Appendix A: Landscape and Public Realm Concept Plan

A

REVITALISING CENTRAL DANDENONG - URBAN REALM

May 2024

Prepared for Capital Alliance

REALM studios

MASTERPLAN LANDSCAPE SUMMARY

The Urban Realm Masterplan is a document that has been prepared in close collaboration with architectural, planning and movement team to achieve an integrated responds to the public realm, considering, operating with and delivering on multiple values. The Masterplan is fundamentally underpinned by the following five structuring principles:

1. **Water expression & capture,**
2. **Urban greening and canopy cover,**
3. **User experience and movement,**
4. **Place and building activation, and**
5. **Place based environmental performance.**

These structuring principles provide the framework for future Central Dandenong to ensure that it has; adaptive and climate resilient infrastructure, a focus on the human scale and granularity of great urban spaces, a clarity of urban space and connectivity to the broader community, and public spaces that retain the connection to and a deep sense of place.

A primary focus in the urban realm has been the interface between building entries, ground floor uses and public space, ensuring that where the three meet, **a considered and engaging and active 'human-scale' is achieved.** *The translation of this is that whilst the overall built form of Revitalising Central Dandenong is of a significant scale, the lower-level interface is an interstitial exchange through a mixture of green blue and grey spaces that* **deliver diverse uses, openings, and offerings – to ensure the urban ecology has a sense of granularity and character.**

The Masterplan endeavours to build upon the existing urban fabric of Central Dandenong and to take this further to create great spaces with **a rich urban ecology that are vibrant, inviting, and both inclusive and reflective of the diversity of the community.** *This diversity then becomes the future custodian of these urban spaces.*

Halpin Way - Artist's Impression
Subject to Authority Approval

HALPIN WAY

DESIGN PRINCIPLES

1. Clear and pedestrian focused shared street, de-cluttered of raised kerbs and edges.
2. Existing raingardens to be retro-fitted into below ground, linked storage cells. Allowing for the removal of obstacles and barriers (walls and kerbs).
3. Surface water to be directed to central drainage lines and connected via sub-surface cells.
4. Pavement transitions to be flush between shared space, verges and building interfaces.
5. Trees (southern side) to be planted in copses and selected to allow for canopy cover, and tall thin trunks that allow winter insolation.
6. Trees (northern side) to be selected to provide dense all year round shade.

DESIGN OBJECTIVE

Provide a pedestrian orientated ground plane under an ecology activated arboreal corridor.

SITE MASTERPLAN

N

SCALE 1:100

0 1 5 10M

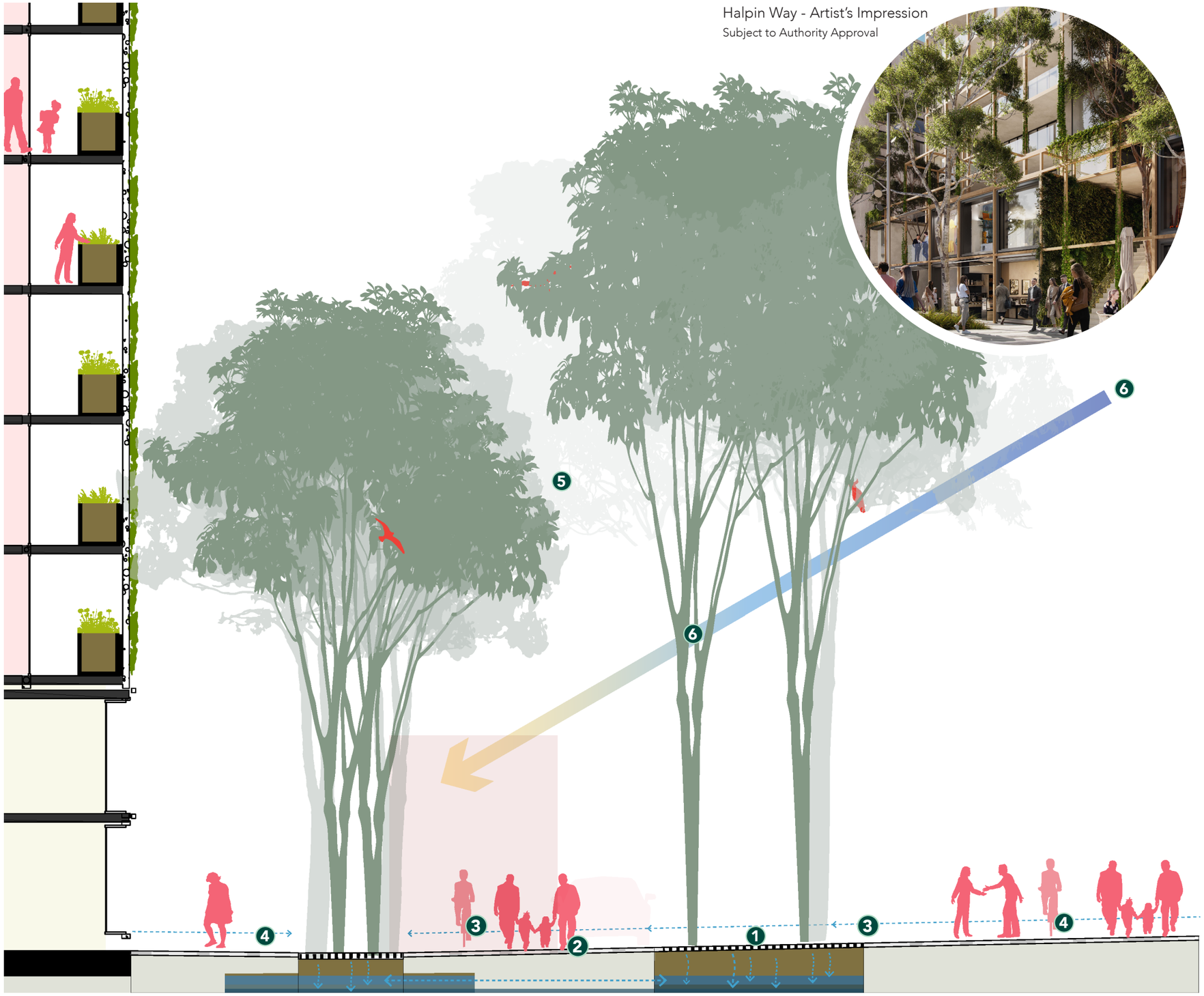
2

REVITALISING CENTRAL DANDENONG

MAY 2024

Halpin Way - Artist's Impression

Subject to Authority Approval



SITE SECTION 1 - HALPIN WAY

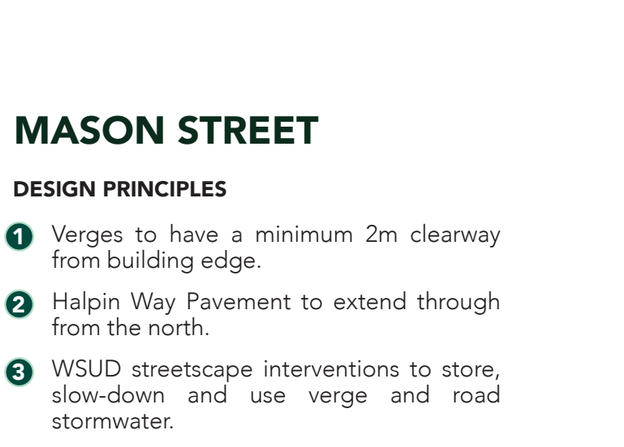
MASON STREET

DESIGN PRINCIPLES

1. Verges to have a minimum 2m clearway from building edge.
2. Halpin Way Pavement to extend through from the north.
3. WSUD streetscape interventions to store, slow-down and use verge and road stormwater.
4. Trees (Western and Eastern) to be planted in copses and selected to allow for canopy cover and tall thin trunks that allow winter insolation.
5. Trees (Western and Eastern) to be planted with adequate breaks to allow for pockets of winter sun.

DESIGN OBJECTIVE

Provide a continuation to Halpin Way's recently completed upgrade with Mason Street to be populated by trees, which define the bus lane and movement patterns.



SITE MASTERPLAN

N

SCALE 1:100

0 1 5 10M

3

REVITALISING CENTRAL DANDENONG

MAY 2024

Mason Street - Artist's Impression
Subject to Authority Approval

SITE SECTION 2 - MASON STREET

4m Verge | 2.5m trees in garden bed where practical e.g not above basement | Carriage Way | 2.5m trees in garden bed where practical e.g not above basement | 4m Verge Graded to Trees | Property Boundary

Mason Street

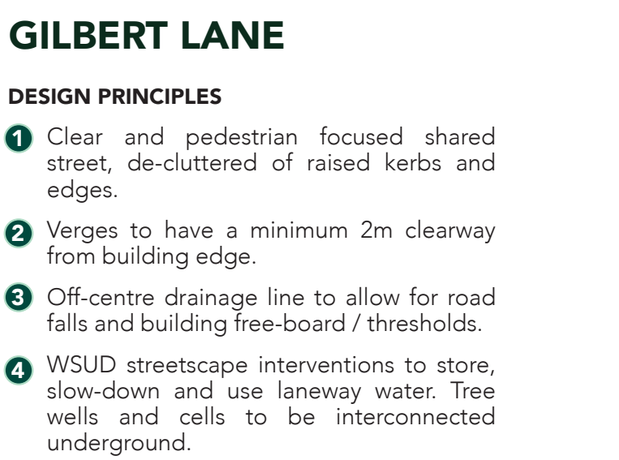
GILBERT LANE

DESIGN PRINCIPLES

1. Clear and pedestrian focused shared street, de-cluttered of raised kerbs and edges.
2. Verges to have a minimum 2m clearway from building edge.
3. Off-centre drainage line to allow for road falls and building free-board / thresholds.
4. WSUD streetscape interventions to store, slow-down and use laneway water. Tree wells and cells to be interconnected underground.
5. Service lane clearance to be provided to the Northern side of laneway.
6. Community seating element to provide buffer between trees, verge and service vehicles. Seating to be of 'communal scale' allowing for various user experiences and uses.

DESIGN OBJECTIVE

Provide a finer grain laneway that responds to level change and allows for urban greening and water capture.



SITE MASTERPLAN

N

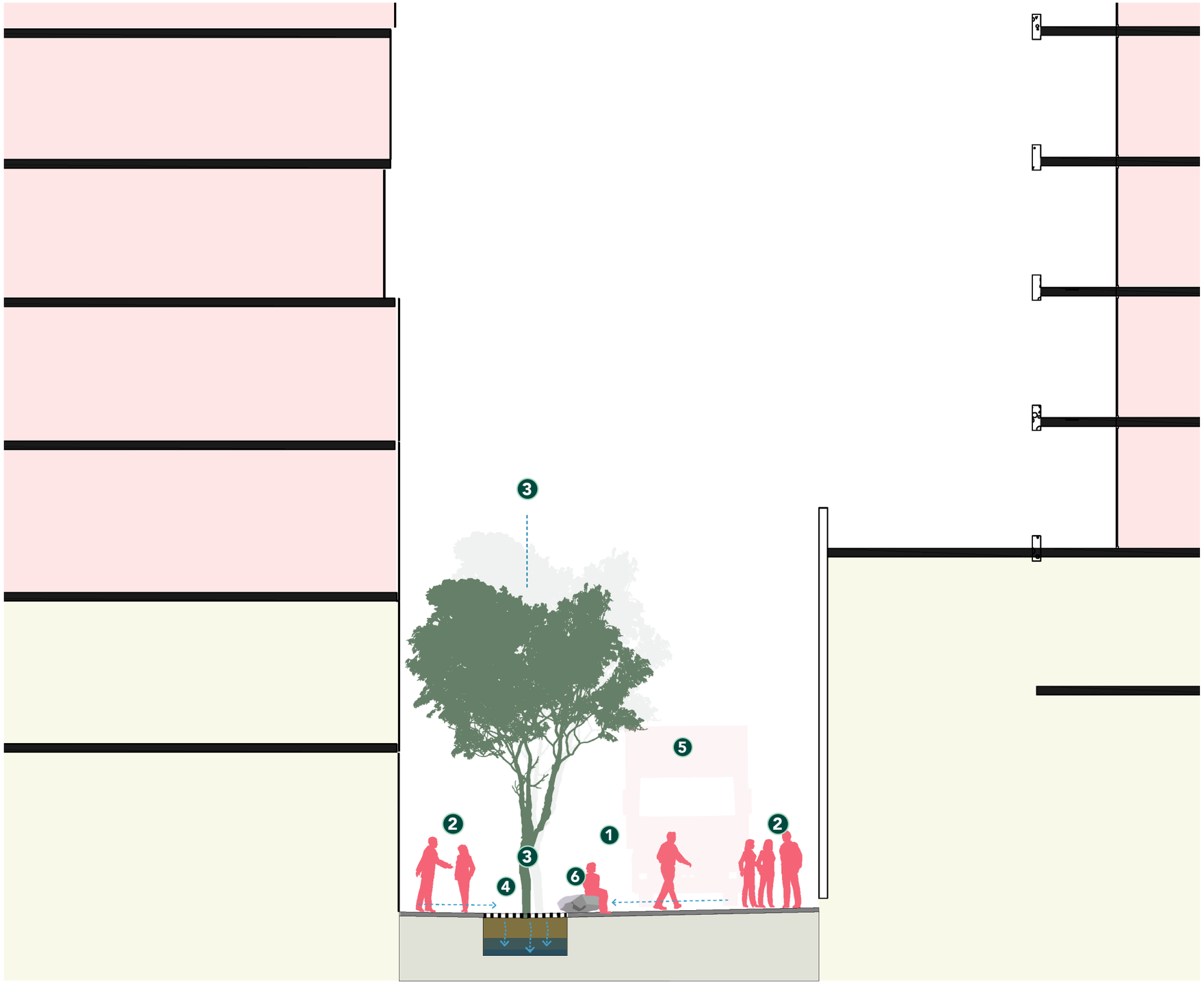
SCALE 1:100

0 1 5 10M

4

REVITALISING CENTRAL DANDENONG

MAY 2024



SITE SECTION 3 - GILBERT LANE

LITTLE INDIA

DESIGN PRINCIPLES

1. Rainwater to be captured and expressed within the building facade and connected to laneway trees.
2. Entry points to tenancies to be located on the northern (higher side) with activation to any level change expression.
3. Surface water to be slowed and drained to intermittent laneway trees and areas of greening.
4. Intermittent trees to provide visual way-finding points and canopy shade. where practical e.g not above basement
5. Tenancies to project and provide activation to laneway.
6. Raised edges to provide opportunities for pause points, people-watching, shop spill-out and occupation in winter sun.

DESIGN OBJECTIVE

Provide surface water capture and expression, whilst allowing for compliant on-grade entries and activation to laneway interfaces.

SITE MASTERPLAN

N

SCALE 1:100

0 1 5 10M

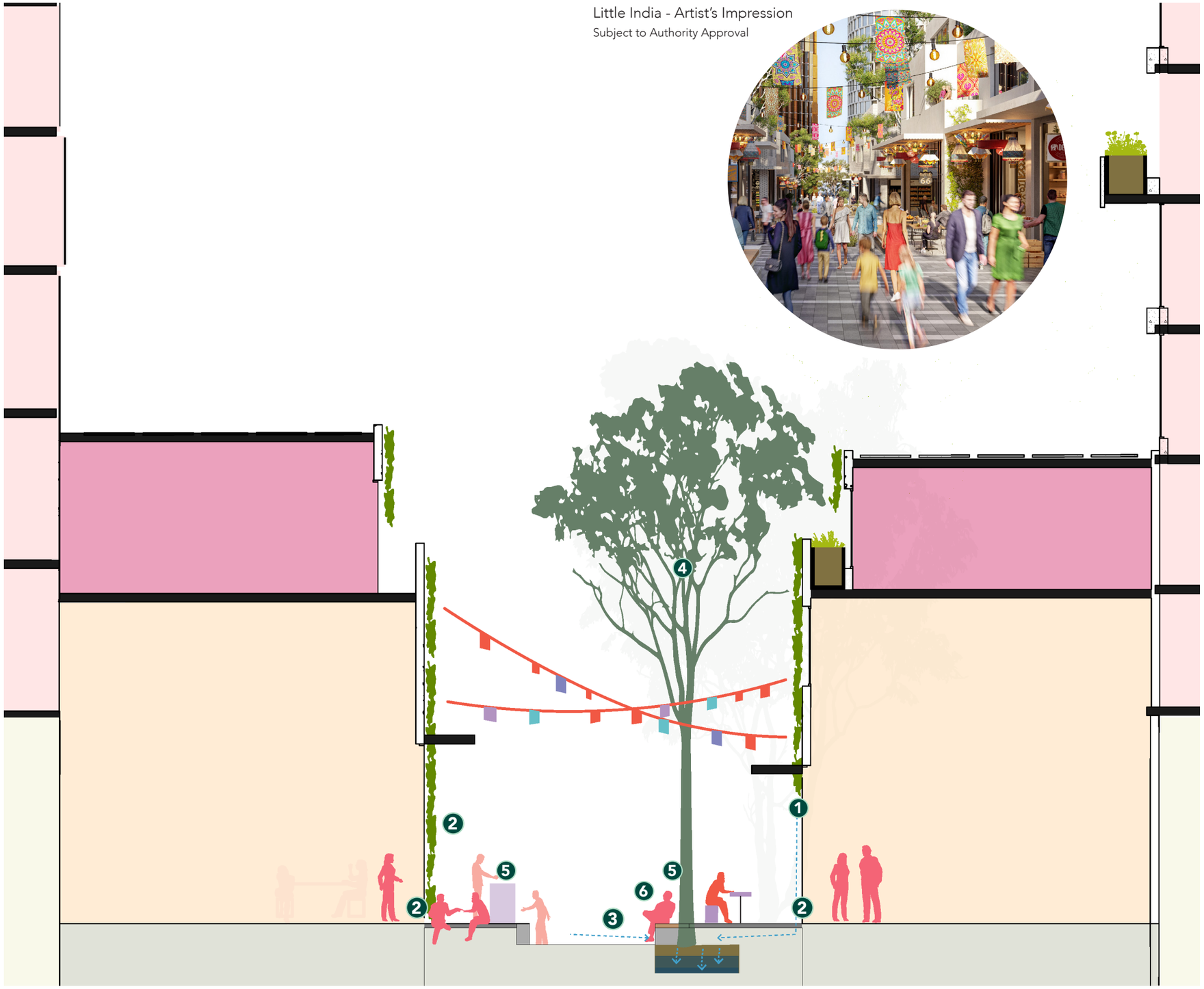
5

REVITALISING CENTRAL DANDENONG

MAY 2024

Little India - Artist's Impression

Subject to Authority Approval



SITE SECTION 4 - LITTLE INDIA

Property Boundary | 2.5m Building Interface | 3.0m Service Lane | 3.5m Building Interface | Property Boundary

Little India

FOSTER STREET

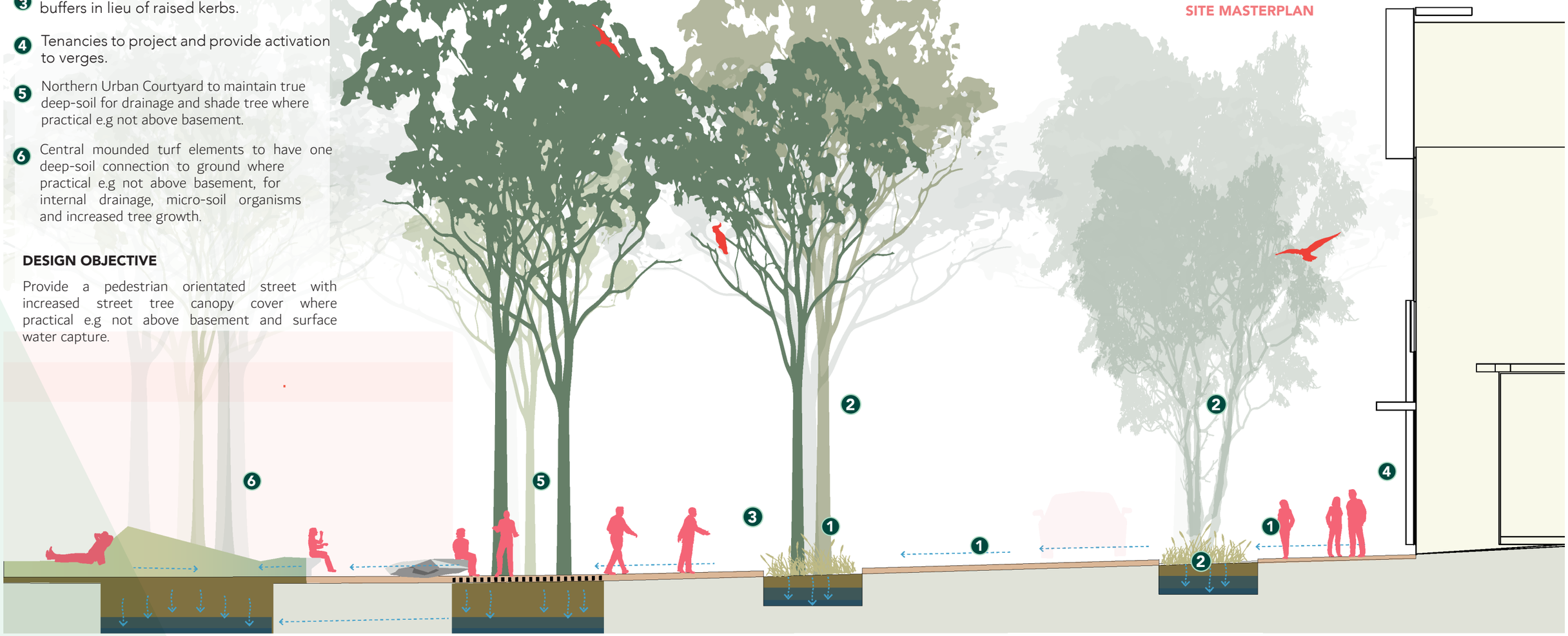
DESIGN PRINCIPLES

1. Stormwater to be directed to southern (lower) side of road.
2. Increased number of street trees to northern and southern verges where practical e.g not above basement.
3. Bollards to be used as vehicle / pedestrian buffers in lieu of raised kerbs.
4. Tenancies to project and provide activation to verges.
5. Northern Urban Courtyard to maintain true deep-soil for drainage and shade tree where practical e.g not above basement.
6. Central mounded turf elements to have one deep-soil connection to ground where practical e.g not above basement, for internal drainage, micro-soil organisms and increased tree growth.

DESIGN OBJECTIVE

Provide a pedestrian orientated street with increased street tree canopy cover where practical e.g not above basement and surface water capture.

SITE MASTERPLAN



SITE SECTION 5 - FOSTER STREET

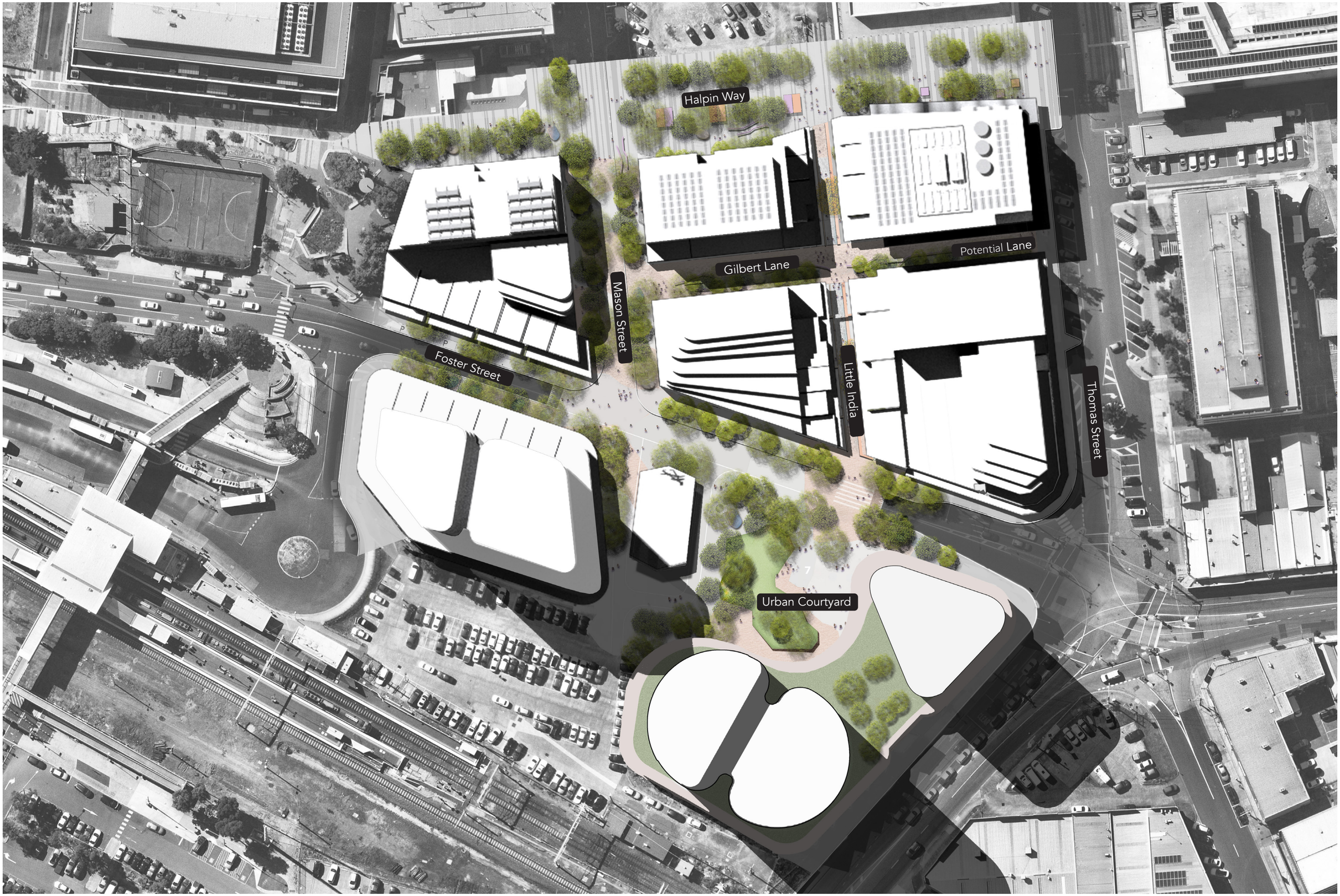
SCALE 1:100

0 1 5 10M

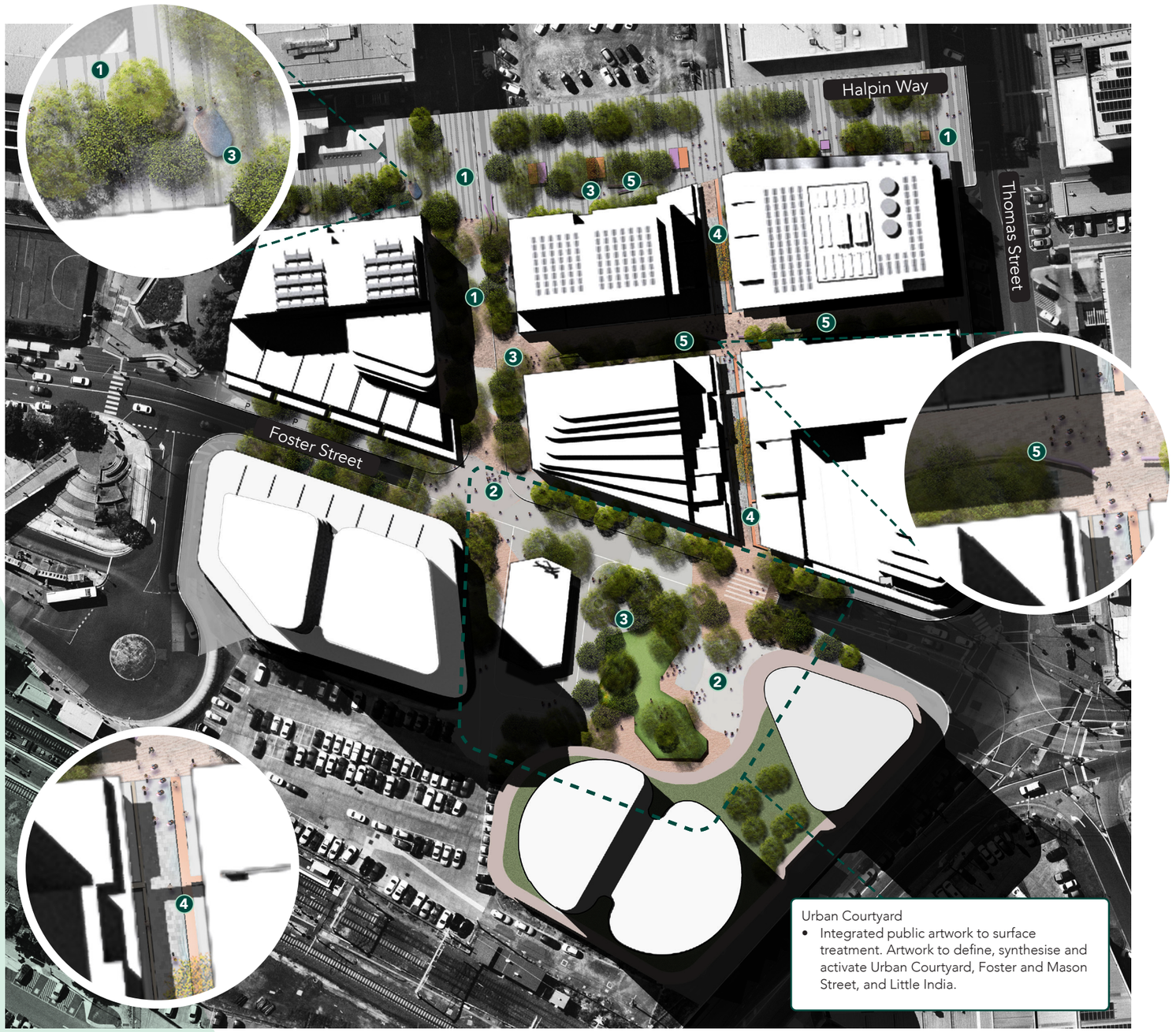
N

MASTERPLAN - PUBLIC OPEN SPACE ZONES

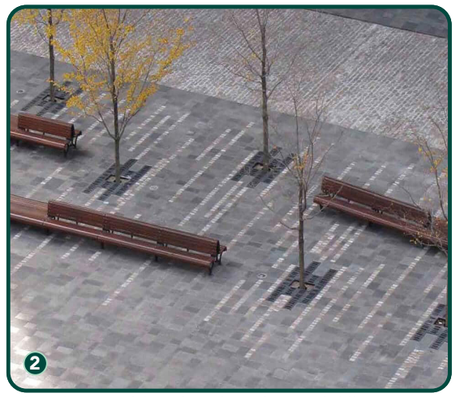
MASTERPLAN - URBAN REALM



MASTERPLAN - MATERIALITY & SITE FURNITURE



Mason Street & Halpin Way to extend existing concrete paving from the recently completed Halpin Way upgrade.



Urban Courtyard & Little India to be tonal different pavement from the Northern Precinct. Changes in format sizes to delineate laneways.

Large Concrete seating elements with multi-use pole.

Timber & Concrete seating elements to Little India walls.

Large communal seating ribbons to Gilbert Lane and the recently completed Halpin Way upgrade.

Note: furniture location and detail is indicative

N

MASTERPLAN - SOFTSCAPE

Shade trees and integrated stormwater management to streetscape.

Range of native and indigenous planting opportunities

Urban courtyard with raised turf opportunity.

Upper level green space and communal areas where practical.

Clear sightlines through planted tree canopy.

Variety of tree planting opportunities to the recently completed Halpin Way upgrade.

Note: furniture location and detail is indicative

MASTERPLAN - STREET UPGRADES

Halpin Way

Settlers Square

Mason Street

Little India

Little India

Foster Street

Thomas Street

Mason Street

Halpin Way

Foster Street

Dandenong Station

N

Legend

1. Halpin Way Upgrade (recently completed by Council)
   (Note: Works outside title boundary)
2. Little India Upgrade
   (Note: Works on Title)
3. Settlers Square Upgrade
   (Note: Works outside title boundary)
4. Mason Street Square
   (Note: Works outside title boundary)
5. Foster Street Upgrade and access / egress to the Vic-track commuter car park
   (Note: Works outside title boundary).

Appendix B: Transport Management Report

B

Movement & Place Consulting

Revitalising Central Dandenong

Transport Management Report (2024)

Final Report

18 September 2024

Document Revision History

Version	Date	DOCUMENT Type
Version 1.0	21 September 2021	Draft Report
Version 2.0	19 August 2022	Draft Report
Version 3.0	7 December 2022	Final Report
Version 4.0	15 December 2022	Final Report
Version 5.0	28 July 2023	Final Report
Version 6.0	24 August 2023	Final Report
Version 7.0 & 8.0	12 June 2024	Final Report
Version 9.0	13 June 2024	Final Report
Version 10.0	18 September 2024	Final Report

Document Control Panel

	Name	Date	Signature
Prepared by	Angela Mejia, Hesara Weliwitiya, Mustafizur Rahman, Alice Liang, Joshua Jang, Natasha Manawadu	7 June 2024	
Reviewed by	William McDougall, Rick Williams, Angela Mejia	11 June 2024	
Approved by	Knowles Tivendale	13 June 2024	

Addressee:
Nancy Cao
Australia
Capital Alliance
Level 11, 720 Bourke Street
Docklands VIC 3000

Another Project By:
Movement & Place Pty Ltd
ACN: 625 377 595

Trading As:
Movement & Place Consulting
ABN: 85 375 284 892
PO BOX 8101, DANDENONG VIC 3175
info@movementandplace.com.au
www.movementandplace.com.au

Executive summary

Dandenong is a location with significant commercial, industrial, and educational activity, with a number of retail, health, education, and warehousing facilities across the area. Dandenong is acknowledged as one of seven National Employment and Innovation Clusters (NEICs) in Melbourne's principal growth strategy for the coming 30 years [1]

The Revitalising Central Dandenong (RCD) initiative, which involves the renewal of a site on Foster Street adjacent to Dandenong Station, is a major investment with a focus on growing education and economic activity in the area, the commercial and cultural activity in the Little India precinct, and opportunities to promote 'living locally'. This report explores the transport impacts of the proposal.

The site has a land area of 17.95 hectares, bounded by Halpin Way, Mason Street, Cheltenham Road, and Thomas Street. The seven buildings proposed will include a range of land uses including residential, retail, commercial, education and community-oriented uses. The total development is expected to be completed by 2041, with about 37% completed by 2031 (interim period).

The land use and operational characteristics of the proposed development will increase the demand for travel to, from and within the area. The development is key to achieving the State and local vision for revitalising Central Dandenong.

The rate of car parking based on similar locations results in a recommendation for 489 car parking spaces to be provided across the site and made available to the public. This will be around 7% of the total public car parking in Central Dandenong. The maximum parking rates should not exceed the parking rates proposed in Section 7.3.5 of this report, unless with the prior written consent of the Responsible Authority.

This transport impact assessment for the development evaluates the future transport needs of the proposed development and their impact on the surrounding networks (walking, bicycle riding, public transport, and private vehicle). The transport demand forecasts for 2031 and 2041 were developed using a 4-step transport model. These future demands were assessed for three peak periods: weekday morning, weekday afternoon and Saturday (middle of the day).

The modelling assessment relates to the development plan as of May 2024 (dated August 2023). As designs evolve and are firmed-up, at each approval and construction stage, transport analysis and modelling will be updated. The model has been updated using SCATS data from October 2023.

It is estimated that, by 2041, the development will generate a weekday peak hour maximum of 900 person-trips per hour by public transport, walking, bicycle riding and private vehicle; this is about three times higher than in 2031.

The modelling identifies significantly higher rates of walking and vehicle trip generation from/to the proposed sites during the afternoon peak. Higher rates of bicycle trips from/to the sites are expected in the morning peaks. Trip projections by modes for each peak hour are shown in detail in Table 0-1 below.

[1] City of Melbourne (2017) Plan Melbourne 2017 - 2050

Table 0-1 Summary of the forecast travel demand

Peak Periods	Year	Bicycle	Vehicle	Walking	Public Transport	Total
AM	2031	50	568	218	300	1,136
	2041	165	1,984	676	903	3,728
PM	2031	38	728	312	205	1,283
	2041	127	2,398	940	609	4,074
Saturday	2031	27	872	81	201	1,181
	2041	58	884	176	435	1,553

Source: M&PC (2022)

The impacts of the forecast travel demand were evaluated across the transport networks. Active and public transport networks in Central Dandenong are underutilised and can absorb the additional demand generated by the Foster Street development. Specific network and infrastructure interventions are outlined to improve walking and bicycle networks and access to public transport services.

- The impacts of vehicular traffic demand on the road network were assessed for:
- Benchmarking the intersection performance in 2031 and 2041, without the Foster Street development, accounting only for the background traffic growth
- Assessing the road network impacts resulting from the Foster Street development in 2031 & 2041 (including the background traffic growth)

The background traffic growth (external to the Foster Street development), in 2031 and 2041, was found to result in most intersections in Central Dandenong operating at or over the theoretical capacity. The proposed Foster Street development will create a transit-oriented development that supports 'living locally', provides more transport choices and reduces reliance on private vehicles.

Fundamentally, the Foster Street development aims to support an urban form characterised by:

- Density (population, dwellings, employment, floor area, overall 'activity')
- Diversity (different land uses, job-housing / population ratios)
- Design (street network characteristics)
- Destination accessibility (ease of access to trip attractions)
- Distance to transit (public transport access and choice)

From a transport perspective, the urban form proposed in the development plays a pivotal role in influencing travel habits and transport mode choice decisions. The intensity of the mixed-use development, that is the Foster Street development, will promote the uptake of more sustainable forms of transport options – which have spare capacity to absorb this demand.

