

LAKE SIDE SQUARE

NEIGHBOURHOOD URBAN DESIGN FRAMEWORK



Version 3 - Prepared on 15th of June 2009

Contents	2
1 Introduction	3
2 Background	4
3 Project Vision	6
4 Context and Function of the Activity Centre	7
5 Lakeside Square Activity Centre	9
6 Urban Design and Landscape Design	11
7 Built Form	15
8 Connectivity	18
9 Car Parking	21
10 Environmental Sustainability	22
11 Future Expansion	23
Appendix A: Response to Activity Centre Design Guidelines	24
Appendix B: Response to Safer Design Guidelines	27

1 Introduction

This Urban Design Framework (UDF) has been prepared by Delfin Lend Lease Pty Ltd ('Delfin') in respect to the land known as the Cardinia Road/railway Station Neighbourhood Activity Centre in the Cardinia Road Precinct Structure Plan (November 2008). The document responds to the requirements of the Cardinia Planning Scheme, and it has the following structure:

- Project Background.
- Project Vision, Role and Design Principles
- Project Context
- The Lakeside Square Urban Design Framework Plan
- Urban and Landscape Design Guidelines
- Built Form Guidelines
- Connectivity
- Car Parking
- Environmental Sustainability
- Future Expansion.

2 Background

Amendment C92 to the Cardinia Planning Scheme was approved in November 2008.

This amendment created Schedule 1 to the Urban Growth Zone, which gives effect to the Cardinia Road Precinct Structure Plan (September 2008).

The provisions of this Schedule require that an Urban Design framework is prepared for the Cardinia road/railway station neighbourhood Activity Centre (now known as Lakeside Square) prior to permits being granted to use or subdivide land, construct a building or carry out works within the centre.

This document is an Urban Design Framework as defined by schedule 1 (clause 3) of the Urban Growth Zone under the Cardinia Planning Scheme. It addresses the requirements of both the Cardinia Planning Scheme and the Cardinia Road Precinct Structure Plan.

2.1 The Planning Framework

2.1.1 State Planning Policy.

State Planning Policy (as outlined in Melbourne 2030 and clause 12 of all metropolitan planning schemes) establishes the following policy outcomes for activity centres:

- Concentrate new development activity centres near current infrastructure and in areas best able to cope with change.
- Build up activity centres as a focus for high-quality development, activity and living in the whole community by developing a network of activity centres that: Comprises a range of centres that differ in size and function; Is a focus for business, shopping, working, leisure and community facilities; Provides different types of housing, including forms of higher density housing; Is connected by public transport; Maximises choice in services, employment and social interaction
- Ensuring activity centres are developed in a way that: Reduced the number of provide motorised trips by concentrating activities that generate high numbers of (non-freight) trips in highly accessible locations; Encourages economic activity and business synergies; Broaden the mix of uses appropriate to the type of centre and needs of the population served.; Provides focal points for the community; Improves access by walking, cycling and public transport to services and facilities for local and regional population; Supports the development of the Principal Public Transport Network
- Broadens the base of activity in centres that are currently dominated

by shopping to include a wider range of services over longer hours.

For neighbourhood activity centres, clause 12 of metropolitan planning schemes establishes the following policy outcomes:

- Ensuring Neighbourhood Activity Centres: Have a mix of uses that meet local convenience needs; Are accessible to a viable user population by walking and cycling; Are accessible by local bus services with public transport links to Principal or Major Activity Centres; Are an important community focal point.
- Encouraging higher density housing in and around neighbourhood Activity Centres that is designed to fit the context and enhances the character of the area while providing a variety of housing options for different types of households.
- Providing for new Neighbourhood Activity Centres in the redevelopment of middle and outer suburbs and the development of new growth areas.

State Planning policy (clauses 12.05-2 and 19.03) establish a range of urban design outcomes relating to issues such as cultural identity, safety, heritage, consolidation, neighbourhood design and landscape architecture. For activity centres, these are given effect via the Activity Centre Design Guidelines (DSE, 2005) and Safer Design Guidelines (DSE, 2005).

The Cardinia Road Precinct Structure Plan establishes a local urban structure for the Lakeside square activity centre environs that builds on these policy outcomes.

2.1.2 Local Planning Policy Framework.

Local Planning Policy (as outlined clause 21 of in the Cardinia Planning Scheme) provides for the early development of the Cardinia Road precinct. It provides for the precinct to be developed in accordance with the Cardinia Road Precinct Structure Plan, as well as providing for development contributions and the coordination of state infrastructure delivery, amongst other matters.

2.1.3 The Urban Growth Zone.

Lakeside Square is located within the Urban Growth Zone under the Cardinia Road Planning Scheme. Schedule 1 to this zone outlines the statutory requirements that apply to the Cardinia Road Precinct.

Clause 3 of this schedule specifically provides that a permit must not be granted to use or subdivide land, or to construct a building or carry out

works within a core business or peripheral commercial area as shown in the Cardinia Road Precinct Structure Plan until an urban design framework for the activity centre has been prepared to the satisfaction of the responsible authority.

Lakeside Square is identified as a neighbourhood activity centre in the Cardinia Road Precinct Structure Plan, and an urban design framework is therefore required under the provisions of the Cardinia Planning Scheme.

Under the zone, an Urban Design Framework must:

Be generally in accordance with the Cardinia Road Precinct Structure Plan (September 2008)

- Address the Activity Centre Design Guidelines (DSE 2005) and Safer Design Guidelines for Victoria (DSE 2005).
- Set out the role and function of the activity centre including the proposed use and development of each part of the activity centre.
- Show the relationship to existing and proposed development surrounding the activity centre.
- Set out building design guidelines including the interface with streets and other public spaces, heights, materials, and articulation to create a strong urban character.
- Set out the design of streets including street design and widths, pedestrian access and areas, car parking, paving materials and street furniture.
- Set out arrangements for access to the activity centre from adjoining arterial roads.
- Set out the location of public spaces within the activity centre including a town park / square.
- Include an overall landscape concept for the activity centre.
- Set out guidelines to improve environmental sustainability including integrated water management and energy conservation.
- Set out provisions for car parking including the location and design of car parking areas and car parking rates for proposed uses within the activity centre.
- Set out how public transport will be integrated with the activity centre.
- Set out design guidelines for the provision of advertising signs.
- 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.

- Show how opportunities for future housing expansion can be incorporated into the activity centre.

This document has been prepared to satisfy these requirements.

2.1.4 Cardinia Road Precinct Structure Plan.

The Cardinia Road Precinct Structure Plan (CRPSP) was approved by the Minister for Planning in November 2008

Part 3.3 of the CRPSP outlines in the objectives, development principles and urban design framework requirements for activity centres. These are broadly addressed in section 3 of this document, and in more detail throughout the remainder of this document.

2.1.5 Activity Centre Design Guidelines (DSE, 2005)

This document has been prepared taking account of the requirements of the Activity Centre Design Guidelines. A review of the lakeside Square UDF against these Guidelines is outlined in Appendix A of this document.

2.1.6 Safer Design Guidelines for Victoria (DSE, 2005)

This document has been prepared taking account of the requirements of the Activity Safer Design Guidelines for Victoria. A review of the lakeside Square UDF against these Guidelines is outlined in Appendix B of this document.

3 Project Vision

The following Vision Statement has been prepared in response to community workshops and focus groups conducted as part of the DLL development process and it describes the intended spirit of what Lakeside Square will be.

3.1 Vision Statement

With its village atmosphere and community, Lakeside Square is place where the community comes together.

Residents have easy access to a range of local shops, as well as train and bus services, child care, schools, medical facilities and other community facilities. They also have a choice of places to live and work locally.

Lakeside Square is a vibrant place with a distinctive 'sense of place' and character. Its traditional main street, town square and other public spaces are safe, comfortable and inviting.

There is a choice of places to meet friends, neighbours, and colleagues. And it's easy to get around, whether on foot, bicycle, car or public transport

Lakeside Square is the heart of the local community.

This vision statement sets the scene for the Urban Design Principles that will guide the development of Lakeside Square. Decisions regarding the design of the town centre should address this vision.

3.2 Design Principles:

Some key principles which can be drawn out of this vision are:

3.2.1 Context

Lakeside Square has been designed to integrate with its surroundings, both developed, and yet to be developed.

3.2.2 A Sense of Place

The urban design for Lakeside Square is focused on achieving an intimate, legible and sustainable town with a strong sense of place based on traditional towns.

3.2.3 Diversity and Connectivity

Lakeside Square is designed to be a great place. Through diverse uses and through their success, it will become an easy place to get to and an enjoyable place to be. The variety of transport options and routes helps ensure equitable access for all.

3.2.4 Catering for Growth

Lakeside Square will establish itself as a successful and vibrant centre in its first few years of development. Opportunities for expanding the range and density of activities in the centre will emerge over time as the centre matures and its broader population catchment grows. This Urban Design Framework recognises that not every opportunity will be realised in the centre from day one. It establishes a robust framework which enables the centre to successfully establish in its early years, and for further growth to occur over time.

4 Context and Function of the Activity Centre

- Is generally in accordance with the Cardinia Road Precinct Structure Plan (September 2008)
- Shows the relationship to existing and proposed development surrounding the activity centre.

4.1 Context

Lakeside Square is one of three neighbourhood activity centres (NAC's) identified under the Cardinia Road Precinct Structure Plan (Figure 1). An existing NAC is located to the north of the Pakenham rail line (Lakeside Plaza), and a smaller NAC is planned in the north-east of the precinct, on the Arena project.

Lakeside Square will support the local shopping and other needs of the 5-6000 residents living immediately around the centre but it will also play a central role in the lives of many of the forecast 28,000 residents who will live within the broader Cardinia Road precinct.

Lakeside Square is an important activity centre for the entire precinct because:

- A wide range of educational, community and commercial activities will be clustered around the centre. The centre will be a local employment hub, and a centre of community life.
- It will be a local public transport hub. It will adjoin the Cardinia Road railway station, which will be integrated with a local bus network.
- It is located centrally within the precinct, on the intersection of the major north-south arterial road (Cardinia Road) and the east-west local arterial road (Henry Road).
- In the longer term, it will have an important relationship with the employment precinct south of the Pakenham Bypass.

4.2 Role and Function of Lakeside Square¹.

The Lakeside Square UDF has been prepared within this context in mind. The UDF provides for Lakeside Square to offer:

- A range of neighbourhood shopping and commercial activities to meet the needs of the broader precinct, including a supermarket and associated shops and services. Additional, non-retail, uses to be pursued later.
- Restricted retail services along a new main street
- Neighbourhood community services, including a community centre.

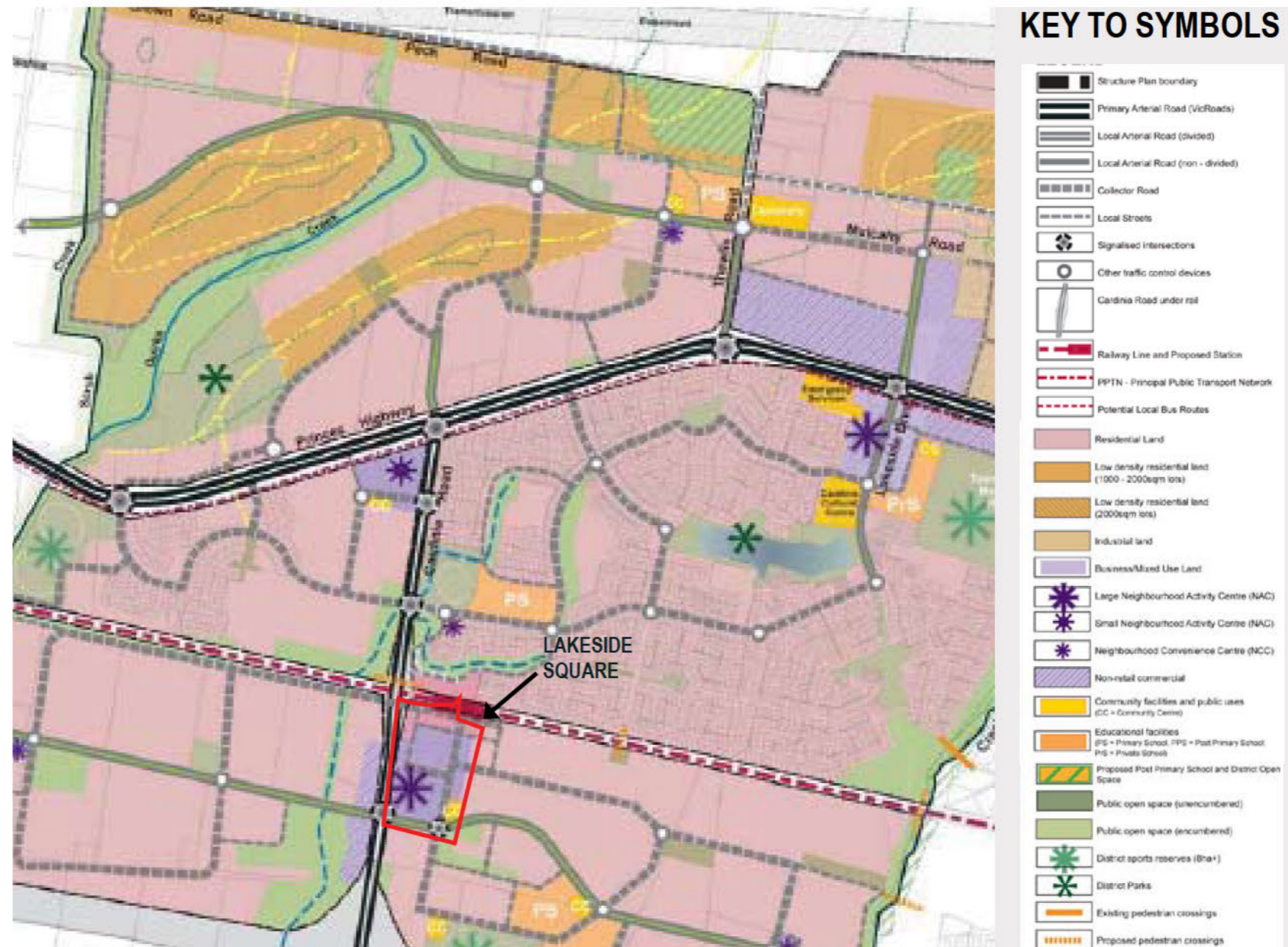


Figure 1: Cardinia Road Precinct Structure Plan

1 - Refer section 3.3.1 of the Cardinia Road Precinct Structure Plan, November 2008.

