Medium density housing is also encouraged within close proximity of public open spaces.
3.2.2 Development Principles

3.2.2.a Distribution of densities

Development should achieve a distribution of densities consistent with that set out in Table 4: Distribution of densities across the Cardinia Road Precinct; and identified in Plan 11: Lot size and Housing Diversity Plan.

### Table 4: Distribution of densities across the Cardinia Road

<table>
<thead>
<tr>
<th>Density Range</th>
<th>Cell 1</th>
<th>Cell 2</th>
<th>Cell 3</th>
<th>Cell 4 (3)</th>
<th>Cell 5</th>
<th>Cell 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Net Developable Area (1)</td>
<td>194.6 ha</td>
<td>81.6 ha</td>
<td>46.3 ha</td>
<td>165.4 ha</td>
<td>98.8 ha</td>
<td>115.1 ha</td>
</tr>
<tr>
<td>Low Density Residential (2)</td>
<td>38%</td>
<td>36%</td>
<td>0%</td>
<td>N/A</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Standard Residential (avg 15 dw per ha)</td>
<td>48%</td>
<td>52%</td>
<td>54%</td>
<td>N/A</td>
<td>89%</td>
<td>77%</td>
</tr>
<tr>
<td>Medium Density (avg 20 dw per ha)</td>
<td>14%</td>
<td>12%</td>
<td>46%</td>
<td>N/A</td>
<td>11%</td>
<td>23%</td>
</tr>
</tbody>
</table>

(1) Includes an 8% deduction for local public open space
(2) Low Density Residential development is confined to Cell 1 and Cell 2, north of Princes Highway
(3) Existing Urban area
3.2.2.b Residential Development

Residential Development includes both ‘standard’ density residential lots and ‘medium’ density residential lots and ‘low density’ residential lots in constrained areas.

Standard Density

Standard density residential includes lots with sizes generally within the range of 350 sq m to 750 sq m. Lot sizes across ‘standard’ density areas should achieve an overall average density of 15 dwellings per hectare with the preferred distribution of lot sizes outlined on Table 5.

Table 5: Preferred Distribution of lot sizes for standard density lots

<table>
<thead>
<tr>
<th>Lot size range</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>350 sq m to 500 sq m</td>
<td>35% - 40%</td>
</tr>
<tr>
<td>500 sq m to 600 sq m</td>
<td>20% - 30%</td>
</tr>
<tr>
<td>600 sq m to 750 sq m</td>
<td>35% - 40%</td>
</tr>
</tbody>
</table>

Medium density

Medium density residential development should include a mix of smaller lots ranging in size from 300 sq m to 450 sq m, as well as integrated housing sites. Medium density residential development should:

- be provided in areas identified in Plan 11: Lot size and Housing Diversity Plan.
- be an average of 20 dwellings per hectare (Net Residential Development Area) in areas within 400m walking distance of an activity centre and/or the proposed railway station;¹⁸
- overlook, abut or be within close proximity of open space; and,
- be provided in a variety of forms – terrace / townhouse development, cottage lots, shared driveway housing, integrated development sites as well as retirement villages / aged care facilities.

Additional sites allocated for medium density and/or sites that propose a higher density may be considered provided that sites are in strategic locations that satisfy the objectives and development principles for medium density development as outlined in this Precinct Structure Plan.

Low Density

Low density residential development should:

- be provided in areas identified in Plan 11: Lot size and Housing Diversity Plan.
- comprise lots of 1,000 sq m to 2,000 sq m which have proportionally wider frontages to maximise side setbacks and create openness between dwellings; and
- should be provided in locations constrained by significant slope; significant vegetation; the prominent ridgelines; and/or the interface with green wedge areas.

¹⁸ The 400 m criteria does not apply to Neighbourhood Convenience Centres (NCCs).
3.2.2.c Subdivision Lot Design

All densities
Lots should be:
• generally rectangular in shape on streets aligned on a north – south or east – west axis to maximise building and energy efficiency; and,
• designed so as to ensure garages are not the dominate front façade element of the house and/or the streetscape. This provision also applies to integrated development sites.
Public open space design should ensure that an appropriate interface with surrounding development is achieved.

Standard Density
Lots should be designed to:
• Create a sense of street address and streetscape character;
• Ensure garages are not the dominant front façade element across the width of the lot;
• Maximise the opportunity for more useable private open space.
• Enable rear accessed garages on narrow fronted lots.

Medium Density
A variety of styles and types of medium density development are encouraged to further enhance lot diversity.
Integrated housing sites / lots of less than 300 sq m should be:
• developed by one builder as an integrated development project; and,
• be provided within or at the interface of activity centres, or overlooking local and linear open space.
Lots with shared driveway access should be designed to ensure:
• housing fronts out to both streets and / or parkland;
• that a shared driveway or ‘garage court’ provides access to garages sited off street to minimise the visual impact of garages on the streetscape; and,
• private open space is maximised through careful design of the dwelling
Lots with direct park frontage or road /park frontage with rear access are encouraged and should be designed to ensure:
• the rear lane access to garages lessens the visual impact on the streetscape;
• strong building form along the park edge provides a backdrop and interface to open space; and,
• wide footpaths are provided along the frontage to ensure an ‘address’ for dwellings.

