

Bannockburn South East

Precinct Structure Plan

WADAWURRUNG COUNTRY

April 2025

DRAFT

FOR PUBLIC CONSULTATION







ICTORIA





ACKNOWLEDGMENT OF COUNTRY

The Victorian Planning Authority proudly acknowledges Victoria's Aboriginal community and their rich culture and pays respect to their Elders past and present.

We acknowledge Aboriginal people as Australia's first peoples and as the Traditional Owners and custodians of the land and water on which we rely.

We recognise and value the ongoing contribution of Aboriginal people and communities to Victorian life and how this enriches us.

We embrace the spirit of reconciliation, working towards the equality of outcomes and ensuring an equal voice.

We acknowledge the Wadawurrung people as the Traditional Owners of the land to which the Precinct Structure plan applies.

The precinct is located on the traditional lands of the Wadawurrung people. The Wadawurrung People are represented by the Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC).

We acknowledge the Wadawurrung People as the Aboriginal Traditional Owners of their unceded Country. We acknowledge their ongoing connection to this land, and we pay our respects to their Elders past and present.

We thank Wadawurrung Traditional Owners Aboriginal Corporation for their time, knowledge and engagement throughout this project.

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1 CONTEXT

1.1 How to read this document

The precinct structure plan (PSP) guides land use and development where a planning permit is required under the Urban Growth Zone at Clause 37.07 of the Golden Plains Planning Scheme, or any other provision of the Golden Plains Planning Scheme that references this PSP.

Part 1: Context

The first part contains the contextual overview of the PSP document and the function of individual components as well as infrastructure contributions required to deliver the precinct.

Part 2: PSP outcomes

The second part contains the outcomes the PSP is seeking to achieve.

A planning application and subsequent planning permit must implement the outcomes of the PSP.

The outcomes are expressed as:

- The Vision, which is the overarching unique place-based outcome intended for this PSP.
- The **Purpose**, which sets out how the PSP will deliver on the vision for the precinct.
- The **Objectives**, place-based objectives to achieve the vision and purpose for the precinct.

Part 3: Implementation

The third part contains the strategic land use context and place-making elements to be implemented for the precinct and responds to each of the six 20-minute neighbourhood **hallmarks**.

Note: The VPA has consolidated two hallmarks to create one hallmark for this PSP: Connect people to jobs, higher order services and thriving local economies.

Each hallmark is implemented according to the following sub-structure:

- PSP objectives: The PSP identifies a set of place-based objectives to achieve the
 vision and purpose for the precinct. These provide the guidance required to
 achieve the specific outcomes sought for each of the six hallmarks within the
 precinct. A responsible authority may consider alternative strategies to achieve
 the vision and objectives. Alternative strategies must demonstrate how they will
 achieve the vision and objectives of the PSP.
- **PSP implementation and delivery:** The PSP provides guidance in the form of requirements, plans, tables and diagrams to help with understanding of how to implement the strategies.
- Place-based requirements: PSP Requirements must be adhered to in developing the land. Where they are not demonstrated in a permit application, requirements will usually be included as a condition on a planning permit whether or not they take the same wording as in the structure plan. A requirement may reference a plan, table or figure in the structure plan.
- Place-based guidelines: The PSP Guidelines express how discretion will be exercised by the responsible authority in certain matters that require a planning permit. The responsible authority may consider an alternative to a guideline if it is satisfied that an application for an alternative, implements the outcomes. A guideline may include or reference a plan, table or figure in the PSP.

Any objective, requirement or guideline applies to the whole PSP, and not just to the Hallmark under which it is nested. Meeting these requirements and guidelines will implement the vision, purpose and objectives of the PSP.



Part 4: Appendices

This section contains the technical and administrative information required to support the implementation of the strategic land use context and place-making elements of the PSP. It will generally comprise of a series of tables and plans. These include:

- Precinct infrastructure plan and table
- Summary land use budget and parcel-specific land use budget
- Cross-sections
- Design outcomes for Bruce Creek open space and the transmission easement
- Glossary of terms.

Not every aspect of land use, development or subdivision is addressed in this PSP. A responsible authority may manage development, and issue permits as relevant under its general discretion. The *Generally in Accordance Guidance Note* is available on the VPA website to provide direction in the application of discretion where a PSP applies.

Development must comply with Acts and approvals where relevant e.g., the *Environment and Biodiversity Conservation Act 1999* or the *Aboriginal Heritage Act 2006*, among others.

1.2 Purpose of the PSP

The purpose of the PSP is to activate the PSP outcomes by:

- Providing the planning conditions for private industry delivery.
- Identifying and, where appropriate, providing the shared funding for a diverse range of open spaces and community infrastructure.
- Ensuring planning permit applications will generate the necessary population to support investment in critical infrastructure.

1.3 Regional context

Bannockburn is a peri-urban town located between Geelong (approximately 18km northeast) and Melbourne (75km southwest). Located in Golden Plains Shire it is part of the Geelong Regional Alliance group of Councils (G21).

Bannockburn sits between the Midland Highway and the Gheringhap-Maroona Freight Railway, making it a strategic gateway location connecting Geelong to the west of the state, and to a lesser-extent Melbourne. As the largest urban centre in Golden Plains, Bannockburn supports a network of southern townships in the Shire including Teesdale, Inverleigh, Lethbridge, Batesford and Gheringhap.

The Bannockburn Growth Plan (2021) identified the delivery of the South East Precinct as a priority to contribute to the short and medium term housing supply within Golden Plains Shire. The precinct is one of several growth areas identified in Bannockburn. Refer to Figure 4 Bannockburn Growth Framework Plan in the Background Report.

The G21 Regional Growth Plan (2013) identifies Bannockburn as a Regional Centre in the North West Gateway of the G21 region. The G21 Regional Growth Plan acknowledges Bannockburn's provision of larger lifestyle lots and relatively affordable housing options as a major drawcard for growth in the area. Settlements such as Bannockburn play an important role in supporting surrounding rural communities and productive farming activity.



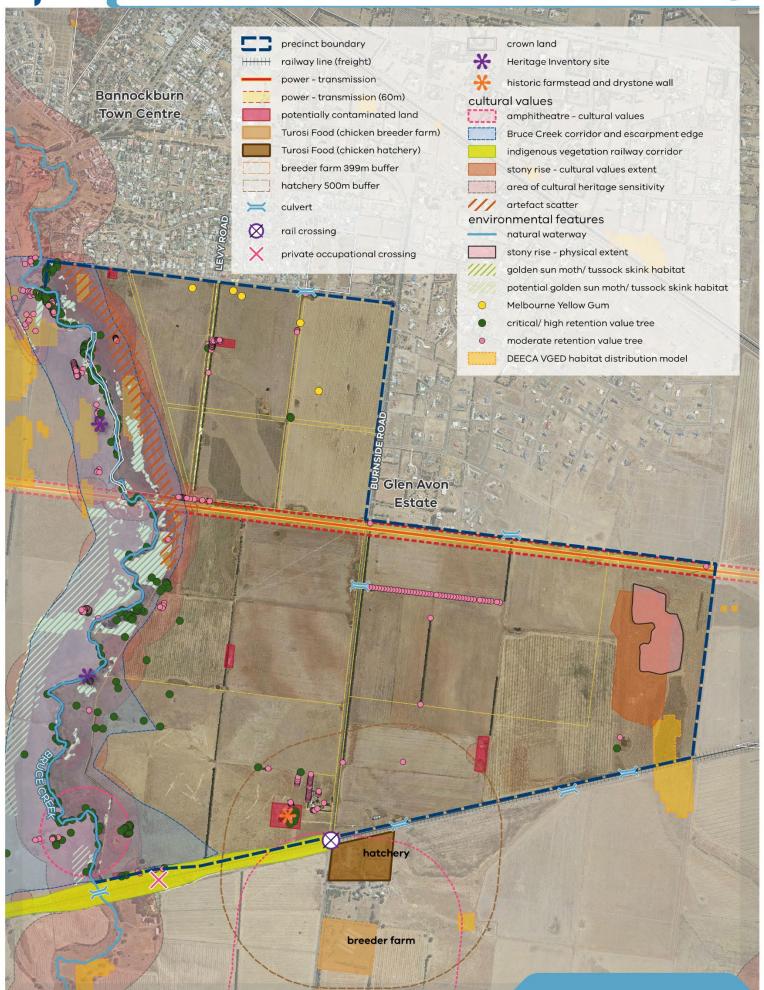
1.4 Precinct features

Bannockburn South East Precinct is bounded by existing residential areas, including lower density areas to the north, farmland identified for future growth areas to the east, farmland identified for future growth areas to the west opposite Bruce Creek and rural land uses to the south opposite the freight railway.

Plan 1 illustrates the existing precinct features that guide and influence the future urban structure of the precinct:

- **Bruce Creek** Located along the western border of the precinct, it is known for its high cultural and ecological values. It provides an opportunity to protect and enhance biodiversity and Wadawurrung living cultural heritage, whilst managing bushfire risk.
- **Crown land** There is a portion of Crown Land within the precinct to the northwest along Bruce Creek. No development is proposed in this area.
- Railway Forms a hard southern boundary to the precinct and presents some barriers to future connectivity. It is part of the Gheringhap to Maroona freight railway line. There is an existing at-grade level crossing at Burnside Road and existing culverts under the railway. The railway is owned by VicTrack and managed by the Australian Rail Track Corporation.
- **Existing roads** There are opportunities to extend north-south connections via Burnside Road and Levy Road.
- **Transmission line easement** Bisects the precinct from east to west. Whilst this is a physical barrier it also presents an opportunity to enhance active links and accommodate appropriate uses within and around the easement.
- Chicken hatchery and breeder farm Located 50 metres off the precinct's southern boundary at 449 Burnside Road is a chicken hatchery and approximately 420m from the precinct is a breeder farm. Buffer areas are required to be kept free of sensitive land uses (including residential dwellings) until such time as the relevant industries cease or alter operations, or until it can be demonstrated that impacts of industry can be appropriately mitigated. The buffers protect both the industries from encroachment of sensitive uses, as well as future residences and sensitive land uses from impacts of industrial uses.
- **Slopes** The precinct is predominantly flat with a gentle slope towards Bruce Creek, which has varied grade of slope.
- **Stony Rises** Identified for its moderate archaeological sensitivity and likely to contain artefact scatters and stone arrangement. It may be protected and reserved for passive recreation to the east of the precinct.
- Amphitheatre An open landscape at the south of the Bruce Creek, which holds significant cultural value.
- Gheringhap Employment Precinct Approximately 6km from the Bannockburn South East precinct. It will provide local employment opportunities for future residents

Refer to the Bannockburn South East Background Report for a more detailed discussion of regional and site specific features that have informed spatial planning outcomes sought by this PSP.





1.5 Wadawurrung Cultural context

The Registered Aboriginal Party (RAP) is the Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC). WTOAC is the RAP for and on behalf of Wadawurrung People. Wadawurrung People are recognised as the Traditional Owners of their lands and waters from the Great Dividing Range in the North to the coast in the South, from the Werribee River in the East and along the Surf Coast in the West. The VPA have consulted with WTOAC and the traditional owners of the land to help ascertain the important cultural values that signify the precinct.

1.6 Post-contact heritage

The land has primarily been used for farming and agricultural purposes.

Bannockburn South East does not contain registered/listed post-contact heritage sites.

Historically, agricultural activity has both transformed, and utilised geological features within the study area, and more broadly in the geographic region. The alluvial soils found within proximity of named and unnamed waterways naturally attracted the early European settlers with more productive soils and access to water. Repeated ploughing and grazing activity have transformed much of the study area, with the removal of trees and levelling of fields influencing subtle landscape changes. Historic settlers also generally found that 'Stony Rises' interfered with efforts to operate farm machinery and often sought to remove such obstacles wherever possible. However, the presence of surface or near surface basalt provided a ready resource for the construction of dry stone walls in the region.

The pastoral settlers of the 1830s and 1840s modified the landscape in a variety of ways, including: clearing vegetation to create open pastures; and construction of 'home stations' occupied by the run holder or by an appointed manager.

Bannockburn South East is relatively close to the earliest track/roadway linking the area to pastoral stations east and west of present-day Bannockburn.

Present-day Burnside Road was surveyed as early as 1878, however does not appear to have been constructed as a formed road until the 1920's.

The Gheringhap-Maroona railway line is located immediately south of the study area. This rail line officially opened in 1913 and was primarily constructed to provide a direct transport route for agricultural produce from the Wimmera and Northern Mallee regions.

1.7 Strategic policy context

This PSP is informed by:

- The Planning Policy Framework set out in the Golden Plains Planning Scheme
- The <u>Bannockburn Growth Plan</u> (VPA, May 2021)
- Plan Melbourne 2017–2050
- G21 Regional Growth Plan
- The <u>Precinct Structure Planning Guidelines: New Communities in Victoria</u> (VPA, 2021).
- Applying the PSP Guidelines in regional areas guidance note (VPA, 2021)

1.8 Development contributions plan (DCP)

This PSP is supported by the *Bannockburn South East Development Contributions Plan* (the DCP) and is incorporated into the Golden Plains Planning Scheme.

The DCP sets out the essential infrastructure requirements and expected contributions arrangements delivered as part of the development permit process.



1.9 Background information

The Bannockburn South East PSP Background Report outlines the rationale behind key decisions made in the PSP, based on the local context and the supporting technical work prepared.

The technical studies are available at the VPA website here.



2 PSP OUTCOMES

2.1 PSP vision

Bannockburn is on Wadawurrung Country. The precinct will recognise Wadawurrung culture, heritage and values by responding to and designing for identified cultural heritage places, waterways, environs, vantage and viewing points, flora and fauna that make up Wadawurrung Country.

The PSP seeks to preserve areas of Aboriginal importance such as the Bruce Creek corridor and the Stony Rises in the east as well as trees of Aboriginal and environmental significance within the precinct. Wadawurrung values and stories will be embedded into open spaces, trails and community places.

Bruce Creek is known for its ecological and intrinsic cultural values. It will be protected and enhanced to form an open space, environmental and active transport spine for the precinct, with pedestrian and cycling paths, wayfinding, storytelling and recreational facilities. The unique biodiversity within the Bruce Creek corridor will be conserved to be enjoyed by the future community. The location of any infrastructure across the creek will be codesigned with the Wadawurrung Traditional Owners Aboriginal Corporation.

Integrated Water Management (IWM) is an important consideration for the precinct to develop in a manner that is sensitive to the water cycle and contributes towards enhancing environmental flows and systems, protects downstream impacts on the Barwon River and the RAMSAR listed Lake Connewarre, considers alternative water use, storm water management, and supports a liveable, sustainable and healthy community in Bannockburn for future generations.

New community master planning will incorporate built form that is consistent with Bannockburn's treasured open rural township character, while also delivering on sustainable development outcomes. The precinct will have a lower average density than other growth areas such as in Geelong and include a diverse range of high quality and well-designed housing typologies. Design and development of new neighbourhoods and open spaces will prioritise addressing flood risk, bushfire risk and the management of storm water.

Embedding sustainability outcomes across the planning and development process including in design, transport, open space and water management will help in creating an ecologically sensitive and resilient community and ensure that residents can build important social and place based connections. These connections will be strengthened by the precinct's network of attractive open spaces, waterways and off-road paths, connecting people to places of amenity and employment.

The precinct's network of paths will ensure that it is walkable and cyclable in areas of high canopy cover and encourage the use of active transport options on a wide network interlinking with Bruce Creek and the existing township to the North. This will connect schools, recreation spaces, community hubs and the new local town centre by way of active transport and green corridors that attract community life, events and cultural expression.