Table of Contents

1 Background 1
1.1 Context 1
1.2 Proposed Development 2
1.3 Study purpose 3
1.4 Document structure 4
2 Transport Policy Context 5
2.1 Plan Melbourne 5
2.2 Transport Integration Act 2010 6
2.3 Movement and Place Framework 6
2.4 Greater Dandenong Planning Scheme 6
3 Existing Conditions 7
3.1 Active transport 7
3.2 Bicycle network & capacity 8
3.3 Public transport network & capacity 8
3.4 Road network & capacity 11
3.5 Current Travel Patterns 12
4 Precinct Vision and Transport Principles 13
5 Movement and Access Arrangements 15
5.1 Pedestrian Network 15
5.2 Bicycle Infrastructure and Parking 16
5.3 Public Transport Access 16
5.4 Vehicle Movement and Access 17
6 Forecasting Future Travel Demand 20
6.1 Trip generation 20
6.2 Mode split 23
6.3 Trip distribution 25
6.4 Trip Assignment 29
7 Transport Impact Assessment 33
7.1 Forecast pedestrian volumes 33
7.2 Forecast bicycle volumes 37
7.3 Road network impacts 41
8 Conclusion 64

List of Figures

Figure 1-1 Dandenong National Employment and Innovation Cluster 1
Figure 1-2 Development site and broader study area 2
Figure 1-3 Development Periods of peak activity for different land uses in the development 3
Figure 3-1 Existing bicycle riding infrastructure 8
Figure 3-2 Access to public transport services 9
Figure 3-3 Road network and hierarchy 11
Figure 5-1 Precinct transport, movement, and access map 15
Figure 5-2 Indicative waste storage, collection, and servicing 19
Figure 6-1 Pedestrian Access Points 29
Figure 6-2 Pedestrian O-D points outside the development 30
Figure 6-3 Bicycle O-D points outside the development 31
Figure 6-4 Locations of O-D points for vehicular traffic assignment 32
Figure 7-1 Pedestrian Flow - AM Peak – 2031 34
Figure 7-2 Pedestrian Flow - PM Peak – 2031 34
Figure 7-3 Pedestrian Flow - Saturday Peak – 2031 35
Figure 7-4 Pedestrian Flow - AM Peak – 2041 35
Figure 7-5 Pedestrian Flow - PM Peak – 2041 36
Figure 7-6 Pedestrian Flow - Saturday Peak – 2041 36
Figure 7-7 Bicycle volume - AM peak – 2031 38
Figure 7-8 Bicycle volume - PM peak - 2031 38
Figure 7-9 Bicycle volume - Saturday peak – 2031 39
Figure 7-10 Bicycle volume - AM peak – 2041 39
Figure 7-11 Bicycle volume - PM peak - 2041 40
Figure 7-12 Bicycle volume - Saturday peak – 2041 40
Figure 7-13 Degree of saturation – Weekday AM Peak 42
Figure 7-14 Degree of saturation – Weekday PM Peak 43
Figure 7-15 Degree of saturation – Saturday 43
Figure 7-16 2031 Background traffic DoS – AM 44
Figure 7-17 2031 Background traffic DoS – PM 45
Figure 7-18 2031 Background traffic DoS – Sat 45
Figure 7-19 2041 Background traffic DoS – AM 46
Figure 7-20 2041 Background traffic DoS – PM 46
Figure 7-21 2041 Background traffic DoS – Sat 47
Figure 7-22 2031 DoS - AM Peak 49
Figure 7-23 2031 DoS - PM Peak 49
Figure 7-24 2031 DoS - Saturday Peak 50
Figure 7-25 2041 DoS - AM Peak 50
Figure 7-26 2041 DoS - PM Peak 51
Figure 7-27 2041 DoS - Saturday Peak 51

List of Tables

Table 0-1 Summary of the forecast travel demand iii
Table 1-1 Indicative development yield 3
Table 3-1 Public Transport Service Capacity 10
Table 3-2 Mode split - Dandenong, 800m radius from site 12
Table 3-3 Trip Distribution To & From Development Site 12
Table 4-1 Transport principles 13
Table 6-1 Person trip generation rates 21
Table 6-2 Person trip generation 22
Table 6-3 Trips produced by the development in the peak periods 22
Table 6-4 Trips attracted to the development in the peak periods 23
Table 6-5 Existing transport mode shares in Dandenong LGA 23
Table 6-6 Current daily mode split – TOD and mixed-use sites in Footscray 24
Table 6-7 Modified transport mode share for the Foster Street development 24
Table 6-8 Directional distribution of trips from study area to broader network 25
Table 6-9 Directional distribution of trips in the 2031 Weekday AM Peak 26
Table 6-10 Directional distribution of trips in the 2031 Weekday PM Peak 26
Table 6-11 Directional distribution of trips in the 2031 Saturday Peak 27
Table 6-12 Directional distribution of trips in the 2041 Weekday AM Peak 27
Table 6-13 Directional distribution of trips in the 2041 Weekday PM Peak 28
Table 6-14 Directional distribution of trips in the 2041 Saturday Peak 28
Table 7-1 Percentage contribution of traffic by the Foster Street development 52
Table 7-2 Comparative Impact Service Levels and Walk Score on No-Car Ownership 56
Table 7-3 Comparative Parking Rates (Residential) 57
Table 7-4 M&PC Proposed Parking Provision 58
Table 7-5 Comparative Parking Rates (Commercial) 61
Table 7-6 M&PC Proposed Parking Provision (Commercial) 62

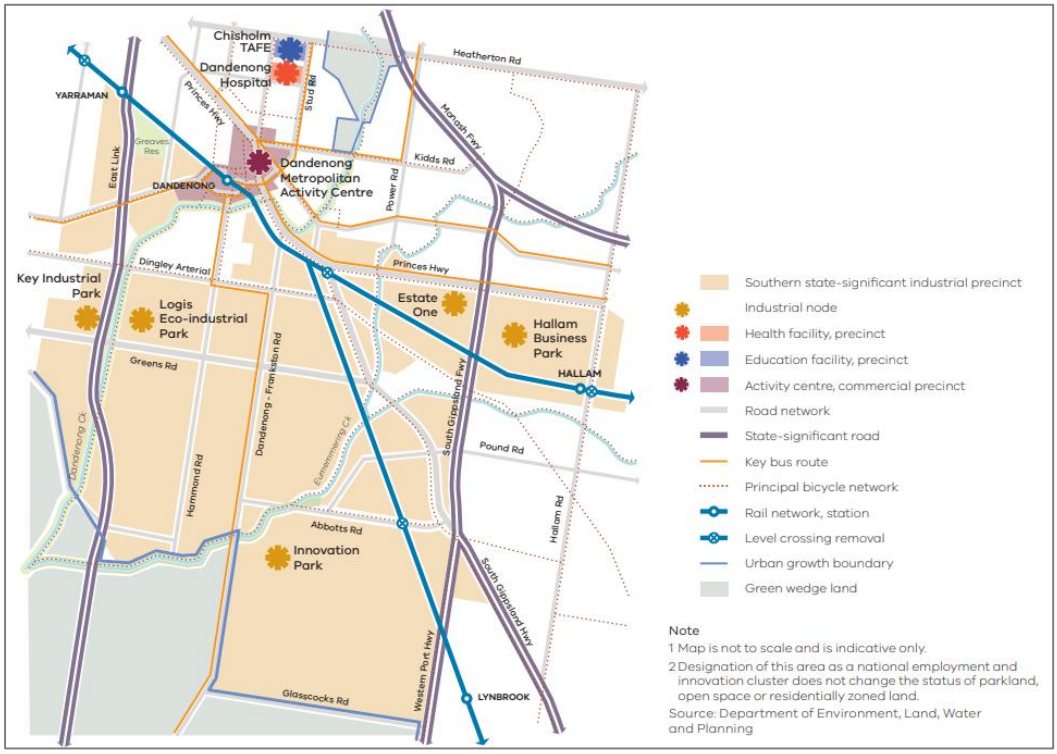
1 Background

This section of the report outlines the project background including the strategic context of Central Dandenong, an overview of the proposed development, the study purpose and document structure.

1.1 Context

Dandenong has long been a location of significant commercial and industrial activity and has been recognised as one of seven national employment and innovation clusters - NEICs[2] as shown in Figure 1-1 below.

Figure 1-1 Dandenong National Employment and Innovation Cluster



Source: City of Melbourne (2017) Plan Melbourne 2017 - 2050

Dandenong NEIC produces a large proportion of Victoria's manufacturing output, in addition to contributing to a variety of sectors, including retail, health, education and warehousing. Several key facilities located in this cluster include Dandenong Hospital, Chisholm TAFE, State and Commonwealth law courts, several government agencies and several other international and retail industrial firms.

The Dandenong metropolitan activity centre adjacent to Dandenong transit interchange is also important to the region's long term economic stability. This area is expected to receive a high level of investment with the purpose of providing a hub for future economic development and renewing urban amenity in the precinct.

One such project is the Revitalising Central Dandenong (RCD) initiative, which involves the renewal of a site on Foster St adjacent to Dandenong Station. In this precinct, five parcels of land are to be established into several multi-use developments which include high-density residential space as well as areas for commercial, educational, community and retail activity.

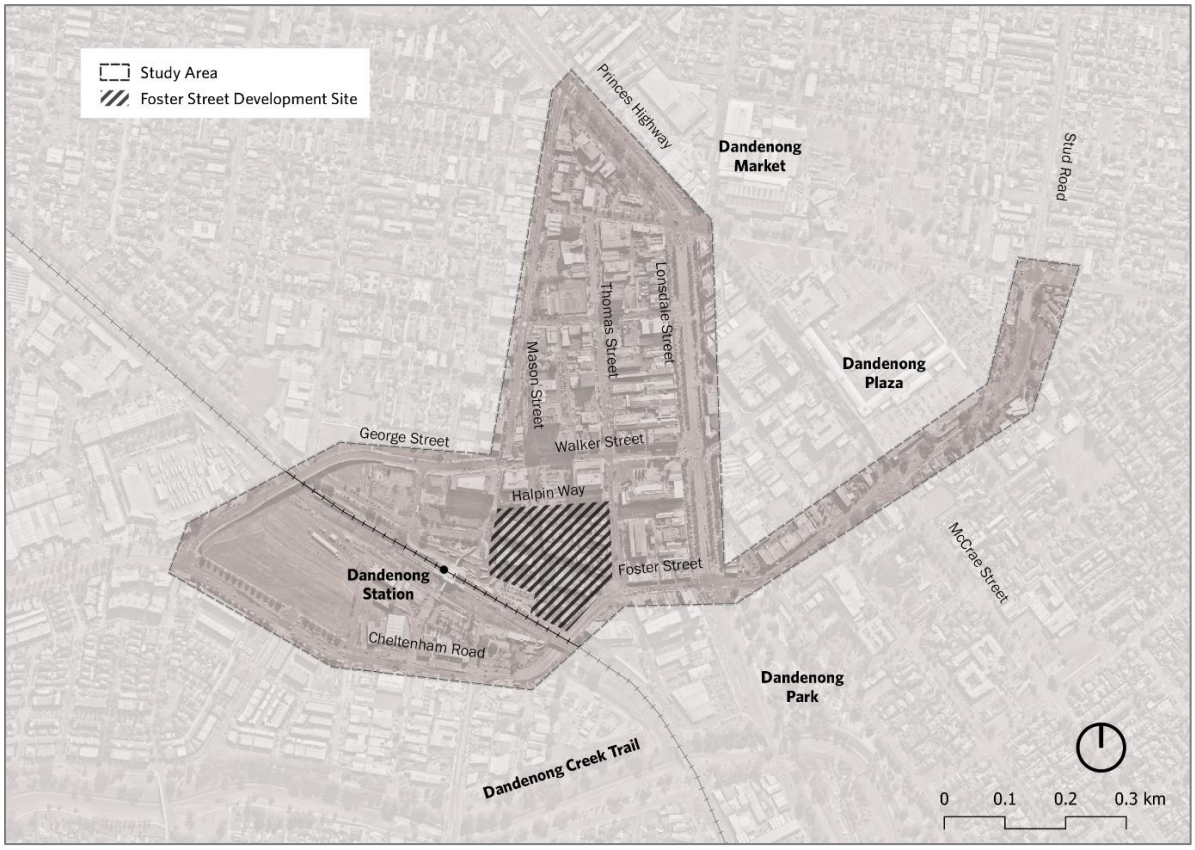
[2] City of Melbourne (2017) Plan Melbourne 2017 - 2050

1.2 Proposed Development

1.2.1 Study area

The immediate development site is bounded by Halpin Way, Mason Street, Cheltenham Road, and Thomas Street. To ensure the broader network impacts were investigated, a larger study area was defined as shown in Figure 1-2 below.

Figure 1-2 Development site and broader study area



Source: M&PC (2022)

The study area includes the footpaths, bicycle paths, roadways directly adjacent to the development including Foster Street, Halpin Way and Thomas Street, as well as those that could be impacted by the new development including Lonsdale Street/Princes Highway, Mason Street and Walker Street.

The study area also extends along Foster Street (east of Lonsdale Street) to Stud Road – this link is included as it is a key corridor for the northern catchments. This study area is determined based primarily on likely car movements.

However, it is noted that the State's vision for the site is to intensify residential and business activity to significantly increase pedestrian movements in the wider area in order to help revitalise Central Dandenong.

This is the largest of the development sites and creating a high intensity of land use is critical to achieve the State and local revitalisation aims including additional pedestrian movements throughout Central Dandenong.

1.2.2 Development yield

The proposed development consists of seven low to mid-rise buildings which facilitate a range of land uses including residential, retail, commercial, and educational uses. The indicative magnitude of development in 2031 (interim period) and 2041 (full build-out) is shown in Table 1-1 below.

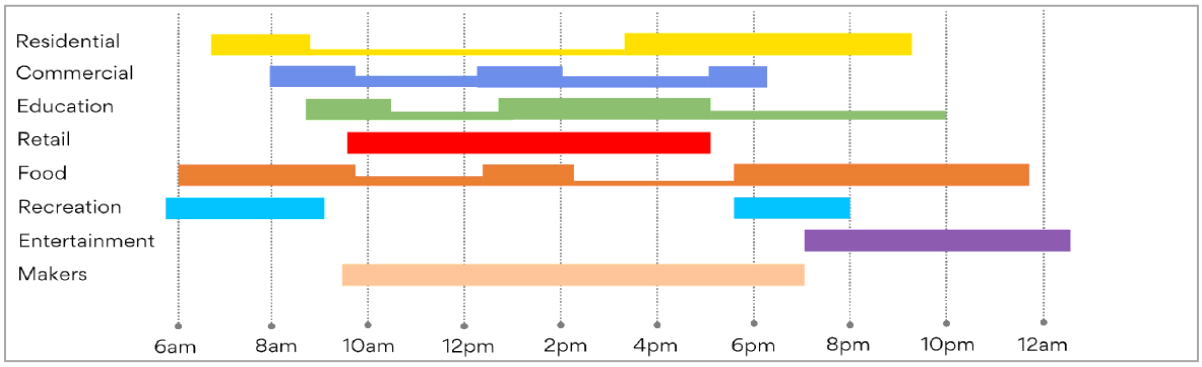
Table 1-1 Indicative development yield

Land use	Units of measurement	Year 2031	Year 2041
Residential	[units]	441	504
Retail (Little India, supermarket & etc.)	[m2]	5,870	17,802
Education	[m2]	2,437	5,631
Community	[m2]	1,332	790
Commercial/Office[3]	[m2]	12,064	113,231
Hotel & Function Centre	[keys]	0	210
Total Floor Area (including residential)	**[m2]**	**67,090**	**199,803**

Source: Capital Alliance source (2023)

The operational characteristics of the proposed land uses will result in fluctuating demands on the transport networks at different times of the day. The peak transport demands are expected to occur during the morning peak period (7-9AM) and afternoon peak period (4-6PM). The development is expected to produce some level of activity from 6AM to midnight as shown in Figure 1-3 below.

Figure 1-3 Development Periods of peak activity for different land uses in the development



Source: Capital Alliance (2022)

1.3 Study purpose

Movement & Place Consulting have been commissioned by Capital Alliance Investment Group to provide a Transport Management Report for the development which outlines an evaluation of impacts on the surrounding transport network, including consideration of all modes including walking, bicycle riding, public transport use and private vehicle trips.

[3] This figure excludes Building G (hotel and function centre)

1.4 Document structure

Following this chapter, the remainder of this report is structured as follows:

- Chapter 2 outlines the transport policy context
- Chapter 3 discusses the existing transport conditions
- Chapter 4 highlights the aspirational vision for the site
- Chapter 5 outlines the proposed development access arrangements
- Chapter 6 explores the future travel demand forecasts
- Chapter 7 presents the transport impact assessment
- Chapter 8 presents a sustainable transport assessment
- Chapter 9 provides the report conclusion

2 Transport Policy Context

Several strategic policy documents have informed the planning of the Foster Street development. From a transport perspective, alignment was sought with the following key strategic documents:

- Plan Melbourne
- Transport Integration Act
- Movement and Place Framework
- Greater Dandenong Planning Scheme (Clause 18)

2.1 Plan Melbourne

Plan Melbourne 2017-2050 is the principal metropolitan planning strategy for Melbourne. It outlines how the planning of housing, transport, commercial and industrial sectors must be jointly considered in response to projected population and job growth. The guiding principles of Plan Melbourne are:

- Facilitate an integrated transport system that connects people to jobs and services and goods to market
- Contributes to a sustainable and resilient Dandenong
- Creates an inclusive, vibrant, and healthy neighbourhood
- Delivers a distinctive and liveable city with quality design and amenity

2.1.1 The 20 – minute neighbourhood

Creating a city of 20-minute neighbourhoods is a key direction of Plan Melbourne, where people are able to meet most of their daily needs within a 20-minute walk, cycle, or local public transport trip of their home. Achieving this direction through integrated transport and land use planning is key to ensuring long-term sustainable transport outcomes in Central Dandenong.

- Plan Melbourne states 20-minute neighbourhoods must:
- Be safe, accessible, and well connected for pedestrians and cyclists to optimise active transport
- Offer high-quality public realm and open space
- Provide services and destinations that support local living
- Facilitate access to quality public transport connecting people to jobs and higher-order services
- Deliver housing/population at densities that make local services and transport viable
- Facilitate thriving local economies

To achieve a 20-minute neighbourhood and contribute to continued success in Revitalising Central Dandenong, the Foster Street development must generate significant levels of residential and commercial activity. The transport network around the site must then prioritise pedestrians and bicycle riders, ensure high-quality access to Dandenong transit interchange, and manage the safety and amenity impacts of car access to and through the site.

2.2 Transport Integration Act 2010

The Transport Integration Act is Victoria's principal transport legislation. Government authorities must collectively use an integrated approach to address land use and transport issues. An integrated approach shifts from a single mode focus to consider a unified transport and land use system.

Under this this approach, both transport bodies and land-use authorities, have an obligation to consider broader social, economic, and environmental implications in their decision-making processes.

2.3 Movement and Place Framework

The Movement and Place Framework (M+PF) is a tool to translate the broad transport outcomes envisioned by overarching state-level strategies, legislation, and policies into actionable changes to improve movement and place performances for communities. At its core, the M+PF recognises that streets perform multiple functions. This includes the traditional consideration roads are used for the movement of goods and people but also considers transport links as key places and destinations.

Often these two functions have competing demands. It is important to balance these functions to ensure an integrated transport and land use outcome. The M+PF addresses this by aiming to balance the competing needs more equitably. This ensures a more integrated approach can be taken when planning out how best to allocate the limited public space for various uses. Applying the M+PF, the aim is to enhance transport outcomes, but also create vibrant and safe dwelling spots which enrich the lives of the people around it.

2.4 Greater Dandenong Planning Scheme

Clause 18 of the Greater Dandenong Planning Scheme outlines the transport objectives for development in Dandenong. Clause 18 and its related sub-clauses emphasise the importance of planning sustainable and safe transport which supports health and wellbeing. Ensuring that walking, bicycle riding and public transport use is a viable transport option when compared with private vehicle travel is key to supporting the creation of 20-minute neighbourhoods.

For example, the vision is supported by a transport system that provides public transport travel times similar or better than car travel times, and the road network outcomes should be evaluated with that vision in mind.

Increasing the proportion of trips made by walking, bicycle and public transport is a key aim of Clause 18, which states roads should facilitate the use of public transport, bicycle riding and walking (cl. 18.02-4S). Clause 18.02-4S also states car parking facilities must be consolidated to improve efficiency.

Clause 22.07 of the Greater Dandenong Planning Scheme, the Central Dandenong Local Planning Policy, articulates Council's vision for the area and sets the framework for its long-term development. It states that walking and bicycle riding must be prioritised, and the ground-level public realm must be people-oriented and dominated by pedestrian movement.

Frontages must contribute to the safety, visual interest, and vitality of the street. Car parking cannot cause a barrier to pedestrian movement and must be discouraged from operating at the ground floor level. To ensure that development complies with the Greater Dandenong Planning Scheme, it is imperative that the built form prioritises active and public transport movement, minimising conflict between cars, pedestrians, and bicycle riders.

3 Existing Conditions

This section of the report details the existing transport networks servicing Central Dandenong. An assessment of the current travel patterns of residents living in Central Dandenong was also outlined.

3.1 Active transport

3.1.1 Pedestrian network and walkability

Dandenong is identified as walkable neighbourhood with a Walk Score of up to 97 (out of 100)[4] , which is comparable to other areas with mixed-use developments close to public transport services. The walk score in the precinct is expected to increase after planned development further increases the intensity of mixed-use space in the precinct. Similar developments located in activity centres across Victoria and NSW include Footscray, Box Hill, Chatswood, Parramatta, and Frankston (all with a Walk Score above 94).

A high level of walkability is related to the proximity of services and public transport facilities. The planned development site is located in the Dandenong CBD, which contains a large proportion of commercial, retail and community space. In addition to the high proportion of shopping, grocery and food service facilities directly adjacent to the development, the 10-minute walking catchment of the site includes the Greater Dandenong Library, Dandenong Plaza and Dandenong Park.

Key opportunities identified to improve the pedestrian network include:

- Embedding the safe systems approach when designing transport infrastructure
- Enhancing amenity of the public realm to improve the experience of walking
- Traffic calming around the site including lower speed limits and pedestrian priority

Some of the existing pedestrian infrastructure is not compliant with the Commonwealth Disability Discrimination Act. For example, uneven surfaces and inadequate tactile ground surface indicators (TGSIs) at crossing points. These will be brought into compliance as part of any streetscape upgrade.

3.1.2 Footpath capacity

Footpaths in Central Dandenong generally meet the minimum requirement of 1.5 metres in width for low volume areas, and 2.4m width in high volume areas[5] . Based on existing and projected pedestrian flows post-development, existing footpaths generally provides adequate capacity for pedestrian movement.

To facilitate footpath trading and dining, footpaths with a minimum width of 4.7m should be considered. These will provide the capacity required for movement while also improving improve amenity and economic activation in and around key destinations including Foster Street.

Existing pedestrian demand is well below the available capacity of the pedestrian network – and future pedestrian demand can be easily accommodated. However, Active Economic Corridors with high levels of activity would benefit from wider footpaths with increased amenity.

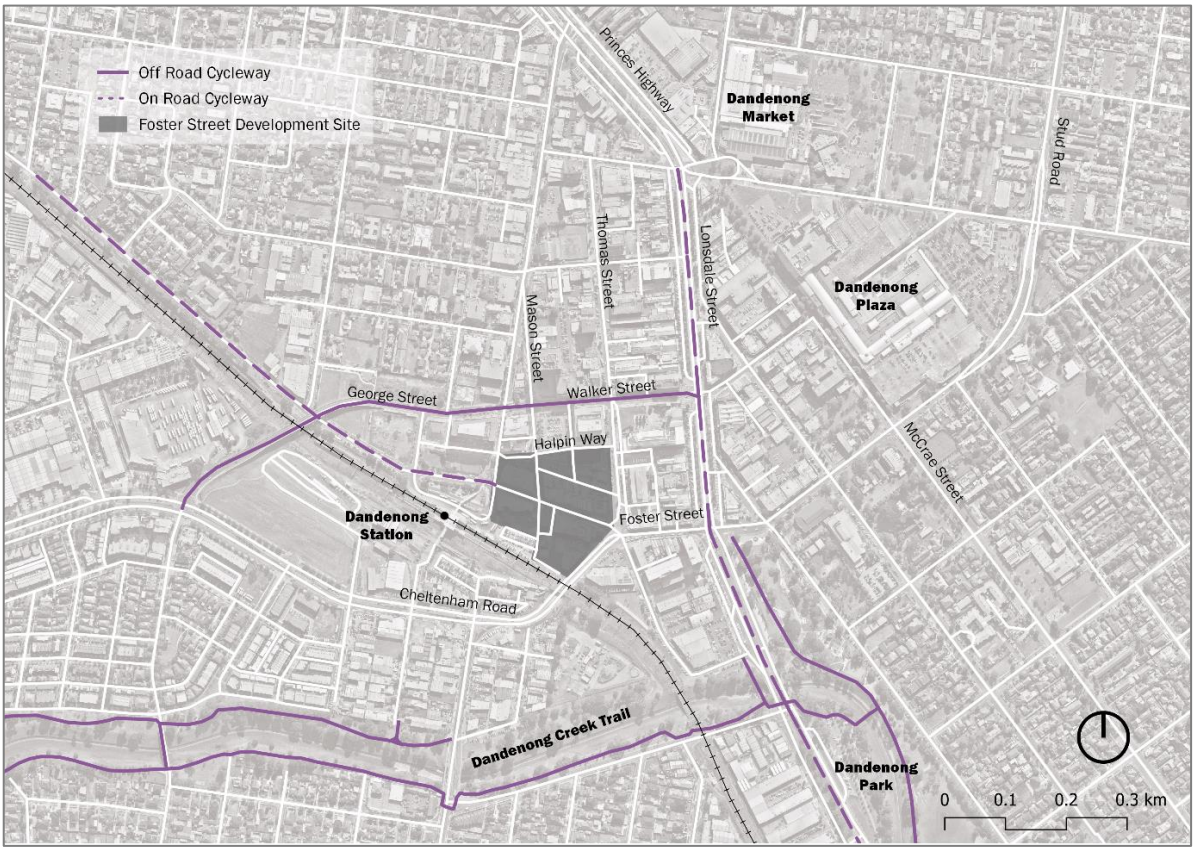
[4] Walk Score, accessed 6 June 2024
[5] City of Greater Dandenong (2020) Footpath Activity Code of Practice

3.2 Bicycle network & capacity

3.2.1 Bicycle network

The existing bicycle network is fragmented, poorly coordinated and not well integrated with key activity sites[6] which is not aligned to the precinct's vision to provide a safe and equitable cycling environment that will reduce rider hesitancy. The existing bicycle riding infrastructure in Central Dandenong is highlighted in Figure 3-1 below.

Figure 3-1 Existing bicycle riding infrastructure



Source: M&PC analysis based on open data (2022)

3.2.2 Bicycle capacity

Bicycle lanes in Central Dandenong are currently between 1.2 to 1.8 metres in width, supporting a capacity of 3,000-4,500 bicycles per hour in each direction[7]. Current bicycle volumes are well below the capacity of the network, largely due to connectivity gaps that create safety concerns. This highlights a need to invest around the region in quality bicycle infrastructure to improve the separation between bicycles and other vehicles.

3.3 Public transport network & capacity

In assessing the public transport network & capacity, three key elements were assessed:

- Network coverage

[6] City of Greater Dandenong (2017) Greater Dandenong Cycling Strategy 2017-2024
[7] M&PC 2024

- Public transport capacity (based on existing service levels)
- Public transport priority

3.3.1 Network coverage

Central Dandenong has a high provision of public transport services. The area is served by 25 bus routes, two metro train lines (serving three directions) and two V/Line services (train to East Gippsland and coach to South Gippsland).

The Foster Street development site has excellent access to public transport services. The entire site sits adjacent to the bus interchange and the metro train service as shown in Figure 3-2 below.

Figure 3-2 Access to public transport services

Source: M&PC analysis based on Open Data (2022)

3.3.2 Public transport capacity

An assessment of the available capacity of the public transport network, to accommodate future travel demand, identified that substantial capacity exists in the public transport network. Table 3 1 outlines the a 'spare' capacity of the public transport network.

2018/19 patronage data was used to estimate the demand for bus services. Capacity of the network was calculated for the 2021 service levels, assuming the ability of a bus to carry a maximum of 63 passengers.

Table 3-1 Public Transport Service Capacity

Route / Station	Name	Capacity (Passengers)					Weekday Operating Hours	Weekday Peak Frequency (minutes)
		Daily capacity	AM Peak Hour capacity	PM Peak Hour capacity	Average Daily Patronage	Patronage as % of Daily Capacity		
800	Chadstone SC - Dandenong	4,914	441	441	1,448	29%	05:37 AM - 08:02 PM	9
802	Chadstone SC - Dandenong	2,646	189	252	735	28%	05:21 AM - 07:41 PM	20
804	Chadstone SC - Dandenong	2,331	126	126	951	41%	05:57 AM - 07:56 PM	30
811	Brighton - Dandenong	2,205	126	126	852	40%	05:40 AM - 10:19 PM	30
812	Brighton - Dandenong	2,142	189	126	1,091	51%	05:38 AM - 10:07 PM	30
813	Waverley Gardens SC - Dandenong	2,016	126	126	1,009	50%	06:06 AM - 10:43 PM	30
814	Springvale South – Dandenong	1,701	126	126	605	37%	06:21 AM - 08:11 PM	30
828	Hampton - Berwick	6,048	378	378	3,143	56%	05:34 AM - 10:13 PM	10
843	Dandenong - Endeavour Hills	4,032	315	252	281	7%	06:00 AM - 09:49 PM	15
844	Doveton - Dandenong	3,276	252	252	317	10%	06:01 AM - 08:00 PM	15
845	Endeavour Hills - Dandenong	3,969	315	252	390	10%	06:15 AM - 9:48 PM	15
848	Dandenong - Brandon Park	2,016	126	126	386	19%	05:55 AM - 09:30 PM	30
850	Dandenong - Glen Waverley	3,780	126	252	1,192	32%	05:58 AM - 09:38 PM	30
857	Chelsea - Dandenong	2,583	252	252	271	11%	05:05 AM - 07:10 PM	15
861	Dandenong Station - Endeavour Hills	3,654	252	252	327	9%	06:34 AM - 08:44 PM	15
862	Chadstone SC - Dandenong	2,961	189	252	1,033	35%	06:21 AM - 10:12 PM	20
890	Dandenong - Lynbrook	3,024	252	252	419	14%	04:55 AM - 09:05 PM	15
892	Casey Central - Dandenong	4,095	252	252	1,037	25%	05:25 AM - 09:39 PM	15
893	Cranbourne Park SC - Dandenong	5,859	378	378	2,028	35%	06:02 AM - 09:30 PM	10
901	Melbourne Airport - Frankston	10,198	630	693	9,158	90%	05:04 AM - 12:43 AM	6

Source M&PC analysis based on open data from the Department of Transport and Planning[8]

3.3.3 Public transport priority

Public transport priority is a critical requirement to ensure public transport services are reliable and adhere to the timetable. The anticipated level of regional growth is expected to further congest the road network, and providing alternative transport options such as high-quality bus services is critical

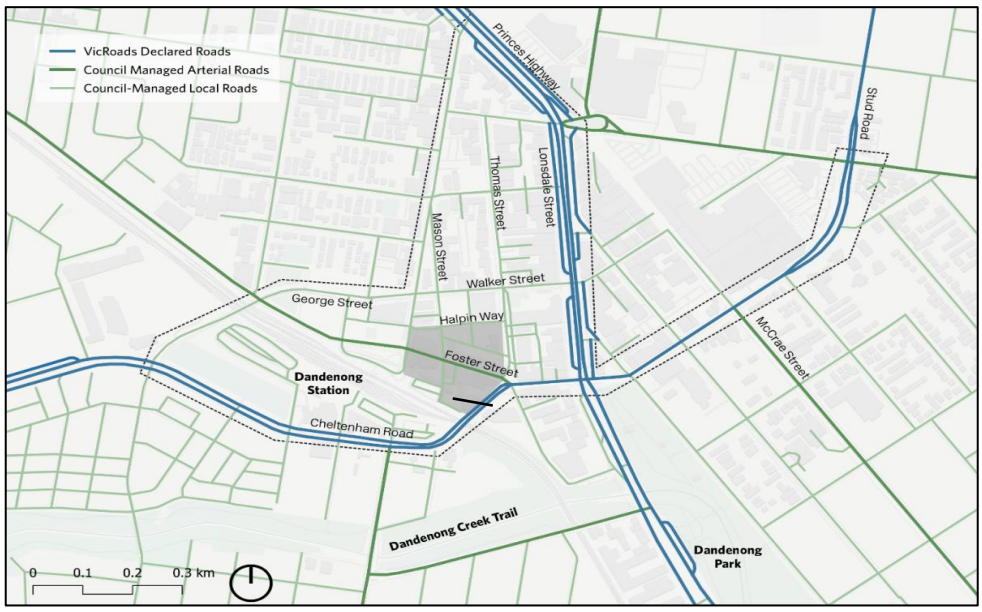
[8] Bus routes 695, 978, 979, 981 and 982 operating during night time and extended period on Tuesdays were not included in the analysis

to maintaining road network performance and reliability. A critical element influencing patronage of bus services relates to the ability to bypass congestion and ensure reliable journey times.

3.4 Road network & capacity

The Foster Street development is located within a highly accessible area, which is also supported by an extensive road network. Key arterial roads serving the development site include Cheltenham Road, Princess Highway, Eastlink, and Monash Freeway. The road hierarchy of the surrounding road network is shown in Figure 3-3 below.

Figure 3-3 Road network and hierarchy



Source: M&PC with DoT data

The speed limits and traffic control devices in the area are consistent with the vision for a pedestrian focused activity centre that aims to slow traffic speeds and provide a safe and high amenity environment for pedestrians, diners, bicycle riders, city workers and visitors. Note that the speed zone in Lonsdale Street (Princes Highway) is lowered from 60km/h to 40km/h from 8am to Midnight.

3.4.1 Car parking supply

The car parking supply in Dandenong is comprised of both on-street and off-street parking. In the Dandenong CBD there are around 12,000 parking spaces, regulated by pricing and permits to ensure accessibility for those who require parking during the peak period.

This parking supply includes two secure multi-level parking facilities with capacity for 700 parking spaces. Both are located less than 400m from the development site. These spaces are closed overnight, and both have significant capacity during the daytime and early evening.

A more detailed assessment of parking availability (at the time) will be undertaken in preparation for Planning Permit Applications for the development. This would ensure that parking surveys are accurate and relevant at the time of applications being made. This would include a comprehensive evaluation of parking space restrictions and availability

3.5 Current Travel Patterns

The proposed mixed-use development integrated with high quality transport, will generate and attract trip patterns differently to other developments in suburban areas. These differences can be attributed to the greater access to high quality transit, range of mixed land uses and greater emphasis on public amenity that usually occur in sites similar to the proposed development.

Due to these differences, it is important to compare anticipated travel patterns with similar mixed-use sites that are adjacent to high quality public transport hubs. Similar developments include case studies in Box Hill and Footscray.

The current zero-car ownership level in Dandenong is 14%, which is much lower than other similar locations with similar social and economic activity levels. This rate is therefore expected to increase once development begins when greater levels of pedestrian activity is expected on site.

Projected car ownership rates have important implications for anticipated future mode share and will help inform decision-making with regards to parking requirements.

The current mode split can also be examined against Transit Oriented Developments (TODs) with similar service levels, such as Footscray. While the mode share of the current site is dominated by vehicles, with 75% of trips being completed by private vehicle, public transport ridership should decrease following the renewal of the Foster Street development. Mode split for trips from/to Dandenong and Footscray are shown in Table 3-2 below.

Table 3-2 Mode split - Dandenong, 800m radius from site

Mode	Mode Split for trips FROM region		Mode Split for trips TO region	
	Dandenong	Footscray	Dandenong	Footscray
Public Bus	5%	4%	4%	6%
Train	1%	17%	1%	13%
Vehicle	76%	66%	75%	68%
Walking	18%	8%	19%	12%
Bicycle	-	2%	-	2%

Source: M&PC analysis based on Australian Bureau of Statistics – ABS (2022)

Most trips are made within the Dandenong Central area, The key directions of movement to and from the site noted as north, east, west, and south is shown in Table 3-3 below.

Table 3-3 Trip Distribution To & From Development Site

Connected Region	From Development Site	To Development Site
Monash & Knox	12%	10%
Yarra Ranges	13%	10%
Melbourne City & Inner-City Areas	9%	12%
Frankston, Casey & Mornington Peninsula	13%	13%
Internal (Dandenong)	53%	55%
Total	**100%**	**100%**

Source: M&PC based on Victorian Integrated Survey of Travel and Activity analysis- VISTA (2022)

4 Precinct Vision and Transport Principles

The RCD initiative will transform Foster Street into a cultural and economic hub that attracts people and businesses. It will create an environment that promotes interaction and exchange between users, supported by the clustering of mixed land uses and a high amenity public realm.

The development will benefit from the high transport accessibility levels within Central Dandenong. There are over 12,000 car parking spaces within a short walk of the precinct[9]. The precinct is also directly served by over 10,000 public transport services each week[10]. High quality, regional shared paths connect for 20km in each direction and provide excellent access for bicycle riders and pedestrians.

In this high-activity, highly accessible precinct, the transport networks must prioritise creation of social, economic, and cultural value for users. Creating a vibrant place for visitors to explore will lead to increased visitation, activation, business activity and community benefit. In this context, the vision for the transport network is to enhance urban amenity and provide excellent access for all.

To achieve this vision, several principles are outlined to guide development of future transport networks serving the Foster Street Precinct as shown in Table 4-1 below.

Table 4-1 Transport principles

Transport mode	Principle
Walking	• Focus road geometry, built form and streetscape design on providing the highest quality pedestrian realm • Prioritise pedestrian movement at intersections and crossings • Focus pedestrian connectivity and permeability on high quality activated links to and through the precinct • Provide access for all across the whole site through raised pavement crossings at all intersections • Leverage Council's existing wayfinding strategy to improve navigation and sense of place • Provide street trees and extensive canopy shade cover over the public realm including road space • Illuminate the public realm to maximise interest, exploration, perceptions of safety and artistic value
Bicycle riding	• Integrate regional active transport links to and through the site • Strengthen the low-stress protected bicycle path network that is separated from moving traffic • Provide high-quality connections to the regional bicycle network • Provide easily accessible and convenient end-of-trip facilities

[9] M&PC parking supply count data
[10] PTV General Transit Feed Specification (GTFS) data (2024)

Transport mode	Principle
Public transport use	• Maintain pedestrian connectivity to Dandenong Station and Bus Interchange • Enhance amenity of pedestrian connections to Dandenong Station and Bus Interchange • Prioritise bus movements at both intersections and roads, with a focus on protecting bus run times from degradation due to increased traffic • Integrate with potential improvements to Dandenong Station and Bus Interchange
Vehicle access	• Focus intersection design and operations on safety for vulnerable road users • Facilitate safe sightlines without encouraging high vehicle speeds • Focus the width of roads and travel lanes on minimising pedestrian crossing distances • Maximise street space for pedestrian movement and retail opportunities • Encourage low vehicle speeds through road geometry and design • Minimise driveway crossovers particularly over high intensity pedestrian corridors
Car parking	• Bookend on-street parking lanes with kerb outstands to minimise pedestrian crossing distances • Provide convenient high-quality pedestrian connections from basement parking facilities • Minimise traffic impacts in Central Dandenong through location of car parking entry/exits • Consolidate off-street car parking and retain it in common ownership so it is available for public use • Minimise traffic congestion by establishing the maximum parking supply within the precinct based on capacity of the surrounding road network and a desire to minimise degradation of travel times
Freight access	• Provide adequate access for delivery and service vehicles • Minimise conflicts with pedestrians and bicycle riders

Source: M&PC through stakeholder workshops (2019-24)

5 Movement and Access Arrangements

This section presents mode specific movement and access arrangements envisioned in the study area following the construction of the Foster Street development.

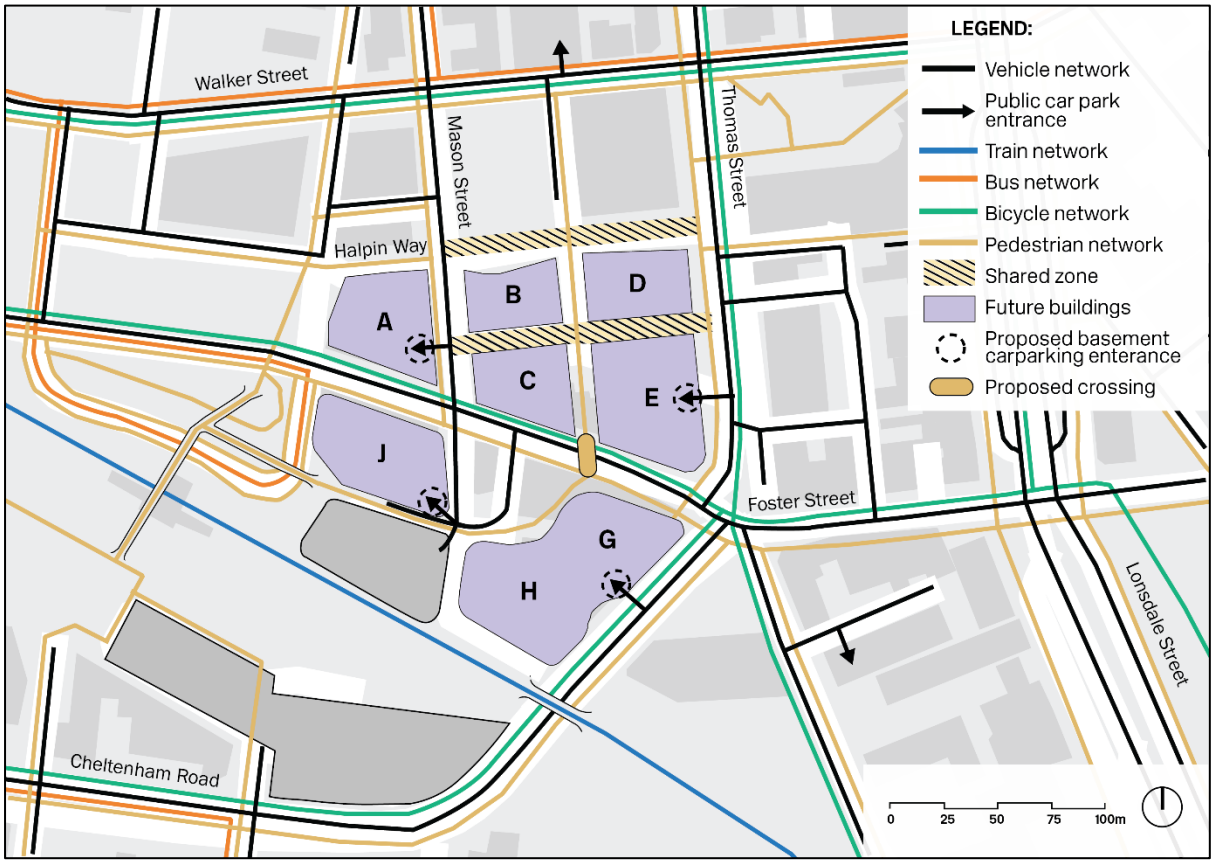
5.1 Pedestrian Network

A high performing pedestrian network is required to facilitate the walking trips generated by the economic, social, and residential activity in and around the site. From a transport perspective, this will broadly require:

- An attractive high-quality public realm
- A net reduction in driveways / crossovers so that the public realm and footpaths are protected from excessive vehicle movements across pedestrian spaces
- Calming of traffic around the site using streetscape interventions, reallocation of road reserve space for pedestrian priority
- Facilitating pedestrian access to and from the station through the Foster Street Precinct

Permeability, connectivity, and pedestrian priority were critical considerations when planning the future pedestrian network within the precinct. A grid network is proposed in Figure 5-1 below.

Figure 5-1 Precinct transport, movement, and access map



Source: M&PC (2022)

The precinct will include a new east-west shared zone connecting between Thomas Street and Mason Street. Curran Lane will be extended to provide a new north-south pedestrian only link (referred to as new Little India). Foster Street will be made more permeable with the addition of a raised pedestrian crossing (wombat crossing) across Foster Street at Curran Lane extension.

The reduction of the block sizes and the addition of the new pedestrian links will enhance the accessibility and permeability through the precinct.

To enhance amenity and the experience of walking through the site, wide footpaths and street tree canopy cover is proposed across the entire pedestrian network.

A range of public realm improvement plans have been considered as part of the Master Plan development. These will improve Access for All and create a range of public spaces that encourage more on-street activity that will revitalise Central Dandenong.

5.2 Bicycle Infrastructure and Parking

A destination focused bicycle network was developed to serve the activity generated in the precinct. A top-of-kerb physically separated bi-directional path is proposed for Foster Street.

This will provide a critical east-west link connecting residents and visitors of the precinct to regional paths including Djerring Trail via Railway Parade and the Dandenong Creek Trail. Top-of-kerb protected bicycle lanes are also proposed along Cheltenham Road and Thomas Street.

Due to the complexity of the Foster Street/Cheltenham Road intersection, a Protected Signalised Intersection is proposed at this intersection to enhance bicycle rider safety and priority.