- Opportunities for higher residential densities in and around the activity centre. The UDF allows for range of more flexible residential typologies (I.e. medium density, shop top and inner urban product) to be constructed in the centre over time. The scale of this provision is to be determined by the evolution of the market.
- A layout which integrates the centre with its surroundings, including the new Cardinia Road railway station, parking, ride facilities and local bus routes. Public transport pedestrian and cycling infrastructure within and around the centre will be well integrated, safe and accessible.
- Safe and accessible pedestrian links to residential areas to the south, west and east.

Lakeside Square will accommodate up to 10,000 square metres of core retail floorspace. The layout of the centre will provide sufficient flexibility to enable future retail, commercial and/or resident redevelopment opportunities to occur over time.



Figure 2: Urban Design Framework Plan from Cardinia Road Precinct Structure Plan

5 Lakeside Square Activity Centre

- Sets out the role and function of the activity centre including the proposed use and development of each part of the activity centre.

5.1 Major elements of the Urban Design Framework Plan²

The Lakeside Square Urban Design Framework Plan is structured around the following main elements (Figure 2):

- Activities within the main street are arranged to achieve an intensity and diversity of activity which will create a vibrancy and sense of place.
- 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
- A 1.9ha land parcel will be set aside for the provision of land for the railway station car park and east-west road link (refer to figure 3A). The land area set aside comprises:
 - - 1.6 ha of land for the DoT carpark
 - - 0.3 ha road reserve, based on a 14 metre (width) by 215 metres (length) reserve running generally in an east-west direction between Cardinia Road and Village Way.
- The railway station should be designed to be integrated within the activity centre, ensuring that:
 1. Views to the station along the 'main street' are an important feature of the centre's design;
 2. The built form of the railway station to provide an opportunity for the development of a superior public domain environment;
 3. The design outcome is to invite and engender civic pride, while offering a safe and enjoyable place to use; and,
 4. Bus access, taxi facilities and pedestrian and bicycle access to be 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.
- Provision of at-grade car parking, with future opportunities for the car parks to be used for future redevelopment of multi-level car parking, and potential residential apartments, and additional commercial/retail activity.



Figure 3: Lakeside Square Activity Centre Plan

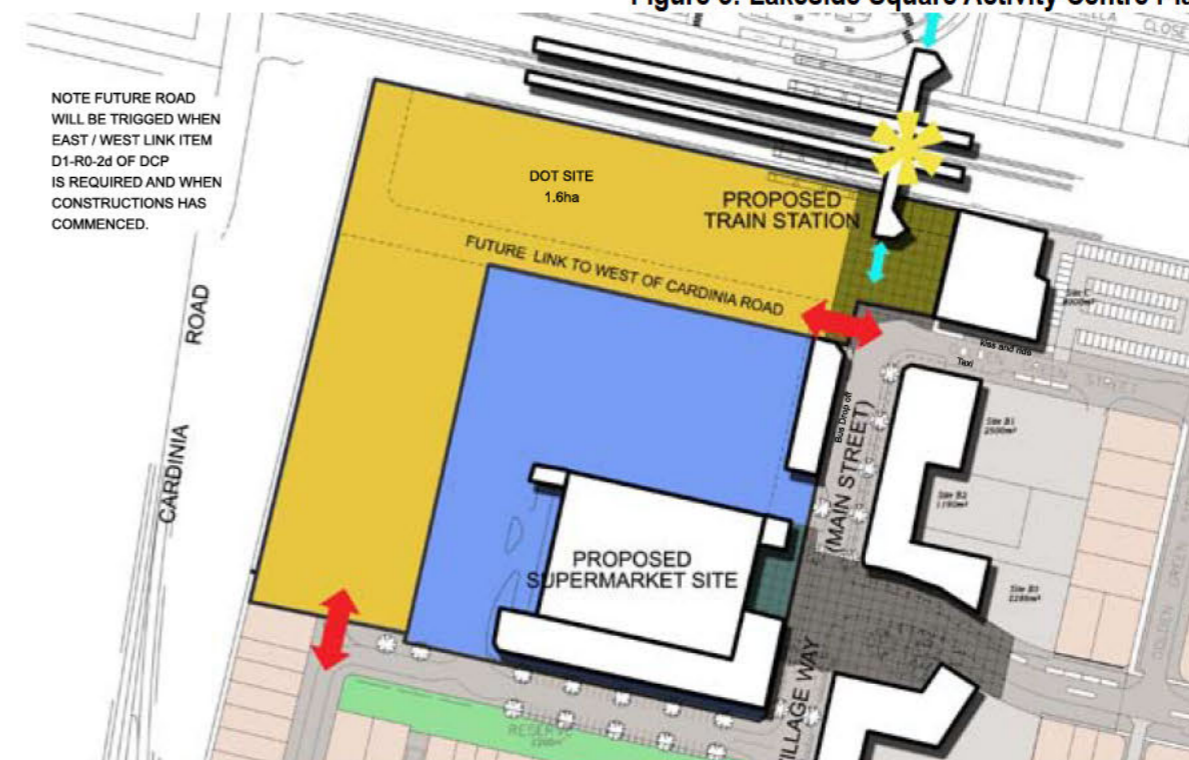


Figure 3A: Lakeside Square Activity Centre Plan

2 - Refer section 3.3.3 of the Cardinia Road Precinct Structure Plan, November 2008.

- The activity centre will provide for substantial residential activity, and will be able to accommodate future access and serving needs of these sites.
- This should be achieved by building or design elements which create a double storey building scale, so as to generate building mass, interest and character to the main street.

5.2. Supporting Development Principles³

The Lakeside Square Urban Design Framework responds to the development objectives principles established for the Centre under the Cardinia Road PSP, as follows (Figure 3).

5.2.1 Activity Centre Typology:

Lakeside Square is designed as a traditional 'main street' neighbourhood centre. Its main street is an undivided road without a central median.

Sites in prominent locations along the main street are identified for significant buildings and landmark structures.

The main street is serviced by an integrated storm water solution, connecting into a new wet lands system running along the southern edge of the centre.

Pedestrian routes within and to the centre have been designed to maximise the comfort, amenity and safety of pedestrians as they access and use the centre.

The built form of the main street is predominantly of a two storey height, built to the property line.

Buildings will be designed to provide facade articulation, with fine grained scale shop fronts with access provided from the main street.

5.2.2 Public Domain:

A north-facing town square is proposed in the centre of main street. It will be flanked by retail and commercial activities

5.2.3 Interface with road network:

Corner sites will be designed to provide built form which anchors the main street to the arterial road.

5.2.4 Supermarket and other 'large box' uses:

Larger floor-plate uses such as the supermarket will be provided behind this fine grained frontage. The primary entry to such uses will be via the main street, with secondary entries via carparks

5.2.5 Main street traffic:

The main street is designed to calm traffic and ensure a safe, pedestrian friendly environment.

5.2.6 Parking:

Parking is provided on the main street.

Off street carparks are designed to be accessible from the main street, provide pedestrian amenity, safety and shade.

Access to off street parking are designed to minimise the entry area frontage to the main street.

5.2.7 Public transport:

The activity centre is designed to integrate well with the planned Cardinia road railway station

The activity centre layout incorporates suitable bus routes, and conveniently located commuter facilities such as shelters.

5.2.8 Service areas:

Service areas have been designed to minimise their visual and physical impact on the main street and public spaces.

5.3 Land Uses

Lakeside Square will accommodate up to 10,000 square metres of core retail floorspace. The layout of the centre will provide sufficient flexibility to enable future retail, commercial and/or resident redevelopment opportunities to occur over time.

3 - Refer table 7 of the Cardinia Road Precinct Structure Plan, November 2008 (page 46).

6 Urban Design and Landscape Design

- Sets out building design guidelines including the interface with streets and other public spaces, heights, materials, and articulation to create a strong urban character.
- Sets out the location of public spaces within the activity centre including a town park / square.
- Includes an overall landscape concept for the activity centre.



Figure 4: Street Sections Location

6.1 Street Typologies

The following five street sections (Figure 4) have been developed in conjunction with VicRoads, Department of Transport and the Cardinia Shire Council. The sections are designed to provide a more intimate street setting generating a slower speed environment and fostering a sense of concentrated activity. This will help provide Lakeside Square with a point of difference to the surrounding suburban development characterizing it as a more urban environment as well as contributing to the development of a stronger sense of place. Pedestrian, cyclist and motorist safety has been a paramount consideration in their development. Provision has been made for adequate street trees that will have an important role in providing green relief and natural complexity in this urban environment.

6.1.1 Park Orchard Drive

This street will have a total road reserve width of 23.5 metres. It will comprise of two lanes of traffic with parallel parking on each side, nature strips on both sides of the road, a central swale, pedestrian footpath on one side and a shared path on the other side (Figure 5).

6.1.2 Golden Green Street

This street will have a total road reserve width of 17.5 metres. It will comprise of two lanes of traffic with a taxi zone on one side and a drop

off zone on the other, nature strips on both sides of the road, pedestrian footpath on one side and a shared path on the other side (Figure 6)

6.1.3 Lakeside Square - Village Way

This will be the main street and will have a total road reserve width of 21.5 metres. It will comprise of two lanes of traffic with dedicated on road bike lanes on each side, a combination of nature strip and parallel parking on both sides of the road, and wide pedestrian footpaths on both sides of the road to allow for increased pedestrian movement and outdoor dining options. This reservation width is critical to the creation of an activated Main Street. (Figure 7)

6.1.4 Inner Urban Streets

This street typology will have a total road reserve width of 14.5 metres. It will comprise of two narrow lanes of traffic, a combination of nature strip and parallel parking on both sides of the road and pedestrian footpaths on both sides of the road (Figure 8).

6.1.5 Laneways

This street typology will have a total road reserve width of 7.5 metres. It will comprise of two narrow lanes of traffic no parking and a combination of nature strip and pedestrian footpaths on both sides of the road (Figure 9).

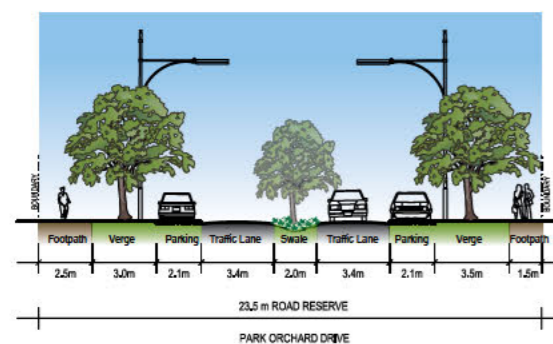


Figure 5: Section 1 - Park Orchard Drive

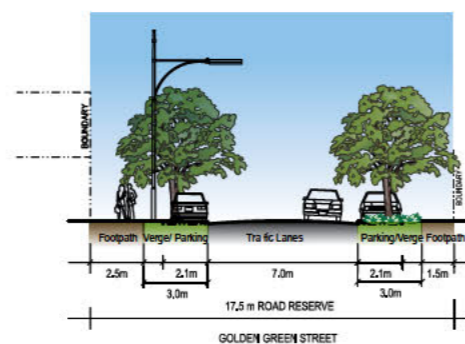


Figure 6: Section 2 - Golden Green Street

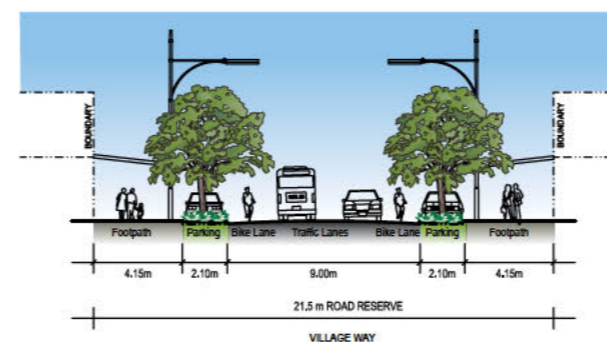


Figure 7: Section 3 - Lakeside Square - Village Way

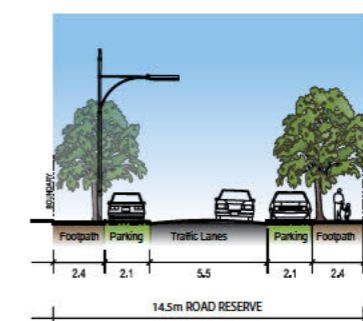


Figure 8: Section 4 - Inner Urban

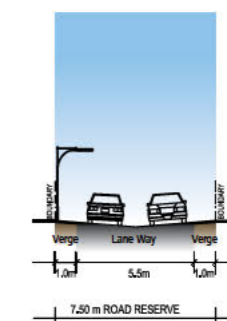


Figure 9: Section 5 - Laneways

6.2 Pedestrian/Cyclist Access and Areas

Lakeside Square pedestrian and cycling areas were designed having the following key objectives in mind:

- Walkability;
- Safe pedestrian environment
- Clear legible pedestrian pathways
- Clear legible cycling network
- Effective integration with surrounding development

The design of Lakeside Square allows for (Figure 10):

- Clearly defined pedestrian walkways on both sides of Village Way.
- Linkage between all major activity destinations - the railway, the central plaza and the linear public open space.
- Cycling paths connect to Village Way from Henry Road and Park Orchard Drive.
- Village Way allows for Bike lanes within the road pavement.