Low Density
Lots in low density areas must be designed to include building envelopes that:
• maximise vegetation retention and ensures the protection of existing vegetation and/or areas requiring revegetation;
• are located on the flatter part of sites, to limit any cut and fill on the sites; and,
• are located away from the tops of significant ridgelines to retain the prominence of ridgelines, and provide for the revegetation of ridgelines.
Lots should be designed to be proportionally wider than deep, to maximise side setbacks and create openness between dwellings.
Low density residential areas should include the provision to include the use of colours and material that are reflective of the natural surrounds.

Avoid rear lanes that:
• provide concealment opportunities; and,
• Are curved, have T-intersections or are longer than 150m.
Design suggestions for siting of building envelopes:

- The building roof line sits below the ridgeline and the top of the ridge is revegetated.

- The building envelope sits below the ridgeline and the existing vegetation is retained.
Design Suggestions for Streetscapes

1. Wider frontage to ensure dwelling is dominant structure.
2. Avoid narrow frontage with garage as dominant structure.
3. Lots with narrow frontage with rear access are encouraged.

Figure 10: Design suggestions for varied lot frontages

1. Direct park frontage with wide front footpath and rear access is encouraged.
2. Direct road address with rear access is encouraged.

Figure 11: Design suggestions for lots fronting open space

1. Integrated development sites fronting parkland and well landscaped garage courts.
2. Integrated development sites with internal garage court with minimal visual impact.

Figure 12: Design suggestions for integrated development site
**Interface treatments**

**Interface with Public Open Space**

Lots with an interface with public open space should:

- take advantage of views / aspect over open space by orienting lots to face towards the open space area;
- ensure lots overlook open space to increase the sense of safety / surveillance; and;
- recognise opportunities for smaller lots to have an alternative outdoor space readily available; and,
- ensure that where lots have direct frontage to parkland that a footpath access is provided along the front boundary to provide for surveillance and a sense of ‘address’.

**Interface between densities**

When creating a transition between densities, development should be designed to:

- Limit any negative impact between lots, particularly where interfacing with lower density development.
- Avoid larger lots (with wide frontages) on one side of a road, facing small lots (with narrow frontages) on the other side.
- Use rear fence lines as the transition from lower densities (1000+ sq m lots) to standard density lots.
- Use standard density lots to create a transition from medium density development to larger, low density lots.

Figure 13: An example of lots with an interface with public open space

Figure 14: An example of the interface between low density and standard density lots
3.3 Activity Centres

3.3.1 Objectives

- To develop a network of vibrant, well serviced and accessible Neighbourhood Activity Centres and Neighbourhood Convenience Centres that form the focus of a new community.
- To ensure that activity centres provide a mix of retail, commercial, entertainment, and community activities to meet the needs of the local community.
- To achieve well designed, safe, attractive, and street based activity centres as expressed in the design objectives for each activity centre.
- To ensure all activity centres are accessible by public transport and that activity centres are designed to facilitate the use of public transport, connected to the pedestrian and bicycle network, and that all residents within the precinct live within a walkable distance of an activity centre.
- To provide for future retail, commercial or residential redevelopment opportunities within activity centres.
- To encourage higher density residential development within 400 metres of a neighbourhood activity centre.

3.3.2 Development Principles

The development of the Activity Centres within the Cardinia Road Precinct should be based on:

- Plan 12: Activity Centres in the Cardinia Road Precinct; and,
- Table 6: The role, function and indicative floor space of the Activity Centres in the Cardinia Road Precinct.
- Table 7: Activity Centre Design Objectives and Design Principles.

Detailed Urban Design Framework Plans must to be prepared for the Activity Centres subsequent to the Cardinia Road Precinct Structure Plan. Specific requirements for these are set out with Draft Urban Design Frameworks that provide an indicative design solution in:

- Figure 15: Draft Urban Design Framework – Cardinia Rd/Railway Station Neighbourhood Activity Centre
- Figure 16: Draft Urban Design Framework – Cardinia Rd/Princes Hwy Neighbourhood Activity Centre
- Figure 17: Draft Urban Design Framework – Lakeside Blvd/Princes Hwy Neighbourhood Activity Centre
- Figure 18: Draft Urban Design Framework – Neighbourhood Convenience Centre
Table 6: The role, function and indicative floor space of the Activity Centres in the Cardinia Road Precinct

