



Carnegie Built Form Framework

Carnegie, VIC
BACKGROUND REPORT





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1.0 Overview

1.1 Introduction

The following Background Report establishes the context, describes the character and provides a summary of key strategic documents and recent studies of the Carnegie Major Activity Centre. The review, summary and actions/conclusions are provided in the context of preparing a well-informed, strategically sound and logical built form framework for the commercial areas of the Activity Centre. This includes an area of commercially zoned land around the intersection of Truganini Road and Koornang Road, south of the main shopping strip, and another between Tranmere Avenue and Hewitts Road on Neerim Road, to the east of the main strip.

The relevant background documents include State Government Policies such as Plan Melbourne and policies embedded in the Planning Scheme, as well as Glen Eira and Carnegie specific guidelines including the Open Space Strategy Refresh 2020, Carnegies Structure Plan 2018-2031, the outcomes of the Amendment C184 process, the Urban Form Analysis 2020 and Carnegie Structure Plan Heritage Review. It is noted that extensive work has already been undertaken for the Carnegie Major Activity Centre and this Background Report

Strategic Context

Carnegie is well located on the Cranbourne and Pakenham Train line and directly abutting Princes Highway/Dandenong Road. It is approximately 12km from Melbourne's City Centre, one stop south east from the Monash University Caulfield Campus, the Caulfield Racecourse and associated redevelopment and 2km west of Chadstone Shopping Centre.



Figure 01: Strategic Context Map

1.2 Glen Eira Context

Carnegie is one of five Major Activity Centres in the City of Glen Eira along with Bentleigh, Caulfield Junction, Elsternwick and Moorabbin

The recent removal of the level crossing at Carnegie has had substantial benefits for the local community including increased permeability under the elevated rail and the provision of new public open space along Woorayl Street. The Djerring Trail which runs along the rail corridor connecting Caulfield to Dandenong provides a safe, dedicated walking and cycling path linking Carnegie to other activity centres.

The closest municipal open space is Koornang Park approximately 1km south of the train station.

Glen Eira City Plan: Activity Centre, Housing and Local Economy Strategy (Feb 2020)

Aligning with Plan Melbourne, the City Plan outlines how Glen Eira will accommodate and manage the expected growth and change over the following two decades. The Plan seeks to direct growth “into a network of vibrant activity centres in a balanced and sustainable manner that is guided by an understanding of local character, context and capacity for change”.

Five key components in the Plan link Council policy to the State’s Plan Melbourne Policy. They are the City Strategic Framework Plan, Activity Centres Network, Place-making, Local Economy, and Housing. According to the Plan approximately 75 per cent of all new housing from 2016 to 2036 is expected to be located in the Activity Centres.

The Plan identifies Carnegie as a Major Activity Centre with urban renewal opportunities. The Major Activity Centres (Bentleigh, Carnegie, Caulfield Junction, Elsternwick, Glen Huntly and Moorabbin) provide access to a wide range of goods, services and activities, including commercial, retail, entertainment and community facilities and are nominated as being appropriate for taller built form. They should include services for the wider community including a library, community hub, medical centres, child care, an entertainment complex, senior citizen centre and maternal child health care services. There is also the recognition that due to the catchment size, driving may be required however the aim is for the majority of visits to be accessible by public transport, foot or bike.

This is supported by the **Integrated Transport Strategy 2018-2031** which sets a target of 50:50 mode share of car and non-car trips by 2031. A shift in transport mode and a priority on sustainable modes of transport is also supported by Council’s declaration of a climate emergency, backed by the commitment to achieve zero net corporate emissions by 2025 and **zero net community emissions by 2030**.

	2021 (estimate)	2036 (forecast)	2021-2036 Change %
Population			
City of Glen Eira	159,152	180,626	13.49
Carnegie	20,050	23,266	16.04

Data from: forecast.id, ABS (2016).

Tenure Type	Carnegie %	City of Glen Eira %	Greater Melbourne %
Fully owned	25.2	31.2	29.0
Mortgage	25.0	29.4	34.3
Renting	42.7	32.6	28.8

Dwelling Structure	Carnegie %	City of Glen Eira %	Greater Melbourne %
Separate House	34.0	49.3	66.1
Medium Density	56.8	43.4	22.9
High Density	8.8	6.6	10.1

Data from: Profile.id, ABS (2016).

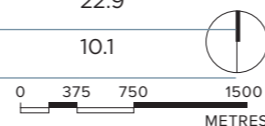


Figure 02: Site Context Map

2.0 Background Review

2.1 Plan Melbourne 2017-2050

Plan Melbourne outlines new and revitalised Metropolitan, Major and Neighbourhood Activity Centres which will support growth as Melbourne’s population grows.

Carnegie is part of a network of 121 Major Activity Centre’s (MAC) each providing different functions, with some serving larger subregional catchments.

MAC’s are generally understood to be “places that provide a suburban focal point for services, employment, housing, public transport and social interaction”.



Figure 03: Plan Melbourne 2017-2050



Figure 04: Metropolitan and Major Activity Centres Map (Plan Melbourne 2050).

- ★ Central city
- Metropolitan activity centre
- Metropolitan activity centre — future
- Major activity centre
- Major activity centre — future

2.2 Carnegie Structure Plan 2018-2031

The Carnegie Structure Plan was prepared in response to concerns around the scale and density of new development occurring around the Activity Centre. The Plan set out the vision for the Activity Centre by 2031 as a “safe, connected and welcoming centre that embraces its authentic urban character and cultural identity” as well as being a “destination for entertainment, shopping and employment, supporting a range of businesses and interconnected community spaces that meet the needs of the local community.”

A series of background reports, supported by extensive community consultation, were commissioned to inform the Plan.

Four key objectives were identified in the Plan:

- Place-making
- Housing
- Economy
- Transport

The Plan was organised by themes to clearly communicate the expectations around specific issues. These Themes were:

Land Use: Six land use precincts were identified to enhance the distinct and diverse urban character within the Activity Centre. These precincts were the Station Precinct, Urban Renewal Precinct, Entertainment Precinct, Retail Precinct, Community Precinct and Housing Opportunity Precinct. Guidance included where to concentrate higher density housing, where streetscapes, pedestrian routes and open spaces needed improvement, and development and redevelopment opportunities were identified.

Buildings: Presented a series of building typologies appropriate for the various land uses within the Activity Centre including residential and commercial and mixed use developments. It also outlined where the taller massing should occur, where the heritage streetscape should be celebrated, and it identified the transitional areas between the Activity Centre and surrounding lower scale residential typologies.

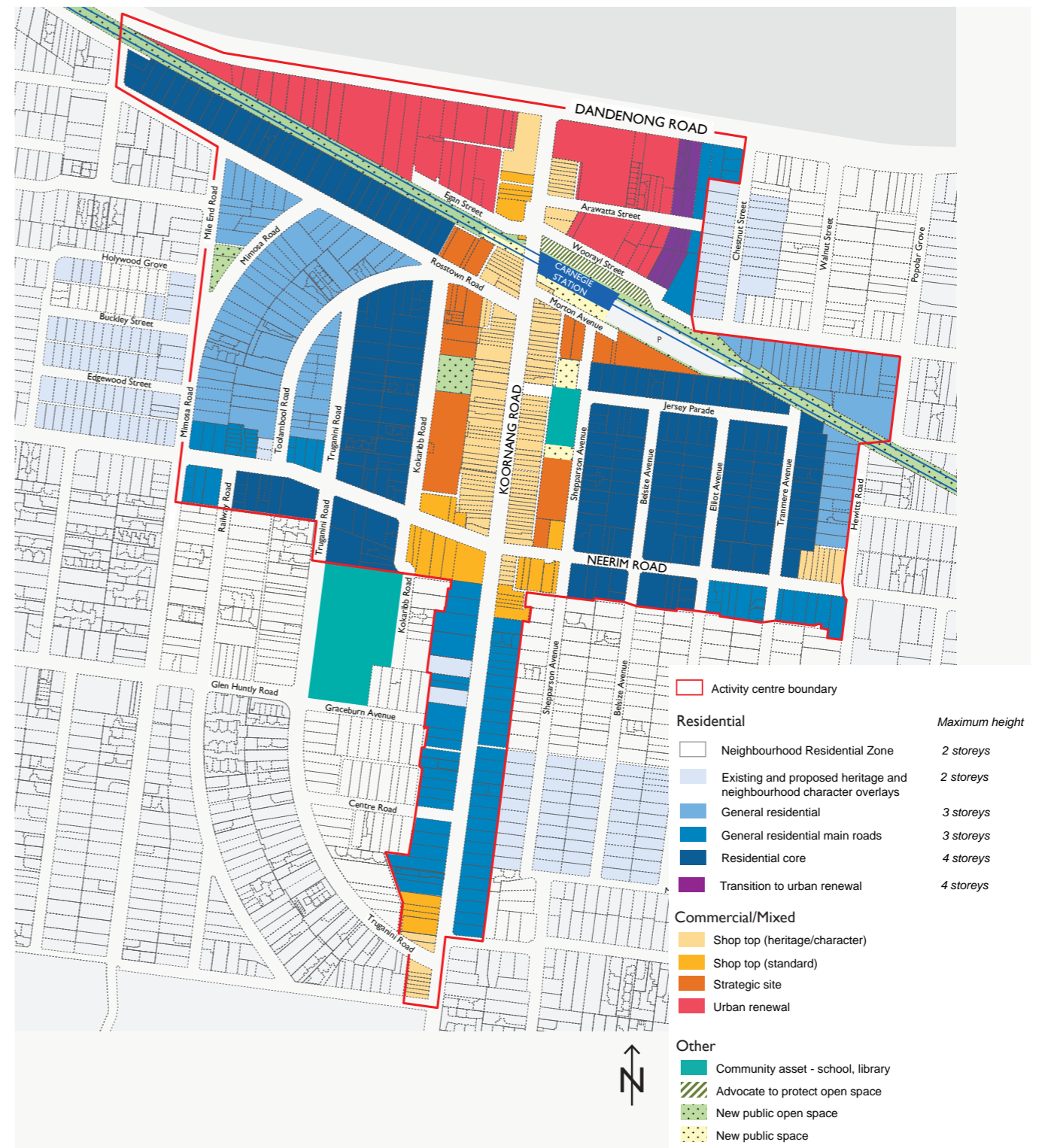
Public Space: Identified the need to provide a range of opportunities for people to meet and gather. A number of new open spaces and connections were nominated, improvements to existing open space and pedestrian connections identified, and the loss of sunlight to future and existing open spaces due to developments recognised as a risk.



Figure 05: Structure Plan 2018-2031

Parking and Movement: This identified the need to increase pedestrian amenity, design streets to balance the needs of diverse users, provide a slow-speed environment, ensure appropriate parking is provided and provide clear connections to public transport.

Urban Renewal: Focused on the land to the north of the rail line, identifying this area as being appropriate for diverse housing and employment opportunities capitalising on the larger land parcels and robust interfaces with Dandenong Road and the rail. Heights were nominated together with typologies and streetscape interfaces (streetwall). The movement network identified new laneways, pedestrian spaces and new links.



Amendment C184

Following the adoption of the Structure Plan by Council on 27 February 2018, Council underwent an amendment process to translate the Structure Plan outcomes into the Glen Eira Planning Scheme. This amendment process combined two activity centres, Bentleigh and Carnegie, under the one amendment. Proposed planning tools included managing the scale of new buildings in commercial centres through zones and overlays and a rezoning of residential land in the Activity Centre.

The Minister did not initially authorise the Amendment on the basis that it would not allow Carnegie to perform its role as Major Activity Centre and was therefore inconsistent with State Policy.

Council revised the Structure Plan and the corresponding amendment was subsequently authorised by the Minister and exhibited. For various reasons, this amendment was recommended by Council officers to be abandoned and the Structure Plan revised.

Submissions to Amendment C184

The following summarises the key elements of submissions made regarding Amendment C184 as they pertain to the Activity Centre and in particular to this Built Form Framework. It is noted that other issues were raised and, where appropriate, are being addressed by the Housing Strategy project and further Transport and Traffic analysis.