A new local town centre will be located on an attractive east-west link road, which will define a northern and southern neighbourhood as identified in the Bannockburn Growth Plan. The northern neighbourhood will have a strong connection to the existing Bannockburn town centre and its social and economic infrastructure. The southern neighbourhood will be focused towards a new vibrant community with access to the new local town centre, new community facilities and key links to Bruce Creek. A new east-west link road will cross Bruce Creek via a bridge crossing and connect to the Midland Highway to protect existing traffic routes such as High Street in Bannockburn's town centre from being overwhelmed and to provide linkages to employment and the Geelong region.





2.2 PSP purpose

- Place Wadawurrung cultural values at the centre of the precinct by recognising and protecting areas of cultural significance.
- 2 Encourage an urban form that integrates with and supports Bannockburn's rural character and lifestyle.
- 3 Create a healthy pedestrian and cycling friendly community by providing an interconnected active transport network linking the existing township and key destinations in the precinct, including schools, the local town centre and Bruce Creek.
- 4 Protect Bruce Creek's ecological, intrinsic cultural values from the impacts or urbanisation and population growth.
- 5 Support the timely delivery of key transport, community and drainage infrastructure by identifying staging of the precinct.
- 6 Provide destinations and services to support a liveable neighbourhood anchored by a strong local town centre and community hubs.
- 7 Deliver a diverse and affordable housing mix including social housing and targeted areas of denser typologies in proximity to services and high amenity open spaces.



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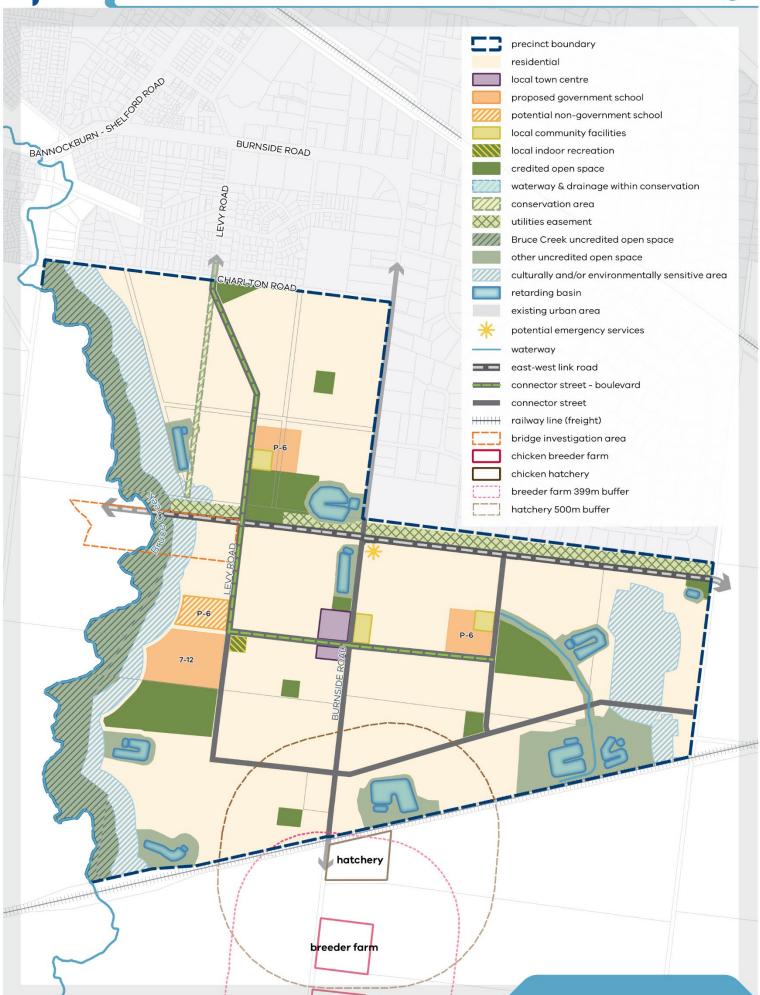


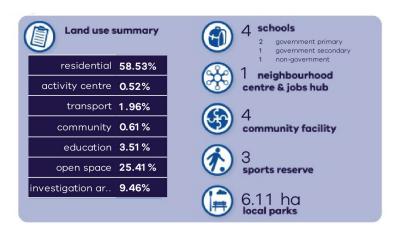




Figure 1 summarises how Bannockburn South East measures against the performance targets based on the PSP Guidelines. The metrics including total numbers and percentage in Figure 1 are rounded.

Figure 1 PSP Performance Summary





















PSP Targets

12 Dwelling density per NDHA 17 Target 30

12 Dwelling density per NDHA across the PSP 15 Target 20

m Minimum open space targets

Total residential credited open space 9% Target: 10%

Local residential park 2% Target: 3-5%

Sports reserve 7% Target: 5-7%

Employment local park n/a Target: 2%

Open space in walking distance Dwellings within 800m of 1 00%

Dwellings within 800m of 1 00% sports reserve or open space Target: 100%

Dwellings within 400m of local park 98% Target: 95%

Public transport in 98% walking distance Target: 95% **Education & community facilities** in walking distance Dwellings within 800m 77% of govt primary school Target: 70% Dwellings within 3,200m of govt secondary school 100% Target: 100% Dwellings within 800m 84% of community hub Target: 80% Dwellings within 800m 100% of health facility Target: 80% Activity centre in walking 56%

OTHER PSP TARGETS (these targets are achieved at the planning permit stage)

13 Housing diversity
14 Affordable housing
15 Arterial road network

16 Off-road cycle paths
17 Footpaths
18 Pedestrian & cyclist crossings
10 Job density

Tree canopy coverage

Passively irrigated street trees

Good solar orientation

Conservation areas

Integrated water management solutions

T20 Basic & essential infrastructure





3 IMPLEMENTATION

3.1 Viable densities

3.1.1 Objectives

Table 1 Place-based objectives – viable densities

OBJECTIVES		IMPLEMENTATION TOOLS
01	Facilitate a diversity of housing types that promote choice and a sense of place for residents at a density that strengthens neighbourhood character, and supports employment and community uses within the Bannockburn South East Precinct.	R1, R2, R3, G1, G3 & G4
02	Ensure that development appropriately responds to culturally and/or environmentally sensitive areas as shown in Plan 2.	R2, R4, R5
О3	Facilitate 6.5% of affordable and social housing generally in accordance with the <i>Bannockburn South East Social and Affordable Housing Strategy</i> (Urbanxchange, August 2023) (or subsequent revisions).	G2, G3 and G4
04	Facilitate the safe transition of land within proximity of the chicken hatchery and breeder farm to accommodate residential land uses as the operations at the farm at 449 Burnside Road change over time and it becomes appropriate to do so.	R6 and G5
05	Ensure that any non-residential uses developed on land within buffers are transitional in nature or can be integrated into a future residential subdivision.	R6

3.1.2 Requirements and guidelines

Table 2 Requirements and guidelines – Viable densities

REQUIREMENTS

R2

Subdivision for residential development must be generally in accordance with Plan 3 Housing, and Table 3 Housing density and diversity, to the satisfaction of the responsible authority.

Subdivisions that can demonstrate how target densities can be achieved over time will be considered.

Subdivision design must respond to the existing precinct features and surrounding uses, in particular:

- Areas of ecological and cultural significance, such as the Bruce Creek corridor
- Any current and future Victorian Aboriginal Heritage Register Places
- Existing native vegetation, including but not limited to high and critical retention value trees and Melbourne Yellow Gums
- Existing and future drainage and waterway areas
- Character and heritage, including existing structures and dry stone walls
- Future Bruce Creek bridge crossing and east-west link road
- Rural interfaces and transmission easement.





Subdivision must facilitate active frontages to adjoining open space, landscape values areas, and waterway corridors.

Subdivision and development must not occur within the culturally and/or environmentally sensitive area adjacent Bruce Creek shown on Plan 3 Housing, unless the whole of the sensitive area within that ownership has been assessed and the entire extent of the developable area identified on a plan to the satisfaction of the responsible authority. The assessment must demonstrate that the developable area is:

R4

- Designed to minimise impacts on biodiversity values, particularly habitat for matters of national environmental significance as defined under the Environment Protection and Biodiversity Conservation Act 1999.
- Consistent with any relevant approved Conservation Management
 Plan
- Consistent with the document titled *Design and construction* standards for Growling Grass Frog passage structures (DELWP 2016).
- Consistent with a Cultural Heritage Management Plan approved under the *Aboriginal Heritage Act 2006*.
- Designed to adequately mitigate bushfire risk.

Subdivision and development must not occur within the property containing the stony rise and the DEECA VGED habitat distribution model to the east of the precinct as shown in Plan 1 Precinct Features, unless the whole of the culturally and/or environmentally sensitive area to the east as shown in Plan 2 Place Based Plan has been assessed and the extent of the stony rise and the developable area identified. The assessment must demonstrate that developable is:

R5

- Designed to minimise impacts on biodiversity values, particularly habitat for matters of national environmental significance as defined under the Environmental Protection and Biodiversity Conservation Act 1999.
- Consistent with a Cultural Heritage Management Plan approved under the *Aboriginal Heritage Act 2006*, where applicable.

R6

Non-sensitive uses within a buffer to the hatchery or chicken farm on land where the land use is residential in Plan 2 must be transitional in nature or be capable of being incorporated into a cohesive residential subdivision.

GUIDELINES

Specialised housing forms, such as retirement living, or aged care should:

• Respond to and integrate with adjoining development, avoiding inactive interfaces and blank facades to the public street network.

G1

- Be located within amenity areas as shown on Plan 3 Housing
- Be accessible by public transport.
- Not present a barrier to movement through the surrounding road and pedestrian movement network

G2

Applications for residential subdivision and development should demonstrate how they will contribute to the target of 6.5% minimum of affordable housing generally in accordance with the *Golden Plains Shire Council Social and Affordable Housing Policy* (2023) and *Bannockburn South East Social and Affordable Housing Strategy* (Urbanxchange, August 2023).



G3	Social and affordable housing and key worker housing should be in high amenity
	areas close to services and community facilities and provide for a range of housing
	typologies to meet demonstrated local needs generally in accordance with Table 3
	Housing density and diversity.

- Where affordable housing is provided, consideration should be given to meeting **G4** the needs of different income ranges and household sizes generally in accordance with Table 5.
- Development that abuts land within a buffer to the hatchery or chicken farm G5 should consider and appropriately address the interface to the buffer areas.

Table 3 Housing	g density and diversity
AMENITY AREA	
Housing catchment area	Applies to land which is located within 400m walkable catchments of activity centres and train stations, and 50m walkable catchment of open space and the Principal Public Transport Network or similar.
Target density	Average of 17 dwellings or more per net developable hectare (NDHa)
	Character statement
	Development will have a modest scaled urban neighbourhood character, characterised by buildings up to three storeys in height. Mixed typologies will be applied throughout the amenity areas to help create a sense of place, provide visual transition in built form, create view corridors and provide appropriate interfaces with other catchments areas.

Typologies

Target typologies

To support delivery of diverse housing outcomes in amenity areas, the PSP and applicable planning applications should enable opportunities to deliver at least three (3) different housing typologies. The mix of dwelling typologies should include, but is not limited to:

- Walk-up low-rise apartment style development with concealed integrated car parking
- Shop-top retail low-rise (2–3 storey) residential development for sites closer to the local town centre
- Attached townhouse development
- Semi-detached/duplex-style development (e.g. Small Lot Housing Code products)
- Detached traditional style housing
- Retirement living

	- Redifficing
BALANCE AREA	
Housing catchment area	Applies to land which is located outside of the nominated amenity area/s
Target density	Average of 14 dwellings or more per NDHa
	Character statement
Target typologies	Development will have a suburban neighbourhood character featuring buildings up to three storeys in height. Housing will generally comprise detached and semi-detached typologies, however more intensive forms of development such as terraced homes and attached





townhouses may be provided in certain locations (e.g. interfaces with amenity areas).

Typologies

To support delivery of diverse housing outcomes in balance areas, the PSP and applicable planning applications should enable opportunities to deliver at least two (2) different housing typologies. The mix of dwelling typologies should include, but is not limited to:

- Attached townhouse development
- Semi-detached/duplex style development (i.e. Small Lot Housing Code products)
- Detached traditional style housing
- Semi-detached/detached low-rise social and affordable housing
- Retirement living

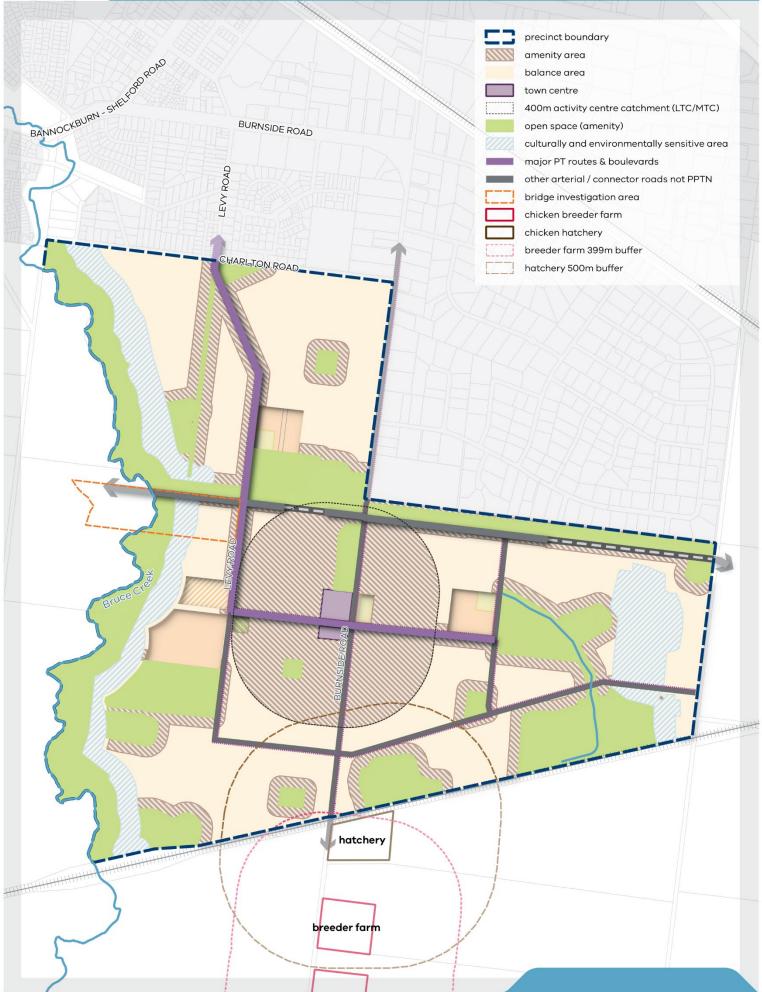
Table 4 Dwelling yields

HOUSING CATCHMENT AREA	NDA (HA)	DWELLINGS/NDHA	NO. OF DWELLINGS
Amenity area	133.3	17	2,266
Balance area	172.8	14	2,419
TOTAL	307.7	-	4,685
Anticipated population	n at 2.95 persons per dv	velling	13,820

Table 5 Affordable housing delivery guidance

	Affordable housing		
% of total dwellings	6.5% Use total affordable housing demand number		
	Subsidised Market Housing	Social Housing	
% of total dwellings	0.9%	5.6%	
Income Band	% of subsidised market housing by income band	% of social housing by income band	
Very low	0%	45%	
Low	0%	47%	
Moderate	100%	8%	
Housing Type	% of subsidised market housing by number of bedrooms	% of social housing by number of bedrooms	
1-bedroom	65%	53%	
2-bedroom	12%	15%	
3-bedroom	12%	16%	
4+ bedrooms	11%	16%	









3.2 Safe, accessible and well-connected

3.2.1 Objectives

Table 6 Objectives – Safe, accessible and well-connected

OBJEC	CTIVES	IMPLEMENTATION TOOLS
06	Deliver a network for roads, active transport and public transport that is permeable and integrated.	R9, R10 & G9, G10 & G11
07	Establish a safe, accessible and efficient movement network which supports community access to existing and future services and destinations whilst enhancing Bannockburn's character.	R9, R10, G6, G7, G8, G9, G10 & G11
08	Facilitate a higher order east-west road that relieves traffic from Bannockburn High Street and balances its movement and place function.	R10 & R11
09	Deliver walking and cycling connections to Bannockburn and the precinct's key destinations, such as the existing town centre, future local town centre, community facilities, schools, open spaces and Bruce Creek.	R7, R8, R9, R10, G8, G9, G10 & G11

3.2.2 Requirements and guidelines

Requirements and guidelines – Safe, accessible and well-connected Table 7

REQUIR	EMENTS	
R7	East-west link road, connector roads and local streets must be designed and developed generally in accordance with the relevant cross sections in Appendix 4 unless otherwise agreed by the relevant authority.	
R8	Pedestrian and cyclist crossings must be provided generally in accordance with those indicated in Plan 4 Movement Network & Public Transport.	
R9	Pedestrian and cyclist crossings must be provided every 400–800m, where appropriate, along the east-west link road, rail lines, waterways, and any other accessibility barriers.	
R10	 Design of all subdivisions, streets and the east-west link road must provide: A permeable, direct and safe street network prioritising walking and cycling, particularly walking and cycling to schools. Safe and convenient crossing points of connector roads and local streets at all intersections and on key desire lines as well as crossing waterways. Safe pedestrian crossings of the east-west link road at all intersections, at key desire lines, and on regular intervals appropriate to the function of the road and public transport provision. Safe and convenient transition between on and off road bicycle networks Convenient access to regional and local points of interest and destinations for effective integration with neighbouring properties, parkland and sports reserves. Direct and convenient walking access to public transport services. 	