<table>
<thead>
<tr>
<th>Activity Centre</th>
<th>Indicative floor areas*</th>
<th>Role</th>
</tr>
</thead>
</table>
| Neighbourhood Activity Centre Lakeside Boulevard / Toomuc | 10,000 sq m core retail floor space 25,000 sq m peripheral commercial | • Neighbourhood core retail and peripheral commercial role comprising a supermarket and associated shops and services.  
• Possible future upgrade from Neighbourhood Activity Centre (Neighbourhood Activity Centre) to Major Activity Centre (MAC).  
• Regional peripheral commercial / bulky goods retailing role associated with the Pakenham Homemaker Precinct.  
• Regional recreation and community services role based on the Cardinia Cultural Centre, the indoor sports and aquatic centre (“Cardinia Life”), and Police and Emergency Services Complex.  
• Public transport access via Principal Public Transport Network (PPTN) route along the Princes Highway and local bus route along Lakeside Boulevard. |
| Neighbourhood Activity Centre Cardinia Road North | 5,000 sq m core retail floor space | • Neighbourhood core retail and peripheral commercial role comprising a supermarket and associated shops and services.  
• Public transport access via Principal Public Transport Network (PPTN) route along the Princes Highway and local bus route along Cardinia Road. |
| Neighbourhood Activity Centre Cardinia Road South | 10,000 sq m core retail floor space | • Neighbourhood core retail and peripheral commercial role comprising a supermarket and associated shops and services.  
• Restricted retail services along Cardinia Road.  
• Neighbourhood community services including primary school and community centre.  
• Support the development of a new railway station and park and ride facility on the east side of Cardinia Road.  
• Public transport access via a new railway station and local bus routes along a new east-west local road connection across Cardinia Road (Henry Road extension) (which is to form part of the grade separated crossing of the railway line and Cardinia Road).  
• Safe and accessible pedestrian links via an east – west pedestrian bridge (which is to form part of the grade separated crossing of the railway line and Cardinia Road). |
| Neighbourhood Convenience Centres              | 500 sq m core retail floor space | • Neighbourhood core retail role comprising convenience shop / general store.                                                                                                                                |

* Note: The floor areas are indicative of the size of the centre, based on the retail assessment undertaken as part of the preparation of the PSP. Variations from the indicative floor area may be permitted provided it does not change the role of the Activity Centre.

2 To be funded by the Cardinia Road Precinct Development Contributions Plan (September 2008)
3 To be funded by the Cardinia Road Precinct Development Contributions Plan (September 2008)
<table>
<thead>
<tr>
<th>Design Issue</th>
<th>Objectives</th>
<th>Development Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activity Centre</strong>&lt;br&gt;<strong>Typology</strong></td>
<td>• To provide active ‘main street’ based activity centres which: &lt;br&gt;- provide an attractive focus for community activity and interaction; &lt;br&gt;- create a strong urban character and sense of place; &lt;br&gt;- establish a pedestrian oriented environment that is visually interesting, well connected and safe; and, &lt;br&gt;- demonstrate an attractive built form and landscape character.</td>
<td>• All activity centres should be designed as ‘main street’ centres. &lt;br&gt;• The ‘main street’ should be an undivided road without a central median and provide for on-street parking. &lt;br&gt;• Sites in prominent locations should be identified for significant buildings or landmark structures. &lt;br&gt;• All activity centres should be designed to: &lt;br&gt;- include an integrated stormwater and servicing solution; and, &lt;br&gt;- maximise accessible and safe pedestrian linkages to, from and within the activity centre. &lt;br&gt;• Two storey built form elements are required as a general principle in the ‘main street’. &lt;br&gt;• The built form is to be aligned with the property boundary of the ‘main street’. &lt;br&gt;• Façade articulation is to be present, with fine grained scale shop fronts with access provided from the ‘main street’. ‘Big box’ elements, such as supermarkets shall be provided behind this fine grained frontage. &lt;br&gt;• A continuous built form along the ‘main street’ is required. However minimised breaks in the frontage of the ‘main street’ may be permitted to allow: &lt;br&gt;- access to car parking; and, &lt;br&gt;- a well located ‘town square’ that addresses the retail uses.</td>
</tr>
<tr>
<td><strong>Public Domain</strong></td>
<td>• To provide public spaces (including a Town Square) which encourage community interaction in a safe and attractive environment that connects to the open space network</td>
<td>• A central ‘town square’ is to be provided at each activity centre. &lt;br&gt;• The ‘town square’ must be well located and in scale with the activity centre. &lt;br&gt;• The ‘town square’ is required to have good solar orientation and be directly accessed by shop frontages to encourage outdoor dining.</td>
</tr>
<tr>
<td><strong>Visual Character</strong></td>
<td>• To ensure that key view lines / sight lines into and out of the activity centre are incorporated in the overall design.</td>
<td>• Exposure to long built facades / continuous concrete walls, with minimal visual interest are not acceptable. Visual interest may be provided through the introduction of windows, display areas and/or other treatments. &lt;br&gt;• Shops with two entries, to both the ‘main street’ and either the car park or an internalised mall are not permitted, except on corner locations. &lt;br&gt;• Ensure that plant structures on the roof are included within roof lines or otherwise hidden.</td>
</tr>
</tbody>
</table>
Table 7: Activity Centre Design Objectives and Development Principles (continued)