- Discretionary heights may create uncertainty
- Requests for greater heights in areas
- Request for lower heights in areas
- Uncertainty regarding overshadowing controls and their role in protecting open space and some streets (Egan Street)
- Laneway access and required setbacks are unclear and too restrictive

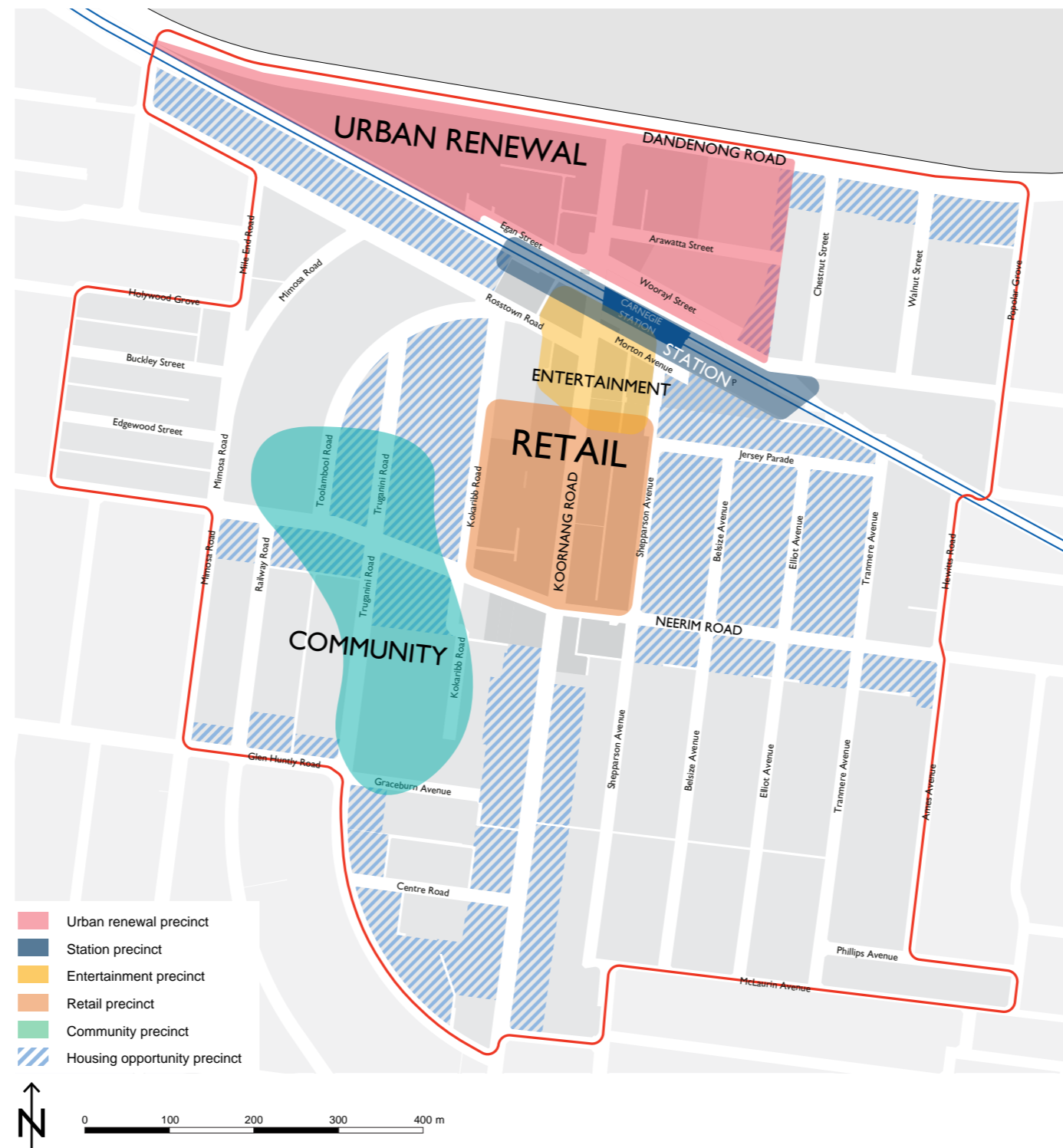


Figure 06: Land Use Precincts

Summary

- The Structure Plan requires further analysis to be undertaken on built form outcomes to assess their impact on amenity including heritage, preferred land use, development potential and streetscape character.
- The Structure Plan requires further analysis to be undertaken to determine appropriate built form responses to the streetscape hierarchy including the main retail core, laneway access and loading, pedestrian and cycle links including streetwall heights and setbacks.
- The Structure Plan requires satisfactory analysis on overshadowing impacts including the new open spaces resulting from the elevated rail, existing open spaces and proposed open spaces including the difference between 22 June and 22 September impacts.
- Guidance on achieving high quality design outcomes is required to be incorporated into the Structure Plan.

Action

- 3D model the impact that different heights have on view lines, heritage and character to determine if any need to be made mandatory to protect amenity and character.
- 3D model overshadowing impacts on existing and proposed open spaces at June 22 and Sept 22 to assess impact on useability and amenity.
- 3D model the implications/urban outcomes of varied setbacks along laneways to allow for vehicle access including rubbish and delivery vehicles including the impact on the pedestrian amenity.
- 3D model the opportunities that height/massing controls have on the ability to achieve developable outcomes.
- Incorporate findings from the Housing Strategy into the Built Form Framework.

2.3 Open Space Strategy Refresh 2020

The Open Space Strategy Refresh gives guidance on the provision of open spaces to service the varying needs of City of Glen Eira's community now and into the future. Factors such as changing population density and changing demographics are considered to help determine how existing open spaces may need to change and where new open spaces may be needed to fill gaps.

The Strategy specifically addresses the changes predicted for the Carnegie Activity Centre. It notes a forecasted increase of 3000 residents plus additional employment numbers. Other key factors include the urban layout, density and the need to mitigate the urban heat island effect.

These increasing numbers mean that additional open spaces are needed to provide the community with access to unencumbered public open space. These should provide green spaces in close proximity to residents and workers in the centre, in addition to the laneways, streets and other open spaces.

The Strategy was also informed by community consultation with the survey for Carnegie revealing that trees are the top item of value to most respondents. The following improvements to public open spaces were also suggested:

- Provide more shade
- Provide additional trees
- Improve pavement surfaces

Key recommendations from the Strategy relating directly to the Carnegie Activity Centre are:

6.4A-1 Provide a Small Local open space north of Neerim Road. This has been actioned with a Public Acquisition Overlay on 93 Mimosa Road and 11 Mile End Road.

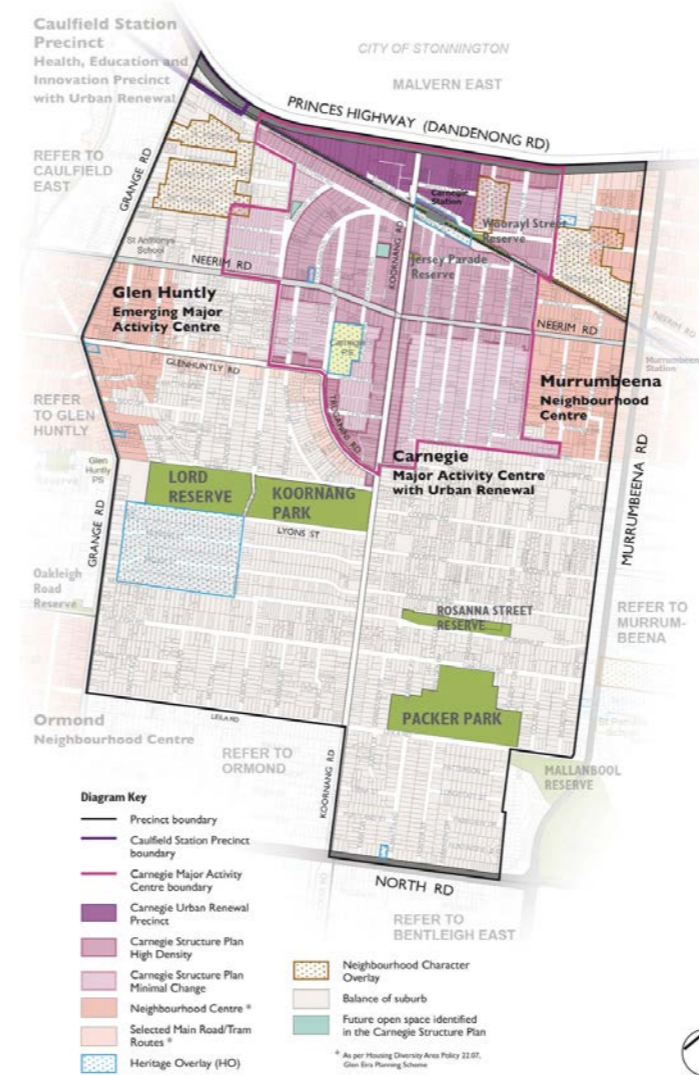
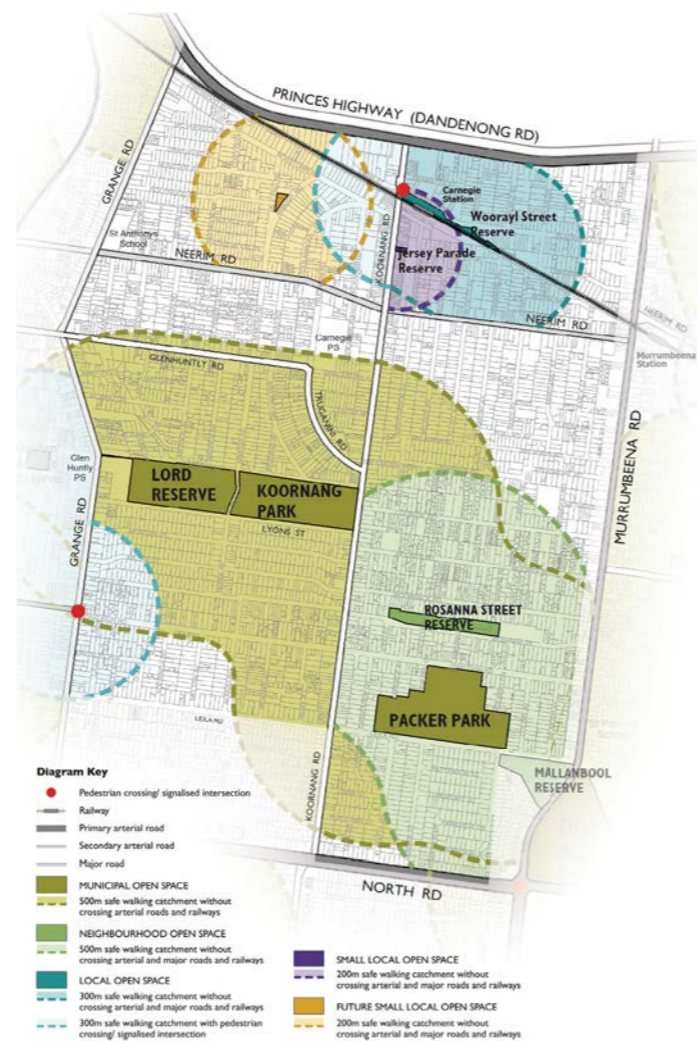
6.4A-2 Provide a Small Local open space to the west of Koornang Road, north of Neerim Road. This has been actioned by identifying the council owned car park on Kokaribb Road.

6.4A-3 Provide a Local open space south of Neerim Road that is accessible to people living and working in the MAC

6.4A-5 Provide a Local open space west of Koornang Road in the Urban Renewal Area, in the general location of the Rosstown Hotel Carpark.

6.4A-6 Provide a Local open space east of Koornang Road, north of the railway. ONLY IF the Wooroyal Street Reserve is not secured in Council ownership

6.4A-7 Provide a Local open space on at least the norther part of Council owned Shepparson Avenue car park or similar location



Summary

- There is an urgent need for new open spaces within the Activity Centre to service the growing residential and working population.
- Open spaces should include trees and greenery.
- Streets and laneways are a part of the open space solution however access to naturalness is also important.
- Council owned land parcels currently used for car parking are located in good positions to provide open space.