Figure 10: Pedestrian/Cyclist Access and Areas.

6.3 Landscape Concept Plan

The Landscape Concept Plan for Lakeside Square (refer to Site A, B, C & D) envisions a soft feel with sophistication. Lakeside Square is in tune with both “the local” and the natural environment.

All open space will be highly detailed; the design will entail open spaces where community interaction is encouraged. It will be designed so that residents will feel proud of it and it will provide for casual encounters between neighbours in warm and engaging spaces. Intimacy and ownership of the spaces are key identifiers of Lakeside Square.

6.3.1 Streetscape Materials

A darker, complex and authentic aggregate palette will be used. Footpaths along Village Way will be exposed grey cement paving. Within the heart of Lakeside Square this pavement type will be further enhanced by paved header courses and detailed saw cuts (500x500mm squares). Header course material will match that of the pavers used for the Village Way thresholds and central raised pavement area. Pavers to be specified:

Vehicular pavements –

- Main Paving: Urban Stone, ‘Gunmetal’ Shot basted 400x400x60mm
- Header course: Urban Stone, ‘Golden Gunmetal’, Honed, 400x300x60mm

Pedestrian Pavements: -

- Main paving: Exposed Grey Cement
- Header courses: Urban Stone, ‘Gunmetal’, Honed cobble, 400x100x40mm

Urban Stone, ‘Golden Gunmetal’, Honed, 400x300x60mm

Example of these can be seen at QUT Gardens Point - Brisbane

6.3.2 Street and Park Furniture

Seating and picnic benches will be provided throughout the open space. The materials shall be recycled composite timbers with steel legs. The form will be organic to soften the amount of hardscape works within Lakeside Square.

There is the opportunity to use a form of patterning which can be laser cut into steel elements within the street furniture.

Steel blade bollards with the Lakeside Square motif will be placed strategically along the edges of the softscape and hardscape open spaces to prevent vehicles from accessing these areas.

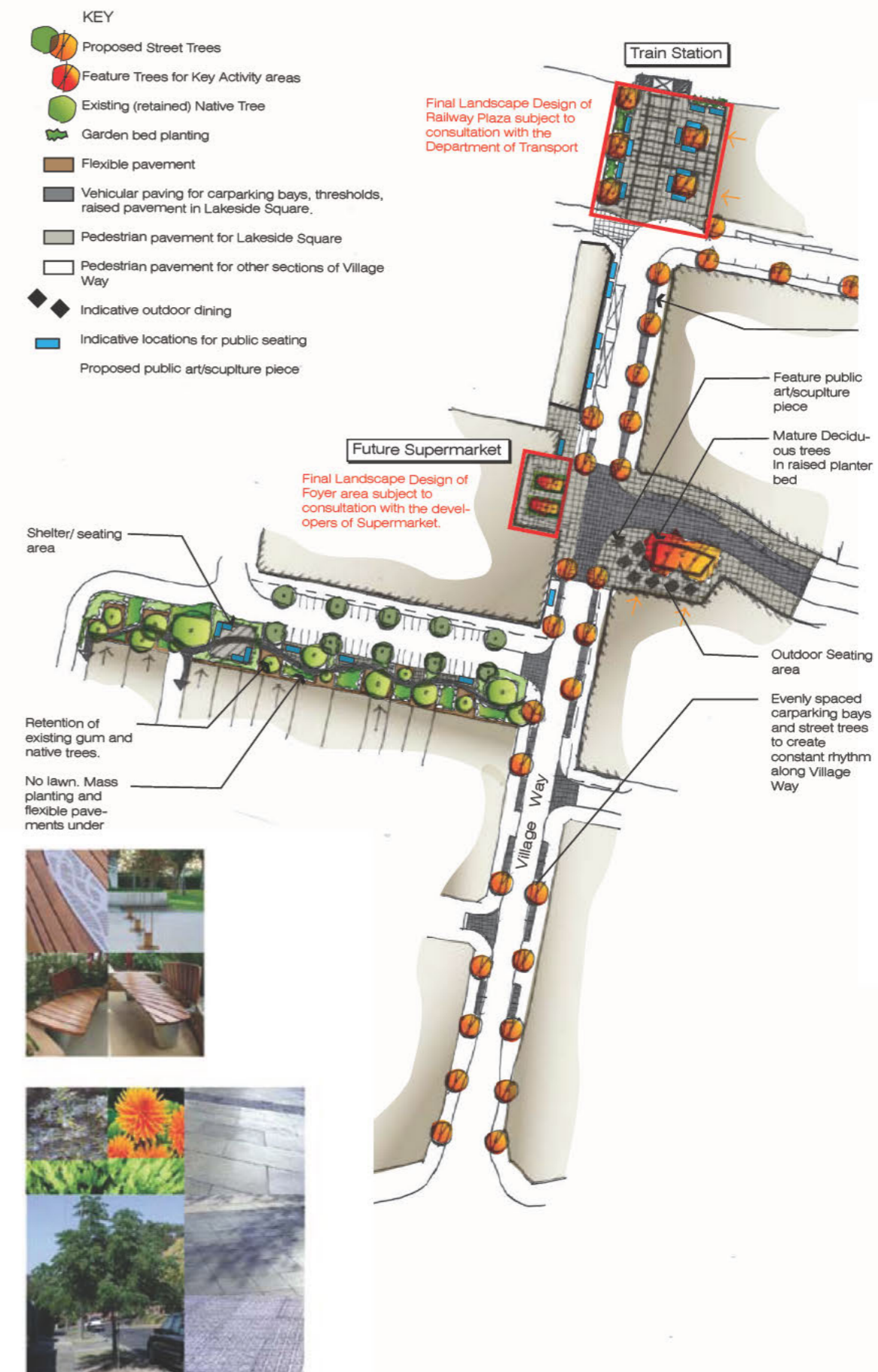
6.3.3 Planting

Vibrant, colourful, drought tolerant ground planting will be used in street verges and village parks. No large lawn areas are to exist in the nature strips with the use of mass planting as a key feature instead.

Street trees will comply with the Cardinia Shire Street Tree list. Species are to be drought tolerant and suitable to the local conditions.

6.4 Public Realm - Open Space

On the next page a detailed look on the Public Realm shows 4 places of open space, each with a different function and feel.





Site A - Railway Plaza



Size: Approximate 500sqm

Key Function:

- Active space immediately adjacent to the proposed train platform
- Area of high passive surveillance
- Focal architectural piece - I.e.. Clock tower or station building
- Facilitates easy flow of pedestrian traffic to station
- Creates a safe environment to linger or grab a newspaper while waiting for the train
- Permeable and legible in design and layout
- Hardscaped plaza - paving materials to match the main street. Will be visually and physically a part of the Town Centre.

Attributes:

- Small tenancies front space
- Clear pedestrian flow
- Interactive space with potential community centre



Site B - Central Meeting Space



Size: Two areas totalling approx... 1000sqm

Key Functions:

- This is the main meeting place for Lakeside Square
- Two areas are linked though a common raised pavement treatment to form the one common space
- Strong pedestrian focus
- Hardscape space, softened through the villages core materials, existing trees and new planting

Attributes :

- Public Art
- Seating
- Large trees



Site C - Linear Walk



Size: 2200sqm

Key Functions:

- It will provide a local destination point for residents
- A strong linear connection to the Town Centre Main Street
- Existing gum trees are a significant asset which the design will focus on
- The use of raw materials such as local stone, timber and corten steel will be presented in a contemporary style
- Open space will be highly detailed; the design will entail open spaces where community interaction is encouraged

Attributes :

- Shelter
- Seating
- BBQ



Site D - Wetlands



Size: 4350sqm

Key Functions:

- The wetland north of Henry Road forms the first significant piece of open space within the Town Centre
- It is a Passive Open Space
- Incorporation of Seating/restful areas overlooking the water body and a pedestrian footpath
- It also has a strong environmental purpose with the filtering of water run-off from the development to the north, car parking spaces and residential areas.

Attributes :

- Shelter
- Seating
- Viewing Platform

7 Built Form

- Sets out building design guidelines including the interface with streets and other public spaces, heights, materials, and articulation to create a strong urban character.
- Sets out design guidelines for the provision of advertising signs.

A performance based approach to assessing development proposals is encouraged under this UDF. All developments must satisfy the design objectives outlined for the Centre in this document.

7.1 Built Form

For the commercial development of each individual site (at early stages of development negotiation and prior to any building design starting) the following three documents will be provided to prospective purchasers to ensure a collaborative design process.

7.1.1 Objectives

An elaborated text that discusses the historical context of town making and how the architecture of individual buildings can help or hinder the creation of a unique Lakeside Square sense of place.

7.1.2 Building Design Guidelines

A set of design guidelines to assist in the preparation and assessment of development proposals within the centre. These guidelines elucidate nine principles and clauses relating to issues such as street interface, pedestrian activity, height, articulation and environmental sustainability. Compliance with these guidelines will ensure a built form and public interface that is appropriate for an activity centre.

7.1.3 Site Specific Guidelines

A set of site specific design guidelines These will be prepared in text and graphic format for each commercial site and detailed to a level that responds to the context and vision for each site and will form part of the covenant approval process for the site development. (Figure 12)

Together, this suite of documents helps ensure the architecture and urban design for Lakeside Square is focused on achieving a diverse, legible and sustainable town with a strong sense of place.

For the purposes of the UDF, only the text for the second document, Building Design Guidelines, is included here as it is a general text that will apply to all sites within Lakeside Square.

7.2 Building Design Guidelines

7.2.1 Overall Objectives

- Sustainability – ensure that Lakeside Square can endure in terms of community, economic and environmental outcomes for future generations.

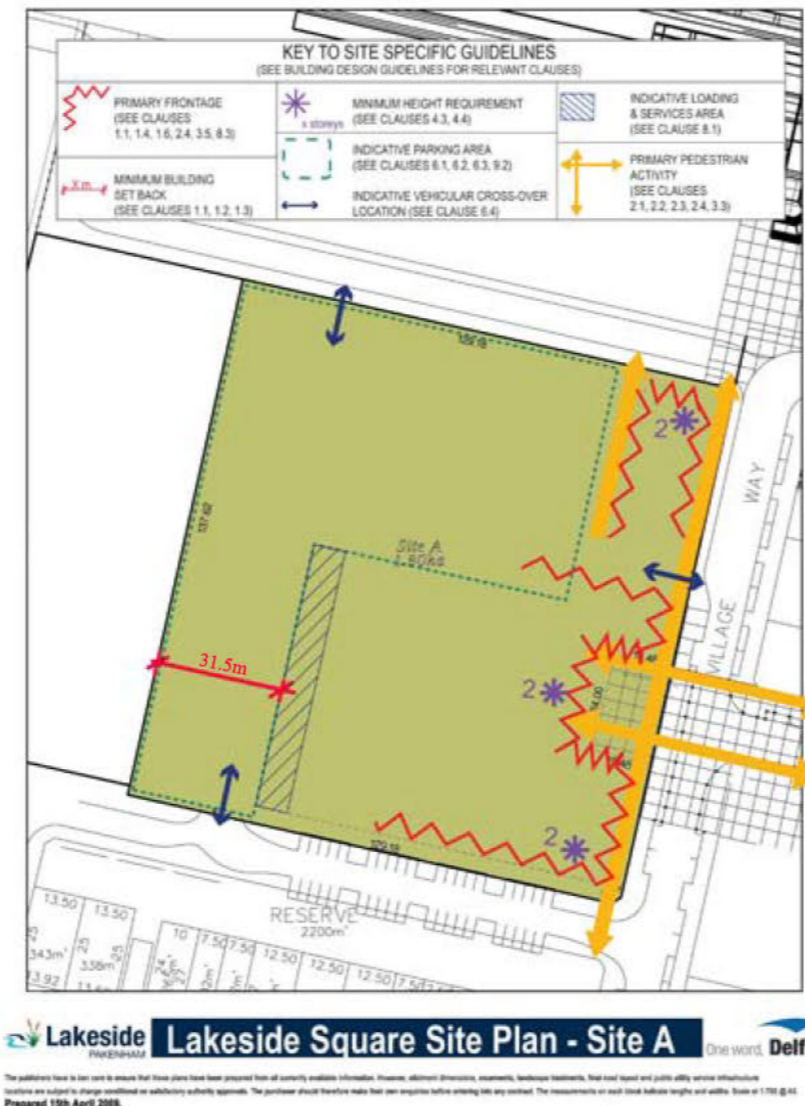


Figure 12: Example of Site Specific Building Design Guidelines

- Robustness – ensure that Lakeside Square's buildings can change their uses over time and that materials used are hardwearing for longevity.
- Diversity – increase the choice of activities for living, working, shopping, learning and entertainment that a diverse range of people can access at Lakeside Square.
- Legibility – make Lakeside Square and its buildings understandable and easy to get around.
- Permeability – make Lakeside Square accessible by providing people with choice on how to get where they need to go.
- Appropriateness – locate activities in Lakeside Square where they

are most compatible with their surroundings and adjacent uses.