Dedicated, secure bicycle parking will be needed for the development. Shared bicycle parking facilities will be provided in the basement car park of the development. Transport modelling forecasts indicate 100 bicycle parking spaces will be required for the development.

5.3 Public Transport Access

The RCD development site is adjacent to Dandenong Train Station which is a hub for regional bus and train networks including V/Line services from Bairnsdale, Cowes, Inverloch, South Gippsland and Traralgon.

This results in every part of the precinct being within a 5-minute walk of public transport services to around 30 different destinations including some that are over 100km away.

A total of 10,865 public transport services (trains and buses) serves Dandenong Station each week:

- 1,788 services per weekday
- 1,059 services each Saturday
- 886 services each Sunday

This level of service will also increase with the delivery of Melbourne Metro in 2025, creating more services along the Cranbourne and Pakenham lines. It will then increase again in 2029 when the Melbourne Airport Rail Link opens with a direct service to Dandenong expected to take less than an hour from the airport. An increase in bus services in Dandenong was announced as part of the 2024 State budget, these service level increases are expected to con continue as population grows.

There is substantial opportunity to maximise public transport integration in a way that offers multiple transport options for residents, workers, and customers. Pedestrian access to the station and bus interchange via Foster Street will be a key precinct priority.

5.4 Vehicle Movement and Access

5.4.1 Vehicle network

The RCD development is served by regional vehicle access from six directions using:

- Cheltenham Road
- Dandenong-Frankston Road
- Dandenong Southern Bypass
- Eastlink
- Monash Freeway
- Princess Highway
- Stud Road
- South Gippsland Freeway
- South Gippsland Highway

Foster Street is a two-lane road that bisects the precinct and creates a minor barrier to pedestrian movement – although there is a zebra crossing immediately to the west of the Development Site. Foster Street has a 20-metre-wide road reserve.

Currently, the traffic lanes are 4m wide, which is excessive for the 40km/h speed limit. This demonstrates the potential for Foster Street to be redesigned to provide higher levels of pedestrian and bicycle rider amenity and safety. Wider footpaths would also enable other uses such as cafés to provide outdoor dining, increasing business yield and maximising the sense of place.

A Level Crossing Removal Project (LXRP) for Webster Street has been announced and will result in a new connection from Cheltenham Road on the southern side of the railway line to Lonsdale Street. Details of this planned connection have not been finalised. The broad impact will be to increase capacity for all road users to cross the railway corridor in the area around the site.

5.4.2 Car parking

The City of Greater Dandenong and Development Victoria's vision for the site is one of intense CBD activity and high levels of pedestrian amenity to bring the streets alive with social and economic activity.

Transport infrastructure components such as car parking (the amount of parking and its location) need to be considered with respect to this overall vision.

This is of critical importance to this site because a lax approach would simply provide an excessive amount of car parking.

This is not appropriate, as even the rates in the Greater Dandenong Planning Scheme are taken directly from the basic rates (in the Victorian Planning Provisions) and are not suitable for the location. Nor are they appropriate for the State and local vision for Central Dandenong.

The Dandenong CBD currently has ample parking. There are around 12,000 existing parking spaces within a short walk of the precinct, of which around 7,000 are available for public use.

The car parking provision should balance the need to provide enough parking to meet the needs of various travel choices, while minimising additional traffic that would exacerbate the already congested road network. The design of off-street parking egress is encouraged to be away from the

station and bus interchange and Walker Street to avoid adding traffic to major bus thoroughfares. This leads to a modelling assumption that the majority of car parking access will be from Thomas Street.

A holistic assessment of all factors indicates a minimum of 489 off-street spaces will be appropriate to serve the development needs.

The basement car parking will be constructed in stages (aligned to the development stages). Completion of Stage 1 of the development will include the completion of the northern basement. The northern basement is expected to have a capacity of around 300-400 parking spaces. The southern basement will be constructed in 2039 with the completion of Stage 4 of the development. The capacity of the southern basement is expected to be at least 83 parking spaces and potentially 250 parking spaces.

If required to meet the financial and pre-sale buyer needs, parking could also be provided on the western side of the site in Stages 2 and 5. The development is not dependant on these potential car parking areas from a transport perspective and they would only cater for a relatively small number of spaces based on specific needs of the building occupants.

The total quantum of parking that can be physically provided on the site is relatively low compared to the parking already available in Central Dandenong and road network capacity including increases in capacity planned by the LXRP. In addition, any neighbouring site could develop as a car park (as has been permitted immediately north of the site. It is therefore not necessary to apply an upper limit to the amount of parking provided on the site, unless otherwise provided for in the Greater Dandenong Planning Scheme.

5.4.3 Disabled Permit parking provision

Disabled permit parking spaces should be provided at a rate of 1 bay per 50 car parking spaces (2% of regular spaces)[11].

This should not be additional, but rather a reallocation of the total requirement. Provision of a minimum of 489 off-street spaces will require ten Disability Permit parking spaces located in easily accessible locations close to the building elevators.

5.4.4 Indicative waste storge, servicing and collection points

A key principle in planning for servicing, loading and waste storage for the Foster Street development is to avoid conflict with pedestrians and bicycle riders.

This is central to the precinct's vision of supporting a safe and pleasant pedestrian experience. It will also ensure that service vehicles can access the site and complete their tasks easily and efficiently.

In planning the indicative waste storage, servicing and collection networks, the following opportunities were considered:

- Optimal delivery and waste removal patterns (including vehicle size) reflecting the capacity of the site and surrounding street network to accommodate various vehicle types
- Consolidation of waste storage, collection, and servicing activities beneath buildings
- Locating delivery and waste management hubs in consolidated areas that maximise operational efficiency and minimise vehicle access impacts around the wider area
- Minimise service vehicle access impacts on walking and bicycle riding routes

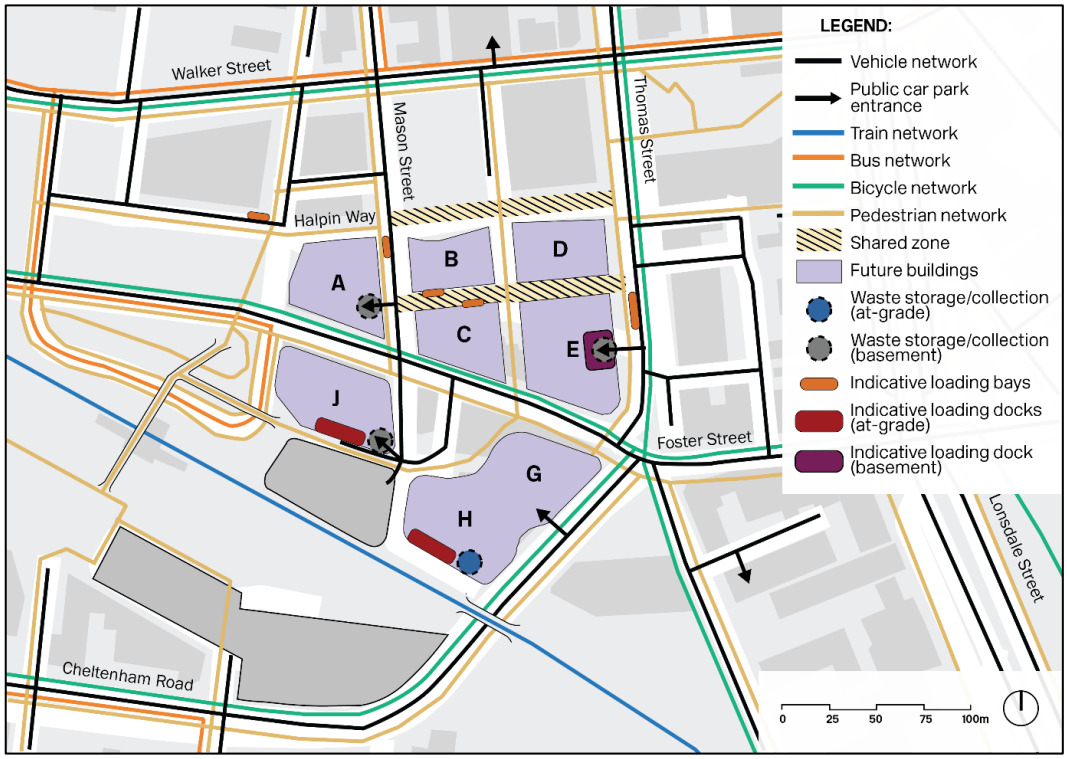
[11] Building Code of Australia (2024)

Buildings J, H/G and B/C/D/E are each proposed to have a consolidated loading dock that supports the anticipated land uses in each cluster of buildings.

On-street loading bays will also be located at key strategic locations to support delivery across the development.

Waste storage and collection will utilise basement storage areas, generally accessed via existing crossovers and road access points. The indicative waste storage, servicing and collection points are shown in Figure 5-2 below.

Figure 5-2 Indicative waste storage, collection, and servicing



Source: M&PC (2022)

6 Forecasting Future Travel Demand

To test the transport impact of the proposed development, a bespoke unconstrained travel demand model was developed. The bespoke model is a static[12] assignment model that loads trip movements onto the transport network surrounding the development site.

The model simulated the transport movements in and around the development site for its peak periods, which includes the weekday morning peak hour (07:45-08:45), weekday evening peak hour (16:15-17:15) and Saturday midday peak hour (11:30-12:30). The determination of these peak hours was based on the analysis of traffic movement counts and SCATS data.

A 4-step modelling approach was used to forecast the future travel demand. This comprised of the following steps: trip generation, mode share, trip distribution and trip assignment. Each step of the modelling approach is detailed below.

The following assessment is reflective of the 2022 development plans. The most recent gross floor area changes (August 2023) have not been modelled.

At this stage of the master planning process, M&PC are of the opinion that updating the core modelling efforts are not warranted. As designs evolve and are firmed-up, at each approval and construction stage, transport analysis and modelling will be updated.

6.1 Trip generation

Trip generation involves estimating the total number of trips generated by the development. The estimation of the trip generation numbers is based on the type and size of the land use proposed for the Foster Street development.

- A range of trip generation guidelines was consulted in creating the methodology for trip generation:
- Institute of Traffic Engineers (ITE) Trip Generation Handbook 10th edition (2017) (USA)
- VicRoads Transport Modelling Guidelines (2019)
- AustRoads Guide to Traffic Management Part 3: Traffic Modelling (2017)
- Road and Maritime Services - formerly Road Traffic Authority (RTA) Trip Generation Guidelines (2002 and Aug 2013 Update)

Of these sources, the RTA guidelines represented the most relevant methodology for trip generation, given the unique characteristics of the proposed development.

This is primarily because other trip generation guidelines generally overestimate the automobile-based proportion of trip volumes produced and attracted by mixed-use, transit-oriented developments.

In comparing RTA guidelines against those of ITE, VicRoads and AustRoads, it is evident in the methodology that RTA rates are generally reflective of Sydney's longer history of mixed-use and transit-oriented developments. The methodology includes studies of shopping centres in urban areas, inner-city areas, station precinct areas as well as more car-dependent suburban areas.

Given the proposed development is highly comparable to examples such as Chatswood and Parramatta, and more recent development in Footscray and Box Hill, it can be broadly classified as a

[12] 'Static' analysis does not account for the likely redistribution, re-timing, and shifts to other modes, of vehicle trips especially in congested road networks.

transit-oriented mixed-use precinct. Precincts such as these have lower private vehicle trip rates compared to other, more suburban areas. These trip generation rates are shown in Table 6-1 below.

Table 6-1 Person trip generation rates

Land use	Weekday morning peak hour	Weekday evening peak hour	Saturday peak hour	Source
Residential	0.76 [per unit]	0.58 [per unit]	0.66 [per unit]	RTA – Guide to Traffic Generating Developments, updated August 2013
Retail (Little India, supermarket & etc.) and Community	4 [per 100m2]	7.6 [per 100m2]	9.6 [per 100m2]	RTA – Guide to Traffic Generating Developments, updated August 2013
Commercial/Office	1.9 [per 100m2]	1.7 [per 100m2]	0.2 [per 100m2]	RTA – Guide to Traffic Generating Developments, updated August 2013
Education	4.8 [per 100m2]	4.3 [per 100m2]	0 [per 100m2]	RTA – Guide to Traffic Generating Developments, updated August 2013
Hotel	0.8 [per unit]	0.8 [per unit]	0.8 [per unit]	RTA – Guide to Traffic Generating Developments v2.2, section 3.4

Source: Guide to Traffic Generating Developments (TfNSW)

- Residential person trip generation rates: Trip generation rates for high density residential dwellings were used (derived from surveys from developments in the Sydney Metro area). Developments that contained a low number of units and were not located in high intensity areas were excluded from this analysis
- Retail, Supermarket and Entertainment person trip generation rate: Trip generation rates for shopping centres with floor areas between 60,000m2 and 100,000m2 were used. The rationale for selecting the rate that corresponds to higher floor area than the proposed development is to account for the presence of a major shopping centre, markets and other retail services in close proximity to the development
- Education person trip generation rate: Person trips generated by educational space was assumed to be based on the commercial/office space rates. However, the rate for educational use differs in that it specifically accounts for greater density per floor area expected in educational settings compared to an office setting. The NCC Building Code of Australia (2019) was used to factor in the increase in person trips generated in educational settings compared with to an office setting.
- Hotel trip generation rate: RTA guidelines only provide vehicle trip generation rates for motels. Hotel person trip generation is assumed to be double this figure as the motel rates are obtained from the previous 2002 version of the guideline, which may be more conservative than newer guidelines
- Compatibility of Net Lettable Area (NLA) and Gross Leasable Floor Area (GLFA): The proposed land-use yields are provided in the form of NLA. Although this does not exactly match the gross leasable floor area for which the RTA rates are designed, it is likely that NLA is equal to or greater than the GLFA. This results in overestimation of vehicle trips (ensuring the results are conservative)

Based on the proposed land-use, and the vehicle traffic generation rates provided in Table 6 1, the expected level of trips generation in the weekday morning, weekday evening and Saturday midday peak hours were calculated as shown in Table 6-2 below.

Table 6-2 Person trip generation

Year	Weekday morning peak hour	Weekday evening peak hour	Saturday peak hour
2031	1,136 trips per hour	1,283 trips per hour	1,181 trips per hour
2041	3,728 trips per hour	4,074 trips per hour	2,559 trips per hour

Source: M&PC (2022)

6.1.1 Production and Attraction classification

The likely distribution of these trips to (attracted) and from (produced) the site was analysed to more holistically understand the pressures on the transport networks for each of the peak periods.

The following assumptions were made when considering the distribution of the generated trips:

- Morning peak majority productions
  - Residential (90%) and Hotel (70%)
  - Commercial/Office (90%) and Education (90%)
- Evening peak majority production include:
  - Residential (90%) and Hotel (70%)
  - Commercial/Office (90%) and Education (90%)
- All Saturday peak production and attraction proportions are equally weighted (50%/50%)
- Retail and Community land uses for all AM, PM and Saturday peaks generate equal (50%/50%) production and attraction proportions

Total vehicle trips generated in the peak hours classified into production and attraction respectively are shown in Table 6-3 and Table 6-4 below.

Table 6-3 Trips produced by the development in the peak periods

		Building								Total
Year	Production	A	B	C	D	E	G	H	J	
2031	AM	88	52	77	45	184	0	0	0	445
	PM	81	58	132	215	171	0	0	0	658
	Sat	106	58	51	67	225	0	0	0	506
2041	AM	88	52	77	45	184	124	115	169	852
	PM	81	58	132	215	171	51	692	588	1,989
	Sat	106	58	51	67	225	82	142	320	1,051

Source: M&PC Analysis (2022)

Note: There is no buildings F or I

Table 6-4 Trips attracted to the development in the peak periods

		Building								
Year	Attraction	A	B	C	D	E	G	H	J	Total
2031	AM	45	41	127	213	96	0	0	0	523
	PM	92	51	59	62	194	0	0	0	457
	Sat	106	58	51	67	225	0	0	0	506
2041	AM	50	26	115	192	47	47	836	530	1,843
	PM	103	50	50	47	98	108	175	254	855
	Sat	117	55	43	49	110	82	176	298	930

Source: M&PC Analysis (2022)

Note: There is no buildings F or I

6.2 Mode split

The existing transport mode share pattern in Dandenong was extracted from the Victorian Integrated Survey of Travel and Activity data (VISTA), 2012-2018. The transport mode share pattern observed from the VISTA data represents pre-COVID transport conditions.

Varying mode share patterns by time of day were also accounted for in the model. To ensure a sufficient VISTA sample size, the travel patterns observed in Dandenong LGA as a whole was used. Table 6-5 below outlines the current transport mode shares observed across the average daily weekday, weekday AM peak hour, weekday PM peak hour and Saturday peak (3-hour) period.

Table 6-5 Existing transport mode shares in Dandenong LGA

Mode		Bicycle	Bus	Train	Vehicle Driver	Vehicle Passenger	Walking	Other
Daily	From Dandenong	1%	2%	5%	69%	23%	1%	0%
	To Dandenong	1%	2%	4%	69%	23%	1%	0%
	Internal to Dandenong	1%	2%	0%	51%	26%	20%	0%
AM Peak	From Dandenong	1%	2%	16%	64%	17%	1%	0%
	To Dandenong	1%	3%	2%	80%	13%	0%	0%
	Internal to Dandenong	1%	2%	0%	51%	23%	21%	1%
PM Peak	From Dandenong	1%	2%	2%	81%	13%	1%	0%
	To Dandenong	1%	2%	12%	66%	18%	2%	0%
	Internal to Dandenong	1%	1%	0%	48%	28%	22%	1%

Source: M&PC analysis of VISTA data

Table 6 5 above shows a decrease in vehicle mode share/higher uptake of public transport from Dandenong in the weekday AM peak and to Dandenong in the PM peak. A higher ratio of vehicle passenger to vehicle driver trips is also noted during the Saturday peak.

However, between 2012-2018 (the VISTA data collection period), there has not been any transit-oriented development of the scale proposed by the Foster Street development in Dandenong. The observed mode share will likely not be an accurate representation of the mode share of trips to and from the Foster Street development. The observed VISTA data, therefore, needs to be adjusted and benchmarked against a region which has had similar transit-oriented, mixed land-use development.

Footscray was used as a comparison for the likely mode share that will be observed in the Foster Street development. The weekday daily average mode split in Footscray is shown in Table 6-6 below.

Table 6-6 Current daily mode split – TOD and mixed-use sites in Footscray

	Bicycle	Bus	Train	Vehicle Driver	Vehicle Passenger	Walking	Other	Total
From Footscray	5%	2%	7%	58%	16%	11%	1%	100% (Sample size = 400)
To Footscray	5%	2%	8%	57%	17%	11%	1%	100% (Sample size = 390)

Source: M&PC analysis of VISTA data

Comparing the mode share of trips to and from Dandenong and Footscray, it is noted that:

- Mixed-use transit-oriented developments increase train ridership to and from the precinct
- Private car usage for people living in the precinct is likely to decrease
- A mixed-use, high-intensity transit-oriented development will encourage and sustain greater walking and bicycle riding trips

Based on this, the forecast mode share for trips to and from the development is outlined in Table 6-7 below.

Table 6-7 Modified transport mode share for the Foster Street development

		Bicycle	Bus	Train	Vehicle Driver[13]	Vehicle Passenger	Walking
Daily	From Dandenong	5%	5%	15%	41%	14%	20%
	To Dandenong	5%	5%	15%	41%	14%	20%
	Internal to Dandenong	5%	10%	5%	26%	14%	35%
AM Peak	From Dandenong	12%	4%	35%	26%	7%	16%
	To Dandenong	12%	8%	8%	51%	9%	12%
	Internal to Dandenong	5%	13%	8%	27%	12%	34%
PM Peak	From Dandenong	10%	6%	7%	52%	8%	17%

[13] Future vehicle occupancy based on the current mode share and taken as the same ratio as the current proportion of vehicle drivers to vehicle passengers in Table 6-5.

		Bicycle	Bus	Train	Vehicle Driver[13]	Vehicle Passenger	Walking
	To Dandenong	6%	3%	25%	24%	7%	35%
	Internal to Dandenong	3%	7%	0%	31%	18%	42%
Saturday	From Dandenong	4%	9%	6%	51%	24%	7%
	To Dandenong	2%	8%	15%	36%	29%	10%
	Internal to Dandenong	7%	10%	0%	45%	26%	12%

Source: M&PC analysis of VISTA data

Note: Transport mode share for the specific peak periods were calculated based on the proportional difference between the daily and each peak period observed in the current VISTA dataset (2012-2018)

6.3 Trip distribution

Prior to loading the trips onto the transport network, a broad categorisation of where these trips are to and from is required. The trip distribution patterns were obtained from VISTA (2012-2018). The trip distribution patterns across the Dandenong LGA were used.[14]

VISTA data provided information of the trip distribution for each of the peak periods. The trip distribution patterns for each of the peak periods is shown in Table 6-8 below. The trip distribution is categorised by direction of travel: north, south, east, west and internal (within Dandenong LGA).

Table 6-8 Directional distribution of trips from study area to broader network

	AM Peak		PM Peak		Saturday Peak	
	From Dandenong	To Dandenong	From Dandenong	To Dandenong	From Dandenong	To Dandenong
North	21%	25%	24%	23%	20%	16%
South	2%	6%	7%	3%	7%	9%
East	7%	21%	21%	7%	12%	21%
West	11%	4%	4%	7%	9%	8%
Internal	59%	45%	44%	59%	51%	48%

Source: VISTA data with M&PC analysis

After applying both the mode split and trip distribution profile, the estimated future number of trips generated by the development is outlined in Table 6-9 to Table 6-11 below for 2031 and Table 6-12 to Table 6-14 below for 2041.

[14] Dandenong LGA was used rather than Dandenong SA2 to ensure a sufficient sample size

Table 6-9 Directional distribution of trips in the 2031 Weekday AM Peak

	Direction	Bicycles	Bus	Train	Vehicle Driver	Vehicle Passenger	Walking
From Site	N	8	9	45	40	11	5
	S	1	1	5	4	1	1
	E	3	3	15	14	4	2
	W	4	5	23	20	5	3
	Internal	9	45	26	96	44	112
	Total	24	63	114	174	65	122
To Site	N	8	20	10	85	14	4
	S	2	5	3	21	4	1
	E	7	17	9	70	12	3
	W	1	3	2	12	2	1
	Internal	7	34	20	74	34	87
	Total	26	80	43	263	66	96

Source: M&PC Analysis

Table 6-10 Directional distribution of trips in the 2031 Weekday PM Peak

	Direction	Bicycles	Bus	Train	Vehicle Driver	Vehicle Passenger	Walking
From Site	N	8	19	11	107	17	7
	S	2	5	3	31	5	2
	E	7	17	10	93	15	6
	W	1	4	2	20	3	1
	Internal	5	20	0	100	57	129
	Total	24	65	27	350	97	146
To Site	N	5	10	42	49	13	14
	S	1	1	5	6	2	2
	E	2	3	14	16	4	5
	W	2	3	13	15	4	5
	Internal	6	22	0	109	63	141
	Total	14	39	74	195	86	166

Source: M&PC Analysis

Table 6-11 Directional distribution of trips in the 2031 Saturday Peak

	Direction	Bicycles	Bus	Train	Vehicle Driver	Vehicle Passenger	Walking
From Site	N	2	17	6	63	30	2
	S	1	6	2	21	10	1
	E	1	10	4	38	18	1
	W	1	8	3	29	14	1
	Internal	10	31	0	143	83	37
	Total	15	72	15	295	154	41
To Site	N	1	14	12	35	29	2
	S	0	8	7	20	16	1
	E	1	18	16	47	38	3
	W	0	7	6	17	14	1
	Internal	10	28	0	132	76	34
	Total	12	74	40	251	173	41

Source: M&PC Analysis

Table 6-12 Directional distribution of trips in the 2041 Weekday AM Peak

	Direction	Bicycles	Bus	Train	Vehicle Driver	Vehicle Passenger	Walking
From Site	N	14	17	83	74	20	10
	S	2	2	9	8	2	1
	E	5	6	28	25	7	3
	W	7	9	42	37	10	5
	Internal	17	82	49	176	81	207
	Total	45	116	210	320	120	226
To Site	N	40	96	49	401	68	20
	S	10	24	12	100	17	5
	E	33	79	40	330	56	16
	W	6	14	7	58	10	3
	Internal	33	162	95	346	159	406
	Total	120	374	204	1235	309	450

Source: M&PC Analysis

Table 6-13 Directional distribution of trips in the 2041 Weekday PM Peak

	Direction	Bicycles	Bus	Train	Vehicle Driver	Vehicle Passenger	Walking
From Site	N	32	77	46	430	68	29
	S	9	22	13	123	19	8
	E	28	67	40	375	59	25
	W	6	14	9	79	13	5
	Internal	22	82	0	404	232	521
	Total	97	261	109	1411	391	588
To Site	N	10	21	89	104	28	31
	S	1	2	11	12	3	4
	E	3	7	29	34	9	10
	W	3	6	28	33	9	10
	Internal	12	47	0	231	132	298
	Total	30	83	156	413	182	352

Source: M&PC Analysis

Table 6-14 Directional distribution of trips in the 2041 Saturday Peak

	Direction	Bicycles	Bus	Train	Vehicle Driver	Vehicle Passenger	Walking
From Site	N	4	38	13	137	64	4
	S	1	13	4	46	21	1
	E	2	23	8	82	38	2
	W	2	18	6	64	30	2
	Internal	22	66	0	310	179	80
	Total	32	156	32	639	333	88
To Site	N	2	29	26	76	62	4
	S	1	17	14	43	35	2
	E	2	39	34	101	82	6
	W	1	14	12	37	30	2
	Internal	21	61	0	287	166	74
	Total	26	160	87	544	375	88

Source: M&PC Analysis

6.4 Trip Assignment

Based on the modal and directional categorisation of the trips, the travel demand to and from the proposed development was assigned to the transport network in and around the study area.

A series of assumptions were made when assigning pedestrian, bicycle, and public transport trips onto the network. These are outlined below.

6.4.1 Pedestrian assignment

The development timeline indicates buildings A to E (north of Foster Street) are expected to be completed by 2031. Buildings G to J (south of Foster Street) are expected to be completed by 2041. This staged approach will result in a total of 18 and 24 pedestrian access points within the Foster Street development by the year 2031 and 2041 respectively as shown in Figure 6-1 below.

These access points comprise of several entry points to each of the eight buildings, including different entry points for land uses such as retail and residential.

Figure 6-1 Pedestrian Access Points

Source: DKO with M&PC annotation

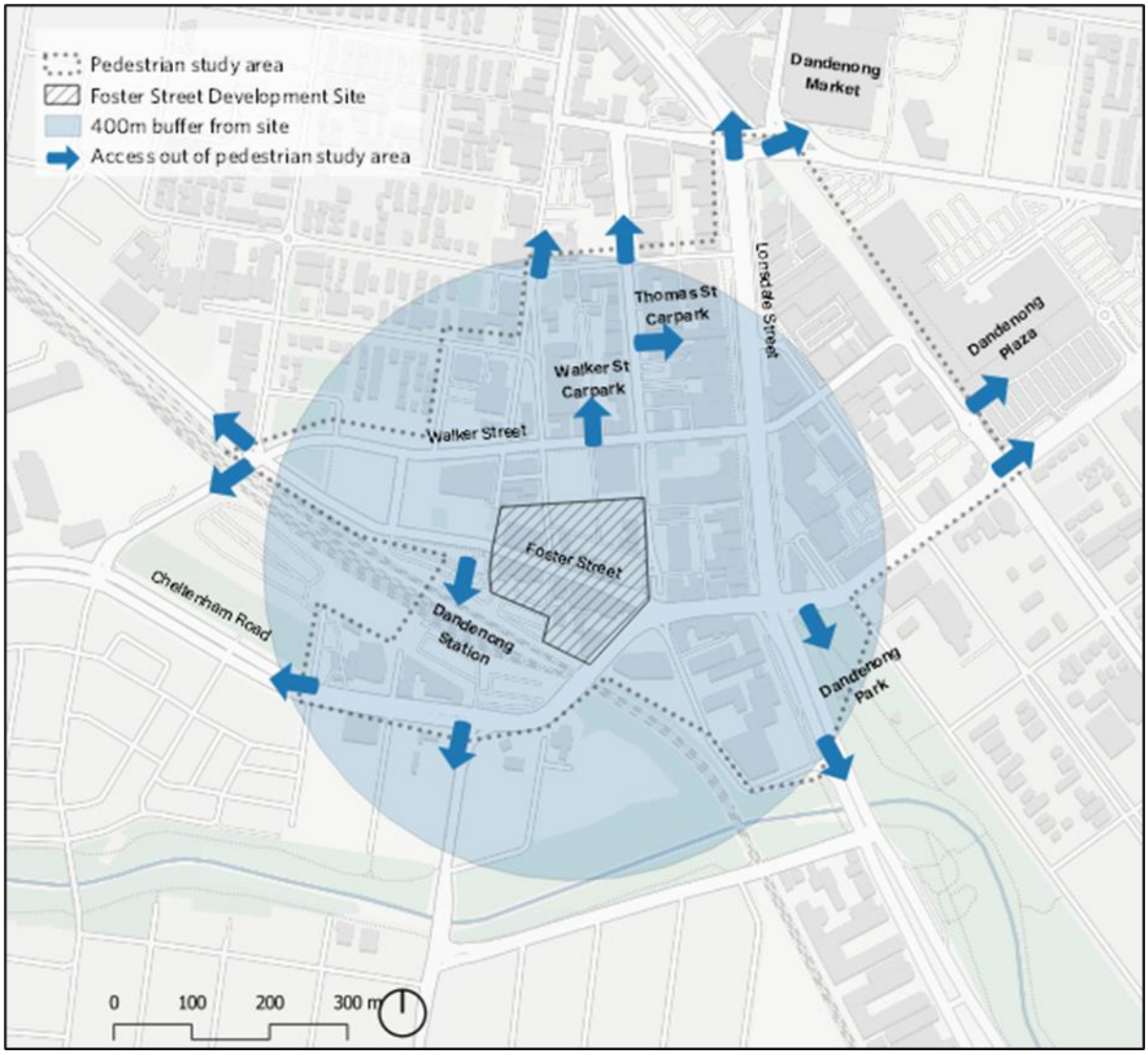
Pedestrian trips were assigned to key destinations within the Foster Street development as well as sites outside of the development.

When assigning pedestrian movement onto the network the following origin/destination (O/D) pairings were considered:

- 17 and 23 pedestrian access points within the development site in 2031 and 2041 respectively
- 15 pedestrian access points beyond the development site

The key destinations outside the development are presented in Figure 6-2 below.

Figure 6-2 Pedestrian O-D points outside the development



Source: M&PC

6.4.2 Public transport assignment

There are no public transport stops/interchanges located directly within the development site. The closest, from all parts of the site, is the Dandenong Station Bus Interchange (for bus users) and Dandenong Station (for train users). All public transport trips, therefore, were classified as pedestrian trips, accounting for the first mile/last-mile connection between the Foster Street development and the adjacent Dandenong Station.

6.4.3 Bicycle assignment

Dedicated off-street, secure bicycle parking is expected to be provided and located within the basement car parking structures. In line with the construction stages, the northern basement car parking is expected to be operational in 2031 with the southern basement car park coming into operation in 2041. This staged approach will result in a single access point for bicycle riders in 2031 and dual access point in 2041 as shown in Figure 6-3 overleaf.

When assigning bicycle trips onto the network the following O/D pairings were considered:

- All the bicycle trips enter/exit the development via the basement car park. This results in a single access point in 2031 and dual access points in 2041
- Bicycles travelling on bi-directional corridors use the most separated facility available (although for ease of reading the maps the volumes are shown on each side of the street segment regardless of where the infrastructure would be located)

Bicycle trips are distributed across the 13 points beyond the development site. The key destinations outside the development are presented in Figure 6-3 below.

Figure 6-3 Bicycle O-D points outside the development

Source: M&PC

6.4.4 Vehicle traffic assignment

Vehicular traffic generated by the Foster Street development was assumed to utilise the basement carparks, with a small proportion of vehicles making use of external multi-level parking facilities on Walker Street and Thomas Street. The location of the parking facilities is shown in Figure 6 4 overleaf. The following parking specific access/egress assumptions were made:

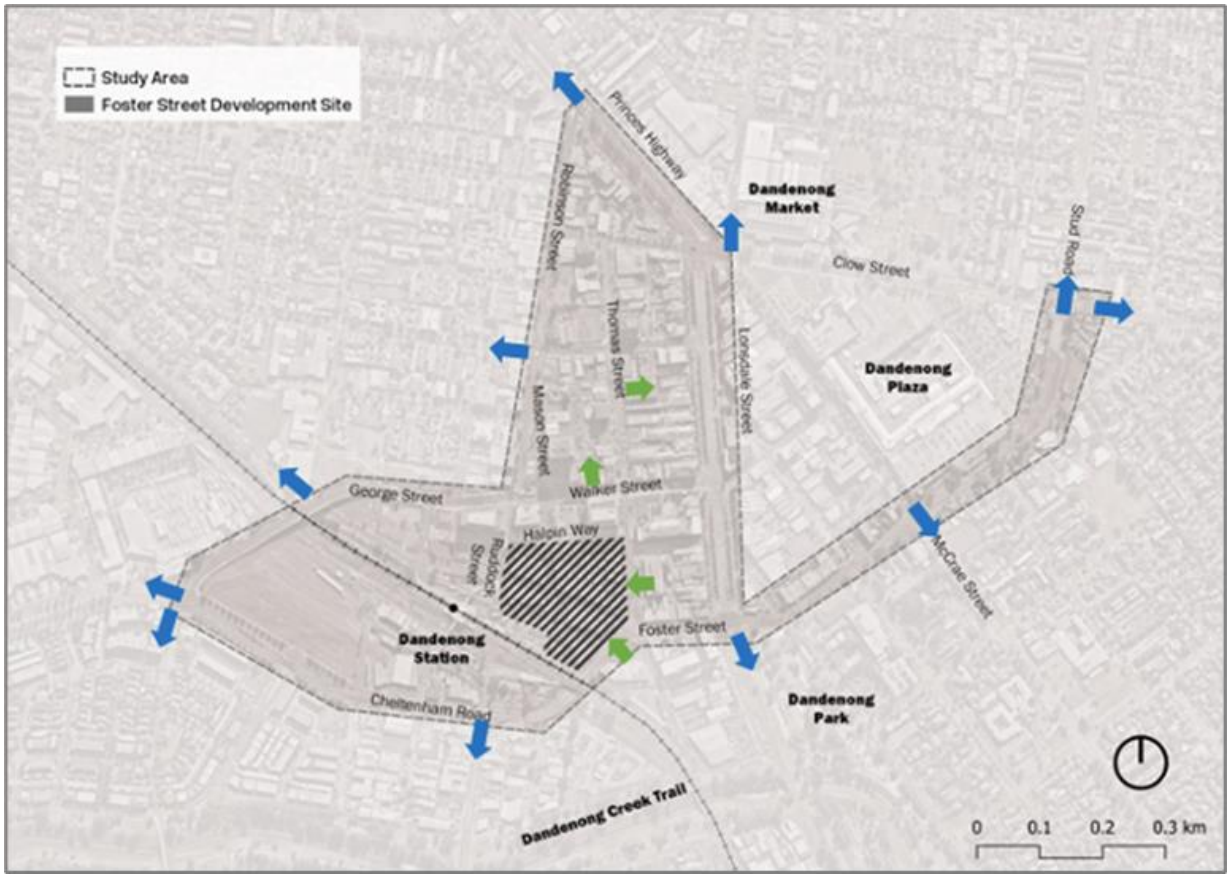
- A collective 10 % of all vehicle trips park in the Walker Street and Thomas Street car park
- In 2041, where there is a dual access to the basement carpark, all vehicle trips travelling to/from the north, using the basement car park, are assumed to access/egress from the northern Thomas Street exit, while vehicle trips to/from the south, using the basement car park, are assumed to access/egress from the southern Cheltenham Road exit

When assigning private vehicle trips onto the network the following O-D pairings were considered:

- Five key vehicle access points (two at the development site and three nearby public facilities)
- 11 key road access points across the broader road network
- Shortest (distance) route is selected for each O-D pair

The key destinations outside the development are presented in Figure 6-4 below.

Figure 6-4 Locations of O-D points for vehicular traffic assignment



Source: M&PC (2024)

7 Transport Impact Assessment

The transport modelling approach noted in Chapter 6 enabled the future travel demand, resulting from the development, to be quantified. This section outlines the expected pedestrian and bicycle rider volumes in 2031 (intermediate time-point with the completion of Buildings A to E) and 2041 (full built-out). An assessment of the road network performance is also outlined for the two time points.

The following assessment is reflective of the 2022 development plans. The most recent gross floor area changes (August 2023) have not been modelled. At this stage of the master planning process, M&PC are of the opinion that updating the core modelling efforts are not warranted. As designs evolve and are firmed-up, at each approval and construction stage, transport analysis and modelling will be updated.

7.1 Forecast pedestrian volumes

The pedestrian activity generated by and attracted to the Foster Street development in 2031 and 2041, for the AM, PM and Saturday peaks, are illustrated in Figure 7-1 to Figure 7-6 overleaf. As existing pedestrian count data was not available, the volumes indicated in each link marks the expected pedestrian volumes resulting solely from the Foster Street development[15][16]. The precise location of building entrances will have a significant impact on the specific pedestrian trip volumes.

Pedestrian activity resulting from the development is expected to be at its highest in the AM peak hour. The PM peak hour is noted to have comparable, albeit marginally lower pedestrian flows. Of the three peak periods assessed, the Saturday peak is forecasted to have the lowest pedestrian flow.

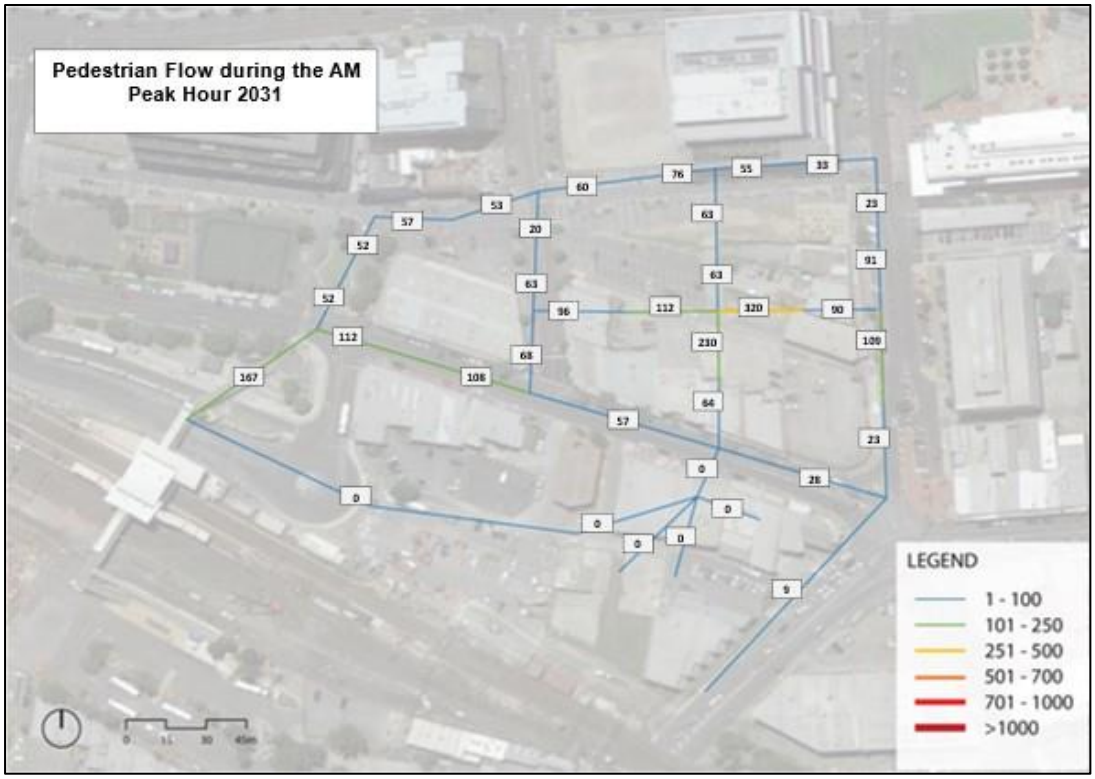
The Foster Street spine is anticipated to cater for the largest pedestrian flows from the development. This is observed across all peak periods in both 2031 and 2041. The full built-out scenario is forecast to add significant pedestrian activation along Foster Street particularly using it to connect with Dandenong Station. A second lane-way (south of Building J) connecting the station to the development will provide a direct alternative, ensuring that Foster Street can cope with the pedestrian demand.