<table>
<thead>
<tr>
<th>Design Issue</th>
<th>Objectives</th>
<th>Development Principles</th>
</tr>
</thead>
</table>
| **Interface with Activity Centre & Road Network** | To ensure a high standard of interface between activity centres, arterial roads and local roads | • Landscaping of the interface is to be of a high standard and is considered to be an important element to compliment the built form design.  
• Areas of blank façades visible from arterial and/or local roads are to be minimised.  
• Good built form design is considered to be the best solution to providing satisfactory interface design between the activity centre and the surrounding land uses.  
• Corner sites, where the ‘main street’ meets an arterial road:  
  - will be designed to provide built form that anchors the ‘main street’ to the arterial road, this could be achieved through the use of a substantial multi-storey building located at the corner;  
  - are considered to be critical development sites and are not suitable sites for standard single storey fast food outlets or service stations; and,  
• Are not required to include a retail component. |
| **Supermarket and other ‘large box uses’** | To avoid internalised retail developments which present a blank façade and extensive car parking areas to the street. | • Supermarkets and other ‘large box uses’ should not present a façade to the ‘main street’.  
• The preferred supermarket / other ‘large box uses’ entry is to be via a small entry mall from the ‘main street’ rather than directly from the car park. A secondary entry via a mall entry from the car park is acceptable, provided the primary entry is from the ‘main street’.  
• Small access malls that address a supermarket / other ‘large box uses’ can form part of the overall design. Such access malls may have a limited number of internalised shops. The primary access to these malls must be from the ‘main street’. |
| **Main street traffic**               | To ensure that traffic is to be managed to ensure pedestrian safety.          | • The use of pedestrian crossings, slow zones, pedestrian priority areas and clearly indicated mixed mode areas should be used to deliver a pedestrian friendly environment. The use of roundabouts to manage traffic is discouraged. |
### Table 7: Activity Centre Design Objectives and Development Principles (continued)

<table>
<thead>
<tr>
<th>Design Issue</th>
<th>Objectives</th>
<th>Development Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parking</strong></td>
<td>• To ensure that adequate provision is made for on street parking within the ‘main street’&lt;br&gt;• To ensure that the access and design of off street parking addresses vehicle and pedestrian movement and provides for appropriate landscaping.</td>
<td>• The main street’ should include on street parking.&lt;br&gt;• Access for off-street parking shall be designed in such a way to minimise the entry area frontage to the ‘main street’.&lt;br&gt;• The design of off-street car parking should ensure:&lt;br&gt;- the car park is accessible for ‘main street’ traffic;&lt;br&gt;- the integration of a pedestrian friendly path network to, from and within the car park; and,&lt;br&gt;- that appropriate detail has been considered such as the incorporation of clean trunked deciduous shade trees and protection from prevailing winds.</td>
</tr>
<tr>
<td><strong>Public Transport</strong></td>
<td>• To integrate the provision of public transport services into the design and layout of the activity centre.</td>
<td>• The activity centre will be designed to incorporate the proposed public transport network.&lt;br&gt;• Provision will be made to locate public transport infrastructure / facilities at commuter friendly / convenient locations within the activity centre.</td>
</tr>
<tr>
<td><strong>Signage</strong></td>
<td>• To provide for activity centre identification</td>
<td>• A maximum of one central, freestanding ‘centre – identifying’ sign is to be provided.&lt;br&gt;• All other signage should be within the built form of the activity centre structures.</td>
</tr>
<tr>
<td><strong>Service Areas</strong></td>
<td>• To minimise the visual and physical impact of services areas on the main street and public domain.</td>
<td>• Service areas are to be internalised wherever possible. Where internalised service areas cannot be provided, they are to be secured and screened at the rear of buildings.&lt;br&gt;• Where service areas are accessible from car parks, they must present a well designed and secure façade to public areas.</td>
</tr>
</tbody>
</table>
3.3.3 Urban Design Framework Requirements

Cardinia Road / Railway Station Neighbourhood Activity Centre

The Urban Design Framework must show:

- A ‘main street’ running parallel to Cardinia Road (north-south).
- Traffic signals at the intersection of the ‘main street’ with the east-west local arterial road.
- Provision for temporary access for south bound traffic travelling along Cardinia Road.
- Options for providing permanent access for south bound traffic on Cardinia Road if the grade separation proceeds as an underpass.
- The railway station designed to be integrated within the activity centre, ensuring that:
  - views to the station along the ‘main street’ are an important feature of the centre’s design;
  - the built form of the railway station provides an opportunity for the development of a superior public domain environment;
  - the design outcome invites and engenders civic pride, while offering a safe and enjoyable place to use; and,
  - bus access, taxi facilities and pedestrian and bicycle access is included in the design.

