

Green Infrastructure Design Checklist

For use with Guidelines for Green Infrastructure

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and Merri-bek City Council

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This Checklist details relevant planning and design considerations when incorporating GI onto a new development, following City of Melbourne and Merri-bek City Council's Guidelines for Green Infrastructure from early planning to post-construction and maintenance. For further direction or detail regarding a particular element of a GI asset, see the associated page number in the leftmost column. The rightmost column highlights when qualified personnel may be consulted for advice as needed.

This Checklist is separate from any planning or building permit application requirements. Please determine planning requirements for your development by checking the Planning Scheme or liaising with the relevant Responsible Authority.

Site and context

Page	Item	Relevant expertise
Site area		
11	<input type="checkbox"/> Establish site area for the development	Land Surveyor
11	<input type="checkbox"/> Determine extent of deep soil (>500mm) on-site	Geotechnical Engineer
11	<input type="checkbox"/> Determine soil type present and suitability for in-ground planting	Landscape Architect, Horticulturalist
11	<input type="checkbox"/> Test for soil contaminants and pH and amend as required	Soil scientist, Geotechnical Engineer
11	<input type="checkbox"/> Identify pre-existing vegetation that can be retained	Horticulturalist
11	<input type="checkbox"/> Identify and retain significant trees on-site	Horticulturalist/Arborist
11	<input type="checkbox"/> Determine canopy spread of retained trees & expected canopy spread post-development and maturation of new canopy trees	Horticulturalist
Local context		
11	<input type="checkbox"/> Locate nearby open space or parklands to inform connections and/or planting design	Horticulturalist Council Open Space Team
12	<input type="checkbox"/> Determine potential vegetation overhang to neighbouring properties, including any hazardous vegetation to be removed.	Horticulturalist
12	<input type="checkbox"/> Liaise with neighbouring property owners and discuss plans to implement GI	
Site constraints		
12	<input type="checkbox"/> Determine level of sunlight available to inform planting design	Landscape Architect
12	<input type="checkbox"/> Determine the presence of high winds and associated risks	Landscape Architect
12	<input type="checkbox"/> Ascertain whether GI assets will be located on private or common property, and appropriate responsibility for maintenance	Building Surveyor Land Surveyor
12	<input type="checkbox"/> Determine responsibility for ongoing vegetation maintenance—engage with neighbouring property owners as required	Horticulturalist

Buildings and structures — host building

Page	Item	Relevant expertise
Adjacent structures and equipment		
12	<input type="checkbox"/> (Green roofs) Determine any additional structures and equipment to be co-located with GI asset	Landscape Architect
Weight load		
13	<input type="checkbox"/> Determine weight load of building and applicable typologies	Structural engineer
13	<input type="checkbox"/> (Green roofs and plants in containers) Determine point loads for roof/balcony surfaces	Structural engineer
13	<input type="checkbox"/> (Green roofs and plants in containers) Determine appropriate spaces for locating heavy elements above structural columns	Structural engineer
13	<input type="checkbox"/> (Green roofs) Determine applicability of roof weight loads, including point loads for extensive or intensive green roof	Structural engineer
Fire risk		
13	<input type="checkbox"/> Determine fire risks present on building	Building Surveyor Fire Safety Engineer
13	<input type="checkbox"/> Consider contribution to fire risk from added greenery	Building Surveyor Fire Safety Engineer
13	<input type="checkbox"/> (Green façades and green walls) Locate non-operable and operable windows and ascertain risk of fire spread from vegetation	Building Surveyor Fire Safety Engineer

