

4.2.6 Provide better transport choices

Access to Local Employment

A key element in creating a more ecologically, socially and economically sustainable urban structure is to design the Precinct in a manner that reduces travel distances, increases travel time efficiency and reduces carbon emissions generated by journey to work trips.

The future urban structure reduces travel distances to work by providing local employment opportunities that reduce travel times and out commuting.

Efficient Road and Public Transport Network

The arterial road and connector street network facilitates efficient road and public transport movement on a grid network within the Ballarat West Growth Area. It will provide strong connections with neighbouring precincts and existing development areas in all directions.

Existing rural standard roads will be upgraded to an urban standard, with several upgrades to be funded through the Ballarat West DCP.

The future urban structure provides the basis for the provision of efficient public transport by locating at least 95 per cent of dwellings within 400 metres walking distance of an existing or proposed bus stop.

The bus network will link residents and employees to the activity centres, Industrial/Commercial Precinct and education facilities within the Precinct and the wider Ballarat area. It will also provide access to the rail network and other employment uses and community infrastructure external to the Ballarat West PSP area.

Safe and Walkable Local Street Network

The proposed grid based road patterns will promote the creation of a local street network with high levels of permeability, walkability and passive solar orientation throughout the Precinct.

The Ballarat West PSP provides for a safe pedestrian and bicycle network via the:

- On and off road paths within the road network; and
- The provision of a walking and cycling trail network along creek corridors and linear links throughout the Precinct. This network will include pedestrian bridges over the creek network, where required.

Activity centres, community facilities and sporting and recreational activities will be clustered along the pedestrian and cycle network to support walking access to these key destinations. The co-location of activity centres, community hubs and open space promotes a road, pedestrian and bicycle network that facilitates permeability and safe walking and cycling for all residents.



4.2.7 Deliver Environmentally Sustainable Communities

The framework provided by Ballarat West PSP promotes an integrated land use and transport planning solution to optimise the number of people who have access to a safe and efficient walking, cycling and public transport network.

The Ballarat West PSP makes provision for a range of retail, employment and community facilities to service the daily and weekly needs of the residents. This supports a reduction in the extent of car use by minimising travel distances and also optimises the viability of alternative modes of transport.

Access to local jobs within and in close proximity to the Precinct will reduce journey-to-work travel distances.

A greater range of choice in travel modes will be provided through implementation of the Ballarat West PSP, with the road network designed to accommodate buses, cyclists and pedestrians.

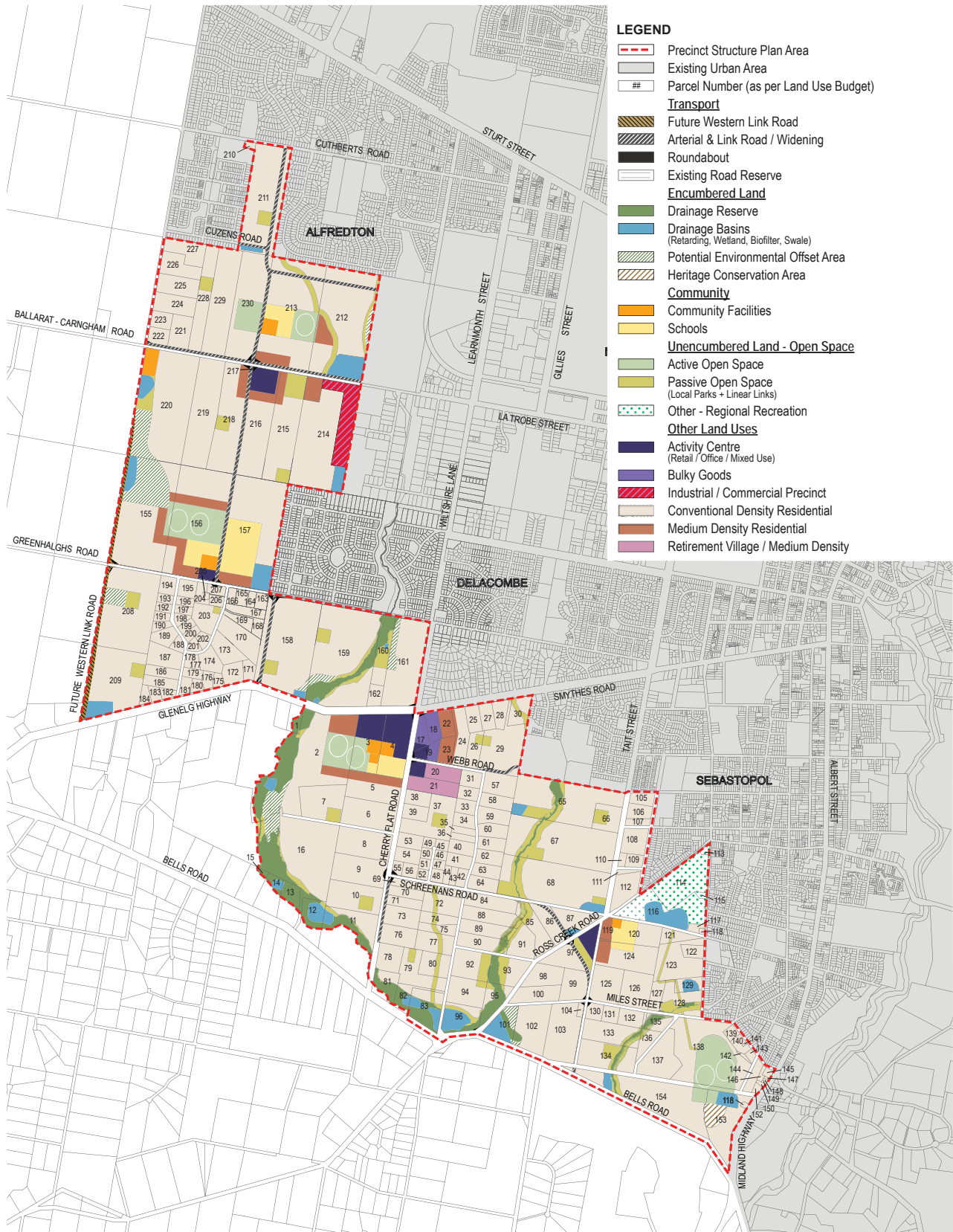
The Ballarat West PSP provides a framework for subdivision design that promotes solar access, to minimise the energy use of dwellings, community infrastructure and buildings in the activity centres.

Water Sensitive Urban Design (WSUD) aims to reduce the quantity of stormwater and improve the quality of water that is either discharged or re-used on site. WSUD techniques are to be incorporated through measures such as a network of retarding basins and wetlands that are integrated with the existing drainage lines and creeks. Utilising the existing drainage systems on the site reduces the requirement for piping and channelling of water and maintenance costs.

Remnant native vegetation will be retained as shown in the Ballarat West NVPP. The NVPP will be one way to assist in creating a distinctive landscape character for the area and enhance biodiversity values to contribute to improved local biodiversity.



Plan 9 Land Use Budget



- LEGEND**
- Precinct Structure Plan Area
 - Existing Urban Area
 - Parcel Number (as per Land Use Budget)
 - Transport**
 - Future Western Link Road
 - Arterial & Link Road / Widening
 - Roundabout
 - Existing Road Reserve
 - Encumbered Land**
 - Drainage Reserve
 - Drainage Basins (Retarding, Wetland, Biofilter, Swale)
 - Potential Environmental Offset Area
 - Heritage Conservation Area
 - Community**
 - Community Facilities
 - Schools
 - Unencumbered Land - Open Space**
 - Active Open Space
 - Passive Open Space (Local Parks + Linear Links)
 - Other - Regional Recreation
 - Other Land Uses**
 - Activity Centre (Retail / Office / Mixed Use)
 - Bulky Goods
 - Industrial / Commercial Precinct
 - Conventional Density Residential
 - Medium Density Residential
 - Retirement Village / Medium Density

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4.3 Land Use Budget

Table 1: Summary Land Use Budget provides an overview of the land use components of the overall Ballarat West PSP area and for each Sub-Precinct. A more detailed land use budget by property is provided in Table 3 and contained in Attachment 1. Plan 9: Land Use Budget provides a key for this table.

4.3.1 Land Use Budget Summary

The Ballarat West PSP covers a total area of approximately 1,290 hectares across three Sub-Precincts (see Plan 1 and section 1.1):

- Sub-Precinct 1: Bonshaw Creek comprising approximately 707 hectares;
- Sub-Precinct 2: Greenhalghs Road comprising approximately 296 hectares; and
- Sub-Precinct 4: Carngham Road comprising approximately 287 hectares.

The overall Net Developable Area ('NDA') for the Precincts is 951 hectares which equates to approximately 74% of the Ballarat West PSP area. The NDA is established by deducting the land required for community facilities, education facilities and passive and active open space (unencumbered), from the Gross Development Area ('GDA'). The GDA is established by deducting any arterial roads, existing road reserves and encumbered land such as waterways and drainage reserves from the total Precinct area.

Table 2: Distribution of Housing Densities, demonstrates that the urban structure plan established by the Ballarat West PSP achieves a lot density of 15.19 dwellings per Net Developable Hectare ('NDHa'). Based on this density, the Ballarat West PSP area is estimated to provide for a yield of approximately 14,442 dwellings.

Table 4 provides details of housing yields by property and is contained in Attachment 2.

The areas identified for activity centres, mixed use and other employment uses have been included as part of the NDA but excluded for the purposes of calculating projected lot yields. Note that the Major Activity Centre is also likely to provide some dwellings. However, dwelling numbers in this area will not be known until an Urban Design Framework is completed by the landowners.

The future urban structure plan encourages the development of medium density development around activity centres and community facilities which may result in the estimated housing yields being exceeded over time if higher density housing is developed at these locations.