Action

- Built form controls must incorporate aspects that protect the amenity of open spaces. This will include:
 - Overshadowing: consideration on 22 June or 22 September controls and percentages
 - Provision of active edges to enable passive surveillance and acceptable levels of activity
 - Control of access points to limit vehicle/ pedestrian conflicts
- Built form controls must address the inclusion of greenery/landscape within the built form to help contribute to the reduction in the heat island effect and provide access to areas of greenery for residents/workers.

2.4 Urban Form Analysis

The Carnegie Urban Form Analysis was prepared to inform and support the Carnegie Structure Plan 2018-2031 and its February 2020 Addendum. It consolidates and documents all background research, analysis and recommendations that inform the built form aspects of the structure plan. As such, it outlines the rationale for proposed building heights, setbacks, open space protection controls and preferred built form character.

Background Research & Analysis

Detailed background research and analysis is contained within Appendix A of the Carnegie Urban Form Analysis and Chapter 2 of the Glen Eira Urban Design Analysis. The former is divided into three sections:

Strategic Context: This section describes the significance of Carnegie as a major activity centre within Plan Melbourne 2050 and its vision within the Glen Eira City Plan. It also provides a snapshot of Carnegie and the study area.

Glen Eira Planning Scheme: This section describes the zoning and overlays applicable to the study area and provides a proposed approach to updating the planning scheme. It also identifies Carnegie as an Urban Village, as nominated by the planning scheme. Urban Villages are defined as places with the highest residential development densities and the centre for business and community life.

Land & Built Form Character Analysis: The final section splits the analysis of existing conditions into four areas. These are the Koornang Road Retail Core (1-2 storey, strong inter-war character shopfronts), Koornang Road Surrounds (1-2 storey, mixed character), North of the Railway Line (commercial/ industrial character with urban renewal potential) and Local Centres (2-3 storey historic character).

This section also provides a summary of the Glen Eira Urban Context Report, which identified the following key design issues:

- In commercial areas:
 - Ground level activation
 - Interface response & amenity
 - Podium expression
 - Design quality
 - Rear transition to residential

- In residential areas:
 - Excessive site coverage & limited front setbacks
 - Street presentation
 - Side interfaces
 - Dominant vehicle access ways

In addition, the Glen Eira Urban Design Analysis identifies the following as key public realm spaces to protect:

- Koornang Road
- Library Plaza
- Rear laneway along east carpark
- Morton Avenue
- Egan Street
- Shepperson Avenue, Rosstown Road, Kokaribb Road
- Laneways and activation of rear of shops
- Carparks
- Spaces around station

Design Analysis & Recommendations

This section identifies several issues and opportunities, and provides recommendations. The issues identified are:

- Residential areas:
 - New development has high site coverage, limited setbacks, and limited overall response to local character. Existing controls provide limited character guidance for Housing Diversity and Urban Village Policy areas.
- Commercial and mixed use:
 - Current policy does not provide adequate built form guidance, including preferred character and building height controls.
- Employment:
 - New developments in commercial areas provide low proportions of commercial floor space.
- Open space:
 - There is limited provision of public open space within walking distance of the activity centre, particularly 'green areas' like traditional parks.

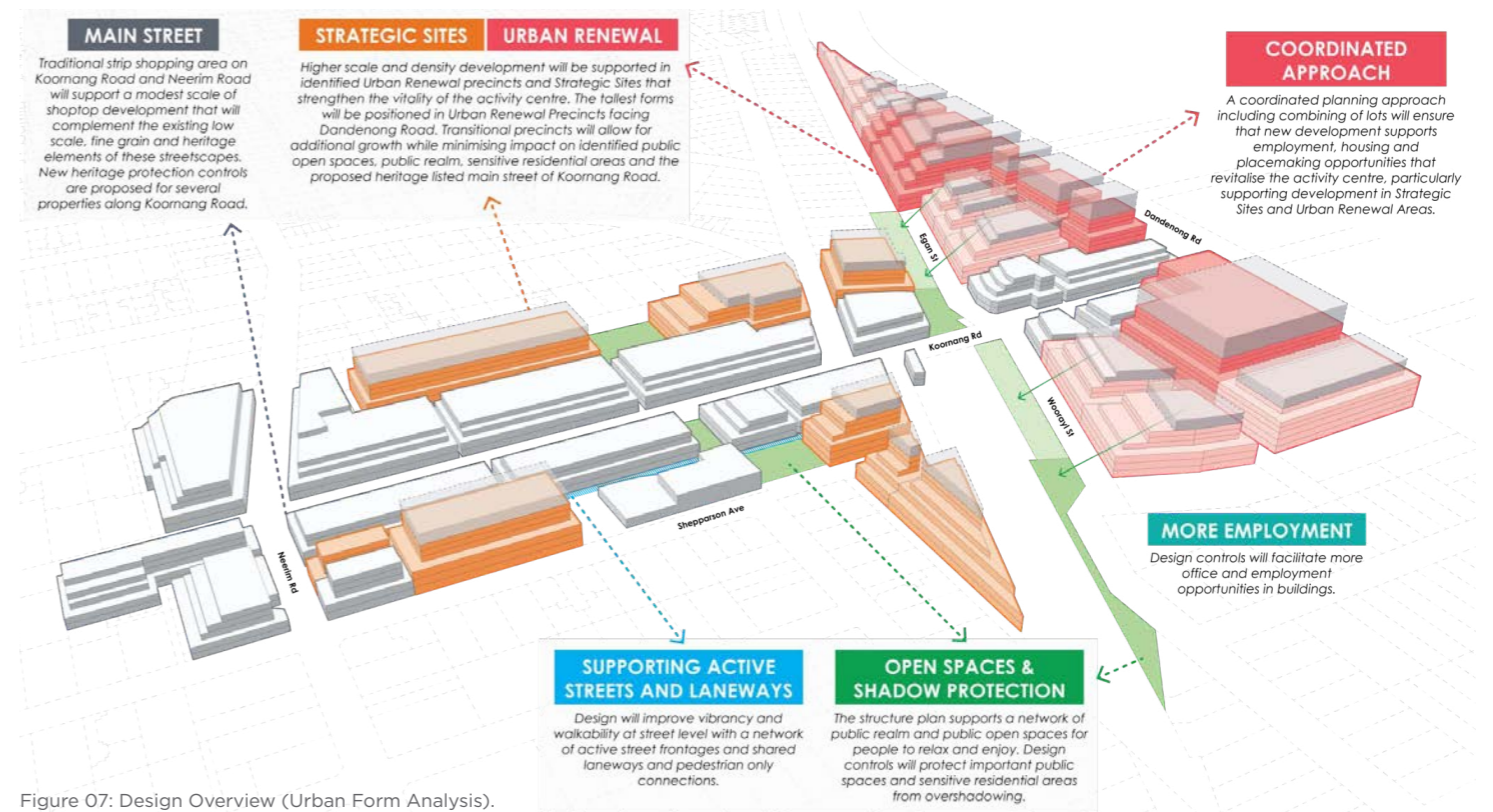


Figure 07: Design Overview (Urban Form Analysis).

The opportunities identified are:

- Overall:
 - Revise planning controls to introduce clear guidance and priorities for building height and character.
- Commercial areas:
 - Preserve the low-scale traditional character of the Koornang Road retail core.
 - Explore increased building heights in peripheral commercial areas surrounding the retail core that complement but do not prejudice the low-scale character of Koornang Road and surrounding residential areas.
 - Explore taller forms north of the railway line forming part of an urban renewal precinct. Ensure these forms respond appropriately to adjoining residential areas and public open spaces.
 - Encourage design that supports employment floorspace.

- Residential areas:
 - Explore ways to support growth while retaining local character elements - review residential zone boundaries and design guidance in the planning scheme to balance the need for growth while reinforcing local character.
 - Strengthen and clarify the residential character outcomes being sought for each residential area.
- Open spaces:
 - Co-ordinate a network of new open spaces. Provide guidance for developments to enhance activation and protect public spaces from overshadowing.

The recommendations are:

1. Main street character protection

Moderate scale (4-5 storeys) and characterful built forms will protect and enhance the historic and finegrain character of Koornang and Neerim Roads.

2. Strategic sites adjoining the main street

Taller built forms (8 storeys) adjoining the mainstreet and train station will:

- Provide opportunities for additional growth while respecting the low-scale main street, residential surrounds and identified open spaces.
- Establish a contemporary character and repair the disjointed urban fabric with built-to-boundary requirements and new laneway connections that facilitate a larger grid pattern strengthening the retail core.

3. Urban Renewal north of the railway line

Transformational built forms of 8-12 storeys will be positioned in a new urban renewal area fronting Dandenong Road north of the railway line. These forms will respond appropriately to adjoining sensitive residential areas and public open spaces and accommodate a greater quantity of housing and employment.

4. Shadow Protection Controls

Design controls will protect identified existing and future public realm and public open spaces from overshadowing

5. More employment opportunities in commercial areas

The employment aspect of commercial areas will be reinforced through policy and by accommodating larger floor to floor heights. Height limits will be calculated to support flexibility and enable a mixture of land uses.

6. Residential Growth around transport corridors and infrastructure

Higher scale and density residential areas will be positioned towards the heart of the precinct around the retail core, train station, selected main roads and tram routes.

7. Diverse housing and built forms

In residential areas, a greater spread of precinct requirements will provide options that meet housing needs of the community. This includes a more varied mixture residential zones and associated housing policy.

8. Identify preferred built form and character outcomes

Identifying preferred character outcomes will improve design responses to local character and provide greater clarity and certainty for the community and developers.

9. Manage transition and remove conflict

Redistributing zone boundaries and built form outcomes will help to improve the transition between areas of different development intensities. Where possible, zones will be separated by roads rather than property boundaries.

These recommendations are addressed in more detail in Appendix B of the Urban Form Analysis. Different heights and setbacks are tested to understand their impact on the character, the transitions to existing residential, the overshadowing of the public realm, and the streetscape, its enclosure and views. These tests were limited to a consolidated maximum building envelope, which provides the basis for the proposed built form controls.

However, further testing is required to provide a more comprehensive justification for these. It is recommended that, building on the evidence contained in Appendix B, further testing explores the impact and outcomes of the controls on:

- Different scenarios, such as single-lot and double-lot developments
- Developable floorplates
- Land uses
- Car parking requirements
- Egress and access
- New heritage considerations

The proposed approach should focus on realistic development scenarios to expand the existing body of work and provide a more solid justification for the resulting proposed built form controls.

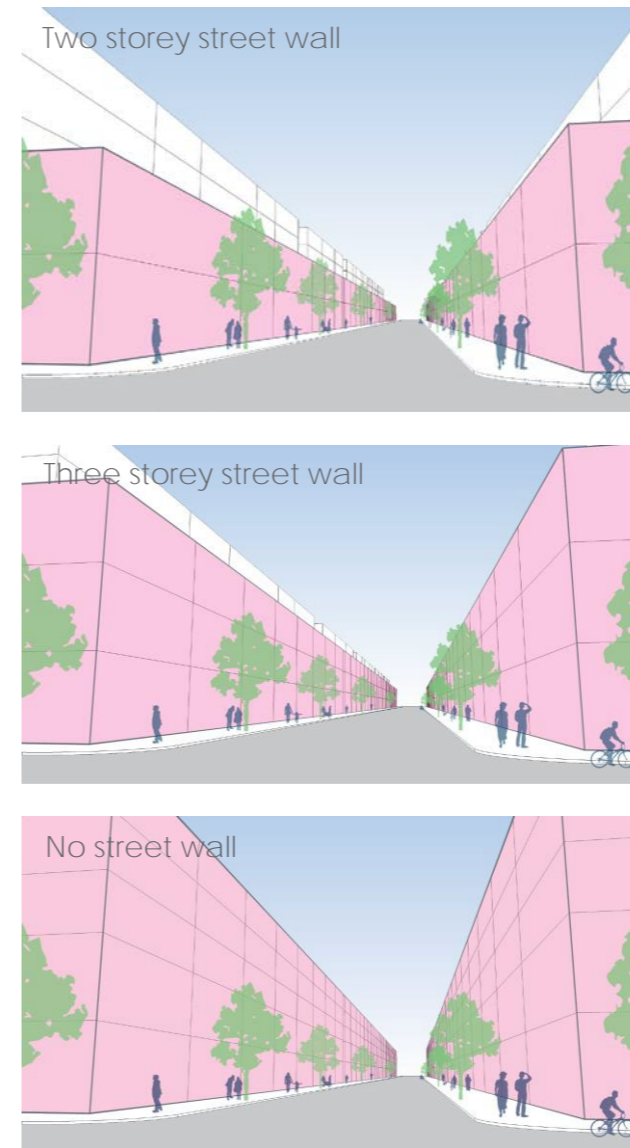


Figure 08: Street Wall Height Analysis (Urban Form Analysis).