- Richness – provide sufficient detail, proportion and human scale to create more interesting buildings.
- Comfort and Safety – heighten people's sense of ownership and of well being at Lakeside Square through using the techniques of crime prevention through environmental design in its buildings, urban environment and landscape.
- Integration – ensure that all components within Lakeside Square are working together to create synergy and energy that makes it a place where people want to be.

7.2.2 Design Principles

Guideline 1: Street Interface and Setback

Objective: To provide built form that reinforces the creation of a safe mixed use, pedestrian based, efficient and accessible activity centre.

- Buildings shall be designed to reinforce the edges of public areas such as streets and squares. Setbacks shall generally be 0m for 80% of primary frontage as indicated on site specific guidelines.
- Maximum site coverage shall be 80% for ground floors. Subsequent floors may cover 100% of the site subject to site specific setback guidelines.
- Other setbacks may be 0m unless otherwise indicated on site specific guidelines.
- Primary building frontage shall be glazed for a minimum 70% by length. Operable windows, stacking doors and wide openings are encouraged.
- Highly reflective glazing is not permitted.
- Soft landscaping at ground level is not permitted between the building front and the primary frontage.
- The wide footpath space will form part of that charter of al fresco dining, to store trading space (e.g. fruit shop) integrated into the street.

Guideline 2: Pedestrian Activity

Objective: To create a pedestrian network that is safe, amenable, legible and direct.

- Pedestrian routes shall as far as possible be on publicly owned land, and preferably within the road reserve as part of the street network.
- Pedestrian routes shall be aligned primarily along proposed building fronts and thereafter along future building fronts.
- Development shall provide for a 2m wide clear pedestrian zone against the building front.
- Pedestrian routes along primary frontage shall be provided with pedestrian coverage for a minimum height of 2.75m, width of 2.5m, and 80% of frontage.

Guideline 3: Entrance and Edge Detail

Objective: To ensure entrances are designed to enable safe and comfortable access and that building fronts provide a clearly defined street edge.

- Verandah posts are encouraged within the road reserve, but must not be load bearing to within 0.5m of the kerb.
- The finished ground floor level of the building should be within 100mm of the finished level of the street.
- To assist in defining the street edge and to aid orientation for partially sighted pedestrians, all windows should have a sill no less 400mm high.
- Recessed entrances, allowing for a transition zone between building and footpath are encouraged. Where recessed entrances are provided, they should be truncated at an angle of 60 degrees to the footpath or adjacent sides of the recess should be glazed. Recesses should be no more than 1m in depth.
- Where a building has more than one frontage, the entrance facing the primary frontage shall be the primary entrance. Other entrances shall not be established to the exclusion of the primary entrance.

Guideline 4: Height

Objective: To ensure buildings aid legibility, way-finding and sense of place.

- Key elements of the 'Main Street' activity centre need to achieve a minimum of two storey height. This should be achieved by building double storey, as this generates building mass, interest and character to the main street core. (Refer to Figure 13a for key location requiring double storey height). See page 17.
- Parapet walls are the preferred form of construction for buildings fronting the street.
- Maximum building height is 4 storeys or 16m.
- Single storey buildings shall have a height to the street no less than 6m.

Guideline 5: Articulation, Proportion and Materials

Objective: To ensure buildings help convey a sense of permanence and visual interest appropriate for an activity centre.

- Main building massing elements and openings should be proportioned more vertical than square, but no more vertical than 1:3, and ideally 1:1.62, which was often used on traditional buildings.
- Buildings shall express verticality through the use of architectural features on the facade that are broken into individual elements with a strong relationship and rhythm.
- Construction materials and surface finishes must be robust and appropriate for a commercial setting. Tilt-up construction is discouraged in favour of masonry construction and/or timber construction of considerable depth with reveals around openings of at least 250mm.
- Construction materials should be authentic with a preference for

natural grain, texture and warmth.

- The colour should reflect character of the built form to be a Traditional interpretation of Australia's traditional town. It should make reference to the "rustic" materials and details characteristic of buildings without losing the focus of it being a more urban area than the broader Lakeside community (Figure 13).

Guideline 6: Car Parking and Vehicular Access

Objective: To provide an efficient, attractive and appropriate level of parking with the activity centre.

- It is possible that some adjoining sites may seek an optimised and integrated approach to car park sharing depending on the nature of uses and hours of activity. If that is the case, the developers of those particular sites will need to prepare a precinct parking submission to be presented to council for endorsement as part of their planning approval process.
- Car parking areas shall be provided with one tree per 12 parking bays. The tree should be mature, robust and branching at a minimum height of 2m.
- Vehicular cross-over locations are as per site specific guidelines.

Guideline 7: Signage

Objective: To promote signage that informs, entertains and advertises, whilst not becoming a dominant feature of the activity centre.

- Free standing pylon signs are not permitted within the activity centre.
- Facade signage shall reinforce the design and geometry of the facade. Billboard signage that covers over facade features is not permitted.
- Overhead signage along awning shall provide no less than 2.4m



Figure 13: Example of Built Form Outcome

clearance to footpath.

- Painted sheet metal signage is discouraged, in favour of signage consisting of individual elements applied to the facade.
- Glazed facade areas are not permitted to be painted out or otherwise applied with signage that covers more than 50% of window area.
- Back-lit signage is encouraged. Neon signs are not permitted.
- Notwithstanding the provisions of this clause, the Cardinia Shire Council planning scheme signage provisions Clause 52-05, take precedence.

Guideline 8: Services

Objective: To adequately service buildings in a manner that is complimentary to the overall appearance of the activity centre.

- Loading areas and bin storage shall be located in accordance with the site specific guidelines.
- Building services shall be concealed on all facades.
- Any roof top plant must be concealed from view of the primary frontage.
- Lighting of awnings, entrances and rear of buildings shall be determined on a case by case basis depending on night usage and light spillage from shop fronts.

Guideline 9: Environmental Sustainability

Objective: To encourage development that incorporates features which are environmentally benign or contribute positively to a more sustainable Lakeside Square.

- Recycled water will be available to all sites within the activity centre through the South East water reticulation system..
- The use of roof stormwater storage and recycling and the benefits it provides to landscape presentation and water consumption costs for toilets and testing of fire systems. Also other uses of recycled water shouldn't be excluded.
- Stormwater run-off from car parking areas may be partially treated on site. However, flows must be designed to support the overall integrated wetland system.

- Consideration should be given to minimising greenhouse emissions associated with energy supply systems.
- The use of passive-solar design is mandatory, where the building is designed for winter sun penetration, and summer sun exclusion according to each facades solar orientation.
- Given the activity centre is provided with excellent public transport and bicycle networks, on site showering, bicycle parking and lockers must be provided within each building at a standard equalling or exceeding Council Planning Scheme clause 53-34. It is strongly encourage that bicycle parking be twice that of the scheme rate.
- Waste going to landfill should be minimised through appropriate designs and construction and providing for the re-use and recycling of materials.
- Building lifecycle efficiency should be increased and greenhouse emissions reduced by: maximising energy efficiency in the design, specifying materials with low lifecycle environmental impact.



Figure 13a: Proposed key location requiring double storey height

8 Connectivity

- Sets out arrangements for access to the activity centre from adjoining arterial roads.
- Sets out how public transport will be integrated with the activity centre.
- Sets 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.

The main aims to enable effective connectivity of Lakeside Square are:

- To develop a street layout with a focus on public transport service
- To provide a well connected road network with collocated access for all users.
- To integrate activity centre streets into the local network.
- To physically connect surrounding residential neighbourhoods to the uses in the activity centre.

8.1 Vehicular Access Plan

The major vehicular access to the Activity Centre (Village Way) is from Henry Road. Henry Road is a major east – west arterial road which will collect traffic catchments from Cardinia Road (a conduit for traffic from the Pakenham Bypass and Princes Highway), existing residential traffic to the east (Pakenham township) and future residential traffic to the west (Officer).

Lower order vehicular access which lead straight into the heart of the Activity Centre are (Figure 14):

- The future Park Orchard Drive, collecting traffic from future residential traffic to the east.
- The future East –West connection, linking the northern end of Village Way to the west of Cardinia Road. This connection will be constructed in conjunction with the proposed Cardinia Road under/overpass of the Pakenham Railway.

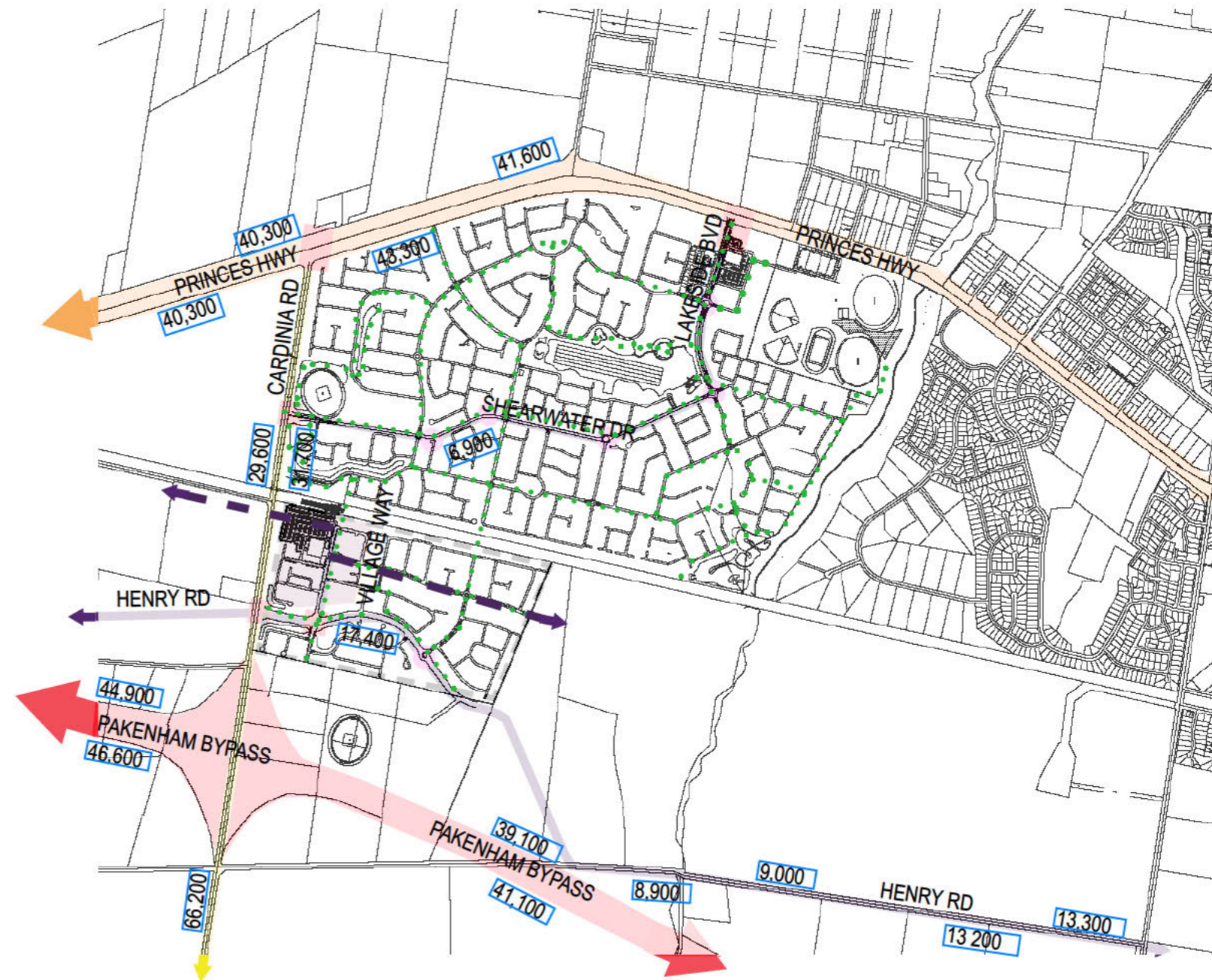


Figure 14: Vehicular Access Plan

KEY TO SYMBOLS

■ Signals	● Hike and bike trail	— Local Arterial Road
● Roundabout	□ Lakeside Extension	- - - Collector Road
□ Activity Centre	□ Ultimate One Way Traffic Volume in Vehicles Per Day.	— Primary Arterial Road



Scale 1: 10, 000 @ A1

September 2008

8.2 Public Transport Integration

The design of the street network for Lakeside Square has a focus on public transport services.

