allow solar access are excluded from the 90% or 100% requirement.

1.4.8 Include green roofs or external green walls, incorporating native plants species, into the project. Species selection should be informed by an appropriately qualified professional and should be designed to improve ecological function. A maintenance plan and non-potable irrigation supply should also be in place. Consideration should also be given to orientation depending on climate zone.

(2 Credits)

Details on size, location and featured species. Statement from registered landscape architect and/or ecologist regarding how the green wall/roof will improve ecological function and agreement from Body Corporate to maintain for life of building.

1.4.9 Include podium planting, incorporating native plant species, in the project. Species selection should be informed by an appropriately qualified professional and should be designed to improve ecological function. A maintenance plan and non-potable irrigation supply should also be in place.

Details on size, location and featured species. Statement from registered landscape architect and/or ecologist regarding how the green wall/roof will improve ecological function.

1.4.10 Incorporate community and productive gardens in the project including space for garden plots, communal or individual vegetable gardens.

Details on the location, maintenance and management of the community/ productive gardens.

1.4.11 Rooftop and relevant ground level plantings (including where appropriate streetscape plantings) to create canopy cover for 20% (**1 credit**) or 50% (**2 credits**) of the total site.

Landscape Plan and statement from Landscape Architect showing canopy coverage including rooftop.

1.4.12 Include tap fixture and drain on habitable balconies to encourage opportunities for residents to include and maintain vegetation.

Statement of compliance from developer with reference to building plans.



Criteria

Required Supporting Documentation

1.4.13 Demonstrate that the planting palette for the project contains a mix of fast and slow growing species.

Statement from registered landscape architect.

1.4.14 Incorporate planting within laneways, arcades and/or atriums.

Landscape palette and statement from registered landscape architect.

1.4.15 Demonstrate appropriate consideration of viable planting spaces by:

- utilising appropriate media with low organic content (5% or less);
- utilise appropriate species for planting which address functionality requirements; and
- demonstrate appropriate consideration of soil depths for the proposed or existing plantings.

Statement from registered landscape architect.

1.4.16 Provide features that allow sheltering, breeding or refuge habitat for terrestrial and/or aquatic native fauna. Evidence from ecological professional, including details on habitat created and targeted species.

Statement from Ecologist.

1.4.17 Provide fauna habitat within the project through the installation of at least one of the following options:

- native bee boxes;
- bird boxes; and/or
- nest boxes.

Details on amount and location.
Statement from registered ecologist on how the bees/boxes will improve ecological function.

These should be installed by an appropriately qualified professional and form part of a broader strategy for fauna habitat creation.

Allocated a % of the site for deep planting:

1 Credit - 15% of site

2 Credits - >20% of site

Statement from registered landscape architect.

1.4.18 Contribute green space significantly in excess of the planning authority requirements for green space.

Credits are to be allocated pro-rata for each 20% in excess of local government requirements and **5 credits** for 100% in excess of local government requirements. This is capped at a maximum of 5 credits. Stringent design guidelines or other protective measures to secure the use of private land for open space and flora and fauna purposes may also be applicable and contribute to the green space calculations for EnviroDevelopment purposes (however, if the longevity of such measures is likely to be less than through other means there may need to be a discount factor used in the calculations).

When claiming credits under this category, a statement of compliance must be provided regarding the ongoing ownership and maintenance arrangements (in the form of an approved management plan) for this land to provide certainty about the longevity of its maintenance as green space.

Note: Credits can be claimed if evidence is provided of off-site land holdings, however this land holding can only be claimed once and must have nature conservation value.

Waste

To achieve certification in the Waste element, a project must achieve:

- **all** of Essential action (2.1); and
- **two credits** from Post-construction phase (2.2).

Innovation

The following criteria details the requirements for certification of the Waste element. However, EnviroDevelopment recognises that a project may include innovative sustainability measures which achieve an equivalent or greater sustainability benefit to a specific requirement. Innovation credits are awarded at the discretion of the National EnviroDevelopment Board of Management. Any claims for innovation credits must be accompanied by an outline of the measure and relevant supporting documentation to verify the sustainability benefit.

2.1 Essential action

Intent: To identify the most suitable opportunities for recycling of resources available to the site.

Requirement: Achieve the following:

Criteria

2.1.2 The contractor implements a comprehensive, project-specific, waste management plan for the pre-construction, civil works and construction phases of the project. At a minimum, the waste management plan should meet all legislative requirements and align with relevant waste targets (where set and applicable) and include the following:

- waste generation;
- waste systems;
- minimisation strategy;
- performance / reduction targets;
- bin quantity and size;
- collection frequency;
- waste contractors;
- waste management facilities shown on plans;
- signage; and
- monitoring and reporting including frequency and method.

Required Supporting Documentation

Site waste management plan endorsed by the developer, with further statements from the engineer as appropriate. The plan must address each of the requirements for the pre-construction and construction phases.



Criteria

Required Supporting Documentation

2.1.2 Recycle or reuse a minimum of **80%** (by weight or volume) of demolition, land clearing and civil works materials/products (including vegetative debris) on site. In the event that demolition, land clearing or civil works materials cannot be recycled on site, full details of the operators to be engaged (including all licences they hold to operate) and materials streams to be recovered as part of the off site activity must be provided.

Details of existing materials on site and arrangements and estimates of waste streams and generation.

Note:

- i. Hazardous materials (e.g. asbestos, contaminated soil) are excluded.
- ii. If reuse on site is not feasible, the establishment of partnerships which embrace industrial ecology principles is strongly encouraged.

2.1.3 Recycle or reuse at least **80%** of all built form construction waste (by weight or volume).

Evidence of a waste management plan. Quarterly reports, including waste records should be kept for compliance purposes.

2.1.4 Manage and dispose/treat all hazardous substances, pollutants and contaminants in accordance with all legislative requirements. Where these materials are treated or used on site, that must occur in accordance with a sanctioned remediation process.

Details of any on site treatment processes for hazardous substances, pollutants, contaminants or acid sulphate soils must be provided and such processes must be supported by approved State Agency requirements and laws.

2.2 Post-construction phase

Intent: To provide recycling opportunities and facilities for end users to reduce waste going to landfill.

Requirement: Achieve at least **two credits** from the following options:

Criteria

Required Supporting Documentation

2.2.1 Where waste chutes are provided for general waste, chutes are also provided for recycling.

Evidence in plans and statement from local authority, architect or building designer.

2.2.2 Dedicated storage for the separation, collection and recycling of waste is provided and is easily accessible by all residents.

Evidence in plans and statement from local authority, architect or building designer.