4.4 Population and Demographic Projections

Ballarat's estimated resident population (ERP) in 2010 was around 96,000 people, an increase of around 13,000 people since 2001. The 2008-10 growth rate of 2.1% was higher than the average annual growth rate of Australia of 1.5% for the nine years to 2010. Based on the Victoria In Future population projections for Ballarat, the population is expected to grow to almost 127,000 by 2030, an increase of around 1,550 persons per year.

Figure 1 Population projections 2010 – 2050

Population	2010	2015	2020	2025	2030	2050
Victoria in Future Projections	96,000	103,249	111,119	118,784	126,978	163,435

Source: Demographic and Residential Assessment, MacroPlan Australia (2010).

Over the period of 2010 to 2050, the Ballarat West PSP area is projected to accommodate almost 80 per cent of the population growth identified for the wider Ballarat West Growth Area. The Ballarat West PSP is forecast to accommodate approximately 14,485 lots and a population of around 36,212 people based on an eventual average household size of 2.5 persons per household (Macroplan, 2010).

The projected demographic profile for the area is summarised below:

- 33% couples with children;
- 23% couples without children;
- 16% other families;
- 25% lone person households; and
- 3% group person households.



Table 1 Summary Land Use Budget

DESCRIPTION % of Total	Precinct 1			Precinct 2			Precinct 4			Precincts 1, 2 & 4		
	Area			Area			Area			Area		
	Hectares	% of Total Precinct	% of Gross Developable Area	Hectares	% of Total Precinct	% of Gross Developable Area	Hectares	% of Total Precinct	% of Gross Developable Area	Hectares	% of Total Precinct	% of Gross Developable Area
TOTAL PRECINCT AREA (ha)	706.97			295.98			286.95			1289.90		
Transport												
Future Ballarat Western Link Road (reservation)	0.00	0.00%		4.76	1.61%		0.54	0.19%		5.30	0.41%	
Arterial / Widening	4.04	0.57%		4.47	1.51%		9.54	3.32%		18.05	1.40%	
Intersections	0.75	0.11%		0.52	0.18%		0.29	0.10%		1.56	0.12%	
Road Reserves	50.80	7.19%		7.42	2.51%		3.16	1.10%		61.38	4.76%	
SUB-TOTAL	55.59	7.86%		17.17	5.80%		13.53	4.72%		86.29	6.69%	
OPEN SPACE												
Encumbered Land												
Waterway / Drainage Line	40.69	5.76%		6.58	2.22%		0.00	0.00%		47.27	3.66%	
Drainage Basins	19.64	2.78%		7.12	2.41%		7.41	2.58%		34.17	2.65%	
Environmental Conservation Area (potential vegetation offset area)	5.19	0.73%		13.46	4.55%		5.27	1.84%		23.92	1.85%	
Heritage Conservation Area	2.28	0.32%		0.00	0.00%		0.00	0.00%		2.28	0.18%	
SUB-TOTAL	67.80	9.59%		27.16	9.18%		12.68	4.42%		107.64	8.34%	
GROSS DEVELOPABLE AREA (ha)	583.58			251.65			260.74			1095.97		
Unencumbered Land Available for Recreation												
Active Open Space	20.98	2.97%	3.60%	11.00	3.72%	4.37%	8.00	2.79%	3.08%	39.98	3.10%	3.65%
Passive Open Space	35.58	5.03%	6.10%	7.92	2.68%	3.15%	12.60	4.39%	4.83%	56.10	4.35%	5.12%
Regional Open Space	17.63	2.49%	3.02%	0.00	0.00%	0.00%	0.00	0.00%	0.00%	17.63	1.37%	1.61%
SUB-TOTAL	74.19	10.49%	12.71%	18.92	6.39%	7.52%	20.60	7.18%	7.90%	113.71	8.82%	10.38%
TOTAL OPEN SPACE	141.99	20.08%		46.08	15.57%		33.28	11.60%		221.35	17.16%	
Community Facilities												
Community Services Facilities	3.00	0.42%	0.51%	1.30	0.44%	0.52%	3.30	1.15%	1.27%	7.60	0.59%	0.69%
SUB-TOTAL	3.00	0.42%	0.51%	1.30	0.44%	0.52%	3.30	1.15%	1.27%	7.60	0.59%	0.69%
Education												
Government Schools	7.00	0.99%	1.20%	10.00	3.38%	3.97%	3.50	1.22%	1.35%	20.50	1.59%	1.87%
Private Schools	0.00	0.00%	0.00%	3.50	1.18%	1.39%	0.00	0.00%	0.00%	3.50	0.27%	0.32%
SUB-TOTAL	7.00	0.99%	1.20%	13.50	4.56%	5.36%	3.50	1.22%	1.35%	24.00	1.86%	2.19%
NET DEVELOPABLE AREA (NDA) ha	499.39	70.64%	85.57%	217.93	73.63%	86.60%	233.34	81.32%	89.49%	950.66	73.70%	86.74%

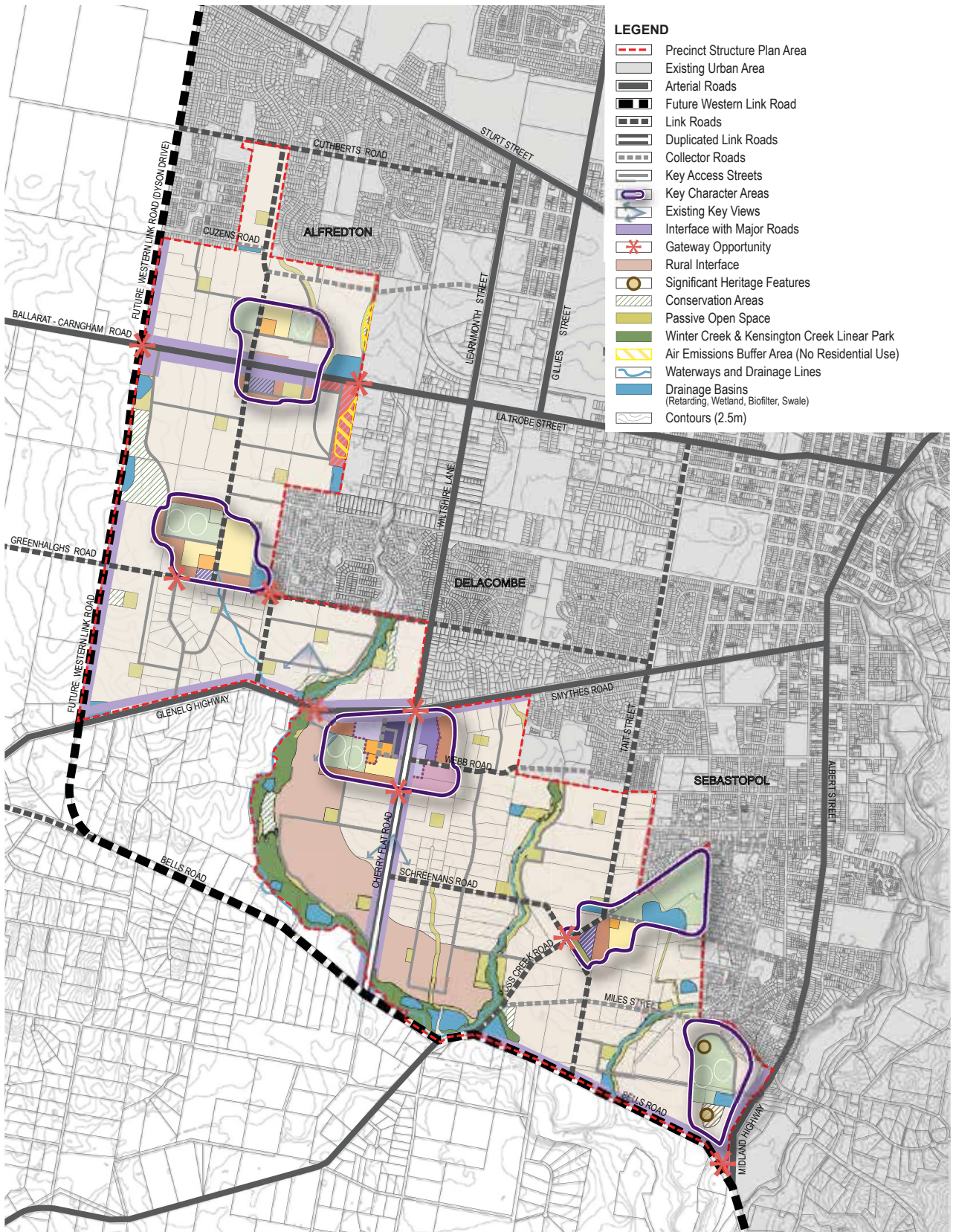


Table 2 Distribution of Housing Densities

DESCRIPTION	Precinct 1			Precinct 2			Precinct 4			Precincts 1, 2 & 4		
NET DEVELOPABLE AREA (NDA) ha	499.39			217.93			233.34			950.66		
Retail / Employment & Other	Ha			Ha			Ha			Ha		
Activity Centre (Retail / Office / Mixed Use)	13.61			0.97			3.29			17.87		
Bulky Goods	4.86			0.00			0.00			4.86		
Industrial / Commercial	0.00			0.00			8.09			8.09		
SUB-TOTAL	18.47			0.97			11.39			30.83		
NET RESIDENTIAL AREA (NRA) ha	480.92			216.96			221.95			919.83		
RESIDENTIAL	NRA (Ha)	Dwell / NRHa	Dwellings	NRA (Ha)	Dwell / NRHa	Dwellings	NRA (Ha)	Dwell / NRHa	Dwellings	NRA (Ha)	Dwell / NRHa	Dwellings
Residential - Conventional Density	458.74	15	6881	206.55	15	3098	211.21	16	3379	876.50	15.24	13359
Residential - Medium Density	22.18	25	555	10.41	25	260	10.74	25	269	43.33	25.00	1083
Subtotal Against Net Residential Area (NRA)	480.92	15.46	7436	216.96	15.48	3359	221.95	16.44	3648	919.83	15.70	14442
Combined Residential / Retail / Employment / Other	NDA (Ha)	Dwell / NDHa	Dwellings	NDA (Ha)	Dwell / NDHa	Dwellings	NDA (Ha)	Dwell / NDHa	Dwellings	NDA (Ha)	Dwell / NDHa	Dwellings
Totals Residential Yield Against NDA	499.39	14.89	7436	217.93	15.41	3359	233.34	15.63	3648	950.66	15.19	14442



Plan 10 Image and Character



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5 Elements

This chapter sets out objectives and planning and design guidelines for the following elements:

- Image and character;
- Housing;
- Employment and Activity Centres;
- Community Facilities;
- Open Space and Natural Systems;
- Biodiversity Assets;
- Integrated Water Management;
- Heritage;
- Transport and Movement; and
- Utilities and Staging.