It is worth noting that higher pedestrian demands will also be observed on Halpin Way but the intensity of development at the northern end of the site does not yield enough pedestrians to fill the 20m wide Shared Zone. A high performing pedestrian network is required to facilitate the walking trips and revitalise Central Dandenong. From a transport perspective, this will broadly require:

- Prioritisation of pedestrian movement, over other modes, in and around the Foster Street development especially on Foster Street
- Calming of traffic around the site using streetscape interventions and locating car parking entrances in the periphery of the development
- Reallocation of road reserve space for pedestrian use, particularly in areas of high demand
- Creating an attractive high-quality public realm
- Achieving a net reduction in driveways / crossovers so that the public realm and footpaths are protected from excessive vehicle movements across pedestrian spaces

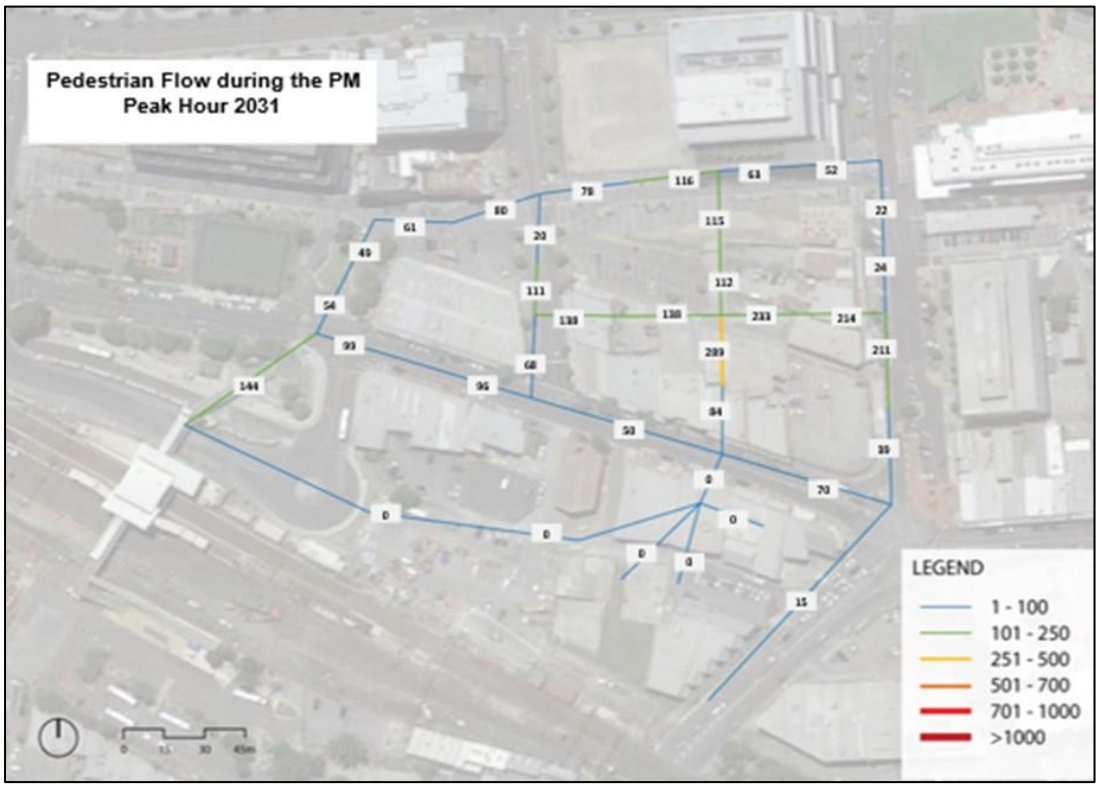
[15] Once parked, vehicle drivers, passengers and bicycle riders were considered pedestrians. These trips were loaded onto the network based on the trip attraction/generation rates to/from each building.
[16] The margin of error when loading the pedestrian trips onto the network is greater than any other mode as the detailed building access/egress arrangements, including elevator access points to/from the basement, are not yet specified.

Figure 7-1 Pedestrian Flow - AM Peak – 2031



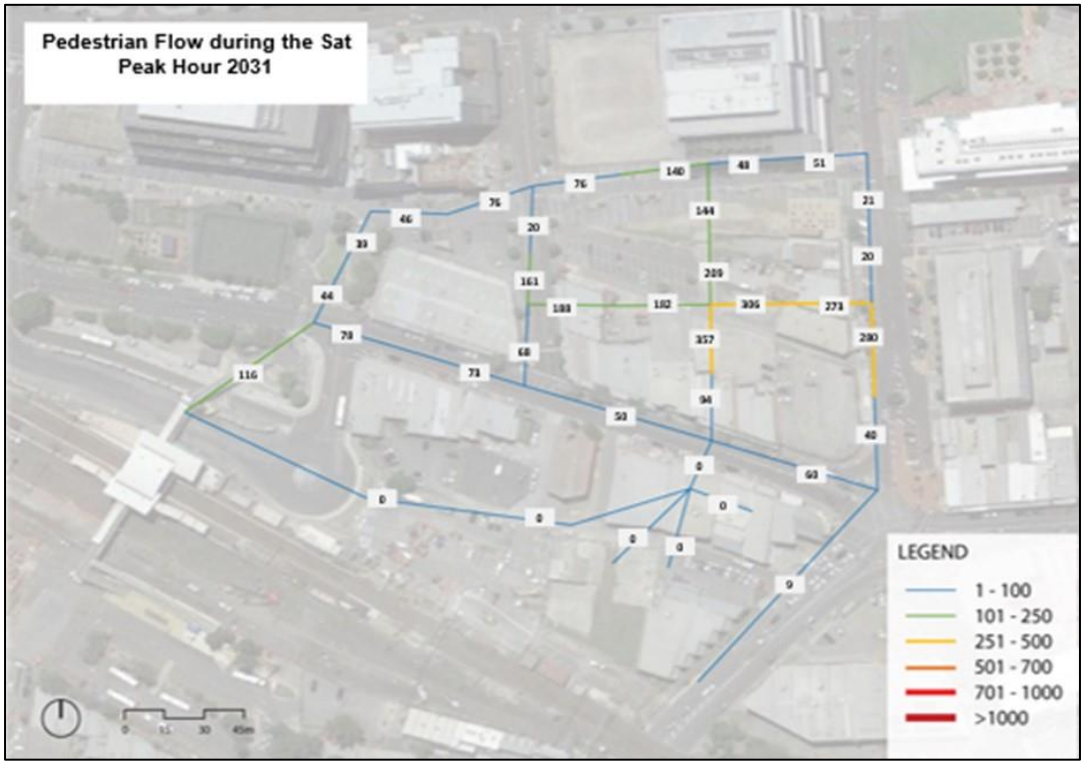
Source: M&PC analysis

Figure 7-2 Pedestrian Flow - PM Peak – 2031



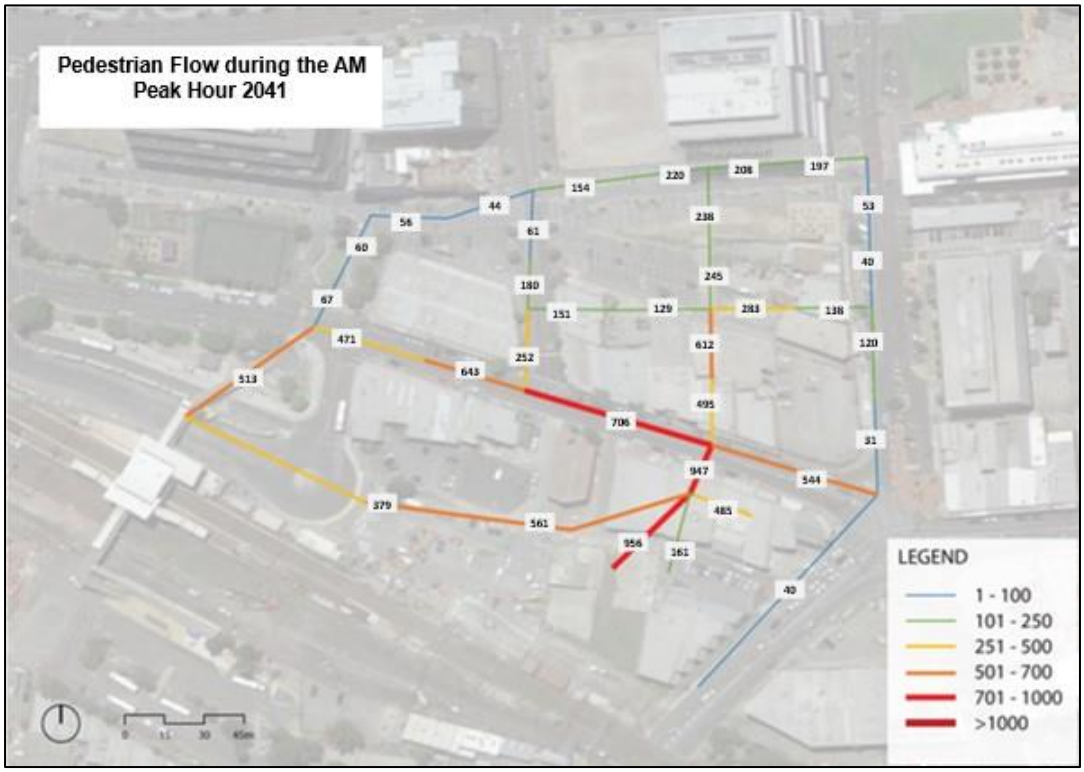
Source: M&PC analysis

Figure 7-3 Pedestrian Flow - Saturday Peak – 2031



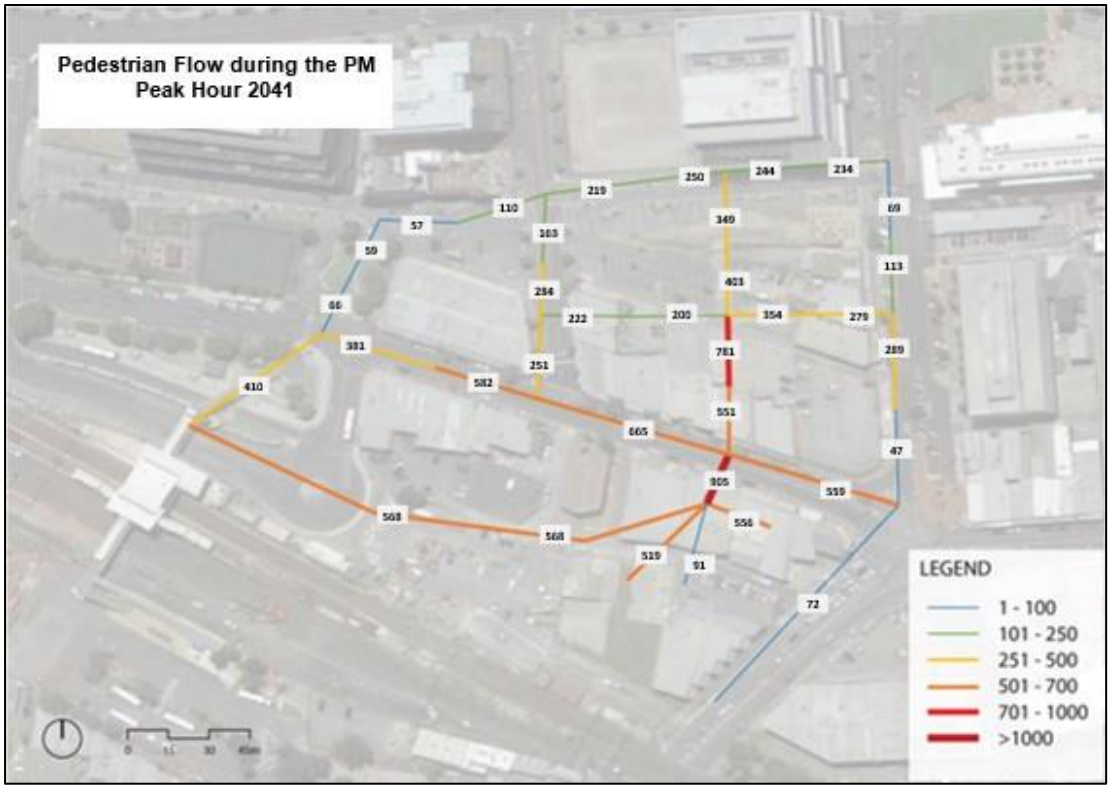
Source: M&PC analysis

Figure 7-4 Pedestrian Flow - AM Peak – 2041



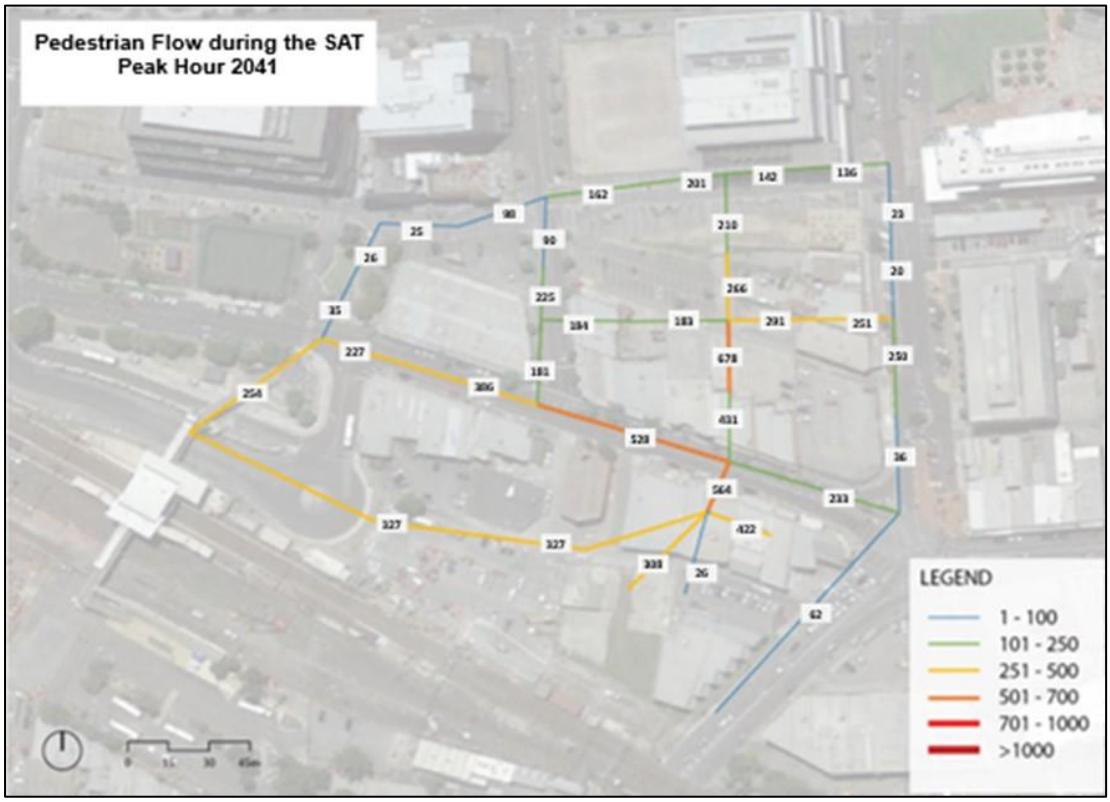
Source: M&PC analysis

Figure 7-5 Pedestrian Flow - PM Peak – 2041



Source: M&PC analysis

Figure 7-6 Pedestrian Flow - Saturday Peak – 2041



Source: M&PC analysis

7.2 Forecast bicycle volumes

The bicycle volumes generated by and attracted to the Foster Street development in 2031 and 2041, for the AM, PM and Saturday peaks, are illustrated in Figure 7-7 to Figure 7-12 overleaf. As existing bicycle count data was not available, the volumes indicated in each link marks the expected cyclist flows resulting solely from the Foster Street development.

Bicycle activity from the development is expected to be at its highest in the AM peak hour. The PM peak and the Saturday peak are noted to have lower bicycle flows relative to the AM peak. Directional volumes are shown either side of the street (for ease of understanding directional movements), even if a bi-directional path is on one side of the roadway

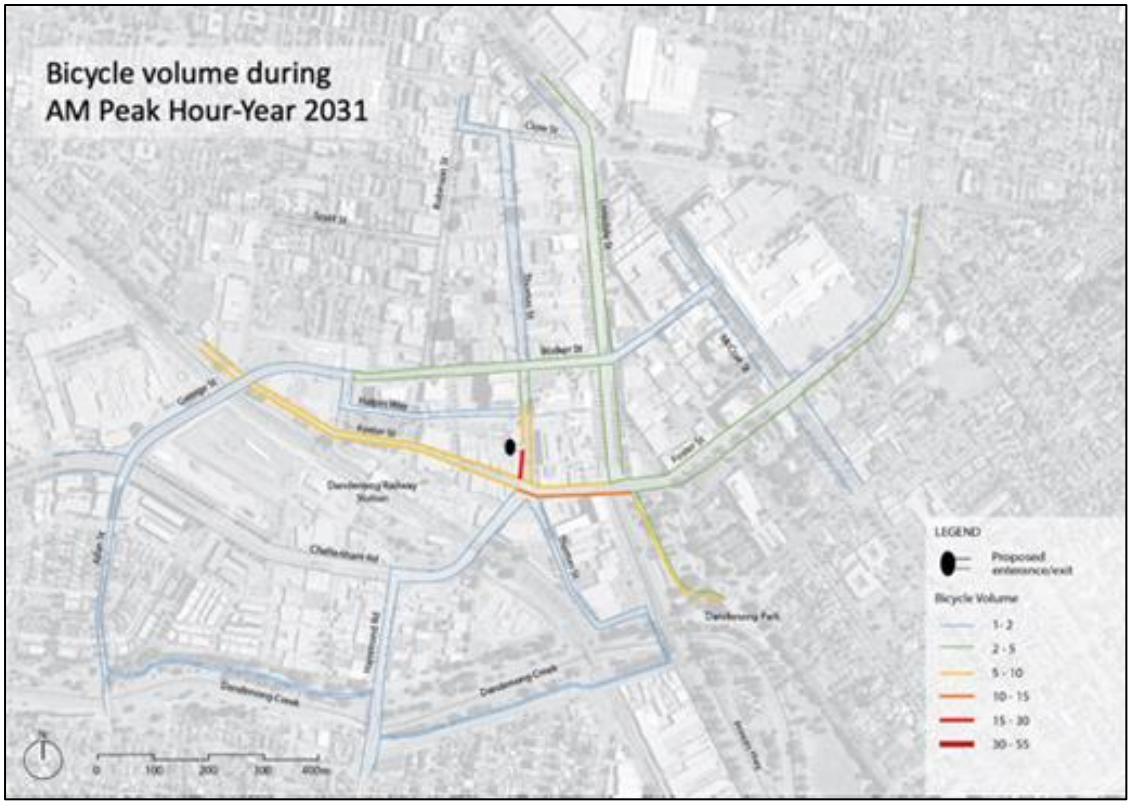
Foster Street (west of the development) is expected to be heavily used by cyclists as it provides a critical link from the Foster Street development to Djerring Trail and the Eastlink Trail via Railway Parade. This link connects the Foster Street development to a wide catchment to the north and west of the development. Foster Street (east of the development) is also expected to be used by cyclists travelling to/from the Dandenong Creek Trail.

Bicycle volumes along Thomas Street (north of Foster Street) is also expected to be high. This is due to Thomas Street providing access into the off-street secure bicycle parking facility located in the basement car park. In 2041 an additional car parking entry on Cheltenham Road is unlikely to induce a substantial increase in bicycle riding volumes on Cheltenham Road due to the location of the entrance and traffic volumes on that section of roadway.

To provide a safe environment for the forecast bicycle trips, the development will include a:

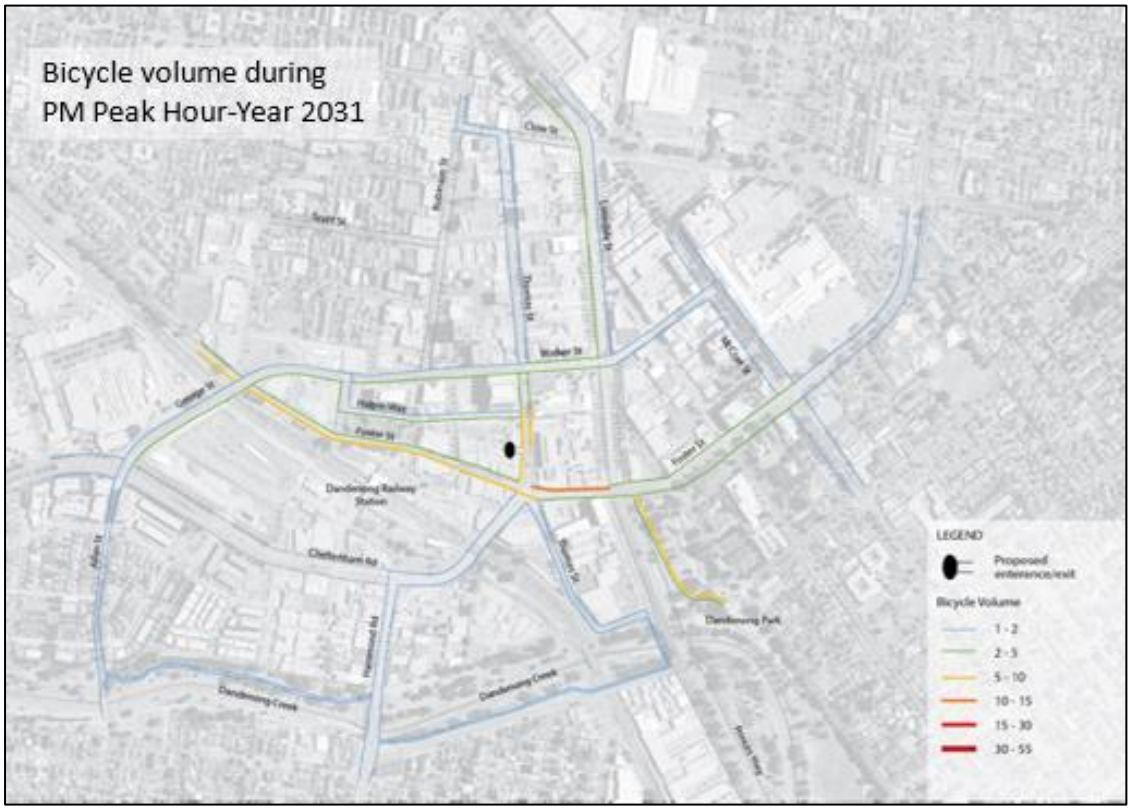
- Top-of-kerb, separated bidirectional path on the northern side of Foster Street (which would connect with future Council and DoT infrastructure between Yarraman Station and Dandenong Park)
- Protected bicycle lane on west side of Thomas Street (which would connect with future Council infrastructure between Dandenong Creek and Clow Street)
- Protected signalised crossing of Thomas Street on the northern side of the Foster Street intersection

Figure 7-7 Bicycle volume - AM peak – 2031



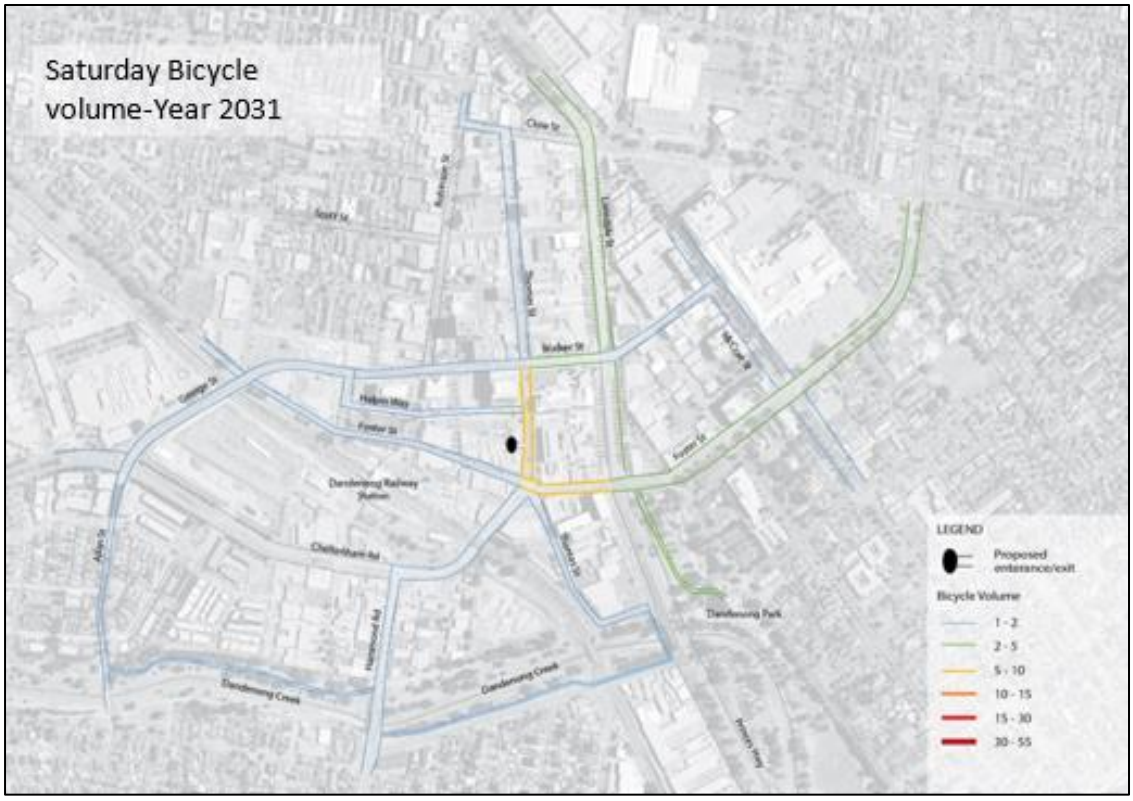
Source: M&PC analysis

Figure 7-8 Bicycle volume - PM peak - 2031



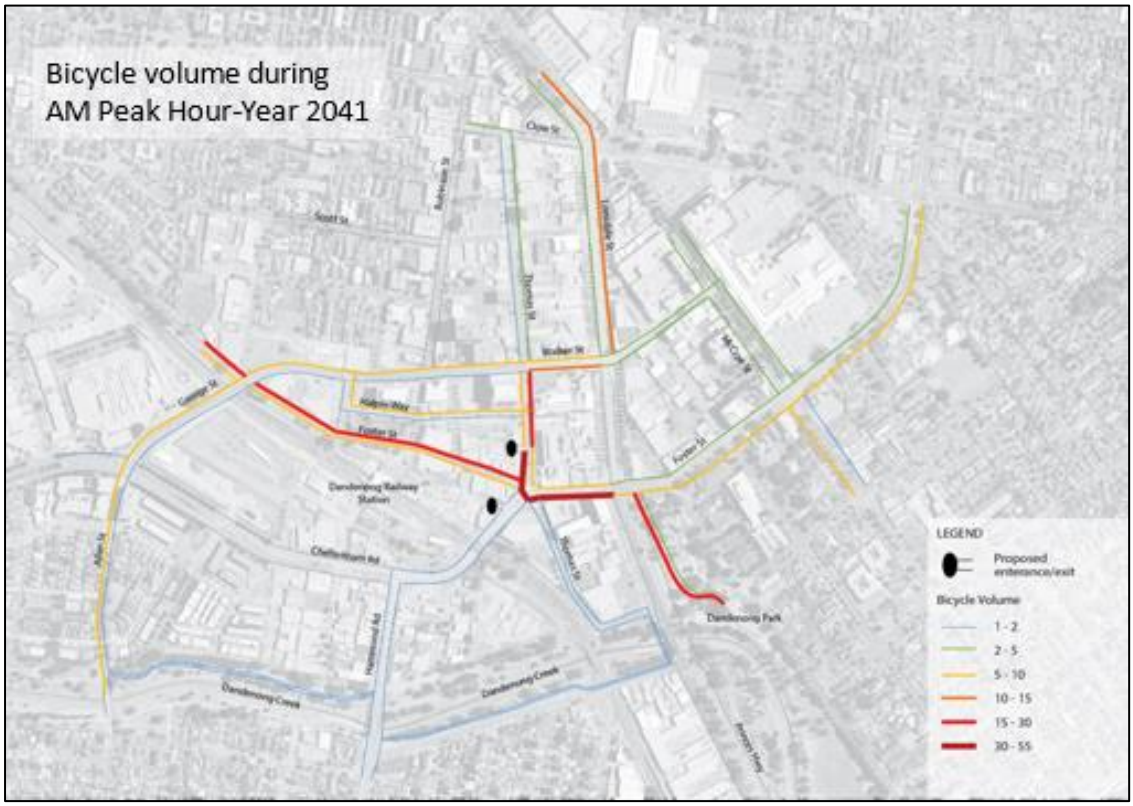
Source: M&PC analysis

Figure 7-9 Bicycle volume - Saturday peak – 2031



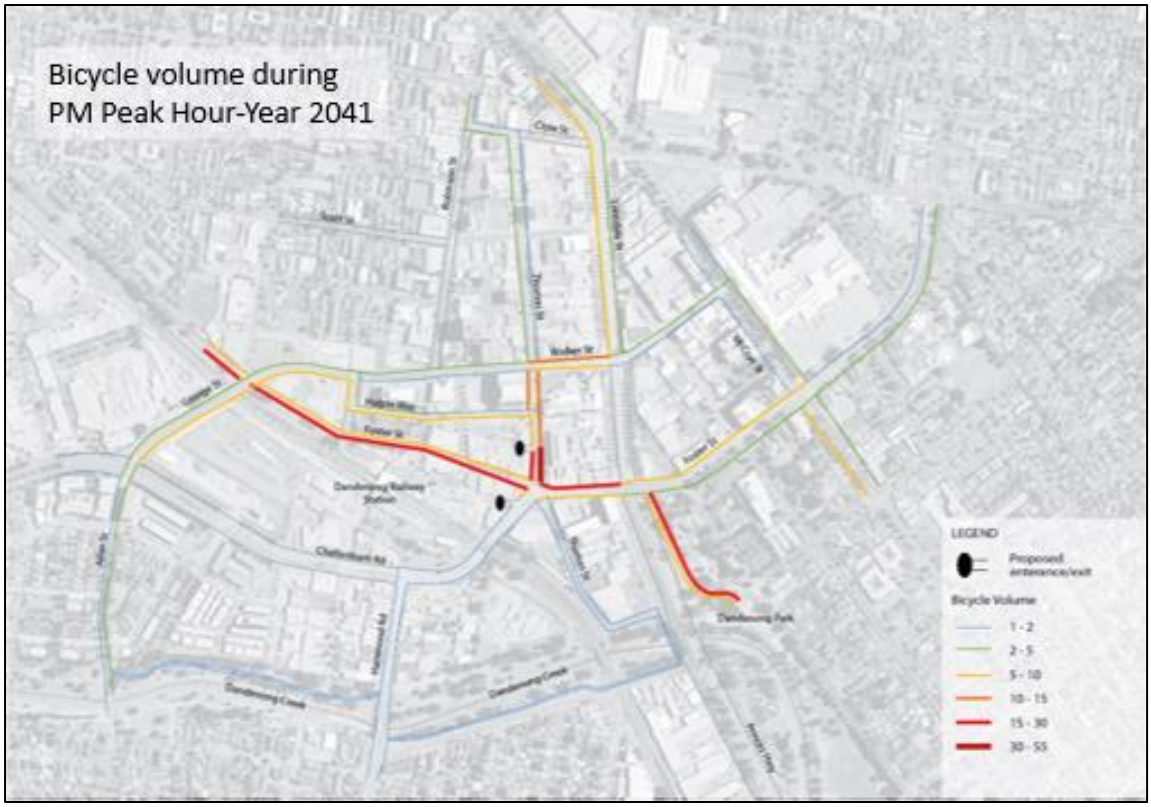
Source: M&PC analysis

Figure 7-10 Bicycle volume - AM peak – 2041



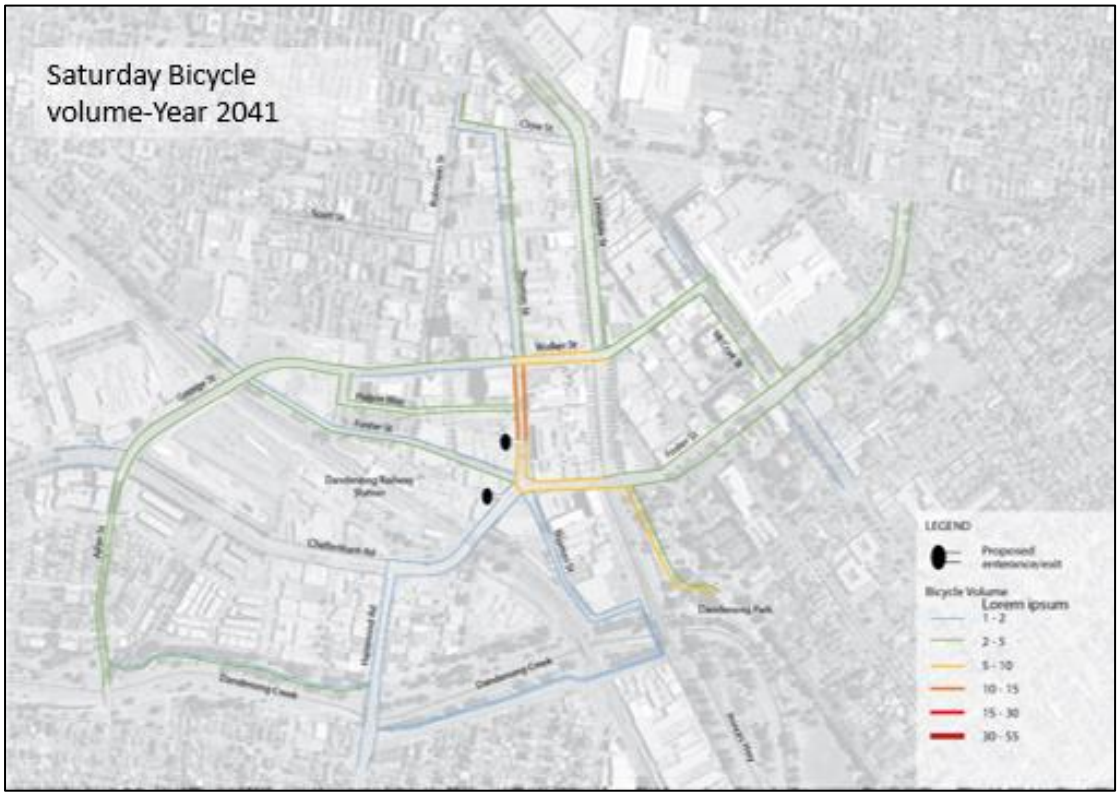
Source: M&PC analysis

Figure 7-11 Bicycle volume - PM peak - 2041



Source: M&PC analysis

Figure 7-12 Bicycle volume - Saturday peak – 2041



Source: M&PC analysis

7.3 Road network impacts

Assessing the impacts of the development on the road network involved:

- Benchmarking the intersection performance for the existing condition
- Benchmarking the intersection performance in 2031 and 2041, without the Foster Street development, accounting only for the background traffic growth
- Assessing the road network impacts resulting from the Foster Street development in 2031 & 2041 (with background traffic growth)

SIDRA Intersection 9.1 software was used for the analysis of the traffic performance at key road intersections for the three assessment scenarios outlined above.

For each of the scenarios above, separate intersection models were developed for three peak periods:

- 7:45 – 8:45 for weekday morning peak
- 16:15 – 17-15 for weekday afternoon peak
- 11:30 – 12:30 for Saturday midday peak

Traffic counts and volume analysis was used to identify the peak periods.

This analysis follows the processes outlined by the Victorian Department of Transport's modelling guidelines including model calibration and validation. The processes undertaken ensured the base model developed was robust and accurately represented the existing condition.

- Calibration – developing a Base model from evidence that reflects current conditions
- Validation – ensuring the Base model is sound for subsequent analysis

The traffic models for each peak period were calibrated using SCATS and cycle/phase time information, these models were then subsequently validated through the assessment of the degree of saturation (DoS)[17] queue lengths, travel times and traffic signal operations.

7.3.1 Intersection performance – existing condition

An assessment of the existing intersection performance identified, broadly, capacity exists on the road network to accommodate the current levels of demand as shown in Figure 7-13 to Figure 7-15 overleaf.

Of the three peak periods, the Saturday peak was identified to be the most congested. Five intersections were identified to be oversaturated. These congested intersections include:

- Clow Street/Princes Highway
- Walker Street/Lonsdale Street
- Foster Street/Lonsdale Street
- Cheltenham Road/Foster Street/Thomas Street
- Hammond Road/Cheltenham Road

[17] DoS is a measure of the traffic demand relative to total roadway capacity. A DoS of 1 means the intersection approach capacity is equal with the traffic demand, this implies there is limited ability for further traffic to be accommodated. An intersection is classified as 'oversaturated' where demand exceeds capacity. Typically, DoS values greater than 0.9 indicate traffic congestion

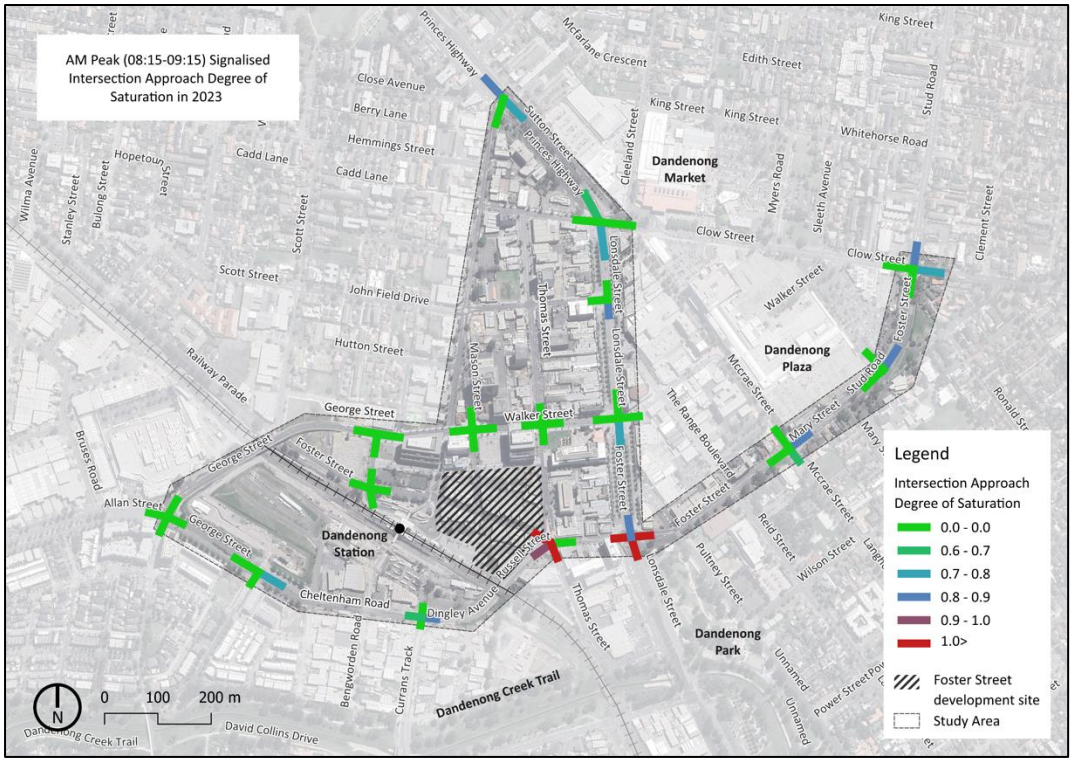
The congestion in the Saturday peak is likely due to the traffic demand being more balanced in all directions, which dampens the efficiencies gained through signal coordination.

Potential queue overflow issues are currently occurring along the Lonsdale Street corridor and will continue into the future. Potential queue overflow issues were also identified at the intersection of Cheltenham Road, Foster Street and Thomas Street.

The intersections at Lonsdale Street/Foster Street and Cheltenham Road/Foster Street/Thomas Street are typically at or approaching capacity in the morning peak. These intersections were also approaching capacity in the afternoon peak. Cheltenham Road/Hammond Road was at capacity in the afternoon peak particularly for movements to and from Dandenong South industrial area.

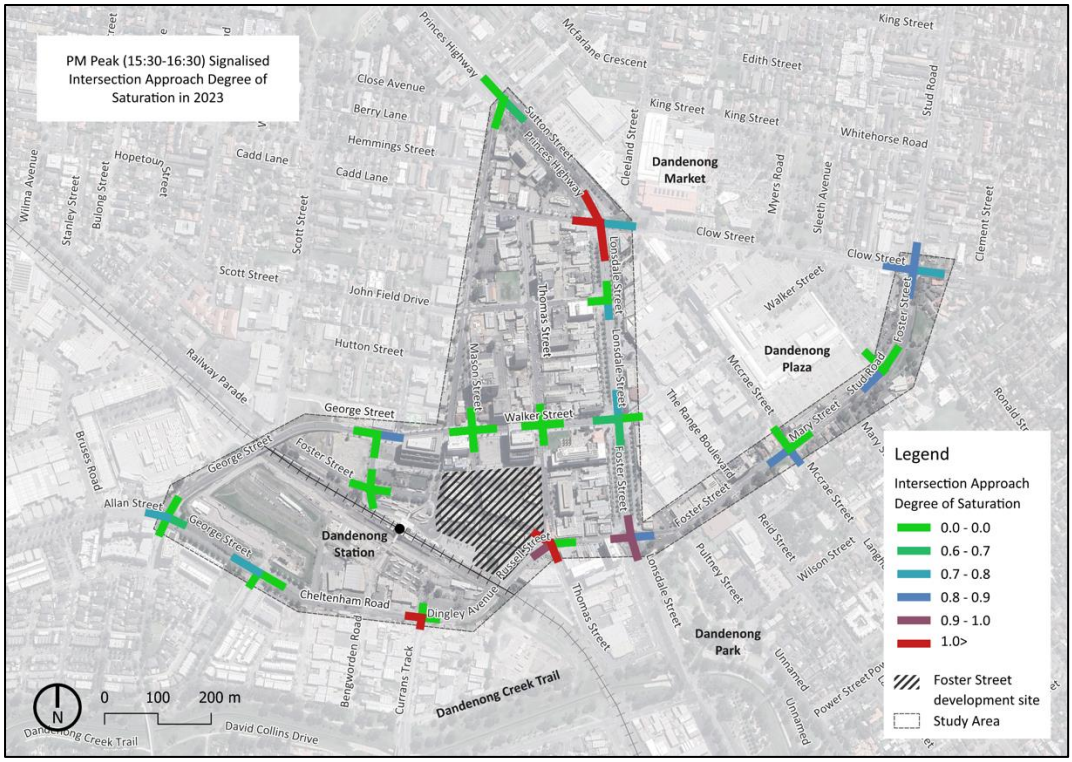
The degree of saturation in 2023 for the morning peak, afternoon peak and Saturday peak is shown in Figure 7-13, Figure 7-14 and Figure 7-15 below.