2.2.3 Provide a compost bin, worm farm and/or green bin or similar initiative for the complex (i.e. in a communal area).

Statement of compliance from developer and evidence in plans of dedicated space.

2.2.4 Install a dehydrator/bio-digester/composter for the purposes of reducing food waste.

Details of system and location.



2.2.5 Repurpose sales office or display suite by retaining on site for permanent incorporation in the project e.g.

- utilising it at another development site; or
- converting it to a community resource (e.g. café).

Statement of compliance from Developer detailing intent.

2.2.6 Establish alternative mechanisms to encourage the reuse or recycling of appropriate waste streams e.g. mechanisms to facilitate and encourage container recycling.

Statement of compliance from Developer detailing program.

2.2.7 Provide on-site e-waste collection and disposal.

Statement of compliance from Developer detailing program.

Energy

To achieve certification in the Energy element, a project must achieve:

- **all** of the requirements under Climate responsive design (3.1);
- 3.2.1 under Daylighting (3.2);
- 3.3.1 under Heat gain and loss (3.3)
- **all** of the requirements under Common area lighting (3.4);
- 3.6.1 and **one credit** from 3.6.2-3.6.4 under HVAC (3.5);
- if the project includes any total enclosed or semi-enclosed carparks, **all** of the requirements under Carparks (3.6);
- if the project includes any lift systems, **all** of the requirements under Lift systems (3.7);
- **two credits** from 3.9.1-3.9.8 or meet 3.9.9 under Reduction in greenhouse gas emissions (3.8);
- if the project includes any commercial and/or retail areas, 3.9.10 under Reduction in greenhouse gas emissions (3.8);
- **all** of the requirements under Clothes drying (3.9); and
- if the project includes any community facilities, **all** of the requirements under Community facilities (3.10).

Innovation

The following criteria details the requirements for certification of the Energy element. However, EnviroDevelopment recognises that a project may include innovative sustainability measures which achieve an equivalent or greater sustainability benefit to a specific requirement. Innovation credits are awarded at the discretion of the National EnviroDevelopment Board of Management. Any claims for innovation credits must be accompanied by an outline of the measure and relevant supporting documentation to verify the sustainability benefit.

3.1 Climate responsive design

Intent: To ensure that the project is underpinned by a comprehensive strategy which considers climate responsive design to improve comfort levels for occupants.

Requirement: Achieve **each** of the following:

Criteria

3.1.1 The project must be planned and controlled through the development process to demonstrate that positive passive design outcomes are maximised.

Required Supporting Documentation

Provide evidence that building orientation, including the positioning of fenestration/access points, and associated outdoor areas (as appropriate) have been/will be designed to encourage ideal solar orientation. This may include a site analysis of local climatic data (average monthly temperatures, humidity, rainfall, wind speed/direction), topography, solar access (including sun paths), overshadowing, glare and privacy.



Criteria	Required Supporting Documentation
3.1.2 The project is designed to minimise extremities in temperatures, including negative microclimatic factors.	Statement from planner/architect/designer/engineer with reference to specific examples.
3.1.3 The design of <u>public spaces</u> optimises microclimatic conditions at all times of the year.	Statement from planner/architect/designer/engineer with reference to specific examples.

3.2 Daylighting

Intent: To ensure buildings provide daylighting benefits to occupants.

Requirement: Achieve of the following:

Criteria	Required Supporting Documentation
3.2.1 Optimise opportunities for daylight penetration into dwellings through measures such as, but not limited to: <ul style="list-style-type: none">• light shelves;• use of light colours; and/or• dual aspect design.	Statement from architect.

3.3 Heat gain and loss

Intent: To reduce heat gain and loss through glazing.

Requirement: Achieve of the following:

Criteria	Required Supporting Documentation
3.3.1 Each residential dwelling demonstrates how heat gain and loss has been mitigated through measures including design, double glazing or other measures.	<u>Statement of compliance</u> from developer and glazing specification from supplier.

3.4 Common area lighting

Intent: To ensure public spaces are lit using energy efficient lighting.

Requirement: Achieve **each** of the following:

Criteria	Required Supporting Documentation
3.4.1 Provide efficient lighting in common areas. (e.g. street lighting, public spaces), such as through utilising solar power, fluorescent or LED fittings.	Evidence in masterplan or electrical plans with <u>statement of compliance</u> from engineer or developer.



Criteria

Required Supporting Documentation

3.4.2 Utilise efficient lighting for carparks and employ strategies to reduce energy usage. This may include but is not limited to the use of:

- reflective diffusers;
- timers; and/or
- motion sensors.

Evidence in masterplan or electrical plans with statement of compliance from engineer or developer.

3.5 HVAC

Intent: To increase the energy efficiency of HVAC systems throughout the project

Requirement: Achieve the following:

Criteria

Required Supporting Documentation

3.5.1 Demonstrate how the design has considered and incorporated natural breezes, cross ventilation, thermal mass and other design elements relevant to the climate zone into the project to reduce the need for artificial heating and cooling.

Evidence in plans with statement from architect.

Requirement: Achieve at least **one credit** from the following options:

3.5.2 The HVAC system in each separate enclosed space within the nominated area is designed to be automatically shut down when not in use.

Evidence in electrical plans with statement of compliance from mechanical engineer.

3.5.3 The HVAC system is designed to allow a wider temperature control band when not in use (minimum of an additional two degrees in each direction is required).

Evidence in electrical plans with statement of compliance from mechanical engineer.

3.5.4 Install carbon dioxide monitoring devices to single HVAC systems which have a capacity over 20kW.

Evidence in electrical plans with statement of compliance from mechanical engineer.

3.6 Carparks

Intent: To reduce the energy usage associated with ventilating carparks within buildings.

Requirement: Achieve **each** of the following:

Criteria

Required Supporting Documentation

3.6.1 Install carbon monoxide monitoring/controls to carpark exhaust systems.

Evidence in electrical plans with statement of compliance from engineer.

3.6.2 25% of the total enclosed/semi-enclosed carpark by area is naturally ventilated, or 50% of the total enclosed/semi-enclosed carpark has either passive supply or passive exhaust.

Statement from engineer and evidence in plans.



3.7 Lift systems

Intent: To reduce the energy usage of lift systems within buildings.

Requirement: Achieve the following:

Criteria

Required Supporting Documentation

3.7.1 Where lifts are installed in the project, demonstrate consideration of lift power systems that are energy efficient and environmentally friendly. This includes but is not limited to:

Evidence in electrical plans with statement of compliance from engineer or developer.

- use of regenerative drives;
- machine room-less elevators;
- dispatch control systems;
- intelligent automation; and/or
- stand-by modes.

3.8 Reduction in greenhouse gas emissions

Intent: To reduce greenhouse gas emissions within the project.