Each element includes:

- **Objectives:** An objective describes the desired outcome to be achieved in the completed development;
- **Plans:** A plan sets out a spatial expression of objectives;
- **Planning and Design Guidelines:** Planning and design guidelines including figures and tables that:
 - must be met; or
 - should be met.

Any planning and design guideline that must be met is a requirement that must be reflected in planning permit applications. Any planning and design guideline that should be met is a preferred outcome for developments that should be reflected in planning permit applications. To meet the objective, an alternative may be proposed.

If the Responsible Authority is satisfied that the alternative meets the objective, then the alternative may be considered provided it is to the satisfaction of the Responsible Authority.

5.1 Image and Character

5.1.1 Image and Character Objectives

The image and character objectives are:

- To create distinctive neighbourhoods, vibrant streets and attractive spaces that reflect the character and traditions of development in Ballarat;
- To achieve environmentally responsive development that makes use of the existing natural features of the Precinct by incorporating remnant trees and natural watercourses;
- To establish a strong sense of place through the creation of a series of 'centres', which provide opportunities for interaction within the neighbourhoods;
- To create a network of tree lined streets that create an attractive safe road network;
- To create a legible and integrated road and path network that connects with the linear trail networks;
- To enhance creek and drainage corridors and transform them into significant landscape features that enhance visual amenity and contribute to a sense of place;
- To encourage development that is flexible and adaptable to the changing needs of the community; and
- To protect and enhance valuable heritage features in the area and incorporate them into future developments through the open space network.

5.1.2 Implementation

The objectives for image and character are met by implementation of all of the following:

- Plan 8: Future Urban Structure Plan;
- Plan 10: Image and Character Plan;
- Plan 11: Housing Plan;
- Plan 14: Open Space Plan;
- Plan 16: Gold Mining Heritage Plan;
- Plan 19: Walking and Trails Plan; and
- Planning and Design Guidelines set out in Section 5.1.3



5.1.3 Planning and Design Guidelines

General

The following planning and design guidelines must be met:

- Community Hubs and Activity Centres will define the character of each neighbourhood and must be designed to create pedestrian focussed street networks, active frontages and opportunities for social interaction within a high quality built environment;
- Development is to address roads to create a network of safe and permeable streets;
- Design development with an interface to Winter, Bonshaw and Kensington Creeks and drainage lines to promote public use and passive surveillance;
- Design development to provide a strong urban frontage to the future Ballarat Western Link Road, Glenelg Highway, Carngham Road, Wiltshire Lane and Cherry Flat Road, and promote passive surveillance of these roads;
- Development along arterial roads must consider the future amenity (visual and noise) for future dwellings;
- Development must consider the orientation of buildings and maximise opportunities to reduce energy consumption and water use;
- As shown on Plan 11, a linear landscape buffer of at least 20m depth must be provided separating:
 - sensitive uses and the Industrial/Commercial Precinct (see Section 5.3.4); and
 - sensitive uses and any land in an Industrial Zone;
- Open spaces including linear parks must provide for active and passive recreation and accommodate a range of facilities including playgrounds, shelters and seating;
- Bonshaw, Winter and Kensington Creeks must create a high quality open space link which is connected to activity centres, open spaces and community facilities through a safe shared path trail; and
- Incorporate Water Sensitive Urban Design features such as retarding basins and wetlands to manage stormwater flows and create habitat for native plants and animals along the creeks and drainage lines.

The following planning and design guidelines should be met:

- The design of the Emergency Services facility should be sympathetic to the residential character of the surrounding areas and protect homes from negative amenity issues such as night-time noise and visual impact;
- Locate medium density development adjacent to activity centres, schools and where appropriate, active open space to reflect the higher amenity values associated with those areas;
- Development should minimise impacts on existing topography;
- Open spaces should be designed to incorporate existing vegetation, habitat or heritage features wherever possible;
- Define key entries to the Precinct and important character areas through the use of landscape treatments or built form;
- Provide opportunities for landmark buildings, public spaces and public art within the activity centres;
- Design and arrange lots to maximise solar efficiency through orientation; and
- Road frontage should be provided along creek corridors and public spaces unless it can be demonstrated that abutting development will provide passive surveillance and activation of abutting public spaces.



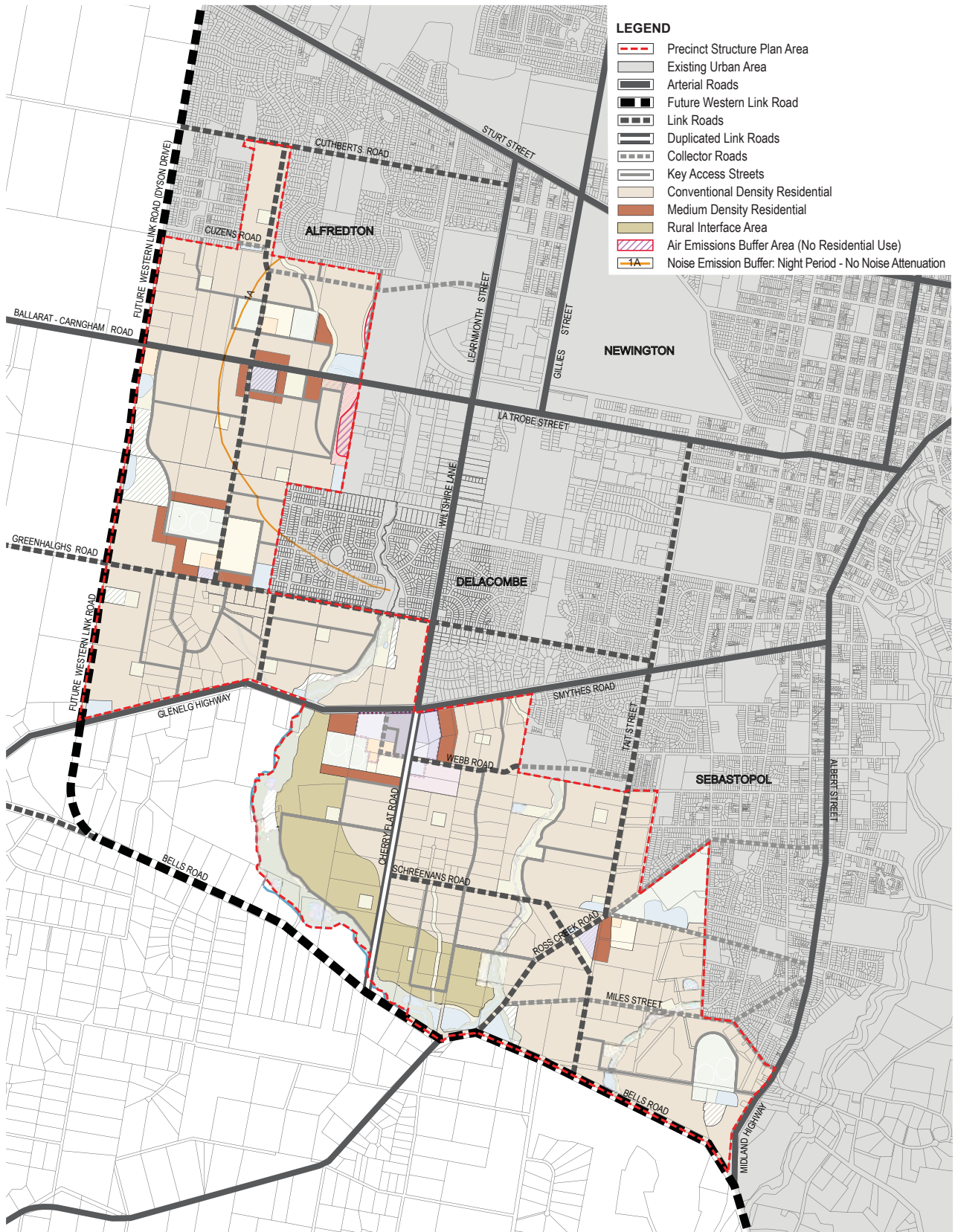
Landscape Design

The following planning and design guidelines should be met:

- Street trees along access streets should encourage pedestrian movement and promote low speed traffic environments;
- Ensure landscaping of public spaces creates safe public spaces that have ample passive surveillance;
- Landscape design within activity centres, neighbourhood parks and streets should:
 - Contribute to the creation of visually interesting public spaces that create a sense of place and identity;
 - Consider the impacts of landscaping on the microclimate, including the need for wind protection and summer shade;
 - Provide for the retention of existing vegetation that contributes to the character of the area, where possible;
 - Ensure the size of the street tree species relates to the scale of the street and is suitable for pedestrian environments;
- Landscaping along creek lines and within encumbered land should:
 - Be planted with species indigenous to Ballarat where possible, enhance and improve biodiversity along creek corridors and provide potential habitat;
 - Allow opportunities for passive recreation;
- Landscaping should be in accordance with the City of Ballarat's Landscape Character Areas Policy and any applicable street furniture guidelines; and
- Vegetation selection should be suitable for Ballarat's climate, minimise the need for ongoing irrigation and have regard to ease of maintenance.



