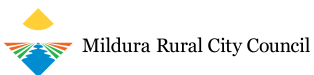


Sustainable subdivisions



Design and documentation checklist



Contents

3	Introduction
4	The three focus areas
5	What the checklist covers
5	Planning permit approval process
6	Design and documentation checklist
8	Integrated water management
9	Ecology and urban heat
11	Site layout and liveability
12	Supporting information
12	Additional information guiding the submission of the checklist
12	What should Clause 56 assessment plans demonstrate?
15	Nexus with the planning scheme
19	Glossary

Councils involved in the development of the checklist

- City of Ballarat
- City of Greater Bendigo
- City of Greater Geelong
- Horsham Rural City Council
- Mildura Rural City Council
- Moorabool Shire Council
- Warrnambool City Council



Introduction

The *Sustainable subdivisions design and documentation checklist* (the checklist) has been designed to support developers and consultants to better understand Local Government Councils expectations on the preferred outcomes and level of information to be submitted when delivering sustainable subdivisions in line with planning scheme requirements.

When is the checklist required

The checklist applies to planning permit applications proposing 16 or more lots and construction of a road. A subdivision creating 250 lots should address the full requirements of the Sustainable Subdivisions Framework which can be found on the Council Alliance for a Sustainable Built Environment (CASBE) website.

How to use the checklist

This checklist will be used by council planning departments when assessing compliance with the planning scheme and identify proposals exceeding the minimum requirements.

An applicant is to submit the checklist for each category along with the required documents supporting the application.

The three key categories complement each other to deliver sustainability into subdivisions that align with current planning provisions.

Developers, consultants, and council officers are encouraged to discuss the opportunities to exceed the minimum planning scheme requirements and push for better practice not just in the three focus areas.

Additional information to assist with the submission of the checklist can be found on pages 12-14.

Consult with your council on the specific councils policies and standards.

The three focus areas

When developing this resource, the participating councils agreed on three key focus areas of high importance: **Integrated water management**, **ecology and urban heat**, and **site layout and liveability**. In most subdivision applications however, none, or partial information is submitted as supporting documentation to be assessed. These key focus areas are considered base line requirements of a sustainable subdivision, and the requirements of the planning scheme. This checklist over time may be extended to include other sustainable subdivisions considerations. The SSF includes the categories of streets and public realm, energy and circular economy which can be found on the Council Alliance for a Sustainable Built Environment (CASBE) website.

1. Integrated water management (IWM)

The role of IWM as the local drainage authority concentrates on optimal stormwater management across its municipality, to ensure stormwater is adequately utilised as a resource for healthy urban climates. The checklist focuses on retaining stormwater on site where appropriate via rainwater in tanks, using recycled water for public and private lots where available, minimising the amount of concrete and bitumen and maximising permeability and via Stormwater Management Strategy (SMS) demonstrating how the subdivision incorporates IWM.



2. Ecology and urban heat

The role of ecology and urban heat complements IWM and seeks to retain and enhance ecology by responding to, protecting, and improving biodiversity and canopy coverage and reducing hard stand areas. The checklist measures will assist in maintaining human health and well-being during periods of extreme heat and should be shown on relevant plans including a landscape plan, street network plan or other relevant detailed design plan. The benefits of locating walking and cycling networks alongside blue and green infrastructure aligns with this category. It is important to have walking and cycling paths considered alongside the development of landscape designs and water sensitive urban design (WSUD) to help inform where elevated levels of tree canopy coverage are required.



3. Site layout and liveability

A subdivision can improve the liveability of a neighbourhood for residents by safely connecting residents to open space and local amenities both within and beyond the site. Majority of lots to have the longest axis on an east west axis promoting solar passive design and installation of renewable energy systems on north facing roofs. The location of crossovers, the length of streets, avoidance of cul-de-sacs unless they connect to open space and the use of traffic calming measures all influence the liveability of streets.



What the checklist covers

The checklist covers:

- The minimum and aspirational requirements for new subdivision in line with planning scheme requirements
- Guidance on the documents required to deliver the minimum expectations of councils

The checklist **does not** cover:

- Detailed engineering requirements for stormwater drainage and Water Sensitive Urban Design (WSUD)
- Detailed requirements of the Infrastructure Design Manual (IDM)
- Technical detailed design or submission requirements specific to a council after a planning permit has been issued

Nexus to the planning scheme

There is a clear nexus between the checklist requirements and the Victoria Planning Provisions (VPP). Refer to the table on pages 15–18 for more detail.

Planning permit approval process

There are clear stages for the assessment and approval of a planning permit. The sustainable subdivision requirements align with the permit assessment process.

Stage 1: Pre-application meeting

The first stage of the process is to apply for a pre-application meeting where the proposal will be discussed between the applicant/consultants and the Town Planner. The Town Planner along with relevant council officers will provide feedback on the plans (not only from the subdivisions sustainability perspective). Written advice on what is required to address the checklist will be provided as part of that feedback.

Stage 2: Plans are submitted as part of the planning permit and are reviewed against the checklist

As part of the planning permit assessment process, a site and features plan, local context plan, stormwater management strategy, landscape design, a Clause 56 written response directing a planner to the relevant plan where the objective or standard is addressed (could be in the form of a Clause 56 response plan) and functional layout plan (if prepared) are to be uploaded along with a copy of the completed checklist.