Requirement: Achieve at least **two credits** from the following options, or meet 3.9.8:

Note: For projects located in New South Wales, demonstrate a 20% improvement beyond minimum thermal performance within BASIX.

Criteria

Required Supporting Documentation

3.8.1 Green power

Mandated use of:

Statement from engineer showing capacity and supporting guidance and green power agreements.

- Green Power, Solar power or other non-polluting, renewable power source to service at least 70% of the common area energy requirements (**1 credit**).
- Battery storage for solar power (**2 credits**).

3.8.2 Water heating and appliances

Mandated use of:

Statement of compliance from developer.

- heat pump; or
- solar hot water (gas or electric boosted).

Appliance palette including product manufacturer, number and energy star rating and/or COP and EER.

And, mandated use of appliances which produce less greenhouse gas emissions.

This should include at a minimum:

- dishwashers with an energy consumption of ≤ 245 kWh per annum;
- air conditioning systems with COP of >3.20 and EER of >3.00 ; and
- washing machines with an energy consumption of ≤ 280 kWh per annum.



Criteria

Required Supporting Documentation

3.8.4 NatHERS rating

Mandated design controls within the project to achieve minimum NatHERS rating for each unit:

- 7.5-8 star (1 credit)
- 8-9 star (2 credits)

Note: Projects located in Victoria, Western Australia and South Australia are not eligible to receive credit for 6 star NatHERS ratings.

Design guidelines and supporting evidence of energy efficiency using BERS, Accurate or FirstRate5 using second generation software systems' thermal calculation method.

3.8.5 Lighting

A minimum of 300 lux is achieved on the surface (nominally 900mm above floor level) using energy efficient lighting in the following:

- kitchen sink;
- cooktop or stove; and
- vanity basins in bathrooms and ensuites.

Statement from electrical engineer / designer.

3.8.6 Ventilation

Dwellings are designed to have cross ventilation. At a minimum dwellings must have security screens on both front and back doors to ensure cross ventilation (2 credits)

Statement from Architect.

3.8.7 Smart submetering

Each individual residential unit is smart sub-metered to provide usage information to residents.

Details of smart submetering system.

3.8.8 Demand/beavioural management

This may include:

- technology including sensors, timers etc.;
- access to smart app which allows remote controls of lighting and air conditioning;
- education using community-based social marketing and use of normative messaging, end user manual, community workshop; and/or
- use of load monitoring devices to provide feedback (e.g. energy monitors).

Evidence in design guidelines or electrical plans with statement of compliance from engineer or developer. Evidence of end user manual and proposed structure of end user education program.

Alternative compliance

3.8.9 Reduction through other means

Reduce greenhouse gas emissions within the project by at least 20% more than required under relevant Federal and State government regulatory means.

Statement from engineer showing the energy requirements of the project and the energy savings compared to regulatory requirements (i.e. energy balance calculations/modelling). Mechanisms to achieve reductions to be specified.



Criteria

Required Supporting Documentation

Commercial and retail areas

Requirement: Achieve the following:

3.8.10 Reduce greenhouse gas emissions within commercial and/or retail areas (where applicable) by at least 20% more than required under relevant Federal and State government regulatory means.

This could be achieved through:

- alternative energy sources (e.g. solar power or other non-polluting, renewable power source);
- energy efficient appliances and fixtures;
- reduction through design; and/or
- demand / behavioural management.

Worked calculations showing how initiatives will achieve at least 20% reduced greenhouse gas emissions compared to regulatory compliance.

3.9 Clothes drying

Intent: To reduce energy usage while drying clothes.

Requirement: Achieve the following criteria:

Criteria

Required Supporting Documentation

3.9.1 Opportunities for natural clothes drying are provided within communal spaces and/or private balconies.

Statement from Architect showing natural clothes drying opportunities on plans.

3.9.2 Where clothes dryers are installed within dwellings, the energy rating have an energy consumption of: $\leq 220\text{kWh}$ per annum.

Appliance palette including product manufacturer, number and energy star rating.

3.10 Community facilities

Intent: To reduce energy usage in community facilities.

Requirement: Where the project includes community facilities, achieve **each** of the following:

Criteria

Required Supporting Documentation

3.10.1 Where swimming pools are installed in the project, demonstrate consideration of pump systems that are energy efficient and environmentally friendly. This includes but is not limited to:

- variable speed control;
- variable-frequency drives; or
- variable-speed pumps.

Statement from developer.



Criteria

3.10.2 In community facilities utilise (where relevant):

- energy efficient lighting (e.g. LED);
- dishwashers with an energy consumption of <245kWh per annum; and
- fridges with an energy consumption of <500kWh per annum.

OR

- provision of green power solar power or other non-polluting, renewable power source.

Required Supporting Documentation

Statement from developer.

Appliance palette including product manufacturer, number and energy star rating.

Statement from engineer and relevant plans or green power agreement."

Materials

To achieve certification in the Materials element, a project must achieve:

- **all** requirements from Healthy buildings (4.1) across the entire project
- 4.2.1 and **one other credit** under Civil works (4.2.2-4.2.4) across the entire project or meet 4.2.9 under Environmentally responsible materials (4.2); and
- **three** requirements from the 'Built form' (4.2.5-4.2.8) across the entire project or meet 4.2.9 under Environmentally responsible materials (4.2).

Innovation

The following criteria details the requirements for certification of the Materials element. However, EnviroDevelopment recognises that a project may include innovative sustainability measures which achieve an equivalent or greater sustainability benefit to a specific requirement. Innovation credits are awarded at the discretion of the National EnviroDevelopment Board of Management. Any claims for innovation credits must be accompanied by an outline of the measure and relevant supporting documentation to verify the sustainability benefit.

4.1 Health buildings

Intent: To increase the use of finishes and products which minimise the levels of emissions in buildings.

Requirement: Achieve **each** of the following:

Criteria

Required Supporting Documentation

Civil works

4.1.1 Use low emission products on 90% of internal surfaces. This includes:

- low emission paints;
- low emission sealants;
- low emission adhesive; and
- low emission floor coverings.

Statement from developer and architect and/or interior decorator as applicable, stating how this requirement has been met. Details including product name, number and data sheet should also be provided.

4.1.2 All composite and engineered wood products (including exposed and concealed applications) comply with the following formaldehyde emissions levels (or equivalent):

- panels with Particleboard base: E1 or better
- panels with MDF base: E0 or better
- other engineered wood products (LVL, Glulam, CLT, plywood etc): better than E0.

Statement from developer and architect and/or interior decorator as applicable, stating how this requirement has been met. Details including product name, number and data sheet should also be provided.