Plan 11 Housing



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5.2 Housing

5.2.1 Housing Objectives

The objectives for housing are:

- To create walkable residential neighbourhoods that have accessibility to local services, community facilities, a range of open spaces and offer a high standard of living;
- To ensure a range of lot sizes and housing types are provided to meet the needs and aspirations of the new community and to provide for the changing needs of the community over time;
- To achieve a density of 15 dwellings per Net Developable Hectare (NDHa) throughout the Ballarat West PSP area;
- To encourage medium density housing within walking distance of key amenities such as activity centres, community hubs and open space;
- To support specialised housing forms such as retirement villages close to activity centres, community facilities and the public transport network to ensure that future residents have good access to a range of services;
- To support the opportunity for larger lots to be provided at the south east of Sub-Precinct 1 at Winter Creek to provide a transition between the existing rural areas and urban development and accommodate sloping topography;
- To ensure integration of the existing low density residential areas within Sub-Precincts 1 and 2 with development of surrounding properties;
- To encourage flexibility in subdivision design and planning/building approvals to enable better adaptation of housing to changing needs and create interesting and diverse living environments throughout the Precinct;
- To ensure subdivision and lot layouts provide creative and innovative design solutions for fragmented land ownership;
- To ensure subdivision and lot layouts maximise solar efficiency through the orientation of lots;
- To protect industrial businesses in the Delacombe Industrial Area from the possible negative impacts of residential encroachment;
- To protect homes and other sensitive uses from the possible negative impacts created by the Delacombe Industrial Area; and
- To encourage home based businesses within residential areas that do not detract from the primary use or amenity of the area.

5.2.2 Implementation

The objectives for housing are met by implementation of all of the following:

- Plan 8: Future Urban Structure Plan;
- Plan 11: Housing Plan;
- Plan 14: Open Space Plan;
- Table 2: Distribution of Housing Densities; and
- Planning and design guidelines set out in Section 5.2.3 and 5.2.4.



5.2.3 Planning and Design Guidelines

General

The following planning and design guidelines must be met:

- Residential development across the Ballarat West PSP must include a range of dwelling densities including conventional and medium density residential lots, and specialised housing (terms defined in glossary);
- Development must address drainage, visual amenity and privacy issues caused by developing new homes along the interface with existing homes in Alfredton Drive, Alfredton. Management options may include raising the height of fences, landscaping/vegetation requirements and controlling the height of new dwellings;
- Eliminate the need for a planning permit for small lot housing (less than 300m²) in appropriate locations where the requirements of the Small Lot Housing Code (Attachment 3) are met;
- Development overall must achieve a minimum average of 15 dwellings per Net Residential Hectare (NHRa);
- Development of conventional density housing must:
 - Achieve an overall average of 15 dwellings per Net Residential Hectare (NHRa);
 - Provide a mix of lot sizes and dwelling types throughout the Precinct; and
 - Ensure dwellings address streets and public spaces and maximise passive surveillance.
- Development of medium density housing must:
 - Achieve an overall average of 25 dwellings per Net Residential Hectare (NHRa);
 - Be overlooking, abutting or within close proximity to activity centres, community hubs, public transport stops or open space; and
 - Be provided in a variety of forms including terrace/townhouse development, integrated development sites and/or retirement villages;

- Housing abutting open spaces and linear links must:
 - Enhance passive surveillance of the open space through design features such as having dual frontage to the road and open space; and
 - Have low or semi-transparent fencing along boundaries to public space;

The following general planning and design guidelines should be met:

- Medium density developments or lots less than 250 square meters should avoid garages fronting parks and linear links;
- Housing abutting open spaces and linear links should:
 - Integrate open spaces into the design of subdivisions;
 - Have a strong built form along the park edges to provide a backdrop and interface to the open spaces;
 - Provide a secondary entry to dwellings from the park to give them a sense of address;
 - Provide a clear transition between public and private spaces; and
 - Provide opportunities for passive surveillance and pedestrian activities along laneways;
- Higher density housing (in excess of 25 dwellings per hectare) may be acceptable in close proximity to the Major Activity Centre, Neighbourhood Activity Centre and Local Activity Centres.



Subdivision of existing rural-residential areas to conventional density

The following planning and design guidelines must be met:

- Create an integrated road network within the existing rural-residential area and provide opportunities for road connections to abutting landholdings where possible;
- Avoid the creation of cul-de-sacs; and
- Provide through-connections (road, walking and cycling) between the existing rural-residential area and surrounding parcels to integrate the rural-residential area with the broader community.

The following planning and design guidelines should be met:

- Consider the character of existing residences to be retained within future developments; and
- Respect and enhance the existing streetscapes and landscape character, for example through street tree selection and setbacks.

Housing within the rural interface zone

The following planning and design guidelines must be met:

- Housing within the rural interface zone must be site responsive, address the topography of the land and minimise the extent of cut and fill; and
- Development on the escarpment must consider the visual impact of development when viewed from the surrounding rural areas.



5.2.4 Sensitive uses in Sub-Precinct 4

Air Emissions Buffer Area

The following planning and design guidelines must be met:

- Sensitive uses must not locate within the Air Emissions Buffer Area shown in Figure 2.

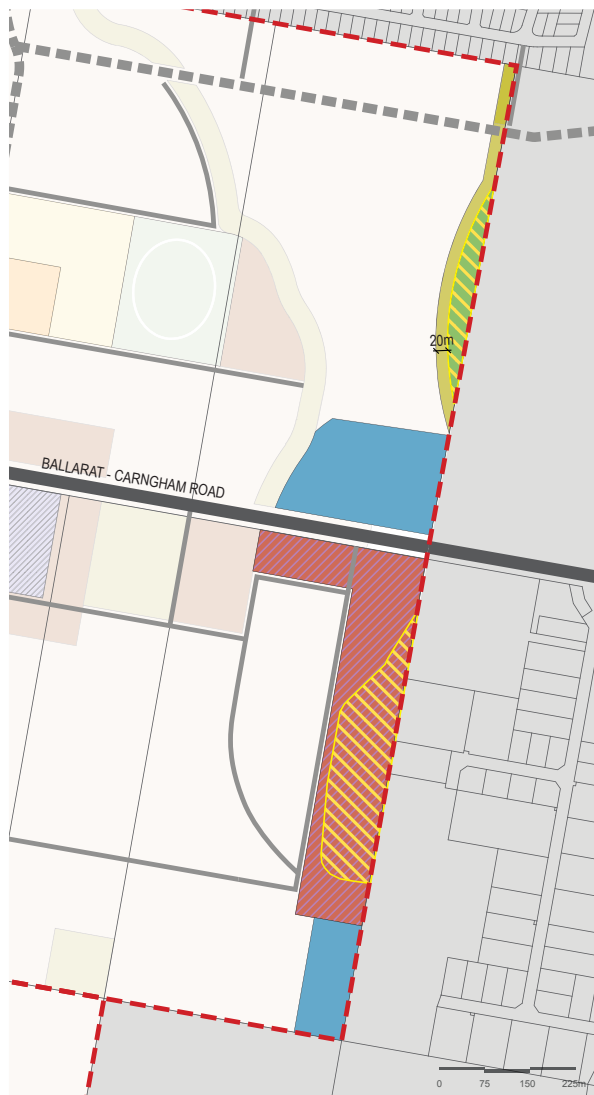


Figure 2 Industrial / Air Emissions Buffer

LEGEND

- Precinct Structure Plan Area
- Existing Urban Area
- Arterial Roads
- Collector Roads
- Key Access Streets
- Linear Landscape Buffer
- Drainage Basins (Retarding, Wetland, Biofilter, Swale)
- Commercial / Industrial Precinct
- Potential Environmental Offset Area
- Air Emissions Buffer Area (No Residential Use)
- Passive Open Space

Sensitive uses within the noise-affected area

The following planning and design guidelines must be met:

- Subdivision or use of land for sensitive uses within the noise-affected area shown on Plan 11 must achieve an acceptable noise environment having regard to the standards and amenity sought to be protected and achieved by SEPP N-1. The noise levels to be achieved at a sensitive land use within the affected area are listed in the table below;

Period	Noise Limits (dB(A)) having regard to SEPP N-1
Day	50
Evening	44
Night	39

- Sensitive land uses include dwellings, residential buildings, private open space of a dwelling/residential buildings, caretaker's house, hospital, hotel, institutional home, motel, reformatory institution, tourist establishment or work release hostel;
- The noise mitigation measures may include, but are not limited to:
 - The attenuation of noise at the source of emission;
 - The attenuation of noise at the receptor (eg residential dwelling);
 - The construction of a noise wall between the source of emissions and receptors;
 - The construction of new buildings between the source of emissions and receptors that have the affect of reducing noise-sensitive uses.

- Noise mitigation measures must:
 - Allow the creation of an integrated neighbourhood in Sub-Precinct 4 and not create isolated developments that cannot be integrated with abutting developments;
 - Not prevent activation and passive surveillance of public spaces;
 - Be of a scale and form that will not detract from the future character of the area;
 - Not have substantial adverse impacts on abutting landholdings;
 - Be designed to have a life of no less than 30 years; and
 - Consider the maintenance and ongoing management obligation of any attenuation measure. Any noise mitigation measure selected must be cost effective and easily maintainable;
- If deemed necessary by the Responsible Authority, an agreement under Section 173 of the Act will be placed on any lot created which will contain a sensitive land use to ensure that future buildings are designed having regard to the standards and amenity sought to be protected and achieved by SEPP N-1; and
- A permit cannot be granted for development within the noise buffer unless the Responsible Authority is satisfied the noise levels specified can be achieved.

