



3.6 Integrated Water Management & utilities

INTEGRATED WATER MANAGEMENT

	REQUIREMENTS
R53	Stormwater conveyance and treatment must be designed in accordance with the relevant Development Services Scheme (DSS), to the satisfaction of Melbourne Water. Where a DSS is not in place, development may not proceed without the preparation of an interim drainage strategy that is approved by both Melbourne Water and the responsible authority.
R54	Consistent with Clause 56.01-2 and Clause 56.07 of the <i>Baw Baw Planning Scheme</i> , a subdivision application of 60 or more lots must include an Integrated Water Management Plan.
R55	Development must meet or exceed best practice stormwater quality treatment standards prior to discharge to receiving waterways as outlined on Plan 9, unless otherwise approved by Melbourne Water and the responsible authority.
R56	 Where a waterway is shown as 'natural' on Plan 9, development works must: Not encroach past the waterway corridor defined in the PSP, unless otherwise agreed by the responsible authority and Melbourne Water. Minimise earthworks and impact on the existing landform of the waterway. Retain existing vegetation as part of waterway landscaping. All to the satisfaction of Melbourne Water and the responsible authority.
R57	Final design and boundary of constructed waterways, waterway corridors, retarding basins, stormwater quality treatment infrastructure and associated paths, boardwalks, bridges, and planting must be to the satisfaction of Melbourne Water and the responsible authority.
R58	Development staging must provide for the delivery of ultimate waterway and drainage infrastructure, including stormwater quality treatment. Where this is not possible, development proposals must demonstrate how any interim solution adequately manages and treats stormwater generated from the development and how this will enable delivery of an ultimate drainage solution, all to the satisfaction of Melbourne Water and the responsible authority.
R59	Design and layout of waterway corridors must maximise the potential for the integration or recreation uses, utility infrastructure and stormwater quality treatment assets, where this does not conflict with the primary function of the land.
R60	Development must positively address all waterways through the use of frontage roads or lots with a direct frontage to the satisfaction of Melbourne Water and the responsible authority.
	GUIDELINES
G45	The design and layout of roads, road reserves and public open space should optimise water use efficiency and long term viability of vegetation and public uses through the use of Water Sensitive Urban Design (WSUD) initiatives.
G46	Where practical, development should include integrated water management initiatives to reduce reliance on potable water and increase the utilisation of storm and waste water, contributing to a sustainable and green urban environment.
G47	Development should have regard to relevant policies and strategies being implemented by the responsible authority, Melbourne Water and South East Water, including any approved Integrated Water Management Plan.
G48	 Where practical, integrated water management systems should be designed to: Maximise habitat values for local flora and fauna species. Enable future harvesting and/or treatment and re-use of stormwater, including those options outlined in Plan 9.
G49	Streets should be the primary interface between development and waterways. Public open space and lots with a direct frontage may be provided as a minor component of the waterway interface. Where lots with direct frontage are provided, they should be sufficiently set back up from the waterway corridor to allow for the provision of pedestrian and service vehicle access to those lots, to the satisfaction of Melbourne Water and the responsible authority.