Buildings and structures

— Green Infrastructure design elements

Page	Item	Relevant expertise
Green roofs		
13	<input type="checkbox"/> Determine appropriate system for development—extensive/intensive	Structural Engineer
13	<input type="checkbox"/> Determine any arbours, trellis, or other structures to incorporate and structural weight load implications	Structural Engineer
Green walls		
13	<input type="checkbox"/> Determine connections to drainage points for external green walls	Structural Engineer
13	<input type="checkbox"/> Determine anchor points for attaching vertical infrastructure and associated weight loads	Architect Structural Engineer
Green façades		
13	<input type="checkbox"/> Specify products to be used for growing plants—trellis/cable/mesh	Landscape Architect/Horticulturalist
13	<input type="checkbox"/> Determine anchor points for attaching vertical infrastructure and associated weight loads	Architect Structural Engineer
Planters on structure		
13	<input type="checkbox"/> Determine size of planters and appropriate plant species/sizes	Landscape Architect/Horticulturalist
13	<input type="checkbox"/> Locate planters to not impede accessibility to exits	Landscape Architect
13	<input type="checkbox"/> Locate structural columns for placement of heavy planters	Structural Engineer/ Landscape Architect
13	<input type="checkbox"/> Anchor fixed furnishings onto structure	Landscape Architect

Waterproofing and drainage

Page	Item	Relevant expertise
Waterproof membranes		
14	<input type="checkbox"/> Determine waterproofing membrane to use and testing method/system	Waterproofing Expert
14	<input type="checkbox"/> Specify waterproofing product and design—ensure UV stability and root resistance barrier	Waterproofing Expert
14	<input type="checkbox"/> Install waterproofing to AUS/NZ Standard	Waterproofing Expert Master Plumber
Testing waterproofing		
14	<input type="checkbox"/> Test waterproofing for correct installation and eliminate leaks	Waterproofing Expert
Drainage systems and cells		
15	<input type="checkbox"/> Determine legal point of discharge (LPOD) for drainage system	Master Plumber Council Drainage Team
15	<input type="checkbox"/> Specify drainage system including any surface drains and pits for additional drainage/access	Master Plumber

Irrigation systems

Page	Item	Relevant expertise
Irrigation design		
16	<input type="checkbox"/> Determine irrigation demand	Horticulturalist
16	<input type="checkbox"/> Determine appropriate irrigation methods and systems	Irrigation Specialist
16	<input type="checkbox"/> Ensure backflow prevention devices are properly installed	Master Plumber
Alternative water sources		
16	<input type="checkbox"/> Connect alternative water sources where possible	Master Plumber
16	<input type="checkbox"/> Ensure alternative water sources are appropriately filtered for use	Master Plumber
Irrigation frequencies		
16	<input type="checkbox"/> Test irrigation system and calibrate for system	Horticulturalist/ Irrigation Specialist/ Maintenance Coordinator
16	<input type="checkbox"/> Connect irrigation system to BMS where appropriate	Irrigation Specialist /Maintenance Coordinator
16	<input type="checkbox"/> Monitor and calibrate irrigation regime through establishment	Maintenance Coordinator
16	<input type="checkbox"/> (Green walls and façades) Determine fertigation system suitability—where alternative water sources are not in use	Irrigation Specialist

Planting

Page	Item	Relevant expertise
Growing media		
17	<input type="checkbox"/> Specify growing media for plantings and timelines for refreshing growing media/replacing planters	Horticulturalist
Elevation and aspect		
17	<input type="checkbox"/> Determine appropriate plantings for available sunlight and high winds	Horticulturalist
Vertical screening		
17	<input type="checkbox"/> Determine appropriate evergreen/deciduous species for shade	Horticulturalist
Green roof vegetation		
17	<input type="checkbox"/> Determine appropriate plant species for system and soil depth	Horticulturalist
17	<input type="checkbox"/> Determine long-term design approach and ongoing maintenance	Horticulturalist
17	<input type="checkbox"/> Determine appropriate species for visitors if applicable—sensory experiences and allergy considerations	Horticulturalist

For more information visit:

merri-bek.vic.gov.au/better-quality-developments

melbourne.vic.gov.au/green-infrastructure



Merri-bek
City Council