Public Transport will be integrated into the Lakeside Square Activity Centre by the following (Figures 15 and 16):

- Encouraging public transport by providing a convenient, prominent and active station and interchange.
- Built form and active frontage will extend all the way along Village Way to the Train Station.
- The train station will act as a key focal point at the end of Village Way, integrating the station visually to the Activity Centre main street.
- A station forecourt has been allowed for. This will be activated as a major piece of public open space.
- A pedestrian underpass will be constructed as part of the Train Station development. This will allow for pedestrian and cyclist connectivity from the existing Lakeside development. It also diminishes the 'dividing effect' of the railway, integrating the station with the land north of the train line.

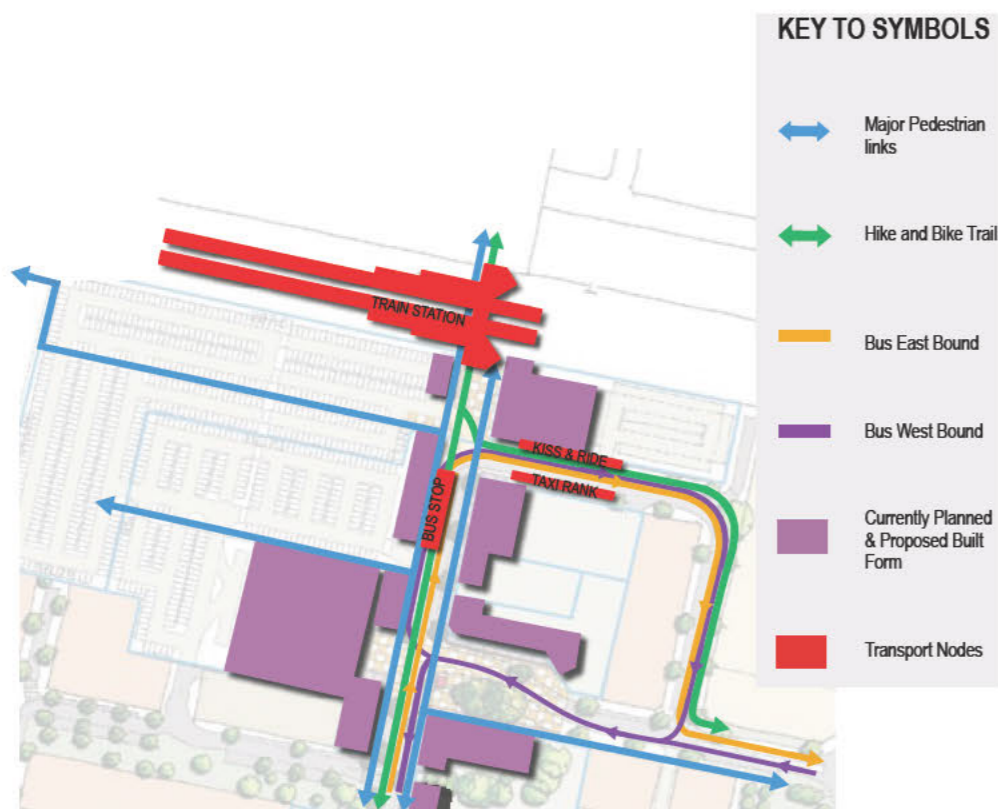


Figure 15: Public Transport Integration (Activity Centre Level)

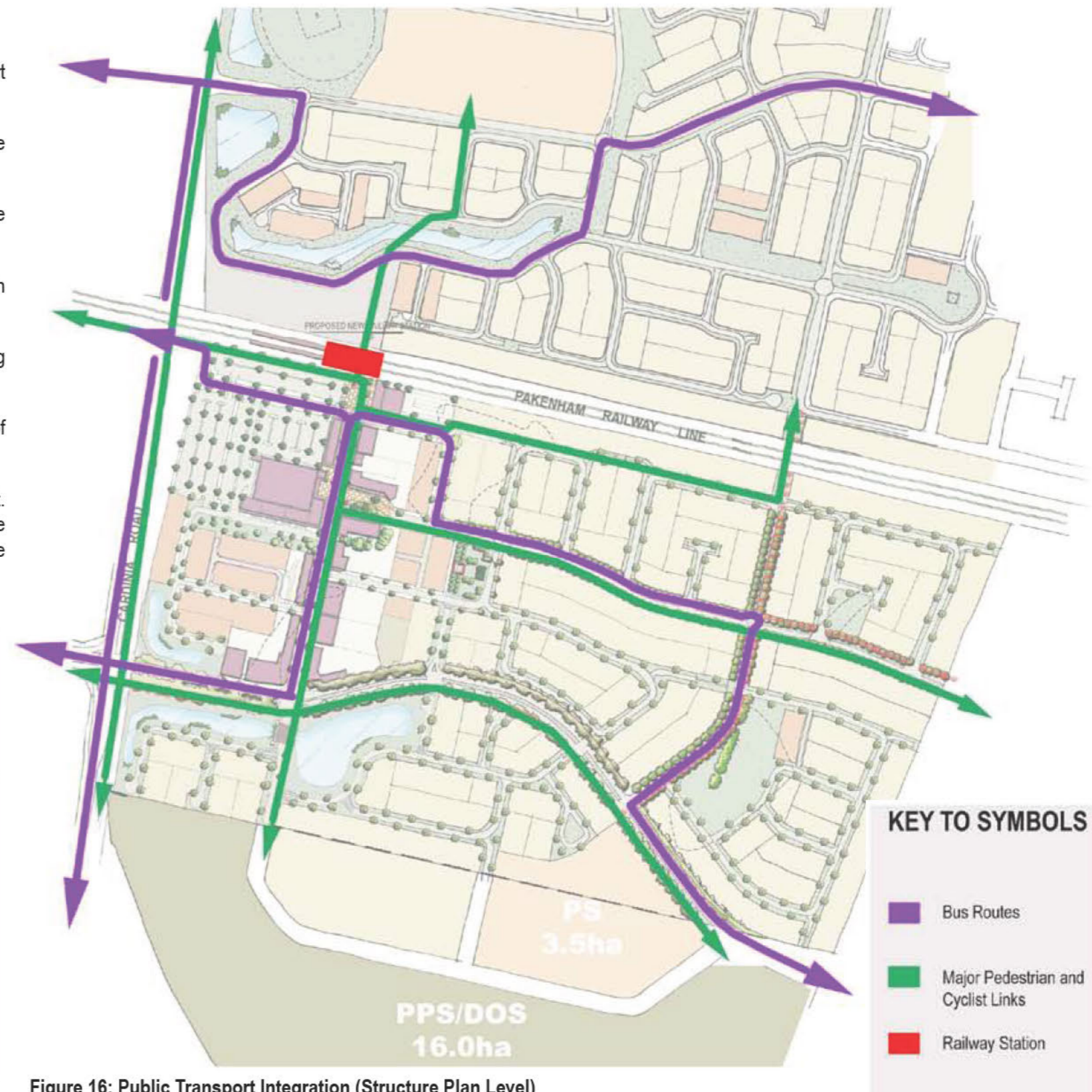


Figure 16: Public Transport Integration (Structure Plan Level)

8.3 Bus networks

A bus network will travel up Village Way; the main bus stop is located in clear view and close proximity to the train station.

The bus network has been incorporated in to the surrounding network. Integrating the Activity Centre into the broader community. (Figures 15 and 16)

8.4 Service Vehicles Access

Service vehicle access has been specifically designed to a single route. (Figure 17).

Loading and potential turning areas are located behind the supermarket site to minimise the impact on the amenity of the activity centre.

The route travels up and back Village Way, this route has little impact on the adjoining neighbourhoods.

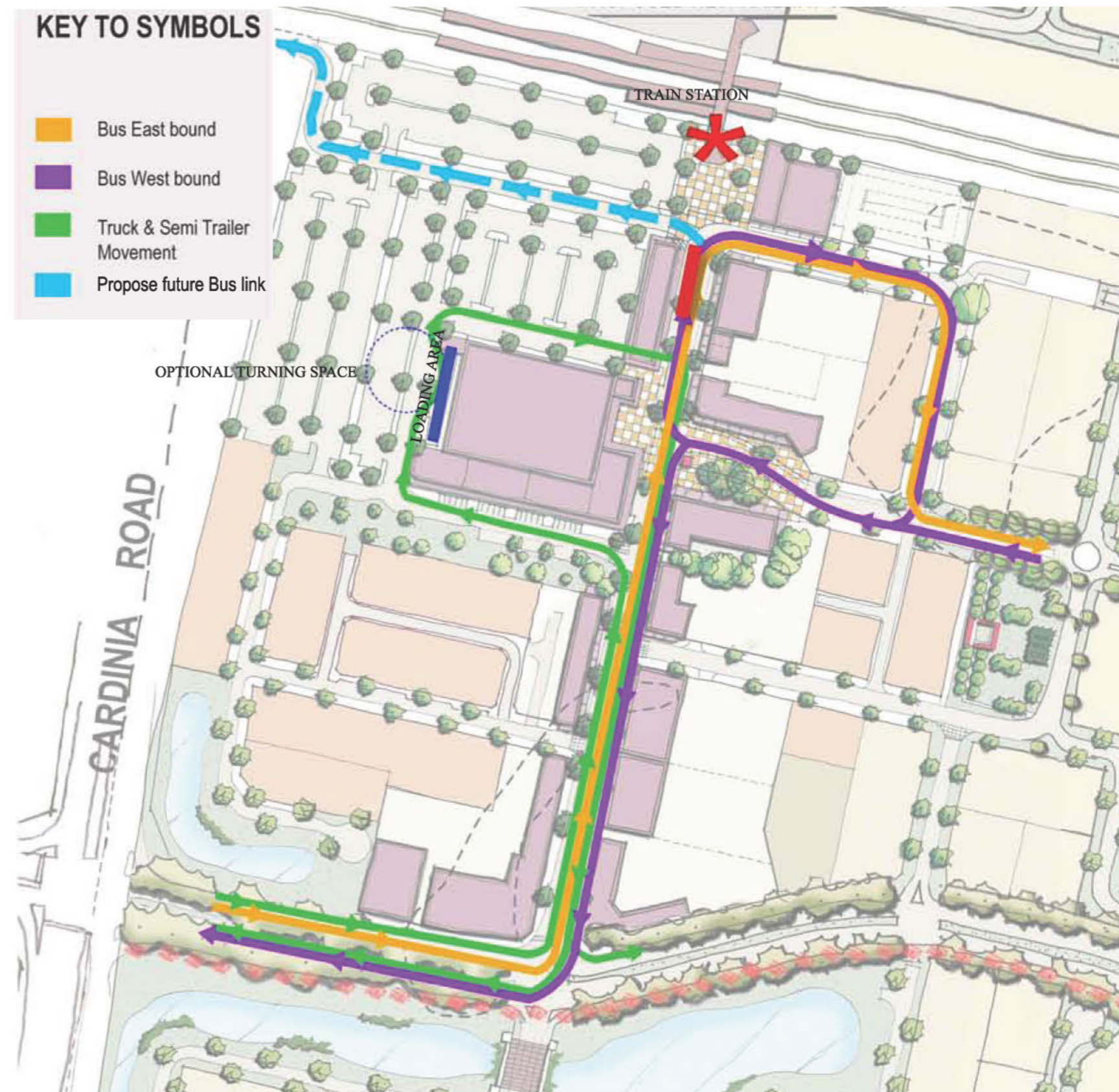


Figure 17: Service Vehicles Access

9 Car Parking

- Sets out provisions for car parking including the location and design of car parking areas and car parking rates for proposed uses within the activity centre.

9.1 Overall view on Car Parking and Vehicular Access

Provision for car parking at Lakeside Square is based on the parking rate requirements of the Cardinia Shire Council planning scheme and the suggested car parking ratio from the Pakenham Town Centre Urban Design Framework (section 4.12 page 83).

It is anticipated that each individual site, when designed, developed and submitted for council approval, should have to accommodate within its boundaries all the car parking numbers required under the Planning Scheme. Some specific sites like the shops or supermarket may be constructed in stages and operate at interim conditions and therefore the required parking numbers will be addresses accordingly. This manoeuvre may allow for the construction of underground or multideck car parking when Lakeside Square reaches its mature stage of development in the future and the construction of such structures become financially viable.