4.2 Environmentally responsible materials

Intent: To promote the use of environmentally responsible materials in the project.

Requirement: Meet the requirements of 4.1.1 and **one other credit** under 'Civil works' (4.1.2-4.1.4) and **three credits** from 'Built form' (4.1.5-4.1.8) OR meet 4.1.9

Criteria

Required Supporting Documentation

4.2.1 Roads

95% of constructed roads use one or more of the following materials:

- a. concrete with $\geq 30\%$ supplementary cement materials or $\geq 30\%$ of recycled aggregate and utilising a minimum 50% captured or reclaimed water;
- b. asphalt which contains at least 10% reclaimed asphalt pavement (RAP) content (or the maximum allowable RAP content for the application);
- c. warm mix asphalt replacing 40% by weight of hot mix asphalt; and/or
- d. recycled materials used for road base or sub-base."

Statement from supplier and supporting technical information.

4.2.2 Services

95% of constructed services infrastructure use one or more of the following materials:

- a. PVC content is reduced to zero through replacement with alternative materials;
- b. PVC content is sourced from an ISO 14001 certified supplier;
- c. concrete pipes with $\geq 30\%$ supplementary cement materials or $> 30\%$ of recycled aggregate and utilising a minimum 50% captured or reclaimed water; and/or
- d. recycled plastic piping.

Statement from quantity surveyor, engineer and/or supplier and supporting technical information.

4.2.3 Hard landscaping

95% of constructed hard landscape materials use one or more of the following materials:

- a. reused or salvaged materials;
- b. materials which have a recycled content (e.g. park furniture made from recycled plastic); and/or
- c. concrete with $\geq 30\%$ supplementary cement materials or $\geq 30\%$ of recycled aggregate and utilising a minimum 50% captured or reclaimed water.

Statement from supplier and supporting technical information.

4.2.4 Soft landscaping

Throughout the project:

- a. any vegetative debris from the site is mulched and reused; and
- b. any non-contaminated topsoil is stockpiled and reused within the site.

Statement from landscape architect, including details of quantities, uses and attributes.



Criteria

Required Supporting Documentation

Built form

4.2.5 Structure

The structure of the built form (both above and below ground) uses one or more of the following materials:

- a. concrete with $\geq 30\%$ supplementary cementitious materials or $\geq 30\%$ of recycled aggregate;

Note: Where structural integrity is an issue, the percentage should reflect the highest allowable replacement to be incorporated.

- b. 80% non-structural steel with a recycled content $\geq 15\%$ or an Environmental Product Declaration complying with EN15804;
- c. (x) 60% of structural steel from a supplier who is both ISO14001 compliant and a member of the World Steel Association's Climate Action Program;
- d. pre-cast panels with $\geq 15\%$ supplementary cement materials;
- e. structural timber which is certified to a PEFC Programme for Endorsement of Forest Certification) standard such as AFS (Australian Forestry Standard) or FSC (Forest Stewardship Council) standard; and/or covered by an Environmental Product Declaration complying with EN15804;
- f. bricks containing a recycled content of at least 25% or an Environmental Product Declaration complying with EN15804; and/or
- g. reused materials (post-consumer) are utilised for $\geq 30\%$ of the structure.

Statement from supplier and supporting technical information.

4.2.6 Envelope / linings

The building envelope uses one or more of the following materials:

- a. timber window frames which are PEFC (e.g. AFS) or FSC accredited/endorsed;
- b. aluminium windows which contain $\geq 20\%$ recycled aluminium or glass by mass;
- c. plasterboard consists of $\geq 10\%$ recycled gypsum; and/or
- d. plasterboard consists of recycled paper.

Statement from supplier and supporting technical information.



4.2.7 Services

Building services achieve one of the following:

- a. PVC content is reduced to zero through replacement with alternative materials;
- b. PVC content is sourced from an ISO 14001 certified supplier; and/or
- c. alternative products are used in preference to sheet metal.

Statement from quantity surveyor, engineer and/or supplier and supporting technical information.

Criteria

Required Supporting Documentation

4.2.8 Furniture, fixtures, equipment and finishes

Furniture, fixtures, equipment and finishes uses at least one of the following:

- d. underlay consists of 95% recycled product;
- e. minimum 50% of the carpet has a rating of level 2 or greater under the Australian Carpet Classification Scheme Environmental Classification Scheme;
- f. joinery is PEFC (e.g. AFS) or FSC certified/endorsed; and/or
- g. materials which have a recycled content of ≥60%.

Statement from supplier and supporting technical information.

Alternative compliance

4.2.9 Use lifecycle assessment (LCA) to quantify the environmental performance of materials selected for the project. At a minimum, the LCA(s) should be in accordance with:

- EN 15978 and demonstrate a combined 20% weighted improvement against standard practice in environmental performance using weightings that comply with the Building Products Innovation Council's lifecycle Inventory Data Protocol; or
- ISO 14044 and EN15978 and demonstrate a 20% improvement in environmental performance in Global Warming Potential and three other environmental impact categories against standard practice, expressed in impacts per functional unit. As required by the standards, the functional unit should reflect the core purpose of the development (kgCO2e/occupant/year). Alternatively, a lifecycle assessment in accordance with the above conditions can be provided in lieu of any of the options outlined under 4.2.1 - 4.2.8.

Lifecycle assessment of relevant products and details of quantities and uses within the project.

OR

EPDs and/or certifications"

OR

80% of procured materials have an Environmental Product Declaration (EPD) or are certified under a recognised environmental certification scheme.



To achieve certification in the Water element, a project must achieve:

- in residential areas - **two credits** from 5.1.1-5.1.4 or meet 5.1.5 under Reduction in potable water demand (5.1);
- in non-residential areas - 5.1.6 under Reduction in potable water demand (5.1);
- **all** of the requirements under Irrigation requirements (5.2); and
- if the project includes any community facilities, all of the requirements under Community facilities (5.3).

Innovation

The following criteria details the requirements for certification of the Water element. However, EnviroDevelopment recognises that a project may include innovative sustainability measures which achieve an equivalent or greater sustainability benefit to a specific requirement. Innovation credits are awarded at the discretion of the National EnviroDevelopment Board of Management. Any claims for innovation credits must be accompanied by an outline of the measure and relevant supporting documentation to verify the sustainability benefit.

5.1 Reduction in potable water demand

Intent: To reduce household potable water consumption.