These documents will be reviewed by the Town Planner and referred to internal officers to ensure the proposal meets the requirements of the planning scheme.

Stage 3: Planning permit has been issued, and plans are endorsed or conditionally required

Where a planning permit issues and documents are submitted with the application to the satisfaction of the responsible authority, plans will be endorsed. Where submitted documents do not adequately address the planning scheme requirements, conditional requirements may form part of the planning permit. This may include the requirement for a detailed landscape plan, functional layout plan, detail on the stormwater quality measures to be shown on plan, commitment to a specific canopy coverage target noted on plan etc.

Endorsed plans may include landscape design/detailed landscape plan, stormwater management strategy, Clause 56 assessment plan, functional layout plan showing cross over locations etc.





Design and documentation checklist

Documents to be submitted with a subdivision application	Submitted Yes/No
<p>1 A planning report including a written response to Clause 56 (Residential subdivisions) detailing how the proposal meets the objectives and standards of Clause 56. The Clause 56 written response is to direct the assessing council officer to the specific plan(s) where the objective or standard has been met. Plans could include a landscape design; street detail plans; a Clause 56 response plan; and a Stormwater Management Strategy. See <i>Figure 1: Exemplar Clause 56 written response</i> on page 13.</p>	<input type="checkbox"/>
<p>2 Site features plan (Clause 56.01-1). Clause 56.01-1 requires a 'site and context plan' to be submitted. The 'site' component of this requirement refers to the site and its specific features. The level of detail required to be shown can vary depending on the natural and manufactured features identifiable on site, the number of lots proposed and features immediately adjoining the land (i.e. native trees in the road reserve, low level vegetation etc.). This plan assists consultants and council officers to understand the opportunities and constraints the subject land presents.</p>	<input type="checkbox"/>
<p>3 Local context plan (Clause 56.01-1) The local context plan shows essential elements beyond the site and should extend a minimum one kilometre from the site. This assists consultants and council officers to understand how the subdivision plan has responded to the local context. See <i>Figure 2: Exemplar local context plan</i> on page 14 for more detail.</p> <p>Both the site features plan and the local context plan are to be supported by the written response to Clause 56.01-1 (Subdivision site and context description) and photographs as relevant to assist councils' assessment.</p> <p>The following information should be included on the local context plan to demonstrate an understanding of the area:</p> <ul style="list-style-type: none"> • A snapshot of the uses within a minimum distance of one kilometre surrounding the subject land • Detail on the following walking catchments on plan: 400m from a bus stop, 600m from a tram stop and 800m from a train station. Detail the number of dwellings captured in each catchment • Location of commercial and industrial land, open space, public assets, bus stops (existing and proposed), shared paths and other key public transport options (trains/trams etc.) in the immediate surrounds • All roads extending around and near the site, including the road hierarchy and any existing access points to the site • Major water features and stormwater infrastructure, including underground infrastructure adjoining and nearby the site • Key biodiversity assets, existing ecological features, existing streets with high percentage of tree canopy vegetation, native shrubs, grasses and known habitat of threatened species (if any) and its proximity to the land • Key climatic conditions (solar orientation arc and prevailing wind arrows) • The location(s) of walking and cycling paths within proximity to the site and opportunities to connect to any such paths. This will allow for continuous walking and cycling paths between subdivisions and connections to, and the extension of, key walking and cycling shade ways 	<input type="checkbox"/>

Documents to be submitted with a subdivision application

- 4 A response to Clause 56 (Residential subdivisions) in the form of a plan(s) showing how the proposal will meet the objectives and standards of Clause 56. This detail may be shown over several plans including:
- A street detail plan (Clause 56.06–7 Standard C20), including indicative tree locations, all vehicle crossover locations, and all other services as per Standard C20
 - A stormwater management strategy (Clause 56.07 Standards C22–C25), including water detention measures and a commitment to reducing potable water usage and water quality measures to be provided on-site and potentially off-site
 - Native vegetation, biodiversity and arboriculture reports submitted where relevant
 - Clause 56 assessment plan including a written response to Clause 56 should detail which plan a council officer should view to see the measures proposed (see exemplar Clause 56 Assessment Plan on page 14)
- 5 Landscape design (Clause 56.05 Standards C12 and 13) that includes a commitment to deliver councils tree canopy coverage targets, tree planting themes, the location and proposed use of public open spaces, a street planting schedule and how this supports shade ways for safe movement. Preferably, these shade ways will link with existing or planned future public open spaces within and beyond the land subject to the subdivision application.
- 6 A subdivision plan, including lot size and diversity table, tree canopy coverage targets, footpaths and crossovers, open spaces and walking and cycling tracks etc.
- 7 If native vegetation is proposed to be removed, provide a clear plan showing all existing vegetation and with each of these clearly annotated to depict if the vegetation is proposed to be retained or removed.





1 Integrated water management

Sustainable water management requirements aim to integrate the use of all water resources, including rainwater, re-used water, recycled water, and stormwater. This assists in reducing the use of potable water.