Summary

- The Urban Form Analysis collates several detailed and in-depth analyses of the study area and its context, providing a solid base for the Structure Plan.
- The Urban Form Analysis identifies the key issues and opportunities and provides built form control recommendations to address these.
- The Urban Form Analysis requires further analysis and testing of the built form control recommendations to ensure that they are appropriate for the study area and its role as a major activity centre.

Action

- 3D model the impact that different heights have on view lines, heritage and character to determine if any need to be made mandatory to protect amenity and character.
- 3D model overshadowing impacts on existing and proposed open spaces at June 22 and Sept 22 to assess impact on useability and amenity.
- 3D model the effectiveness of varied setbacks at providing an appropriate transition to sensitive interfaces.
- 3D model the opportunities that height/massing controls have on the ability to achieve developable outcomes.

2.5 Heritage Review

The Glen Eira Heritage Review of Bentleigh and Carnegie Structure Plan Areas 2018 was prepared to identify any places with potential heritage significance that were not included in the Schedule to the Heritage Overlay of the planning scheme. The review consists of two phases, one for commercial areas and one for residential areas.

In the commercial areas, the review found that much of the built form dates to the Late Federation and early Interwar period. There are also several Art Deco and Moderne styles (late Interwar period) and plainer Post WWII. The following places and precincts are proposed for heritage protection through Planning Scheme Amendment C190 and are all located within the study area:

- Rosstown Hotel (1084 Dandenong Rd)
- Carnegie Retail Precinct (Koornang Rd: 22 to 166 evens and 41 to 145 odds. Morton Ave: 1-1B odds and 18. Rosstown Rd: 66 and 73. Woorayl St: 2A to 8 evens)
- Glenhuntly Tram Terminus Estate Shops (231-251 Koornang Rd)

The report also recommended that the extent of existing HO123, Carnegie Railway Station, be altered to only include the significant trees within the reserve and that the name of the overlay be changed to Carnegie Railway Station Reserve.

In the residential areas, the review found that much of Carnegie had been developed by 1945. It recommended seven places in Carnegie for heritage protection, none of which are located within the study area.

Council adopted all studies and proposed planning scheme amendment C190, which was adopted by Council in March 2021. At the time of writing, Council is still awaiting the decision from the Minister for Planning in relation to this amendment.



Rosstown Hotel (yellow)
Carnegie Retail Precinct (red)
Carnegie Railway Station Reserve (green)
(Source: Nearmap 19 October 2018)

Summary

- Heritage overlays apply to large parts of the study area, which were not in place when the Urban Form Analysis was undertaken.
- The heritage protection of the Carnegie Retail Precinct includes both contributory and non-contributory sites.

Actions

- 3D model potential built form controls that take into account the relevant heritage overlays and the status of each property as being either contributory or non-contributory to the cultural heritage significance of the precinct.

2.6 Zoning & Overlays

Zones

The Carnegie Activity Centre has the following zones.

Commercial 1 Zone (C1Z)

This zone covers areas to the north of the railway line and the central spine of the Activity Centre and has the following purposes:

- To create vibrant mixed use commercial centres for retail, office, business, entertainment and community uses
- To provide for residential uses at densities complementary to the role and scale of the commercial centre

The schedule to the zone does not specify any changes to the zone requirements.

Mixed Use Zone Schedule 1 (MUZ1)

There are several of these pockets within the study area and the purpose of this zone is to:

- To provide for a range of residential, commercial, industrial and other uses which complement the mixed-use function of the locality
- To provide for housing at higher densities
- To encourage development that responds to the existing or preferred neighbourhood character of the area
- To facilitate the use, development and redevelopment of land in accordance with the objectives specified in a schedule to this zone

The schedule to the zone does not specify any requirements.

General Residential Zone Schedule 2 (GRZ)

This zone covers pockets of residential area that buffer the RGZ from the NRZ and are deemed 'residential transition areas'. The schedule does not modify the height requirements from the mandatory 11m but it does specify rear setbacks requirements with 4m required on the ground floor, 5.5m required at the second storey and 11.5m required for the third storey from all property in the NRZ. The purpose of this zone is:

- To encourage development that respects the

neighbourhood character of the area

- To encourage a diversity of housing types and housing growth particularly in locations offering good access to services and transport
- To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations

Residential Growth Zone Schedule 1 (RGZ1)

This zone covers the immediate surrounding residential areas of the Centre. The schedule for the 'Urban Village' sets a height control for residential buildings at 13.5m or 14.5m when there is significant slope. No variation to Clause 54 and Clause 55 is specified. The purpose of this zone is:

- To provide housing at increased densities in buildings up to and including four storey buildings. To encourage a diversity of housing types in locations offering good access to services and transport including activity centres and town centres
- To encourage a scale of development that provides a transition between areas of more intensive use and development and other residential areas
- To ensure residential development achieves design objectives specified in a schedule to this zone
- To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations

Other Zones

Neighbourhood Residential Zone Schedule 1 (NRZ1) surrounds the southern end and is on the periphery of the main Activity Centre, with a 9m height limit. Public Use Zones for Local Government and Transport (PUZ6 and PUZ4) are also applicable to the study area and include the Community Centre/Library which has as schedule to provide 61 car spaces.

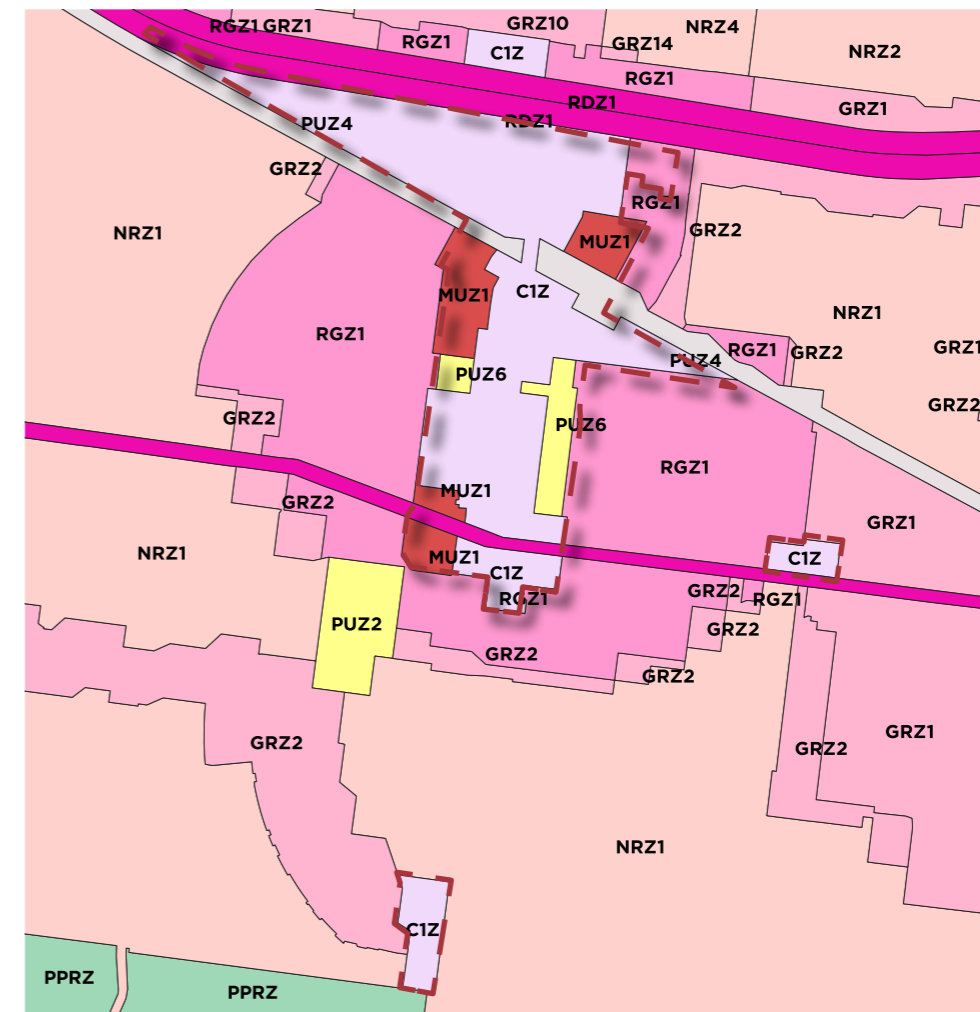


Figure 09: Current Zones

Overlays

The following Overlays apply to the Activity Centre.

Heritage Overlay (HO123 – Carnegie Railway Station, Koornang Road, Carnegie)

This overlay relates to the original station buildings (now demolished) and trees within the railway reserve. This overlay will be updated by Amendment C190.

The purpose of this overlay is:

- To conserve and enhance heritage places of natural or cultural significance
- To conserve and enhance those elements which contribute to the significance of heritage places
- To ensure that development does not adversely affect the significance of heritage places
- To conserve specified heritage places by allowing a use that would otherwise be prohibited if this will demonstrably assist with the conservation of the significance of the heritage place

Further places and precincts of heritage significance may be approved in the near future (refer page 12 for further details).

Design and Development Overlay Schedule 9 (DDO9)

This is an interim control that is due to expire at the end of the year. Council has sought an extension that the Minister for Planning is currently considering. The control is based on those proposed by Amendment C184. The Built Form Framework will provide the basis for an updated DDO.

This overlay applies to both sites and has the following Design Objectives:

- To preserve and enhance the low scale character of the Koornang Road shopping strip
- To preserve and enhance the low scale residential areas in Carnegie
- To encourage well designed mixed-use development, that supports the housing and economic needs of the Carnegie activity centre
- To ensure an appropriate design response to sensitive interfaces, such as heritage or low-scale residential sites and open space
- To encourage developments in urban renewal areas and on strategic sites that provide a significant benefit to the Carnegie community

The eight precincts have varying building height requirements with maximums ranging from 9m (two storeys) to 43m (twelve storeys) but preferred heights at a top of eight storeys in the urban renewal precincts north of the railway. The schedule also sets specific street, rear and side setbacks for each precinct along with building guidelines. The requirements of this overlay cease to have effect post 30 September 2021.

Environmental Audit Overlay (EAO)

This overlay applies to land north of the railway line and a small section immediately south of the station. It has the main purpose:

- To ensure that potentially contaminated land is suitable for a use which could be significantly adversely affected by any contamination

Special Building Overlay (SBO)

This overlay applies to the southern part of the study area and has the following purposes among others:

- To identify land in urban areas liable to inundation by overland flows from the urban drainage system as determined by, or in consultation with, the floodplain management authority
- To ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, is compatible with the flood hazard and local drainage conditions and will not cause any significant rise in flood level or flow velocity

Parking Overlay Schedule 2 (PO2 - Student Housing in Specific Areas)

This overlay applies to most of the study area and has the following purposes among others:

- To develop student housing that provides car parking at a rate commensurate with the reduced ownership pattern of students and the strategic location of the proposed student housing.
- Ensure that student housing developments generate minimal traffic impacts on the surrounding area.