Residential areas

Requirement: Achieve at least **two credits** from the following options, or meet 5.1.5:

Criteria

Required Supporting Documentation

- 5.1.1** Utilise non-potable water source by achieving at least one of the following:
- a. rainwater capture with rainwater tanks plumbed directly to the components of the project (i.e.. units or tenancies);
 - b. project includes storage facility which captures either stormwater or rainwater for reuse within the components of the project (i.e. units or tenancies); and/or
 - c. non-potable source service that is plumbed to the components of the project (i.e. units or tenancies).

Statement from engineer and relevant plans.

5.1.2 At a minimum fixtures must include:

- showerheads that use <7.5 litres per minute; and
- taps to bathrooms, kitchen and laundry that use <6 litres per minute.

Finishes palette including product manufacturer, number and WELS rating.

5.1.3 Each individual unit has smart submetering that allows residents to monitor their water usage.

Evidence in plans with statement of compliance from engineer or developer.

5.1.4 Water efficient appliances installed within dwellings which include, where installed a dishwasher and washing machine should achieve a WELS rating 1 star from best available for the size/capacity of the appliance (Dishwasher: ≤14/Litres per use; Washing Machine: ≤90 L per load).

Appliance palette including product manufacturer, number and WELS rating.



Criteria

Required Supporting Documentation

Alternative compliance

5.1.5 Reduce potable water usage within the project (excluding common area irrigation requirements captured in 5.3.1) by at least 20% more than required under relevant Federal and State government regulatory means.

Design guidelines and worked calculations showing how initiatives will achieve at least 20% reduced potable water usage compared to regulatory compliance.

Non-residential areas

Requirement: Achieve the following:

Notes: For projects located in Western Australia, compliance with this criteria is not required.

5.1.6 Reduce potable water usage within non-residential areas of the project (excluding common area irrigation requirements captured in 5.3.1) by at least 20% more than required under relevant Federal and State government regulatory means.

Certification by engineer or local government engineer or development assessment officer or other appropriately qualified professional (e.g. through water balance calculations and hydrological modelling and a statement) that sufficient stormwater will be available and that the civil works will be constructed in such a way as to facilitate its harvest and use. (Such infrastructure should be constructed as part of the civil works.)

This may be achieved by any or a combination of the following means: stormwater harvesting;

- plumbing of recycled water reticulation (such as dual reticulation facilitating the reuse of treated effluent water);
- greywater reuse (e.g. plumbing to facilitate reuse of greywater on lot);
- rainwater harvesting (e.g. collection of rainwater in tanks from roof runoff); and/or
- water use efficiency (e.g. fittings with a higher WELS rating than mandated through regulation, rainwater tanks with larger capacity than mandated).

Worked calculations showing how initiatives will achieve at least 20% reduced potable water usage compared to regulatory requirements.



5.2 Irrigation requirements

Intent: To reduce the use of potable water for irrigation purposes in the public realm.

Requirement: Achieve **each** of the following:

Criteria

Required Supporting Documentation

5.2.1 Use drought tolerant species which have no irrigation requirements for the public realm.

Landscape palette and statement from landscape architect.

Where irrigation is required either for the purposes of establishment or for ongoing watering, water should be supplemented from a non-potable source including through:

Certification by engineer or local government engineer or development assessment officer or other appropriately qualified professional (e.g. through water balance calculations and hydrological modelling and a statement) that sufficient non-potable water will be available and that the civil works will be constructed in such a way as to facilitate its harvest and use. (Such infrastructure should be constructed as part of the civil works.)

- stormwater harvesting (e.g. broad scale collection of stormwater runoff for use in irrigation);
- plumbing of recycled water reticulation (such as dual reticulation facilitating the reuse of treated effluent water);
- greywater reuse (e.g. plumbing to facilitate reuse of greywater on lot);
- rainwater harvesting (e.g. collection of rainwater in tanks from roof runoff); and/or
- use of underground water sources.

Note: the following exemptions may apply:

If using an underground water source, certification of bore licence and capacity should be provided. Must also show proof of recharge (by hydrogeologist) and water balance calculations to show that there will be no net drain to aquifer. Where irrigation is sourced from a recycled water or grey water supply, a soil management plan must be provided.

- potable water used during the establishment phase (maximum establishment phase is considered three years for trees, two years for shrubs and one year for herbaceous cover); and
- potable water used to irrigate non-commercial food production gardens if accompanied by an effective irrigation minimisation strategy.

If potable water is used to irrigate non-commercial food production gardens, an irrigation minimisation strategy must be provided.

5.2.2 Demonstrate that irrigation will be delivered via the most efficient system for that situation. This could include the use of integrated sensors and/or weather monitoring. Water should be directly applied to the vegetation to limit evaporation, runoff or wastage.

Irrigation plan or statement from landscape architect regarding irrigation methods.

5.2.3 Where sandy or clay soils are present in the public realm, soil is ameliorated to increase the effectiveness and efficiency of irrigation.

Statement from registered landscape architect.

5.2.4 Mulch (at a minimum depth of 75mm) is applied to planted areas and maintained.

Statement from registered landscape architect.



5.3 Community facilities

Intent: To reduce potable water usage in community facilities.

Requirement: Where the project includes community facilities, achieve each of the following:

Criteria	Required Supporting Documentation
<p>5.3.1 Where an outdoor swimming pool is included, the pool area should include at least two (2) of the following design elements to reduce evaporation:</p> <ul style="list-style-type: none"> • pool blanket; • non-potable top-up water source; and/or • shade devices (50% of pool area shaded). 	Statement from developer.
<p>5.3.2 Where a swimming pool is included within the project, ensure there is a backwash minimisation system in place (e.g. cartridge filter, filter utilising cyclone technology, oversized sand filter, centrifugal / pre-filter device, backwash recycling system or similar).</p>	Statement from developer.
<p>5.3.3 In community facilities utilise (where relevant):</p> <ul style="list-style-type: none"> • waterless urinals; • taps with water usage of ≤6 litres per minute; • showerheads that use <7.5 litres per minute; and; • dishwashers with a water consumption of ≤14 litres per use. 	Statement from engineer and relevant plans.
OR	
<ul style="list-style-type: none"> • connect to a non-potable water source for indoor non-drinking water uses. 	
<p>5.3.4 In community facilities ensure there is easy access to a potable water source (e.g. water bubbler or water tap).</p>	Statement of compliance from developer evidence on plans.

Community

To achieve certification in the Community element, a project must achieve:

- **all** of the requirements under Essential actions (6.1); and
- the requirements of **five** of the following sections:
 - Community engagement (6.2)
 - Care for Country (6.3)
 - Corporate social responsibility (6.4)
 - Efficient and accessible transport (6.5)
 - Engaging and inclusive public realm (6.6)
 - Housing diversity and economic prosperity (6.7)
 - Connected communities (6.8)
 - Internet (6.9)
 - Safe and accessible living (6.10)
 - Healthy and active communities (6.11).