Standard practice requirements

Submitted
Yes/No

1	Stormwater Management Strategy (SMS) including water quality monitoring has been submitted.	<input type="checkbox"/>
2	Rainwater tanks shown in water quality monitoring treatment train: 2,500ltrs lots less than 500m ² , 5,000ltr lots greater than 500m ² .	<input type="checkbox"/>
3	Onsite detention within rainwater tank accepted providing storage capacity is in additional to stormwater treatment capacity shown in water quality monitoring.	<input type="checkbox"/>
4	WSUD treatment trains shown on plan: i.e. swales, passive irrigation, wetlands, sediment ponds etc.	<input type="checkbox"/>
5	Creek restoration and protection areas marked on plan. This space should be ecological restored consistent with local Ecological Vegetation Classification (EVC) characteristics to include habitat features such as snags, rock or hollow logs.	<input type="checkbox"/>
6	Recycled water connection to each lot where available.	<input type="checkbox"/>
7	Precinct scale recycled water connected to public realm where available.	<input type="checkbox"/>
8	Any change to the flow of water across land must not have a detrimental impact on habitat, existing, retained or proposed vegetation as a result of any reduction or increase in water flow. i.e. open space with a conservation area that has a dramatic increase in water may detrimentally impact on vegetation.	<input type="checkbox"/>

Better practice opportunities

Submitted
Yes/No

1	Demonstrated alignment with 'sponge city' principles.	<input type="checkbox"/>
2	Use of IWM to support ecology outcomes (such as passively irrigating revegetation areas or creating of a frog habitat).	<input type="checkbox"/>
3	Grey water systems proposed at lot scale.	<input type="checkbox"/>
4	Other innovative solutions.	<input type="checkbox"/>



2 Ecology and urban heat

Retain and enhance ecology by responding to, protecting, and improving biodiversity and canopy coverage and by reducing hard stand areas. These measures assist in maintaining human health and well-being during periods of extreme heat and should be shown on the landscape plan, street network plan or other relevant detailed design plan.

Standard practice requirements		Submitted Yes/No
1	Implementation of the three step approach in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017).	<input type="checkbox"/>
2	Green and blue areas marked on the landscape design providing shade and biodiversity corridors.	<input type="checkbox"/>
3	Green and blue infrastructure link active spaces via walking and cycling networks.	<input type="checkbox"/>
4	Landscape design - The desired tree canopy coverage target of council is detailed on plan (consult council on the target). Where no council adopted tree canopy coverage target exists, 25% minimum canopy coverage in the public realm is desired.	<input type="checkbox"/>
5	Landscape design - Native vegetation on adjoining land potentially impacted by civil works.	<input type="checkbox"/>
6	Landscape design - Water bodies, understory and irrigated areas detailed on plan.	<input type="checkbox"/>
7	Landscape design - Planting schedule of all trees, shrubs, understory, and cross section where applicable.	<input type="checkbox"/>
8	Key pedestrian routes marked on plan, shown as cool routes, and connecting public open space.	<input type="checkbox"/>
9	Hard stand areas are minimised and/or shaded via canopy trees in the road reserve used as traffic calming measures.	<input type="checkbox"/>

✓ Better practice opportunities

Submitted
Yes/No

- | | | |
|---|---|--------------------------|
| 1 | Canopy coverage exceeds council requirements. Canopy coverage target is noted on the relevant landscape plan. Consult with council on the canopy coverage target if unsure. | <input type="checkbox"/> |
| 2 | All public realm building, and shelter roof colours are to be designed and constructed to be light – medium colour (as per the Building Code of Australia (BCA) definitions) typically whites or cream with low solar absorbance. | <input type="checkbox"/> |
| 3 | Private realm building roofs colours are addressed in the ESD (Environmentally Sustainable Design) Guidelines for dwellings and other buildings. | <input type="checkbox"/> |
| 4 | 5% of the subdivision set aside for biodiversity, rehabilitation or establishment. | <input type="checkbox"/> |





3

Site layout and liveability

A subdivision can improve the functional layout and liveability of a site by connecting residents to local amenities within and beyond the site. The below items are to be notated on the relevant plans.

Standard practice requirements		Submitted Yes/No
1	Site features plan (as per dot point 2 on page 6).	<input type="checkbox"/>
2	Local context plan (minimum 1km from the perimeter of the site as per dot point 3 on page 6 and exemplar plan on page 14).	<input type="checkbox"/>
3	Clause 56 assessment plan (as per dot point 4 on page 6, exemplar clause 56 plan on page 14, and detailed requirements of the planning scheme noted on pages 12 and 13).	<input type="checkbox"/>
4	Minimise cul-de-sacs shown on plan unless they link to public open space networks which facilitate walking and cycling.	<input type="checkbox"/>
5	Maximum street length of 200m.	<input type="checkbox"/>
6	A street detail plan (Clause 56.06-7 Standard C20), including indicative tree locations, all vehicle crossover locations (preferable single width), and all other services.	<input type="checkbox"/>
7	Demonstrated on plan the majority of lots have an east west longest axis. This will be influenced by natural features and constraints of the site.	<input type="checkbox"/>

Better practice opportunities		Submitted Yes/No
1	Commit to the provision of a microgrid or virtual power plant where a minimum 80% of lots can access, and show on subdivision design response.	<input type="checkbox"/>
2	Commit to the provision of a community battery where a minimum 40% of lots can access, and show on subdivision design response.	<input type="checkbox"/>
3	Detail on plan location of proposed public electric vehicle charging stations.	<input type="checkbox"/>



Supporting information

Additional information guiding the submission of the checklist

The following information is designed to guide the submission of the checklist and required documents for a subdivision application. This will assist with facilitating a quicker assessment by council officers. The primary focus of the checklist is residential subdivisions, however many of the checklist requirements are applicable to industrial subdivisions.