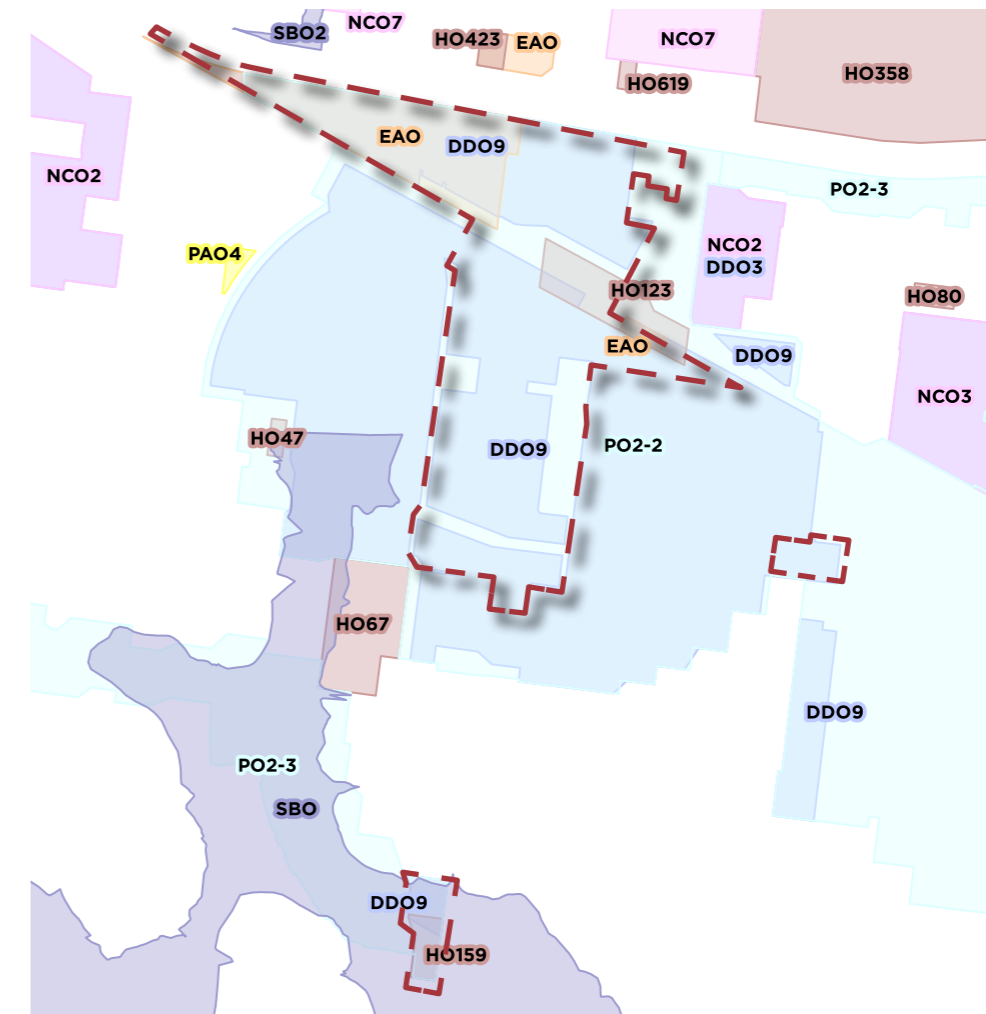


Figure 10: Current Overlays

2.7 Example VCAT Cases

There have been a number of development applications in Carnegie that have ended up being referred to the Victorian Civil and Administrative Tribunal (VCAT) to determine if they will obtain a planning permit. This usually occurs when the applicant is unsatisfied with the ruling provided by the local government. These decisions are useful to analyse when conducting built form analysis as they provide an insight into what others outside of the local government may consider acceptable. They also tend to highlight where there are holes in the existing policy and what these gaps end up allowing for.

The following summarises three VCAT approvals and one rejection, the reasons why and how this may influence the built form framework.

178-180 Koornang Road - Permit granted, 2014

Construction of a 5 storey building including: 25 dwellings, a ground floor shop on Koornang Road, a reduction of car parking and the waiver of a loading bay. The design included a car stacker system and ground floor parking. The land is zoned C1Z with a Parking Overlay and is located along the main commercial spine of the Activity Centre.

It was opposed by Council on the grounds of excessive building height and mass, poorly resolved design especially in terms of the setbacks, poor internal amenity, inadequate parking provisions and an unsatisfactory vehicle entry point to Koornang Road. Submissions were received that deemed the building incompatible with the scale and character of the existing buildings and a height that would lead to overlooking and reduced solar access.

A permit was granted by VCAT on the grounds that the location within the 'Urban Village' encourages higher density residential and mixed use development.

Conclusions:

The Activity Centre is an appropriate location for mixed use development with more height and mass.

Reduced parking within the parking overlay is acceptable however clearer guidelines outlining acceptable locations and egress is needed.

The ground floor primary frontage is acknowledged as the best location for retail, however design guidelines are needed to prevent excessive interruption along Koornang Road by driveway access.

14-22 Woorayl Street - Permit granted with conditions, 2016

Construction of a 13 storey building including: 154 dwellings, office and retail, two basement car parks and a reduction of car parking. The land is zoned MUZ and is within the urban renewal precinct of the Structure Plan.

A permit was previously granted by Council at 12 storeys with a different design outcome for the lower floors and setbacks/cut outs of the overall building. The new design was opposed by Council due to the increased height, overshadowing of the Carnegie Railway Station Reserve and the lack of active interfaces to Arawatta Street (a primary frontage in the Structure Plan). A new permit was granted with conditions which relate predominately to new parking and access provisions.

Conclusions:

The urban renewal areas are deemed appropriate for mixed uses and more height when compared to other areas of the Activity Centre.

Parking provisions outside of a PO will be enforced.

Ground plane/street interfaces are important and clearer guidelines to communicate expectations are required.

1056-1060 Dandenong Road - Permit granted with conditions, 2013

Construction of a 10 storey and 8 storey tower on a 2 storey podium including: 172 dwellings, offices, retail, two basement car park levels, at-grade and above grade parking. The land is zoned BZ2 (replaced by C1Z) and has an EAO as well as being located on Dandenong Road, a Road Zone (Category 1) - RDZ1.

Council issued a permit with conditions requiring the removal of 4 residential storeys on the grounds that the design did not respond well to the existing character and the proposed height would negatively impact the streetscape through overshadowing. Other concerns included poor amenity of dwellings, added pressure on traffic, parking and infrastructure.

Conclusions:

Dandenong Road and the urban renewal precinct are appropriate locations for the tallest buildings of the Activity Centre and a podium and tower style outcome.

Adequate parking provision and assessment of traffic impacts is important.

8 Egan Street - Permit not granted, 2017

Construction of a 16 storey mixed use development including: 135 dwellings, 2 commercial tenancies, two basement parking levels and several above ground parking levels. The land is zoned C1Z and has the overlays DDO9, EAO and PO2.

This case was a repeat appeal from a previous rejection at the tribunal in 2015. Since this time DDO9 has been introduced along with the Skyrail south of the site. A permit was rejected on the grounds that the design negatively impacts the public realm and associated public open space corridor along Egan Street. Also, several design objectives of the DDO9 were not met.

Conclusions:

Increased height within the urban renewal precinct is acceptable, however it should not come at a cost to the public realm.

The public realm associated with the Skyrail is crucial to the Activity Centre.

Parking at ground level on a primary frontage is not acceptable and must be sleeved with active uses.

Parking above ground can be mitigated by use of perforated panels. However, this does not maximise opportunities for interaction and surveillance.

Enhanced pedestrian permeability in larger lot designs is highly desirable and should be included in plans for any strategic sites.

2.8 Recent Development

1. 2 Morton Ave

- 6 storeys + 1 Basement
- Carstackers for 40 cars
- 3 visitor carparks at ground
- 1x small tenancy, 8x 1-bed, 32x 2-bed
- w: 14.2m, l: 55.4m

2. 1056-1060 Dandenong Rd

- 11/12 storeys (ground is double-height, with carparking on 'upper ground') + 2 Basements
- 239 car parks in total
- 2x medium tenancies
- w: 39.9m, l: 110.1m

3. 24 Woorayl St

- 4 storeys + 1 Basement
- Carstackers for 16 cars
- 3 visitor car parks at basement
- 6x 1-bed, 11x 2-bed
- w: 19m, l: 30m

4. 14-22 Woorayl St

- 13 storeys (2-storey podium of carparking wrapped in active uses) + 2 Basements
- Carparking:
 - 165 residential
 - 14 visitor
 - 20 commercial
- 1x supermarket, 2x small tenancies, 2x offices
- 152 apartments
- w: 59.1m, l: 57.1m

5. 1068-1074 Dandenong Rd

- 5 storeys
- Self-storage facility
- w: 39.2m, l: 48m

6. 180 Koornang Rd

- 6 Storeys
- Carstackers for 26 cars
- 1x small tenancy, 18x 1-bed, 8x 2-bed
- w: 14.8m, l: 42.9m

7. 276-280 Neerim Rd

- 5 Storeys + 2 Basements
- 54 car parks
- 3x medium tenancies, 21x 1-bed, 27x 2-bed
- w: 37.9m, l: 31.7m

8. 285 Neerim Rd

- 5 storeys + 1 Basement
- Carparking:
 - 55 residential
 - 15 retail (food)
- 2x medium tenancies (1x food), 7x 1-bed, 38x 2-bed, 3x 3-bed



Figure 11: Recent development map.

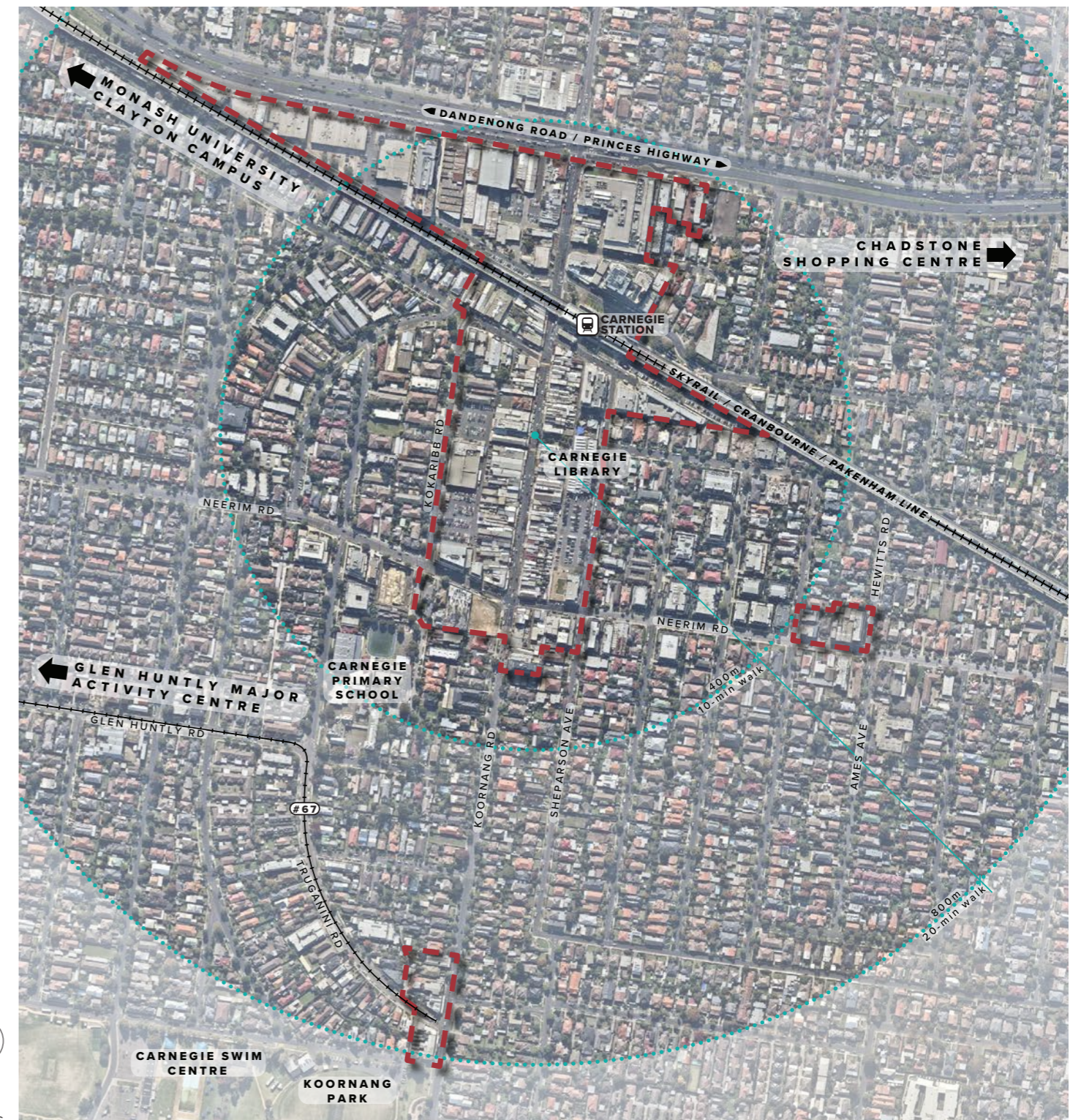
3.0 Opportunities & Issues

3.1 Site Context

The following site explorations are grouped under five themes:

- Land Use
- Built Form & Character
- Public Realm
- Interfaces
- Council Assets

These themes allow us to examine the various elements that impact on the Built Form Framework. The summaries capture issues and opportunities discussed during an internal workshop attended by Council officers from various departments, as well as from the background documents.