Figure 7-13 Degree of saturation – Weekday AM Peak



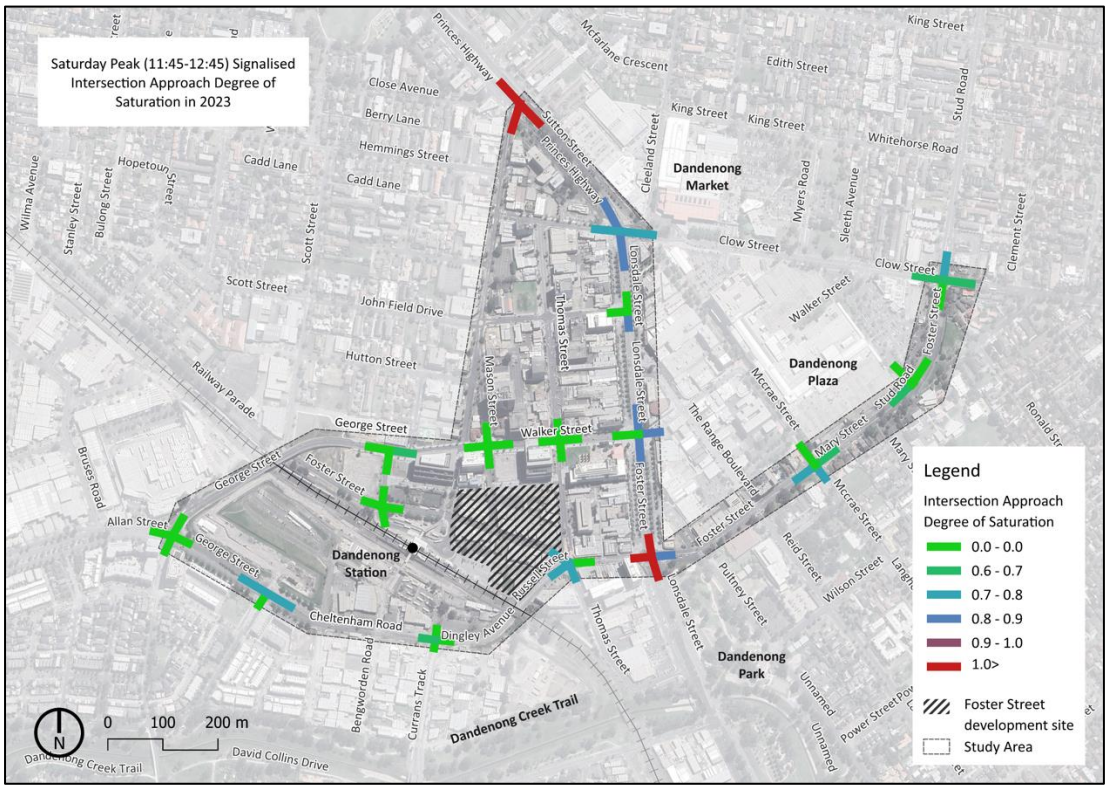
Source: M&PC Analysis

Figure 7-14 Degree of saturation – Weekday PM Peak



Source: M&PC Analysis

Figure 7-15 Degree of saturation – Saturday



Source: M&PC analysis

7.3.2 Intersection capacity – background growth (external to development)

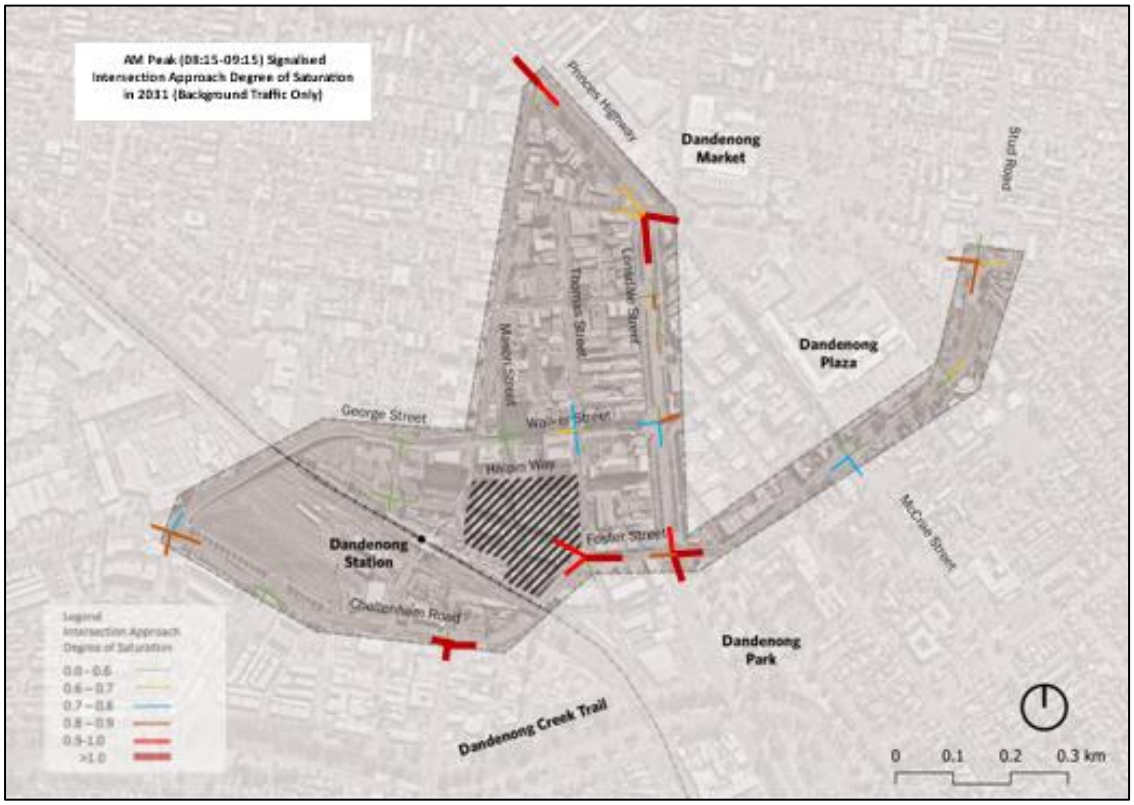
In 2031 and 2041, the traffic demand in the study area, generated external to the Foster Street development, is expected to increase. Population growth, the regional importance of Central Dandenong and high car dependency in the outer south-east is expected to put pressure on the road network.

To model the impacts of the Foster Street development in 2031 and 2041, we first had to project the growth of the background traffic for years 2031 and 2041. As Victorian Integrated Transport Model (VITM) outputs were unavailable, historic traffic growth patterns were analysed from VicRoads data and used to determine a site-specific annualised traffic growth rate for arterial and other major roads in the study area. An annualised growth rate between 0-2% was used to project the current demand levels out to the 2031 and 2041 demand levels, while also ensuring that the resulting traffic demand did not exceed an upper limit of the road capacity.

Loading the background (external) traffic volumes, for 2031 and 2041, onto the road network in SIDRA results in a congested network. Across the morning, afternoon and Saturday peak periods, key intersections are expected to operate at capacity (indicated by a DoS greater than 0.9 – as shown in Figure 7-16 to Figure 7-21 overleaf. This suggests the traffic demand generated external to the Foster Street development, in 2031 and 2041, is likely to lead to most intersections in the study area operating at or over capacity.

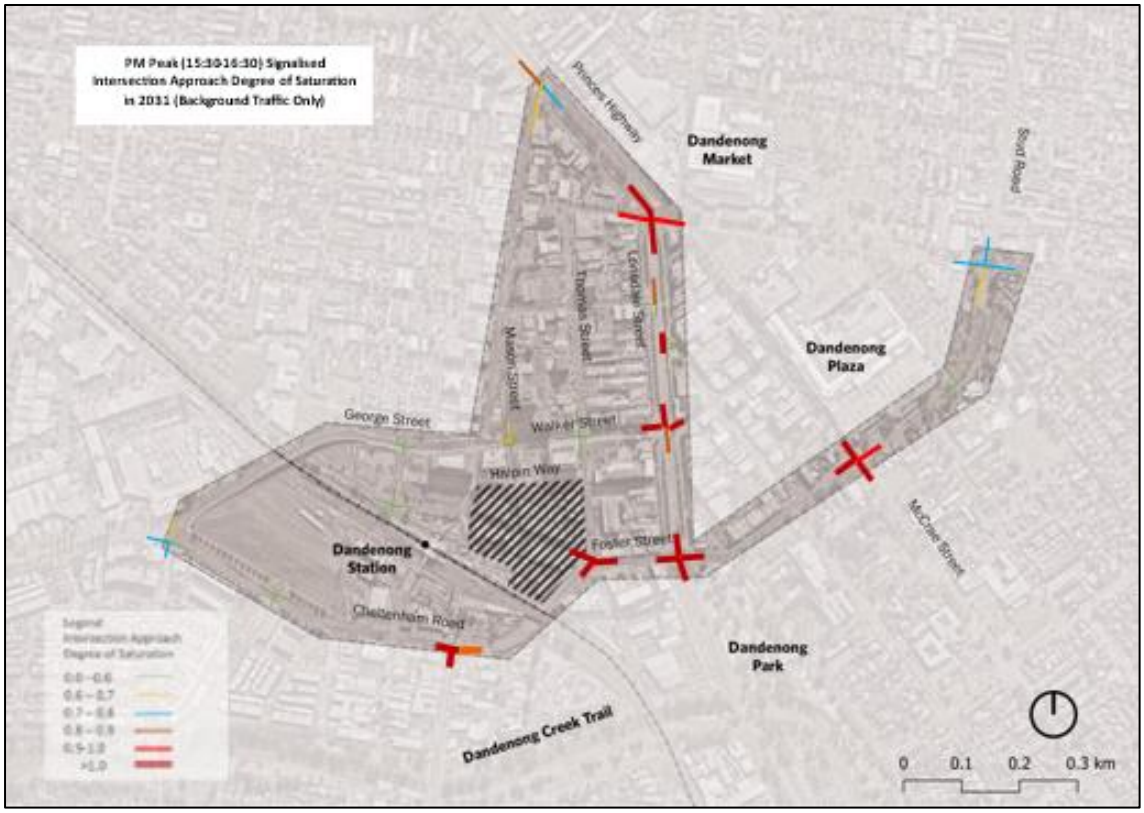
It is therefore important to maximise the intensity of development of this specific site, where the majority of trips can be accommodated on the active and public transport network.

Figure 7-16 2031 Background traffic DoS – AM



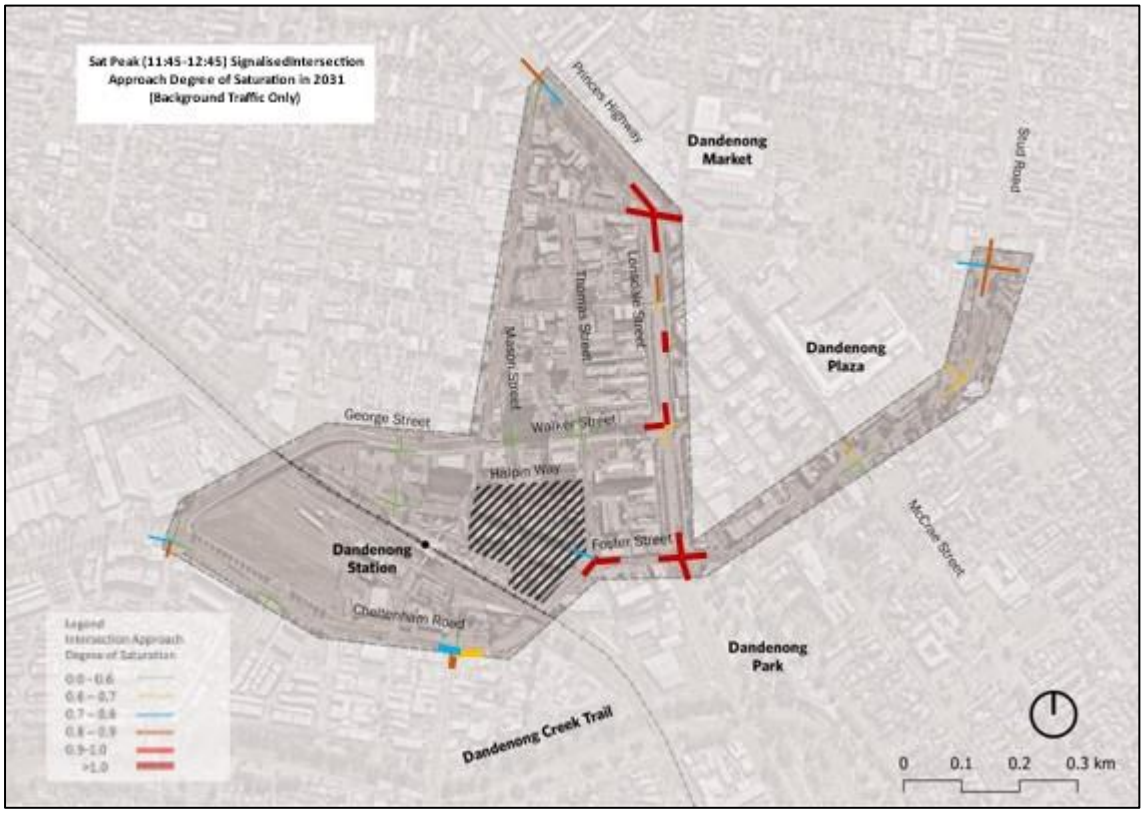
Source: M&PC analysis

Figure 7-17 2031 Background traffic DoS – PM



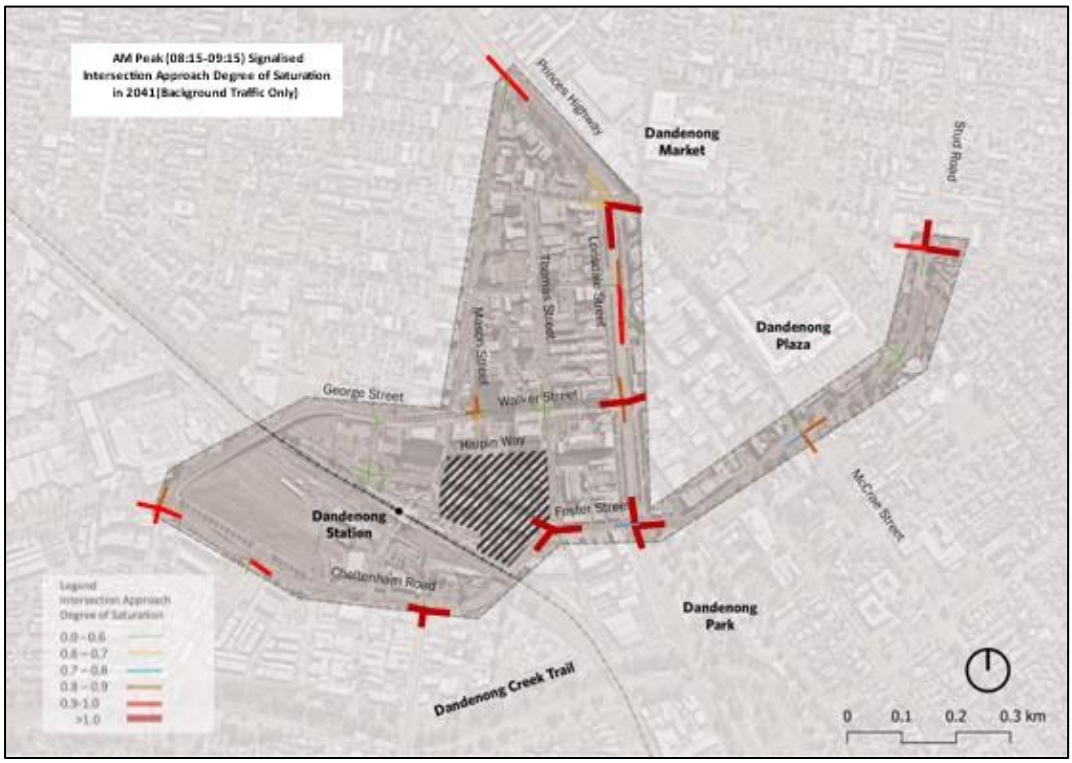
Source: M&PC analysis

Figure 7-18 2031 Background traffic DoS – Sat



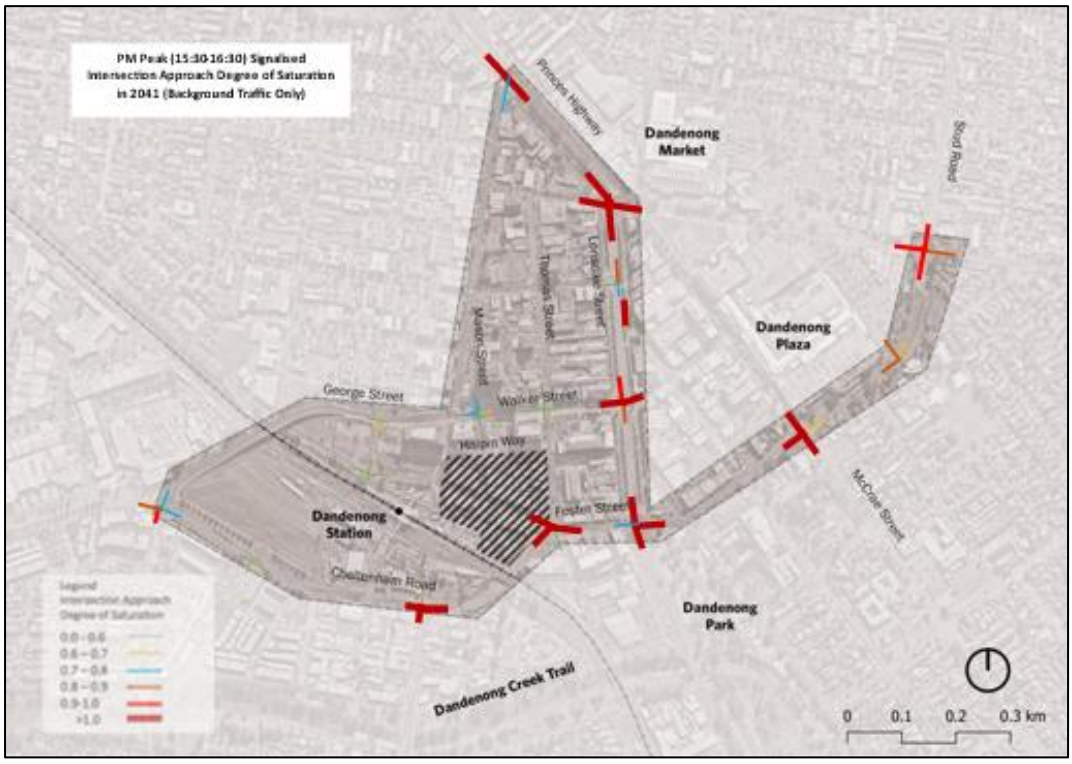
Source: M&PC analysis

Figure 7-19 2041 Background traffic DoS – AM



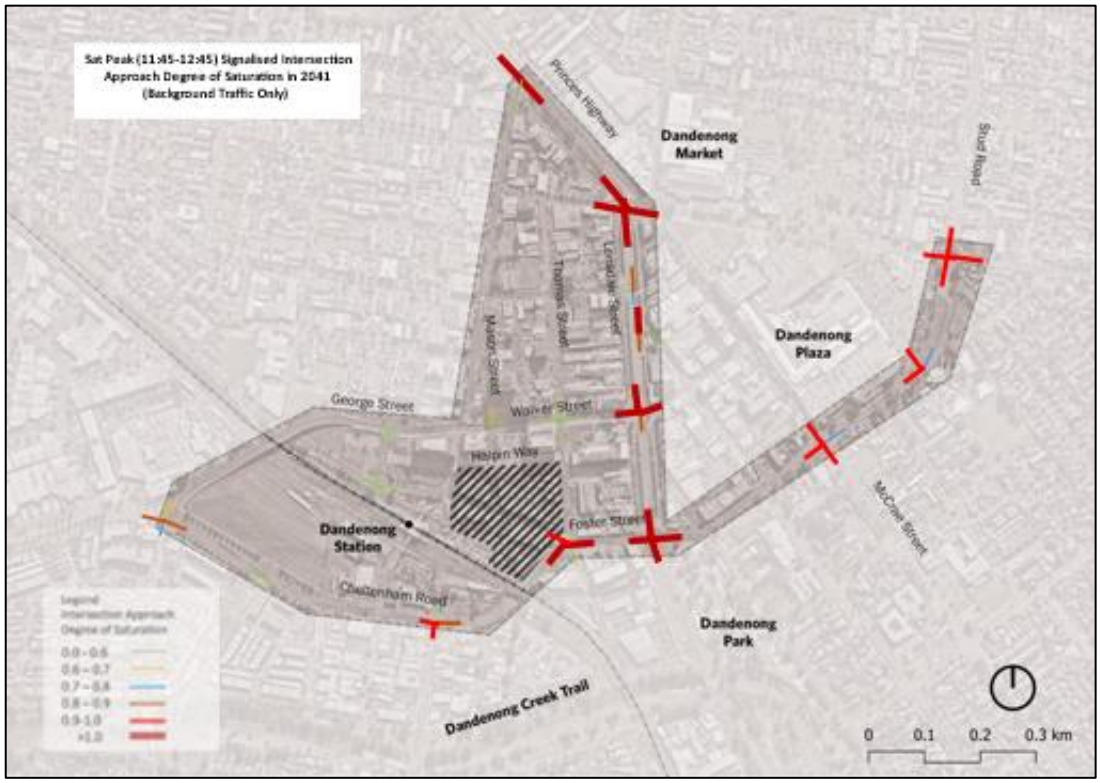
Source: M&PC analysis

Figure 7-20 2041 Background traffic DoS – PM



Source: M&PC analysis

Figure 7-21 2041 Background traffic DoS – Sat



Source: M&PC analysis

7.3.3 Intersection capacity – with the development

The impact of the traffic demand attracted to/generated by the Foster Street development was assessed for 2031 (interim period) and 2041 (full built out) for the morning, afternoon and Saturday peak periods[18] [19]

The traffic volumes loaded onto the network were composed of:

- The background traffic expected in 2031 and 2041
- The vehicle trips attracted to/generated by the Foster Street development

Note that the modelling did not include any allowance for additional capacity being provided on regional arterial connections including additional lanes on EastLink, Monash Freeway or Dandenong Southern Bypass, or improved connections such as the recently completed South Gippsland Highway level crossing removal or the connection from Dandenong Southern Bypass to South Gippsland Freeway.

[18] The modelling involved a static assignment of vehicle trips onto the network. In fact, driving behaviour will change as intersections get congested. Some drivers may shift modes or re-route to avoid congested intersections. The potential of trip re-routing is not accounted for in this modelling exercise. The effect of trip re-routing is expected to be limited as most intersections across the wider study area are operating at or near capacity.

[19] The modelling has not included road upgrades in the region including additional lanes on Eastlink, Monash Freeway, Dandenong Southern Bypass or South Gippsland Highway. Nor has the modelling included new planned road links such as the link between Dandenong Southern Bypass and South Gippsland Freeway. These road improvements will provide a range of alternative options for existing traffic that is currently travelling through Dandenong CBD.

SIDRA analysis evaluating the intersection performance for the intersections in the development study area are shown in Figure 7-22 to Figure 7-27 overleaf. The results indicate a congested road network with most of the intersections operating at or overcapacity across all peak periods.

It should be noted that the Degree of Saturation (DoS) is a measure of the delay that at intersections in peak times. As drivers get frustrated with the delay they seek alternative travel times, routes and modes of transport. This is typically a good thing that shows the road network operating at full capacity (not under capacity as is often the case) and is a key motivator for drivers to seek out alternatives that reduce their negative impacts on local place making efforts.

In 2031, the following intersections were noted to be oversaturated:

- Foster Street, Cheltenham Road and Thomas Street during all peak periods
- Lonsdale Street and Foster Street during all peak periods
- Lonsdale Street and Clow Street during all peak periods
- Cheltenham Road and Hammond Street during the AM and PM peaks
- Foster Street and Dandenong Plaza entrance during the PM peak
- Lonsdale Street and Walker Street during the PM and Saturday peaks

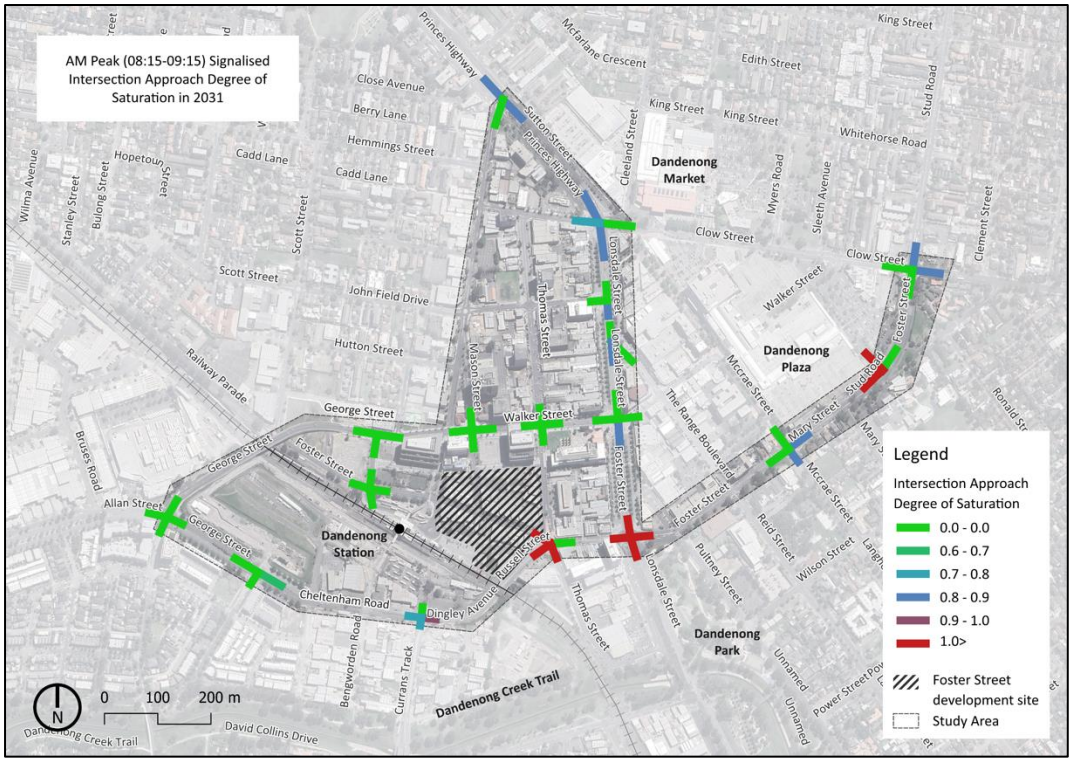
In 2041, the following intersections also 'tip over' to operate at an oversaturated state:

- Clow Street and Stud Road during the AM peak
- Princes Highway and Robinson Street during the AM and PM peaks
- Lonsdale Street and Walker Street during all peak periods

A vast majority of the sites in the study area are anticipated to be operating at or near capacity (DoS > 0.9). This analysis paints a clear picture of a congested road network in 2031 and 2041, largely driven by the growth in vehicle trips external to the Foster Street development.

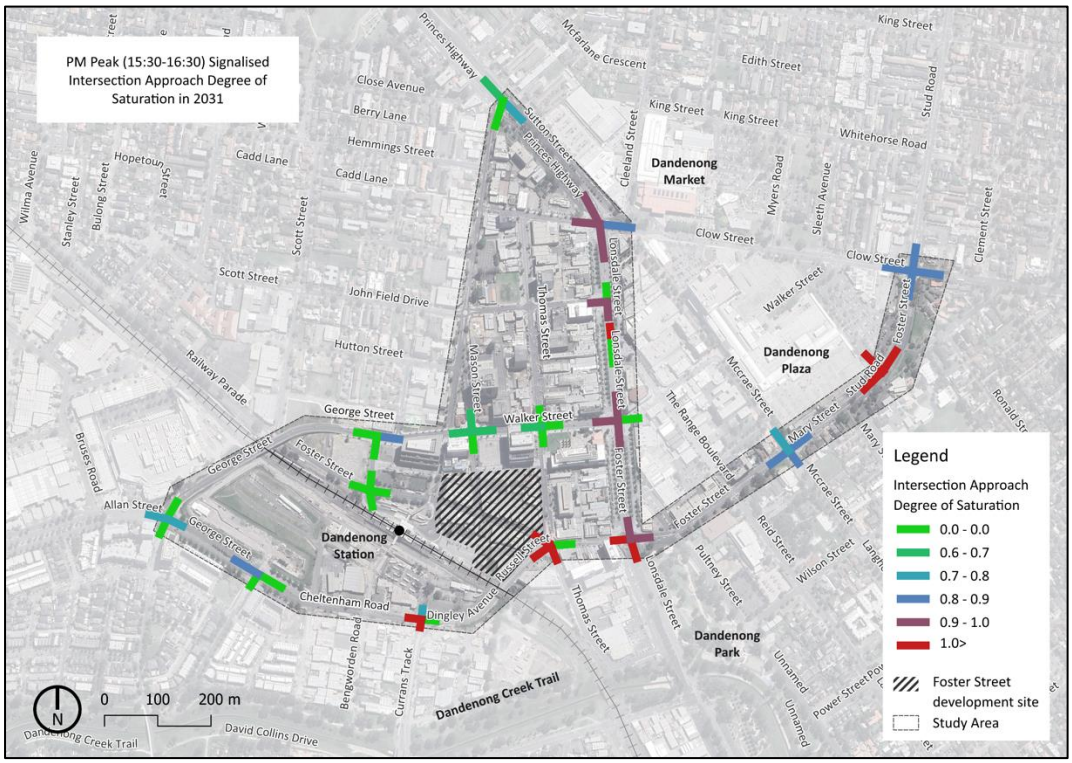
It is critical to note that this externally generated traffic is typically through traffic that has no business in a revitalised Central Dandenong. These drivers have a multitude of alternative options to bypass Central Dandenong and as the traffic congestion grows, the through traffic will divert to these alternatives including some who will switch modes.

Figure 7-22 2031 DoS - AM Peak



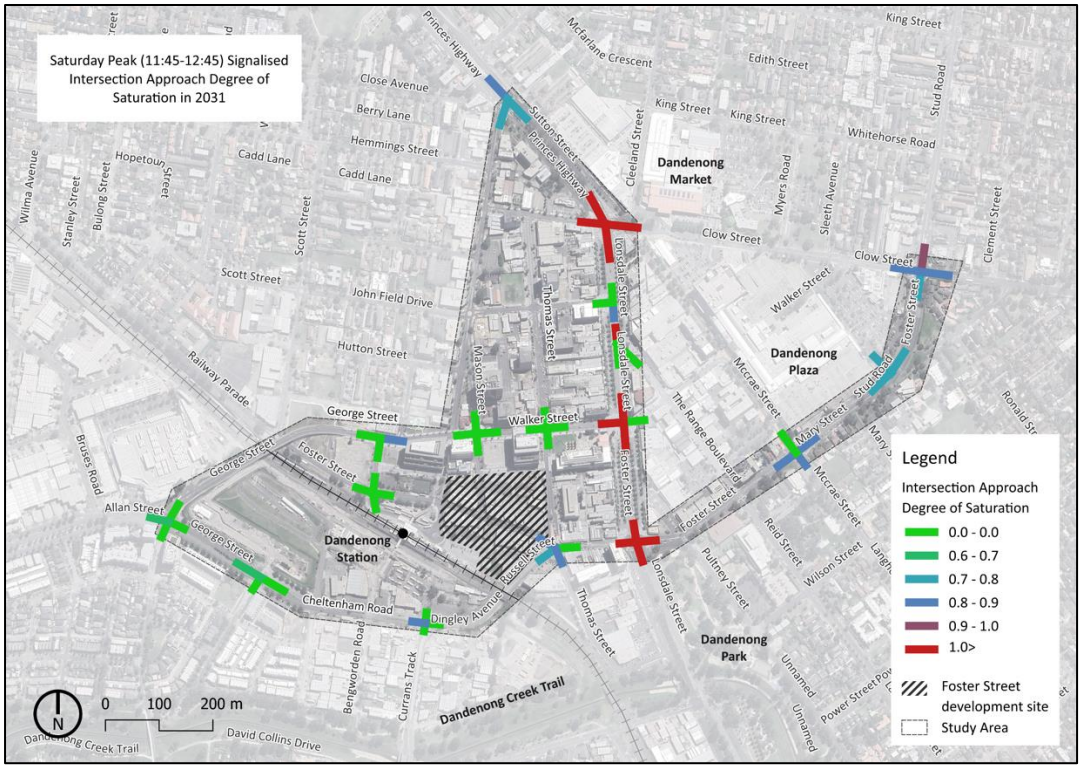
Source: M&PC analysis

Figure 7-23 2031 DoS - PM Peak



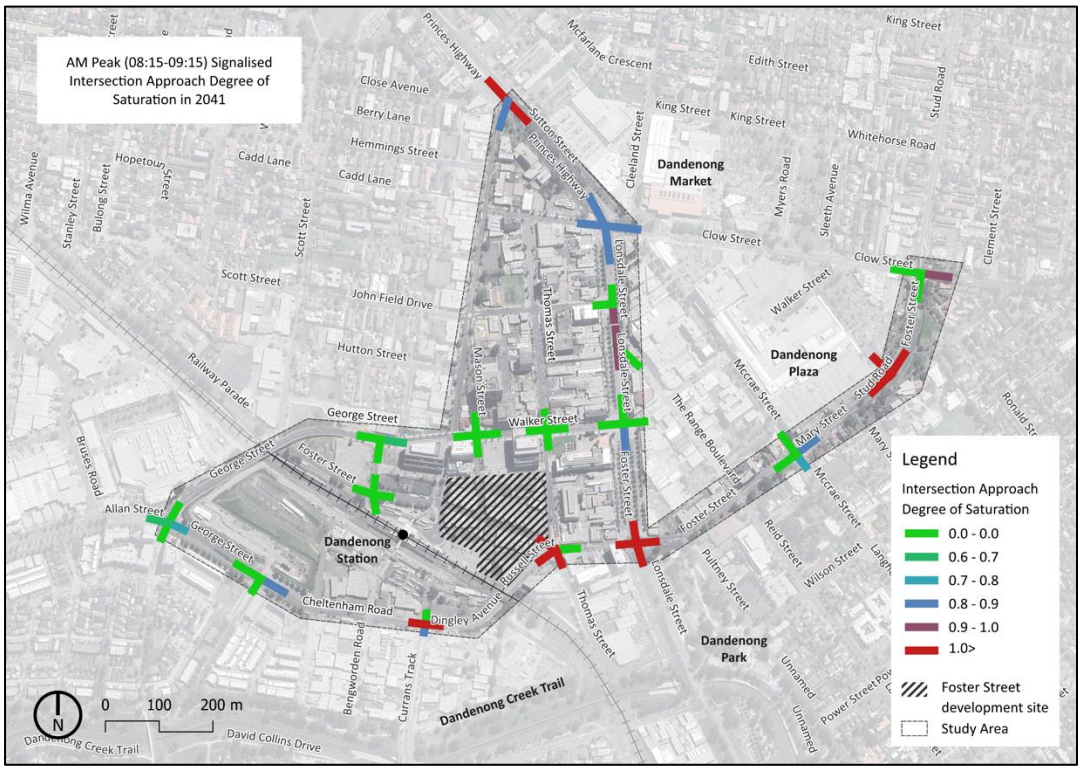
Source: M&PC analysis

Figure 7-24 2031 DoS - Saturday Peak



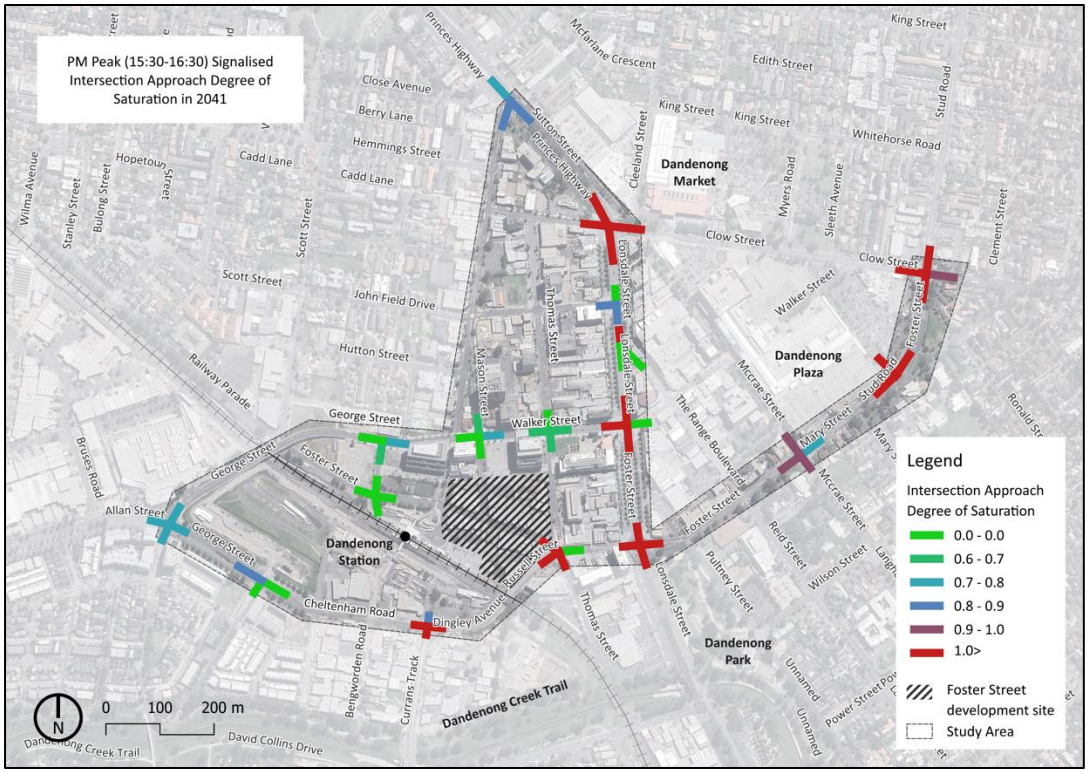
Source: M&PC analysis

Figure 7-25 2041 DoS - AM Peak



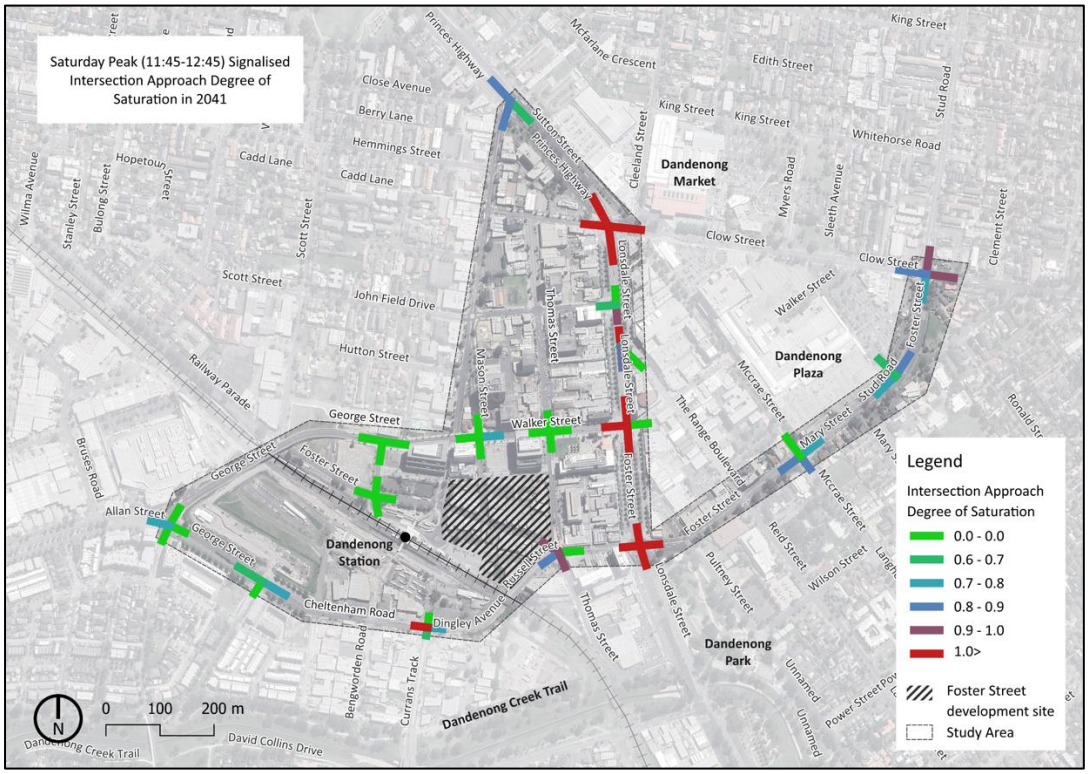
Source: M&PC analysis

Figure 7-26 2041 DoS - PM Peak



Source: M&PC analysis

Figure 7-27 2041 DoS - Saturday Peak



Source: M&PC

As the revitalisation of Central Dandenong takes shape, the orbital ring road of Freeway quality connections will play an increasingly important role in protecting Central Dandenong from the negative impacts of through traffic.