This section provides exemplar plans to illustrate:

- The expected level of detail to be shown on a local context plan
- The level of detail to be provided on plan(s) in response to Clause 56
- A written response to Clause 56 directing council officers to specific plans demonstrated Clause 56 requirements
- A Clause 56 response plan(s) detailing how Clause 56 measures are being addressed

A planning permit assessment timeline is also provided to detail the importance of providing accurate information when lodging an application.

The checklist and document requirements are linked to existing planning scheme requirements creating a nexus between the ask for information and the need for information to be submitted with the subdivision planning permit application for assessment. A table illustrating the nexus can be found on pages 15-18.

What should Clause 56 assessment plans demonstrate?

A Clause 56 Assessment Plan in most instances will be a series of plans detailing where the objectives and/or standards of Clause 56 have been addressed.

The Clause 56 assessment plan is to be supported by a written response to Clause 56. The written response will detail on which plan(s) the objectives and standards of Clause 56 have been addressed. For example, Clause 56.05-1 (Integrated urban landscape objectives and standards) should direct the reader to the landscape design where the detail would be marked with 'Standard C12'.

The following items should be shown on plan(s) to satisfy the relevant requirements of Clause 56 (Residential subdivisions). Where a standard in Clause 56 cannot be shown on plan, a notation highlighting how the standard is met is required for ease of identification.

Lot design (diversity and orientation):

- A table detailing the number of lots and percentage of lot sizes of a comparable size. This table should be colour-coded to match lot locations and confirm overall site area, lot density per hectare, staging order and the percentage of lots achieving solar orientation objectives and standards
- A colour-coded legend showing all title boundaries, staging boundaries, super lots, major contours, open space walking catchments, public transport walking catchments and key shade ways and safe pedestrian access routes to internal and neighbourhood public open spaces
- Majority of lots preferred to have longest axis within 20 degrees north and 30 degrees south of east/west (roads to be north to south where possible). This promotes good solar orientation to maximise renewable energy generation and storage, maximise solar access to secluded private open spaces and passive solar design

Urban landscape and integrated water management (integrated landscape and open space) requires the submission of a landscape plan detailing:

- A commitment on plan for a minimum percentage canopy coverage target as per relevant Responsible Authority requirements and acknowledgement of the existing tree canopy coverage prior to development
- Streets with minimum % tree canopy coverage streets connecting to open spaces within or beyond the site noted on plan
- Nominate the spatial areas where blue and green infrastructure will be located, including WSUD features
- Reference a link to the landscape design and other relevant Clause 56.05-1, Standard C12 considerations
- Note all public open spaces (parks) within 400 metres safe walking distance of 95% of dwellings
- Provisions for recycled or reused water supply if available
- Safe, clear walking and cycling linkages between open spaces

Access and mobility:

- The location(s) of walking and cycling networks accessible to all people that show:
 - existing neighbourhood and regional walking and cycling networks and links accessed from the subject site
 - the location(s) of priority pedestrian and cycling routes linking with nearby activity centres, community facilities, public transport stops and public open spaces
 - the provision of a continuous network of safe, efficient, and convenient footpaths, shared paths, cycle paths and cycle lanes based primarily on the network of arterial roads, neighbourhood streets and regional public open spaces
- 400 metre street walking routes to/from bus stops and 800 metre street walking routes to/from railway stations
- Minimise cul-de-sacs and align with walking and cycling permeability where a cul-de-sac is required
- The provision of low-speed environments where traffic calming measures and increased canopy trees are promoted
- A commitment noted on plan to show barrier kerbs and single width crossovers to be constructed prior to statement of compliance

Site management and utilities:

- Any commitment to use recycled materials in civil works available in your area (i.e. recycled concrete for footpaths and barrier kerbs, recycled crushed concrete for road base, asphalt mix with recycled content etc.)
- Reference to service plans where all services are shown on plan and tree locations and growth are first inclusions along with crossover location commitments

A street detail plan that shows, as relevant:

- Location(s) of carriageway pavement, parking, bus stops, kerbs, crossovers, footpaths, tactile surface indicators, cycle paths and speed controls and traffic management devices
- Any relevant details for the design and location of street furniture, lighting, seats, bus stops, telephone boxes and mailboxes
- The street hierarchy and typical cross-sections for all street types

This plan should be accompanied by a written response to the objective and standards of Clause 56.