Visual amenity

The following planning and design guidelines must be met:

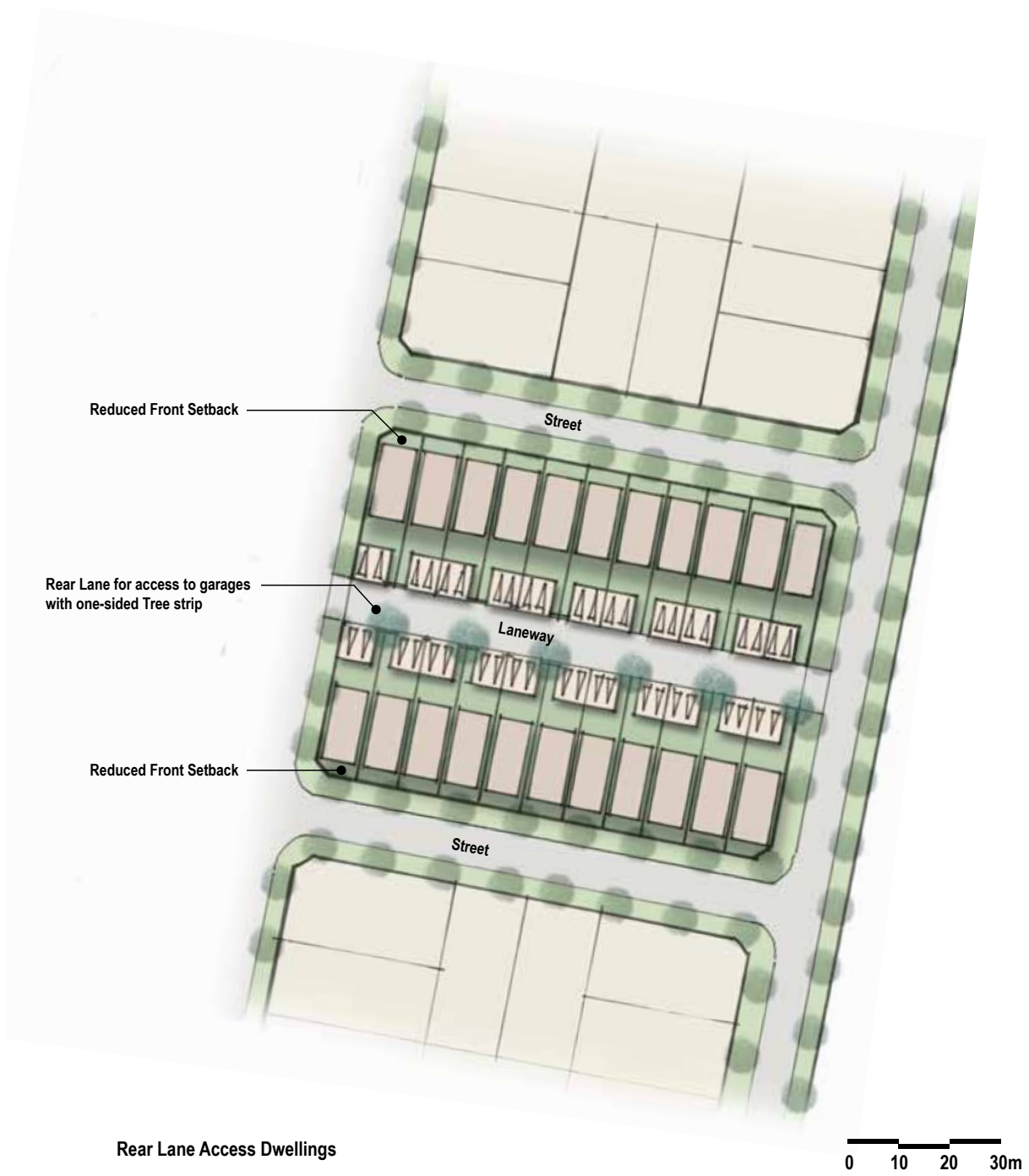
- As shown in Figure 2, a linear landscape buffer of at least 20m depth must be provided separating:
 - sensitive uses and the Industrial/Commercial Precinct (see Section 5.3.4); and
 - sensitive uses and any land in an Industrial Zone.
- The linear landscape buffer is to be landscaped and integrated within abutting development. Landscaping in this area must include canopy tree plantings that will help screen and soften views to the Industrial/Commercial Precinct; and
- New development abutting the linear landscape buffer is to provide passive surveillance and activation of the buffer.

Protection of industrial land

The following planning and design guidelines must be met:

- The minimum separation between a sensitive use and land in an Industrial 1 Zone shall be 100m.





Reduced Front Setback

Street

Rear Lane for access to garages
with one-sided Tree strip

Laneway

Reduced Front Setback

Street

Rear Lane Access Dwellings

0 10 20 30m

Figure 3 Example Layout: Medium Density Lots



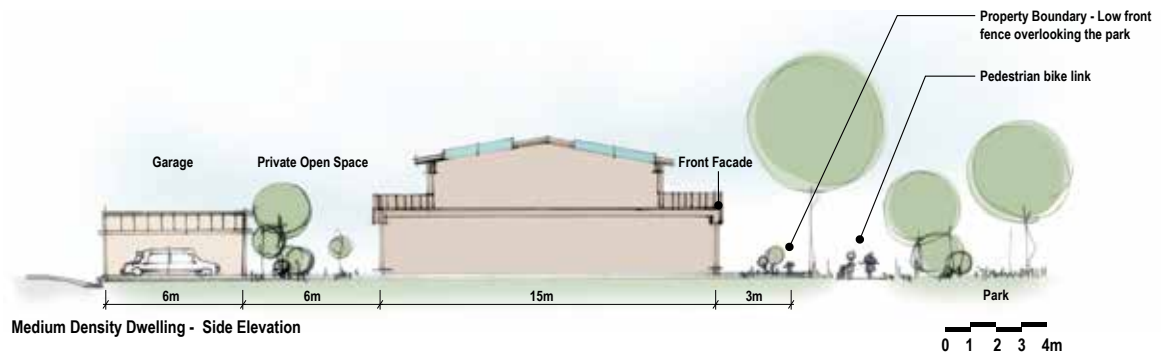
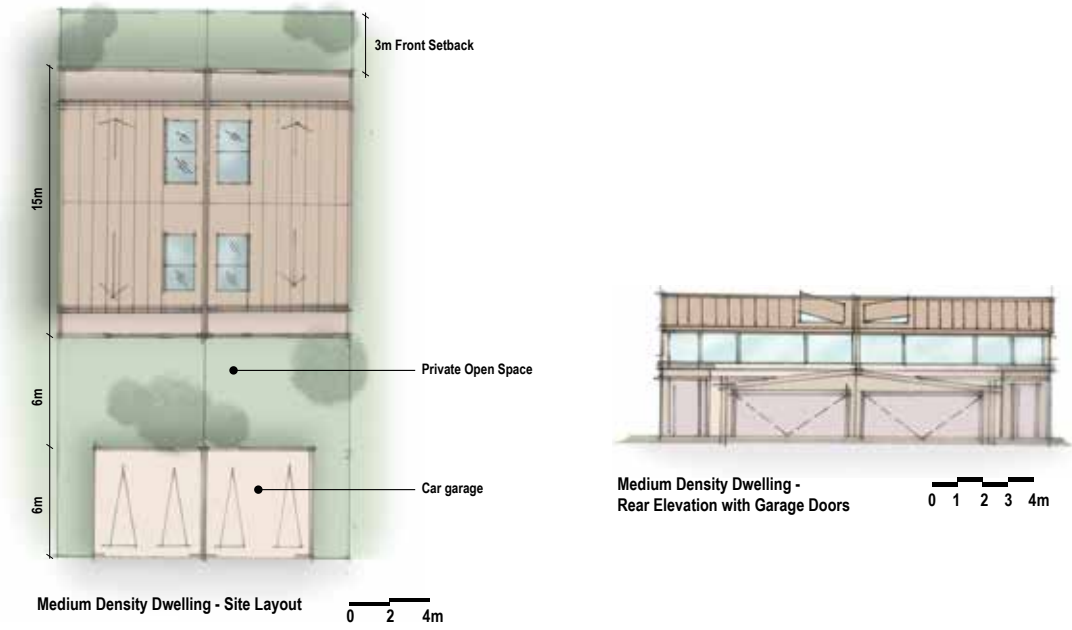