R11

R12

The Bridge Investigation Area represents a potential location for a bridge crossing of Bruce Creek as informed by the *Bannockburn South East Bridge Feasibility Assessment* (Jacobs, April 2025). Final siting and design will be determined through consultation with the Registered Aboriginal Party (RAP) and compliance with *the Aboriginal Heritage Act 2006* (Vic) and all relevant statutory requirements.

The design and construction of any bridge crossing of Bruce Creek must:

- Be designed to minimise impacts on biodiversity values, particularly habitat for matters of national environmental significance as defined under the Environmental Protection and Biodiversity Conservation Act, 1999.
- Be consistent with any relevant approved Conservation Management Plan
- Be consistent with the document titled *Design and construction standards* for Growling Grass Frog passage structures (DELWP 2016).
- Be consistent with any Cultural Heritage Management Plan (CHMP) approved under the *Aboriginal Heritage Act 2006* for the land.
- Meet the objectives of Corangamite Catchment Management Authority's Waterway Crossing Performance Objectives.

GUIDELINES

A variety of cross sections should be used in subdivision layouts for local streets to create differentiation, sense of place and neighbourhood character.

Alternative cross sections should ensure that:

G6

- Sufficient provision is made for street tree planting to achieve 30% canopy tree coverage in the public realm.
- Minimum required carriageway dimensions are maintained to ensure safe and efficient operation of emergency vehicles on all streets as well as buses on connector streets.
- The performance characteristics of standard cross sections as they relate to pedestrian and cycle use are maintained.
- Relevant minimum road reserve widths for the type of street are maintained.

G7

Alternative cross sections may be considered for the east-west link road where supported by a movement and place assessment completed according to the matrix methodology in Module 1 in *Movement and Place in Victoria* (Department of Transport, 2019), so that road design is appropriate to the transport function for all modes, surrounding land uses and user experience, to the satisfaction of the relevant road authority and the responsible authority.

- Where alternative cross-sections have been implemented, they should provide for offroad bicycle paths on all connector streets and the east-west link road.
- Alternative footpath or shared path approaches may be used where they enhance walkability and permeability and respond to the purpose of the place and character of the urban form to the satisfaction of the responsible authority.
- Waterway crossings should be provided at intervals no greater than 400m or corresponding with all perpendicular through roads or pedestrian and cycle paths, where possible.

Street layouts should provide multiple convenient routes via direct off road active network paths to major destinations such as local parks, sporting reserves, community facilities, major and neighbourhood activity centres, local town centres, train/bus interchanges and significant employment areas both within the precinct and in surrounding areas.

Plan 4
Movement Network
Bannockburn South East Precinct Structure Plan 200 400 600 precinct boundary BANNOCKBURN - SHELFOOD ROAD east-west link (32m/4 lanes) connector street - boulevard (28.0 - 31.0m) connector street (25m) connector street (22m) Burnside Road existing residential interface BURNSIDE ROAD local access street (minimum 16m) constructed waterway interface local access street (16m) -EVY ROAD railway interface local access street (16m) existing residential interface (Charlton Road) off-road 2-way bike path off-road shared path indicative shared path link strategic cycling corridors bus capable road railway line (freight) public transport catchment area bridge investigation area signalised intersection signalised t-intersection rail crossing bridge

1:17,500 @ A4



3.3 Connect people to jobs, higher order services and thriving local economies

3.3.1 Objectives

Table 8 Objectives – Connect people to jobs and higher order services

ОВЈЕСТ	IMPLEMENTATION TOOLS	
010	Strengthen Bannockburn's local and regional economy and create opportunities for new businesses and a variety of local jobs.	R13, R14, R15 & G12
O11	Deliver a high amenity local town centre that can adapt and evolve over time to cater to the daily needs of surrounding residents and reflects Bannockburn's sense of identity and local character.	R13, R14 & R15,
O12	Ensure that the hierarchy is maintained between the local town centre and the primacy of the existing Bannockburn Town Centre.	R15
O13	Facilitate the delivery of local jobs.	R15 & R16

3.3.2 Requirements and guidelines

Table 9 Requirements and guidelines – Connect people to jobs and higher order services

REQUIREMENTS

Subdivision and development involving the delivery and design of the local town centre shown on Plan 5 Employment and Activity Centres must:

R13

- Appropriately reflect and cater for the anticipated needs of the community.
- Complement the planned activity and community-related outcomes in adjoining neighbourhoods.
- Provide convenient, walkable access to everyday retail and commercial needs and services.

A local town centre must be developed generally in the location shown on Plan 5 Employment and Activity Centres, with:

R14

- Direct access to a connector road
- Direct access to walking paths, cycling paths and bus capable roads.
- Concealed and integrated carparking

Prior to subdivision, use and/or development of any land wholly or partly located in the local town centre shown on Plan 5 Employment and Activity Centres:

R15

- Provide an appropriate design response to Appendix 3 Local town centre performance requirements & guidelines.
- Where appropriate, demonstrate how the use contributes to delivering local jobs anticipated in Table 10 Employment generation table.

The subdivision must provide a diverse range of lot sizes to accommodate the needs of a range of commercial businesses and industries, where applicable.



Environmentally sustainable principles and initiatives should be considered in the design of commercial buildings including (but not limited to):

- Integrated Water Management for onsite storage and re-use
- Solar panels and associated battery storage
- Electrical Vehicle charging
- Climate cooling through building design
- Shade and cooling of open air car parks.

Refer to Appendix 3 Local town centre performance requirements and guidelines.

GUIDELINES

Complementary land uses should be located adjacent to existing or future local town centre. These may include:

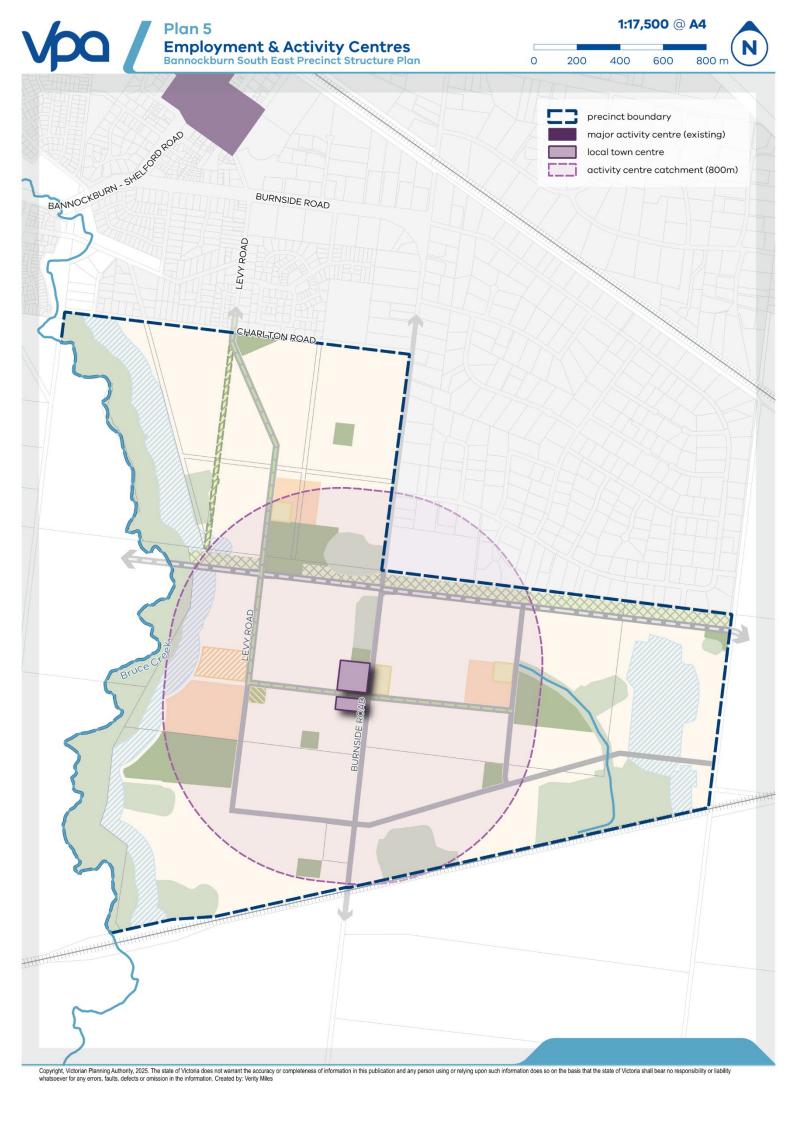
G12

R17

- Medical centres
- Convenience shop
- Food and drink premises.

Table 10 Employment generation table

LAND USE	NDA (ha)	ESTIMATED JOBS
Education and other community facilities	21.6	Up to 390
Local town centre	2.7	360
TOTAL	26.3	750







3.4 High quality public realm

3.4.1 Objectives

Table 11 Objectives – High quality public realm

OBJECT	IMPLEMENTATION TOOLS	
014	Promote safe, functional and enjoyable streetscapes, local parks, and sports reserves and recreation facilities that cater to a diversity of people and ages.	R28, G23, G25, G29, G30, G31 & G33
O15	Deliver an accessible and integrated network of local parks, sports reserves and recreation facilities that meet the needs and aspirations of the new community with adaptable, flexible and multi-use designs.	R39, R40 & G23
O16	Contribute to the protection and integration of areas of Wadawurrung cultural heritage and living cultural values through the urban form and open space network and encourage suitable interpretations of these values throughout subdivision design.	R35, R36, R42, G28, G29, G30, G,32 & G33
O17	Contribute to the long-term conservation of significant flora and fauna species through habitat protection, maintenance of passage for fauna, and the management of urban stormwater flows.	R17, R18, R19, R20, R22, G24 & G29
O18	Ensure the retention and establishment of trees through responsive layout of lots, streets and open spaces.	R17, R28, G14, G21, G24 & G25
O19	Facilitate safe, resilient, water sensitive, environmentally sustainable urban environments that respond to climate change and other hazards.	R19, R29, R30, R31, G19, G21, G34 & G35
020	Develop sustainable water supply, drainage and wastewater systems that protect, conserve, and improve biodiversity, waterways and other natural resources and maintains or enhances the safety, health and wellbeing of people and property.	R19, R20, R29, R30, R31, R32, R33 & G28
O21	Increase community resilience to bushfire by ensuring bushfire hazards are identified and bushfire risk is reduced to an acceptable level.	R24, R25, R25, R27 & G18
O22	Promote an integrated and high quality open space and conservation outcome for the Bruce Creek corridor.	R19, R22, R35, R39, R42, G30 & G33

3.4.2 Requirements and guidelines

Table 12 Requirements and guidelines – High quality public realm

REQUIREMENTS

R18

Significant trees and habitat areas (Melbourne Yellow Gums, High/Critical Retention Trees and Golden Sun Moth/Tussock Skink Habitat) identified in Plan 1 Precinct Features and Plan 6 Public Realm must be retained and protected to the satisfaction of the responsible authority.





R19	Applications must demonstrate how the proposed development will avoid and minimise impacts on biodiversity values, particularly habitat for matters of national environmental significance in the <i>Environment Protection and Biodiversity Conservation Act 1999</i> to the satisfaction of the responsible authority.			
R20	Bruce Creek corridor must prioritise revegetation and consolidation of Natural Temperate Grasslands and ensure protection of extant biodiversity values.			
R21	The location and design of stormwater management infrastructure must consider matters of state and national environmental significance under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> , particularly where they occur upstream of, within or adjacent to Growling Grass Frog conservation areas and must be designed and located consistent with any approved Growling Grass Frog Habitat Design Plan.			
R22	Any biodiversity conservation area to be vested in the relevant authority must be finished to a standard that satisfies the requirements of that authority. Works required prior to the transfer include, but may not be limited to: Clearing of rubbish and weeds. Completion of essential repairs to and stabilisation of any structures			
	 Installation of any fencing required to ensure public safety. Any works carried out must be consistent with any relevant approved Cultural Heritage Management Plan and/or Conservation Management Plan. 			
R23	Public lighting must be designed and baffled to prevent light spill and glare within and adjacent to Bruce Creek, unless otherwise agreed by the Department of Energy, Environment and Climate Action.			
R24	Vegetation within bushfire hazard areas shown on Plan 8 Bushfire must be managed to the relevant vegetation threat level unless otherwise agreed by the Responsible Authority and relevant fire authority.			
R25	Development adjoining bushfire hazards shown on Plan 8 Bushfire must be setback in accordance with the corresponding bushfire hazard designations to the satisfaction of the Responsible Authority and relevant fire authority and as outlined in <i>Bannockburn South East PSP - Bushfire Assessment</i> (January 2025).			
R26	Subdivision adjoining a bushfire hazard area must include a publicly accessible perimeter road unless otherwise agreed by the Responsible Authority and relevant fire authority.			
0	Any vegetation located in a setback required for bushfire purposes must be managed in accordance with the following requirements, unless otherwise agreed by the Responsible Authority and relevant fire authority:			
R27	 Grass must be short cropped and maintained during the declared fire danger period. All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period. Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building. Plants greater than 10 centimetres in height must not be placed within 3 metres of a window or glass feature of the building. 			

Shrubs must not be located under the canopy of trees.

Trees must not overhang or touch any elements of a building.

and must be separated by at least 5 metres.