Exemplar Clause 56 written response

Standard	Objectives	References	Sustainable Subdivision Checklist requirements
C2	Compact and walkable neighbourhoods'	See Clause 56 response plan. The plan has references to Standard C2 detailing street walking distances to public transport and dwellings within that catchment.	<p>The submitted plan of subdivision meets the objectives of Clause 56 as relevant.</p> <p>The subject site will be serviced by the future bus route. The PSP (Precinct Structure Plan) does not nominate any public transport shelter (bus stop) being required at the frontage of the subject site.</p> <p>As denoted in the plan, all lots within this subdivision are within the 400 metre walking catchment to proposed bus stops as well as the proposed public open spaces.</p>
C7	Lot diversity and distribution	See the subdivision layout plan. The plan has a lot size and diversity table.	<p>The layout proposes a range of lot sizes to enable diversity of housing types. See lot size and diversity table on the Clause 56 plan.</p> <p>All lots will be within 400 metres of a bus stop, (no tram or train stations are within 800m of the of the site).</p> <p>The average net residential density is 20 lots per hectare.</p>
C9	Solar orientation of lots	See Clause 56 response plan. The plan has references to Standard C9. The lots meeting this long axis requirements are marked with an Asterix.	<p>The site achieves good solar orientation of lots and solar access for future dwellings by providing the following details illustrated on the Clause 56 plan:</p> <ul style="list-style-type: none"> • Majority of lots have their longest axis within 20 degrees north and 30 degrees south of east lots marked with an asterix on the Clause 56 plan submitted for assessment demonstrate this
C12	Integrated urban landscape	See landscape design. The objectives and standards achieved are marked on plan with Standard C12.	<p>Please see landscape design for the following:</p> <ul style="list-style-type: none"> • Percentage canopy coverage commitment • Walking and cycling networks connected to open space and community facilities • Blue and green infrastructure marked on plan including water sensitive urban design features in streets and open space • Safe walking distances of local parks • Lineal parks and trails along waterways, vegetation corridors within 1km of 95% of dwellings • Creek restoration works and enhancements proposed <p>In addition see the the maintenance plan outlining the maintenance responsibility, requirements and costs.</p>

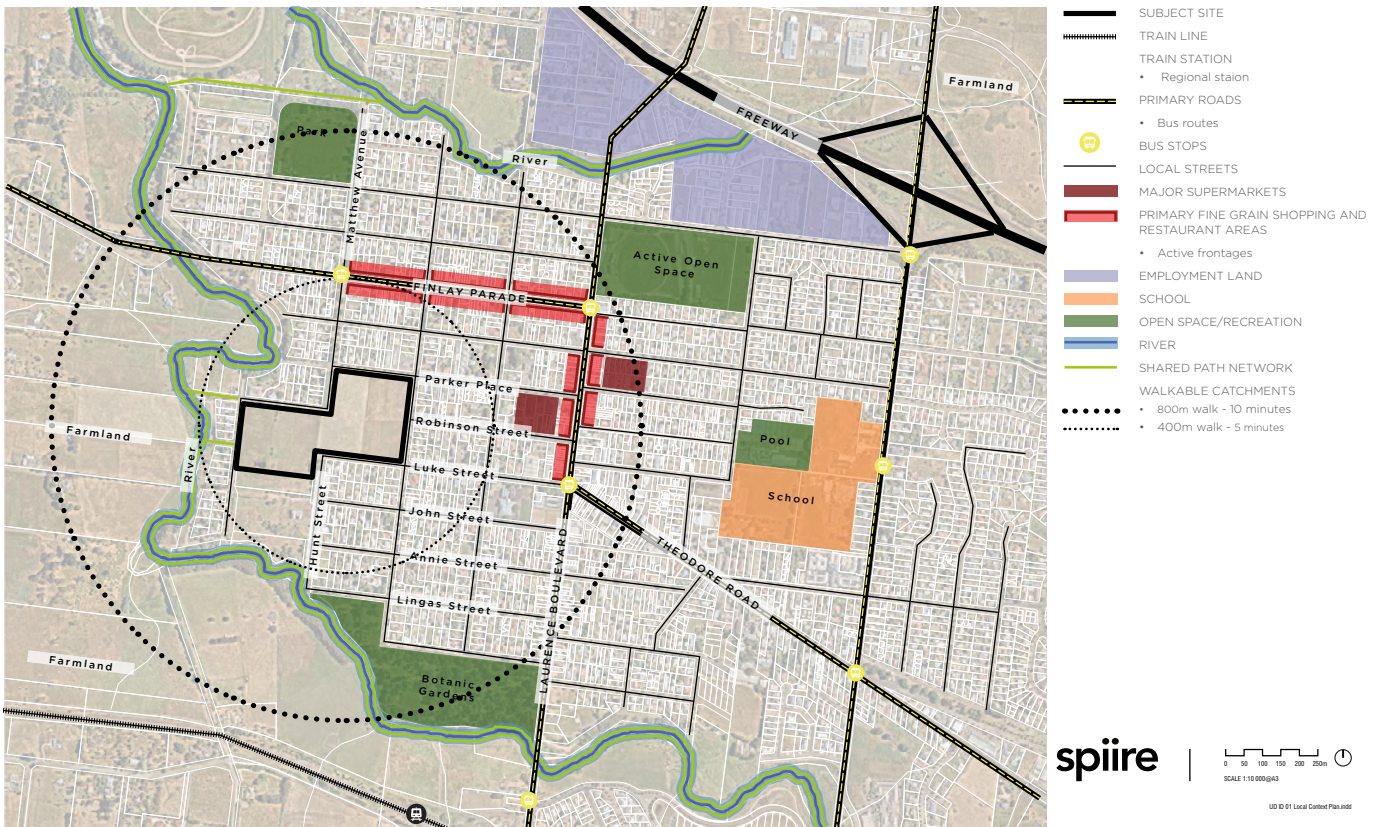


Figure 2: Exemplar local context plan



Figure 3: Exemplar Clause 56 response plan



Nexus with the planning scheme

The checklist and document requirements are linked to planning scheme requirements creating a nexus between the request for information and the need for information to be submitted as part of supporting documents of the subdivision application and subsequent assessment.