Figure 4 Example Layout: Medium Density Housing fronting Open Space

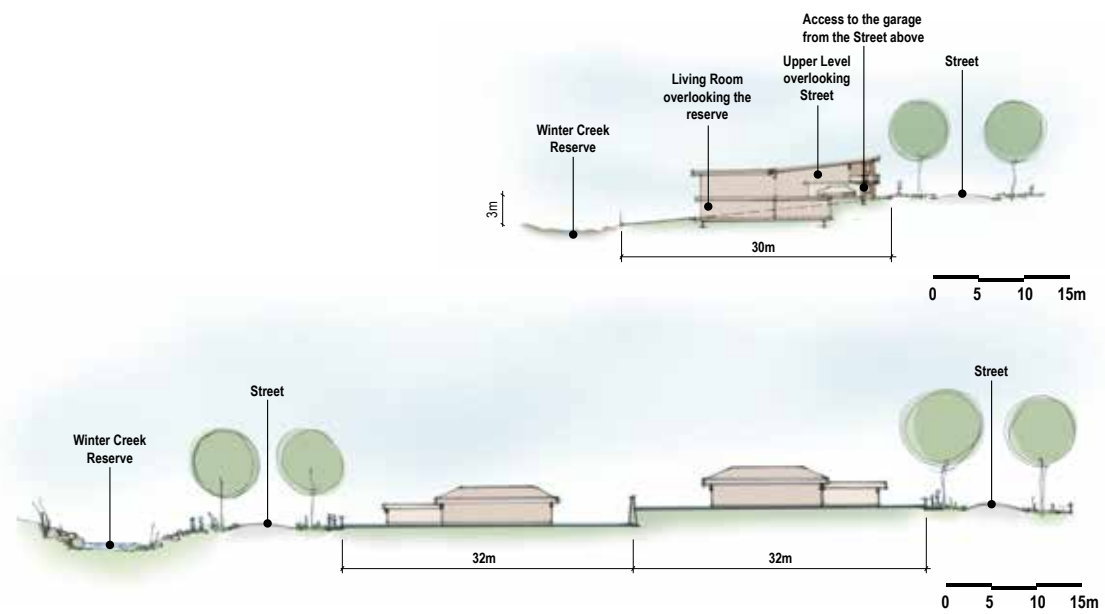
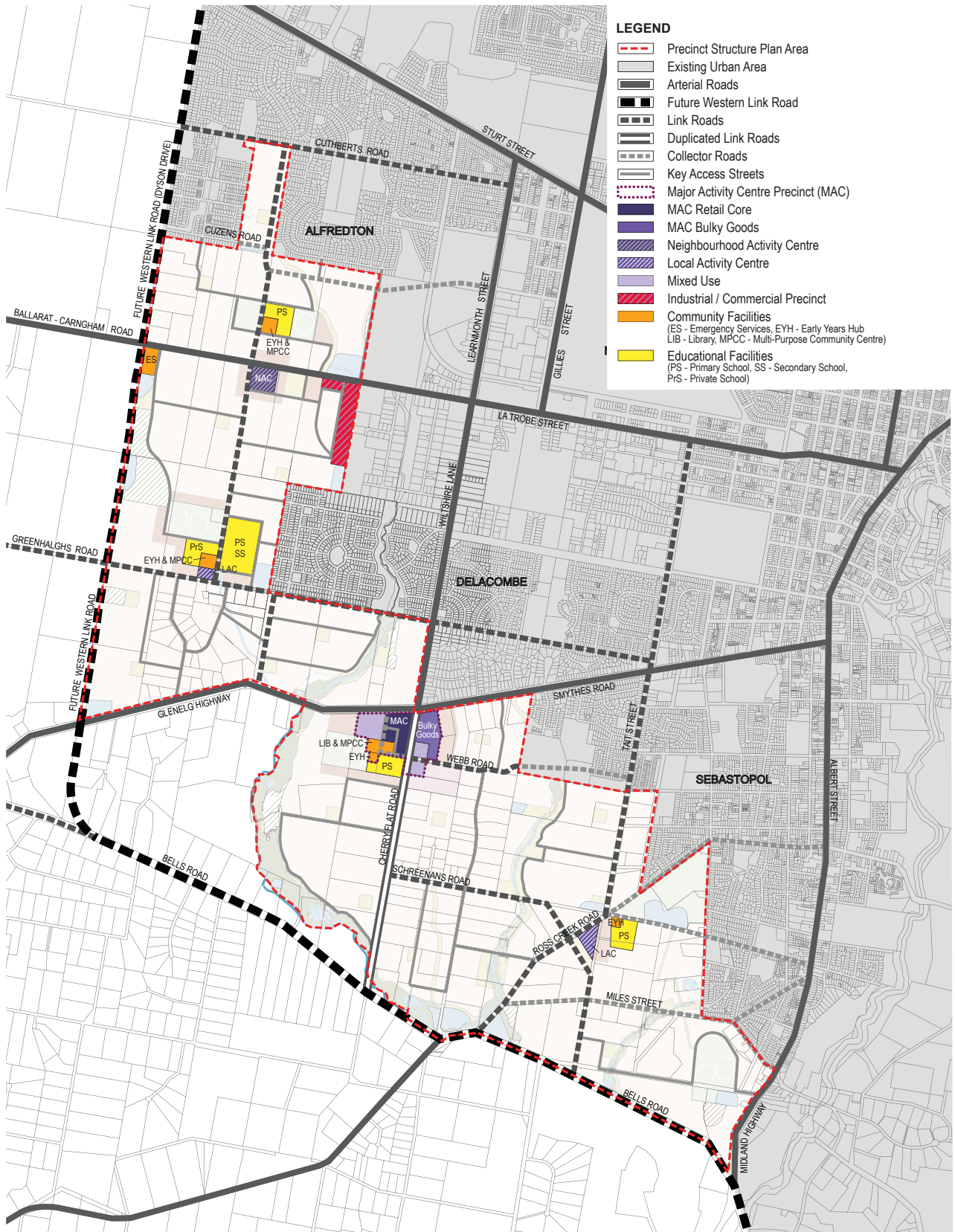


Figure 5 Example Layouts: Lots adjacent to Winter Creek



Plan 12 Employment and Activity Centres



0 0.25 0.5 .75km



5.3 Employment and Activity Centres

5.3.1 Employment and Activity Centre Objectives

Activity Centres

The objectives for Activity Centres are:

- To establish a hierarchy of vibrant 'Main Street' based activity centres that service the Ballarat West PSP area and parts of the surrounding community. These activity centres will provide a mix of retail, commercial and community uses to increase opportunities for employment in the Precinct and avoid the creation of 'dormitory suburbs';
- To ensure that new activity centres do not detract from the function and catchment of existing retail centres;
- To ensure that the Major Activity Centre provides opportunity for a mixture of retail, commercial, residential and service uses, and caters to the needs of the wider area;
- To ensure that the Neighbourhood Activity Centre serves a local function and acts as a weekly shopping destination for local residents;
- To create Local Activity Centres that cater for the day to day needs of residents and become a central focus for their communities;
- To ensure that Activity Centres are integrated with adjacent residential neighbourhoods;
- To ensure that the Major Activity Centre and Neighbourhood Activity Centre have the capacity to accommodate growth and adapt to changing market trends over time;
- To connect all activity centres with an integrated and accessible transport network which caters for a range of transport modes; and
- To acknowledge and appropriately address the interface with Carngham Road and Glenelg Highway when designing the Neighbourhood Activity Centre and the Major Activity Centre respectively.

5.3.2 Implementation

The objectives for activity centres are met by the implementation of all of the following:

- Plan 8: Future Urban Structure Plan;
- Plan 12: Employment and Activity Centres Plan;
- Plan 13: Community Facilities Plan;
- Table 5: Activity Centre and Employment Hierarchy;
- Planning and Design Guidelines set out in Section 5.3.3;
- Figure 6: Indicative Concept for the Major Activity Centre; and
- Figure 7: Indicative Concept for the Neighbourhood Activity Centre.



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5.3.3 Activity Centre Planning and Design Guidelines

General

Built form and the public realm

The following planning and design guidelines must be met:

- Developments must achieve a high degree of integration and connectivity between all uses within the activity centre;
- Active street frontages must be provided to primary street frontages within activity centres; and
- A main street through each activity centre must be created. The main street must encourage pedestrian movement and support a mixture of street based activities;

The following planning and design guidelines should be met:

- Build retail and commercial frontages to the edge of footpaths with clearly defined principal entrances addressing streets or public spaces;
- Place large retail formats (such as supermarkets and discount department stores) behind street-front retail tenancies;
- Provide high quality pedestrian spaces throughout activity centres to allow for connection, congregation and informal activity;
- Provide active uses at street level along 'main streets' to ensure a high level of activation of streets and pedestrian spaces;
- Establish pedestrian oriented environments that are permeable, visually interesting, accessible, well connected, safe and prioritise pedestrian movement over vehicle movement;
- Street facades must be well articulated, visually interesting and contribute to local character. Extensive blank facades to the street should be avoided;
- Corner sites should not be anchored by petrol stations or fast food outlets;
- Active frontages should be provided with continuous awnings or similar shelter to encourage pedestrian movement in all weather conditions;
- Advertising signage should be co-ordinated for each premises to avoid unnecessary visual clutter; and
- Activity Centres should incorporate Water Sensitive Urban Design measures.

Parking and movement

The following planning and design guidelines should be met:

- Locate car parking areas behind buildings to screen these areas from shopping streets and provide access from side-streets or rear laneways;
- Car parking areas should be designed to ensure passive surveillance and public safety through adequate positioning and lighting;
- Bicycle parking should be provided in a number of prominent and easily accessible locations and must be clearly visible, well lit, and preferably under cover;
- Bus stops should be centrally located to both community and retail facilities, in an area of high amenity and located in areas with a high level of passive surveillance; and
- Service areas should be screened from the public realm.



Major Activity Centre

The following planning and design guidelines must be met:

- Proposals are to be consistent with the role and function of the centre as described in Table 5.

The following planning and design guidelines should be met:

- The first stage of development within the MAC Retail Core should create a main street with activity on both sides, provide legible, high-quality pedestrian connections to residential areas and be integrated with the community facility and primary school sites;
- Locate a landmark frontage on each side of the intersection of Glenelg Highway and Cherry Flat Road, as well as at the entry to the MAC Retail Core at Webb Road, to signal the entry point to the major activity centre to passing traffic;
- Create a main street in the MAC Retail Core that provides protection from prevailing winds, rain and takes advantage of morning or afternoon solar access;
- Provide high-quality on-street pedestrian connections linking the MAC Retail Core to other parts of the Major Activity Centre. Footpaths should be broad; enabling outdoor dining and encouraging informal social interaction;
- Provide tree lined streets, street furniture and urban art to give the centre a unique sense of place;
- Encourage visually interesting buildings and streetscapes;
- Major retail anchors, entrances to enclosed centres, and street parking should be designed to generate passing trade for street-based shopfronts;
- Create a nexus between the district park and the activity centre by locating community facilities between retail and open space;
- Use built form to the north and east of the district park to form a well defined edge to park land and maximise passive surveillance opportunities;
- Configure the district park to reach the ridgeline to the west to maximise views from the activity centre to the south-west;
- Encourage medium density residential development around the periphery of the town centre over time;

- Consider provision of shop top housing and other residential mixed-use built forms to help activate the town centre throughout the day and evening;
- Provide a variety of employment and business opportunities through the provision of community, retail and non-retail commercial activities;
- Limit access to Cherry Flat Road between Webb Road and Glenelg Highway. Any access proposed should be from a service lane or allow left-in, left-out movements only; and
- Create a town square or similar public space within the MAC Retail Core. This space should be:
 - Edged with active frontages;
 - Located in an area with high pedestrian activity and accessible from multiple places;
 - Located adjacent to or directly addressed by community facilities;
 - Located to have good solar orientation; and
 - Accessible to both shade and rain sheltered areas.