To ensure a viable and productive revitalisation of Central Dandenong, including the Foster Street development, emphasis needs to remain on integrated land use & transport outcomes to create 20-minute neighbourhoods that promote the use of walking, bicycle riding and public transport use.

These sustainable transport networks have spare capacity to absorb the expected transport demands. Critical to the success of the State government's revitalisation efforts is the need to create a Transit Oriented Development that makes it easy for most daily activities to be completed without the need for private vehicle travel.

7.3.4 Traffic impacts from the Foster Street development

To determine the traffic impacts resulting from the Foster Street development, the percentage contribution of traffic at each intersection within the study area was identified.

- The intersections that will cater for vehicle traffic resulting from the development include:
- Walker Street and Thomas Street intersection in year 2031 and 2041
- Robinson Street and Princes Highway intersection in year 2031 and 2041
- Walker Street and Mason Street in year 2031
- Cheltenham Road, Foster Street and Thomas Street intersection in year 2041

The percentage contribution is shown in Table 7-1 below. Colouring is used to highlight specific road segments where the development proposal is expected to contribute more than 10% of the future traffic volumes. However this is not necessarily a negative, as the impact depends on what other users the road is serving.

Table 7-1 Percentage contribution of traffic by the Foster Street development

Intersection Name	NEW Approach	2031			2041		
		AM %	PM %	SAT %	AM %	PM %	SAT %
Allan Street, George Street and Cheltenham Road	George St (Southbound)	7%	7%	9%	2%	3%	3%
	Allan St (Northbound)	2%	3%	4%	5%	6%	6%
	Cheltenham Rd (Westbound)	0%	0%	0%	1%	5%	4%
	Cheltenham Rd (Eastbound)	1%	1%	1%	2%	1%	2%
Cheltenham Road, Foster Street and Thomas Street	Foster St (Westbound)	0%	0%	0%	0%	0%	0%
	Thomas St (Southwest Bound)	0%	0%	0%	0%	0%	0%
	Cheltenham Rd (Northeast Bound)	0%	0%	0%	10%	26%	11%
	Foster St (Eastbound)	0%	0%	1%	30%	10%	12%
	Cheltenham Rd (Westbound)	0%	0%	0%	3%	9%	7%
	Hammond Rd (Southbound)	0%	0%	0%	0%	0%	0%

Intersection Name	NEW Approach	2031			2041		
		AM %	PM %	SAT %	AM %	PM %	SAT %
Hammond Road and Cheltenham Road	Hammond Rd (Northbound)	3%	1%	2%	3%	2%	3%
	Cheltenham Rd (Eastbound)	2%	1%	2%	4%	2%	3%
Foster Street and Rudduck Street	Foster St (Westbound)	1%	1%	1%	10%	16%	14%
	Rudduck St (Southbound)	15%	15%	21%	2%	3%	4%
	Interchange St (Northbound)	0%	0%	0%	0%	0%	0%
	Foster St (Eastbound)	7%	7%	9%	15%	10%	15%
George Street and Rudduck Street	George St (Westbound)	10%	10%	14%	2%	3%	3%
	Rudduck St (Northbound)	1%	2%	3%	4%	3%	6%
	George St (Eastbound)	0%	1%	1%	2%	1%	2%
McCrae Street and Foster Street	Foster St (Southwest Bound)	2%	1%	1%	8%	3%	4%
	McCrae St (Southeast Bound)	6%	9%	5%	2%	5%	2%
	McCrae St (Northwest Bound)	3%	1%	2%	8%	2%	4%
	Foster St (Northeast Bound)	0%	0%	0%	4%	10%	5%
Pedestrian crossing along Lonsdale Street near Pultney Street	Lonsdale St (Southbound)	4%	6%	5%	1%	2%	1%
	Lonsdale St (Northbound)	0%	0%	0%	0%	0%	0%
Walker Street and Lonsdale Street	Walker St (Westbound)	3%	1%	2%	8%	2%	3%
	Lonsdale St (Southbound)	0%	0%	0%	0%	0%	0%
	Lonsdale St (Northbound)	0%	0%	0%	0%	0%	0%
	Walker St (Eastbound)	12%	20%	17%	4%	10%	7%
Langhorne Street and Lonsdale Street	Langhorne St (Westbound)	0%	0%	0%	0%	0%	0%
	Lonsdale St (Southbound)	0%	0%	0%	0%	0%	0%
	Lonsdale St (Northbound)	0%	1%	1%	0%	0%	0%
Scott Street and Lonsdale Street	Lonsdale St (Southbound)	0%	0%	0%	0%	0%	0%
	Lonsdale St (Northbound)	0%	1%	0%	0%	0%	0%
	Scott St (Eastbound)	0%	0%	0%	0%	0%	0%
	Prince Hwy (Southeast Bound)	3%	3%	3%	8%	4%	4%
	Robinson St (Northbound)	11%	20%	23%	17%	37%	33%

Intersection Name	NEW Approach	2031			2041		
		AM %	PM %	SAT %	AM %	PM %	SAT %
Robinson Street and Princes Highway	Princes Hwy (Northwest Bound)	0%	0%	0%	0%	0%	0%
Clow Street and Princes Highway	Clow St (Westbound)	5%	2%	2%	7%	2%	2%
	Princes Hwy (Southeast Bound)	0%	0%	0%	0%	0%	0%
	Lonsdale St (Northbound)	0%	1%	0%	0%	0%	0%
	Clow St (Eastbound)	7%	11%	7%	6%	10%	5%
Foster Street and Lonsdale Street	Foster Rd (Westbound)	3%	1%	3%	11%	4%	6%
	Lonsdale St (Southbound)	3%	6%	4%	1%	2%	1%
	Princes Hwy (Northbound)	2%	1%	2%	6%	2%	3%
	Foster St (Eastbound)	0%	0%	0%	8%	25%	16%
Clow Street and Stud Road	Clow St (Westbound)	2%	1%	2%	4%	2%	2%
	Stud Rd (Southbound)	2%	1%	1%	6%	2%	2%
	Foster St (Northbound)	1%	1%	1%	3%	6%	3%
	Clow St (Eastbound)	3%	5%	3%	0%	1%	0%
Walker Street and Mason Street	Walker St (Westbound)	27%	32%	31%	8%	14%	11%
	Mason St (Southbound)	2%	2%	2%	6%	3%	4%
	Mason St (Northbound)	0%	0%	0%	0%	0%	0%
	Walker St (Eastbound)	1%	2%	3%	5%	4%	6%
Walker Street and Thomas Street	Walker St (Westbound)	3%	1%	2%	8%	3%	4%
	Thomas St (Southbound)	34%	24%	21%	51%	34%	28%
	Thomas St (Northbound)	33%	55%	43%	26%	49%	32%
	Walker St (Eastbound)	3%	4%	5%	6%	11%	9%

Source: M&PC

7.3.5 Car parking analysis and recommendations

Our approach to parking stems from the planning and design of the precinct, with the aim of optimising accessibility and mobility for residents and visitors, whilst also delivering a high-quality urban realm amenity.

The proposed design for a high-quality urban realm and mixed used, high activity development will support a lifestyle for residents similar to the inner city. Services such as the supermarket, cafes, shops, restaurants and recreational activities, coupled with proximity to high levels of transport

service, will enable people to walk, ride a bicycle or use public transport to make most trips within 20 minutes.

There are currently around 700 secure off-street parking spaces between the multi-level car parks on Walker Street and Thomas Street. Knowing that a substantial proportion of these spaces will likely be empty during the evening, a key part of our approach will be in optimising the efficiency of these assets in catering for various residential and parking demands.

Current improvements to the rail network in metropolitan Melbourne (such as Metro Melbourne and the Suburban Rail Loop Stage 1) are also expected to be delivered within the next 10 years, aligning well with the staged design plan for the proposed development. These infrastructure improvements will enhance the levels of services provided on a daily basis and will reduce travel times significantly to areas of the south-east metropolitan region such as Monash, Frankston, Box Hill and Melbourne CBD.

Given these factors, it is likely that a substantial number of future households will not require, and therefore likely will not own, a car. This should be reflected by an appropriate provision of parking spaces, which ensures that there is minimal (if any) excess provision of car parking. Likewise, it is likely that a considerable proportion of trips to the precinct will be internal or non-automobile based.

The precinct vision is to achieve a high level of urban realm amenity and pedestrian priority. This vision would be undermined by excessive provision of parking in the Precinct. This is because car parking generates more traffic to the area which will further add pressure onto an already constrained local road network. If the proposed development was to accommodate the parking suggested by the current Victorian Planning Provisions, it would undermine the State vision for the site and the road network.

It is noted that many previous developments in the Dandenong CBD (even back in the 1980s) have provided significantly lower rates of parking than the Planning Scheme requirements, and (despite this) the current parking supply is still under-utilised during weekdays.

The Greater Dandenong Planning Scheme parking provisions currently reflect conditions similar to an outer suburban or regional area without any transit access and walkability. This is completely inappropriate for a mixed-use high-quality transit-oriented development in an existing metropolitan activity centre (such as the proposed site).

Our approach uses the benchmarks from Section 3 to provide guidance for a more appropriate parking requirements for residential and commercial parking.

Residential Parking

Ensuring the rate of residential parking for the development is correctly determined is important for several competing reasons:

- An increasing number of households do not own a car
- Forcing households that do not own a car to have a car space is illogical, potentially illegal and decreases housing affordability
- Any parking provided on the site will increase the cost of living for residents and the surrounding community due to the increasing cost of doing business
- Some people will not buy or rent a dwelling without a car space

These competing demands means that careful consideration goes into how much parking should be built. The developer does not want to have too few car spaces (that would make the dwellings difficult to sell), nor do they want too many car spaces (that would increase the price of all commercial tenancies and dwellings, in order to pay for the sunk cost of the car parking).

In 2016, 14% of households within 400 metres of Dandenong Station did not own a car. The number of zero car households is likely to increase as alternatives to driving become more viable and attractive. Recent research demonstrates that high quality transit levels, in particular, have a substantial impact on increasing the proportion of households who do not own a car[20] The development site in particular is expected to attract a higher proportion of zero car households, due to its location, and the price of parking in the nearby area.

Walkability of the local area has a substantial impact on car ownership rates. It consists of two main variables – urban realm amenity, and diversity and density of potential destinations including shopping, social activities and recreational activities. The latter can be measured using Walk Score which indicates the volume and diversity of places which can be accessed by a short walk.

Comparing other locations that are slightly more developed that Central Dandenong (but still comparable in terms of service levels and Walk Score) can illustrate the likely car ownership rates in the future development. This highlights that we could expect double the rate of zero car households compared to currently across the local area as shown in Table 7-2 below.

Table 7-2 Comparative Impact Service Levels and Walk Score on No-Car Ownership

Station Precinct (400m)	Service Levels	Service Levels relative to Dandenong	Walk Scores	Proportion of households without a car
Footscray	14,768	+21%	95	26%
Dandenong	***10,865***	***Reference***	***97***	***14%***
Box Hill	10,547	-3%	94	27%
Frankston	9,846	-9%	94	19%
Chatswood	8,143	-10%	99	28%
Parramatta	7,905	-13%	99	31%

Source: DoT, Transport for NSW, Walk Score and ABS 2016 Census Data with M&PC Analysis

Despite having 10%-13% less transit services than Dandenong, about 1 in 3 households in Parramatta and Chatswood do not own a car as illustrated in Table 7-2 above. This is due to the availability of a diverse, high volume of services such as workplaces, grocery, retail, entertainment, social activities (primarily food & beverage) and recreational facilities within a short walking distance from the station and the households who live there. A highly similar mix is proposed in the design, including two supermarkets, food & beverage, retail, offices and apartments. In addition, the design of the urban realm offers high-quality amenity, which is also very likely to further impact travel behaviour and car ownership.

It should also be noted that across the whole Chatswood, Footscray and Parramatta areas car ownership increases relative to the increase in distance from the train station. The development site is immediately adjacent to Dandenong Station and therefore could be expected to include an even higher proportion of zero car households.

[20] Gruyter, C. d., Truong, L., & Taylor, E. J. (2020). Can high quality public transport support reduced car parking requirements for new residential apartments? Transport Geography

Based on the proposed mixed-use yields including two supermarkets, retail, workplaces, medical and recreational facilities, the development site will likely have future a Walk Score similar to Footscray (95) or Box Hill (94). Over time this is expected to increase to the Walk Score level seen in Chatswood and Parramatta (99). With similar levels of transit and walkability, the development is likely to have a similar proportion of households who do not own a car.

It is also useful to compare the suggested parking provision rates for each of the case study areas, all of which give a more appropriate estimate of likely demand for residential parking than the State based provisions. This analysis highlights that even with a low proportion of zero car households, Frankston has the lowest suggested rate of parking provision for future dwellings, as shown in Table 7-3 below.

Table 7-3 Comparative Parking Rates (Residential)

Station	Proportion of households without a car	Suggested parking spaces per one-bedroom dwelling	Suggested parking spaces per two-bedroom dwelling	Suggested parking spaces for three or more bedroom dwelling
Dandenong[21]	***14%***	***1.0***	***1.0***	***1.5***
Parramatta[22]	31%	0	0	0
Chatswood[23]	28%	0.1	0.2	0.25
Frankston[24]	19%	0.3	0.6	0.9
Box Hill[25]	27%	0.5	0.75	1.0
Footscray[26]	26%	0.5	0.8	1.0

Source: ABS Census Data 2016 with M&PC analysis; parking rates as per footnotes
Note: Parramatta LEP and Willoughby DCP both include a maximum rate of parking set a 1 space per dwelling

In summary, numerous reasons suggest a low parking provision is required for this development site:

- There will be a significant increase in zero car households in Central Dandenong as the area is revitalised, and this increase is likely to be concentrated in the new development
- There is a need to minimise traffic congestion impacts on the surrounding road network
- Benchmarking shows significantly lower parking provision rates are applied in similar areas
- There is high availability in nearby parking facilities to cater for additional vehicles (particularly overnight with over 700 public car parking spaces currently available within 100m of the site

[21] Greater Dandenong Planning Scheme Cl. 37.02 Section 2.5.0 (CDZ Schedule 2) (2008)
[22] Parramatta City Council Local Environment Plan (2023) Division 4 -cl7.17
[23] Willoughby City Council Development Control Plan (2023) Part F Table 1
[24] Frankston City Council Planning Scheme (2015) Cl. 45.09s01 (Planning Overlay 1) 3.0 and Frankston City Council Planning Scheme (2020) Cl. 52.06-5 (Column B)
[25] Whitehorse City Council Planning Scheme (2015) Cl. 45.09s01 (Parking Overlay 1) 2.0 and Whitehorse City Council Planning Scheme (2020) Cl. 52.06-5 (Column B)
[26] Maribyrnong City Council Planning Scheme (2015) Cl. 45.09s01 (Planning Overlay 1) 3.0 and Maribyrnong City Council Planning Scheme (2020) Cl. 52.06-5 (Column B)

- There is significant embodied energy in providing car parking, which has a significant environmental impact
- The future growth of automated vehicles, shared vehicles and micro-mobility mean that future buildings are likely to need much less parking than they historically have
- The cost of over-provision is significant (around $50,000 per car space) and would impact on housing affordability for all residents and increased tenancy costs for all commercial tenants

We therefore recommend the following parking provision rates for residential dwellings:

- 0.3 spaces per dwelling (one bedroom or student housing)
- 0.5 spaces per dwelling with two bedrooms
- 0.5 spaces per dwelling with three bedrooms

We also suggest that a maximum rate of provision be applied to the site, to avoid creating significant traffic congestion on the surrounding road network. These recommended parking provision rates are shown in Table 7-4 below.

Table 7-4 M&PC Proposed Parking Provision

Parking rates by land use	Dwellings	Suggested parking rate	Number of Parking Spaces	Maximum parking rate	Maximum Parking Spaces
Residential (1 bed)	267	0.3	81	0.5	134
Residential (2 bed)	201	0.5	101	0.8	157
Residential (3 bed)	36	0.5	18	1	36
Sub-total Residential	504		200		327

Source: M&PC Analysis

In total, the development should provide parking between 200-327 parking spaces.

The current availability of parking within walking distance to the precinct is also capable of meeting some of the residential demand. For instance, Frankston has low parking requirements due not only to the available high Walk Score and transit SERVICES, but also an abundance of public parking available, particularly in the evening which would suit trip behaviours of residents who own a car.

There are two secure public parking locations 100 metres from the Foster Street precinct area. In addition there are free publicly available parking areas that are patrolled at night – also within 100 metres of the site. All these spaces are 95% unoccupied during the evening, when residential parking is required. The multi-level Walker Street car park has 364 off-street parking spaces 100m to the north of the development site, and Thomas Street car park has another 350 spaces, 100m further north.

Both these car parking facilities would be available to residents at a lower price than the $50,000 it would cost to buy the car park within the development. Therefore some residents will choose to park their car in the cheaper parking available off-site. In some cases households would store one car on-site and have a second car space available off-site if they owned a second car. We have estimated that

based on currently pricing around 22% of households would choose to park their car (or second car) off-site.

Based on this, it is estimated that 41 residential cars would be parked elsewhere, reducing the number of residential car parking spaces required on-site to 159 parking spaces.

Commercial Parking

In order to revitalise Central Dandenong there is a need to provide cost-effective business spaces that increase productivity and activity in Central Dandenong. The car parking plan must balance the need to provide enough parking to ensure business certainty and reliability of access by car, but not so much car parking that the roads used to access the car parking become congested.

The Dandenong CBD currently has ample parking to meet business needs. This is primarily shown by the availability of car parking at no cost to the user right in the heart of Central Dandenong.

There are around 12,000 parking spaces in Central Dandenong catering for a variety of trip purposes.[27] In 2016, 75% of total trips to Central Dandenong were by car, 4% of employees and visitors arrived by bus, 1% arrived by train and 19% walked[28]

In Footscray, the demand for parking is significant lower proportionally, despite having comparable public transport service levels, intensity of activities and mix of land uses. This difference is likely due to their being less parking available (only 7,718 spaces are provided[29]). This lower rate of car parking provision encourages visitors to use other transport modes. In 2016, 68% [30] of trips to Footscray were made by car.

If the number of parking spaces suggested by the State provision of the Planning Scheme was applied to the development site, the cars using the parking (which would include cars not associated with the development) would significantly increase traffic congestion on the surrounding road network. To minimise potential traffic congestion, a rate of zero parking would be applied – but this would undermine the development as some people want or need to be able to park within their building.

Therefore, an alternative approach to balancing the needs of future residents and commercial visitors, the surrounding road network capacity and vision for the site is required. To develop a robust assessment it is worth considering how similar locations cater for parking and the rates they apply.

It is worth noting relevant precedents in the local area including:

- The former Australian Taxation Office, a 12-storey office building at 14 Mason Street, Dandenong (built in 1988) has 0.5 spaces per 100sqm of office floor space and zero parking for shop and hospitality floor areas
- Greater Dandenong Council Civic Centre, a 6-storey building located at 156 Thomas Street, Dandenong (built in 2014) has 0.3 spaces per 100sqm of floor space including commercial office, community facilities, library and function centre space

This is very similar to the maximum parking allowance in Melbourne CBD, which is based on minimising traffic congestion on the roads used to access the area. In Melbourne CBD development is not required to build any parking, and the specific maximum rate of parking allowed is calculated as:

[27] Indicative assessment of occupancy in the CBD area by M&PC in the peak time showed that occupancy in the CBD is around 80%.
[28] VISTA Data: Destination Trips to SA1s in Dandenong CBD by LinkMode with M&PC analysis
[29] GTA Consultants, 2013, Footscray Central Activities Area Car Parking Study
[30] *Ibid*

- 5 x net floor area of buildings on that part of the site in sqm/1000 sqm or 12 x that part of the site area in sqm/1000 sqm[31].

To develop a reasonable set of maximum parking provision rates we have looked at similar locations and analysed the suggested rates that are applied in those locations for various commercial land uses. It is noted that these suggested parking rates are typically higher than they need to be and expect to be reduced in order to facilitate higher intensity development for a range of reasons:

- They typically apply to a large area around the centre and are not expected to be provided on sites adjacent to Dandenong Station
- They are able to be waived, and serve as a starting point for discussions about how much parking could be provided (the Dandenong Council Offices across the road from the development site have less than 10% of the suggested parking provision)
- There is no general agreement whether specific rates should be high or low for various land uses, and low rates for one land use type could be undone by over-provision for other land use types
- In a location such as the development site adjacent to Dandenong Station, there is an expectation that every car space should be paid for on a user pays basis. The current market price amounts to $15 per day – as evidenced by many nearby parking areas being occupied at that price
- The significant variation in suggested provision rates highlights the lack of professional agreement on how much parking future developments should provide. In these six activity centres the lowest rates are 15-30% of the highest rates for each land use type

These parking provision rates for commercial land uses in six activity centres including Central Dandenong are shown in Table 7-5 below.

[31] Melbourne City Council Planning Scheme (2013) Cl. 45.09s01 (Planning Overlay 1) 3.0

Table 7-5 Comparative Parking Rates (Commercial)

Station	Suggested office parking spaces per 100sqm	Suggested shop parking spaces per 100sqm	Suggested supermarket parking spaces per 100sqm	Suggested industry parking spaces per 100sqm
Footscray[32]	1.5	0.5	2.0	1.0
Box Hill[33]	2.0	3.5	3.5	1.0
Dandenong[34]	***3.0***	***4.0***	***4.0***	***1.5***
Chatswood[35]	0.15	0.5	1.0	0
Parramatta[36]	0	0	0	0
Frankston[37]	3.0	3.0	5.0	1.0

Source: M&PC Analysis of footnoted documents
Note: Parramatta LEP and Willoughby DCP both include a maximum rate of parking for each type of use

It is particularly important that in a key location adjacent to Dandenong Station, the car parking should not be provided to any extent greater than potential demand based on users paying for each time they need to use the parking.

To make a financial return on the parking spaces provided, every car space will need to generate $15 every day of the year for at least twenty years. If there is lower demand on the weekends, then the weekday rate will need to be closer to $20 per space on every weekday.

If these rates of return cannot be generated by user pays parking fees, then higher lease costs will need to be passed on to commercial tenants and higher dwelling costs will be passed onto residents. It is therefore critically important for the revitalising Central Dandenong project vision that the amount of parking be enough to meet genuine needs (that each user is willing to pay for) without over-capitalising the development in a manner that makes the leases or dwellings unaffordable or more expensive.

Any additional parking will reduce the price users are willing to pay, and the lower price will attract more cars and result in additional traffic congestion. An over provision of parking on the development site adjacent to Dandenong Station will increase traffic congestion in the area and negatively impact on bus service reliability in and around the precinct.

It is therefore necessary to recommend a maximum rate of parking provision that will not be exceeded over the life of the development and a recommended total amount of parking that will ensure the dwellings are affordable and commercial tenancies are not inflated by the need to cover the cost of building excessive amounts of parking.

[32] *Maribyrnong Planning Scheme (2015) Cl. 45.09s01 (Planning Overlay 1) 3.0 and Cl. 52.06-5 (Column B)*

[33] *Whitehorse Planning Scheme (2015) Cl. 45.09s01 (Parking Overlay 1) 2.0 and (2020) Cl. 52.06-5 (Column B)*

[34] *Greater Dandenong Planning Scheme Cl. 37.02 Section 2.5.0 (CDZ Schedule 2) (2008)*

[35] *Willoughby City Council Development Control Plan (2023) Part F Table 1*

[36] *Parramatta City Council Local Environment Plan (2023) Division 4 -cl7.17*

[37] *Frankston Planning Scheme (2015) Cl. 45.09s01 (Planning Overlay 1) 3.0 and Cl. 52.06-5 (Column B)*

Based on this analysis and the location of the site in a metropolitan Activity Centre adjacent to Dandenong Station, the lower rates of commercial parking provision are recommended as maximums for each land use on the development site, specifically:

- 0.5 spaces per 100sqm of business, office or education Net Lettable Area
- 0.5 spaces per 100sm of retail, community or food and beverage GFA
- 3 spaces per 100sqm of hotel GFA
- 3 spaces per 100sqm of entertainment uses
- 2 spaces per 100sqm of supermarket area GFA

Application of this maximum rate of parking would ensure the parking provided on the site does not create significant traffic congestion on the surrounding road network.

The recommended parking rate acknowledges that there is significant opportunity to share the car parking between users in a single facility, and that there is a significant over supply of parking in the surrounding area that is never utilised. This over supply includes several Council owned parking facilities that are provided to users at very low prices and still (despite low prices) have significant spare capacity that is not being used.

The minimum rate also takes account of technology changes that are likely to reduce parking demands in the future. This is particularly relevant to the Commercial and Hotel and Function Centre activities which are more likely to have lower expectations for cheap on-site parking being available for all staff and visitors. These recommended rates for each commercial land use and the resulting total number of parking spaces recommended are summarised in Table 7-6 below:

Table 7-6 M&PC Proposed Parking Provision (Commercial)

Parking rates by land use	GLA (sqm)	Recommended parking rate/m^2	Number of Parking Spaces	Maximum parking rate	Maximum Parking Spaces
Retail[38]	17,802	0.005	89	0.005	89
Education	5,631	0.005	28	0.02	112
Community	790	0.005	3	0.005	3
Commercial[39]	113,231	0.0015	169	0.005	566
Function centre	210	0.003	0	0.03	6
Sub-total			289		776

Source: M&PC Analysis

The analysis has found that a minimum of 489 parking spaces will serve the needs of the development:

- 200 parking spaces related to residential purposes
- 289 parking spaces related to commercial purposes (employees and visitors)

[38] *This figure excludes Supermarket*
[39] *This figure excludes Building G (hotel and function centre) and includes space for education*

7.3.6 Demand management initiatives to minimise road – based congestion

Integrate land-use and transport outcomes

Land use and transport are closely linked. From a transport perspective, the urban form plays a pivotal role in influencing travel habits and transport mode choice decisions. The key elements of the urban form promoting the uptake of more sustainable forms of transport options include[40]:

- Density (population, dwellings, employment, floor area, overall 'activity')
- Diversity (different land uses, job-housing / population ratios)
- Design (street network characteristics which might include direct connectivity, permeability, number of intersections, sidewalk coverage, and the quality of pedestrian realm)
- Destination accessibility (ease of access to trip attractions)
- Distance to transit (public transport access and choice)

Specific to dwelling density, the research indicates as housing densities increase, the land use gets close enough to support walk, bike and transit modes.[41] The extent to which sustainable modes are embraced vary, in part, with the dwelling density. Trips made by private vehicle dominate as the dwelling density is low, with a shift to more non-auto mode use as densities increase.

As highlighted in research, while dwelling density is an important factor, it does not by itself, translate to a greater share of non-auto trips. As indicated previously, a holistic approach to urban planning is needed. In the case of Central Dandenong this holistic approach is already in place and ready-made for the State to capitalise on the location, with a diversity of land uses, high quality pedestrian realm and access to regional public transport services (in every direction).

Parking provision in new development

The development should not provide car parking at the rate specified in the Greater Dandenong Planning Scheme, as this rate of car parking provision would add 20% more traffic to the Dandenong CBD road network and would undermine pedestrian activity in the Dandenong CBD more generally.

Taking the current road network and intersection constraints into account, we recommend a parking rate range that minimises congestion on the road network while still providing appropriate options and choices for people accessing the precinct by car. Analysis of the situation shows that provision of a minimum of 489 parking spaces will be adequate to meet the needs of future residents and visitors to the site. This amount of parking would be 7% of the total public parking in Central Dandenong.

The analysis also determined that a maximum limit on future car parking provided on the site should be established to ensure traffic impacts from the development are minimised. This recommended maximum limit on future on-site parking provision is 1,229 parking spaces. The Greater Dandenong Planning Scheme could specify maximum rates of parking provision in this and other developments in Central Dandenong (and the surrounding area). It will also help to ensure parking is well utilised and not a burden that undermines housing affordability and financial viability of future developments.

Parking management

Ensure car parking is managed through appropriate user-based, time-based and fee-based controls in Central Dandenong. Parking controls will play a critical role in managing the future traffic demand.

[40] Ewing, R. & Cervero, R. 2010. Travel and the built environment: a meta-analysis. Journal of the American planning association, 76, 265-294.
[41] Lewis, S. 2018. Neighbourhood density and travel mode: new survey findings for high densities. International Journal of Sustainable Development & World Ecology, 25, 152-165

8 Conclusion

The Revitalising Central Dandenong initiative, 20 years in the making, is a major investment with a focus on growing population and economic activity in the area, the commercial and cultural activity in the Little India precinct, and opportunities to 'live locally'.

The Foster Street development is a major milestone in revitalising Central Dandenong, consisting of seven buildings, bounded by Halpin Way, Mason Street, Cheltenham Road and Thomas Street. The buildings will facilitate a range of land uses including residential, retail, commercial, education and community-oriented uses. The total development is expected to be completed by 2041, with the Little India precinct completed by 2031.[42]

The Foster Street development is a unique regional opportunity to reduce reliance on private vehicles by integrating transport and land use outcomes, characterised by:

- Higher density (population, dwellings, employment, floor area, overall 'activity')
- Higher diversity (different land uses, job-housing / population ratios)
- People focused design (street network characteristics which might include direct connectivity, permeability, number of intersections, sidewalk coverage, and the quality of pedestrian realm)
- Distance to transit (excellent access to public transport) being adjacent to a major regional interchange

From a transport perspective, this urban form positively influences travel habits and transport mode choice decisions. Locating residential, commercial, retail, educational and community uses in the Foster Street development, will significantly improve transport and economic outcomes in Central Dandenong.

It is estimated that, by 2041, the development will generate a weekday peak hour maximum of 2,550 person-trips per hour by public transport, walking, bicycle riding and private vehicle (about three times higher than in 2031). This will significantly revitalise this quarter of Central Dandenong and positively contribute to the State and local vision for the area and region.

The impacts of travel demand were evaluated across all transport networks. Active and public transport networks in Central Dandenong are underutilised and can absorb the additional demand generated by the development. The road network is already congested, largely as a result of regional through traffic that is negatively impacting on the revitalising Central Dandenong vision.

In future the regional growth will continue to congest the local road network, regardless of the proposed development. The development will have enough car parking to meet the on-site needs, without building more parking than necessary. Car parking access locations have been carefully chosen to avoid significant negative traffic impacts from the development site and utilise the existing collector and arterial road network in a manner that improves pedestrian and bicycle rider safety.

It is recommended that 489 car parking spaces be provided on the site. This amounts to 7% of all public parking in Central Dandenong. The site has excellent access to wide ranging transport choices that provide for local and regional travel needs. It is located adjacent to Dandenong Station and bus interchange, it is on the Strategic Cycling Corridor and has high quality pedestrian environments that connect the site directly to the heart of Central Dandenong with Harmony Square and the Civic Centre less than 30m from the site.

[42] This assessment is reflective of the 2024 development plans

Appendix C: Environmentally Sustainable Design Strategy and Water Sensitive Urban Design Assessment

C

ADP
Consulting : Engineering

Revitalisation of Central Dandenong Sites 11-15

Environmentally sustainable design strategy and water sensitive urban design assessment

Prepared for: Capital Alliance

Project No: MEL2785
Date: 2 May 2024
Revision: 09

ADP
Consulting : Engineering

Creating great environments with great people

Project:	Revitalisation of Central Dandenong Sites 11-15
Location:	Development Parcel 11, 12, 13, 14, 15 Dandenong, VIC, 3175
Prepared by:	ADP Consulting Pty Ltd Level 13, 55 Collins Street Melbourne VIC 3200
Project No:	MEL2785
Revision:	09
Date:	2 May 2024

Rev	Date	Comment	Author	Signature	Technical Review	Signature	Authorisation & QA	Signature
01 Draft	03/06/22	Draft for client review	Norma Rivera	NR	Vickie Huang	VH	Vickie Huang	VH
02	10/06/22	Revised for client	Norma Rivera	NR	Vickie Huang	VH	Vickie Huang	VH
03	23/06/22	Revised for client	Norma Rivera	NR	Vickie Huang	VH	Vickie Huang	VH
04	30/06/22	Revised for client	Norma Rivera	NR	Vickie Huang	VH	Vickie Huang	VH
05	01/07/22	Revised for client	Norma Rivera	NR	Vickie Huang	VH	Vickie Huang	VH
06	14/12/22	Revised WSUD details	Vickie Huang	VH	Thomas Miers	TM	Vickie Huang	VH
07	24/07/23	Update renders	Vickie Huang	VH	Thomas Miers	TM	Vickie Huang	VH
08	23/08/23	Update renders	Radhika Gupta	RG	Vickie Huang	VH	Vickie Huang	VH
09	02/05/24	Minor wording updates	Radhika Gupta	RG	Vickie Huang	VH	Vickie Huang	VH

Project Team	
Client / Principal	Capital Alliance
Architect	DKO
Building Services & Sustainability	ADP Consulting

Contents

1. Introduction 4
1.1 Project Overview 5
1.2 Purpose of the Sustainability Strategy Report 6
1.3 Site Context 7
2. Sustainability and Placemaking Opportunities 9
2.1 A Green Future 10
2.2 Celebrating Cultural Identity 15
2.3 Inclusive and Integrated Transport 16
2.4 High Quality and Sustainable Development 17
3. Requirements 19
3.1 Statutory requirements 20
3.2 NCC requirements 20
4. Design Sustainability Tools 22
4.1 Precinct certifications 23
4.2 Green Building Council of Australia 23
4.3 National Australian Built Environment Rating Scheme (NABERS) 24
4.4 NatHERS 24
4.5 Climate Active Carbon Neutral Certification 25

1. Introduction

1.1 Project Overview

The Revitalising Central Dandenong (RCD) initiative is supported by Victorian Government to transform Dandenong into a vibrant and thriving economic hub.

Melbourne-based developer Capital Alliance has been selected for the next phase of the project that is expected to deliver a mixed-used precinct with at least 470 new dwellings, along with a range of uses including food and drinks premises, retail premises, cinema, place of assembly, education centre, hospital, medical centre, offices, residential hotel and supermarket.

1.2 Purpose of the Sustainability Strategy Report

The primary goal for the RCD Sustainability Strategy Report is to help the Design Team and Client capture the benefits and opportunities that this urban transformation offers, within this site and across the broader precinct. It is understood that Capital Alliance is seeking to develop these land parcels into a precinct that is underpinned by Sustainable key initiatives that have been identified as goals for the area and are addressed in this report. This report provides clear direction to achieve the overarching sustainability vision for the development through the setting of ambitious objectives and key supporting actions.

The following key themes have been identified goals for the area. Within each of these opportunities for the site have been listed:

1.2.1 Summary of Sustainability Strategies

- 'Regenerative' central goal and vision of the project
- Net Zero Precinct
- Engagement with Traditional Elders
- Placemaking Strategy and Culture
- Outdoor physical activity space
- Indoor Fitness spaces
- Community tool sharing
- Integrated water management design
- Community book library
- Safe pedestrian and cycle crossing points
- Cyclist Infrastructure
- Sidewalk shade provision
- All buildings achieving minimum levels of certification (Green Star, NABERS and NatHERS ratings)
- Car and bike sharing program

1.3 Site Context

Dandenong is located approximately 30km south-east of Melbourne's CBD and forms part of the Greater Dandenong Local Government Area (LGA).

The RCD initiative project site spans 7ha of land in central Dandenong, with proximity to Dandenong Train Station and major arterial roads including Lonsdale Street, Princes Highway and Cheltenham Road.

1.3.1 Shared vision

The Revitalising Central Dandenong development plan is the 15 to 20 year framework for delivering on the shared vision.

The development plan builds upon central Dandenong's rich history and heritage as a meeting place, a market town and a centre for business, employment, living, learning and retail. The plan was informed by an extensive community consultation process in 2007.

The Revitalising Central Dandenong area was declared on 26 September 2005.

2. Sustainability and Placemaking Opportunities

2.1 A Green Future

2.1.1 Adopting a Regenerative approach

What is regenerative development? ''*Regenerative Development is an approach that encourages communities to support and create positive relationships that will benefit society and our environments by allowing the system to evolve and adapt to changing circumstances*." Thrive, Melbourne School of Design1.

Most of today's sustainability efforts focus on efficiency and doing less harm. Such as, design energy efficient systems, reduce water consumption and use responsibly sourced materials. However, ''doing less harm'' is not enough anymore. We live in a world where our global ecosystems are degenerating faster than they can generate. The aim of regenerative design is to reverse this trend and approach sustainability in a deeply and meaningful way.

Regenerative development concentrates on our role as members of the community to support high-quality, mutually beneficial relationships between people and place, seeking to reverse the degeneration of ecosystems caused by human activities.

Bill Reeds diagram contrasts business as usual and doing less harm, with development that aspires to make the world a better place – a world where people see themselves as an integral part of nature, not as something separate to who we are.

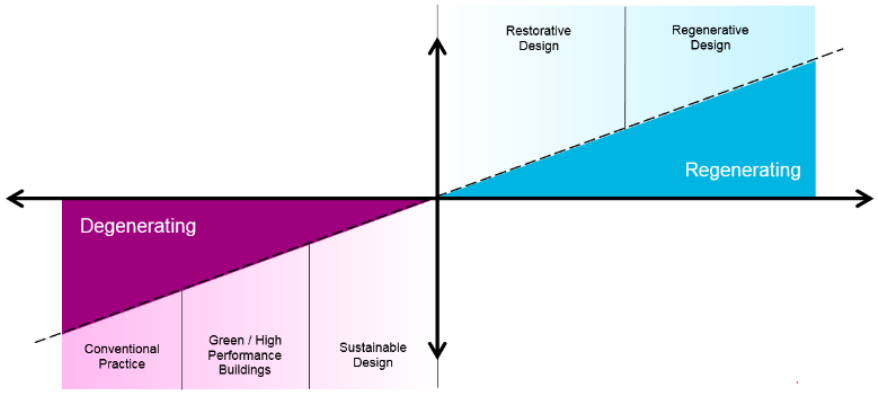


Figure 1: Diagram of the scale of degenerative to regenerative development

[1] "Regenerative Development in a nutshell", Thrive Research Hub

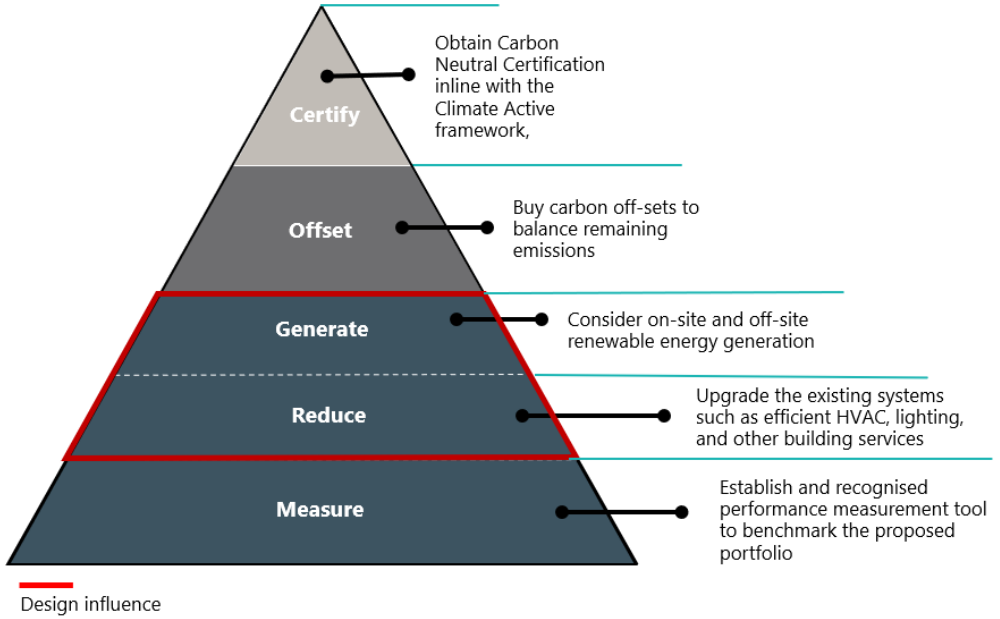
2.1.2 A Net Zero Precinct

Create a development that prioritises energy reduction and efficiency is cognisant to global goals of achieving zero net emissions

> **Energy avoidance**
  - Designing buildings using passive design strategies and bioclimatic framework. New buildings that consider bioclimatic principles can ensure a collaborative and holistic approach to design from the very early stages of the project.

> **All-electric energy infrastructure**
  - District thermal energy to the precinct.
  - Domestic hot water heat pumps (as opposed to gas hot water).
  - Solar thermal to replace boilers to top up either air source or ground source electric heat pumps.
  - Connection to other site waste heat sources to top up the ground source thermal store in winter.
  - Electricity demand at a precinct level to be aggregated to purchase renewable electricity collectively.
  - Domestic cooktops can be supplied as electric induction type, which have many benefits over gas including reduced energy demand and enhanced safety.

> **Renewable Energy through Photovoltaic Systems**
  - Community renewable energy projects such as solar gardens.
  - Maximisation of rooftop solar panels installation.
  - Consider inclusion of Building Integrated Photovoltaic (BIPV).
  - Electricity generation from Solar PV systems aligning with periods of demand. Typically, commercial and retail tenancies consume electricity during the day, which aligns with the generation from solar.



- Install an embedded network supply with 100% renewable or carbon neutral electricity.

> **Energy efficient building services**
  - Optimised building services strategy to reduce greenhouse gas emissions.
  - Incorporation of high efficiency HVAC and hot water systems, including gas-free systems.
  - If provided, energy efficient appliances such as dishwashers, washing machine and hot water systems.
  - Energy efficient lighting fixtures (e.g. LED lighting) and vertical transport (e.g. regenerative elevators).