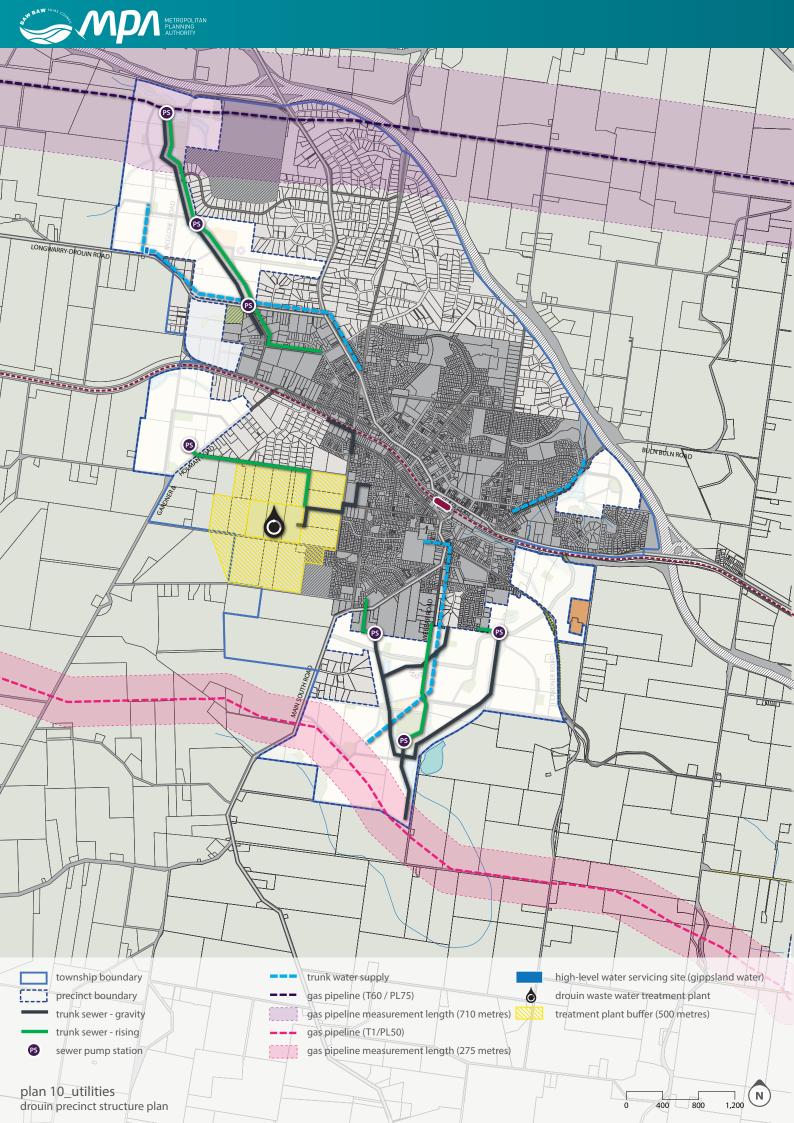
 Table 10
 Drainage & water quality treatment infrastructure

ID	DESCRIPTION	LOCATION	LAND AREA (HA)
RB-01a	Retardation basin and wetland	Located in Fairway, west of McGlones Road	2.2
RB-01b	Retardation basin and wetland	Located in Fairway, east of McGlones Road	2.3
RB-01c	Retardation basin and wetland	Located in Fairway, west of Fairway Drive	3.3
RB-02	Retardation basin and wetland	Located in Wellwood	5.98
RB-03	Retardation basin and wetland	Located in Gardner	2.05
RB-04	Retardation basin and wetland (Subject to finalisation of DSS)	Located in Gabbot	4.3
RB-05	Retardation basin (Subject to finalisation of DSS)	Located in Startup	2.75
RB-06	Retardation basin and wetland	Located in Simper	3.6
RB-07	Retardation basin and wetland	Located in Weebar	3.9
RB-07a	Retardation basin and wetland	Located in Cowan	8.9
RB-07b	Retardation basin and wetland	Located outside township boundary	9