Individual and clumps of shrubs must not exceed 5 square metres in area

BANNOCKBURN SOUTH EAST PRECINCT STRUCTURE PLAN





R28	Landscape design and plant selection in open spaces, including waterways and drainage corridors, must mitigate bushfire risk to the satisfaction of the responsible authority.				
R29	Canopy tree coverage within the public realm must achieve a minimum of 30% (excluding areas dedicated to biodiversity or native vegetation conservation).				
R30	A landscape plan must implement integrated water management and water sensitive design outcomes to the satisfaction of the responsible authority.				
R31	Stormwater runoff from development must meet the performance objectives of the Commonwealth Scientific and Industrial Research Organisation Best Practice Environmental Management Guidelines for Urban Stormwater (or as amended) prior to discharge to receiving waterways and as outlined in Plan 7 Water, unless otherwise approved by Corangamite Catchment Management Authority and the responsible authority.				
	Proposals that exceed the performance objectives are highly encouraged and ca be considered, all to the satisfaction of Corangamite Catchment Management Authority and the responsible Authority.				
R32	 Applications must demonstrate, through the preparation of integrated water management (IWM) plans, and to the satisfaction of Barwon Water, Corangamite Catchment Management Authority, and the responsible authority, the extent to which development will contribute towards: Strategic outcomes for integrated water management identified in the current DEECA Barwon Strategic Directions Statement. Actions identified in Barwon Water's most current Urban Water Strategy. Vision and objectives identified in the Bannockburn Integrated Water Management Plan (Golden Plains Shire Council, July 2024). The General Environmental Duty as per the Environmental Protection Act 2017. Outcomes identified in the Corangamite Regional Catchment Strategy. Regional outcomes identified in the Corangamite Waterway Strategy. Waterways and integrated water management outcomes which enable land to be used for multiple recreation and environmental purposes. 				
R33	The final layout, boundaries and design of constructed wetlands, retarding basins stormwater quality treatment infrastructure, and associated paths, boardwalks, bridges, and planting, must include appropriate treatments to provide protection for dispersive soils where these are present and be designed to the satisfaction of Corangamite Catchment Management Authority and the responsible authority, and must mitigate the risk of erosion from sodic and dispersive soils.				
	Stormwater conveyance and treatment must be designed in accordance with the final stormwater drainage concept, Plan 7 Water, such that:				
R34	 Overland flow paths and piping within road reserves will be connected and integrated across property/ parcel boundaries. Corangamite Catchment Management Authority and the responsible authority freeboard requirements for overland flow paths will be adequately contained within the road reserves and waterways. The risk of erosion of sodic and/or dispersive soils is avoided or 				

mitigated to the satisfaction of Corangamite Catchment Management Authority and the responsible authority.





The risk of erosion of sodic and/or dispersive soils must be avoided or mitigated. Potential management methods may include but are not limited to:

- Widening the buffer distances between the core riparian zone and the outside vegetated buffers that allows sufficient tolerances for channel migration.
- Diversion of water away from sodic and/or dispersive materials.
- Minimising potential convergence and/or ponding of surface flows
- Compacting to reduce pore spaces and minimise water movement through material.
- Physical and chemical soil ameliorants.
- Maintenance of topsoil across undisturbed land, preferably with grasses to provide surface soil stability and root anchorage.
- Minimise the amount of time land is exposed (e.g., by staging development).
- Ensure that culverts and drains excavated into dispersive subsoils are capped with non-dispersive topsoil, gypsum stabilised and vegetated.

Stormwater drainage infrastructure must not be constructed in the culturally and/or environmentally sensitive area adjacent Bruce Creek on Plan 7 Water, unless otherwise agreed by the responsible authority and the design:

- Minimises impacts on biodiversity values, particularly habitat for matters of national environmental significance Environment Protection and Biodiversity Conservation Act 1999
- Is consistent with the document titled Design and construction standards for Growling Grass Frog passage structures (DELWP 2016).
- Is consistent with a Cultural Heritage Management Plan approved under the *Aboriginal Heritage Act 2006*.
- Ensures an erosion management plan is approved by the responsible authority.

Stormwater drainage infrastructure must not be in the culturally and/or environmentally sensitive area east of Burnside Road on Plan 7 Water, unless otherwise agreed by the responsible authority and the design:

R37

- Minimises impacts on biodiversity values, particularly habitat for matters of national environmental significance, if applicable.
- Is consistent with a Cultural Heritage Management Plan approved under the *Aboriginal Heritage Act* 2006, where applicable.

Constructed drainage waterways are to be designed in accordance with Plan 10 Infrastructure and Development Staging. Waterways must, to the satisfaction of the responsible authority:

R38

- Provide safe drainage and flood protection
- Incorporate sufficient setbacks or buffers from built infrastructure such as roads and residential and commercial uses to safeguard the ecological function and values of the waterway
- Protect environmental, cultural and amenity value

Dry stone walls must be retained unless otherwise agreed by the responsible authority. Dry stone walls to be retained must:

R39

- Be situated within a public open space or road reserve to the satisfaction of the responsible authority
- Have a suitable landscape interface (continued next page)

R36

R35

30





- Be checked by a suitably qualified dry stone wall expert for any loose stones that are to be reinstated in the wall in secure positions
- Be incorporated into subdivision design to minimise disturbance to the walls (e.g. utilisation of existing openings for vehicle and pedestrian access).

R40

Prior to subdivision of land containing the high voltage transmission easement, a concept plan for the easement must be prepared, which demonstrates high quality amenity, open space and development outcomes corresponding with the list of considerations found in Appendix 6 Transmission easement design outcomes to the satisfaction of the responsible authority.

R41

The transmission easement must not be used or developed for residential or commercial or industrial purposes.

Wadawurrung cultural heritage and historic heritage sites (e.g. drystone walls and the historic farmstead) must be recognised through the design of public places, infrastructure and interpretive installations.

R42

Opportunities should be explored through cultural heritage interpretation trails along public path networks in areas of known historic cultural history or areas of Aboriginal cultural heritage sensitivity (e.g. Bruce Creek), in consultation with relevant stakeholders.

Signage or interpretive opportunities should be integrated into the public realm to contribute to the knowledge and understanding of the local area's Aboriginal cultural and historic cultural history.

GUIDELINES

G13

Canopy trees should have an average canopy of foliage of 6.4m in diameter at maturity in summer. Where this cannot be achieved because of local climate and soil conditions, a suitable species should be selected which closest achieves suitable canopy cover, to the satisfaction of the responsible authority. The requirement for a minimum 30% canopy tree coverage within the public realm must still be met.

G14

All fencing adjoining bushfire hazard areas shown on Plan 8 Bushfire should be made from non-combustible materials.

G15

Lot design adjoining bushfire interface, shown on Plan 8 Bushfire should allow for the provision of a static water supply of 2,500 litres for personal firefighting where practical.

G16

Subdivision should include a network of streets that provide multiple evacuation routes away from bushfire risks and areas of bushfire hazard.

G17

Where a setback is required from a bushfire hazard, the setback should be provided on public land where practical.

Passive irrigation of street trees should be provided.

G18

Alternative irrigation may be considered where it can be demonstrated through a comprehensive alternative plan (such as an Integrated Water Management Plan) that passive irrigation is either unnecessary or inferior to the proposed alternative (for example, recycled water irrigation of street trees in mandated recycled water areas).

G19

Movement corridors for local fauna and adjacent land uses should be designed and managed sensitively in accordance with a management plan, and to enhance community access and experience of the conservation and landscape value areas.





G20	The design and layout of roads, road reserves and public open space should optimise water use efficiency and long-term viability of vegetation, tree canopy and public landscaped areas through use of Water Sensitive Urban Design (WSUD) initiatives.					
G21	Movement corridors for local fauna (e.g. Growling Grass Frog, Golden Sun Moth, Wedge Tail Eagle and Tussock Skink) should be designed and managed sensitively to enhance community access and experience of the conservation, cultural and landscape value areas.					
G22	Alternative locations and configurations for local parks shown on Public Realm Plan, may be considered subject to: Open space being retained within the same landownership, unless otherwise agreed with the affected landowners. Not diminishing the quality or usability of the space Not adversely affecting walkable accessibility of the network Not adversely affecting the overall diversity of the precinct's open space network.					
G23	 Include a range of open space typologies and sizes in accordance with Table 13 Open space delivery and Plan 6 Public Realm. Maximise the amenity and value of open space through shared paths, trails, interpretive features and other recreational elements. 					
G24	Where practicable, existing vegetation including low and moderate value trees should be considered for retention, protected and enhanced, and indigenous revegetation undertaken to provide habitat and movement corridors for local fauna.					
G25	Open Space and landscape in the public realm should state that street trees are to be awarded adequate root zone space free from infrastructure or utilities.					
G26	Incorporate opportunities for alternative energy such as solar lighting, wind trees and neighbourhood batteries into streetscapes and the public realm.					
G27	Drainage assets and public open space areas should be located adjacent with the conservation area and waterways to provide a buffer to development where appropriate to the satisfaction of the responsible authority.					
G28	Drainage assets should be located and designed in collaboration with the Wadawurrung. The design process should include consideration of the following: • Rehabilitation, protection and creation of habitat values, including for threatened species such as Growling Grass Frog.					
	Contributing towards a resilient, clean and healthy system of rivers and waterways.					

Significant flora and fauna species should be integrated into the open space network in a way that:

for cultural and economic access to water.

G29

- Respects and incorporates Wadawurrung values and aspirations.
- Maximises passive amenity values
- Builds opportunities for the community to connect with the landscape and embeds passive educational outcomes (continued next page)

Ensuring cultural flows are maintained and maximising opportunities



- Reflects the Growling Grass Frog Habitat Design Standards 2017.
- Ensures ongoing viability of habitat and maximises habitat connectivity.

The open space network should respond to the values of adjoining areas of Wadawurrung cultural value and significance, including but not limited to the Bruce Creek corridor and area of Stony Rises.

Significant elements of the landscape and built form should be used as focal points for view lines along streets. Elements may include hill tops, ridge lines, prominent vegetation and other landmarks.

Special consideration should be given to maintaining visual connectivity to landscape features that are important to Wadawurrung relationships to the precinct, such as the Barrabool Hills including Mt Moriac, Mt Gnarwarre and Mt Pollock.

Wadawurrung should be invited to placename new precinct features (e.g. constructed waterways, roads, trails and open spaces).

Dependent on the outcomes and cultural value findings of the relevant Cultural Heritage Management Plans (CHMPs) and/or other cultural heritage investigations, open space outcomes within the areas of Stony Rises and Bruce Creek should be designed to:

G33

- Prioritise indigenous vegetation restoration and renourishment
- Maximise significant view lines to and from features within the precinct, and features of significance across Wadawurrung Country
- Integrate with the wider open space and active transport network.

Development should demonstrate a reduced reliance on potable water using alternative design features such as stormwater collection, and recycled water. In particular, the use of lot scale rainwater tanks plumbed for internal reuse (e.g. toilets).

Applications should consider a range of IWM options as indicated in Plan 7 Water and Figure 2 Integrated Water Management opportunities. Potential IWM options may include but are not limited to:

- Rainwater tanks on all commercial and residential lots
- Passive irrigation of trees in the public realm, include all streets and public open space.
- Stormwater harvesting systems to She Oaks.
- Stormwater reuse for public open space.
- Kerb cut-out installation around public open space.
- Enablement of infiltration wetlands to be installed.

Table 13 Open space delivery

PARK ID	AREA (HA)	TYPE	LOCATIONAL ATTRIBUTES	RESPONSIBILITY
ACTIVE OPEN	SPACE			
SR-01	6.00	Local Sports Reserve	Co-located with northern primary school, partially within transmission easement	Golden Plains Shire





PARK ID	AREA (HA)	ТҮРЕ	LOCATIONAL ATTRIBUTES	RESPONSIBILITY
SR-02	6.00	Local Sports Reserve	Co-located with eastern primary school and constructed waterway	Golden Plains Shire
SR-03	10.00	Local Sports Reserve	In south on the Levy Road extension, co-located with secondary school and abutting the Bruce Creek corridor	Golden Plains Shire
LOCAL PARKS				
LP-01	1.24	Local Park	Corner of Levy Road and Charlton Road at north of precinct, including multiple extant Melbourne Yellow Gums	Golden Plains Shire
LP-02	1.00	Local Park	Local park in north with an extant Melbourne Yellow Gum	Golden Plains Shire
LP-03	0.60	Local Park	Local park co-located with local town centre with potential urban square/plaza treatment	Golden Plains Shire
LP-04	0.55	Local Park	Eastern local park, co- located with sediment basin	Golden Plains Shire
LP-05	0.71	Local Park	Local park in south/centre of precinct	Golden Plains Shire
LP-06	1.00	Local Park	Local park in southeast of precinct on corner of future connector routes	Golden Plains Shire
LP-07	1.00	Local Park	Local park in near southern precinct boundary, including many extant indigenous trees and a historic farmstead with drystone walls	Golden Plains Shire
INDOOR RECREATION				

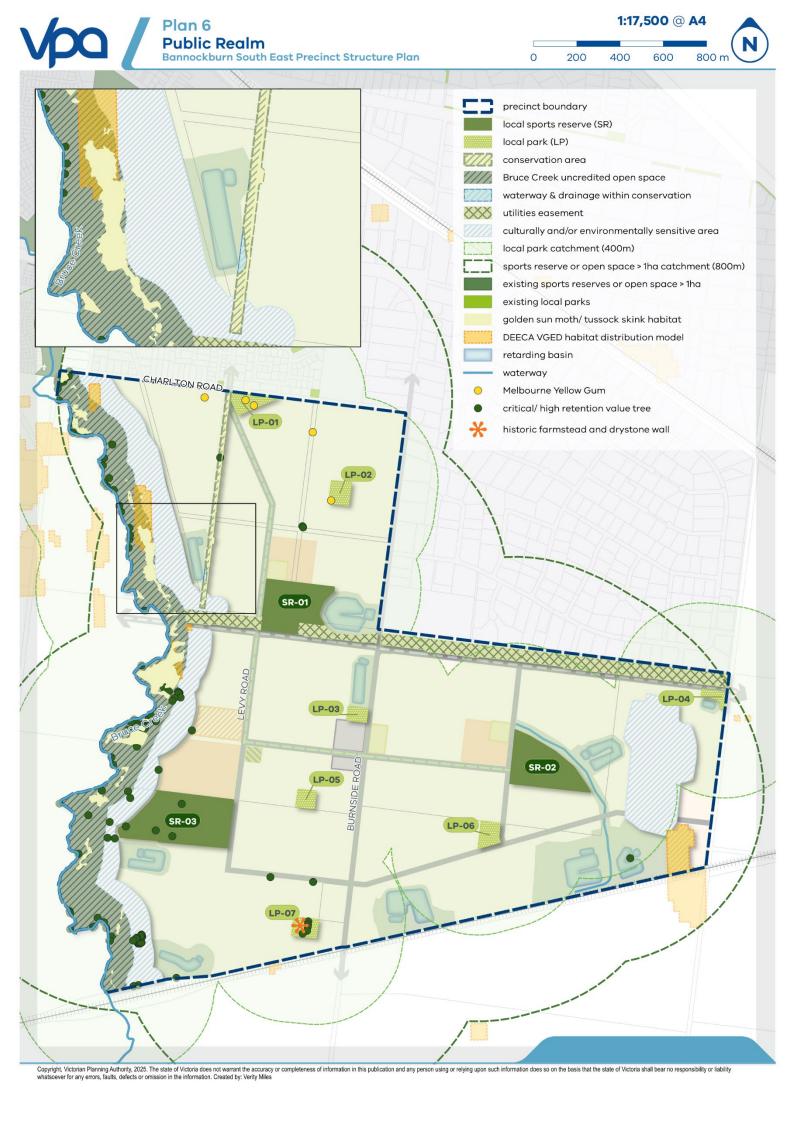




PARK ID	AREA (HA)	TYPE	LOCATIONAL ATTRIBUTES	RESPONSIBILITY
IR-01	0.60	Indoor Recreation Facility	On central connector spine, co-located with secondary school, sports reserve and potential private primary school	Golden Plains Shire

Table 14 Water infrastructure

DRAINAGE SCHEME				
ASSEST ID	AREA (HA)	ASSET TYPE	RESPONSIBILITY	
RBWL1	4.31	Retarding basin / wetland	Golden Plains Shire	
RBWL2	3.21	Retarding basin / wetland	Golden Plains Shire	
RBWL3	2.34	Retarding basin / wetland	Golden Plains Shire	
RBWL4	6.46	Retarding basin / wetland	Golden Plains Shire	
RBWL5	4.57	Retarding basin / wetland	Golden Plains Shire	
RBWL6	2.35	Retarding basin / wetland	Golden Plains Shire	
RBWL7	2.83	Retarding basin / wetland	Golden Plains Shire	
RBWL8	0.64	Sediment basin	Golden Plains Shire	
RBWL9	9.57	Retarding basin / wetland	Golden Plains Shire	
RBWL10	6.69	Retarding basin / wetland	Golden Plains Shire	
WW-01	3.55	Constructed waterway	Golden Plains Shire	