- Provision for safe and efficient pedestrian / bicycle and vehicular north – south access along Cardinia Road to the new railway station and the activity centre pending the construction of the grade separation of Cardinia Road and the railway line.
- How at grade car parking provides opportunities to be used for future redevelopment of multi-level carparking, and potential residential apartments / additional commercial/retail activity.
- How the proposed activity centre provides for a substantial residential component and can accommodate future access and servicing needs to these sites.
- The draft urban design framework provided in Figure 15, is an indicative design solution. Alternative approaches may be considered, that meet the objectives for activity centre design, to the satisfaction of the Responsible Authority.
Figure 15: Draft Urban Design Framework - Cardinia Rd/Railway Station Neighbourhood Activity Centre
Cardinia Road / Railway Station Neighbourhood Activity Centre

The Urban Design Framework must show:

• How development of the corner site at the Cardinia Road /Princes Highway intersection can be considered for ‘second stage’ of development.

• How options for meeting future access and servicing needs for the future development of the site are protected.

• The draft urban design framework, provided in Figure 16, is an indicative design solution. Alternative approaches may be considered, that meet the objectives for activity centre design, to the satisfaction of the Responsible Authority.

Figure 16: Draft Urban Design Framework - Cardinia Rd/Princes Hwy Neighbourhood Activity Centre
Lakeside Boulevard/Princes Highway Neighbourhood Activity Centre

The Urban Design Framework must show:

- Development on the north side of Princes Highway that is generally consistent with the Pakenham Homemaker Precinct Urban Design Framework (2004).
- Development on the south side of the Princes Highway that is generally consistent with the Toomuc Sports Precinct Urban Design Study (2006).
- The draft urban design framework, provided in Figure 17, is an indicative design solution. Alternative approaches may be considered, that meet the objectives for activity centre design, to the satisfaction of the Responsible Authority.

Refer to Pakenham Homemaker Precinct Urban Design Framework 2004 for detailed design controls on development within this precinct.

Refer to Toomuc Sports Precinct Urban Design Study 2006.

Figure 17: Draft Urban Design Framework - Lakeside Blvd/Princes Hwy Neighbourhood Activity Centre
Neighbourhood Convenience Centres

The urban design framework must show:

- How the overall design and location of the neighbourhood activity centre has had regard to the adjoining public uses.
- How parking solutions integrated with adjoining public uses are achieved.
- The draft urban design framework, provided in Figure 18, is an indicative design solution. Alternative approaches may be considered, that meet the objectives for activity centre design, to the satisfaction of the Responsible Authority.

Figure 18: Draft Urban Design Framework - Neighbourhood Convenience Centres
3.4 Employment and Economic Activity

3.4.1 Objectives

- To provide opportunities for local employment through the integration of economic activities into the development of the precinct; such as;
  - the provision of a network of activity centres with a mix of retail, commercial, leisure and community services activities; and,
  - the establishment of community services (public and private) and other activities (such as childcare centres and nursing homes) which provide employment as well as services to the local community.
- To maximise accessibility to and within employment opportunity areas, particularly by public transport, cycling and walking to ensure an improved quality of life of residents, as well as reducing the demands for travel.
- To provide for a mix of retail, commercial, leisure and other services to support the needs of workers of nearby business and industry.
- To minimise potential amenity impacts between existing industrial activity and residential development.

3.4.2 Development Principles

- The development of the employment areas should meet the requirements of Plan 13: Employment and Commercial Activity.
- Design and development of activity centres should provide for a mix of retail, commercial, leisure and community services activities; and demonstrate the capacity for future expansion.
- Education and community services (public and private) and other activities (such as childcare centres and nursing homes) should be encouraged:
  - within community hubs;
  - within/or on the edge of activity centres;
  - on either collector roads or local arterial roads; and/or,
  - within walking distance of public transport.
- Restricted retailing should be encouraged along the Princes Highway frontage and within the Pakenham Homemaker Centre within land shown as peripheral commercial.
- Potential amenity impacts at interface between the existing industrial precinct and residential development should be minimised through the provision of an acoustic fence and landscaping buffer.
Plan 13: Employment & Commercial Activity Plan

LEGEND
- Structure Plan Area
- Primary Arterial Road (VicRoads)
- Local Arterial Road (divided)
- Local Arterial Road (undivided)
- Collector Road
- Local Streets
- Signalised intersections
- Other traffic control devices
- Railway Line, Proposed Station & Car Parking
- Industrial land
- Core Business
- Peripheral Commercial
- Cardinia Road Employment Precinct
- Existing Major Easements
- Existing Creeks
- Drainage Lines
3.5 Community Infrastructure

3.5.1 Objectives

- To provide a network of community hubs across the precinct as focal points for community activity and interaction.
- To provide a range of community facilities, cultural venues and services to meet the varying needs of local residents.
- To promote high quality architecture and flexible design and use of community facilities to accommodate changing community needs over time.
- To provide for community facilities and services delivered by government and non-government education, health and community service providers.
- To encourage the co-location of community facilities with activity centres, open space, and transport facilities.
- To maximise access to community facilities especially by public transport, walking and cycling.

3.5.2 Development Principles

The development of the community infrastructure should meet the requirements outlined in:

- Table 8: Network of Community Hubs; and,
- Plan 14: Community Facilities within the Cardinia Road Precinct.