UTILITIES

	REQUIREMENTS
R61	Trunk services are to be installed generally in accordance with the schematic alignments shown on Plan 10.
R62	Utilities must be placed outside any areas shown as 'retained native vegetation' on Plan 6. Utilities must also be placed outside of natural waterway corridors or on the outer edges these corridors to avoid disturbance to existing native vegetation, significant landform features (eg rock outcrops) and heritage sites, to the satisfaction of the responsible authority and catchment management authority.
R63	 Before development commences on a property, functional layout plans are to be submitted of the road network showing the location of all: Underground services Driveways/crossovers Street lights Street trees A typical cross section of each street is also to be submitted showing above and below ground placement of services, street lights and trees. The plans and cross sections must demonstrate how services, driveways and street lights will be placed so as to achieve the road reserve width (consistent with the road cross sections outlined in this PSP) and accommodate the minimum level of street tree planting (as outlined in this PSP). If required, the plan and cross sections will nominate which services will be placed under footpaths or road pavement. The plans and cross sections are to be approved by the Responsible Authority and all relevant service authorities before development commences.
R64	Above-ground utilities (such as electricity substations and sewer pump stations) must be identified at the subdivision design stage to enable their appropriate integration into the subdivision layout and minimise any adverse amenity impacts.
R65	 Residential subdivision proposing any unsewered low-density lots must: Obtain the consent of both Gippsland Water and Council. Demonstrate how groundwater and surface water will be protected from contamination. Demonstrate how the design of the subdivision allows for the efficient future resubidivision should sewer become available. Demonstrate how the development complies with the development sequencing requirements in this PSP.
	GUIDELINES
G50	Above-ground utilities should be located outside of prominent view lines and screened with vegetation, as appropriate.
G51	Design and placement of underground services in new or upgraded streets should have regard to the service placement guidelines outlined in Appendix D.
G52	High-density and high-activity-generating land uses should generally be located outside or to the outer edge of the utility 'measurement lengths' outlined on Plan 10, as appropriate and practical.
G53	Utility easements to the rear of lots should only be provided where there is no practical alternative.





3.7 Sequencing, staging & infrastructure delivery

DEVELOPMENT SEQUENCING & STAGING

REOUIREMENTS

Development sequencing will largely be determined by the ability to appropriately access and service land. Within this context, the following must be achieved:

- Development staging must provide for the early delivery of neighbourhood parks or other local amenity for new residents where parks are not otherwise easily accessible.
- Access to each new lot must be via a sealed road constructed to an appropriate standard.
- Each new lot must be sewered unless the area of the lot exceeds 4,000m2 and is approved by Gippsland Water and the responsible authority.

R66

- Each new lot must be connected to a potable water supply.
- Where not directly adjoining existing development, new development should provide for onward connections to existing walking and cycling paths to facilitate access to the town and nearby facilities.

Where there is a need for works to satisfy this requirement, those works must be undertaken at the full cost of the development proponent. Works may constitute Works In Kind for projects included in the DCP, however Council will not be obliged to satisfy any liability until contributions sufficient to cover the cost of that liability have been received and projects deemed to be of a higher priority in the DCP have been fully funded or constructed.

R67

Streets must be constructed to property boundaries where an inter-parcel connection is intended or indicated in the structure plan, by any date or stage of development required or approved by the responsible authority.

GUIDELINES

Development staging should provide for the timely connection of:

G54

- Road links between properties.
- Road links to the wider connector and arterial network.
- Pedestrian and cyclist links to the off-road pedestrian and bicycle network.

All to the satisfaction of the responsible authority.

G55

Each stage of development, where at the edge of the urban area, should comply with any relevant interface objectives, requirements or guidelines contained in this PSP.

SUBDIVISION WORKS BY DEVELOPERS

REQUIREMENTS

- Subdivision of land within the precinct must provide and meet the total cost of delivering the
 following infrastructure where not included in the DCP, funded through an alternative mechanism or
 outlined as the responsibility of another agency in the Precinct Infrastructure Plan:
- Connector streets and local streets.
- Tree planting and landscaping in all streets.
- Intersection works and traffic management measures along arterial roads, connector streets, and local streets.
- Council approved fencing and landscaping (where required) along arterial roads.
- Local bus stop infrastructure (where locations have been agreed in writing by Public Transport Victoria).

R68

- Shared, pedestrian and bicycle paths along streets, and waterways and within parks including bridges and other waterway crossings.
- Appropriately scaled lighting along all roads and bicycle, shared, or pedestrian paths as required by this PSP.
- Bicycle parking as required in this PSP.
- Basic improvements to local parks and open space (refer open space delivery below).
- Local drainage system.
- Infrastructure as required by utility services providers including water, sewerage, electricity, gas, and telecommunications.