2.1.3 Ecology and Biodiversity

Prioritise the creation of biodiverse green and communal spaces with indigenous flora and fauna that enhance the resident's connections to nature, fostering positive health outcomes

Biodiverse urban green spaces provide for a community and nature connection and provide both environmental and human health benefits. Biodiversity also enables ecosystems to continue to contribute to energy efficient, sustainable, liveable and resilient sites.

Landscape is largely influenced by habitat mosaics that support biodiversity. Connectivity coupled with measures to improve habitat quantity and quality, maximises ecosystem function and health and influences the provision of ecosystem services.

The key recommendations for the precinct strategy include:

> Ecological restoration assessment: Undertake an assessment with an Ecological consultant to determine the most suitable methods to restoring the local ecology of the site.

> Prioritise connection to the ongoing naturalisation and restoring the riparian and indigenous vegetation and habitat.

- Plant diverse landscape and prioritise the use of climate-resilient and indigenous plants
- Set minimum targets for external landscape.
- Plants should be indigenous, and the site should include at least one significant (nesting) tree or equivalent habitat provision.

2.1.4 Integrated water management system

To reduce the use of potable water and provide adequate and a cost-effective supply of potable water. A whole integrated water strategy for the precinct will include:

- Prioritise water efficiency, water reduction through a site-wide strategy.
- Water metering and monitoring for tenancies, dwellings, high water demand spaces and landscaped areas.
- Installation of high efficiency fixtures and fittings in all buildings works.
- Capturing of rainwater from rooftops into rainwater tanks.
- Integration of stormwater detention, retention, and reuse.

2.1.5 Best practice for Urban Stormwater Quality

To maximise rainwater reuse and collection from the site. A lifecycle cost approach will be assessed for a whole of site strategy to determine the most appropriate option. The key recommendations for the precinct strategy include:

- Prioritising on-site treatment solutions to reduce stormwater pollutants of the site (e.g. water harvesting and reuse, raingardens and minimising impervious areas).
- Reduce pollutants (such as suspended solids, nitrogen, phosphorus and gross pollutants) from entering the stormwater system per the stormwater management objectives under Planning Scheme clause 53.18.

2.1.6 Water Sensitive Urban Design Principles and Strategies

Water sensitive urban design (WSUD) uses better urban planning and design to reuse stormwater or treat, stopping it from reaching our waterways by mimicking the natural water cycle as closely as possible. Strategies for WSUD and improving water quality include:

- Rainwater tanks: when rainwater is reused for toilet flushing, the amount of stormwater leaving the property is reduced and diverted to the sewer mains. There is also the added benefit of reducing potable water consumption for non-drinking purposes (e.g. toilet flushing, irrigation etc.).
- Raingardens: raingardens reduce pollutant loads in stormwater while providing attractive landscaping. Raingardens are designed to capture, filter and reduce the flow rate of stormwater from roofs or hard surfaces.
- Permeable/porous paving: allows rainwater to pass through the pavers and soak into the ground, unlike standard concrete or block pavers. The stormwater is then treated through biofiltration via the soil below.
- Sediment basins/ponds: an open water basin or pond that captures coarse sediment and litter carried by stormwater. They intercept stormwater before it reaches the waterway, and slows it down to allow the coarse sediment to fall to the bottom.
- Wetlands: are a series of shallow, densely-planted, man-made ponds that help filter water through physical and biological processes. They provide a natural way to treat and remove pollutants from stormwater before it enters our creeks, rivers and oceans.
- Buffer strips and Swales: are linear, depressed channels that collect and transfer stormwater. Buffer strips are typically lined with grass, and swales with more dense vegetation and landscaping (e.g. reeds and sedges). Buffer strips and swales initially immobilise pollutants by binding them to organic matter and soil particles, then remove them by settling, filtration and infiltration into the subsoil.

- Proprietary devices: these are 'off the shelf' products are available for onsite treatment of stormwater runoff quality. Proprietary products generally comprise of refabricated filtration systems, often with replaceable filter cartridges. Proprietary devices are often used in constrained situations where conventional stormwater treatment measures may not be suitable (e.g. large paved areas). Note that the installation of proprietary products are often accompanied by a fixed maintenance contract with the suppliers, whereby the unit will be serviced/replaced on a regular basis. The specification of proprietary devices is also subject to council approval.

2.2 Celebrating Cultural Identity

2.2.1 Placemaking Strategy

Priority should be given to strategies around place making, privacy, social interaction, mixed use places, community, amenity, involvement, and inclusion with a plan for community consultation.

2.2.2 Culture and Heritage Assessment Plan and Community Resilience Strategy

The key recommendations for the precinct strategy include:

- Undertake a Community Development Plan
- Install extensive communal space.

The communal space will:

- Accommodate appropriate/nominated community-based activities
- Have capacity and flexibility to operate in multiple modes of usage; and
- Demonstrate relevance of the space for local people (demographics, social profile, current needs

2.3 Inclusive and Integrated Transport

Create a precinct that is connected to sustainable transport, with world class facilities that make sustainable and healthy transport choices easy.

The precinct strategy will endeavour to:

- Undertake a comprehensive Green Travel Plan in response to an assessment of new conditions.
- Define the key outcome targets for connectivity and transport, including active travel, minimising car-use and encouraging walking and cycling.
- Configure basement car parks to be electric vehicle ready to cater for the rapidly evolving trend in the displacement of petrol and diesel cars with battery electric vehicles
- Ensure parking structures to maintain flexibility for adaptation for alternate uses over time and to accommodate driverless/autonomous cars.
- Utilise energy services companies to use emerging technology to access the combined vehicle battery storage capacity in the precinct to store energy and balance electrical loads to stabilise the onsite microgrid.
- Provide mobility scooter parking with direct access to street.

Bicycle facilities

- Install bicycle parking that is visible, accessible, and convenient for users with a clear path of travel from the building entrance. Bicycle parking located on mounted racks above car bonnets is not classified as convenient.
- Signage strategy to inform all relevant cycling infrastructure. This can be within buildings or in public spaces.
- Target active transport, bicycle parking and End of trip initiatives within sustainability rating tools (e.g. BESS, Green Star and the like).
- Design efficient bicycle linkages internally and with surrounding urban development, particularly to and from community services and major traffic generators.

> Bicycle network objectives under Planning Scheme Movement Networks clause 18.02-2S.

2.4 High Quality and Sustainable Development

2.4.1 Sustainable Design Principles

Incorporating sustainable design principles to achieve outcomes that contribute positively to the local context.

Sustainable design principles feature a range of strategies applicable to the building following strategies under Building Design clause 15.01-2S.

2.4.2 Materials and Embodied energy

A project wide materials strategy will be developed giving consideration to the follow key points;

> Define embodied energy and carbon target outcome, including the boundaries of the assessment with regard to net-zero carbon and certification methodologies where possible.

> Investigate the use of cross laminated timber.

> Consider the relationship between embodied and operational energy.

> Implement reduced upfront carbon targets.

> Reuse of heritage buildings.

2.4.3 Waste Management

Implementation of waste management plans to facilitate the re-use, upcycling, pr conversion of waste into energy.

> At least 60% of the waste generated (by mass) during construction and demolition of the project site is reused or recycled.

- During construction, design for disassembly. Consider use of materials where sections can be easily replaced (e.g. carpet tiles, using screws instead glue for fixings etc)
- During operation, separation of waste into streams such as: garbage, recycling (hard plastics, soft plastics, glass, aluminium, paper and cardboard, and co-mingled etc.), food organics, e-waste and hard waste.

3. Requirements

3.1 Statutory requirements

3.1.1 Greater Dandenong Council

The site is situated in Dandenong, within the municipal boundaries of Greater Dandenong Council. The council has objectives and strategies relating to ESD which are contained in the Greater Dandenong Planning Scheme:

> Clause 22.06 Environmentally Sustainable Development of the Greater Dandenong Planning Scheme.

3.2 NCC requirements

3.2.1 2019 National Construction Code

The project will be designed in accordance with the Section J Energy Efficiency requirements of the 2019 National Construction Code (NCC). The energy efficiency requirements apply to the conditioned areas of a building to ensure adequate thermal comfort conditions can be maintained within the space. Under Section J the project is split into two separate areas of compliance:

> Class 2 - Conditioned residential areas (dwellings)

> Class 3-9 - Conditioned non-residential areas (commercial)

The adjacent table summarises the building class breakdown in accordance with the 2019 NCC.

GREATER DANDENONG City of Opportunity

3.2.1.1 Section J - Class 2 Residential Apartment Buildings

In order to demonstrate formal compliance with the provisions of the NCC, all dwellings are required to be assessed in accordance with the Nationwide House Energy Rating Scheme (NatHERS). This is a star rating scheme which can be used to demonstrate compliance to the NCC Parts J1 to J3 and to promote the energy efficiency of a dwelling. Section J of the NCC notes that the project is required to attain a minimum 6-star average NatHERS rating across the development with each independent dwelling achieving a minimum of 5-star NatHERS rating.

3.2.1.2 Section J Class 3-9 Non-residential

The project's non-residential and common areas on will be designed in accordance with the Section J Energy Efficiency requirements of NCC. The energy efficiency requirements apply to the conditioned areas of a building to ensure adequate thermal comfort conditions can be maintained within the space. The project must also comply with relevant prescriptive requirements of Section J.

4. Design Sustainability Tools

4.1 Precinct certifications

Utilizing the opportunities identified for the site above, high level preassessments for Green Star - Communities, Green Star Buildings, NABERS and the Climate Active Carbon Neutral certification and NatHERS have been undertaken. These rating tools are further explored in sections below.

Example targets should be:

- Green Star Communities – 5 stars.
- Climate active certification (gas free).
- Commercial spaces "Best Practice" standards through schemes such as NABERS.
- 7-star NatHERS (residential).

4.2 Green Building Council of Australia

4.2.1 Green Star Communities (existing rating tool)

An analysis of the precinct has been undertaken using the Green Star Communities rating tool (version 1.1 released September 2016). The Green Star credits targeted are described in a preliminary Green Star Matrix Scorecard.

The project is targeting a 5-star Green Star Communities rating, and the attached matrix outlines a potential pathway to achieving points. Note that the targeted credits may change during the design process whilst still maintaining the 5-star communities rating commitment.

4.3 National Australian Built Environment Rating Scheme (NABERS)

The National Australian Built Environment Rating System (NABERS) can be used to measure a building's energy efficiency, carbon emissions, as well as the water consumed, the waste produced and compare it to similar buildings.

NABERS compares the performance of buildings or tenancies to benchmarks that represent the performance of other similar buildings in the same location. NABERS uses 12 months of real, measurable information about a building or tenancy, such as energy and water bills or waste consumption data as the basis of a rating.

4.4 NatHERS

4.4.1 Class 2 Residential Apartment Buildings

In order to demonstrate formal compliance with the provisions of the NCC, all dwellings are required to be assessed in accordance with the Nationwide House Energy Rating Scheme (NatHERS). This is a star rating scheme which can be used to demonstrate compliance to the NCC Parts J1 to J3 and to promote the energy efficiency of a dwelling. Section J of the NCC notes that the project is required to attain a minimum 6-star average NatHERS rating across the development with each independent dwelling achieving a minimum of 5-star NatHERS rating.

4.5 Climate Active Carbon Neutral Certification

Climate Active is an ongoing partnership between the Australian Government and Australian businesses to drive voluntary climate action. The brand represents Australia's collective effort to measure, reduce, and offset carbon emissions to lessen our negative impact on the environment.

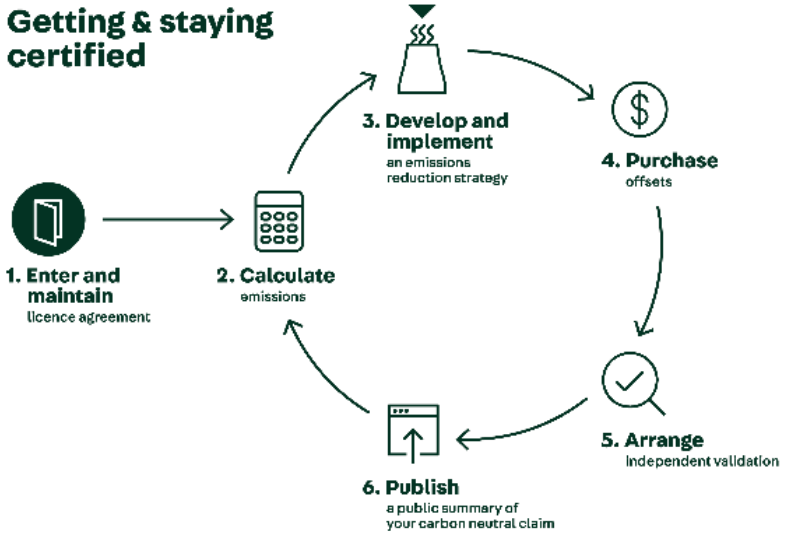
The certification is a new iteration of the Australian Government's current carbon neutral certification (National Carbon Offset Standard, NCOS) that better reflects the role that government, business and community have to play in working together to address climate change.

The Climate Active program and Climate Active Carbon Neutral Standard supports and guides businesses as they account for and reduce carbon emissions. The Climate Active stamp helps the community act by making it easier to identify and choose brands that are making a real difference. It's about making good decisions today, for a more sustainable tomorrow.

The Climate Active carbon neutral certification is one of the most rigorous in the world and has been recognised by the European Union Commission and the World Bank as a mature and effective model to help businesses and incentivise emission reductions.

The following Approach to achieving Carbon Neutral Certification is considered:

- **Register**: Enter into a licence agreement with Climate Active and confirm your commitment to achieving carbon neutrality. - A licence agreement will last for two years with an opportunity to re-commit to a new agreement every year.
- **Calculate**: Quantify the proposed greenhouse gas emissions produced at a portfolio level and establish the overall carbon account or carbon footprint. We Note that this will be addressed as part of the ongoing Green Star performance rating.
- **Develop and Implement**: Agree and finalise the energy efficiency and renewable energy strategy in line with the approaches and timeline identified in this report.



- **Purchase**: Invest in carbon offsetting projects offsets that are accredited under the Climate Active framework.
- **Validate**: Apply for an independent technical assessment to validate the portfolios claims of Net Zero Carbon Emissions and to further provide evidence and credibility for the final certification.
- **Publish**: Publicly report or provide a portfolio wide disclosure statement. to ensuring transparency and help builds trust and public confidence in the claim.

ADP
Consulting : Engineering

Creating great environments with great people

Appendix D: Wind Impact Assessment

D

MEL
CONSULTANTS

(ACN 004 230 013)

22 CLEELAND ROAD
SOUTH OAKLEIGH VIC 3167
AUSTRALIA

Ref: 50-21-DE-EWC-05

1st May 2024

Capital Alliance
Level 11, 720 Bourke Street
Docklands VIC 3008
Attn: Nancy Cao

Dear Nancy,

Revitalising Central Dandenong - Development Plan
Environmental Wind Considerations

MEL Consultants and Laminar2 Turbulent (CFD Virtual Modelling) have been working with Capital Alliance and DKO to develop the Revitalising Central Dandenong (RCD) development plan building forms so they respond to Dandenong's wind climate and mitigate the wind effects on the pedestrian realm. The development of the building forms over the last 24 months has utilised our wind engineering expertise and virtual wind modelling techniques to investigate and refine the building forms.

The pedestrian safety and comfort criteria for the project are those defined in the Better Apartment Design Guidelines and the City of Greater Dandenong Planning Scheme Clause 58.04-4 (Standard D17). These criteria are defined for apartment developments but the wind effects of a building are determined from the built form and not the intended usage. Therefore, these criteria will be used for both the commercial and residential buildings of the Revitalising Central Dandenong precinct. Furthermore, the use of these criteria across the precinct is consistent with the wind safety and comfort criteria for Victoria. At development plan level the specific activation of the spaces within the precinct has not been resolved. However, the intended target criteria from Standard D17 for areas within the precinct are as follows:

Safety Criterion	All locations around and within development
Comfort Criteria	
Walking	Pedestrian transit areas; e.g. roads, back of house laneways, non-active frontages
Standing	Pedestrian short duration stationary areas; e.g. building entrances, active frontages [window shopping], elective outdoor seating areas.
Sitting	Pedestrian long duration activities; e.g. Outdoor Cafe seating, key public seating areas, resident communal spaces [BBQ areas] For outdoor dining seating the target will be half the wind speed of the sitting criterion, approx. 1.5ms^{-1}.

The virtual modelling has developed development plan building forms to reduce the wind impacts on the surrounding streetscapes and public realm, i.e. macro site/precinct analysis of wind impacts. The development plan buildings were forms with no details, such as balconies, and these features would be designed for the individual development applications.

For the development plan design dated 9th August, 2023, the predicted wind safety criterion for the virtual modelling study is presented in Figure 1. These data show the proposed development plan would not fail the pedestrian safety criterion in the surrounding streetscapes. It is important to note the virtual modelling gust wind speeds are mean wind speeds converted to equivalent gust wind speeds (i.e. mean wind speed x 1.85) as the virtual modelling does not directly model wind gusts. The predicted wind comfort levels for the development plan, using virtual wind modelling techniques, are presented in Figure 2. The virtual modelling results indicate the wind comfort levels generally satisfy the intended pedestrian activation in the development plan precinct and surrounding streetscapes (private and public areas). Development of neighbouring vacant sites to north, west and southwest of the proposed Development plan site would be expected to improve pedestrian wind conditions as the existing RCD site is very exposed to Dandenong's prevailing wind directions. Therefore, it would be expected the proposed development plan would achieve safe and comfortable wind conditions.

Further virtual and wind tunnel studies will be undertaken to support the detailed design of the buildings to ensure the target criteria area satisfied and, if required, develop and quantify the effectiveness of wind mitigation strategies. Since the development plan virtual analysis completed to date has focused on the macro wind effects the future studies would focus on the micro wind effects and the mitigation strategies for these areas, e.g. wind break screens, canopies, locating key entrances and areas.

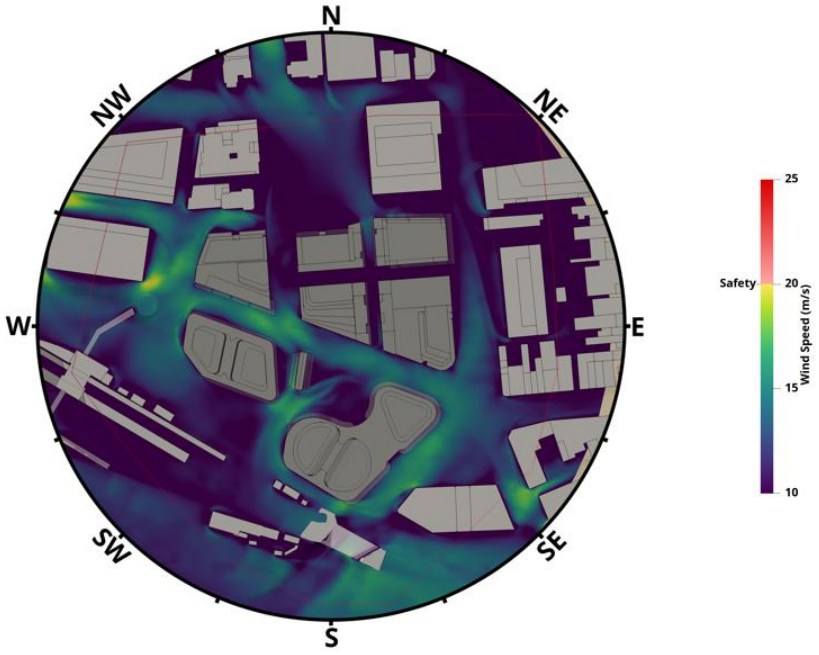


Figure 1: Development plan virtual wind modelling (CFD) predicted safety criterion (Any wind direction maximum, as per BADS)

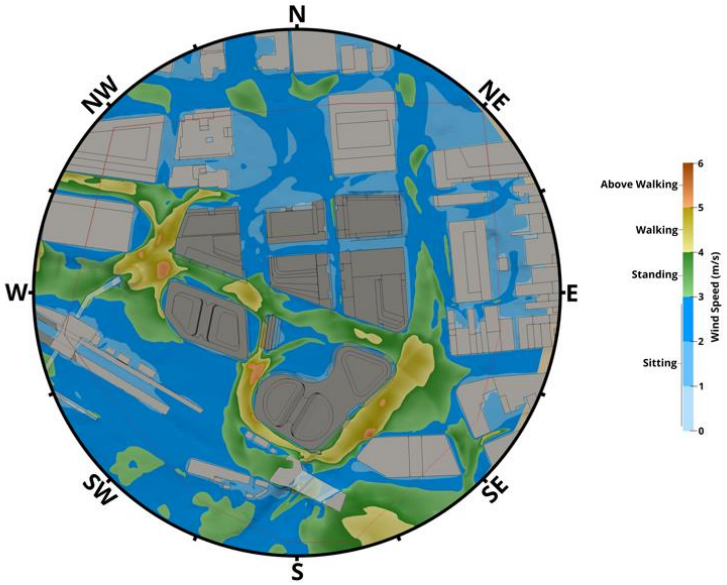
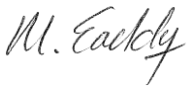


Figure 2: Development plan virtual wind modelling (CFD) predicted wind comfort level (All wind directions combined, as per BADS)

Yours sincerely,



M. Eaddy
MEL Consultants Pty Ltd

B. Gilhome
Laminar2 Turbulent. Pty Ltd

Appendix E: Social Infrastructure Report

E

ASR RESEARCH

Planning today for the communities of tomorrow

Revitalising Central Dandenong:

Parcels 11-15 Social Infrastructure Assessment

Final Report

Version 5

April 30, 2024

Prepared for Capital Alliance

Level 11, 720 Bourke St

Docklands VIC 3008

Table of Contents

1 INTRODUCTION 4

1.1 Background 4

1.2 The Revitalising Central Dandenong Project 5

1.3 The Subject Site 6

1.4 RCD Urban Master Plan Summary (2006) 7

1.5 Subject Site development Plan & Development Requirements 9

2. ASSESSMENT OBJECTIVES & SCOPE 10

2.1 Assessment Objectives 10

2.2 Social Infrastructure Definition & Scope of Plan 10

2.3 Dandenong Statistical Area 2 (SA2) 12

2.4 Subject Site 1.5 Kilometre Population Catchment 13

2.5 Social Infrastructure Provision Standards 14

3 REVIEW OF STATUTORY FRAMEWORK & OTHER STRATEGIC DOCUMENTS 15

3.1 Overview 15

3.2 Greater Dandenong Planning Scheme & Plan Melbourne 15

3.3 Greater Dandenong Council Strategies and Plans 16

3.4 Other Agency Strategies and Plans 16

3.5 Implications of Policy and Strategic Documents Review 17

4 SOCIAL INFRASTRUCTURE AUDIT ANALYSIS 18

4.1 Audit of 20 Minute Walkable Catchment 18

5 PROJECTED POPULATION CHANGE FOR DANDENONG SA2 22

5.1 Dwelling and Population Projections for Dandenong SA2 22

5. ASSESSMENT OF DEVELOPMENT GENERATED SOCIAL INFRASTRUCTURE DEMAND 23

5.1 Social Infrastructure Standards and Demand and Supply Estimates 23

5.2 Subject Site Dwelling and Population Scenario 23

5.3 Implications 25

5.5 Summary of Development Generated Demand Impacts & Recommended Response Measures 25

6 CONCLUSIONS AND RECOMMENDATIONS 35

6.1 Dwelling & Population Assumptions 35

6.2 Public Open Space & Recreation 35

6.3 Council & Non-Council Community Services 36

6.4 Education 38

6.5 Justice, Police & Emergency Services 39

6.6 Acute & Community Health 39

6.7 Residential Aged Care & Other Facilities for Older Persons 39

6.8 Consistency with Statutory Policies and Other Strategic Documents 39

6.9 Further Process Related Recommendations 39

APPENDICES 40

List of Tables

Table 1 - Social Infrastructure Hierarchy 11
Table 2 – Nearest Existing Social Infrastructure Surrounding the Subject Site 19
Table 3 – Dandenong SA2 Population and Dwelling Forecasts 22
Table 4 – Comparison of Projected Household Types for Dandneong SA2 area and Metropolitan Activity Centre 24
Table 5 - Target Population Projections for key Community Infrastructure Age Cohorts 24
Table 6 – Detailed Assessment of Community infrastructure Response Measures for Subject Site 26
Table 7 – Relevant Clauses from Planning Policy Framework 41
Table 8 – Relevant Clauses from Local Planning Policy Framework & Particular Provisions 45

List of Figures

Figure 1 - Subject Site Location 4
Figure 2 - RCD Master Plan (2006) 8
Figure 3 – Dandenong Statistical Area 2 12
Figure 4 – Subject Site 1.5 Kilometre Population Catchment 13
Figure 5 - Plan Melbourne Implementation Plan: Southern Region 51
Figure 6 - Dandenong Access and Open Space Map 56
Figure 7 - Location of Nearest Early Years & Youth Facilities 70
Figure 8 – Location of Nearest Education Facilities 71
Figure 9 - Location of Nearest Open Space Reserves within 1.5 Kilometres of Subject Site 72
Figure 10 - Location of Nearest Active Open Spaces and Recreation Facilities 73
Figure 11 - Location of Nearest Existing & Planned Libraries, Neighbourhood Houses, Community Centres and Meeting Spaces 74
Figure 12 - Location of Nearest Acute & Community Health Facilities 75
Figure 13 - Nearest Justice & Emergency Services 76
Figure 14 - Location of Nearest Residential Aged Care Services 77
Figure 15 - Major Non Government Organisations (NGOs) 78

1 Introduction

1.1 Background

Development Victoria (DV) is overseeing the transformation of a large site in the heart of the Precinct referred to as the "Revitalising Central Dandenong" (RCD) project. Melbourne-based developer Capital Alliance has been selected for the next phase of the project. This follows the competitive Expression of Interest and Request for Proposal process, led by Development Victoria. Construction of the first stage is expected to begin in 2023 following community and stakeholder consultation on the proposed Development Plan.

Since Revitalising Central Dandenong was established in 2006, the Victorian Government has invested $290 million in transforming central Dandenong into a vibrant and thriving economic hub. RCD is a long-term project being delivered by DV, the Victorian Government's property development agency, responsible for urban renewal, housing developments and the delivery of important civic infrastructure across Victoria.

Capital Alliance engaged ASR Research Pty Ltd to prepare a social infrastructure assessment for the proposed development of five parcels (parcels 11 to 15) of land located in the Central Dandenong Precinct (the "subject sites") as shown in Figure 1 below. The Central Dandenong Precinct is identified by Plan Melbourne as both a Metropolitan Activity Centre (MAC) and a National Employment and Innovation Clusters (NEIC). The Centre is located within the suburb of Dandenong (City of Greater Dandenong).

Figure 1 - Subject Site Location

1.2 The Revitalising Central Dandenong Project

The Development Victoria (DV) website provides a brief overview of the RCD project. It notes the following key points:

- The Revitalising Central Dandenong (RCD) initiative is supported by a $290 million commitment from the Victorian Government to transform central Dandenong into a vibrant and thriving economic hub. The project is expected to attract more than $1 billion in private sector investment, create 5,000 jobs, and enhance Dandenong's appeal as a place to live, work and visit.
- Around $700 million has been invested to date to rejuvenate and re-establish Dandenong's city centre as the capital of Melbourne's growing south east region.
- Melbourne-based developer Capital Alliance has been selected for the next phase of the project that is expected to:
  - deliver a new Little India precinct
  - inject $600 million into the Dandenong economy during its development and construction phase
  - create 2,600 construction jobs
  - create around 5,000 ongoing jobs when it is operational
  - deliver in the order of 470 new dwellings and 2,500 square metres of community space
  - deliver new commercial and retail spaces including a new supermarket.
  - transform central Dandenong into a vibrant and thriving destination
  - deliver social enterprise initiatives
  - improve public safety and amenity.
- Dandenong was once the social and economic centre of Melbourne's south-east. However, during the 1990s and early 2000s, competition from neighbouring areas resulted in reduced investment in retail, entertainment, and amenity infrastructure.
- Development Victoria is working in partnership with the City of Greater Dandenong, state government agencies, and the private sector to achieve the goals of the RCD initiative, encouraging new development and job-creating economic activity.
  - With Dandenong as its heart, Melbourne's south-east region:
  - Produces almost half of Victoria's manufacturing output;
  - Is home to more than one million people; and
  - Is home to one in every three jobs in the greater Melbourne area.

The DV website also identifies a number of completed and proposed community infrastructure projects including:

- The City of Greater Dandenong opened the Drum Theatre in 2006;
- Government Services Office completed in 2011;
- City of Greater Dandenong municipal building completed in 2014 (and features an integrated community library and a civic plaza - Harmony Square - which includes seating, green space, plantings and a giant screen);
- The construction of a multi-sport community court on the corner of Cadle and George Streets. The multi-sport court can play host to a range of sports including basketball, netball and futsal; and
- Construction commenced on the $13.5 million Salvation Army Community Hub (Site 17) development in June 2021.

1.3 The Subject Site

RCD Sites 11-15, inclusive of the area known as "Little India" are the sites that will be transformed into an integrated and vibrant, mixed-use precinct. The parcels are bounded by Settlers Square, Halpin Way, Thomas Street / Cheltenham Road and Dandenong Station and railway line. The site addresses and areas are as follows:

- Development Parcel 11: 61 – 71 Foster Street, Dandenong - 2,044 square metres (sqm);
- Development Parcel 12: 81 – 83 Foster Street, Dandenong - 3,446 sqm;
- Development Parcel 13: 85 - 91 Foster Street, Dandenong - 4,823 sqm;
- Development Parcel 14: 72 – 90 Foster Street, Dandenong - 2,795 sqm; and
- Development Parcel 15: 50 – 62 Foster Street, Dandenong - 5,730 sqm.

The total site area is 18,838 square meters (approximately 1.9 hectares), excluding existing streets. The sites are within the Central Dandenong Precinct that currently accommodates over 17,000 workers across major office, retail, education, health and community facilities.

The sites are bounded by transport infrastructure of the rail line, at-grade VicTrack owned commuter car park and bus interchange to the south and west. It is bounded by the busy roads of Cheltenham Road and Thomas Street to the east, and the recently upgraded pedestrian promenade Halpin Way to the north. It is characterised by low-rise existing retail tenancies and warehouses. The vibrant Indian sari shops, grocery stores and cafes along Foster Street, and wrapping around Mason Street, give this area the name 'Little India', and is Melbourne's longest standing cluster of Indian culture and commerce.

The sites are located next to a transport hub, within close proximity of amenities and facilities situated between Dandenong Station and the Dandenong town centre focused on Lonsdale Street. There has been significant local, state government and private investment in the area, with public realm upgrades to Halpin Way and Harmony

Square, as well as major destinations and workplaces such as the ATO , State Government Services Office, the Dandenong Library and two apartment/hotel complexes.

Key amenities near the sites include public transport (Dandenong Train Station and bus interchange), recreational reserves and parks (Dandenong Park, Dandenong Creek Trail), private and public medical centres and hospitals (Dandenong Public Hospital, South Eastern Private Hospital), Government Services Office, Dandenong Market (Melbourne's second oldest and second largest market) and Dandenong Plaza (regional shopping centre).

1.4 RCD Urban Master Plan Summary (2006)

As previously mentioned, the RCD initiative is being delivered by the Victorian Government, through Development Victoria, in partnership with the City of Greater Dandenong.

Figure 3 on the following page shows the 'Urban Master Plan' for the RCD area that was prepared by the then VicUrban (now Development Victoria) in 2006. Figure 3 also shows the location of the subject sites that form part of this assessment.

The Urban Master Plan maps a dynamic future for Central Dandenong as it seeks to attract more people, jobs and businesses. This document points to Station Precinct improvements and Halpin Way as two of four major infrastructure projects.

Halpin Way is proposed as an improved link for pedestrians and cyclists between Dandenong railway station and the city centre, and its key features include:

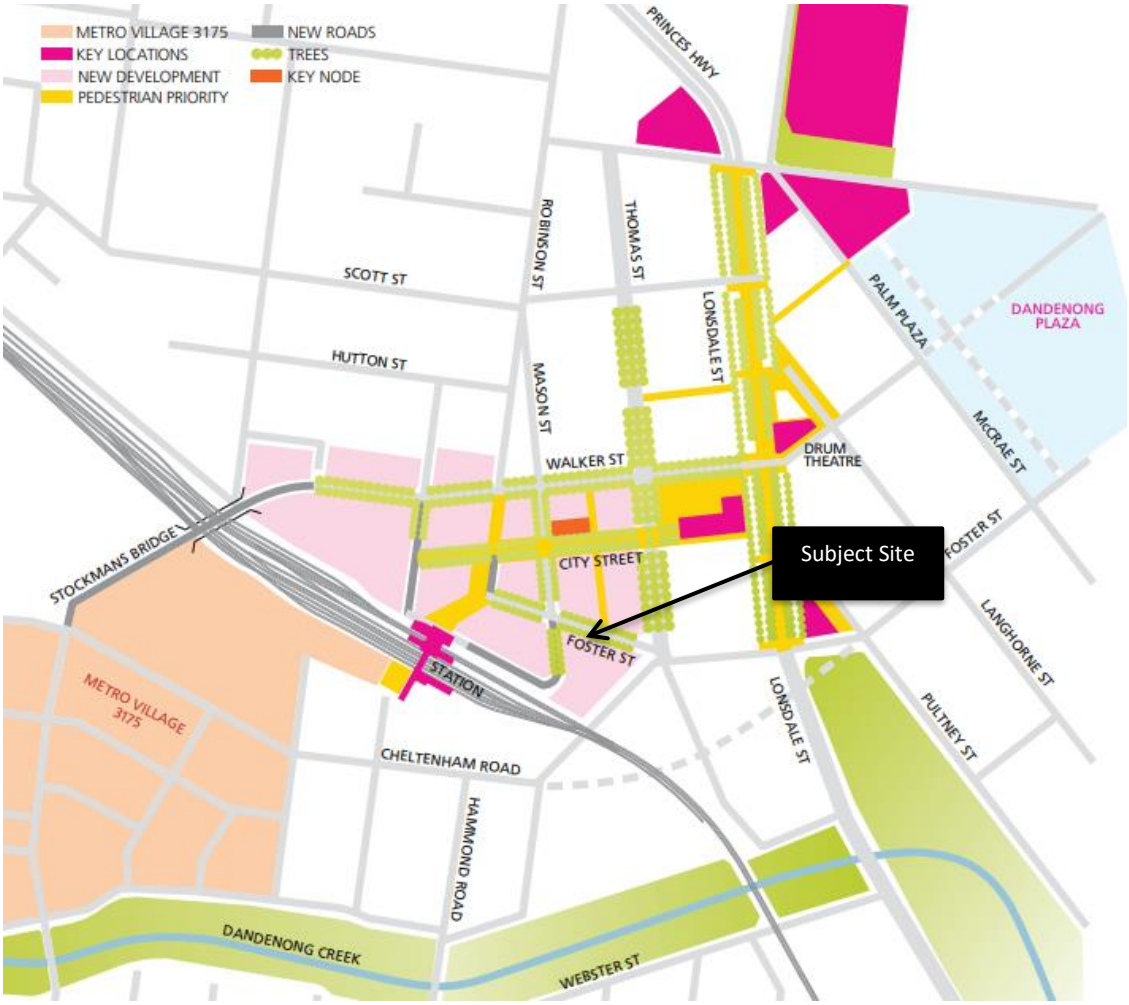
- An easy and direct route that links the Station to the city centre, Dandenong Plaza and the Market
- A setting for high quality energy efficient buildings for living, working and business activities
- A green street with wide pedestrian paths for easy movement
- Retail outlets at ground level to bring life and activity to the western half of the city
- New civic and public spaces to meet and relax and for events
- On street parking to support local businesses
- Designated safe cycling lane.

The Station Precinct improvements was proposed as a safe and vibrant gateway to central Dandenong, with enhancements including:

- A new public plaza linking the Station to City Walk (now Halpin Way) and Foster Street
- Safe and convenient drop off and pick up area for public transport travellers, buses and taxis

- Public plaza with shade, beauty, public enjoyment, events and festivals to attract people
- Seating areas to rest and meet people
- Lighting to improve safety
- New development opportunities around the arrival plaza including retail, education, residential and office to service the western part of the city
- A new arrival plaza south of the Station linking through to existing and new residences and the Dandenong creeklands.

Figure 2 - RCD Master Plan (2006)



1.5 Current Subject Site Development Plan & Development Requirements

Through the Developer's Works and the Developer's Project, the Developer will use all reasonable endeavours:

- to develop the Melbourne Food Hub Concept and other social enterprise initiatives, such as the Southern Melbourne Refugee Centre (SMRC) Cafe, being a food and drinks premises;
- to incorporate Indian cultural themes in the Developer's Project, including through community infrastructure such as an Indian museum, a community hall and a place of worship;
- to invite existing businesses (traders) to purchase, lease or licence relevant built form areas in the Developer's Project;
- to promote local community benefit programs as part of the Developer's Project on terms consistent with the Proposal;
- to enhance safety and surveillance with respect to access control, and space management;
- to incorporate built form features to establish a business incubator and innovation exchange targeted for SMEs;
- to create new public use spaces in the Developer's Project, including 2,500m2 of community space, in accordance with the Approved Development Plan; and
- to develop in the order of 470 new residential dwellings including affordable housing options, in accordance with the Approved Development Plan.

The current proposed ground floor Development Plan for the subject site which includes a range of community infrastructure measures including the creation of new public open space (approximately 1,300 square metres), improved pedestrian connections, an education preinct, and the establishment of a new community hub (approximately 790 square metres), which as a place of assembly will cater for a range of Council and Community uses.

New high quality public streets and spaces will be designed as attractive engaging, people-friendly, comfortable and safe places, which accommodate a range of passive activities, and which build on the precedents set by Harmony Square and Halpin Way. Key initiatives include:

- Little India will be focused on a new north-south oriented urban laneway, for pedestrians only;
- The Forecourt urban plaza or park will be established on the south side of Foster Street, in between the north-south connectors of Mason Street and Little India (new laneway);
- Placemaking strategy and approach to be developed and implemented over time, as the precinct is developed.

[1] This initiative proposes the establishment of a hospitality site that supports migrant employment and training. For the purposes of this assessment the SMRC is classified as a non-government organisation (NGO).

2. Assessment Objectives & Scope

2.1 Assessment Objectives

The main objectives of the assessment are to identify the following:

- Existing and planned services in the surrounding area and the impact the development of the site will have on these services;
- The need to provide additional community facilities, including early years services, on site or whether any existing community facilities and open space in the local area should be upgraded or extended;
- The location of any new community facilities and open space on site or in the surrounding area; and
- Timing of the provision of any required community facilities and open space coordinated with the overall development of the site.

2.2 Social Infrastructure Definition & Scope of Plan

For the purposes of this assessment social infrastructure is defined as both public and private, Council and non-Council facilities (e.g. buildings and ovals) likely to be required to support social services, programs, activities and accessibility to them (e.g. Kindergarten services, child care, community meetings, sporting competition, informal recreation etc.).

For the purposes of undertaking this assessment an audit of the following social infrastructure categories were selected:

1. Early years services;
2. Open space (active and passive);
3. Community meeting spaces, libraries and learning centres;
4. Indoor recreation facilities;
5. Education facilities;
6. Health services;
7. Police & Emergency services; and
8. Residential aged care.

Categories 1 to 4 are typically (but not exclusively) Local Government responsibilities and are often (but not always) included in development contribution agreements associated with significant land use developments. However, government education facilities (typically primary and secondary schools), where deemed to be required within a land use development, are generally funded (both land and building costs) by the State Government.

Although not prescriptive, different forms of social infrastructure generally have different population catchments as shown in Table 2 below.