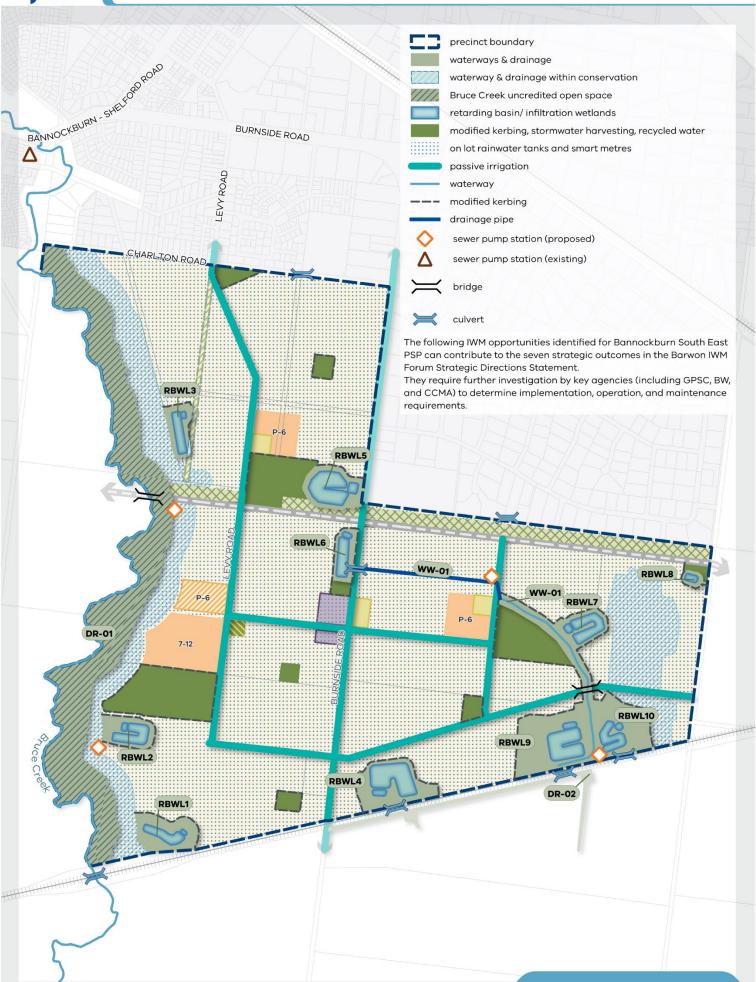




Figure 2 Integrated Water Management opportunities



Safe, secure, and affordable supplies in an uncertain future

- Lot-scale rainwater and stormwater harvesting (households)
- · Smart meters for residents (BW)



Effective and affordable wastewater systems

 Recycled water for open space irrigation (GPSC / BW)



Healthy and valued waterways and marine environments

 Stormwater infiltration via Water Sensitive Urban Design assets and infiltration wetlands (GPSC)



Opportunities are optimised to manage existing and future flood risks and impacts

• Flood mitigation via the Bannockburn South East Drainage Strategy (GPSC / CCMA)



Healthy and valued urban, agricultural, rural and green landscapes

- Passive irrigation of street trees (GPSC)
- Stormwater harvesting for open space irrigation (GPSC / BW)
- Modified kerbing to allow passive irrigation of open space (GPSC)



Traditional Owner and community values reflected in place-based planning

 Location of infrastructure across Bruce Creek is co-designed with the Wadawurrung Traditional Owners Aboriginal Corporation



Jobs, economic growth and innovation

• Water to support jobs and economic growth

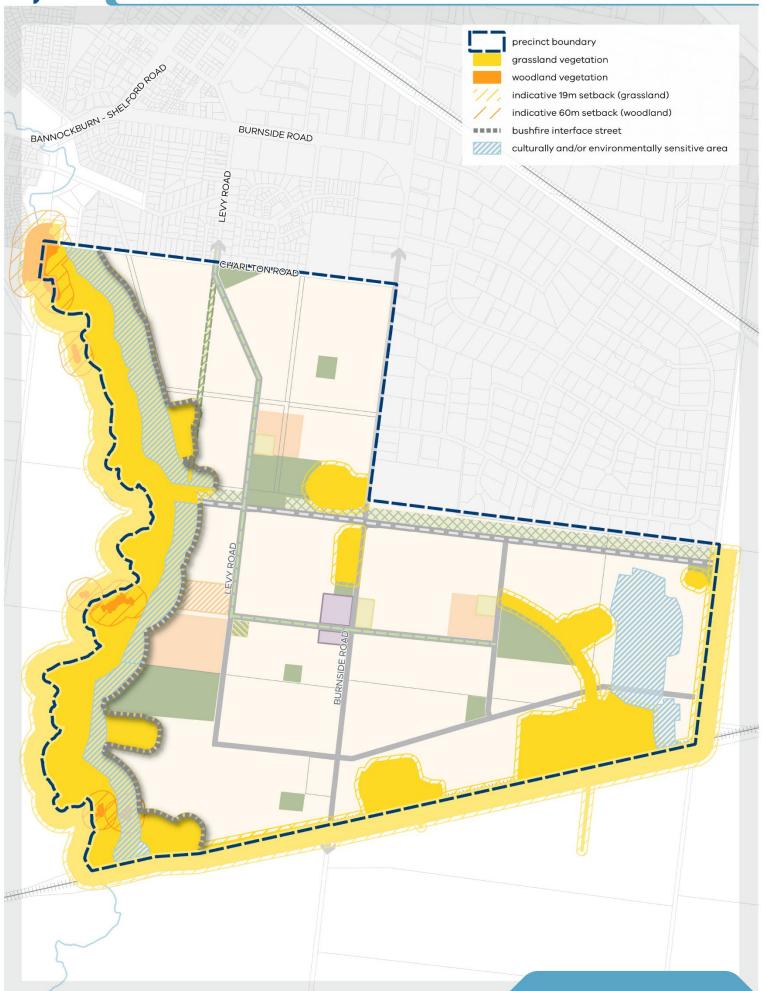
V = Barwon Water

GPSC = Golden Plains Shire Council

CCMA = Corangamite Catchment Management Authority











3.5 Services and destinations

3.5.1 Objectives

Table 15 Objectives – Services and destinations

OBJEC	TIVES	IMPLEMENTATION TOOLS
O23	To support education and community infrastructure and facilities that cater for multiple social needs, and that are located to equitably and efficiently maximise their accessibility and shared use with adjoining precincts and the broader region.	R43, R44, R45, G36, G37, G41, G42 & G43
O24	To facilitate development of shared-use facilities by co-locating schools and community facilities with sporting reserves adjacent to the Local Town Centre and facilitating the appropriate and timely delivery of local community infrastructure and services.	G36 & G43

3.5.2 Requirements and guidelines

Table 16 Requirements and guidelines – Services and destinations

REQUIREMENTS

R43

Education facilities must have a minimum of two road frontages (three preferred), with one connector road abutting the school with a road easement wide enough to allow for school bus movement while accommodating on-street parking, adequate drop off and pick up zones, and two-way traffic movement

Any connector road or access street abutting a community or education facility must be designed to achieve slow vehicle speeds and provide designated pedestrian crossing points in the vicinity of the school site.

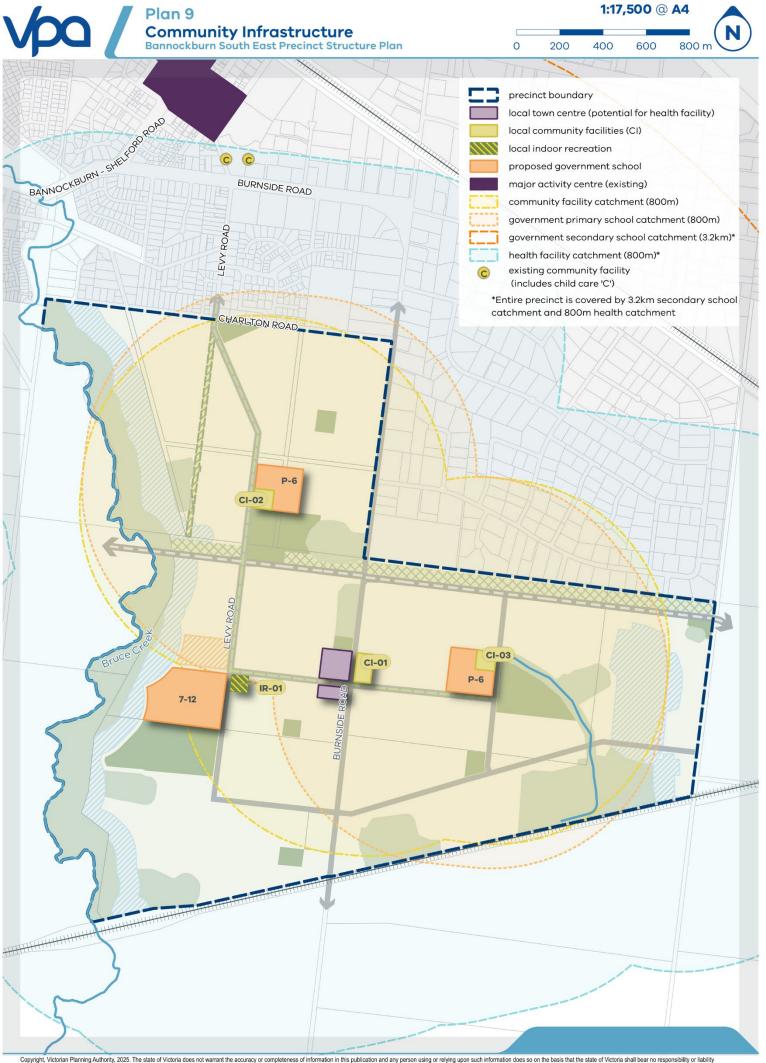
Subdivision and development involving the delivery of government school sites must be undertaken in accordance with the criteria specified in the *Victorian Government School Site Selection Criteria Toolbox* (Department of Education, April 2025). Any lot created for a government school site or proposals to modify the location of the proposed government schools from the incorporated PSP must be to the satisfaction of the Department of Education.

GUIDELINES

- Community facilities, schools, and sporting reserves which are co-located should be designed to maximise efficiencies through the sharing of car parking and other complementary infrastructure.
- The design of community facilities and infrastructure should cater towards and supports various user needs to promote inclusivity.
- G38 The incorporation of landscaping and design treatments should reflect local character and community needs.
- Where the responsible authority is satisfied that land shown as a non-government school site is unlikely to be used for a school at ultimate development of the PSP, that land must be used for an alternative purpose that is compatible with the surrounding land uses and the provisions of the applied zone. Justification should be provided in accordance with the

40

	VPA's guidance note titled <i>Development of Non-Government School Sites for an Alternative Purpose</i> .
G40	Emergency services should have access to the arterial road network to maximise coverage and reduce response times.
G41	Social services that support the needs of the community should be provided within the walkable catchment shown on Plan 9 Community.
G42	Social services that support the needs of the community should be provided simultaneously with the delivery of Affordable Housing.
G43	 Community facilities, schools and sports reserves which are co-located should be designed to: Maximise efficiencies through the sharing of car parking and other complementary infrastructure. Maximise direct access and permeability for pedestrians and cyclists through and between facilities. Apply a user centred approach to ensure these spaces are accessible, flexible, safe and intuitive to create a positive experience for the community.



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Infrastructure coordination 3.6

3.6.1 Objectives

Table 17 Objectives – Infrastructure coordination

ОВЈЕСТ	IVES	IMPLEMENTATION TOOLS						
O25	To identify and guide the timely staging and delivery of R46, R4 infrastructure and development, encourage leveraging of existing and planned infrastructure.							
O26	 Is adapted and resilient to climate related hazards Supports the transition to net zero greenhouse gas emissions Encourages renewable energy generation, storage and distribution Reduces the urban heat island effect Minimises waste generation and supports resource recovery and circular economy principles Conserves potable water. 	R50, G46 & G47						

3.6.2 Requirements and guidelines

Table 18 Requirements and guidelines – Infrastructure coordination

REQUI	REMENTS
R46	Sequencing of infrastructure development must be generally in accordance with the Plan 10 Infrastructure and Development Staging, unless otherwise agreed by the responsible authority.
R47	 Development staging must provide for the timely provision and delivery of: East-west link road reservations Connector streets and connector street bridges Tree canopy Street links between properties, constructed to the property boundary On and off-road pedestrian and bicycle network paths Essential infrastructure Land for community infrastructure, sports fields and local open space.
R48	Delivery of underground services must be coordinated, located, and bundled (utilising common trenching) to facilitate the planting of trees and other vegetation within road verges.
R49	Above ground utilities must be identified at the subdivision design stage to ensure effective integration with the surrounding neighbourhood, to minimise amenity impacts and be designed to the satisfaction of the relevant authority. Where that infrastructure is intended to be in public open space, the land required to accommodate that infrastructure will not be counted as contributing to public open space requirements specified and will be in addition to the areas designated in Appendix 2 Summary land use

budget & parcel specific land use budget.



R50

Rooftop solar and battery storage facilities must be included for homes, commercial, community and school buildings to the satisfaction of the network distributor.

GUIDELINES

Out-of-sequence development should only be by negotiation and agreement between a developer and the impacted infrastructure providers and not impose unreasonable additional burden on infrastructure providers.

Development staging should have regard to:

- Proximity to existing or proposed development fronts or serviced land
- Proximity to significant existing public transport infrastructure or public transport service
- Proximity to existing or committed community infrastructure, such as schools

G45

- Proximity to new or existing road infrastructure
- Its role in facilitating delivery of the above infrastructure.

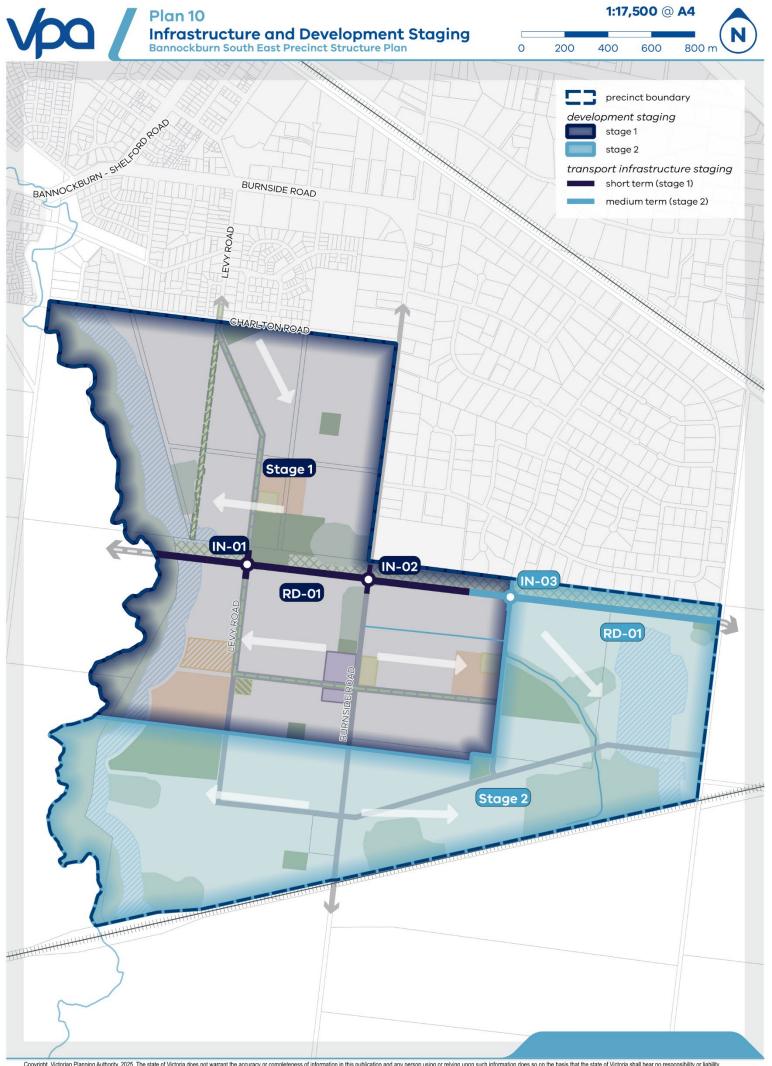
Staging that meets alternative criteria to the above may be considered by the responsible authority where an applicant satisfactorily demonstrates that development will not be isolated from basic and essential infrastructure and services, as identified in Plan 10 Infrastructure and Development Staging.