It recommended that some adjoining sites seek an optimised and integrated approach to car park sharing depending on the nature of uses and hours of activity. If that is the case, the developers of those particular sites should prepare a precinct parking submission to be presented to council for endorsement as part of their planning approval process.

As an exercise, the following spreadsheet and plan were prepared to generally anticipate overall required car parking numbers and to guide the design of individual sites. The chart summarises the assumed land uses, their assumed parking rates, and the resultant parking numbers.

For this exercise it is assumed that given a certain total area of activity centre development sites, and a certain development floor area cap for these sites, that an area of at-grade parking (which includes circulation and landscape) will be remaining. Across the entire Lakeside Square, the result of this analysis is neutral balance when the area develops into its mature stage (including the foreseen future expansions detailed on section 10 of this document).

According to what is presented at section 6 of this document, guidance will be offered for the location and design of car parking areas within each individual site as part of the Building Design Guidelines that will be prepared for each site.

	Land Use	Site Area (1)	Lakeside Town Centre UDF Recommended
At completion stage	Shops(2)	31700m2	4 bays /100m2
	Offices	7300m2	3.5 bays /100m2
	Restaurant	2200m2	0.4/seat
	Non Commercial Uses (3)	4200m2	20 spaces
	On Street Visitor Parking Spaces (4)	-	0.5/dwelling
Mature Stage	Shop Top Offices	1300m2	1 bay\office (5)

Notes:

- (1) All site areas are based on current proposed subdivision and preferred land uses. Subject to change.
- (2) May include a variety of different uses that may require different parking rations each.
- (3) Assumes the rates required for a library as close proposed comnity building.
- (4) On Street parking numbers are approximate and based on current street design. Subject to change through detailed design.
- (5) Assumes each office as 100m2



10 Environmental Sustainability

- Set out guidelines to improve environmental sustainability including integrated water management and energy conservation.

Environmental sustainability is fully integrated into the planning and design guidance for Lakeside Square in the following areas:

10.1 Integrated Water Management

Through the wetland system and stormwater treatment train where car-park runoff is treated and used for irrigation of landscaped areas. Flows are designed to support the overall integrated wetland system.

10.2 Reduced Energy Demand

Through the passive solar building design where the buildings are designed for winter sun penetration, and summer sun exclusion according to each facades solar orientation. The encouragement of other technologies and some alternative site power generation including T5 street lighting are also sought throughout.

10.3 Sustainable Transport

Through the provision of bicycle parking in accordance with Clause 52-34 of the Council Planning Scheme and the general reduction in transport energy demand due to the integration of public transport into the centre.

Through the Building Design Guidelines where the request for lockers and showers will be presented to the site developers.

Through the encouragement of green transport plans which promote modal changes for travel are catered for though the provision of interconnected cycling and pedestrian networks, streetscape amenities that encourage walking, and the overall connection to the railway station for public transport are promoted as alternative modes of transport within Lakeside Square.

Combined all these initiatives will work together to help create a more sustainable Lakeside Square.

10.4 Integrated Water Management

Storm water quality at Lakeside Square is addressed at a number of levels. At a point of origin level all side entry pits are grated to stop litter and other larger pollutants from entering the drainage system. Water then drains to the wetlands that flank either side of Henry Road. These wetlands are a series of sediment ponds, vegetated areas and open water pools which will treat water prior to it leaving the site. The wetlands removes suspended solids, nutrients and phosphorus from the storm water. (Figure 19)



Figure 19: Wetlands Concept Design and stormwater treatment train plan

11 Future Expansion

- Shows how opportunities for housing and future commercial expansion can be incorporated into the activity centre.

This plan shows how opportunities for future housing and commercial expansion have been accommodated into the design of the Neighbourhood Activity Centre. These opportunities respect the Building Design Guidelines and servicing potential of the centre by limiting development to four storeys - generally envisioned to present a mixed use ground floor flushed to the street underneath three storeys of residential apartment development and car parking allocated to the rear or below/above surface (Figure 20).

At completion Lakeside Square will already be a vibrant and commercially successful town centre. Nonetheless, as any mature activity centre across the country, gradual development through time form the basis of the most successful examples that can be found. Therefore, this centre is designed to grow as surrounding land becomes more intensively developed.

At completion stage residential areas in the Activity Centre will achieve a density of 20.1 dwellings per hectare. Residential areas within Devonian Park (stages 1, 2, part of 3 and part of 9) will achieve an average density of 15.3 dwellings per hectare. Residential areas within Caversham Waters (stages 1, 2, 4 and part of 3) will achieve an average density of 15.1 dwellings per hectare. Overall, Pakenham Valley will have over 574 dwellings when completed. When the centre reaches its maturity and if the sites are developed as envisaged by this plan, approximately 271 dwellings can be added to commercial spaces and car parking areas, accounting for overall future residential areas achieving a top density of 33.1 dwellings per hectare within the activity centre and elevating the overall Pakenham Valley density to approximately 19.5 dwellings per hectare. (Densities have been calculated excluding major collector roads, open space and commercial areas.)

The plan also allows for a non-retail/commercial expansion of 21,000m² to be achieved around the railway station through the development of areas previously allocated to on grade car parking (The required car parking spaces for this future expansion would have to be accommodated above or below surface).



Figure 20: Future Expansion Concept Plan

Another perceived evolution in mature activity centres and that is also allowed for in Lakeside Square through the Building Design Guidelines, is the gradual transformation of commercial and residential areas into Shop Top Offices. The concept has two different approaches. The first being that once financially viable, a residence can have its ground floor transformed into an office space, with the family living above this space. This can be achieved through the remodelling of the houses (which ideally would have a flexible internal design that allows for minimal intervention), the construction of new spaces within the "gaps" of the urban fabric or through the demolition and reconstruction of the houses. The second being that existing commercial spaces may have their upper floors expanded and transformed into residential areas. This can be achieved through flexible design, staged design and/or demolition of interim spaces to give space to the construction of ultimate mixed use buildings

If examples of mature activity centres are analysed, it can be perceived that these future residential and commercial sites generally take up at-grade parking areas and fill in streetscape 'gaps' by creating a continuous built edge to the street. Lakeside Square should follow the same patterns when it reaches its mature development stage.

As demonstrated on section 8 of this document, parking can be accommodated at surface level at the completion stage and above or below grade as land values improve with the success of the centre.

Appendix A: Response to Activity Centre Design Guidelines

- Addresses the Activity Centre Design Guidelines (DSE 2005) and Safer Design Guidelines for Victoria (DSE 2005)

1. STREET LAYOUT

1.1 To develop a street layout with a focus on public transport services.

Lakeside Square achieves this through a street which leads directly from the high traffic volume Henry Rd. and Cardinia Rd., north to the railway station and car parking. The northern section of this street will be the heart of Lakeside Square. The street will be a bus route and has been designed accordingly. On the north side of the rail line, a major loop road connects with Shearwater Drive for existing Lakeside residents. Dedicated bus lanes are incorporated into the car park design for the northern section.

1.2 To provide a well connected road network with collocated access for all users.

The Lakeside Square activity centre plan uses a grid so that there is strong equity in the distribution of uses and multiple connections south and east into the street grid of the predominantly residential area. The main street footpath has a minimum width of 4m with on-street cycle path, major pedestrian and cycle routes feature a 2.5m footpath, with all other streets incorporating a minimum 1.5m footpath. Service vehicle access has been specially engineered to one route only, to limit intrusion into residential areas.

1.3 To provide appropriate street widths.

Street width in Lakeside Square has been designed to relate to the desired character and function of the street. For example the main street (Village Way) is narrower and intimate, but still accommodates sufficient footpath area, on-street parking, bus lanes and cycling areas. This will generate an active street also offering a strong sense of place and correct human scale through the proportion of building height to street width.

1.4 To integrate activity centre streets into the local network.

A strong feature of the Lakeside Square plan is the nine streets and access points into the heart of the centre. This is despite the significant barriers of the railway, Cardinia Road and Henry Road. In addition, there are three streets that run directly to the main street from the east and southern residential neighbourhoods.

1.5 To encourage a diverse mix of uses within the centre.

The Lakeside Square plan includes retail, community, office, medical, recreation, child-care and residential uses within an 8ha area. Diverse uses are concentrated around a core town square area to ensure a vibrant street life, leading to the railway station. Shop-top housing is

encouraged in the main street, as well as medium density dwellings less than 150m from the main street. The design carefully places compatible uses facing each other across streets.

1.6 To intensify active uses along street frontages.

The Urban Design Guidelines for Lakeside Square require active primary frontages. They also prevent the setting back of buildings through the use of carparking or landscaping. The supermarket is to be sleeved with shop-fronts to prevent a long blank wall. Frontages are recommended to be continuous for the length of the street with pedestrian cover. Mixing of uses within the street helps ensure continuous activity.

1.7 To physically connect surrounding residential neighbourhoods to the uses in the activity centre.

Carparking has been carefully located to keep the vast majority of it separate from residential areas where it can act as a barrier to physical connection with the activity centre. In the future deck parking could "fill in the gaps", between the residential only areas and Lakeside Square activity centre. Locating residential uses right in the heart of activity centre also helps encourage a truly connected centre.

2. STATION AND INTERCHANGE ENVIRONMENTS

2.1 To encourage public transport use by providing convenient, prominent and active stations and interchanges.

Through the Cardinia Station Working Group, much effort has been put into integrating the station with Village Way. This includes main street built form extending all the way to the station and the station forecourt (between buildings) being a major public space. Essentially, the amenity of the station will be readily apparent as a major amenity of Lakeside Square, not separate from it.

2.2 To provide high-quality passenger amenity.

This will be provided through DOT and their design requirements to stations

2.3 To provide safe, attractive and direct pedestrian and cycling access to stations, interchanges and transit stops.

The pedestrian footpath to the station is continuous along both sides of the main street, along with a bicycle reservation within the road pavement. The project wide "Hike and Bike" network also passes through, and is focused on the activity centre. Excellent surveillance is achieved through active shop-fronts and the activity of the streets, residential or retail,

through which the path passes. All access within Lakeside Square such as pedestrian ramps, thresholds, and public squares will be compliant with Australian Standard access requirements.

2.4 To minimise the dividing effect of railway corridors on activity centres.

As with 2.1 above, considerable effort has been put into allowing for development on the DOT parking land. This leads to a townscape where the station building becomes part of the town and not separate from it. A crossing of the corridor is also provided for in the linear pedestrian axis from Henry Road to Shearwater Drive and the eastern underpass joining the Lakeside community across the railway line.

3. STREET DESIGN

3.1 To design streets that comfortably and safely accommodate the pedestrian and cyclist.

The street section of Village Way accommodates 4m of footpath which is sufficient for al fresco, stall holders, street furniture and other uses to populate the street. A 2m pedestrian clearway against the shop fronts will be mandated in the Lakeside Square Urban Design Guidelines. Tree planting is provided for at an interval of approximately 15m, which when fully grown will provide a continuous canopy across and along the street. A mandated minimum 6m parapet for single storey development helps ensure the scale of the street is appropriate for an activity centre and creates the human scale and enclosure so critical to sense of place. Street lighting and sign posting will be designed to clearly aid way finding and safety.

3.2 To ensure vehicle traffic does not compromise a good walking and cycling environment.

Care has been taken in designing Lakeside Square to better balance the needs of pedestrians and motorists. The central square will be a plateau space where the vehicular pavement is raised to the same height as the footpath. In this way it acts as a calming device. Village Way has been designed to a speed of 20-40km/h. On street parking will further reduce speeds. In other parts of the centre, barrier kerbing, reduced corner radii and constrained cross sections will help slow vehicle speeds. Articulated vehicle movement has been separated from main street traffic as far as is practicable and away from pedestrian and cycling routes.

3.3 To design and plan street edges to enhance the pedestrian environment.

The urban design guidelines for Lakeside Square mandate active uses

to the ground floor of main street and encourage operable windows, wide openings and stackable doors. Highly reflective glazing is not permitted, nor are landscaped setbacks. Verandas or other pedestrian covering devices are mandatory for 80% of primary building frontage.

4. PUBLIC SPACES

4.1 To provide generous, purposeful and well defined public spaces.

Lakeside Square has four major public spaces (other than the streets) that provide a range of public environments.

Town Square – the public space enclosed by built form on four sides featuring large established trees. The plateau and traffic calmed street and range of uses further enhance the town square as the focus of town life.

Station Forecourt – this space, enclosed on two sides with the station building at the northern end, will be a pedestrian only zone for the immediate and convenient access of pedestrians from shops to train.

Avenue Park – this park in the residential area will provide significant green relief to the townscape.

Lakeside – at the southern end of Lakeside Square is a large wetland with surrounding passive recreation space.

These spaces will all have – good solar access; resting spaces and more active spaces; excellent passive surveillance and well defined boundaries between public and private property.

4.2 To provide public space elements that are engaging, convenient, and encourage use.

Street furniture, paving, planting species and other such elements within Lakeside Square will be of consistent design and specification. The public spaces will provide opportunities to sit both on benches, and more informally around planters and tree boxings. Regularly spaced lighting and resting points will help ensure a safe and universal access activity centre.