Innovation

The following criteria details the requirements for certification of the Community element. However, EnviroDevelopment recognises that a project may include innovative sustainability measures which achieve an equivalent or greater sustainability benefit to a specific requirement. Innovation credits are awarded at the discretion of the National EnviroDevelopment Board of Management. Any claims for innovation credits must be accompanied by an outline of the measure and relevant supporting documentation to verify the sustainability benefit.

6.1 Essential actions

Requirement: Achieve **each** of the following:

Criteria	Required Supporting Documentation
<p>6.1.1 Demonstrate that the project is driven by a clear vision, with defined environmental, economic, social sustainability and liveability goals including measurable performance targets.</p>	<p>Evidence of project vision and goals with corresponding measurable performance targets.</p>
<p>6.1.2 Demonstrate how the project has been designed to encourage a safe environment, reduce crime and encourage positive interaction between residents/employees and other local people using the area, according to Crime Prevention Through Environmental Design (CPTED).</p>	<p>Evidence in plans, and statement from planner.</p>



6.2 Community engagement

Intent: To proactively and meaningfully engage in effective and informed consultation with the local community.

Requirement: Achieve **each** of the following:

Criteria

Required Supporting Documentation

6.2.1 Demonstrate efforts to proactively engage with members of the existing community prior to application lodgement who may have an interest in the project through the preparation of a community engagement plan which outlines a schedule of engagement activities. Evidence should be provided that feedback sought has been considered, and incorporated where feasible and appropriate.

Concise report outlining methods and results of research on local community needs and wishes and how they have been considered in the project. Report should also include a schedule of submissions.

Note: If project is purchased by applicant AFTER development approval has been given, consideration may be given if efforts are made immediately to engage with community.

6.2.2 Establish a structure or framework for ongoing community involvement and establish ongoing partnerships with the community created by the project. The framework should include some of the activities listed in 6.3.2-6.3.7 and commence within one year of the occupation of the first dwelling and continue through until the last stage. The framework should also include a plan to encourage the establishment of a self-sufficient community group by project completion.

Evidence of structure and framework including a list of measurables and delivery timeframes.

6.2.3 Establish a strategy to ensure ongoing engagement with the community around delivery impacts. At a minimum this should include information regarding dust & noise, working hours and additional traffic.

Details of strategy with implementation timeline.

Requirement: Achieve at least **two credits** from the following options, or identify other actions appropriate to the local context:

6.2.4 Facilitate local community grants programs.

Details of programs including financial investment and timeframes.

6.2.5 Involve inclusive employment practices in the project by involving the practices by involving the following in construction activities:

Details including arrangements and planned activities and timeframes.

- local Trainees;
- mature aged apprentices; or
- people with disabilities.

6.2.6 Engage with local environmental groups/catchment organisations for ongoing community-based environmental restoration and maintenance activities.

Details including arrangements and planned activities and timeframes.

6.2.7 Provide or support an existing resource (e.g. community development officer or program) to facilitate and support community development.

Details including responsibilities, level of commitment and hours of commitment.



6.3 Care for Country

Intent: To ensure the project has engaged with First Nations Peoples and incorporated initiatives.

Requirement: Achieve the following:

Criteria

Required Supporting Documentation

6.3.1 Demonstrate proactive engagement with members of the local First Nations People commencing prior to application lodgement who may have an interest in the project through the preparation of a First Nations engagement plan which outlines an ongoing schedule of consideration and consultation throughout the project.

Consultation/stakeholder engagement strategy.

6.3.2 Demonstrate incorporated initiatives derived from ongoing consultation with First Nations People.

Evidence of implementation through list of guiding activities.

6.4 Corporate social responsibility

Intent: To ensure the developer behind the project has implemented corporate social responsibility measures.

Requirement: Achieve **two** of the following:

Criteria

Required Supporting Documentation

6.4.1 Establish and implement a clearly formulated corporate social responsibility strategy. The strategy should have clear goals set against a timeline of activities and implementation actions.

Corporate social responsibility strategy and evidence of implementation.

6.4.2 Establish and implement a company Modern Slavery Statement.

Modern Slavery Statement.

6.4.3 Achieve certification in a corporate social responsibility rating tool (i.e. B Corp certification).

Evidence of certification, including measures achieved.



6.5 Efficient and accessible transport

Intent: To reduce reliance on private cars as the primary mode of transport.

Requirement: Achieve the following:

Criteria

Required Supporting Documentation

6.5.1 Demonstrate encouragement of active transport options amongst the community through design considerations and community education.

Provide evidence of educational material to be distributed to residents / occupants highlighting active transport opportunities including routes and potential time savings for different modes (i.e. 5 minute shortcut for cyclists on this shared path).

Requirement: Achieve at least **two credits** from the following options:

6.5.2 Alternative transport parking

Provide alternative transport (etc) parking at all community facilities and retail/commercial businesses within the project at a rate of one space per 500sqm of GFA. Place parking in public view and easily accessible from the road."

Evidence in plans, and statement from masterplanner and developer stating how the requirements have been met.

6.5.3 Pathways

Provide connecting, safe, attractive and well-lit pathways running wholly in public spaces (including streets and open spaces), directly connecting residential and commercial areas to local facilities and providing links between areas. Paths should have some areas of adjacent shade, shelter, seating and water fountains and connect with paths in neighbouring areas. Way-finding signage should also be provided for other destinations and focal points.

Evidence in plans, and statement from landscape architect, developer and engineer stating how the requirements have been met.

6.5.4 Active transport linkages

Provide connections from project to existing shared pathways for both walking and cycling. The connections should be designed appropriately for the anticipated level of pedestrian and bicycle use.

Evidence in plans and/or statement on how the requirements have been met.

6.5.5 Public transport

Demonstrate access to public transport, such that 75% of dwellings are within:

- 400m walking distance of a bus stop;
- 800m walking distance from a railway station or line haul station; and/or
- 1,200m walking distance from a line haul station located within a town centre.

The stop/station must be serviced by at least ten services per weekday (by the time the buildings within the project are 50% occupied) to local facilities or other service centres or connecting transport systems. Legible direction signage to public transport stops is provided at key locations.

Evidence of existing transport location(s) and frequency of service. If public transport stop is proposed, details of proposal to local government and negotiations to date should be provided.

Evidence including arrangements and frequency.

Evidence including distribution and eligibility.

6.5.6 Shared transport

Provide a community transport network such as car share, car pool or community minibus, electric scooters/bikes to provide connectivity for the community.

Evidence including the location, arrangements and provider of scheme.