G46

Prioritise the consolidation and placement of utilities outside of culturally and/or environmentally sensitive area as shown on Plan 2 Place Based Plan. Where the placement of utilities cannot avoid crossing a culturally and/or environmentally sensitive area it must be located to avoid disturbance to existing waterway values, native vegetation, areas of strategic importance to Growling Grass Frog and cultural heritage sites, to the satisfaction of the responsible authority.

Development should consider Environmentally Sustainable Development principles, such as the inclusion of, but not limited to:

- Material re-use and recycling (use of materials with reduced embodied
- Electrical self-generation, car charge schemes, smart grids, microgrids and battery storage
- Use of tools such as Built Environment Sustainability Scorecard (BESS) & Sustainable Subdivisions Framework (Council Alliance for a Sustainable **Built Environment)**
- Measures that reduce the urban heat island effect
- Waste management initiatives
- Smart meters and power point tracking
- Flywheel energy storage systems in commercial, community and school settings
- Development that facilitates the reduction of environmental impacts and resource use through:
 - Public realm design and connectivity.
 - Facilitation of alternative energy generation systems
- Access to public and integrated active transport networks.



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4 APPENDICES

PIBILICOMPHILIPADE





Appendix 1: Precinct infrastructure plan







Table 19 Precinct infrastructure

					С	OMPONENT INCLUDE	ED IN DCP		APPORTIONMENT	
CATEGORY	PIP REF. NO.	TITLE	DESCRIPTION	OLTIMATE INTERIM OLTIMAT		ULTIMATE CONSTRUCTION	TIMING	FUNDING SOURCE	APPORTION MENT	
Road	RD-01	East-West Link Road (Interim)	Purchase of land for ultimate (4 lane) east-west link road and construction of interim (2 lane) east-west link road	Golden Plains Shire Council	Yes	Yes	No	Short / Medium	Development	100%
Road	RD-02	Burnside Road level crossing upgrade	Upgrades to Burnside Road rail level crossing	Golden Plains Shire Council	Yes	Yes	No	Long	Development	100%
Intersection	IN-01	Levy Road / Future East- West Link Road Intersection	Purchase of land for ultimate 4-way intersection (Levy Road/future east-west link road) and construction of interim 4-way intersection (Levy Road/future east-west link road)	Golden Plains Shire Council	Yes	Yes	No	Short	Development	100%
Intersection	IN-02	Burnside Road / Future East- West Link Road Intersection	Purchase of land for ultimate 4-way intersection (Burnside Road/future east-west link road) and construction of interim 4-way intersection (Burnside Road/future east- west link road)	Golden Plains Shire Council	Yes	Yes	No	Short	Development	100%
Intersection	IN-03	Future Connector / Future East- West Link Road Intersection	Purchase of land for ultimate 3-way intersection (future connector/future east-west link road) and construction of interim 3-way intersection (future connector/future east-west link road)	Golden Plains Shire Council	Yes	Yes	No	Medium	Development	100%
Bridge	BR-01	East-West Link Road Bridge	Construction of interim (2 lane) bridge	Golden Plains Shire Council	Yes	Yes	No	Long	Development	50%
Culvert	BR-02	Connector culvert over constructed waterway	Construction of constructed waterway culvert on connector road	Golden Plains Shire Council	Yes	No	Yes	Medium / Long	Development	100%







					С	OMPONENT INCLUDE	ED IN DCP		APPORTIONMENT	
CATEGORY	PIP REF. NO.	TITLE	DESCRIPTION	LEAD AGENCY	ULTIMATE LAND	INTERIM CONSTRUCTION	ULTIMATE CONSTRUCTION	TIMING	FUNDING SOURCE	APPORTION MENT
Community facility	CI-01	Level 2 Community Facility	Purchase of land for level 2 community facility and construction of level 2 community facility	Golden Plains Shire Council	Yes	No	Yes	Medium	Development	100%
Community facility	CI-02	Level 1 Community Facility	Purchase of land for level 1 community facility and construction of level 1 community facility	Golden Plains Shire Council	Yes	No	Yes	Medium	Development	100%
Community facility	CI-03	Level 1 Community Facility	Purchase of land for level 1 community facility and construction of level 1 community facility	Golden Plains Shire Council	Yes	No	Yes	Medium	Development	100%
Indoor recreation	IR-01	Indoor Recreation Centre (2 Court)	Purchase of land for 2 court indoor recreation facility and construction of 2 court indoor recreation facility	Golden Plains Shire Council	Yes	No	Yes	Medium	Development	75%
Sports reserve	SR-01	Sports Reserve (6ha - Partially within transmission easement)	Purchase of land for sports reserve, construction of sports reserve and Construction of pavilions	Golden Plains Shire Council	Yes	No	Yes	Medium	Community (Pavilions) and Development (Land and other construction)	100%
Sports reserve	SR-02	Sports Reserve (6ha)	Purchase of land for sports reserve, construction of sports reserve and Construction of pavilions	Golden Plains Shire Council	Yes	No	Yes	Medium	Community (Pavilions) and Development (Land and other construction)	100%
Sports reserve	SR-03	Sports Reserve (10ha)	Purchase of land for sports reserve, construction of sports reserve and Construction of pavilions	Golden Plains Shire Council	Yes	No	Yes	Long	Community (Pavilions) and Development (Land and other construction)	100%
Basin/wetland	RBWL1	Retarding Basin / Wetland	Purchase of land for wetland/retarding basin and Construction of wetland/retarding basin	Golden Plains Shire Council	Yes	No	Yes	Long	Development	100%







					С	OMPONENT INCLUDE	ED IN DCP		APPORTIONMENT	
CATEGORY	PIP REF. NO.	TITLE	DESCRIPTION	LEAD AGENCY	ULTIMATE LAND	INTERIM CONSTRUCTION	ULTIMATE CONSTRUCTION	TIMING	FUNDING SOURCE	APPORTION MENT
Basin/wetland	RBWL2	Retarding Basin / Wetland	Purchase of land for wetland/retarding basin and Construction of wetland/retarding basin	Golden Plains Shire Council	Yes	No	Yes	Long	Development	100%
Basin/wetland	RBWL3	Retarding Basin / Wetland	Purchase of land for wetland/retarding basin and Construction of wetland/retarding basin	Golden Plains Shire Council	Yes	No	Yes	Short	Development	100%
Basin/wetland	RBWL4	Retarding Basin / Wetland	Purchase of land for wetland/retarding basin and Construction of wetland/retarding basin	Golden Plains Shire Council	Yes	No	Yes	Short / Medium	Development	100%
Basin/wetland	RBWL5	Retarding Basin / Wetland	Purchase of land for wetland/retarding basin and Construction of wetland/retarding basin	Golden Plains Shire Council	Yes	No	Yes	Short	Development	100%
Basin/wetland	RBWL6	Retarding Basin / Wetland	Purchase of land for wetland/retarding basin and Construction of wetland/retarding basin	Golden Plains Shire Council	Yes	No	Yes	Short / Medium	Development	100%
Basin/wetland	RBWL7	Retarding Basin / Wetland	Purchase of land for wetland/retarding basin and Construction of wetland/retarding basin	Golden Plains Shire Council	Yes	No	Yes	Medium	Development	100%
Basin/wetland	RBWL8	Sediment Basin	Purchase of land for sediment basin and Construction of sediment basin	Golden Plains Shire Council	Yes	No	Yes	Short / Medium	Development	100%
Basin/wetland	RBWL9	Retarding Basin / Wetland	Purchase of land for wetland/retarding basin and Construction of wetland/retarding basin	Golden Plains Shire Council	Yes	No	Yes	Short / Medium	Development	100%
Basin/wetland	RBWL10	Retarding Basin / Wetland	Purchase of land for wetland/retarding basin and Construction of wetland/retarding basin	Golden Plains Shire Council	Yes	No	Yes	Medium / Long	Development	100%





	regory PIP REF. TITLE I				С	OMPONENT INCLUDE	ED IN DCP		APPORTIONMENT	APPORTION MENT
CATEGORY			DESCRIPTION	LEAD AGENCY	ULTIMATE LAND	INTERIM CONSTRUCTION	ULTIMATE CONSTRUCTION	TIMING	FUNDING SOURCE	
Constructed waterway	WW-01	Constructed Waterway	Purchase of land for constructed waterway and Construction of constructed waterway	Golden Plains Shire Council	Yes	No	Yes	Short / Medium	Development	100%
Constructed waterway	DR-01	Bruce Creek open space reserve	Purchase of land for open space reserve and drainage	Golden Plains Shire Council	Yes	No	Yes	Medium / Long	Development	100%
Constructed waterway	DR-02	Culvert and channel	Purchase of land for drainage channels south of precinct	Golden Plains Shire Council	Yes	No	Yes	Medium / Long	Development	100%



4.2 Appendix 2: Summary & parcel-specific land use budget

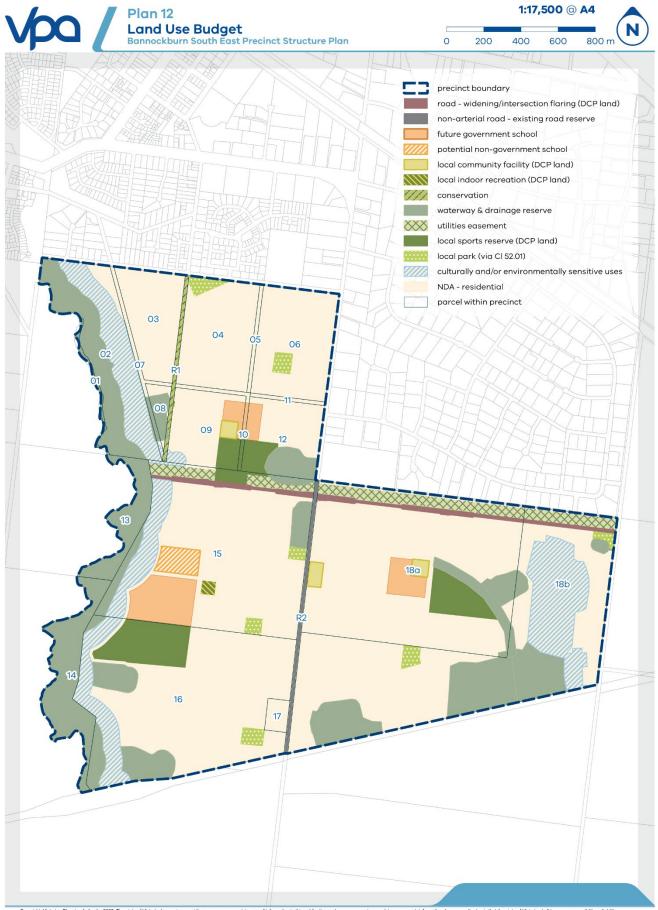








Table 20 Summary land use budget

Description	PSP Number							
Description	HECTARES	% OF TOTAL	% OF NDA					
TOTAL PRECINCT AREA (ha)	524.00							
Transport								
Road - Widening/Intersection Flaring (DCP land)	7.21	1.38%	2.31%					
Burnside Road - Existing Road Reserve	3.05	0.58%	0.98%					
Sub-total Transport	10.26	2.0%	3.29%					
Community & Education								
Proposed Government School	15.40	2.94%	4.98%					
Potential Non-Government School	3.00	0.57%	0.97%					
Local Community Facility (DCP land)	2.60	0.50%	0.84%					
Local Indoor Recreation (DCP land)	0.60	0.11%	0.19%					
Sub-total Education	21.60	4.1%	7.0%					
Open Space								
Uncredited Open Space								
Conservation Reserve	1.99	0.38%	0.64%					
Waterway and Drainage Reserve	90.24	17.22%	29.16%					
Utilities Easements	12.83	2.45%	4.15%					
Sub-total Uncredited Open Space	105.06	20.05%	33.95%					
Credited Open Space								
Local Sports Reserve (DCP land)	22.00	4.2%	7.11%					
Local Network Park (via Cl 52.01)	6.11	1.2%	1.97%					
Sub-total Credited Open Space	28.11	5.4%	9.09%					
Total All Open Space	133.17	25.4%	43.04%					
Other								
Culturally and/or environmentally sensitive areas	49.55	9.46%	16.01%					
Sub-total	49.55	9.46%	16.01%					
TOTAL NET DEVELOPABLE AREA (NDA)	309.42	59.05%						





Table 21 Parcel-specific land use budget

										_					
		TRANSPORT		MMUNI DUCATI			UNCR	EDITED SPACE	OPEN	_	EN ACE	OTHER			
Parcel ID	TOTAL AREA (HECTARES)	Arterial Road - Widening/Intersection Flaring (DCP land)	Proposed Government School	Potential Non-Government School	DCP Community Facilities	Local Indoor Recreation (DCP land)	Conservation Reserve	Waterway and Drainage Reserve	Utilities Easements	Local Sports Reserve (DCP land)	Local Network Park (via Cl 52.01)	Sensitive Uses	Total Net Developable Area (Hectares)	Net Developable Area % of Property	Total Contribution Land (Hectares)
1	0.85	-	-	-	-	-	-	0.85	-	-	-	-	0.00	0.00%	0.85
2	30.26	-	-	-	-	-	1	14.23	-	-	-	14.07	1.96	6.48%	28.30
3	15.82	-	-	-	-	-	-	-	-	-	-	-	15.82	100.00%	0.00
4	22.53	-	-	-	- (-	<i>)</i> _	-	-	-	1.24	-	21.30	94.51%	1.24
5	1.18	-	-	-	-	-	-	-	-	-	-	-	1.18	100.00%	0.00
6	23.96	-	-			-	-	-	-	-	1.00	-	22.96	95.83%	1.00
7	2.42	-	-	-	-	-	-	0.49	-	-	-	0.13	1.80	74.39%	0.62
8	2.54	-	_		-	-	-	1.71	-	-	-	0.01	0.82	32.30%	1.72
9	15.54	-	1.53	-	0.80	-	0.02	-	-	1.95	-	0.59	10.65	68.54%	4.89
10	1.63	-	0.41	-	-	-	-	-	-	0.34	-	-	0.88	53.93%	0.75
11	0.82	-	-	-	-	-	-	-	-	-	-	-	0.82	100.00%	0.00