3.2 Land Use

As identified in strategic background documents including the previously adopted Structure Plan, the land uses within the Activity Centre are varied suiting its designation as a Major Activity Centre. The variety of uses able to be accommodated are influenced by factors such as, but not limited to:

Lot size

Larger lots tend to occur to the north of the railway and cater for large floorplate commercial uses such as supermarkets, storage facilities, trade retailers, large hospitality venues such as the Rosstown Hotel on the gateway corner of Koornang Road and multi-storey apartment developments. There are also larger lot sizes found to the east and west of Koornang Road behind the main street which accommodate the community facility on the east and a supermarket in the west.

Smaller narrow lots form the spine of the Koornang Road primary commercial 'Main Street'. These smaller sizes allow for a wide range of tenants offering choice and variety with the Centre gaining a reputation as a food destination.

Access

At-grade car parking is along most streets, on both sides, as well as larger lots associated with the library, supermarket and hotel. Accessibility to lots will also influence their ability to accommodate various uses. For instance, there may be some restrictions on vehicle numbers and sizes utilising rear laneways which will influence loading and car parking configurations.

Public Transport and cycling connections

The Centre's location around the Carnegie Train Station and on the Djerring Trail provides safe and equitable access to a range of locations including Monash University and Melbourne CBD. This allows for increased residential densities and commercial opportunities with good access to sustainable transport modes.

Existing

1. Well defined main street with a large diversity of independent retail/commercial tenants.
2. Larger, destination retail (Aldi, Spotlight, Officeworks) located along Dandenong Road with access from a slip lane
3. 27 new carparks being built on Egan Street - completion Oct 2021 (adding to existing at-grade car parks)
4. Recreational facility currently being built in Girdwood Avenue Reserve adjacent to skyrail

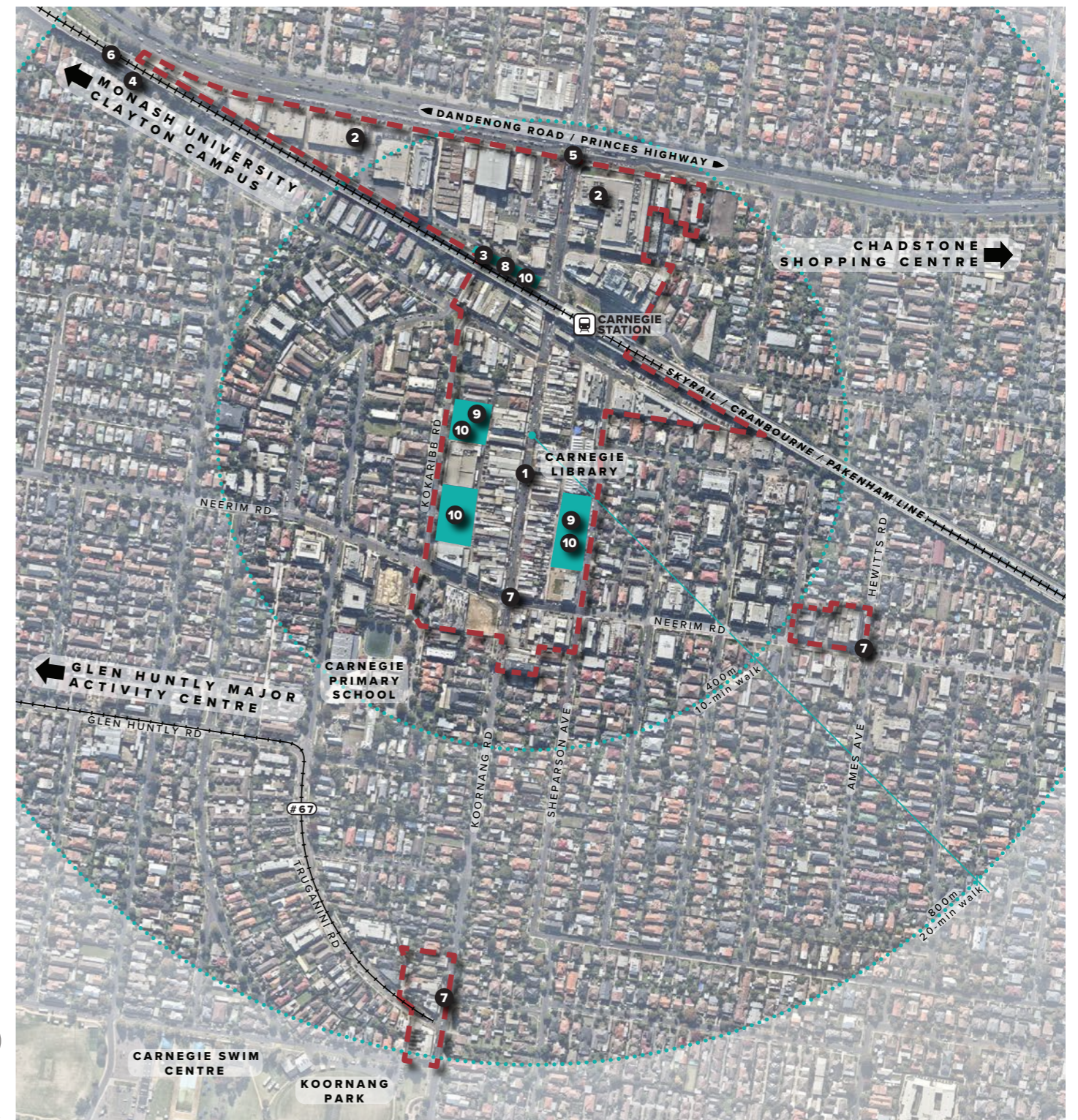
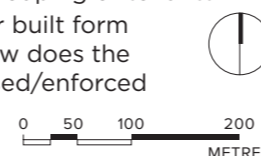
5. Challenging interface with Dandenong Road including noise and pollutants
6. Carnegie is one train stop from the Monash University Caulfield Campus and the new Caulfield mixed-use development
7. Street length from rail to Neerim of less than 300 metres encourages walkability in the core

Opportunities

8. On Egan St, change from 90 degree to parallel parking and provide larger street trees and more canopy
 9. Opportunity site, existing Council car park
 10. EV charge within parking areas, including PV/ensure renewable energy source for these charges
- Provide a diversity of housing and commercial opportunities
 - Bring more people to work and live and eat and enjoy the parks
 - Circular economy accommodated in the making of the place and in its operations as an area (diversity of use)
 - Increased density and diversity
 - Create a thriving night-time economy through increased restaurants and entertainment options
 - Major mode share change 50 / 50 consider the amount of car parking
 - Transport: balance between all the different road users, sustainability, active modes of transport, proper transfer between transport modes
 - Support businesses through temporary installations which lead to future capital works projects
 - Include public art requirements as part of developments

Issues

- Consolidated sites may lead to higher development, how do we protect the amenity of adjacent open space
- Retaining the diversity of tenants which is a large contributor to the success of the main street
- Consider/care around how far the commercial 'stretches' south along Koornang to the small centres at Truganini Road and east along Neerim to Hewitts Road. These have unique characters and grouping of tenants.
- Lot consolidation may lead to better built form outcomes at the upper levels but how does the diversity at ground level get expressed/enforced



3.3 Built Form & Character

The built form and character of Carnegie is informed by the land uses discussed previously as well as the era, individual character, style and materiality of the buildings. The importance of this has been captured in the Heritage Review highlighting the significance of the Koornang Road streetscape. More recent built form typologies such as residential apartments and mixed-use podium/towers are informing a changing character outside of the central spine of the activity centre, which is also influenced by the substantial physical presence of the elevated rail.

The new developments are predominately occurring on larger lots, however this may change and include proposals on smaller lots including lots along the retail core of Koornang Road. The Built Form Framework must interrogate the likely outcome of single lot, double lot and greater consolidation on the character of the centre.

The character of streetscapes are also influenced by the materiality and massing of the built form, along with the uses at ground level. The Framework must consider the integration of the established and desired street hierarchy, land uses, egress and access (both pedestrian and vehicular) materiality, overhangs/awnings, glazing and activation to ensure a logical and cohesive outcome.