Criteria

Required Supporting Documentation

6.5.7 Efficient vehicles

Provide parking and charging for low-emitting, zero emitting, fully electric and fuel-efficient vehicles within the project for 100% of total carparking bays. 'Roughing in' of charging infrastructure to allow for future installation is also an acceptable outcome.

Evidence including the location and number of parks.

6.6 Engaging and inclusive public realm

Intent: To ensure the delivery of high quality public realm which provides an attractive, inclusive, non-discriminatory and safe environment for the community to meet, engage and recreate.

Requirement: Achieve at least **six credits** from the following options:.

Criteria

Required Supporting Documentation

6.6.1 Demonstrate a hierarchy of functions within the public realm.

The following required supporting documentation applies to Criteria **6.7.1** to **6.7.8**.

6.6.2 Include educational signage within public realm areas to provide educational information regarding indigenous or post-European heritage, ecology, or other notable features of the development, public realm area or surrounding area.

Statement of compliance from registered landscape architect, registered urban designer and/or planner with reference to plans.

6.6.3 The public realm is designed for intergenerational play to allow multiple uses for community members, including children, the elderly and disabled people with regard taken to safety, comfort and security. Provide appropriate seating, shading, accessible toilets and water bubblers.

6.6.4 The design of the public realm takes account of the role it plays in terms of inclusiveness and connectivity within and external to the project.

6.6.5 The design plans indicate how space for quality social interaction has been considered in the design of streets and open areas and choice of material throughout the project and its surroundings.

6.6.6 Benches and other seating areas are located in places with consideration of the sun, shade, wind and rain.

6.6.7 Create locally distinct places which connect people through place and strongly reflect the local identity of the area through the design of social spaces.

6.6.8 Demonstrate the flexibility of the public realm for multiple other uses (e.g. water sensitive urban design, conservation, business enterprises, healthy active living, etc).

6.6.9 Provide an attractive, safe and walkable street environment by planting or retaining street trees at 8-9 metre intervals, or demonstrate intervals appropriate to the chosen tree species and region to ensure maximum shade for pedestrians.

Evidence in landscape plans and statement from registered landscape architect.



Criteria

Required Supporting Documentation

Residential components

Requirement: Achieve **each** of the following:

6.6.10 A common area is provided within the project which is designed to encourage interaction amongst residents. The common area should include at least three of the following:

- community meeting space;
- composting facilities;
- communal or individual garden plots;
- worm farm facilities;
- in-ground deep soil planting;
- play space;
- sun-shaded area with seating;
- outdoor gym;
- outdoor dining; and/or
- barbecue facilities.

Evidence in plans and statement from landscape architect and/or architect.

6.6.11 Provide private external space to at least 90% of dwellings. The space must be equivalent in size to at least 15% of the area of each dwelling, or at least 2 x 3m (whichever is the greater). It must be directly adjacent and accessible from the dwelling(s).

Statement from architect and evidence in plans.

6.7 Housing diversity and economic prosperity

Intent: To ensure that the project makes a contribution to housing diversity within the context of the local neighbourhood and city.

Requirement: Achieve at least **six credits** from the following options:

Criteria

Required Supporting Documentation

6.7.1 Provide significant diversity of housing types including a mix of dwelling sizes (e.g. number of bedrooms) and/or densities of housing. Consideration given for diversity in housing provided at a neighbourhood level.

Evidence in plans and statement from developer including lot mix, and densities.



Criteria

Required Supporting Documentation

6.7.2 Develop a community economic/employment strategy with measurable outcomes which identifies:

- economic goals and priorities for the community;
- employment targets and the job balance ratio;
- activities to be provided within the project (e.g. retail, industrial, commercial or community based);
- socio-economic profile of the host local government area (based on at least the last two census);

Note: Where there have been local government amalgamations, define using a similar area.

- how the project will contribute to the host local government area's socio-economic profile; and
- net percentage increase in the number of jobs in the local area where the project replaces productive uses (e.g. redevelopment of an industrial area).

6.7.3 Provide at least 10% of dwellings as affordable housing or key worker accommodation.

Statement of compliance from developer and evidence of community economic/employment strategy and implementation plan.

Market analysis and house, land and/or house and land package prices.

6.8 Connected communities

Intent: To provide serviced communities with facilities to meet their needs and reduce the number of private car trips required.

Requirement: Provide services within project such that 75% of residences/workplaces are within 1km by foot or provided within two years of the first residential occupancy at least **five** of the following local services.



Criteria	Required Supporting Documentation
6.8.1 Newsagent	Evidence in plans, including walking distances.
6.8.2 Grocery/corner store	
6.8.3 Primary school	
6.8.4 Secondary school	
6.8.5 University	
6.8.6 Kindergarten, preschool, or childcare	
6.8.7 Medical practice	
6.8.8 Chemist	
6.8.9 Specialty stores	
6.8.10 Cafes and/or restaurants	
6.8.11 Community centre	
6.8.12 Dog park	
6.8.13 Public transport hub	
6.8.14 Emergency services (including rural fire brigade, ambulance, police)	
6.8.15 Community accessible facilities/spaces (e.g. rooms, public areas, education centres)	
6.8.16 Public toilets	
6.8.17 Farmers markets	
6.8.18 Community gardens	

6.9 Internet

Intent: Future-proofing residential developments by providing high speed internet infrastructure.

Requirement: Achieve the following:

Criteria	Required Supporting Documentation
6.9.1 Provide Wi-Fi opportunities and/or smart technology in a at least one primary public open space where people gather in the project to complement community amenity provision.	Statement of compliance from developer.



6.10 Safe and accessible living

Intent: To provide facilities and housing which are appropriate and accessible for a variety of people.

Requirement: Achieve **each** of the following:

Criteria	Required Supporting Documentation
6.10.1 Achieve in at least 50% of dwellings 'gold' performance levels under the Livable Housing Australia's 'Livable Housing Design Guidelines'.	Evidence in plans, and statement from architect or building designer and developer.
6.10.2 All common areas are universally accessible.	Evidence in plans, and statement from architect.

6.11 Healthy and active communities

Intent: To design and deliver communities which promote community-based physical activity and support healthy lifestyle behaviours.

Requirement: Achieve at least **two credits** from the following options:

Criteria	Required Supporting Documentation
6.11.1 Ensure all dwellings have access to neighbourhood parks within 400m (or a five minute walk) for a pocket park, and up to 800m (or a ten minute walk) for neighbourhood / active recreation parks.	Evidence in plans and statement from planner.
6.11.2 Provide supplement opportunities to support local community providing infrastructure encouraging mental health and wellbeing in close proximity to the project site.	Evidence of programs/infrastructure with benefit analysis.
6.11.3 Include design considerations to encourage pet ownership. Considerations could include dog washing station, private off-lead area and pet doors on balconies.	Evidence in plans and statement from architect.
6.11.4 Provide active travel links that are attractive, safe, direct and convenient to ensure permeability, creating better accessibility towards a destination.	Evidence in plans and statement from planner.