**Design of community facilities**

All community facilities should be designed to:

- provide for the multi-use of facilities by different groups within the community;
- facilitate the efficient and shared use of resources and facilities; and,
- provide for disability access, and incorporate Crime Prevention Through Environmental Design (CPTED) Safe Design Principles where appropriate.

**Location of non-government schools**

Non-government schools are encouraged to co-locate with open space and other schools and community facilities.

Non-government schools should be located within walking distance to the principal public transport network.
## Table 8: Network of Community Hubs

<table>
<thead>
<tr>
<th>Hub / Catchment</th>
<th>Location and land allocation</th>
<th>Core facilities</th>
<th>Potential additional facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neighbourhood Hub</strong></td>
<td>Catchment of approximately 1,000 people</td>
<td>1 ha within 500 m of every dwelling</td>
<td>Local open space/local park&lt;br&gt;Community Meeting Space&lt;br&gt;Public Transport stop</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Urban Hub</strong></td>
<td>Catchment of approximately 5,000 – 9,000 people</td>
<td>Total site area of 5 ha&lt;br&gt;Located on public transport routes and within 1,000 m of most dwellings&lt;br&gt;Urban Hubs provided at:&lt;br&gt;• Cell 1&lt;br&gt;• Cell 3&lt;br&gt;• Cell 4&lt;br&gt;• Cell 5</td>
<td>Local open space/local park&lt;br&gt;Community centre (Kindergarten and Community Meeting Space)&lt;br&gt;Primary school&lt;br&gt;Public Transport Stop&lt;br&gt;Within Community Centre:&lt;br&gt;• Maternal and Child Health Centre&lt;br&gt;• Space for sessional and outreach services&lt;br&gt;Medical centre&lt;br&gt;Childcare centre&lt;br&gt;After school care</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>District Hub</strong></td>
<td>Catchment of approximately 30,000 people</td>
<td>Total site 6 – 8 ha&lt;br&gt;Joint Urban Hub/District Hub provided in Cell 6 located within proximity of Cardinia Station and in Cell 4 Lakeside Boulevard.</td>
<td>Local open space/local park&lt;br&gt;Community centre (Kindergarten and Community Meeting Space)&lt;br&gt;Primary school&lt;br&gt;Additional purpose built Meeting Space&lt;br&gt;Public Transport Stop&lt;br&gt;Within Community Centre:&lt;br&gt;• Maternal and Child Health Centre&lt;br&gt;• Meeting Place&lt;br&gt;• Youth Specific Building / Services&lt;br&gt;Secondary School</td>
</tr>
</tbody>
</table>
3.6 Open space

3.6.1 Objectives

- To provide and develop a range of open space types to meet the active and passive needs of the community and protect and restore environmental values and features.
- To provide a range of appropriately sized and well distributed open spaces to meet local and district open space needs.
- To provide for the protection and enhancement of areas of environmental significance and to integrate these areas with open space systems.
- To create an attractive urban environment with a strong sense of place through the provision and landscaping of open space.
- To ensure that open space development standards provide for a sustainable future maintenance regime.
- To encourage and promote the early development of open space through subdivisional works, the development contribution plan; and/or Council’s Capital Works Programs.

3.6.2 Development Principles

The open space network must meet the requirements outlined in the following:

- Table 9a: Open Space Contributions;
- Table 9b: Open Space Categories; and,
- Plan 15: Open Space Network.\(^\text{19}\)

Public Open Space Contribution

A minimum public open space contribution of 8% of the land to be subdivided must be provided as part of the subdivision of land for residential purposes.

The 8% public open space contribution must comprise land unencumbered by other constraints (eg: land required by Melbourne Water for drainage purposes, land within service easements) to allow its full use for recreation purposes.

Any encumbered public open space should be provided in addition to the 8% unencumbered public open space contribution.

Where the size and location of a parcel of land being subdivided is unable to provide open space within the framework set out the structure plan, a cash contribution in lieu of the provision of land for open space should be provided.

Funds collected through these contributions should be used to offset the provision of land for open space on a parcel of land being subdivided where the amount of open space to be provided exceeds the 8% public open space contribution.

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\(^{19}\) Note: The configuration of the shape of the open space area may be modified to the satisfaction of the Responsible Authority.
Plan 15: Open Space Network Plan

LEGEND
- Structure Plan Area
- Primary Arterial Road (VicRoads)
- Local Arterial Road (divided)
- Local Arterial Road (undivided)
- Collector Road
- Local Streets
- Signalised intersections
- Other traffic control devices
- Railway Line, Proposed Station and Car Park
- Public open space (uncumbered)
- Public open space (encumbered)
- District sports reserves (8ha+)
- District Parks
- Existing Major Easements
- Existing creeks
- Drainage Lines
- Lakes/waterbodies

NOTES
Part encumbered and part unencumbered open space. (For the purpose of Table 1: Land Budget, this has been classified as ‘District Open Space’).
### Table 9a: Open Space Contributions