PROVISION OF OPEN SPACE

REQUIREMENTS

All local level neighborhood parks must be finished to a standard that satisfies the requirements of the responsible authority prior to the transfer of the public open space, including:

- Removal of all existing and disused structures, foundations, pipelines, and stockpiles.
- Clearing of rubbish and weeds, leveled, topsoiled and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise).

R69

- Provision of water tapping, potable and recycled water connection points. Sewer and gas connection
 points must also be provided to land identified as a sporting reserve.
- Planting of trees and shrubs.
- Provision of vehicular exclusion devices (fence, bollards, or other suitable method) and maintenance access points.
- Installation of park furniture including barbeques, shelters, furniture, rubbish bins, local scale
 playground equipment, local scale play areas, and appropriate paving to support these facilities,
 consistent with the type of public open space listed in the open space delivery guide (Table 6).

Land for sporting reserves or district level neighbourhood parks must be vested in the relevant authority in the following condition:

Free from surface / protruding rocks and structures.

R70

- Reasonably graded and topsoiled to create a safe and regular surface (with a maximum 1:6 gradient for all grassed areas).
- Bare, patchy and newly graded areas seeded, top-dressed with drought resistant grass.

Where works are required to satisfy the above requirement those works may be undertaken through the Works In Kind provisions of the DCP and the costs offset against any DCP liability.

With respect to the public open space contribution required by Clause 52.01 of the *Baw Baw Planning Scheme*, this provision sets out the amount of land to be contributed by each property in the precinct and consequently where a cash contribution is required in lieu of land.

All land owners within a residential or low-density residential area must provide a public open space contribution equal to 4.5-per-cent of the Net Developable Area Residential (NDAR) upon subdivision of land in accordance with the following:

R71

- Where land is required for unencumbered open space (neighbourhood park) purposes as shown on Plan 2 and specified in Table 13 and is equal to 4.5-per-cent of NDA that land is to be transferred to Council at no cost.
- Where no land or less than 4.5-per-cent of NDA is shown on Plan 2 and specified in Table 13, as
 required for unencumbered open space (neighbourhood park) purposes a cash contribution is to be
 made to Council to bring the total open space contribution to a value equal to 4.5-per-cent of NDA of
 that site.
- Where land required for unencumbered open space (neighbourhood park) purpose as shown on Plan 2 and specified in Table 13 is more than 4.5-per-cent of NDA, Council will pay an amount equivalent to the value of the additional land being provided by that proposed development.

The value of land for equalisation purposes is to be assessed as an equivalent proportion of the value of the whole of the land, in accordance with Section 18 of the Subdivision Act 1988.



3.7.1 Precinct Infrastructure Plan

The Precinct Infrastructure Plan (PIP) at Table 9 sets out the infrastructure and services required to meet the needs of proposed development within the precinct. The infrastructure items and services are to be provided through a number of mechanisms including:

- Subdivision construction works by developers.
- Agreement under Section 173 of the Act.
- Utility service provider requirements.
- The Drouin Development Contributions Plan.
- Capital works projects by Council, State government agencies and non-government organisations.
- Works In Kind (WIK) projects undertaken by developers on behalf of Council or state government agencies.