1. Integrated water management

Requirements	Nexus to the Victoria Planning Provisions
Best practice design considerations.	<p>Clause 12 Environmental and landscape values Planning must implement environmental principles for ecologically sustainable development that have been established by international and national agreements... Planning should protect, restore, and enhance sites and features of nature conservation, biodiversity, geological or landscape value.</p> <ul style="list-style-type: none"> • Clause 12.03-15 River and riparian corridors, waterways, lakes, wetlands, and billabongs. Objective: To protect and enhance waterway systems including river and riparian corridors, waterways, lakes, wetlands, and billabongs <p>Clause 14.02 Water and most of the applies to most of the below proposed standards including:</p> <ul style="list-style-type: none"> • Clause 14.02-15 Catchment planning and management. Objective: To assist the protection and restoration of catchments, waterways, estuaries, bays, water bodies, groundwater, and the marine environment • Clause 14.02-2S Water Quality. Objective: protect water quality <p>Clause 15.01-3S Subdivision Design. Objective To ensure the design of subdivisions achieves attractive, safe, accessible, diverse, and sustainable neighbourhoods.</p> <p>Clause 15.01-4S Healthy neighbourhoods. Objective: To achieve neighbourhoods that foster healthy and active living and community wellbeing.</p> <p>Clause 19.03-3S Integrated Water Management. Objective: To sustainably manage water supply and demand, water resources, wastewater, drainage, and stormwater through an integrated water management approach.</p>
Stormwater Management Strategy including modelling: BPEM best practice: Design development to meet the best practice performance objectives for suspended solids, total phosphorus, and total nitrogen, as set out in the Urban Stormwater – Best Practice Environmental Management Guidelines (Victoria Stormwater Committee 1999).	<p>Clause 56.07-4 Stormwater management. Objective: To minimise increases in stormwater and protect the environmental values and physical characteristics of receiving waters from degradation by stormwater.</p> <p>Standard C25 Designed to meet the current best practice performance objectives for stormwater quality as contained in the Urban Stormwater – Best Practice Environmental Management Guidelines (Victorian Stormwater Committee, 1999).</p>

1. Integrated water management

Requirements	Nexus to the Victoria Planning Provisions
Creek protection and enhancement: Detail where restoration and protection of creeks in new developments will occur (potentially identified in your IWM (Integrated Water Management) plan with Water Authority and CMA).	<p>Clause 12 Environmental and Landscape Values.</p> <p>Clause 12.03-15 River and riparian corridors, waterways, lakes, wetlands, and billabong's. Objective: To protect and enhance waterway systems including river and riparian corridors, waterways, lakes, wetlands, and billabongs-several strategies.</p>
WSUD located within or connected to open space as part of the overall drainage network.	<p>Clause 19.03-35 Integrated Water Management. Integrate water into the landscape to provide attractive and enjoyable spaces for community use.</p> <p>Clause 56.07-4 Stormwater Management. Objective: To encourage stormwater management that contributes to cooling, local habitat improvements and provision of attractive and enjoyable spaces.</p> <p>Standard C25 'Include water sensitive urban design features to manage stormwater in streets and public open space. Where such features are provided, an application must describe maintenance responsibilities, requirements, and costs.'</p> <p>Clause 56.07-4 Stormwater Management. Objective: To encourage stormwater management that contributes to cooling, local habitat improvements and provision of attractive and enjoyable spaces.</p> <p>Clause 56.06-7 Neighbourhood Street network detail objective: To design and construct street carriageways and verges so that the street geometry and traffic speeds provide an accessible and safe neighbourhood street system for all users.</p> <p>Standard C20 Have verges of sufficient width to accommodate footpaths, shared paths, cycle paths, integrated water management, street tree planting, lighting, and utility needs.</p> <p>Standard C20 A street detail plan should be prepared that shows, as appropriate:</p> <ul style="list-style-type: none"> • The street hierarchy and typical cross-sections for all street types • Location of carriageway pavement, parking, bus stops, kerbs, crossovers, footpaths, tactile surface indicators, cycle paths and speed control and traffic management devices • Water sensitive urban design features • Location and species of proposed street trees and other vegetation • Location of existing vegetation to be retained and proposed treatment to ensure its health • Any relevant details for the design and location of street furniture, lighting, seats, bus stops, telephone boxes and mailboxes • Have street geometry appropriate to the street type and function, the physical land characteristics and achieve a safe environment for all users • Provide a low-speed environment while allowing all road users to proceed without unreasonable inconvenience or delay
Recycled water public assets.	<p>Clause 56.07-2 Objective: To provide for the substitution of drinking water for non-drinking purposes with reused and recycled water.</p> <p>Standard C23 Designed, constructed, and managed in accordance with the requirements and to the satisfaction of the relevant water authority, Environment Protection Authority and Department of Health. Provided to the boundary of all lots in the subdivision where required by the relevant water authority.</p>
Recycled water at lot scale.	<p>Clause 56.07-2 Objective: To provide for the substitution of drinking water for non-drinking purposes with reused and recycled water.</p> <p>Standard C23 Provided to the boundary of all lots in the subdivision where required by the relevant water authority.</p>
Detail any innovation measures pertaining to IWM included in the subdivision.	PSP 2.0