		TRANSPORT		MMUNI DUCATI			UNCR	EDITED SPACE		OP SPA		OTHER			
Parcel ID	TOTAL AREA (HECTARES)	Arterial Road - Widening/Intersection Flaring (DCP land)	Proposed Government School	Potential Non-Government School	DCP Community Facilities	Local Indoor Recreation (DCP land)	Conservation Reserve	Waterway and Drainage Reserve	Utilities Easements	Local Sports Reserve (DCP land)	Local Network Park (via CI 52.01)	Sensitive Uses	Total Net Developable Area (Hectares)	Net Developable Area % of Property	Total Contribution Land (Hectares)
12	16.37	-	1.56	-	-	-	-	3.72	>	2.47	-	-	8.62	52.67%	7.75
13	8.48	-	-	-	-	-	-	8.48	-	-	-	-	0.00	0.00%	8.48
14	15.17	-	-	-	-	-	gan)	15.17	-	-	-	-	0.00	0.00%	15.17
15	81.92	2.79	8.40	3.00	-	0.60	-	5.48	3.53	1.25	1.31	7.55	48.00	58.60%	30.39
16	84.84	-	-	-	-	-	-	10.27	-	10.00	1.00	8.91	54.64	64.41%	30.19
17	2.03	-	-	-	-	-	-	-	-	-	-	-	2.03	100.00%	0.00
18a	91.76	3.27	3.50	-	1.80	U	-	5.26	6.30	6.00	-	-	65.63	71.52%	19.84
18b	100.79	1.15	-	-	-	-	-	24.48	3.00	-	1.55	18.29	52.32	51.91%	45.47
SUB TOTAL	518.89	7.21	15.40	3.00	2.60	0.60	0.02	90.15	12.83	22.00	6.11	49.55	309.42	59.63%	196.64



4.3 Appendix 3: Local town centre performance requirements & guidelines

Table 22 Local town centre performance requirements and guidelines

PERFORMANCE REQUIREMENTS	PERFORMANCE GUIDELINES								
Must address all relevant elements of	Development should result in a walkable, pedestrian focused, mixed-use urban neighbourhood.								
the Urban Design Guidelines of Victoria.	Development should be structured to seamlessly integrate with surrounding land including the wetlands, waterways, and neighbourhoods.								
	Development should be structured to create physical and visual connections with surrounding features and points of interest to reinforce the sense of place and identity								
	Development should prioritise active transport and facilitate the provision of safe and direct off-road walking and cycling connections.								
Must provide an area	Should provide a retail floor space of 6,000-8300m2.								
of 2.7 net developable hectares for the	Development should deliver a compact, walkable street and block pattern.								
provision of the Local Town Centre. The land	Development should include a high intensity, activated spine of retail and employment opportunities.								
area may be reduced at the discretion of the council.	Development should include a centrally located civic plaza or public space that provides a clear point of focus for the retail core.								
	Development should include car parking that is concealed and well-integrated.								
Promote Ecologically	Development should include climate resilient design such as:								
Sustainable Development	Minimise urban heat island effect through light roofs and								
	 minimising hardscaped surfaces. Orient buildings to ensure passive heating, cooling and ventilation. 								
	Solar Photovoltaic Technology on buildings.								
(18)	 Minimise gas connections High amount of vegetation and canopy cover, shelter and shading 								
00	Water sensitive urban design and passive irrigation								
	Development should:								
	 Group waste collection points to maximise opportunities for recycling and reuse 								
	 Consider the lifecycle of materials including embodied carbon. 								
	Use construction practices that use recycled materials.								
	Development should support zero and low emissions transport:								
	 Provision for electric vehicle (EV) charging infrastructure provision and future proofing for EV. 								
	 Bicycle parking facilities and supporting infrastructure and space for additional bike parking and facilities. 								

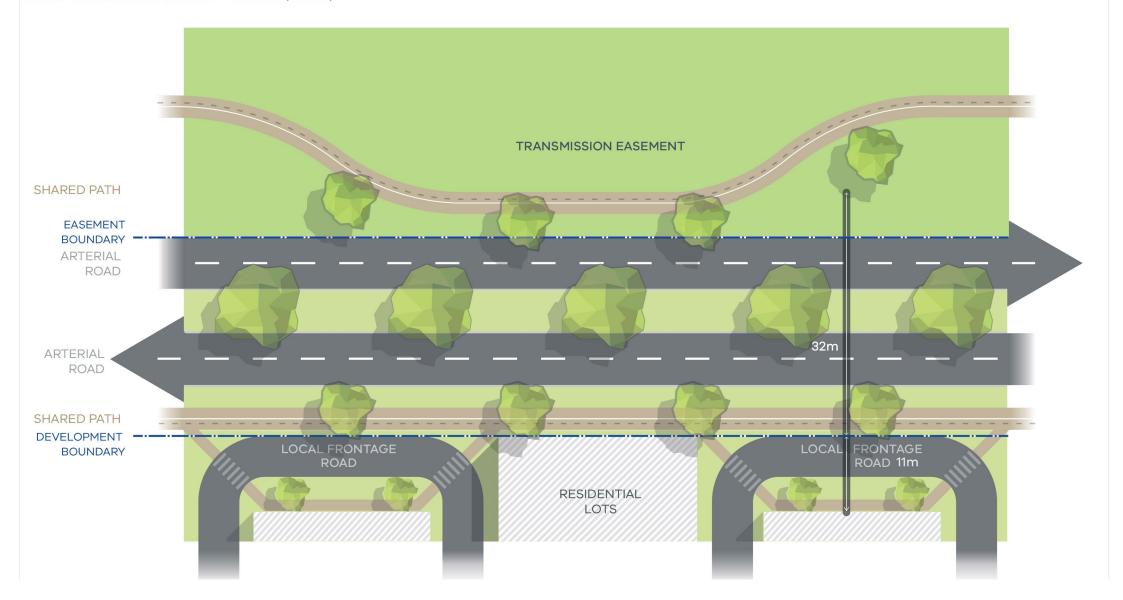


4.4 Appendix 4: Standard road cross sections



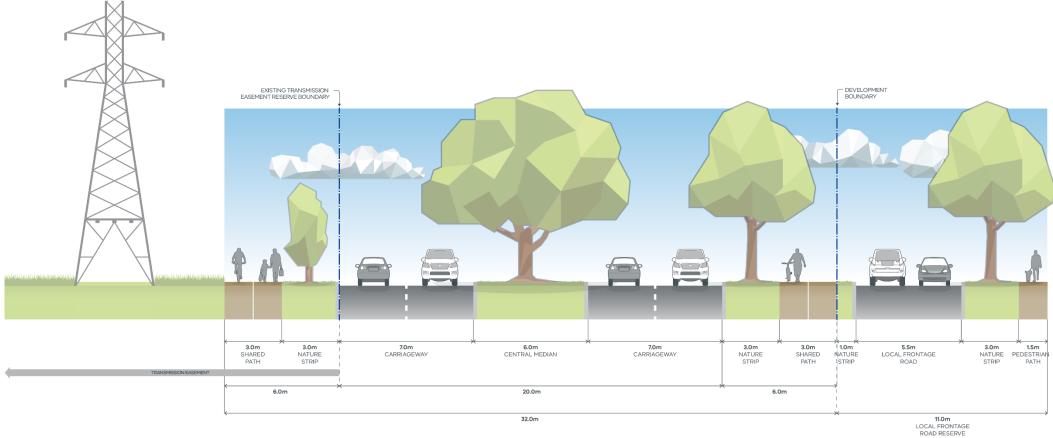


East-West Link Road 4 Lane (32m)



Cross Section 1





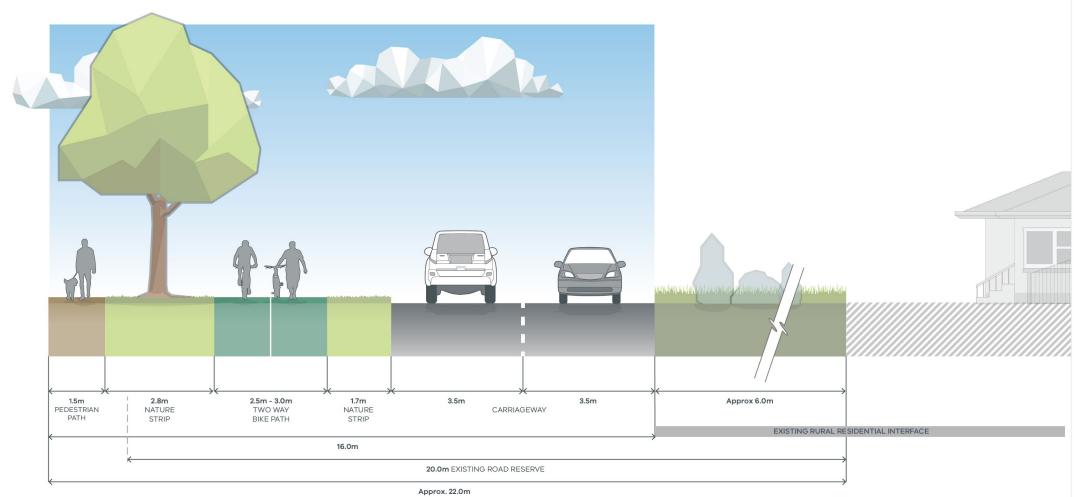
NOTES:

- Includes typical residential interface both sides.
- Minimum street tree mature height 15 metres.
- Cross section indicative, final location of infrastructure and landscaping to be developed at detailed design stage.

• Variations to indicative cross-section may include water sensitive urban design (WSUD) outcomes. These could include but are not limited to bioretention tree planter systems and/or median bioretention swales. Such variations must be to the satisfaction of the responsible authority.

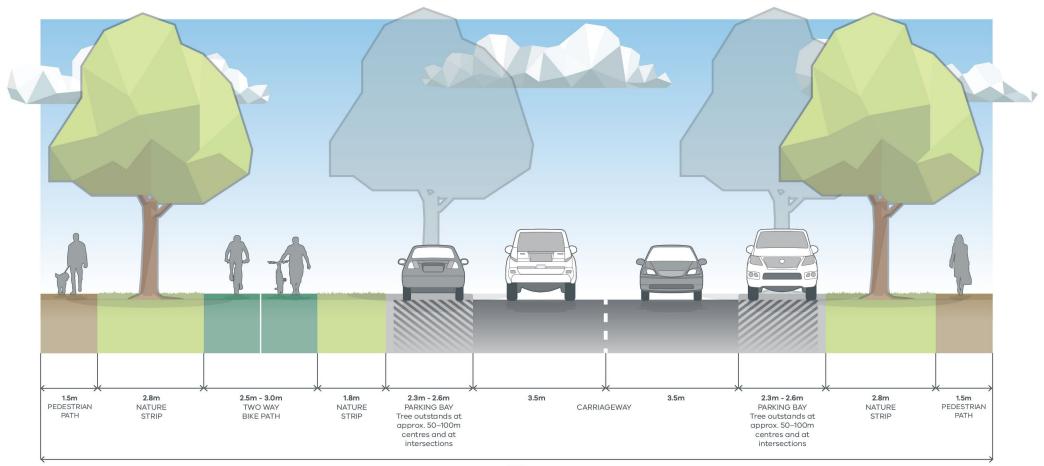
Cross Section 2

Connector Street (22m) Burnside Road Existing Residential Interface (north of transmission easement)



- Minimum street tree mature height 15 metres.
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.
- Variation to indicative cross-section may include water sensitive urban design (WSUD) outcome. These
 could include but are not limited to bioretention tree planter systems and/or median bioretention
 swales. Such variations must be to the satisfaction of the responsible authority.

Cross Section 3 Connector Street (25m)



25.0m

- · Minimum street tree mature height 15 metres.
- Where roads abut school drop-off zones and throughfares, grassed nature strip should be replaced with pavement. Canopy tree planting must be incorporated into any additional pavement.
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.
- Variation to indicative cross-section may include water sensitive urban design (WSUD) outcome.
 These could include but are not limited to bioretention tree planter systems and/or median bioretention swales. Such variations must be to the satisfaction of the responsible authority.
- Parking bay widths are flexible and may be adjusted depending on need.
- · Parking may be removed from interfacing side when connector is abutting a drainage reserve.
- The standard connector cross section may be altered in the circumstances of a constrained reserve (i.e. where limited by adjacent heritage features) to the discretion of Council, prioritising the continuity and function of pedestrian pathways and offroad cycleways.

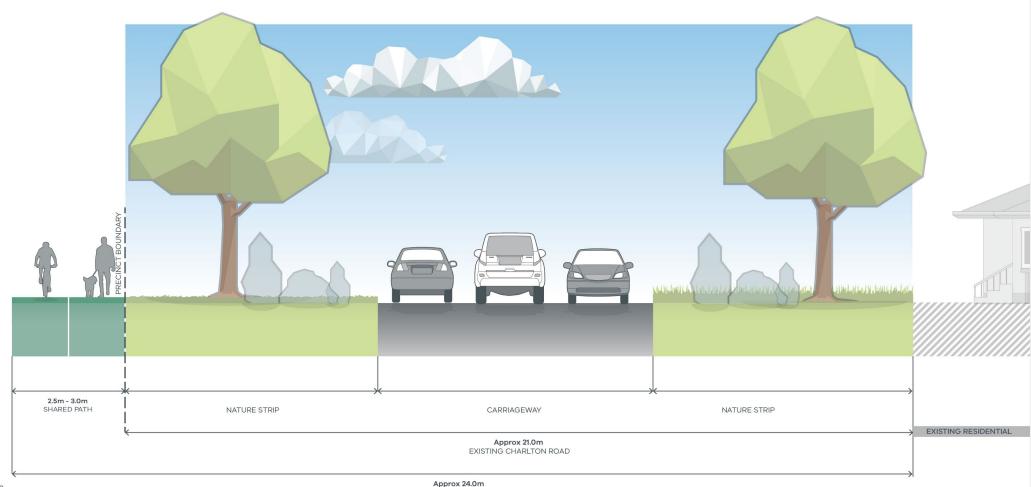
Cross Section 4 Connector Street Boulevard (28–31m) 1.5m 3.0m 2.5m - 3.0m 2.3m - 2.6m 3.5m 3.0-6.0m 3.5m 2.3m - 2.6m 3.0m 1.5m 1.8m PEDESTRIAN NATURE TWO WAY NATURE PARKING BAY CARRIAGEWAY CENTRAL MEDIAN CARRIAGEWAY PARKING BAY NATURE **PEDESTRIAN** PATH STRIP BIKE PATH STRIP Tree outstands at Opportunity for WSUD Tree outstands at STRIP PATH approx. 50-100m approx. 50-100m centres and at centres and at intersections intersections

28.0-31.0m

- Include a central median with large canopy trees to create a boulevard effect. Trees are to be centrally planted in median.
- Topsoil used in central medians is to be sandy loam, with a minimum depth of 200mm. The surface of
 medians is to be free-draining with a minimum cross fall of 2%, and is to be planted with warm season
 grasses.
- In areas where high pedestrian volumes are expected (e.g. around schools and town centres), central
 medians should be paved with harder wearing surfaces such as granitic sand or other pavements.
 Canopy tree planting must be incorporated into additional paved area.
- Any garden beds in central medians are to be offset 1.5m from back of kerb.

- Depending on the location of breaks in the median, provide intermediate pedestrian crossing points to accommodate mid-block crossings.
- An alternative boulevard treatment can be achieved through a wider verge on one side capable of accommodating a double row of canopy trees.
- Variations to indicative cross-section may include water sensitive urban design (WSUD) outcome.
 These could includebut are not limited to bioretention tree planter systems and/or median bioretention swales. Such variations must be to the satisfaction of the responsible authority.

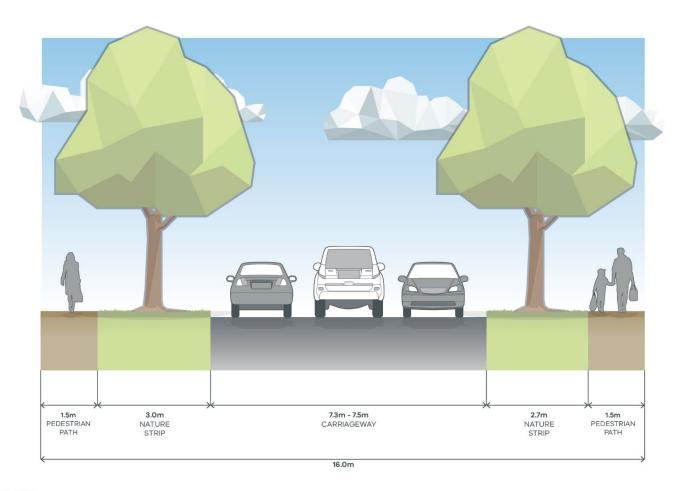
Cross Section 5 Local Access Street (24m) Existing Residential Interface (Charlton Road)



- Minimum street tree mature height 15 metres.
- · Shared path should ensure connections to current and future crossing points, paths and bus stands.