4.3 To ensure that the appearance of public space is continually maintained.

DLL will design public spaces for robust material and quality installation. Local government approval of street furniture and other materials will be sought, with whom the final maintenance responsibility rests.

4.4 To ensure landscaping contributes positively to quality public space.

Species selection will be appropriate to the Lakeside Square town centre environment. The use of ground level informal landscaping will be limited in favour of raised formal beds and tree canopies. This provides benefits both for maintenance and to provide green relief at an eye level that increases complexities of light and shade.

4.5 To provide conveniences for public comfort.

Equitable access within Lakeside Square is assured through the universal application of Australian Standards. Public toilets will be recommended to be included at both at the Railway Station and as part of the supermarket development site. Way-finding signage will further facilitate convenient access to public comforts.

4.6 To maintain good air quality in public space.

Lakeside Square is fortunate to be located away from major freight traffic routes. The establishment of trees will also help in this regard. As will the design of the road and parking configuration so that cars are moved away from public areas.

4.7 To provide a focus for the local community and reinforce a local sense of place or identity.

The vision statement for Lakeside Square makes clear the community desire for a place that reflects the benefits of both town centre living. This is a key place making distinctive of the Pakenham area which is evident in the Architectural Objectives for the centre and the traditional approach to towns represented in the Urban Design Guidelines. The Town Square will be the key place making element and give Lakeside Square a unique identity in the south-east corridor. Public art and the stormwater catchment system will also be significant visual distinctive of Lakeside Square.

5. BUILDING DESIGN

5.1 To incorporate new development in heritage areas sensitively

While Lakeside Square has no built heritage, established trees within open spaces will link to the heritage of the area. The Building Design Guidelines for each site also encourage more traditional styles of building, that respect vertical proportion and fenestration to help give the feel of a town without obsessive mimicry.

5.2 To minimise the energy consumption of new buildings

The sustainability guidelines for Lakeside Square mandate passive solar design, natural lighting and the installation of energy efficient appliances. Photo-voltaic electricity generation is encouraged.

5.3 To minimise waste generation

In order to help achieve a unique sense of place, recycled building materials are encouraged for the immediate weathered texture they provide. Floor to ceiling heights and multiple access points into robust building floorplans help ensure the adaptability of Lakeside Square building stock and reduce the need for demolition.

5.4 To minimise water consumption and stormwater run off from new buildings

The stormwater management system for Lakeside Square makes use of car-park run off primarily to fund the environmental lake system. Stormwater is treated in this system through systems of natural vegetation and aeration. Flows will be achieved at the exit point of the site. The Building Design Guidelines also encourage the use of roof water for retention on site while mandating the contribution of parking area runoff to the wetland system.

6. MALLS AND LARGE STORES

6.1 To improve pedestrian and cycling access and amenity between malls/large stores and the rest of the activity centre and surrounding neighbourhood.

A significant challenge in the design of Lakeside Square has been the 1.6ha area required for the station parking, combined with a 1.5ha supermarket site. The design guidelines mandate active frontage to the main street, which leaves large parking areas to the rear. These areas are integrated into the design through a linear and legible path network directly to the main street. The vast bulk of parking has been gathered in the north-west corner of the activity centre. This ensures the parking areas do not dominate the townscape. The parking areas are also designed to be developable with robust built form later in the centres evolution.

6.2 To ensure malls and large stores address streets with active frontages.

The urban design guidelines mandate active frontages to the street. The supermarket will be sleeved with small shops that address the street. Servicing areas are to the rear.

6.3 To ensure that malls/large stores maximise the opportunity for an

increased mix of use.

The land use within Lakeside Square activity centre has been deliberately diversified to what would normally be seen in a 'shopping centre'. A council community activity centre, supermarket, railway station, medical suites, commercial offices, residential (including shop-top), town square, cafes/bistro (with al fresco dining), small shops, mixed use sites are all envisaged as part of the centre..

6.4 To integrate the built form of malls and large stores into activity centres and their surrounding neighbourhoods.

The Building Design Guidelines require a vertical rhythm for all buildings within Lakeside Square so that there is a consistency of new streetscape. The intensity of built form also diminishes away from the main street to the residential area so that there are no aesthetic conflicts of building bulk. This is evident in the medium density site that abuts the supermarket proper and provides a transition to the residential area to the south.

7. HIGHER DENSITY HOUSING

7.1 To maximise higher density housing opportunities in activity centres.

Density will be maximised through using a creative mix of residential dwellings integrating with the commercial area. Such as shop-top housing, medium density sites and narrow lots, rear loaded laneway housing. In the further subject to market demand there is the potential for apartments to be built within the activity centre.

7.2 To ensure the scale and form of higher density housing in activity centres is appropriate.

While Lakeside Square is a new activity centre with no preexisting development, the plan still recognises the community determined level of appropriate higher density development. In order to significantly advantage residents living at close proximity and at higher density to the amenities of the centre, lower density development is positioned some distance away. The design guidelines also require multiple entrances for large medium density development so that single entrances do not quarantine long lengths of streetscape, to be more in keeping with a traditional residential streetscape.

7.3 To ensure good amenity for residents of higher density housing and the surrounding development.

Medium density sites within Lakeside Square are positioned to overlook significant natural or built amenity, such as the lake based stormwater treatment system, the linear park, or quieter streets. Good solar access

is also assisted by a regular north-south grid for the centre. Servicing has been grouped between the parking and rear boundary of commercial sites so that impact on residential areas and the main street is minimised.

7.4 To integrate the activity centre into the surrounding neighbourhoods.

In the planning for Lakeside Square, careful consideration has been given to ensuring full integration with the surrounding residential only area.

There are multiple, connection points for pedestrians, cyclists and pedestrians into the centre. These connections shift in frontage condition from residential, to mixed use, to commercial /retail on a journey into town.

7.5 To ensure higher density housing sensitively responds to the surrounding neighbourhoods.

As discussed above, as Lakeside Square is a new development there are no existing surrounding neighbourhoods. However, the graduated density model employed, ensures a gradual transition from lower density areas, through medium density mixed use area, into the main street, and right to the heart of the town square.

8. CAR PARKING

8.1 To maximise on street parking opportunities

Lakeside Square includes on street parking on the main street and side streets at every opportunity. The significant number of rear loaded housing in the higher density residential area also provides further opportunity for on-street bays due to the elimination of vehicular crossovers.

8.2 To use on-street parking efficiently.

A significant advantage of the integrated design of Lakeside Square is the complementary relationship between the station parking and the retail parking. This ensures that commuters who utilise the station parking can also use it to complete larger shopping trips. On street parking bays can be easily signposted if their time management becomes an issue as the centre matures and grows in popularity.

8.3 To minimise off street car parks visually dominating public space.

Through the use of perimeter block development and mandated active frontages, the rear off street parking will not be part of the visual experience of the public realm.

8.4 To improve pedestrian and cycling safety and amenity in and around off street parking.

Fortunately, the orthogonal grid of Lakeside Square facilitates direct, gracious and landscaped pedestrian and cyclist routes directly to the main street. Frontage is achieved where possible. Lighting will meet Australian Standards. Trees will be planted at a rate of one per 12 bays as mandated in the design guidelines. Bicycle parking will be provided under the protection of the compulsory weather protection to shop fronts

Appendix B: Response to Safer Design Guidelines

ELEMENT 1 - URBAN STRUCTURE

NEIGHBOURHOOD DESIGN

1.1 CONNECTION

To ensure a well integrated urban structure that increases activity by maximising connections between neighbourhoods.

The grid layout of streets and mixing of uses at Lakeside Square is dedicated to achieving a well integrated urban structure.

The increase in residential density towards the activity centre also helps achieve increased activity.

Pedestrian links north into the existing Lakeside Square are located at the railway station and on a major north-south axis in the eastern portion of the two neighbourhoods.

Although highly constrained on the southern boundary by the Pakenham Bypass, the western and eastern boundaries are highly permeable with direct connections into future development areas.

1.2 ACTIVITY

To develop urban areas with 'walkable neighbourhoods' and active neighbourhood centres.

The design of Lakeside Square is devoted to the establishment of a pedestrian based neighbourhood. Lakeside Square has excelled in achieving higher than the mandatory requirement for a walkable neighbourhood. More than half of inner suburban residents, are less than three minutes walk (200 metres) from the town centre. In addition, some of the larger housing types are less than five minutes walk (400 metres) from the town centre.

The intent of Lakeside Square is to create a sense of place for the local residents so that walking to the active town centre becomes desirable. This has been planned with the goal of economic and social sustainability. The town will provide a variety of shopping facilities, with opportunities and services for both retailers and residents. These commercial facilities will range from a supermarket, to small businesses and speciality shops - all located in close walking distance from the train station and residents. The community centre will be easily accessible within the town centre and a child care centre, kindergarten, maternal and child health centre, primary school and post-primary school will be located approximately seven minutes walk from the town centre.

The two pedestrian underpasses at the railway station and in the east link the new Lakeside Square with the existing neighbourhood. This results in easy pedestrian access between the communities.

The town centre also has a direct connection to parklands and wetlands to the south.

1.3 LEGIBILITY

To design an easily navigable and legible network of streets, providing convenient access for all users across neighbourhoods and to activity centres.

Lakeside Square has a diversity of street scales in a grided network to facilitate the dispersal of traffic and increase motorist and pedestrian safety. The very limited number of culs-de-sac (5) ensures a permeable network, especially as all but one, are open ended.

A number of streets in Lakeside Square are linked from 'centre to edge' including Orchard Way and Village Way. This means that they provide direct connections from the edge of the neighbourhood immediately into the centre of activity. This is the most legible method and allows easily navigable access within the neighbourhood and adjoining areas.

1.4 DIVERSITY

To encourage active neighbourhoods where people are present during most hours of the day.

The mixing of uses within the town centre helps ensure a seven to eleven street life. All residential areas have direct connections to parklands to increase the presence of people on the street.

Lakeside Square provides a range of parks and public places for opportunity for passive and active recreation, within easy walking distance from houses. Lakeside Square also links open spaces and parks to form connected recreational and walking networks. These spaces have in common - good solar access; resting spaces and more active spaces; excellent passive surveillance and well defined boundaries between public and private property.

Lakeside Square provides a diversity of dwelling sizes and types so that a broad lifestyle mix of residents emerges within each neighbourhood, increasing the potential for activity throughout the day.

1.5 SURVEILLANCE

To design neighbourhoods that maximise visibility and surveillance of

public spaces to enhance real and perceived safety.

Lakeside Square Town Centre Building Design Guidelines require active fronts to ensure these streets promote a sense of safety for people during most hours of the day and night.

The variety of housing and lot types in Lakeside Square will provide an opportunity to encourage home-based business activity within the activity centre to provide for greater surveillance for longer periods of time.

Covenants for all dwellings within Lakeside Square require front doors that face the street, significant windows to the street and no high walls or fences along public frontages.

The main street accommodates 4m of footpath which is sufficient for al fresco, stall holders, street furniture and other uses to populate the street. A 2m pedestrian clearway against the shopfronts is mandated in the Lakeside Square Building Design Guidelines. A mandated minimum 6m parapet for single storey development helps ensure the scale of the street is appropriate for an activity centre and creates the human scale and enclosure so critical to sense of place and safety. Street lighting and sign posting will be designed to clearly aid way finding and safety.

SUBDIVISION DESIGN

OBJECTIVE 1.6

To connect new residential subdivisions to adjacent subdivisions through a physically integrated and direct movement/street network.

The main entry to Lakeside Square on Henry Road creates a sense of place, and an opportunity for the residents to connect to the existing areas of Lakeside.

Lakeside Square streets are generally straight, and where curved, still provide long lines of sight.

The major streets in new and existing development make direct links within and between neighbourhoods. This integrates areas, increasing activity, surveillance and aids confidence in orientation and way-finding.

OBJECTIVE 1.7

To provide the highest level of natural surveillance and 'eyes on the street' by encouraging walking and cycling.

Lakeside Square Town Centre Building Design Guidelines require active fronts to ensure these streets promote a sense of safety for people during

most hours of the day and night.

The street section of Village Way accommodates 4m of footpath which is sufficient for al fresco, stall holders, street furniture and other uses to populate the street. A 2m pedestrian clearway against the shopfronts is mandated in the Lakeside Square Building Design Guidelines.

Lakeside Square has put in place a comprehensive network of pedestrian and cyclist routes to help increase activity.

Lakeside Square walking and cycling paths are not separate from the street network, such as wetland interface areas, to ensure clear sight lines and limit spots where people can hide or be entrapped.

Lakeside Square has one pedestrian underpass, under the railway line. Safety issues have been considered in the design through improved surveillance in an active location, wide and clear lines of sight through the underpass and good access to daylight and good lighting at night.

OBJECTIVE 1.8

To design street layouts which minimise direct access to secluded private open space.

Special guidelines on corner lots help prevent the amount of rear private open space that is directly accessible from side boundary fences along public frontages.

Laneways within Lakeside Square will be passively surveillance from second floors overlooking the lane.

Residential or commercial activity will be encouraged to front lanes where appropriate.