Table 11 Precinct Infrastructure Plan

TITLE	DESCRIPTION	DELIVERY	DCP ID	
NORTH-WEST ROAD PROJECTS				
Richie Road upgrade				
Upgrade to connector street standard	2 lane local road	DCP (DEV)	RD-NW-01	
Upgrade to intersection at Longwarry-Drouin Road	Un-signalised T intersection	DCP	INA-NW-04	
Richie Road extension				
Connector street construction from end of existing Richie Road to McGlone Road	2 lane local road	DCP (DEV)	RD-NW-01	
McGlone Road upgrade (connector street)				
Upgrade to connector street standard adjacent Princes Freeway	2 lane local road	Council	-	
Upgrade to intersection at Princes Way	Un-signalised T intersection	VicRoads	-	
Connector street between McGlone Road and Rich	ie Road extension			
Connector street construction to west of McGlone Road	2 lane local road	DCP (DEV)	RD-NW-02	
Waterway crossing construction	2 x 60m long culvert crossings over waterway	DCP (DEV)	BR-NW-02 BR-NW-03	
Intersection construction at Richie Road extension	Un-signalised intersection	DCP (DEV)	INL-NW-01	
Intersection construction at Fairway Drive extension	Un-signalised T intersection	DCP (DEV)	INL-NW-03	
Connector street between McGlone Road and Long	Connector street between McGlone Road and Longwarry-Drouin Road			
Connector street construction to east of McGlone Road	2 lane local road	DCP (DEV)	RD-NW-02	
Intersection contruction with connector street and eastwest connector boulevard	Un-signalised T intersection	DCP(DEV)	INL-NW-02	
Intersection construction at Longwarry-Drouin Road opposite Weerong Road	Un-signalised 4-way roundabout intersection	DCP (DEV)	INA-NW-03	
Waterway crossing construction	60m long culvert crossing over waterway	DCP (DEV)	BR-NW-01	
McGlone Road upgrade (local access street)				
Upgrade to Local Access Level 2 standard between connector section of McGlone Road and Longwarry-Drouin Road	2 lane local road	DEV	-	
Waterway crossing construction	60m long culvert crossing over waterway	DEV	-	
Local access street between McGlone Road and new connector				
Local Access Level 2 street construction west of McGlone Road	2 lane local road	DEV	-	
Waterway crossing construction	60m long culvert crossing over waterway	DCP	BR-NW-04	



TITLE	DESCRIPTION	DELIVERY	DCP ID
Local access street between Longwarry-Drouin Roa	ad and new connector		
Local Access Level 2 street construction	2 lane local road	DEV	-
Upgrade to two intersections at Longwarry-Drouin Road	Un-signalised T intersection	DEV	-
Waterway crossing construction	60m long culvert crossing over waterway	DEV	-
Local access street between Longwarry Road and C	Clancy Road		
Local Access Level 2 street construction	2 lane local road	DEV	-
Upgrade to two intersections at Longwarry Road	Un-signalised T intersection	DEV	-
Connector Boulevard between Princes Way and ne	w connector		
Connector boulevard construction between Princes Way and new connector	2 lane local road with central median	DCP (DEV)	RD-NW-03
Intersection construction at Princes Way	Un-signalised roundabout intersection	DCP	INA-NW-01
Intersection at Longwarry-Drouin Road and Prince	s Way		
Intersection construction at Longwarry-Drouin Road and Princes Way	Un-signalised roundabout intersection	DCP	INA-NW-02
BULN BULN ROAD PROJECTS			
Connector street between Walker Drive and Waters	side Drive		
Connector street construction	2 lane local road	DCP (DEV)	RD-BB-01
Waterway crossing construction	60m long culvert crossing over waterway	DCP (DEV)	BR-BB-01
Intersection construction	Un-signalised intersection	DCP (DEV)	INL-BB-01
Local access street west of new connector street			
Local Access Level 2 street construction	2 lane local road	DEV	-
Waterway crossing construction	60m long culvert crossing over waterway	DEV	-
GARDNER & HOLMAN ROAD PROJECTS			
Connector street between Old Drouin Road and Ga	ardner and Holman Road		
Connector street construction	2 lane local road	DCP (DEV)	RD-GH-01 RD-GH-02 RD-GH-03 RD-GH-04
Intersection construction at Old Drouin Road	Un-signalised T intersection	DCP (DEV)	INL-GH-03
Intersection construction at Gardner and Holman Road	Un-signalised T intersection	DCP (DEV)	INL-GH-02
Intersection construction at Longwarry Road	Un-signalised T intersection	DCP (DEV)	INL-GH-01
Local access street north of new connector street (link to unmade road along railway lind	e)	
Local Access Level 2 street construction	2 lane local road	DEV	-
SOUTH-EAST ROAD PROJECTS			
Connector boulevard between Main South Road and Weebar Road (Drouin South Bypass)			
Connector boulevard construction	2 lane local road	DCP (DEV)	RD-SE-01
Intersection construction at Main South Road	Un-signalised 4-way intersection	DCP	INA-SE-02
Connector boulevard between Weebar Road and Lardner Road (Drouin South Bypass)			
Connector boulevard construction	2 lane local road	DCP (DEV)	RD-SE-01
Intersection construction at Weebar Road	Un-signalised 4-way intersection	DCP (DEV)	INL-SE-01
Waterway crossing construction	60m long culvert crossing over waterway	DCP(DEV)	BR-SE-01
Waterway crossing construction	60m long culvert crossing over waterway	DCP (DEV)	BR-SE-02