2. Ecology and urban heat

Requirements	Nexus to the Victoria Planning Provisions
Design considerations.	<p>Clause 12 Environmental and landscape values Planning must implement environmental principles for ecologically sustainable development that have been established by international and national agreements...</p> <p>Clause 12.01 Protection of biodiversity.</p> <p>Clause 12.03-1S River and riparian corridors...</p> <p>Clause 14.02-1S Catchment planning and management. Objective: To assist the protection and restoration of catchments, waterways, estuaries, bays, water bodies, groundwater, and the marine environment.</p> <p>Clause 14.02-2S Water quality. Objective: protect water quality, geological or landscape value.</p> <p>Clause 15.01-3S Subdivision design. Objective: To ensure the design of subdivisions achieves attractive, safe, accessible, diverse, and sustainable neighbourhoods.</p> <p>Clause 15.01-4S Healthy neighbourhoods. Objective: To achieve neighbourhoods that foster healthy and active living and community wellbeing.</p>
Green and blue areas marked on plan supporting vegetation links between areas of biodiversity value (bio links).	<p>Clause 56.05-1 Integrated urban landscape objectives.</p> <p>Clause 12.01-1S Biodiversity strategy: Support land use and development that contributes to protecting and enhancing habitat for indigenous plants and animals in urban areas.</p> <p>Clause 12.03-1S Water bodies and wetlands. Objective: To protect and enhance waterway systems including river and riparian corridors, waterways, lakes, wetlands, and billabongs.</p>
Shade and biodiversity corridors offering connectivity for the safe movement of people and fauna within and beyond the subdivision marked on plan.	<p>Clause 15.01-4S Healthy neighbourhoods.</p> <p>Clause 18.02-1S Walking.</p>
Streets and open spaces designed to cool the landscape.	<p>Clause 15.01-4S Healthy neighbourhoods.</p> <p>Clause 18.02-1S Walking.</p> <p>Clause 18.02-2S Cycling.</p>
Reduce the extent of hardstand non permeable surfaces.	
Detail the tree species selected based on their suitability for the climatic conditions, specific site, aesthetic, functional and biological attributes.	<p>Clause 56.06-7 Neighbourhood Street network detail objective.</p> <p>Standard C20 To design and construct street carriageways and verges so that the street geometry and traffic speeds provide an accessible and safe neighbourhood street system for all users.</p>
Detail the percentage of retained native vegetation (existing) and describe where and how it has been included into the subdivision layout.	<p>Clause 12.01-S Protection of biodiversity strategies and the use of statewide maintained biodiversity information such as Nature Kit.</p>
Cut and fill shown on plan and where retaining walls will be located. Where the slope of land exceeds ?? degrees, design guidelines for dwellings are required detailing minimal site cut and fill will occur because of construction.	<p>Clause 56.01</p>
Detail areas of innovation pertaining to street layout and design.	

3. Site layout and liveability

Requirements	Nexus to the Victoria Planning Provisions
Site plan detailing how it responds to the site features and Local context plan requirements, links to walking and cycling networks, creek lines, biodiversity and native vegetation connecting to open space both within and beyond the subject land.	<p>Clause 56.01-1 Subdivisions site and context description.</p> <p>Clause 18.01-3S Sustainable and safe transport.</p> <p>Clause 56.05-2 Public Open Space provision's objective.</p> <p>Clause 56.06-2 Walking and cycling network objectives.</p>
<p>Details to be shown on plan: Lot diversity table including lot sizes, super lots, smaller lots.</p> <p>Proximity of lots to POS and public transport links.</p> <p>Colour coded lot layout plan detailing location of lot sizes and open space locations.</p> <p>Projected tree canopy coverage target.</p>	<p>Clause 56.01-1 Subdivisions site and context description.</p> <p>Clause 56.04-1 Lot diversity and distribution objectives.</p>
Location of cross overs, street trees, all services, footpaths, light poles etc shown on plan and submitted for consideration and constructed prior to Statement of Compliance (SOC).	<p>Clause 56.01-1 Subdivisions site and context description.</p> <p>Clause 56.06-7 Neighbourhood street network detail objective.</p> <p>Standard C20 To design and construct street carriageways and verges so that the street geometry and traffic speeds provide an accessible and safe neighbourhood street system for all users.</p>
Streets designed for traffic to flow from north south allowing majority of lots with the longest axis being within 20 degrees north and 30 South of east.	<p>Clause 56.04-3 Solar orientation of lot. Objective: To provide good solar orientation of lots and solar access for future dwellings.</p> <p>Clause 19.01-2S Renewable energy. Objective: To support the provision and use of renewable energy in a manner that ensures appropriate siting and design considerations are met.</p>
Dedicated walking and cycling networks detailed on plan and included into key pedestrian routes/shade ways.	<p>Clause 18.02 Walking. Objective: To facilitate an efficient and safe walking network and increase the proportion of trips made by walking.</p> <p>Clause 18.02-2S Cycling. Objective: To facilitate an efficient and safe bicycle network and increase the proportion of trips made by cycling.</p> <p>Clause 18.02-4S Roads. To facilitate an efficient and safe road network that integrates all movement networks and makes best use of existing infrastructure.</p> <p>Clause 56.03-1 Compact and walkable neighbourhoods' objective.</p> <p>Clause 56.06-4 Neighbourhood street network.</p>
Cut and fill shown on plan and where retaining walls will be located. Where the slope of land exceeds ?? degrees, design guidelines for dwellings are required detailing minimal site cut and fill will occur because of construction.	Clause 56.01
Detail areas of innovation pertaining to street layout and design.	
No cul-de-sacs on plan unless the cul-de-sac demonstrates permeability for walking, cycling and IWM treatments to adjoining streets.	Clause 56.06-4 Neighbourhood street network: 'minimise' the provision of cul-de-sacs.
Maximum street length for priority pedestrian streets less than 200m and where necessary include traffic calming measures and minimise road surface area. Trees can be used in road surface as traffic calming measures.	<p>Clause 56.06-7 Neighbourhood street network.</p> <p>Standard C20 The design of streets and roads should: Provide street blocks that are between 120 metres and 240 metres in length and between 60 metres to 120 metres in width to facilitate pedestrian movement and control traffic speed. This references max street length of 240 metres, the checklist goes further.</p>