Glossary

Affordable in the context of residential property means:

- a. the average weekly rent payable by occupiers for a residence in the local region is equal to or less than 30% of the median household income for the local region; and
- b. the average weekly home loan repayment payable by owner occupiers for a residence in the local region is equal to or less than 30% of the median household income for the local region where weekly mortgage repayments are calculated on the basis that the initial loan was for an amount equal to 90% of the purchase price for a term of 30 years and the interest rate is equivalent to the standard variable home loan rate charged by the project developer's financial institution.

AFFL means above finished floor level.

AFS means Australian Forestry Standard.

Appropriately qualified professional means a person or persons with tertiary qualifications or equivalent in the relevant area to the satisfaction of the EnviroDevelopment Board of Management.

ARI means average recurrence interval; the average or expected value of the periods between exceedances of a given rainfall total accumulated over a given duration.

Brownfield site means land within an urban area, which at the time of purchase, a minimum of 50% of the site had been previously built on.

Building Code of Australia means Volumes One and Two of the National Construction Code, being the set of technical provisions for the design and construction of buildings and other structures, produced and maintained by the Australian Building Codes Board (ABCB) on behalf of the Australian Government and State and Territory Governments.

Building Products Innovation Council means the national body representing Australia's building product associations and developer of the [Building Products Life Cycle Inventory](#).

Building Products Lifecycle Inventory Data Protocol means the method and database developed by the [Building Products Innovation Council](#) for life cycle assessment of building products.

Climatic zones means those defined as per the [Building Code of Australia](#).

Communal uses means facilities and spaces within a project that are designed and constructed for communal use by owners, occupiers, residents and employees (as applicable).

Community Development Officer means a person engaged to oversee a range of practices to service members of the community and increase liveability and social interaction.

Community facilities includes community halls, community centres, recreational clubs, parkland and other facilities designed and constructed for communal use by owners, occupiers, residents and employees (as applicable).

COP means coefficient of performance of air conditioning systems.

CPTED means the Crime Prevention Through Environmental Design strategy for the local government area or State (as applicable) in which the Project is located, being the strategy which outlines how physical environments can be designed in order to lessen the opportunity for crime. If a CPTED strategy is not in place for the local government area or State in which the Project is located, then the CPTED strategy for Queensland will be the relevant document.

Deep planting means an area dedicated to the protection and establishment of significant landscape trees.

Design guidelines means an enforceable system of design and related principles whether operating under contract, deed, covenant, architectural and landscape code for body corporates or some other means satisfactory to the EnviroDevelopment Board of Management. The developer may be asked to demonstrate active design guideline enforcement.

Environmental weed is a plant that invades native ecosystems and adversely affect the survival of indigenous flora and fauna. They may have significant economic and social impacts, as well as environmental impacts, including reduction in biodiversity.

EER means the energy efficiency ratio relating to the performance of air conditioning systems.

EPBC Act means Environmental Protection and Biodiversity Act 1999, as amended or replaced from time to time.

FSC means Forest Stewardship Council.

Green Infrastructure means a network of green spaces and planting, designed and managed to support the liveability, sustainability and resilience.

IUCN Redlist means the index compiled by the International Union for Conservation of Nature to identify and document plant and animal species most in need of conservation attention if global extinction rates are to be reduced, as amended or replaced from time to time.

Key worker is a person who is employed as an emergency service worker (police, ambulance, fire brigade etc), nurse or educator.

Line haul station means a a public transport interchange located on a fixed line public transport corridor, such as heavy rail line, light rail line or busway.

Locally native means native plants which are endemic to the area.

Low emission adhesives means adhesives which meet the following VOC limits:

- Indoor Carpet Adhesives <50g/L
- Carpet Pad Adhesives <50g/L
- Outdoor Carpet Adhesives <150g/L
- Wood Flooring Adhesive <100g/L
- Rubber Floor Adhesives <60g/L
- Subfloor Adhesives <50g/L
- Ceramic Tile Adhesives <65g/L
- VCT and Asphalt Tile Adhesives <50g/L
- Dry Wall and Panel Adhesives <50g/L
- Cove Base Adhesives <50g/L
- Multipurpose Construction Adhesives <70g/L
- Structural Glazing Adhesives <100g/L
- Single Ply Roof Membrane Adhesives <250g/L

Low emission floor coverings means floor coverings which have maximum VOC limit of <0.5mg/m²/hr (14 days).

Low emission paints means paints which have a VOC limit of <50g/L.

Low emission sealants means sealants which meet the following VOC limits:

- Architectural <250g/L
- Marine Deck <760g/L
- Nonmembrane Roof <300g/L
- Roadway <250g/L
- Single-Ply Roof Membrane <450g/L
- Other <420g/L

MUSIC means the Model for Urban Stormwater Improvement Conceptualisation simulation software which simulates urban stormwater systems operating at a range of temporal and spatial scales, catchments and modelling time steps.

National Construction Code means the National Construction Code published by the Australian Building Codes Board comprising the Building Code of Australia (Volumes One and Two) and the Plumbing Code of Australia (Volume Three) as amended or replaced from time to time.

Non-metropolitan sites means projects that are located in areas, towns and other localities outside the boundaries of capital cities and major urban centres.

Potable water means water of a quality suitable for drinking, cooking and personal bathing having regard to the Australian Drinking Water Guidelines developed by the National Health and Medical Research Council and amended or replaced from time to time.

Project means the development which is the subject of the application for EnviroDevelopment.

Public spaces means land that is publicly accessible but must be more than just road.

RAP means reclaimed asphalt pavement.

Significantly modified means land which has previously been utilised for intensive uses and has little or limited ecological value.

Statement of compliance means a statutory declaration or other form of written statement by the developer of the project or a senior project representative engaged by the developer of the project which sets out the particular facts and circumstances and details the level of compliance with the criteria.

Threatened species means as listed under the EPBC Act or IUCN Red List or legislation for the State in which the project is located.

VOC means volatile organic compounds.

Weighting of Environmental Impacts in Australia means the report produced to establish a toolkit of resources that will permit comprehensive Life Cycle Assessment of building and construction materials and products, building elements and assemblies, and whole buildings in Australia. The report outlines the approach taken to developing a set of regionally relevant and Australian average weighting factors, which reveal how Australian stakeholders subjectively judge the relative importance of different environmental impacts in different locations/climates around Australia.



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