TITLE	DESCRIPTION	DELIVERY	DCP ID	
Connector boulevard between Lardner Road and B	Connector boulevard between Lardner Road and Balfour Road / Princes Way			
Connector boulevard construction	2 lane local road	DCP (DEV)	RD-SE-01	
Intersection construction at Lardner Road	Un-signalised 4-way intersection	DCP (DEV)	INL-SE-02	
Intersection construction at Balfour Road	Signalised T intersection	DCP	INA-SE-04	
Intersection construction at Princes Way	Signalised T intersection	DCP	INA-SE-04	
Expansion of existing Balfour Road Bridge	Bridge expansion	DCP	BR-SE-03	
Weebar Road upgrade				
Upgrade to connector street standard between Main South Road and township boundary	2 lane local road	DCP	RD-SE-02	
Upgrade to intersection at Main South Road	Un-signalised roundabout intersection	DCP	INA-SE-01	
Connector street between Weebar Road and Main	South Road			
Connector street construction	2 lane local road	DCP (DEV)	RD-SE-03	
Intersection construction at Main South Road	Un-signalised T intersection	DCP (DEV)	INA-SE-03	
Waterway crossing construction	60m long culvert crossing over King Parrot Creek	DCP (DEV)	BR-SE-04	
Connector street between Weebar Road and Lardn	er Road			
Connector street construction	2 lane local road	DCP (DEV)	RD-SE-04	
Intersection contruction at Weebar Road	Un-signalised intersection	DCP(DEV)	INL-SE-03	
Waterway crossing construction	2 x 60m long culvert crossing over waterway	DCP(DEV)	BR-SE-05 BR-SE-06	
Intersection construction at Lardner Road	Un-signalised T intersection	DCP (DEV)	INL-SE-04	
Local access street between new connector boulev	ard and connector street			
Local Access Level 2 street construction	2 lane local road	DEV	-	
Local access street between Weebar Road and new	Local access street between Weebar Road and new connector boulevard			
Local Access Level 2 street construction (including 100m of boulevard treatment) on east side of Weebar Road	2 lane local road	DEV	-	
Local access street between Weebar Road and new	connector street			
Local Access Level 2 street construction on west side of Weebar Road	2 lane local road	DEV	-	
Waterway crossing construction	60m long culvert crossing over King Parrot Creek	DEV	-	
Local access boulevard south of new connector street				
Local Access Level 2 boulevard construction	2 lane local road	DEV	-	
Local access boulevard south of new connector street				
Local Access Level 2 boulevard construction	2 lane local road	DEV	-	
SHARED PATH PROJECTS				
Princes Way trail connection	Construction of shared path	DCP	SP-NW-01	
Drouin Station Trail connection	Construction of shared path	DCP	SP-SE-01	