Major Activity Centre – Bulky Goods Precinct

The following planning and design guidelines must be met:

- Proposals are to be consistent with the role and function of the centre as described in Table 5.

The following planning and design guidelines should be met:

- Create an appropriate interface between the bulky goods precinct and abutting residential development;
- Ensure development addresses Glenelg Highway, Cherry Flat Road and Webb Road;
- Landmark frontages should be provided at the intersection of Glenelg Highway and Cherry Flat Road and Cherry Flat Road and Webb Road, unarticulated facades to these intersections will not be supported; and
- The scale of development in this precinct must have regard to the scale of development in surrounding residential areas.



Neighbourhood Activity Centre

The following planning and design guidelines should be met:

- Provide a landmark frontage at the intersection of Carngham Road and the future north-south collector road and at prominent corner sites within the activity centre;
- Orientate buildings to address Carngham Road, the proposed collector road and the future residential development to the south and east;
- Create a tree lined 'main street' feel through the activity centre by providing active street frontages to all proposed internal roads and the north-south collector. Future development should not present blank facades to Carngham Road, the north-south collector road or the proposed 'main street';
- Locate car parking areas behind retail buildings to screen these areas from key shopping areas;
- Integrate the activity centre with future residential development; and
- Locate medium density residential adjacent to the Neighbourhood Activity Centre.

Urban Design Frameworks – Major Activity Centre and Neighbourhood Activity Centre

A permit should not be granted to use or subdivide land, or to construct a building or construct and carry out works within the Major Activity Centre or the Neighbourhood Activity Centre until an Urban Design Framework has been prepared to the satisfaction of the Responsible Authority.

The Urban Design Framework should:

- Address the whole of the activity centre unless a staged Urban Design Framework is agreed to by the Responsible Authority;
- Address any relevant design guidelines prepared by the Victorian Government or Responsible Authority;
- Demonstrate an appropriate design response that addresses the relevant Activity Centre Planning and Design Guidelines and the indicative concept plans illustrated in Figures 6 & 7;
- Explain how the Framework responds to feedback received following consultation with infrastructure agencies including VicRoads and the Department of Transport and landowners within the activity centre;
- Show how the activity centre relates to existing or approved development in the area;
- Include an overall landscape concept for the activity centre;
- Demonstrate how the activity centre will positively address environmental sustainability including integrated water management and energy conservation;
- Show the proposed location and design of car parking areas, and detail car parking rates for proposed uses within the activity centre;
- Show proposed staging of development;
- Set out design principles for the provision of advertising Signs; and
- Set out arrangements for the provision of service areas for deliveries and waste disposal including access for larger vehicles and measures to minimise the impact on the amenity of the activity centre and adjoining neighbourhoods.



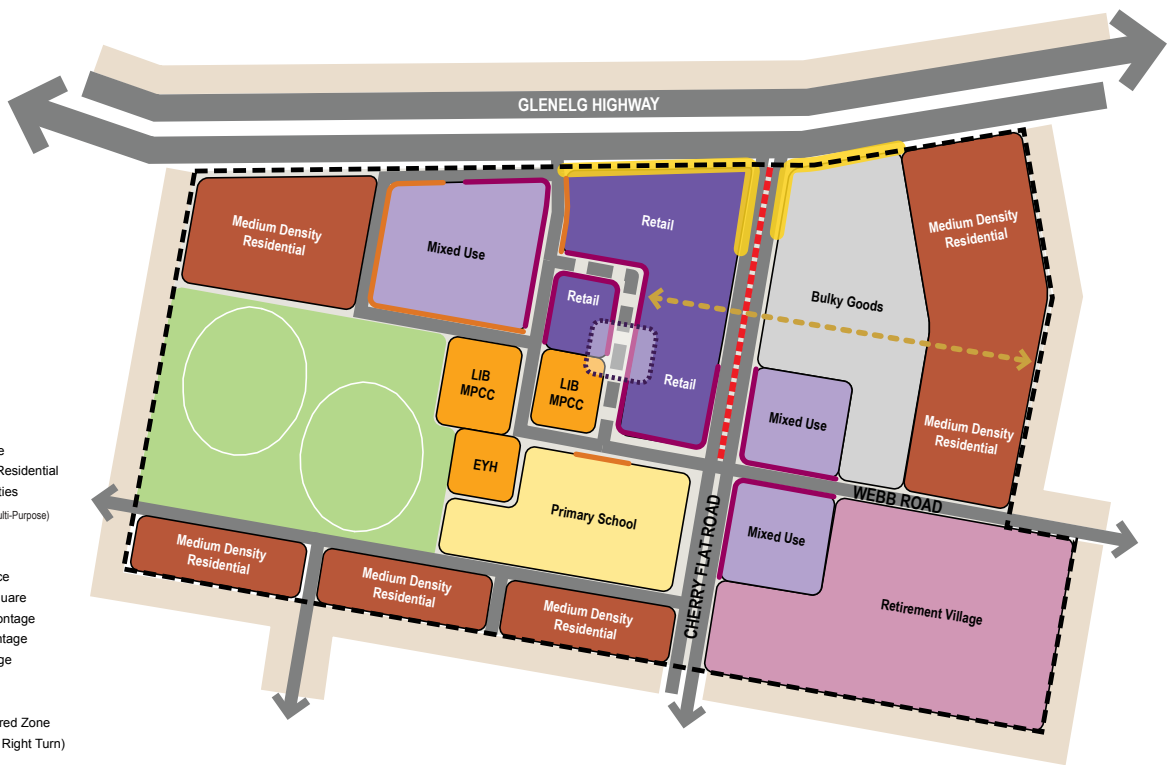


Figure 6 Sub-Precinct 1 Major Activity Centre - Indicative Concept Plan

0 50 100 150m

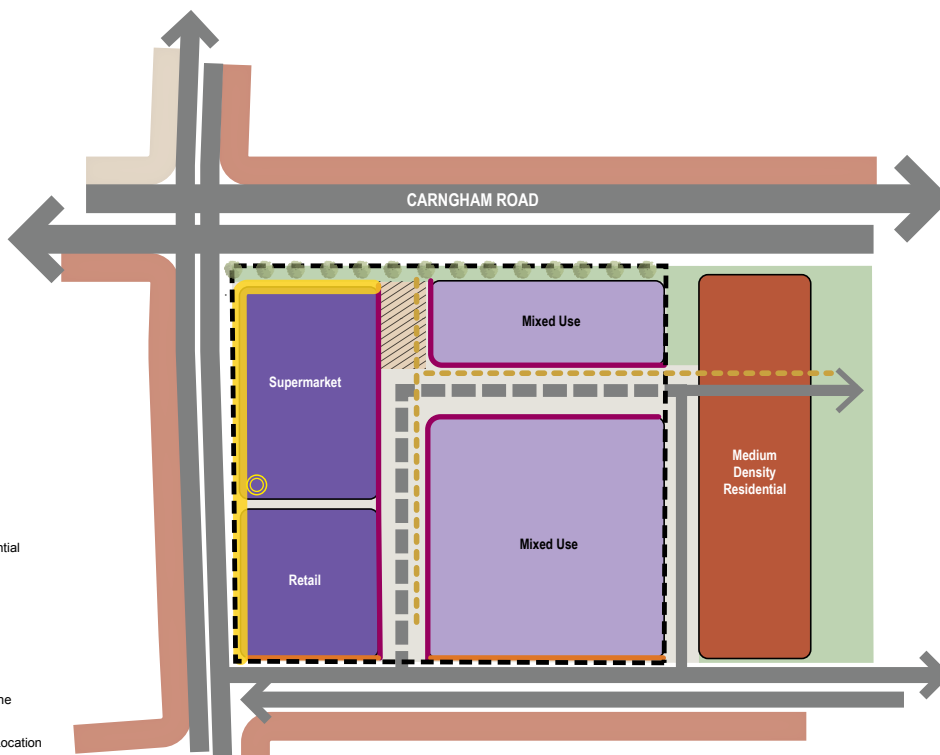


Figure 7 Sub-Precinct 4 Neighbourhood Activity Centre - Indicative Concept Plan

0 20 40 60m



5.3.4 Industrial / Commercial Precinct Objectives

The objectives for the Industrial/Commercial precinct are:

- To provide an air emissions buffer between the existing Delacombe Industrial Area and residential neighbourhoods in the Ballarat West PSP;
- To protect heavy industries in the Delacombe Industrial Area from residential encroachment;
- To create a unique industrial/commercial precinct that accommodates a mixture of non-sensitive land uses that provide employment opportunities supporting the Precinct;
- To provide passive surveillance of the linear landscape buffer;
- To support high quality built forms and uses such as office and small business workshops to provide an attractive interface between the Delacombe Industrial Area and residential land uses to the west; and
- Provide built forms within the Industrial/Commercial precinct that serve a noise attenuation function and assist to reduce noise impacts on the surrounding residential area.

5.3.5 Implementation

The objectives for the Industrial/Commercial Precinct are met by the implementation of all of the following:

- Plan 8: Future Urban Structure Plan;
- Plan 12: Employment and Activity Centres Plan;
- Table 5: Activity Centre and Employment Hierarchy; and
- Industrial/Commercial Precinct Planning and Design Guidelines set out in Section 5.3.6.



5.3.6 Industrial / Commercial Precinct Planning and Design Guidelines

The following planning and design guidelines must be met:

- Proposals must be consistent with and enhance the Activity Centre and Employment Hierarchy described in Table 5;
- Development facing the Linear Landscape Buffer must address the buffer area, be well landscaped and ensure passive surveillance;
- Buildings fronting the Linear Landscape Buffer and Carngham Road must be designed to a high standard and provide a well-articulated front facade;
- Building designs must consider their presentation to residential areas and provide an appropriate transition between residential and non-residential uses;
- Uses within the precinct must not create new amenity buffer requirements for air, noise or light emissions that would extend the existing buffers or levels identified in this PSP;
- No sensitive land uses are permitted within the Industrial/ Commercial Precinct;
- Office uses must be commensurate in scale with an out-of-centre, suburban location and must not undermine the function of the Central Business District and the proposed Major Activity Centre;
- Restricted retail (bulky goods) uses must be appropriate in scale with an out-of-centre location, not undermine the retail hierarchy defined by the *Ballarat Activity Centres Strategy (2011)* and not undermine the function of the bulky goods precinct within the Major Activity Centre; and
- Other non-sensitive, non-industrial uses such as an indoor sports centre may be acceptable.