Glossary

Biodiversity Management Plan

A Biodiversity Management Plan provide a clear and concise outline of the actions and methods required to mitigate impacts on biodiversity.

Blue infrastructure

Systems and technologies that improve water efficiency and expand the capacity to manage stormwater and flooding, including rain gardens, rainwater tanks and swales.

Canopy planting

The proportion of a fixed area of the ground covered by tree crowns that is comprised of branches and crowns of plants or trees.

Class A recycled water

Water derived from sewerage systems or industrial processes that is treated to an appropriate standard. Class A water can be facilitated for high exposure uses, including residential developments involving 'dual pipe' systems for toilets and garden use, irrigation where access is public and unrestricted, and irrigation of edible crops intended for raw or unprocessed consumption.

Cool route

Active transport routes between destinations that provide protection from direct heat (i.e. through physical shade structure or uninterrupted canopy coverage).

Green Infrastructure

Planned elements of building and landscape designs that deliver a wide range of ecosystem services, in the form of vegetation.

Hardstand areas

Non-living features used in landscape architecture such as paths, driveways, gravel, bricks, or stones.

Invasive species

A plant species that is foreign to the ecosystem under consideration and that may cause, or is likely to cause, economic or environmental harm or harm to human health.

Liveability

Refers to a community's quality of life and experience. It is influenced by an array of factors, including the quality of the natural and urban environment, social and economic aspects (i.e. level of crime, safety and access to everyday services, facilities, and employment) as well as the quality and availability of urban amenities.

Mature canopy trees

A mature tree means a tree that:

- a) Is taller than 8 metres
- b) Has a trunk that is 400mm or wider measured 1.2 metres above ground level
- c) Has multiple trunks with a combined diameter 400mm or wider measured at 1.2 metres above ground level
- d) Has heritage protection, significant landscape tree control protection or is listed on Council's Significant Tree Register
- e) Equivalent definition in your local government area

Native vegetation three step approach

A process to ensure there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. The following three step approach applies:

1. Avoid the removal, destruction or lopping of native vegetation.
2. Minimize impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
3. Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.

Passive irrigation

Self-watering systems involving gravity-fed processes, minimum use of energy, planned layout and sufficient use of resources.

Public realm

The public realm comprises spaces and places that are open and freely accessible to everyone, regardless of their economic or social conditions. These spaces can include streets, laneways and roads, parks, public spaces, waterways, and foreshores.

Potable water

Treated water from surface or ground water resources that is safe to consume (also known as 'drinking water').

Solar absorptance

The fraction of the sun's radiation that a surface absorbs. It is a measure of the solar radiation, commonly heat, which an object can absorb. The higher the solar absorptance, the more heat it can absorb. Lighter coloured materials are commonly more reflective and absorb less heat.

Sponge city

A model that relies on natural stormwater management infrastructure, with a focus on flood control and mitigating urban development's impacts on hydrology and ecosystems. Its goal is to increase infiltration, detention, storage, treatment, and drainage of water while improving urban livability.

Uses natural, green and permeable surfaces to absorb and recycle rainwater, cool down urban heat and prevent flooding.

Super lots

Typically found in greenfield subdivisions where a larger than normal lot is created. This lot is then subject to a separate planning process (i.e. further subdivision or development, such as medium density housing).

Traffic calming measures

Physical devices installed in streets to slow or reduce vehicle traffic and improve safety for pedestrians and cyclists. Traffic calming devices include speed humps, chicanes and narrows sized for the desired speed. These measures can slow car speeds to between 15 and 40 kilometres per hour.

Understory planting

Plant species such as herbs, grasses, shrubs, mosses, lichens, and small trees that occupy the vegetation layers (strata) below the canopy of taller trees.

Urban heat island effect

A phenomenon where the urban area is warmer compared to surrounding undeveloped and natural areas. This is attributed to increased dense, dark, and solid surfaces that absorb heat as well as concentrated human activity.

Walkability

The extent to which the built environment supports walking for transport and for recreation where the walking environment is safe, connected, accessible and pleasant.