TITLE	DESCRIPTION	DELIVERY	DCP ID
DRAINAGE PROJECTS			
North			
Wellwood retention basin and wetland	Land and construction of retention basin with wetland	DSS	-
McGlone Road retention basins and wetlands	Series of three retention basin and wetlands eitherside of McGlone Road	DSS	-
Waterways	Construction of waterway improvements including deepening and/or rehabilitaion	DSS	-
South			
Gardner retardation basin and wetland	Land and construction of retention basin with wetland	DSS	-
Lardner Road retardation basin and wetland	Land and construction of retarding basin with wetland	DSS	-
Buln Buln Road retardation basin and wetland (subject to approved DSS)	Land and construction of retarding basin with wetland	DSS	-
Balfour Road retardation basin (subject to approved DSS)	Land and construction of retarding basin	DSS	-
King Parrot Creek retardation basins and wetlands	Land and construction of retention basins and wetlands either side of Weebar Road.	DSS	-
Waterways	Construction of waterway improvements including deepening and/or rehabilitaion	DSS	-
COMMUNITY AND RECREATION PROJECTS			
Community centres			
Wellwood community centre	Land and construction of L1 community centre	DCP	CO-01
Weebar community centre	Land and construction of L1 community centre	DCP	CO-02
Schools			
Wellwood Government Primary	Land and construction of school	DEECD	-
Weebar Government Primary	Land and construction of school	DEECD	-
Recreation			
Fairway Sporting Reserve	Land and construction of sporting reserve	DCP	SR-01
Weebar Sporting Reserve	Land and construction of sporting reserve	DCP	SR-02
PUBLIC TRANSPORT PROJECTS			
Bus services	Provision of bus services	PTV	-

CODE	DELIVERY MECHANISM
DEV	Developer works, funded by land owners/developers and delivered as part of subdivision works
DCP	Funded by Drouin Development Contributions Plan, delivered by Council or as Works in Kind by developers/land owners
DCP (DEV)	DCP project that is anticipated to be constructed by developers through Works
DEECD	Funded and delivered by Department of Education and Early Childhood Development



4.0 APPENDICES

APPENDIX A - Future Urban Structure details

APPENDIX B - Land budget

APPENDIX C - Neighbourhood centre design principles

APPENDIX D - Service placement guidelines

APPENDIX E - Open space standards

APPENDIX F - Street cross sections

Appendix F, which contains the Baw Baw standard urban street cross sections, is provided as a seperate document which is available on the Baw Baw Shire Council website.





APPENDIX A - Future Urban Structure details

LOCAL DESIGN CONSIDERATIONS: NORTH-WEST

- Maintain rural character of town gateway along Longwarry-Drouin Road
- Provide alternative routes to McGlone Road to ensure low traffic volumes and enable the existing cross section to be retained.
- Retain significant vegetation along McGlone Road.
- Develop sensitive interfaces with low-density residential areas to ensure amenity of existing properties is
- Allow for long-term redevelopment of neighbouring low-density areas by making provision for future street and path connections at appropriate locations.
- Ensure development addresses prominent sections of the township boundary as illustrated on Plan 3.





LOCAL DESIGN CONSIDERATIONS: GARDNER & HOLMAN

- Allow for long-term redevelopment of neighbouring low-density areas by making provision for future street and path connections at appropriate locations.
- Allow for connection into unmade road reserve along railway line.
- Retain significant vegetation along unmade road reserve.





LOCAL DESIGN CONSIDERATIONS: SOUTH-EAST (PART 1)

- Maintain rural character of town gateway along Main South Road
- Retain significant vegetation along Weebar Road
- Develop utility easements as an extension of the open space network with suitable landscaping and provision of paths.
- Position neighbourhood parks at prominent points in the landscape to maximise views both to and from.
- Allow for long-term redevelopment of neighbouring low-density areas by making provision for future street and path connections at appropriate locations.