<table>
<thead>
<tr>
<th>Cell</th>
<th>Cell 1</th>
<th>Cell 2</th>
<th>Cell 3</th>
<th>Cell 4(1)</th>
<th>Cell 5</th>
<th>Cell 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Residential Developable Area (ha)</td>
<td>211.5</td>
<td>88.7</td>
<td>50.3</td>
<td>179.8</td>
<td>107.4</td>
<td>125.1</td>
</tr>
<tr>
<td>District Sports Reserves*</td>
<td>0.0</td>
<td>0.0</td>
<td>8.0</td>
<td>N/A</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>District Parkland*</td>
<td>16.2</td>
<td>0.0</td>
<td>0.0</td>
<td>N/A</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Neighbourhood Sports Reserve*</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>N/A</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Local Open Space (8% of Net Residential Developable Area)</td>
<td>16.9</td>
<td>7.1</td>
<td>4.0</td>
<td>N/A</td>
<td>8.6</td>
<td>10.0</td>
</tr>
</tbody>
</table>

* Further information in relation to the Land Use Budget for each Cell is provided in Section 2 of this Structure Plan
(1) Existing Urban Area
<table>
<thead>
<tr>
<th>Role</th>
<th>Location</th>
<th>Development Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>District Park</strong></td>
<td>District Parks are to be provided:</td>
<td>• Should be from 4 ha - 10 ha plus.</td>
</tr>
<tr>
<td></td>
<td>• Lake Reserve (already exists in Cell 4)</td>
<td>• Should provide extensive informal recreation park, including mown grassland</td>
</tr>
<tr>
<td></td>
<td>• Hilltop Parklands* north of the Princes Highway (located within Cell 1)</td>
<td>• Should be associated with a linear feature such as a waterway or ridgeline,</td>
</tr>
<tr>
<td></td>
<td>Must be accessible by public transport.</td>
<td>• Should be integrated with adjacent sports facilities, where these exist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Should provide a diversity of recreation facilities eg. Barbeques, walking and cycling trails, and play facilities</td>
</tr>
<tr>
<td><strong>District Sports Ground</strong></td>
<td>District sports reserves are to be provided:</td>
<td>• Should have a total area of at least 8 ha for each park.</td>
</tr>
<tr>
<td></td>
<td>• Princes Highway &amp; Gum Scrub Creek** (Cell 3);</td>
<td>• Should incorporate provide for irrigated grass sportsgrounds</td>
</tr>
<tr>
<td></td>
<td>• Henry Road (west of Cardinia Road) adjoining Gum Scrub Creek* (Cell 5);</td>
<td>• Are provided with at least a pavilion that includes change rooms, toilets and canteen. Training lights are usually provided.</td>
</tr>
<tr>
<td></td>
<td>and,</td>
<td>• Should be located adjacent to a secondary college or adjoining a linear park.</td>
</tr>
<tr>
<td></td>
<td>• Henry Road (east of Cardinia Road)* (Cell 6)</td>
<td>• Should contain two playing fields or ovals with a buffer space.</td>
</tr>
<tr>
<td></td>
<td>• Toomuc Rerve (existing) (Cell 4).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Must be accessible from a primary or local arterial road and must be</td>
<td></td>
</tr>
<tr>
<td></td>
<td>accessible by public transport.</td>
<td></td>
</tr>
<tr>
<td><strong>Neighbourhood Sports Reserves</strong></td>
<td>One Neighbourhood Sports Reserve** is to be provided on the north east corner of Cardinia Road and Shearwater Drive (Cell 4).</td>
<td>• Usually about 2 - 3 ha in size</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Should be located adjacent to a primary school</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Should be provided with pavilions, toilet facilities and training lights, depending on local demands.</td>
</tr>
</tbody>
</table>

* Land and embellishment work to be funded by the Cardinia Road Precinct Development Contribution Plan. (September 2008)
** Embellishment work to be funded by the Cardinia Road Precinct Development Contribution Plan (September 2008) (part Community Infrastructure Levy and part Development Infrastructure Levy)
Table 9b: Open Space Network Categories (continued)

<table>
<thead>
<tr>
<th>Role</th>
<th>Location</th>
<th>Development Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation Reserve</td>
<td>Conservation Reserves are located:</td>
<td>• Identified EVC areas should be incorporated</td>
</tr>
<tr>
<td></td>
<td>• North of Mulcahy Road, located east of Thewlis Road containing Grassy Forest EVC.</td>
<td>• Formal recreation use should be limited.</td>
</tr>
<tr>
<td></td>
<td>• The Hilltop Reserve on the south west corner of Thewlis Road and Peck Road containing Grassy Forest and Damp Heathy Woodland EVC.</td>
<td></td>
</tr>
<tr>
<td>Local Open Space</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Town Square</td>
<td>Located within an Activity Centre.</td>
<td>• Provide a formal park, managed to a high standard usually with mown and irrigated lawns, paving, sculpture, shrub or flower beds.</td>
</tr>
<tr>
<td>Local Park</td>
<td>Located throughout the Structure Plan Area so that all dwellings are within 500m of a local park.</td>
<td>• Should have a minimum area of 1ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provide grassed areas and simple play facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Consider the need to minimise ongoing maintenance requirements</td>
</tr>
<tr>
<td>Linear Park</td>
<td>Linear open space corridors are located along:</td>
<td>• Corridors should have a minimum width of 100m (50m either side of centre line of creek) with significantly wider nodes.</td>
</tr>
<tr>
<td></td>
<td>• Toomuc Creek corridor</td>
<td>• Corridors should create long, relatively narrow, interconnected open space areas.</td>
</tr>
<tr>
<td></td>
<td>• Gum Scrub Creek corridor</td>
<td>• Wider nodes should created by locating adjoining open space (eg: District Park or Sports Reserve).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Should accommodate shared pathways.</td>
</tr>
</tbody>
</table>
Local Open Space Landscape Plan