The following planning and design guidelines should be met:

- To minimise dumping of rubbish, lots in the Industrial/ Commercial Precinct should not directly abut the Linear Landscape Buffer.



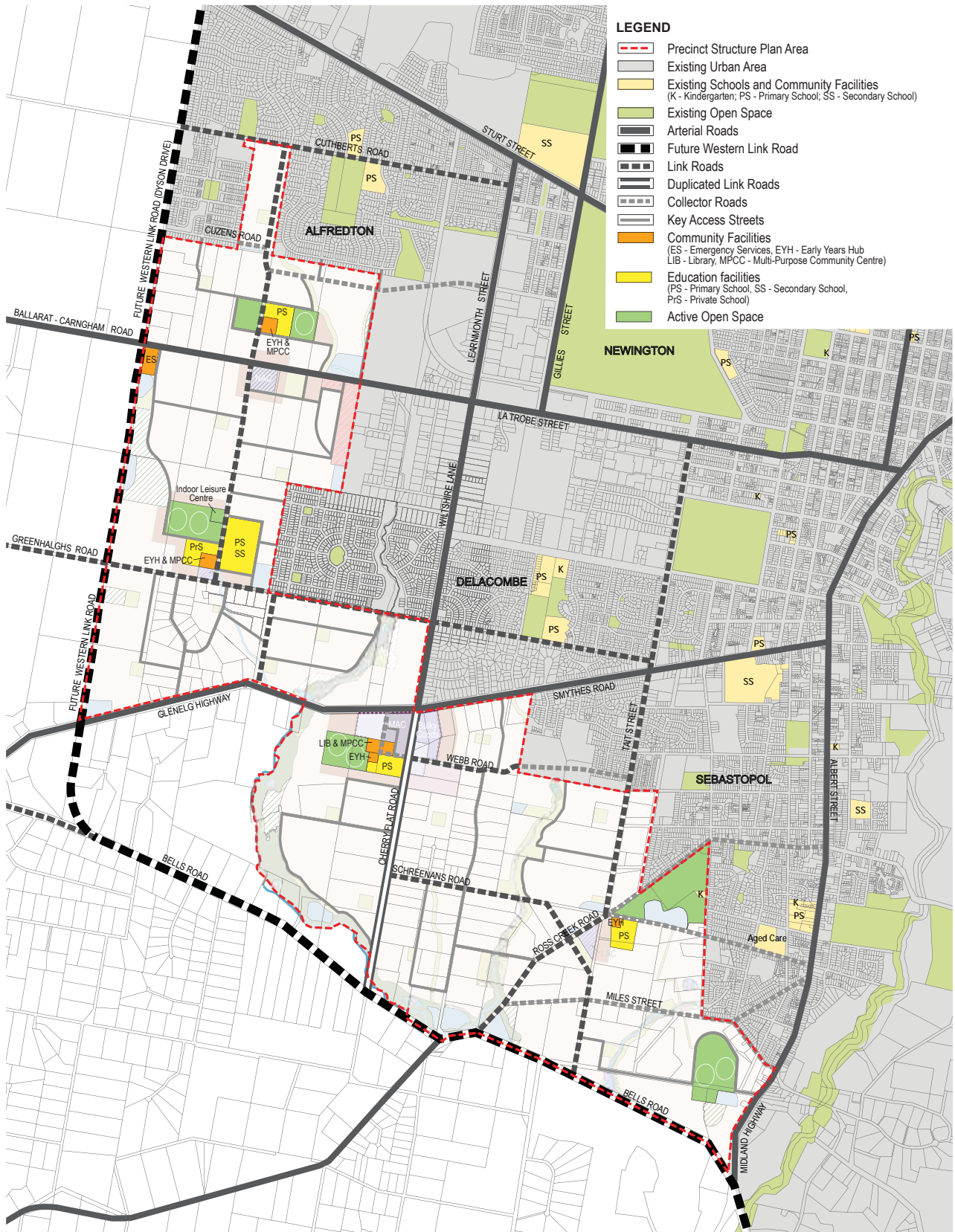
Table 5 Activity Centre and Employment Hierarchy

Activity Centre	Role and Function
Glenelg Highway Major Activity Centre	<ul style="list-style-type: none"> • Act as the main shopping precinct for Ballarat West; • Primarily serve the population of the Ballarat West Growth Area; • Provide for up to 29,500 m² of retail floor space, up to 20,000 m² of floor space for restricted retail premises and up to 21,500 m² of office space. Provision of this floor space will be staged in line with demand growth in the catchment (the Ballarat West Growth Area); • At full development of the catchment (the Ballarat West Growth Area), accommodate two full-line supermarkets, discount department stores and specialty shops and services; • Have a civic function and include a library and multi-purpose community centre; and • Allow residential uses and encourage the introduction of office/ home developments around the periphery of the centre.
Carngham Road Neighbourhood Activity Centre	<ul style="list-style-type: none"> • Medium sized neighbourhood activity centre; • Provide for up to 6,000 m² of retail floor space, with opportunities to provide up to 3000 m² office uses; • Provision for one supermarket and a variety of specialty shops and services; and • Development should be anchored along a main street which runs through the centre.
Local Activity Centres	<ul style="list-style-type: none"> • Provide for up to 1500 m² of retail floor space and 500 m² of office space; • Provide opportunity for a small supermarket supported by convenience shops and services; and • Serve daily shopping needs.
Industrial / Commercial Precinct	<ul style="list-style-type: none"> • Employment precinct that provides for manufacturing and service industries, offices, associated commercial and industrial uses, and other non-sensitive land uses, which are compatible with sensitive land uses; • Provides flexibility for integrated office/industry developments that is not readily accommodated in the Central Business District and Glenelg Highway Major Activity Centre; • Provides an air emissions buffer between existing industry and sensitive uses. This area is not to include sensitive uses; • Provides manufacturing and service industries to meet the needs of the future Ballarat West community, allowing flexibility for development of a range of associated commercial uses including offices; • Provide some capacity for Restricted Retail Premises up to a total of 8,500 m² across the Industrial/ Commercial Precinct. Restricted Retailing in this area should form part of a balanced mixture of land uses which do not undermine the role of the retail hierarchy or the Major Activity Centre. The primary focus for Restricted Retailing is to be the Major Activity Centre; and • This employment area is not intended to become an activity centre or be integrated with the Carngham Road Neighbourhood Activity Centre. Land use proposals in this area should not detract from the function and role of planned and existing activity centres, considering Ballarat’s wider activity centre hierarchy. This may need to be demonstrated to the satisfaction of the Responsible Authority.

The floor areas are indicative of the size of the centre based on the retail assessment undertaken by Macroplan as part of the preparation of the PSP. Variations to the indicative floor area may be permitted provided it does not change the role of the Activity Centre. A retail or economic assessment will be required.



Plan 13 Community Facilities



0 0.25 0.5 .75km



5.4 Community Facilities

5.4.1 Community Facilities Objectives

The objectives for community facilities are:

- To provide a well-connected network of community hubs across the Precinct;
- To foster community activity and interaction within each neighbourhood by co-locating community uses, activity centres, play space, open space, and transport facilities;
- To provide community facilities in line with future population growth;
- To provide opportunities for adaptable, shared, co-located and/or integrated community facilities (land and buildings);
- To plan for a range of community facilities, cultural venues and services to meet the varying needs of local residents;
- To plan for community facilities of a high standard that have flexible designs which can accommodate a range of uses, meet the changing needs of the community and allow for both indoor and outdoor activities;
- To locate community facilities with active and passive open space and, where appropriate, education facilities;
- To plan for community facilities which have safe and convenient access by public transport, walking, cycling, the mobility aided and car;
- To plan for physical connections that integrate future adjoining land uses for community use;
- To provide sporting facilities and supporting infrastructure identified in the plan;
- To allow for the timely delivery of community facilities such as schools, health and children's services and formal recreation facilities as population thresholds are reached and funding becomes available; and
- To provide for an emergency services facility (CFA, Ambulance and possibly Police and SES) to cater for growth outside of their existing service areas.

5.4.2 Implementation

The objectives for community facilities are met by implementation of all of the following:

- Plan 8: Future Urban Structure Plan;
- Table 6: Community Facilities;
- Plan 13: Community Facilities Plan;
- Community Facilities Planning and Design Guidelines set out in Section 5.4.3; and
- Community Facilities Delivery Statement set out in Section 5.4.4.

5.4.3 Community Facilities planning and design guidelines

General

The following planning and design guidelines must be met:

- Community facilities must be integrated with other community facilities, activity centres and/or open space, and be co-located with proposed children's playgrounds, recreation infrastructure and kindergartens; and
- Education and community services (public and private) and other activities (such as childcare centres) must:
 - Be within and/or adjoining community hubs or activity centres;
 - Be located so they are easily accessible by walking, cycling and public transport; and
 - Provide safe drop-off and pick up locations on access streets and collector roads, not arterial roads.

The planning and development of community facilities should:

- Accommodate a diverse range of users;
- Promote social interaction and foster a sense of place;
- Ensure that built form is of a high standard and of a proportion, scale and character appropriate to their urban context;
- Ensure principal entrances of buildings to streets and/or public spaces are clearly visible from the street and are not isolated from view;
- Be designed with adaptable spaces that can be modified to respond to changing community demands and needs;
- Capitalise on any natural features that currently exist, and emphasise any unique characteristics that may be present; and
- Schools may be designed to incorporate uses such as places of worship or other welfare/community facilities if required.