Existing

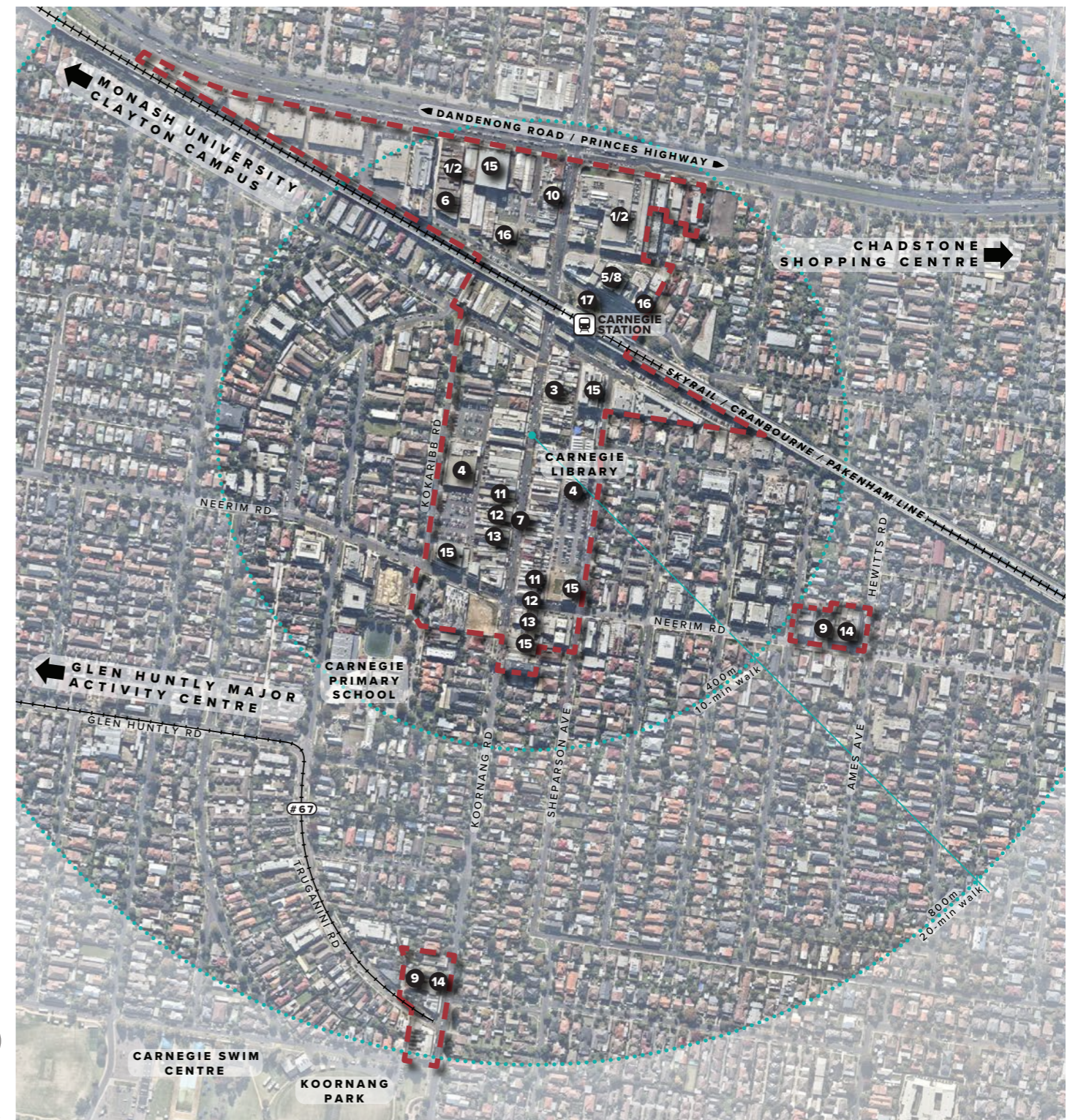
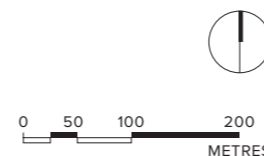
1. Larger sites north of the railway
2. Larger scale commercial along Dandenong Road
3. Lot sizes along Koornang Rd between the rail and Neerim Road are generally finer grain
4. Lots sizes behind the fine grain streetscape are larger and contain community facilities and larger retail (woolworths)
5. New and proposed built form on Arawatta Street/ Woorayl Street is achieving greater height without well defined/prescribed character/quality
6. VCAT identified a policy vacuum stating that they were comfortable with 16 storeys (8 Egan - VCAT decision)
7. Heritage fabric defines a dominant 1-2 storey 'Main Street' typology with continuous street overhang/awning
8. Existing and proposed taller built form along Woorayl Street and Egan Street overshadow the new public open spaces associated with the level crossing removal
9. Small commercial pockets have distinct character provided by the existing built form
 - Large variety of lot scales
 - Large variety of building scales

Opportunities

10. Opportunities for greater height and mass between the railway and Dandenong Road
11. Retain finer grain development between railway and south to Neerim Road
12. Retain and enhance active frontages on koornang Road
13. Retention/ reinforcement of a 2 storey streetwall south of the railway is supported by a heritage study
14. Protect/enhance the unique character of the two smaller commercial clusters
 - Increase density and diversity
 - Embed climate change action in everything we do to achieve net zero community emissions by 2030
 - Built form should deliver human scale streetscape interfaces
 - Consider solar access to public realm including footpaths as a way of controlling setbacks
 - Protect the heritage places, consider the extent of fabric retention (ie first front room)
 - Consider green spaces/infrastructure on multiple levels such as roofs and walls

Issues

1. Potential urban heat from large concrete roof top, low permeability of large concrete surface
2. Smaller lots may need consolidation to achieve good built form outcomes and increased diversity and density
3. Taller built form may lead to overshadowed public realm and wind tunnel effects
 - Lack of planning certainty and expectation around high quality design outcomes
 - Car parking within mixed use developments, at the podium level, may impact streetscapes
 - 'Market/developer' expectations around car parking within new residential developments may not be in line with encouraging a reduction in car use



3.4 Public Realm

The Public Realm is defined as any space that is publicly accessible and in this case, generally owned and/or managed by Council. This includes parks, plazas and streets. A series of actions were identified to improve the amenity of the public realm in the Carnegie Activity Centre and provide a variety of experiences. This includes ideas such as shared streets, parklets, new parks and plazas and improvements to the existing footpaths.

Successful implementation of the public realm plan is essential to the sustainability of the centre from a cultural, economic and environmental aspect. The Built Form Framework will provide the framing elements to these crucial community assets.

Existing

1. Increased recreational use near station with well-loved public open spaces delivered with the level crossing removal
2. Djerring Trail an important shared use trail connecting activity centres and encouraging active transport
3. New Woorayl Street Reserve with parkland and playground space for children and families to be completed Oct 2021
4. Towards Caulfield station at Girdwood Avenue a new multigeneration space built with elderly exercise equipment, half basketball court and picnic tables
5. Dominance of at-grade car parks surrounding the main street
6. Koornang Road cross-section includes parking and a narrow bike lane on both sides
 - Lack of canopy trees in the streetscape and within at-grade car parks

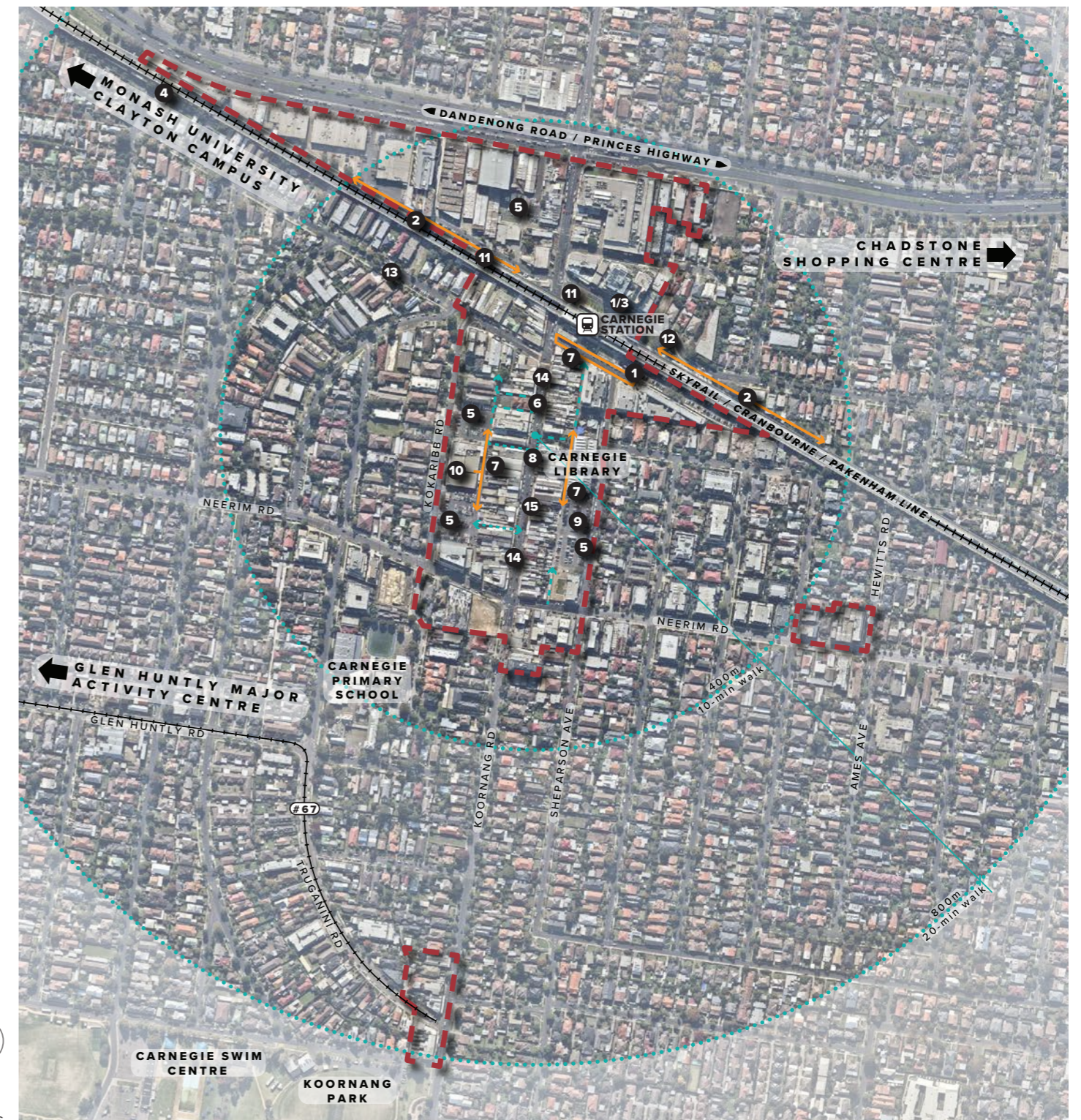
Opportunities

7. Create shared spaces
8. Increase through-site links and pedestrian permeability in centre. (this is the dotted blue line)
9. Increase tree canopy cover to reduce urban heat island effect
10. Create a park on top of Woolworths
 - Think about streets as public space
 - Improve the walkability, better connected for pedestrians

- Improve the public realm
- Make trees a key element
- Water in the landscape - opportunities for WSUD and water as play increase storm water harvesting and reuse.
- Embed climate change action in everything we do to achieve net zero community emissions by 2030
- Increase the services delivered by the concept of 'open space' beyond it only being a garden on the ground - use all surfaces to achieve multiple outcomes
- Introduce permeable surfaces and WSUD in car park design
- Leverage the 'new car parks' against taking some away for open space
- Public domain improvements - removal of barrier fencing, footpath widening, street trees, places for people to relax and enjoy
- Close off Koornang road to cars after hours
- Pedestrian priority rather than car dominance
- Protect open space
- Provide more green spaces and make existing spaces greener

Issues

11. Difficult to protect the open space associated with the rail line due to building heights
12. Woorayl Street Reserve has several significant remnant Red Gums that need protection from increased overshadowing
13. Review overshadowing of urban renewal area to Rosstown Road and Djerring trail (raised in submissions)
14. Some community reluctance to convert car parks to open space
15. Power lines on the eastern side of Koornang Road may limit tree growth



3.5 Interfaces

The Activity Centre is surrounded by a valued suburban residential typology. Glen Eira have committed to accommodating the majority of new growth within Activity Centres taking advantage of the excellent transport, community and commercial amenity, leaving the surrounding residential areas relatively unchanged.

This sensitive interface requires the Built Form Framework to consider elements that transition from the 'harder' more urban typology to the more suburban outlook. This may include changing setbacks and landscape requirements as well as consideration regarding increased traffic volumes and egress arrangements.