A detailed landscape plan must be prepared for local open space as part of the overall landscape concept plan for the development. The local landscape plan must show where relevant:

- how significant view corridors have been considered;
- significant vegetation, including remnant vegetation and provide details for protection and retention;
- incorporation of stormwater management and techniques to improve stormwater quality, particularly along drainage lines;
- open space landscaped to at least a base improvements standard as part of subdivision construction works;
- ensure walking and cycling routes are provided with good surveillance; and,
- the parks and open space objectives set out in the Safer Design Guidelines for Victoria (2005).

The landscape plan and associated works, including the future maintenance regime, must be in accordance with Council’s adopted standards as set out in the Council’s Landscape Development Guidelines\(^{20}\). All landscaping and improvement works for public open space should be undertaken in accordance with Table 10.

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\(^{20}\) Landscape Development Guidelines, Cardinia Shire Council (June 2007)
<table>
<thead>
<tr>
<th>Standard of works</th>
<th>Description</th>
<th>Means of provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base improvements</td>
<td>Earthworks and drainage to create the final form of the parkland.</td>
<td>As part of subdivision construction works.</td>
</tr>
<tr>
<td></td>
<td>Seeding of grass on all exposed surfaces.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planting of trees and shrubs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Local pathway construction</td>
<td></td>
</tr>
<tr>
<td>Community improvements</td>
<td>Additional landscaping</td>
<td>As part of development contributions.</td>
</tr>
<tr>
<td></td>
<td>Playgrounds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sporting facilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Infrastructure (carparking, BBQ’s, etc)</td>
<td></td>
</tr>
<tr>
<td>Marketing improvements*</td>
<td>Feature landscaping (including walls, paving and furniture)</td>
<td>As part of developer works.</td>
</tr>
<tr>
<td></td>
<td>Additional landscaping</td>
<td></td>
</tr>
</tbody>
</table>

* Marketing improvements will be undertaken wholly at the developer’s cost and only where Council agrees that the improvements will not impose an unreasonable additional cost for the future maintenance of the improvements by Council

** Will be funded in accordance with the detailed project sheets outlined in the Cardinia Road Precinct Development Contribution Plan (September 2008) Biodiversity
3.7 Biodiversity

3.7.1 Objectives
- To protect and restore key areas of native habitat and create new waterway corridor and habitat links.
- To provide for the long term conservation management of areas of significant native vegetation and fauna habitat.
- To create open space corridors which incorporate stormwater treatment wetlands along the Toomuc Creek and Gum Scrub Creek.
- To protect and restore habitat for the Growling Grass Frog in accordance with the management plan for the urban growth area.
- To effectively manage stormwater and to improve downstream water quality flows into Western Port.
- To encourage the collocation of public recreation and open spaces to assist in buffering of reserves and waterways.

3.7.2 Development Principles
Biodiversity management should meet the requirements outlined in Plan 16: Biodiversity Management Plan.

Growling Grass Frog Habitat
Frog movement corridors are located south of the railway line reservation and within Gum Scrub Creek. Movement corridors should be a minimum width of 20m wide. Collocation of open space, pathways or road and rail reserves adjacent to the movement corridor is encouraged.
Habitat protection and creation opportunities exist along the Toomuc and Gum Scrub Creek corridors and within the stormwater treatment wetlands.
The status of the Growling Grass frog in the northern portion of the study area (north of Princes Highway) is not known, and requires further assessment.
Habitat and movement corridors should be designed and constructed in accordance with the Conservation Management Plan for the Growling Grass Frog.

Waterway buffers, Rehabilitation and Conservation Works
The open space corridors along the Toomuc Creek and Gum Scrub Creek should have a minimum width of 100m (50 m each side of the centre line of the creek) to provide for vegetation buffers and the protection and enhancement of the creek system in addition to other uses.
Rehabilitation and conservation works are provided for in the open space corridors through both drainage plan requirements and, for the balance of the required land, through the Development Contributions Plan.
The Development Contributions Plan also provides for rehabilitation and conservation works at the District Park.

Ecological Vegetation Classes (EVC)
Where practical and sustainable, identified areas of EVC’s should be incorporated in to the design of open space reserves.