A design goal has been to maintain a transition from public space to private outdoor space. This is achieved for residential lots by locating semi-private front yards towards the street or public space and private backyards to the rear of residential lots. Residential lots should always be designed with backyards 'back-to-back' to maximise their security and minimise the need for high fences facing public space.

RESIDENTIAL LOT DESIGN

OBJECTIVE 1.9

To provide for natural surveillance of streets by ensuring future buildings have windows facing streets and public spaces.

All collector streets, arterial roads, parks and public open space within

Lakeside Square will be fronted by dwellings.

End lots on the short side of blocks are designed to face the street. This 'end grain' increases natural surveillance and avoids high fencing and long walls facing the side street.

Special guidelines on corner lots help prevent the amount of rear private open space that is directly accessible from side boundary fences along public frontages and to offer surveillance of both streets.

OBJECTIVE 1.10

To maintain natural surveillance of streets and public open space while clearly defining private and public property.

By locating at-grade parking areas to the rear of development, the shop front clearly demarcates the boundary between public and private property facing the street.

The preparation of a parking precinct plan for the entire Activity Centre will help ensure that parking areas will be of high quality and used to an optimal level, rather than being vacant for long periods of time.

Deeper lots, in particular on Henry Rd., will have larger building setbacks to reduce the need for high walls and heavy planting to reduce traffic noise.

ELEMENT 2 - ACTIVITY CENTRES

OBJECTIVE 2.1

To maximise surveillance of streets by increasing the level of activity within buildings and on the street.

All ground floor uses with the centre are required to be active and the Building Design Guidelines require glazing for 70% of frontage by length so that this activity is part of the street. Operable windows and stacking doors will help ensure an active street life.

OBJECTIVE 2.2

To provide a compatible mix of uses and activities to maximise natural surveillance and support 24 hour public presence in activity centres.

The town square will be surrounded by retail, restaurant, office and community uses. The Town Square follows the "Power of 10" place-making model where a maximum number of diverse uses and possible activities is designed into the space to help extend public presence beyond retail trading hours.

OBJECTIVE 2.3

To support night-time uses by providing easily accessible public transport and parking facilities.

The railway station has been designed to fully integrate with the town centre. See "Section 2 – Station and Interchange Environs" of Activity Centre Design Guidelines.

OBJECTIVE 2.4

To develop activity centres that are well connected and provide direct pedestrian links to surrounding residential neighbourhoods to maximise use and natural surveillance.

The activity centre has been designed to fully integrate with surrounding residential areas to the greatest extent possible. See "Section 1 – Street Layout" of Activity Centre Design Guidelines.

OBJECTIVE 2.5

To ensure streets and public spaces are attractive and well used to signal care and attention and support people's feeling of safety.

The landscape design and materials selection for Lakeside Square will respect the requirement for robustness in colour, texture and ease of maintenance. See "Part B – Clauses 1 to 5" of Building Design Guidelines.

ELEMENT 3 - BUILDING DESIGN

OBJECTIVE 3.1

To design buildings that contribute to the natural surveillance of adjacent streets and public space.

All buildings at Lakeside Square will contribute to the natural surveillance of adjacent streets and public space. See "Part B – Clauses 1 and 2" of Building Design Guidelines. (Requirement 4)

OBJECTIVE 3.2

To encourage active uses along streets to increase the 'eyes on the street'.

While the final arrangement of uses at Lakeside Square is not yet known, the Building Design Guidelines ensure active primary frontages. See "Part B – Clause 1" of Building Design Guidelines. (Requirement 4)

OBJECTIVE 3.3

To design entrances which provide easy access to all users, afford visibility to and from the street, and minimise the potential for hiding spots.

The covenants for residential buildings ensure the primary entrance of all dwellings faces the street. For commercial buildings, see "Part B – Clause 3" of Building Design Guidelines. (Requirement 4)

OBJECTIVE 3.4

To maintain visibility and natural surveillance of the public environment and private entrances.

The covenants for residential buildings ensure the primary entrance of all dwellings faces the street. For commercial buildings, see "Part B – Clause 3" of Building Design Guidelines. (Requirement 4)

OBJECTIVE 3.5

To minimise the occurrence of graffiti on walls and fences to signal care and attention and support people's feeling of safety.

Delfin Lend Lease has a 24 hour rapid response policy for graffiti vandalism events on public property. This is to ensure that 'tagging' and other forms of graffiti do not escalate in scale and number due to the 'bragging rights' they promote. A zero tolerance policy has been shown to be an effective way of controlling graffiti along with the passive surveillance measure described above.

OBJECTIVE 3.6

To minimise the potential for walls and fences to be used to gain access to private space.

A design goal has been to maintain a transition from public space to private outdoor space. This is achieved for residential lots by locating semi-private front yards towards the street or public space and private backyards to the rear of residential lots. Residential lots should always be designed with backyards 'back-to-back' to maximise their security and minimise the need for high fences facing public space.

ELEMENT 4 - PARKS AND OPEN SPACE

OBJECTIVE 4.1

To maximise natural surveillance of parks and open spaces to encourage use and support people's perceptions of safety.

Parks have active frontages on all sides to provide natural surveillance. All parks, public open spaces or play areas are visible from neighbouring streets, houses, schools and other buildings. Informal areas are clearly visible from surrounding properties and streets to maximise natural surveillance and support user's perceptions of safety.

Buildings with active frontages are located and designed to overlook public open space and parks.

OBJECTIVE 4.2

To encourage the use of parks and open space by a range of users at all times of the day to improve the quality of life for the community and improve perceptions of safety in public places.

Lakeside Square contains three public open spaces that have complementary roles, sizes and functions. See Requirements 7 and 8 of the Lakeside Square Town Centre Urban Design Framework.

OBJECTIVE 4.3

To ensure lighting is carefully integrated to further enhance visibility and natural surveillance of parks and open spaces.

Delfin Lend Lease's national experience has shown that overlighting parks and public open spaces can have a deleterious effect on public safety due to attracting anti-social behaviour late into the night. However, all public open space pathways within the Activity Centre will be lit to ensure safe night time use. Pathways are lit through ambient street lighting, while high use public facilities within open spaces are target lit with timer functionality.

OBJECTIVE 4.4

To ensure landscaping maintains sightlines of paths in parks and open spaces and allows for natural surveillance.

All parks and public open spaces have been designed to respect natural sight lines from surrounding streets. See Requirements 7 and 8 of the Lakeside Square Town Centre Urban Design Framework.

ELEMENT 5 - WALKING AND CYCLING PATHS

OBJECTIVE 5.1

To collocate pedestrian, cycle and vehicle movement routes, where practical, to maximise activity and natural surveillance opportunities.

Within the activity centre, the main street (Village Way) is the most

obvious example of collocated pedestrian, cycle and vehicle routes. All other paths and routes are also collocated.

OBJECTIVE 5.2

To provide convenient paths with generous proportions to encourage walking and cycling and promote natural surveillance.

Paths within Lakeside Square promote walking and cycling through a number of elements, including pedestrian/cycle crossing points and ensuring pedestrian routes are not compromised or interrupted by traffic calming devices. In addition, Lakeside Square has minimum 1.5 metre wide paths, minimum 2.5m hike and bike paths, and a main street footpath of 4m. This ensures comfortable two way traffic flow as a minimum.

OBJECTIVE 5.3

To maintain long sightlines along paths and into adjacent spaces to maximise visibility.

Lakeside Square maintains long sightlines along paths to permit views of activity. The grided street network helps achieve this. Physically integrated pedestrian/cycle paths and crossings into surrounding areas helps create a multiple of route options and avoids predictability of movement.

The landscape masterplan avoids dense shrubbery around pedestrian routes to eliminate potential entrapment spots and maximise visibility.

ELEMENT 6 - PUBLIC TRANSPORT

OBJECTIVE 6.1

To provide access routes to public transport stops and stations which are direct and maximise natural surveillance and visibility.

The railway station and bus stop access routes have direct visual connections with the Activity Centre. The main street is the primary means of access. See "Section 2 – Station and Interchange Environs" of Activity Centre Design Guidelines.

OBJECTIVE 6.2

To ensure maximum natural surveillance of public transport stops and increase their visibility for users safety.

The railway station and bus stops have direct visual connections with the Activity Centre. See "Section 2 – Station and Interchange Environs" of Activity Centre Design Guidelines.

OBJECTIVE 6.3

To provide signage to assist in way finding.

While the railway station and bus stops have direct visual connection with the activity centre, some signage can nonetheless be incorporated in the street signage of the centre.

OBJECTIVE 6.4

To ensure all facilities are well maintained and graffiti is promptly removed to promote a perception of safety and encourage use.

Refer to Objective 3.5

Refer to Department of Transport guidelines for graffiti policies relevant to public transport property.

ELEMENT 7 - CAR PARK AREAS

OBJECTIVE 7.1

To ensure that pedestrian amenity and safety in the street is not degraded by car park siting and design.

Car parks within the activity centre are located to the rear of development so that pedestrian amenity and safety is not degraded by long sections of the main street being without built form. These large at-grade parking areas are designed to include safe and direct pedestrian routes to the main street, often with a tree-canopy.

OBJECTIVE 7.2

To design all car parking areas to maximise natural surveillance and pedestrian visibility.

Although car parking areas are at the rear of development, multiple openings into the space of the car park help ensure they are visible from the main street and railway station platforms in particular. Double fronted shops (or tenancies) have been designed in to some locations to further enhance safety.

OBJECTIVE 7.3

To ensure pedestrian access to car park areas from the street is convenient and assists way-finding by maximising visibility.

Although car parking areas are at the rear of development, multiple openings into the space of the car park help ensure they are easily

accessible and visible.

MULTI-LEVEL CAR PARKS

OBJECTIVE 7.4

To design multi-level car parking to maximise natural surveillance inside, and to and from, the parking structure to ensure user safety.

Although multi-deck car-parks are not planned at this stage, their future development will be compliant with Safer Design Guidelines.

ELEMENT 8 - PUBLIC FACILITIES

OBJECTIVE 8.1

To provide automatic teller machines in highly visible and accessible locations to promote their use and enhance user's safety.

ATM's within the town centre will be located on commercial streets at street level and within direct view of pedestrian routes and surrounding activities rather than in recesses, alcoves or in buildings adjacent to laneways.

OBJECTIVE 8.2

To provide public toilets in highly visible and accessible locations to promote their use and enhance people's perception of safety.

Public toilets will be located in highly visible and accessible locations. Toilets within the supermarket site will be adjacent to high traffic areas. At this stage it is not known if toilets will be a part of the railway station. Facilities will be well maintained with graffiti promptly removed to promote their use and enhance people's perception of safety.

OBJECTIVE 8.3

To provide public telephones in highly visible and accessible locations to enhance user safety.

Public telephones will be part of the main street in the town centre near high traffic areas, particularly near restaurants or shops that have late opening hours and are clearly visible from train stations.

OBJECTIVE 8.4

To provide cycle parking in highly visible and accessible locations to enhance user safety.

Town Centre cycle parking will be in high traffic areas, near train stations, bus stops, restaurants and shops that have late opening hours for added informal surveillance.

ELEMENT 9 - LIGHTING

OBJECTIVE 9.1

To position lighting appropriately to improve visibility for pedestrians and cyclists and enhance natural surveillance opportunities.

Street lighting will be the primary form of public lighting within Lakeside Square. This will occur along streets and paths, and at public transport stops. Awnings over shop fronts will be required to be lit. Building entrances will be required to be lit at night.

OBJECTIVE 9.2

To ensure lighting intensity and direction is appropriate and improves visibility and surveillance of the public environment at night.

The path and street lighting within Lakeside Square meets Australian Standard 1158.1. This requires illumination to the immediate surrounding area to levels so that people are able to recognise an approaching person's face from 10 to 15 metres away.

OBJECTIVE 9.3

To ensure the quality of light enhances people's visibility to see at night and enhances public safety.

Lakeside Square will be utilising white lighting for better colour recognition.

OBJECTIVE 9.4

To ensure lighting is easily maintained and minimises potential for wilful damage.

All lighting at Lakeside Square will be protected from wilful damage through installation height or mechanical protection.

ELEMENT 10 - SIGNAGE

OBJECTIVE 10.1

To locate signage where it will assist in way-finding to ensure people feel confident and safe in a public place.

While the design of Lakeside Square has been structured to provide high levels of legibility and connectivity, appropriate way finding signage will be installed as an extra measure in helping people feel confident and safe.

OBJECTIVE 10.2

To ensure signage contains current and relevant information to encourage use, particularly the use of public facilities after dark.

While the design of Lakeside Square has been structured to provide high levels of legibility and connectivity, appropriate way finding signage will be installed and maintained as an extra measure in helping people feel confident and safe.

OBJECTIVE 10.3

To provide maps to assist in directing pedestrians so they feel safe and confident using public places that are unfamiliar.

While the design of Lakeside Square has been structured to provide high levels of legibility and connectivity, appropriate way finding maps can be incorporated into signage as an extra measure in helping people feel confident and safe.

OBJECTIVE 10.4

To design signage that is easy to see, read and understand. This will assist people to interpret their surroundings and help their way-finding.

The graphic design of Lakeside Square signage will be structured to clearly communicate the intended message so that it is user friendly for people unfamiliar with their surroundings.