Existing

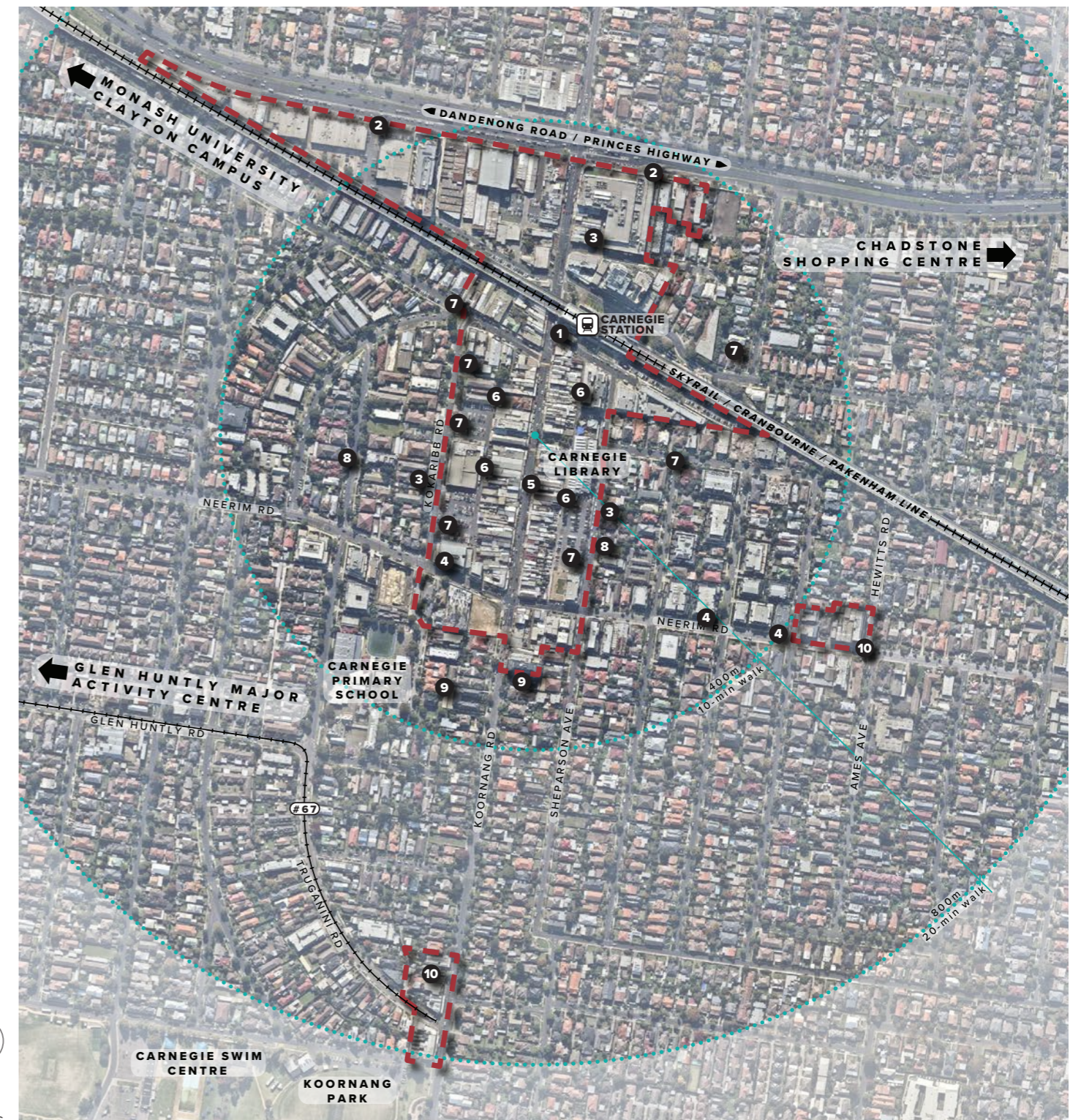
1. New interface between Skyrail Open Space Corridor and Koornang Road
2. Robust interface with Dandenong Road, softened by the service lane
3. Distinct changes in land use west of Kokaribb Road and east of Shepparson Ave
4. Neerim Road is accommodating increased density and apartment developments
5. Relationship between the street/footpath and the shop fronts is defined by the overhang/awning

Opportunities

6. Improve laneway interfaces to activate them and increase vibrancy throughout the street network
7. Ensure built form controls create a transition zone
 - Consider outlook and privacy (without the need for excessive screening)
 - Consider transition between small commercial clusters and neighbouring residential

Issues

8. Difficult transition between 2 storeys and expected high development
9. Define the transition zone between the land uses south of Neerim Road
10. Define the interfaces/transition between the commercial clusters
 - Vehicle/loading access to existing lots via laneways may restrict future development and pedestrian amenity
 - Noise conflict between shops and residential



3.6 Council Assets

Council assets in Carnegie primarily include the streets (roadway and footpaths), public plazas and some at-grade car parking. The new open space delivered as part of the Level Crossing Project is owned by VicTrack.

These assets are Council's primary opportunity to deliver increased amenity for the growing population. They are often in demand by competing uses such as a car park versus a park. The Built Form Framework must consider these alternative uses and the fact that they may change over time ensuring the edge condition is fit for purpose now and does not prejudice a change of use in the future.

Existing

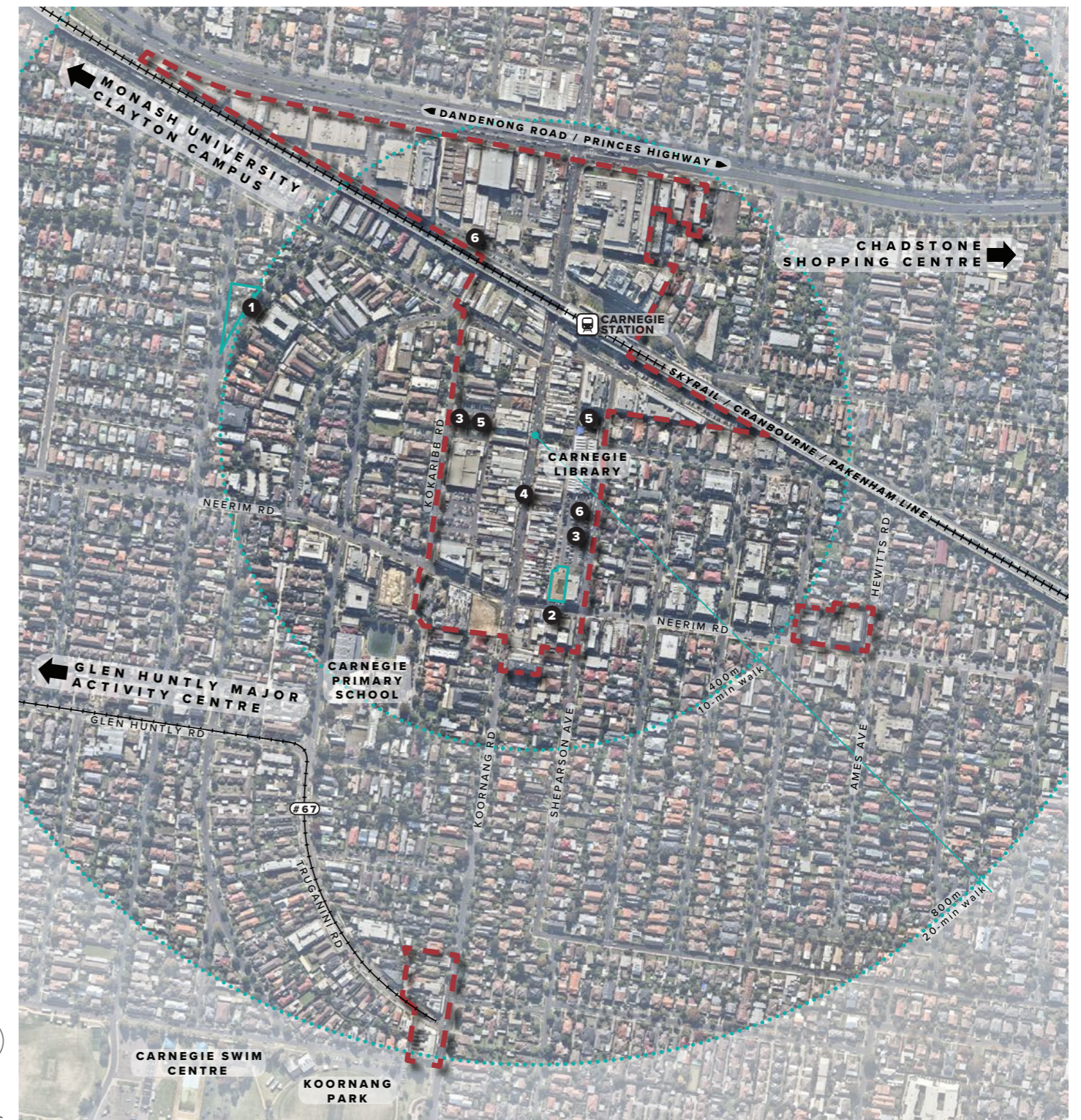
1. Public acquisition overlay for these two properties (PAO4- for public open space)
2. Council bought land to link with public car park and create more open space

Opportunities

3. Council car parks - opportunity for people focused outcomes
4. Council managed road space - opportunity for parklets, on-street dining
5. Potential for new open space
 - Net zero emissions by 2030 - Council policy

Issues

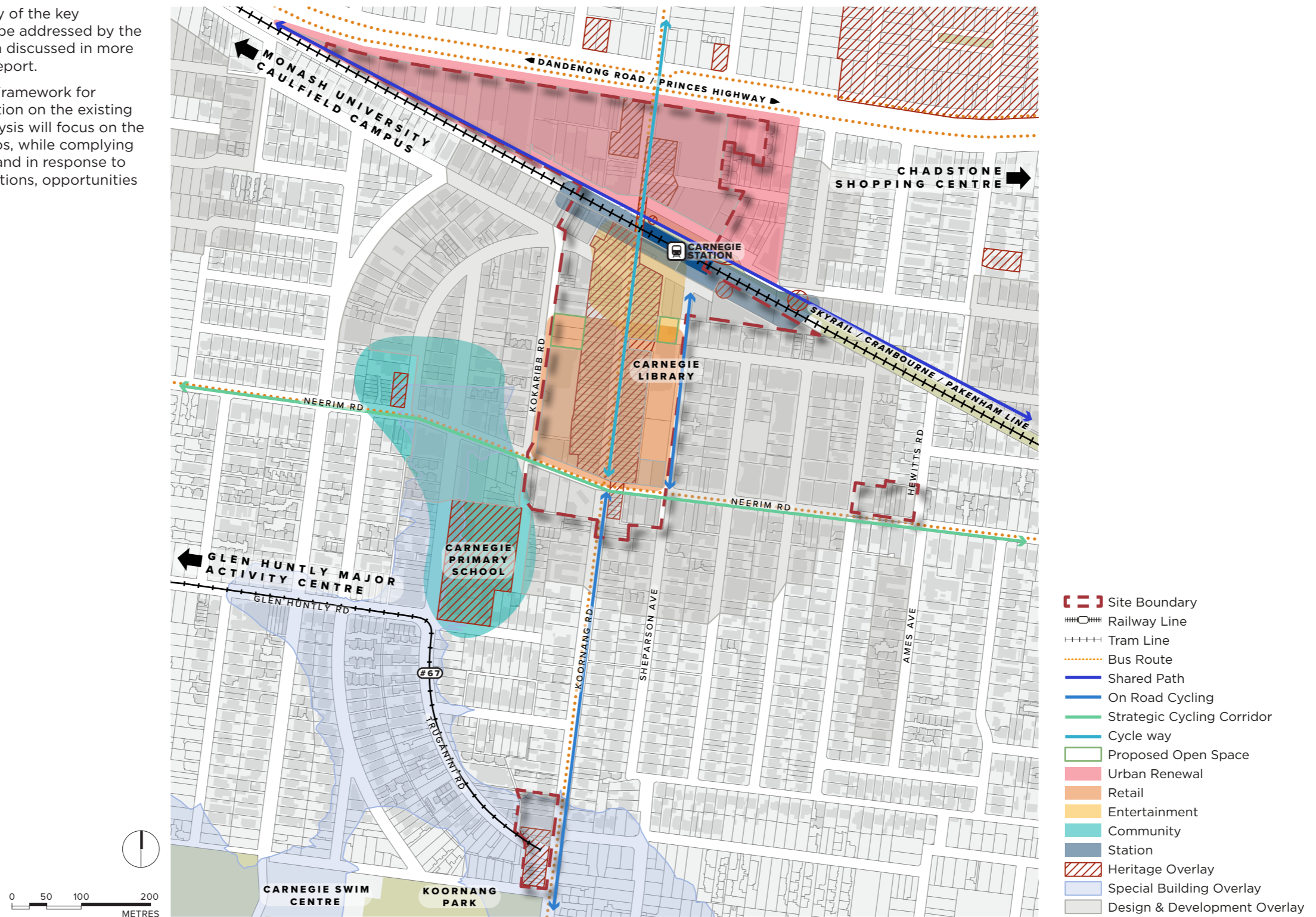
6. Expectations from community for Council to provide car parking



3.7 Summary

The following map provides a summary of the key initiatives, opportunities and issues to be addressed by the built form framework. These have been discussed in more detail in the previous sections of this report.

This report will inform the Built Form Framework for Carnegie by collating relevant information on the existing context of the study area. Further analysis will focus on the impacts of different built form scenarios, while complying with applicable state and local policy, and in response to the previously identified existing conditions, opportunities and issues.





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