Cross Section 6 Local Access Street Level 1 (16m)

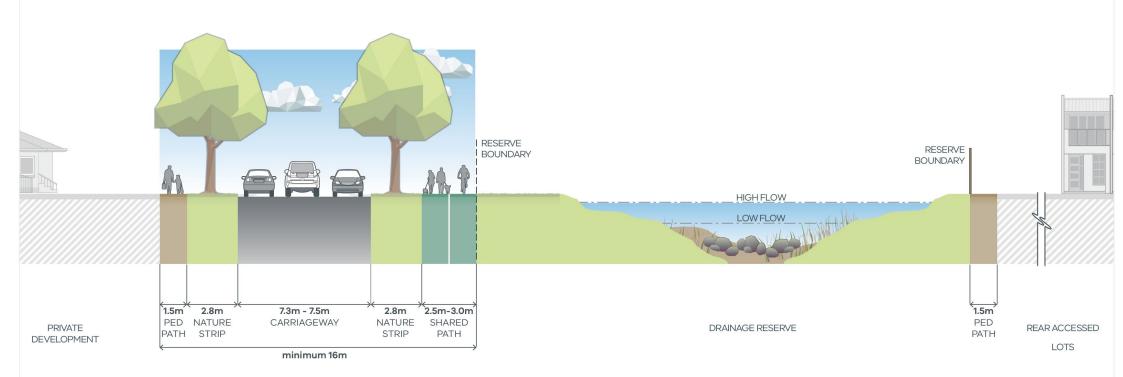


NOTES:

• Minimum street tree mature height 15 metres.

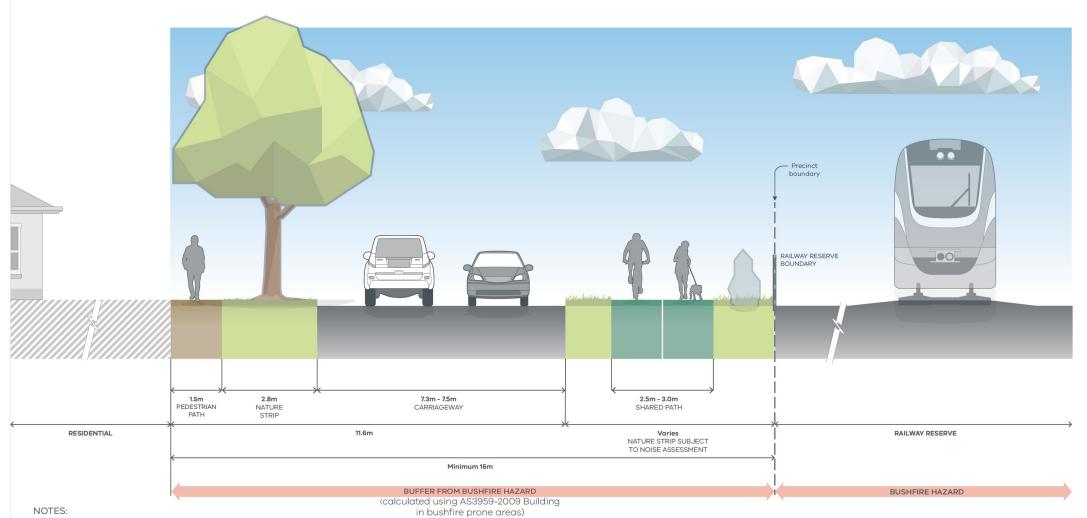


Cross Section 7 Local Access Street - Constructed Waterway Interface (minimum 16m)



- Waterway widths are subject to Council approval
- Waterway should be fronted by either local street or rear loaded residential lots. Houses should not back onto or side directly to the reserve
- · Minimum street tree mature height 15 metres.

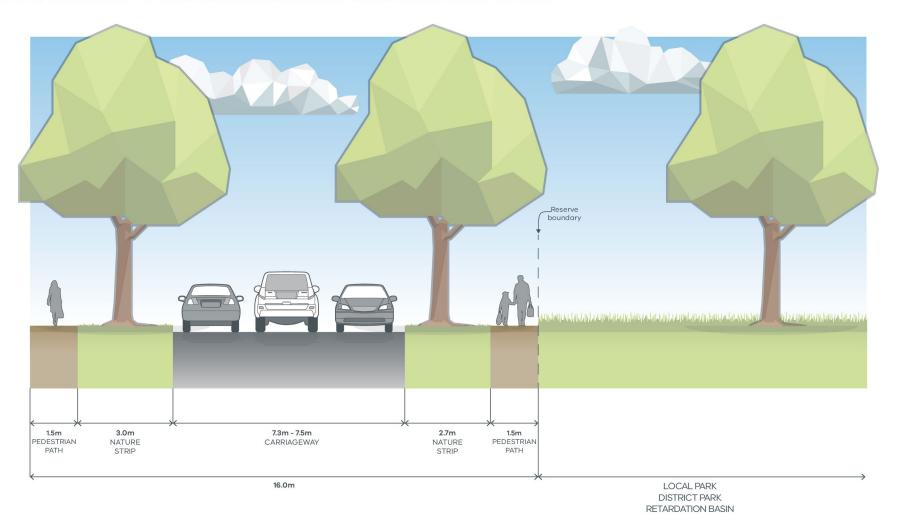
Cross Section 8 Local Access Street (16m) - Railway Interface



- Refer to Australian Railway Track Corporation standards.
- A shared path may be located in the nature strip adjacent the railway reserve subject to approval by the responsible authority.
- Fencing to the railway reserve boundary is to be visually transparent.



Cross Section 9 Local Access Street (16m) - Park and Retardation Basin Interface Street



- · Minimum street tree mature height 15 metres.
- · Verge widths maybe reduced where roads abut open space with the consent of the responsible authority.



4.5 Appendix 5: Bruce Creek open space design outcomes

Objective	Outcomes
Protect and enhance habitat values	 Avoid degradation of existing Ecological Vegetation Classes. Any public paths or infrastructure, including but not limited to drainage infrastructure must be designed and located to avoid or minimise disturbance to vegetation and Growling Grass Frog habitat. To ensure habitat values are enhanced and protected, if tree removal is permitted by Council, it will be in accordance with the tree removal hierarchy within the Golden Plains Shire Tree Protection and Management Policy (May 2023) including but not limited to retaining trunks, large branches or stumps for habitat and amenity.
Mitigate bushfire risk	 Ensure revegetation and landscaping is sensitive to bushfire considerations and avoids reclassifying areas to higher risk landscapes. Provide a suitable landscape/road interface and buffer between corridor and development. Design paths, trails and maintenance vehicle access to facilitate fuel reduction and ecological burning to reduce fire risk and encourage ecological diversity
Protect sites of historic and cultural heritage	 Ensure the design of active transport network avoids allowing direct pedestrian access to sensitive sites of cultural heritage significance, based on findings and recommendations as part of future Cultural Heritage Management Plan preparation. Avoid works that would require ground disturbance in proximity to sites of significance unless otherwise agreed by the Registered Aboriginal Party and responsible authority.
Respect and incorporate Wadawurrung cultural values	 Protect the open nature of the amphitheatre – prioritise revegetation and avoid uses such as built structures and shared paths. Avoid areas of sensitivity such as artefact sites Prioritise habitat restoration and revegetation to protect key threatened species
Nominate suitable path and trail locations	 Locate intensive commuter type cycleways at edge of corridor in flat and unconstrained land. Locate shared path network to prioritise less constrained land, ensure accessibility and ease of use and provide connections to the creek landscape. Locate walking/jogging/cycling paths closer to the creek line, avoiding the most constrained land where possible. Identify and locate maintenance vehicle access through the reserve.
Nominate suitable locations for creek crossing points	 Locate higher order cycle/pedestrian crossings where there are clear paths of lesser constrained land. Potential to locate lower order boardwalk/pedestrian crossings in more constrained areas.



Objective	Outcomes
Identify locations suitable for facilities and recreational activities	 Prioritise unconstrained land within the corridor for credited open space, potentially including facilities such as public toilets, playgrounds etc. Potential for low impact structures such as picnic areas in low constraint areas, particularly those with visual amenity.
Ensure open space is deliverable and function in both the short and long term	 Area defined as creek corridor should make sense regarding title boundaries. Pathway networks and facilities should not be limited to one parcel to ensure functionality of the corridor is not limited in the shorter term.

4.6 Appendix 6: Transmission easement design outcomes

Figure 3 High Level Transmission Easement Concept



Open space and development outcomes for the transmission easement should:

- Be in accordance with standards and guidelines set out in *A guide to living with transmission line* easements (Ausnet) and permissions set out in Table 24.
- Prioritise active transport connectivity, both on an east-west and north-south axes
- Ensure visual and transport continuity on an east-west axis.
- Encourage the effective use of encumbered land for high quality passive and active open space, including encouraging passive surveillance, permeable frontages and activity.
- Consider innovative practices in areas such as urban agriculture, microgrids and Integrated Water Management.
- Consider Wadawurrung connections to Country and opportunities to embed cultural values and practices within open space outcomes.





- Retain and build on significant sightlines to features such as the Barrabool Hills and Mount Gnarwarre.
- Consider the potential role for open space in preserving, enhancing and providing connectivity for biodiversity and habitat values.
- Consider transport links to existing uses, while ensuring the safe and effective function of the proposed east west link road is prioritised.
- Provide a diversity of open space uses and outcomes, including but not limited to dog parks, bike tracks, playgrounds and sports and recreation.

Table 23 Transmission easement allowances and restrictions

Features	Allowance	Restrictions
Roads	Roads that cross generally perpendicular to the easement are acceptable provided that they are at least 30m away from towers.	Roads that run parallel to the line are not permitted within the easement.
Lighting	Lighting poles are permitted, with pole heights determined by available clearances to the overhead lines and must be of a hinged design that lowers to ground for maintenance.	
Lots	General subdivision of the land is acceptable subject to relevant subdivision planning provisions.	Subdivision must not create residential or commercial lots either wholly or partially within the easement.
Drainage	Wetlands and reserves are permitted subject to acceptance of designs by AusNet.	No water bodies permitted within 30m of towers.
Services and Utilities	Any underground services within the easement are subject to approval by AusNet.	Nothing permitted within 30m of towers. Solar panels are not permitted in the easement.
Structures	Structures are subject to approval by AusNet.	Buildings are not permitted in the easement.
Access	Use of vehicles and equipment over 3m in height is subject to written approval from AusNet.	
Landscaping	Planting of vegetation is restricted to lower height species with reduced planting density to ensure that a fire cannot spread throughout the easement. Approval is required by AusNet.	
Recreation	Open space and recreation assets i.e. seating, playground equipment are permitted subject to AusNet provisions on materiality and height (e.g. 1 metre maximum for playground equipment).	



4.7 Appendix 7: Glossary of terms

TERM	DEFINITION	
Activity centre	Provides the focus for services, employment and social interaction. They are where people shop, work, meet, relax and live. Usually well-serviced by public transport, they range in size and intensity of use.	
Affordable housing	Defined under the <i>Planning and Environment Act 1987</i> as housing, including social housing, that is appropriate for the needs of very low-, low- or moderate-income households.	
Canopy tree cover	The total area of a tree's foliage (which comprises of the layer of leaves, branches, and stems) that covers the ground when viewed from above.	
Canopy tree	A tree which has an average potential canopy of foliage of 6.4m in diameter or greater at maturity in the summer months.	
Co-location	Adjoining land uses to enable complementary programs, activities, and services as well as shared use of resources and facilities, for example, siting schools and sporting fields together.	
Community facility	Infrastructure provided by government or non-government organisations for accommodating a range of community support services, programs, and activities. This includes:	
	 Facilities for education and learning (e.g. government and non-government schools, universities, adult learning centres) Early years (e.g. preschool, maternal and child health, childcare) Health and community services (e.g. hospitals, aged care, doctors, dentists, family and youth services, specialist health services) 	
	 Community (e.g. civic centres, libraries, neighbourhood houses) Arts and culture (e.g. galleries, museums, performance space) 	
6/18/	 Sport, recreation and leisure (e.g. swimming pools) Justice (e.g. law courts) Voluntary and faith (e.g. places of worship), and Emergency services (e.g. police, fire and ambulance stations). 	
Encumbered land	Land that is constrained for development purposes, including easements for power/transmission lines, sewer, gas, waterways/drainage; retarding basins/ wetlands; landfill; conservation, protected vegetation and heritage areas. This land may be used for a range of activities (e.g. walking trails, sports fields) and is not credited. However, regard is taken to the availability of encumbered land when determining the open space requirement.	
Frontage	The road alignment at the front of a lot. If a lot abuts two or more roads, the one to which the building, or proposed building faces	





TERM	DEFINITION	
Gross developable area	Total precinct area excluding encumbered land, arterial roads and other roads with four or more lanes.	
Housing density (gross)	The number of houses divided by gross developable area.	
Housing density (net)	The number of houses divided by net developable area.	
Linear open space network	Corridors of open space, mainly along waterways that link together forming a network	
Land use budget table	A table setting out the total precinct area, gross developable area, net developable area and constituent land uses proposed within the precinct	
Local town centre	An activity centre smaller than a neighbourhood activity centre which may include a small limited-line supermarket or convenience store of between 599 square metres and 1,500 square metres, plus non-retail uses.	
Net developable area (NDA) or hectare (NDHa)	Land within a precinct available for development. This excludes encumbered land, arterial roads, railway corridors, government schools and community facilities and public open space. It includes lots, local streets, and connector streets. Net developable area may be expressed in terms of hectare units (i.e. NDHa).	
Passive open space	Open space that is set aside for parks, gardens, linear corridors, conservation bushlands, nature reserves, public squares and community gardens that are made available for passive recreation, play and unstructured physical activity including walking, cycling, hiking, revitalisation, contemplation and enjoying nature.	
Principal public transport network	Incorporated document <i>Principle Public Transport Network 2017</i> (Victorian Government, 2017), and <i>Principle Public Transport Network Area Maps</i> (Victorian Government, August 2018).	
Public open space	Land that is set aside in the precinct structure plan for public recreation that incorporates active and passive open space.	
Social housing	Social housing as defined by the <i>Housing Act 1983</i> (Vic) means the following housing (other than under the <u>Victorian Affordable Housing Programs</u>) —	
	(a) <u>public housing</u>(b) housing owned, controlled or managed by a <u>participating</u> <u>registered agency</u>	
	A type of rental housing that is provided and/or managed by the government or by a not-for-profit organisation. Social housing is an overarching term that covers both public housing and community housing.	
Subsidised market housing	Housing (rented or owned) which is made available to households at below market rates through subsidies (eligibility criteria set out in the Act).	





TERM	DEFINITION	
Culturally and/or environmentally sensitive areas	Land shown on the Bannockburn South East Place Based Plan that is potentially developable subject to approvals that consider cultural heritage, biodiversity and risk of erosion.	
Water sensitive urban design	A sustainable water management approach that aims to provide water quality, flood management and green landscapes. Key principles include:	
	 minimising water-resistant areas recharging natural groundwater aquifers (where appropriate) by increasing the amount of rain absorbed into the ground encouraging onsite reuse of rain and incorporation of rain gardens encouraging onsite treatment to improve water quality, and removing pollution and using temporary rainfall storage (retarding basins/wetlands) to reduce the load on drains. 	



Bannockburn South East Precinct Structure Plan

April 2025