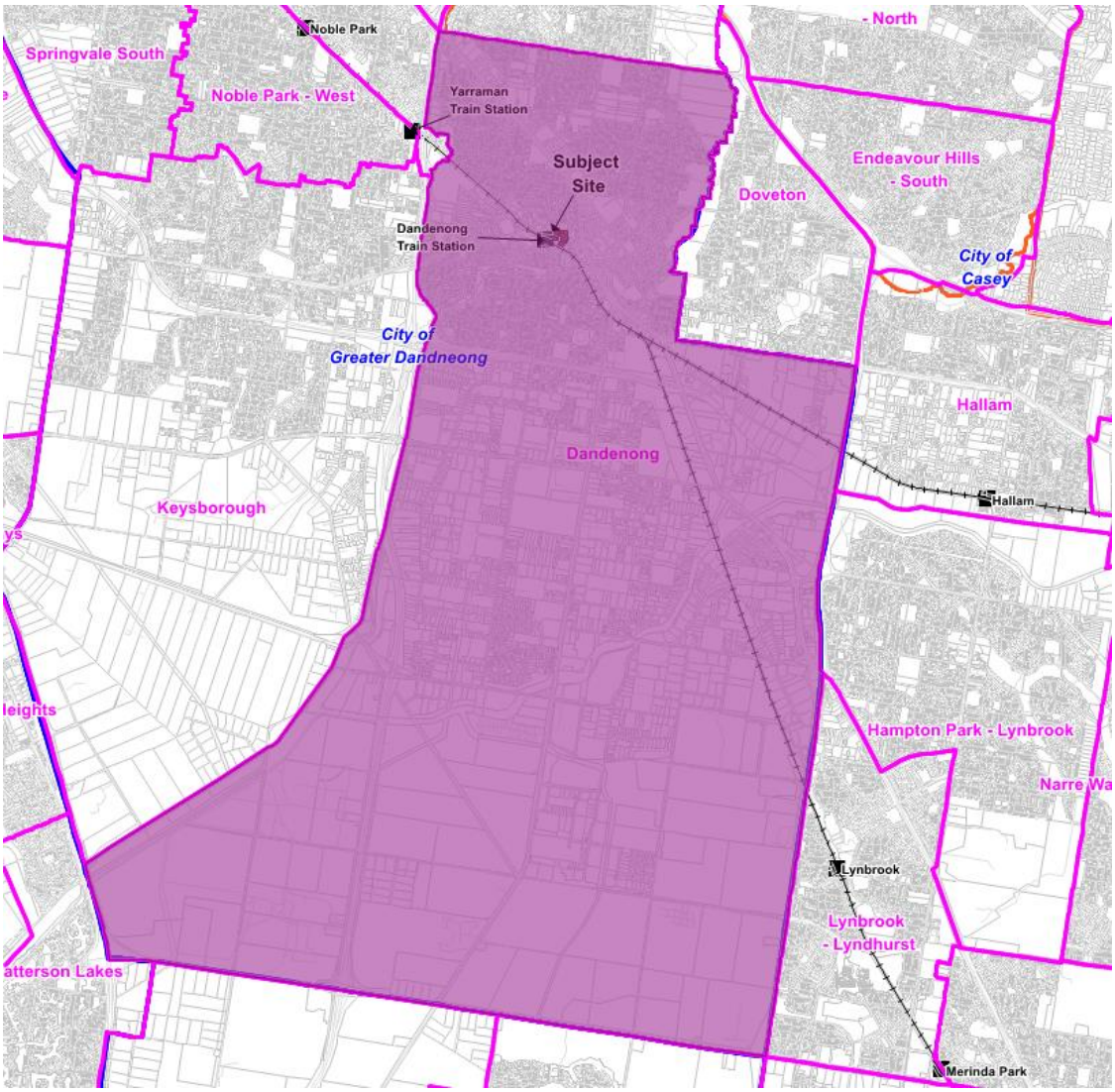
Table 1 - Social Infrastructure Hierarchy

Hierarchy	Items
Level 1 *Up to 10,000 people*	• Government Primary Schools (including out of schools hours care)/Early Years Facility • Level 1 Council Community Centres/ Early Years Facility/Neighbourhood House • Level 1 Active Open Space • Level 1 Passive Open Space (including level 1 playgrounds) • Long Day Child Care Centres • Social housing
Level 2 *Between 10 and 30,000 people*	• Government Secondary Colleges • Catholic Primary Schools • Level 2 indoor recreation centres • Level 2 Council Community Centres/Early Years Facility/Neighbourhood Houses • Low Order Tennis Facilities • Low Order Youth Facilities • Maternal & Child Health (within every second level 1 early years facility) • Occasional Child Care (as part of every neighbourhood house and leisure centre) • Residential Aged Care
Level 3 *Between 30 and 60,000 people*	• Libraries • Aquatic Leisure Centres • Community Arts Centres • Catholic Secondary Colleges • Higher Order Active Open Space Reserves • Level 3 indoor recreation centres • High Order Tennis Facilities • Lawn Bowls Facility • High Order Dedicated Youth Facilities • Level 3 Council Community Centres • Level 2 Community-based health precincts (dedicated outreach health precinct sites) • Early Childhood Intervention Service • PAG facility • Delivered meals facility • Level 3 adventure playgrounds • Other independent schools
Level 4 *Total municipality*	• Main Council Civic Centre • Level 3 Community-based health precincts – Day hospitals that contain main or outreach Community Health Centre site (including Mental Health) • Synthetic athletics track

2.3 Dandenong Statistical Area 2 (SA2)

To assist with calculating future community infrastructure demand across a broader Study Area which includes the subject site, the Statistical Area Level 2[2] (SA2) Dandenong was selected. As shown in Figure 3 below, the Dandenong SA2 is a large geographic area. However, the majority of the current and future population is located at the far northern end of the SA2 area. The SA2s form the basis of the Victoria in Future 2019[3] (VIF2019) estimates prepared by the Department of Environment, Land, Water and Planning (DELWP).

Figure 3 – Dandenong Statistical Area 2



Source: Australian Bureau of Statistics (2016).

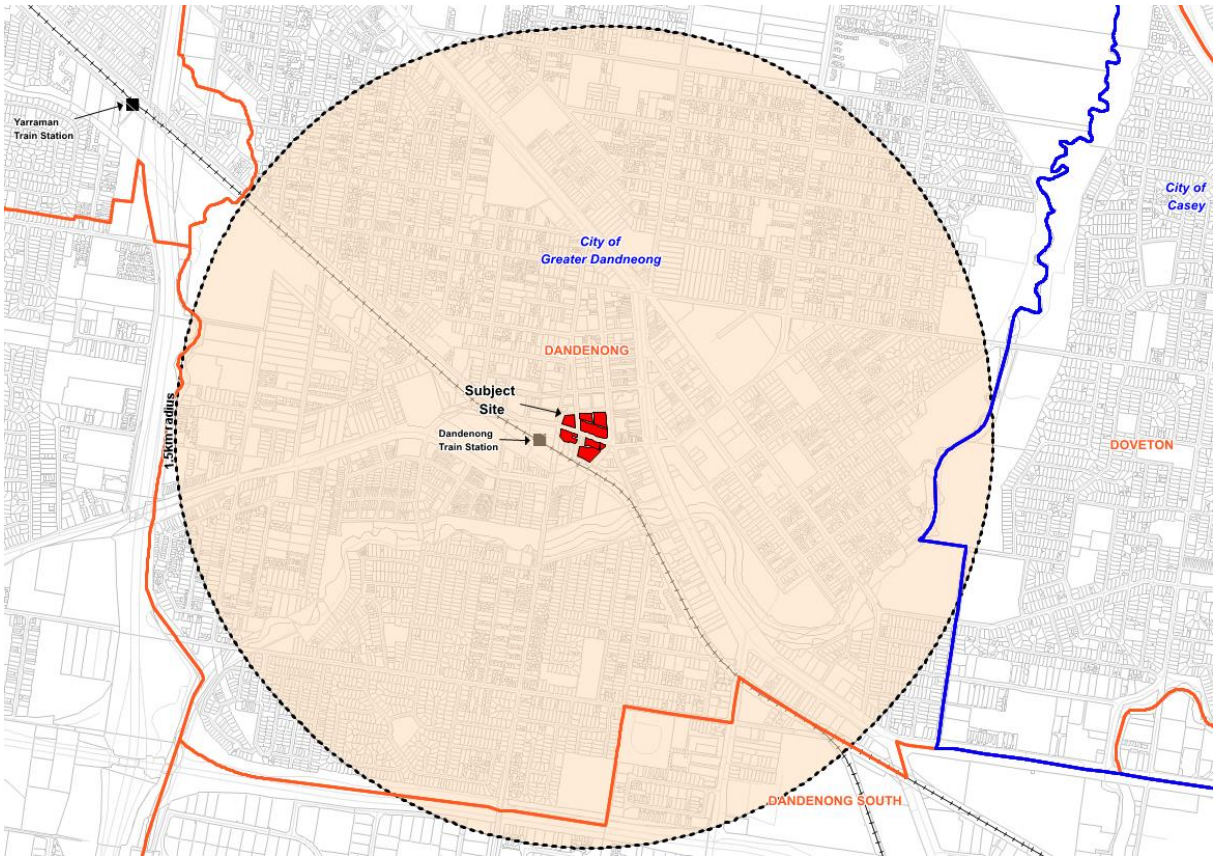
[2] Source: Australian Bureau of Statistics, Statistical Area Level 2 (SA2) ASGS Ed 2016 Digital Boundaries. SA2s are medium-sized general purpose areas built up from whole Statistical Areas Level 1 (SA1). Their purpose is to represent a community that interacts together socially and economically.

[3] Victoria in Future is the official state government projection of population and households. Projections are based on trends and assumptions for births, life expectancy, migration, and living arrangements across all of Victoria. For Local Government Areas (LGA), smaller areas (VIFSAs) and Australian Statistical Geography Standard Areas Level 2 (SA2) and above, the VIF2019 covers the period to 2036.

2.4 Subject Site 1.5 Kilometre Population Catchment

Figure 4 below shows the 1.5-kilometre population catchment area of the subject site. Although the site is largely located in Dandenong (a suburb located at the southern end of the City of Greater Dandenong, the 1.5-kilometre population catchment also includes small portions of Doveton to the east (located in the City of Casey) and Dandenong South to the south (located in the City of Greater Dandenong).

Figure 4 – Subject Site 1.5 Kilometre Population Catchment



2.5 Social Infrastructure Provision Standards

A number of social infrastructure provision standards were adopted for the purposes of preparing the following assessment. These are located in Appendix 2 and contain the indicative population thresholds for each type of community infrastructure. It should be emphasised that the provision standards are used only as a guideline and do not necessarily confirm the final community infrastructure strategy in every case and should be used only in conjunction with other qualitative and quantitative assessment methods.

3 Review of Statutory Framework & Other Strategic Documents

3.1 Overview

This section reviews:

- Two key statutory documents that inform future social infrastructure priorities for the City of Greater Dandenong: 1) the Greater Dandenong Planning Scheme, and 2) *Plan Melbourne 2017*; and
- Other Council and other agency strategic documents of potential relevance to this assessment.

The review allows for existing statutory requirements and broader strategic objectives to be identified and assessed for its potential relevance and application to the subject site.

3.2 Greater Dandenong Planning Scheme & Plan Melbourne

The Planning Scheme is a statutory document that guides and shapes development in Greater Dandenong. It includes State Government provisions as well as local policies specific to Greater Dandenong and a strategic vision for the municipality.

The Greater Dandenong Planning Scheme contains a number of Clauses of potential relevance to the development of the subject site. These include:

Relevant Clauses from Planning Policy Framework

11.03 PLANNING FOR PLACES
11.03-1S Activity centres
11.03-1R Activity centres - Metropolitan Melbourne
11.03-6S Regional and local places

19.02 COMMUNITY INFRASTRUCTURE
19.02-1S Health facilities
19.02-1R Health precincts - Metropolitan Melbourne
19.02-2S Education facilities
19.02-2R Education precincts - Metropolitan Melbourne
19.02-3S Cultural facilities
19.02-3R Cultural facilities - Metropolitan Melbourne
19.02-4S Social and cultural infrastructure
19.02-5S Emergency services
19.02-6S Open space
19.02-6R Open space - Metropolitan Melbourne

Relevant Clauses from Local Planning Policy Framework & Particular Provisions

21.01 MUNICIPAL PROFILE
21.02-2 Regional context

21.03 A VISION FOR GREATER DANDENONG
21.03-2 Achieving the vision

21.06 OPEN SPACE AND NATURAL ENVIRONMENT
21.06-1 Open space

21.07 INFRASTRUCTURE AND TRANSPORTATION
21.07-1 Physical, community and cultural infrastructure

22.07 CENTRAL DANDENONG LOCAL PLANNING POLICY
22.07-2 Future Direction and Vision
22.07-5 Policy objectives and policy

50. PARTICULAR PROVISIONS
Schedule to Clause 53.01 Public Open Space Contribution and Subdivision

A summary of each of these Clauses is provided in Appendix 1a of this report.

3.3 Greater Dandenong Council Strategies and Plans

A number of Greater Dandenong Council strategies, plans and polices were identified and reviewed for potential relevance to the assessment. Council policies, strategies and plans are reviewed in Appendix 1b of this report. The documents reviewed are:

- Council Plan 2021 – 25 (incorporating the Municipal Public Health and Wellbeing Plan);
- Long Term Financial Plan 2021-22 – 2030-31;
- City of Greater Dandenong Community Hubs Framework (2015);
- Dandenong Community Hub Project - Community Consultation (2021);
- City of Greater Dandenong Children's Plan 2021-2026;
- City of Greater Dandenong Youth and Family Strategy 2021-26;
- City of Greater Dandenong Positive Ageing Strategy 2017-25;
- Greater Dandenong Open Space Strategy 2020 – 2030;
- Greater Dandenong Physical Activity Strategy 2020–2030);
- Sports Facilities Plan: Implementation Plan Update (2018);
- ACTIVATE: Sport & Active Recreation Strategy 2014-19 (November 2014);
- Greater Dandenong Aquatic Strategy (2019); and
- Dandenong Park Regional Leisure Precinct Master Plan (2007);
- City of Greater Dandenong Library Strategy (2018-2023);
- Discover, Create, Share: Draft City of Greater Dandenong Arts and Cultural Heritage Strategy 2022-2026; and
- Dandenong New Art (DNA) Redevelopment project.

3.4 Other Agency Strategies and Plans

Other important State Government and service agency strategies reviewed included:

- Victorian Infrastructure Plan (2021);
- Health 2040: Advancing Health, Access and Care (2016);
- Statewide Design, Service and Infrastructure Plan for Victoria's Health System 2017–2037;
- Monash Health Strategic Plan 2023;
- Monash University Strategic Plan 2021–2030;
- Federation University Strategic Plan 2018 - 2022;
- Chisholm Strategy Plan 2017-2020;
- Victoria Police Blue Paper: A Vision for Victoria Police In 2025;

- VICSES Strategic Plan 2018-2022;
- Fire Services Victoria Plan 2020-2021;
- Ambulance Victoria Strategic Plan 2017-2022; and
- Court Services Victoria Strategic Asset Plan:2016-2031.
- Frankston North Education Plan (2018).

3.5 Implications of Policy and Strategic Documents Review

Where relevant, the contents of these strategies are referred to as part of the more detailed community infrastructure assessment presented in Section 5 of this report.

4 Social Infrastructure Audit Analysis

4.1 Audit of 20 Minute Walkable Catchment

Appendix 3 of this report provides an audit of the following existing social infrastructure categories generally located within 1.5 kilometres[4] of the subject site:

1. Early years services;
2. Education facilities;
3. Community meeting spaces, libraries and learning centres, Men's Sheds and arts cultural facilities;
4. Open space (active and passive);
5. Indoor recreation facilities;
6. Health services;
7. Police & Emergency services; and
8. Residential and facility based aged care.

Table 3 on the following page identifies the main social infrastructure items (including open space) which currently exists in the catchment area surrounding the subject site and the drive and walking times from the site to these facilities.

Table 3 reveals that the catchment area surrounding the subject site generally has good access to all the social infrastructure categories identified above. The implications of the audit findings are also included in Section 5 of this report which provides an assessment of the likely social infrastructure demand impacts generated by the proposed development of the subject site.

[4] Plan Melbourne, the city's metropolitan planning strategy, proposes a city made up of 20 minute neighbourhoods were every home will be within 20 minutes travel time of jobs, shops, cafes, schools, parks and community facilities. Rather than basing this on car based travel times, Plan Melbourne proposes it will be 20 minutes travel by active modes i.e. by public transport, walking and cycling. For the purposes of this assessment the 1.5 kilometre radius was chosen as it approximately equates to a 20 minute walk.

Table 2 – Nearest Existing Social Infrastructure Surrounding the Subject Site

Nearest Existing Social Infrastructure	Drive and Walking Times from the Subject Site[5]
Open Space and Recreation	
Major Passive Open Spaces	
Harmony Square	2 minute drive, 4 minute walk
Dandenong Park	5 minute drive, 8 minute walk
Woodcock Reserve	3 minute drive, 11 minute walk
Clow Street Reserve	5 minute drive, 14 minute walk
Jim Hardy Park	5 minute drive, 15 minute walk
Apex Park	4 minute drive, 20 minute walk
Hemmings Park (located within Dandenong Creek linear open space)	5 minute drive, 14 minute walk
Keneally Reserve (located within Dandenong Creek linear open space)	3 minute drive, 13 minute walk
Des Custerson Reserve	4 minute drive, 20 minute walk
Pioneer Memorial Gardens	4 minute drive, 16 minute walk
Active Open Space (Public Sportsgrounds/Outdoor Courts)	
Central Dandenong multi-purpose court	2 minute drive, 4 minute walk
Dandenong Croquet & Bowls Club (Dandenong Park)	3 minute drive, 9 minute walk
Shepley Oval (Dandenong Park)	5 minute drive, 15 minute walk
Hemmings Park (BMX / Skating component)	5 minute drive, 14 minute walk
Greaves Reserve (includes Gloria Pyke Netball Complex)	4 minute drive, 20 minute walk
Robert Booth Reserve	5 minute drive, 22 minute walk
Thomas P Carroll Reserve	5 minute drive, 24 minute walk
Betula Park Recreation Reserve	5 minute drive, 26 minute walk
George Andrews Reserve	5 minute drive, 22 minute walk
Dandenong Workers Social Club and Golf Course	6 minute drive, 32 minute walk
Public Indoor Recreation (Aquatic Leisure Centres / Indoor Courts)	
Dandenong Oasis	6 minute drive, 32 minute walk
Dandenong Stadium	9 minute drive, 47 minute walk
Education	
Dandenong Primary School (zoned school catchment that includes subject site)	4 minute drive, 13 minute walk
Dandenong South Primary School	4 minute drive, 18 minute walk
Dandenong West Primary School	5 minute drive, 20 minute walk
Dandenong North Primary School	5 minute drive, 24 minute walk
Dandenong High School (Dandenong Campus) (zoned school catchment that includes subject site)	4 minute drive, 16 minute walk
Dandenong High School (Cleeland Campus) (zoned school catchment that includes subject site)	4 minute drive, 16 minute walk
St Mary's Catholic Primary School	5 minute drive, 14 minute walk
St Johns Regional College	6 minute drive, 23 minute walk

[5] Times derived from Google Maps using the corner of Foster Street and Mason Street as the starting location.

Nearest Existing Social Infrastructure	Drive and Walking Times from the Subject Site[5]
St Marys College for the Deaf (Dandenong Campus)	5 minute drive, 21 minute walk
Chisholm TAFE (Dandenong Campus)	6 minute drive, 27 minute walk
Monash University (Clayton Campus)	21 minute drive (beyond reasonable walking distance)
Federation University (Berwick Campus)	26 minute drive (beyond reasonable walking distance)
Early Years Services	
Long Day Child Care	
Fifth Avenue Day care Centre	2 minute drive, 9 minute walk
Goodstart Early Learning Dandenong – Princess Highway	5 minute drive, 20 minute walk
Little Dreamers Early Learning Centre	6 minute drive, 37 minute walk
Beacon House Montessori Centre	2 minute drive, 11 minute walk
Canberra Avenue Child Care & Kinder	4 minute drive, 15 minute walk
Occasional Child Care	
Market Street Occasional Child Care Centre	4 minute drive, 17 minute walk
Sessional Kindergarten	
Dandenong Primary Kindergarten	3 minute drive, 11 minute walk
Dandenong South Kindergarten	3 minute drive, 17 minute walk
Dandenong West Primary Kindergarten	3 minute drive, 18 minute walk
Maternal & Child Health (MCH)	
Dandenong Primary MCH	3 minute drive, 18 minute walk
Dandenong South MCH	4 minute drive, 14 minute walk
Playgroups	
Dandenong Library Playgroup	2 minute drive, 4 minute walk
St James Anglican Church Playgroup	3 minute drive, 10 minute walk
Youth Services	
City of Greater Dandenong Youth Services	6 minute drive, 14 minute walk
Libraries, Community Centres / Neighbourhood Houses, Meeting Spaces	
Community Meeting Spaces	
Dandenong Civic Centre	2 minute drive, 4 minute walk
Harmony Square	2 minute drive, 4 minute walk
Memorial Hall	3 minute drive, 8 minute walk
Walker Street Gallery & Arts Centre	2 minute drive, 3 minute walk
Heritage Hill Museum and Historic Gardens	3 minute drive, 10 minute walk
Palm Plaza Meeting Room	4 minute drive, 10 minute walk
Neighbourhood Houses	
Dandenong Neighbourhood House	5 minute drive, 17 minute walk
Men's Shed	
Dandenong Men's Shed	5 minute drive, 17 minute walk
Libraries	

Nearest Existing Social Infrastructure	Drive and Walking Times from the Subject Site[5]
Dandenong Library	2 minute drive, 4 minute walk
Arts / Cultural	
Future Dandenong New Art (DNA) Redevelopment Facility	1 minute drive, 3 minute walk
Drum Theatre	2 minute drive, 5 minute walk
Walker Street Gallery & Arts Centre	2 minute drive, 3 minute walk
Heritage Hill Museum and Historic Gardens	3 minute drive, 10 minute walk
Health	
Community Health	
Monash Health Community Dandenong	2 minute drive, 2 minute walk
Acute Health	
Dandenong Hospital	5 minute drive, 25 minute walk
Corymbia Day Hospital	5 minute drive, 23 minute walk
The Digestive Health Centre	5 minute drive, 23 minute walk
Monash Health Dialysis Unit	5 minute drive, 25 minute walk
Monash Women's Clinic Dandenong	6 minute drive, 27 minute walk
Dandenong Eye Clinic Day Surgery Centre	6 minute drive, 30 minute walk
Aged Care Facilities	
Southern Cross Care Dandenong	3 minute drive, 12 minute walk
Kronstadt Gardens	5 minute drive, 21 minute walk
Scottvale Aged Care	2 minute drive, 10 minute walk
Wittringham Eunice Seddon Home	3 minute drive, 16 minute walk
Aaron Lodge (Supported Residential Service)	5 minute drive, 19 minute walk
Rosewood Downs (Supported Residential Service)	2 minute drive, 9 minute walk
Harrier Manor (Supported Residential Service)	5 minute drive, 25 minute walk
Mayfair Lodge (Supported Residential Service)	5 minute drive, 26 minute walk
Law Courts, Police & Emergency Services	
Dandenong Magistrates Court	2 minute drive, 6 minute walk
Dandenong Drug Court	1 minute drive, 2 minute walk
Dandenong Justice Service Centre	1 minute drive, 3 minute walk
Dandenong Police Station	2 minute drive, 9 minute walk
Dandenong Ambulance Station	5 minute drive, 25 minute walk
VicSES Greater Dandenong	5 minute drive, 23 minute walk
Dandenong Fire Station	4 minute drive, 28 minute walk

5 Projected Population Change for Dandenong SA2

5.1 Dwelling and Population Projections for Dandenong SA2

Table 3 below shows that the Dandneong SA2 area currently (2021) has a population of approximately 36,300 residents and is projected to increase signficiantly to approximately 50,700 residents by 2036, an increase of 40%.

Table 3 – Dandenong SA2 Population and Dwelling Forecasts

Variable	2021	2026	2031	2036	Change no. from 2021 to 2036	% Change from 2021 to 2036
Households	12,728	14,224	15,840	17,648	4,920	39%
Dwellings	12,983	14,509	16,158	18,002	5,019	39%
Total Population	36,325	40,750	45,551	50,674	14,349	40%

Source: Department of Environment, Land, Water and Planning, Victoria in Future 2019 (VIF2019)

5. Assessment of Development Generated Social Infrastructure Demand

5.1 Social Infrastructure Standards and Demand and Supply Estimates

Appendix 2 of this report provides a table of indicative estimates for various forms of social infrastructure that lend themselves to some form of quantifiable demand and / or supply measure. The source of these demand / supply measures is also identified the same table. ***It should be emphasised that the numbers indicated should not be interpreted as final provision recommendations for the subject site development scenario.*** Social infrastructure assessments also require existing strategic priorities be taken into consideration, as well as the capacity of existing services and facility to meet current and future needs.

5.2 Subject Site Dwelling and Population Scenario

Based on advice provided by Capital Alliance, the subject site Development Plan envisages the creation of somewhere between 470 and 506 new dwellings consisting of 50% 1-bedroom apartments, 46% 2-bedroom apartments and 4% 3 bedroom apartments. For the purposes of this assessment the upper dwelling yield scenario has been assumed (i.e. 506 dwellings).

Demographic data from the 2016 ABS Census[6] for localities that currently include Metropolitan Activity Centres[7] across Melbourne was used to calculate both the population and likely age profile of the subject site. This data was used to calculate average household size estimates[8] for each apartment type (i.e. the number of bedrooms in an apartment) and an age profile for each apartment type.

Based on these development and demographic assumptions the subject site is likely to generate a residential population of approximately 870.

As shown in Table 4 on the following page, the types of households that are likely to live within the subject site will vary significantly from that forecast for the wider Dandenong SA2 area. It shows that Metropolitan Activity Centres have a far smaller proportion of families with children and a far higher proportion of lone person households and group households.

[6] Source: 2016 ABS Census, Tablebuilder: Metropolitan Activity Centre Local Government Areas (LGAs) x Apartment Profile x Bedroom Number (Flat or apartment in a three storey block & Flat or apartment in a four or more storey block).
[7] The Metropolitan Activity Centres (and LGAs) selected were Dandenong (City of Greater Dandenong), Box Hill (City of Whitehorse), Ringwood (City of Maroondah), Frankston (City of Frankston) and Epping (City of Whittlesea).
[8] Average household size estimates are 1.4 for 1-bedroom apartments, 2.0 for 2-bedroom apartments and 2.4 for 3-bedroom apartments.

Table 4 – Comparison of Projected Household Types for Dandneong SA2 area and Metropolitan Activity Centre

	Dandenong SA2	Metropolitan Activity Centres
Household Types	**%**	**%**
Couple family with children	35%	9%
Couple family without children	18%	22%
One-parent family	13%	7%
Other family	2%	2%
Group households and other household types	7%	19%
Lone person	25%	40%
All Household Types	100%	100%

Population age cohort yields anticipated for both the subject site and the broader Dandenong SA2 area by 2036 are shown in Table 5 below. The age cohorts shown reflect a requirement for (but not necessarily restricted to) the following types of services and / or facilities:

- 0 - 3 Years - Maternal and Child Health Services, Playgroups;
- 3 - 4 Years – Kindergarten Programs;
- 0-4 Years - Long Day Child Care, Occasional Child Care, Maternal and Child; Health Services, Family Day Care, Specialist Early Intervention Services;
- 5-11 Years - Primary School, After Hours School Care, School Holiday; Programs, Family Day Care;
- 5-14 Years – Participation by children in organised sport and leisure activities;
- 15+ Years – Participation by older youth and adults in organised sport and leisure activities;
- 12-17 Years - Secondary School, School Holiday programs;
- 55+ Years- Senior Citizens Groups and Centres;
- 70+ Years – Aged care services and facilities for older persons; and
- All population age cohorts – Libraries, Neighbourhood Houses etc.

Table 5 - Target Population Projections for key Community Infrastructure Age Cohorts

Age Cohort	Community infrastructure types the age cohort is relevant to	Subject Site	Dandenong SA2 by 2036
0-3	MCH, Playgroups	34	3,089
4	4 Year Old Kindergarten	3	772
3	3 Year Old Kindergarten	6	772
0-4	Long Day Child Care & Occasional Child Care	37	3,862
5-11	Primary School enrolments, out of school hours care	20	4,685
5-14	Participation in organised children's sport	29	6,564

Age Cohort	Community infrastructure types the age cohort is relevant to	Subject Site	Dandenong SA2 by 2036
15+	Participation in organised youth & adult sport	804	40,248
15-24	Participation in higher education (youth & young adult)	222	6,354
25+	Participation in higher education (older adults)	582	33,893
12-17	Secondary School enrolments	18	3,514
70+	Residential & home based aged care services	35	4,208
Total Population	**Total Population**	**870**	**50,674**
Dwellings	**Total Dwellings**	**506**	**18,002**

5.3 Implications

The implications of this population profile can be summarised as follows:

- The development of in the order of 506 additional dwellings within the subject site will account for 2.8% of all dwellings in the Dandenong SA2 area by 2036; and
- An estimated population yield of 870 within the subject site will account for 1.7% of the total population of the Dandenong SA2 area by 2036.

5.5 Summary of Development Generated Demand Impacts & Recommended Response Measures

Table 6 on the following pages summarises the key findings, issues and demand impacts associated with the proposed subject site Development Plan and outlines recommended response measures for each form of social infrastructure.

Table 6 – Detailed Assessment of Community infrastructure Response Measures for Subject Site

Service / Community infrastructure type	Key Assessment Findings	Recommended Response Measures for Subject Site
Passive Open Space	The 1.5 kilometre catchment area contains a number of passive open space reserves including: • Harmony Square • Dandenong Park • Woodcock Reserve • Clow Street Reserve • Jim Hardy Park • Apex Park • Hemmings Park (located within Dandenong Creek linear open space) • Keneally Reserve (located within Dandenong Creek linear open space) • Des Custerson Reserve • Pioneer Memorial Gardens In keeping with its development contributions obligations, Capital Alliance have advised that it intends to include a minimum of 2,500 square metres of new public open space as part of the development. This represents 13.3% of the subject site land area, and significantly exceeds the current public open space contribution rates for the area (5%).	This assessment strongly endorses the proposed inclusion of a minimum of 1,300 square metres of new public open space as part of the development. This represents 6.9% of the subject site land area, and significantly exceeds the current public open space contribution rates for the area (5%). The Development Plan commissioned by Capital Alliance proposes new high quality public streets and spaces will be designed as attractive engaging, people-friendly, comfortable and safe places, which accommodate a range of passive activities. Key initiatives include: • Little India will be focussed on a new north-south oriented urban laneway, for pedestrians only; and • The Urban Courtyard plaza or park will be established on the south side of Foster Street, in between the north-south connectors of Mason Street and Little India (new laneway). These proposed initiatives are also pivotal to prioritising pedestrian and cycling movement throughout the development.
Active Open Space	The 1.5 kilometre catchment area contains the following public active open space reserves including: • Davies Central Dandenong multi-purpose court; • Dandenong Croquet & Bowls Club (Dandenong Park); • Shepley Oval (Dandenong Park); • Hemmings Park (BMX / Skating component); • Greaves Reserve (includes Gloria Pyke Netball Complex); • Robert Booth Reserve; • Thomas P Carroll Reserve; • Betula Park Recreation Reserve; • George Andrews Reserve; and • Dandenong Workers Social Club and Golf Course. Council's long term capital works plan includes ongoing improvement to many of these reserves via adopted masterplans and sporting pavilion upgrades.	The subject site has insufficient land to be considered a feasible location for any typical sports ground. However, given Council is supportive of measures to incorporate unstructured recreation infrastructure into the planning and development of key open space areas to encourage increased levels of physical activity (i.e. outdoor gyms, basketball half courts, rebound walls etc.), this assessment recommends the proposed development include one or more outdoor fitness nodes offering a combination of static and dynamic fitness equipment.

Service / Community infrastructure type	Key Assessment Findings	Recommended Response Measures for Subject Site
	The proposed development of the subject site is likely to generate the following additional demands for organised sports: **Sport** — **Number of participants (approx.)** Basketball — 37 Australian rules football — 32 Golf — 32 Athletics, track and field (includes jogging and running) — 31 Football/soccer — 29 Tennis — 27 Netball — 27 Cricket — 20	
Council Indoor Aquatic Leisure Centres	The nearest Council aquatic and indoor leisure centres to the subject site are: • Dandenong Oasis; and • Dandenong Stadium. The City of Greater Dandenong is committed to redeveloping and expanding the capacity of both of these facilities. The development of the subject site is likely to generate the equivalent of an additional 7,700 (approximately) aquatic leisure centre visits per annum, an additional 3,000 (approximately) recreation centre visits (indoor court facilities) per annum, approximately 40 basketball participants and 0.1 indoor courts for highball sports such as basketball. The development will also generate additional demand for fitness / gym programs (approximately 260), swimming (approximately 90), yoga (approximately 30) and pilates (approximately 30).	Given its proximity Dandenong Oasis and the Dandenong Stadium and Council's commitment to major redevelopments for both facilities, additional Council indoor recreation provision at the subject site is not warranted. However, the development of the subject site does present a potential opportunity to include a privately operated gym.
Early Years Services *Long Day Child Care*	• There are 4 Long Day Child Care facilities within 1.5 kilometres of the subject site supplying a total of 401 places: 1) Fifth Avenue Day Care Centre (46 places); 2) Goodstart Early Learning Dandenong – Princess Highway (150 places); 3) Beacon	Although there is currently a reasonable number of existing long day child care centres within the 1.5 kilometre catchment area, there is a potential need and opportunity to seek private market interest in establishing an additional facility as part of the

Service / Community infrastructure type	Key Assessment Findings	Recommended Response Measures for Subject Site
	House Montessori Centre (34 places); 4) Canberra Avenue Child Care & Kinder (73 places). • The proposed development generates the equivalent of 11 long day child care places. More broadly across the Dandenong SA2 area, additional long day child care facilities will be required by 2036.	proposed development. This recommendation should be interpreted as a non-mandatory requirement and to be explored on a commercial basis only.
4 & 3 year old sessional Kindergartens	• There are 3 sessional Kindergarten facilities located within the 1.5 kilometre catchment area: - Dandenong Primary Kindergarten (2 rooms, 66 places); - Dandenong West Primary Kindergarten (2 rooms, 66 places); and - Dandenong South Kindergarten (2 rooms, 50 places). • The proposed development generates approximately 7 sessional kindergarten enrolments (both 3 and 4 year old kindergarten).	Based on the current supply and distribution of sessional kindergarten facilities, low subject site demand projections, and the proposed development of the Dandenong Hub facility which includes 2 kindergarten rooms (located a short distance north of the subject site), no additional sessional kindergarten rooms are recommended for the proposed development.
Maternal & Child Health	• There are 4 MCH facilities within 1.5 kilometres of the subject site: 1) Dandenong Primary MCH; 2) Dandenong Central MCH; 3) Dandenong South MCH and 4) Dandenong MCH; • The proposed development generates the equivalent of 0.1 MCH sessions per week.	Based on the current supply and distribution of sessional MCH facilities, low subject site demand projections, and the proposed development of the Dandenong Hub facility which includes 3 MCH consulting rooms (located a short distance north of the subject site), no additional sessional MCH consulting rooms are recommended for the proposed development.
Occasional Child Care	• The occasional care service operating from the Market Street Occasional Child Care Centre (41 places) is the only occasional care service in the 1.5 kilometre catchment area. • The proposed development generates the equivalent of 1 occasional child care places.	Given the very low occasional child care demand estimate, this assessment does not support the need for an additional occasional child care service within the proposed development.
Youth Services	• The City of Greater Dandenong Youth Services Centre is located within the 1.5 kilometre catchment area. • The proposed Central Dandenong Community Hub facility will include a youth service component.	Given the proposed development of the Dandenong Hub facility (located a short distance north of the subject site) will include spaces for youth services, no additional youth service provision is recommended for the proposed development.
Council & Non-Government Organisations (NGOs) Community Services and Facilities	The 1.5 kilometre catchment area contains a significant array of Council owned / managed community facilities offering meeting spaces for hire. These include: • Dandenong Civic Centre; • Harmony Square; • Memorial Hall; • Walker Street Gallery & Arts Centre; • Heritage Hill Museum and Historic Gardens; and • Palm Plaza Meeting Room.	Given the proposed development will include a new community facility / hub within the proposed development, with a floor area of approximately 650 square metres, this assessment recommends Greater Dandenong Council be consulted to confirm its interest in establishing a NGO hub facility for the large array of service providers which are currently located in the RCD area. It is important that the proposed role of this future facility does not unnecessarily overlap with Council's two other major proposed community facility projects in the RCD area: 1) the Central Dandenong Community Hub and 2) the Dandenong New Art Project.

Service / Community infrastructure type	Key Assessment Findings	Recommended Response Measures for Subject Site
	In addition to these existing facilities Greater Dandenong City Council is planning for a community hub in central Dandenong, a short distance north of the subject site. The proposed functions identified for the Hub include: • Adult education/learning • Arts, craft, woodwork • Singing, dancing, exercise • Group meetings and social gathering • Small performance/presentation (indoor and outdoor) • Cooking and eating together • IT/technology access, homework, relaxing, chatting • Coffee/tea, eating and socialising • Outdoor space for gathering, sitting, picnics, play and gardening • Carparking • Maternal and Child Health Services • Early Years: Kindergarten, Childcare and Playgroups. Concepts plans have been prepared for the Hub resulting in a proposed two-storey facility containing approximately 5,200 square metres of floorspace. Construction is proposed to commence in the 2023-2024 financial year. Council is also in the process of implementing the Dandenong New Art (DNA) Redevelopment Project for the former 1920s Masonic Hall at 5 Mason Street Dandenong (located adjacent to the subject site). Refurbishments and extensions will create Dandenong New Art – a new centre with facilities for touring art exhibitions, curation space for artists, and community spaces for creative activities and community gatherings. The facility is anticipated to be completed in 2023. The 1.5 kilometre catchment area also has a significant presence of non government service providers including: • CatholicCare – Dandenong; • South-East Monash Legal Service; • Southern Migrant and Refugee Centre; • The Salvation Army Dandenong; • Anglicare Dandenong; • WAYSS Dandenong;	

Service / Community infrastructure type	Key Assessment Findings	Recommended Response Measures for Subject Site
	• Mission Australia Dandenong; • Australian Red Cross - Migration Support Program; • enliven Victoria; • Brotherhood of St Laurence Dandenong; and • Uniting Connections Dandenong. These NGO services are located in different facilities from one another. This presents a potential opportunity to establish a one-stop shop / NGO hub where clients with multiple service needs can access what they need in one location. In keeping with its development contributions obligations, Capital Alliance have advised that it intends to include a new community facility / hub within the proposed development. It is anticipated this facility will have a floor area of approximately 650 square metres.	
Neighbourhood Houses	The 1.5-kilometre catchment contains the Dandenong Community and Learning Centre (DCLC) which is located north of the subject site. The proposed subject site generates the equivalent of 77 additional Neighbourhood House users per week and 0.1 facilities.	Given its proximity to the Dandenong Community and Learning Centre (DCLC), no additional Neighbourhood House provision is recommended for the subject site.
Libraries	The relatively new Dandenong Library (constructed in 2014), a facility integrated within the Dandenong Civic Centre, is located just a short distance east of the subject site and within easy walking distance. The subject site generates the equivalent of 4,000 loans per annum and 5,100 library visits per annum.	Given its proximity to the Dandenong Library (located within the Dandenong Civic Centre complex), no additional library provision is recommended for the subject site.
Arts / Cultural Facilities	The 1.5 kilometre catchment area contains a significant array of arts / cultural facilities. These include: • Dandenong Civic Centre; • Walker Street Gallery & Arts Centre; and • Heritage Hill Museum and Historic Gardens. In addition to these existing facilities Greater Dandenong Council is planning to deliver two new facilities that expand the capacity of the area to cater for arts and cultural activities. These are:	Given the significant presence of existing and planned community facilities with an arts and cultural focus in Central Dandenong, additional provision catering for this sector is not recommended for the subject site.

Service / Community infrastructure type	Key Assessment Findings	Recommended Response Measures for Subject Site
	• The Dandenong New Art (DNA) Redevelopment Project for the former 1920s Masonic Hall at 5 Mason Street Dandenong (located adjacent to the subject site). Refurbishments and extensions will create Dandenong New Art – a new centre with facilities for touring art exhibitions, curation space for artists, and community spaces for creative activities and community gatherings. The facility is anticipated to be completed in 2023. • The proposed Central Dandenong Community Hub which will be located a short distance north of the subject site. The proposed functions identified for the Hub include a significant number of spaces dedicated to arts and cultural activities.	
Education Facilities	There are 8 schools located within the 1.5 kilometre catchment area. These schools (and 2021 enrolment numbers) are: • Dandenong Primary School - zoned Government Primary school catchment that includes subject site (355 enrolments); • Dandenong South Primary School (589 enrolments); • Dandenong West Primary School (279 enrolments); • Dandenong North Primary School (774 enrolments); • Dandenong High School (Dandenong Campus and Cleeland Campus) zoned Government Secondary school catchment that includes subject site (1,555 enrolments); • St Mary's Catholic Primary School (589 enrolments); • St Johns Regional College (642 enrolments); and • St Marys College for the Deaf - Dandenong Campus (189 enrolments). The nearest tertiary education facilities to the subject site are Chisholm TAFE (Dandenong Campus), located north of the subject site and forming part of the Dandenong Health and Education Precinct, Monash University - Clayton Campus (approximately a 20 minute drive north west of the subject site) and Federation	Based on the relatively modest enrolment demands generated by the subject site, the current supply and distribution of education facilities, and the general enrolment capacities of Government and Catholic Schools[9], this assessment concludes that no additional primary or secondary education facilities are likely to be required as part of the development of the subject site. However, it is recommended that this report be forwarded to the Department of Education (DET) and Catholic Education Melbourne (CEM) for comment and to confirm the capacity of the surrounding network of Government and Catholic schools to cater for future growth. In relation to higher education the most significant deficiency, especially considering the RCD area is located in a designated Metropolitan Activity Centre, is the absence of a university campus. It is recommended the developer seek interest from existing higher education providers in establishing a high-density / vertical campus facility within the subject site. This should include higher education facilities with a vocational training focus despite the presence of the Chisholm TAFE Dandenong Campus north of the subject site. Preliminary discussions held with Federation University during the course of preparing this assessment indicated a potential interest in establishing a campus within the Dandenong Metropolitan Activity Centre.

[9] In relation to Government school provision, the Department of Education and Training (DET) identifies a long-term enrolment (LTE) objective for each primary and secondary school. These are: 1) Government Primary Schools: 450-475 long term enrolments and generally with a maximum capacity of 600 enrolments; and 2) Government Secondary Schools: 1,100 long term enrolments and generally with a maximum capacity to accommodate 50% more (approximately 1,600 to 1,700 enrolments). Like DET, Catholic Education Melbourne (CEM) has established its own LTE benchmarks for Catholic Primary and Secondary Schools. These are: 1) New Catholic Primary schools in metropolitan areas are planned for an LTE as close to 400 as possible, and 2) Catholic secondary schools (Years 7–12) normally have an LTE of at least 700, and not larger than 1250. New secondary schools in metropolitan areas are planned for an LTE as close to 900 as possible. It should be noted that a number of recent State Government measures to expand the enrolment capacity of inner and middle ring Melbourne locations have included the construction of 'vertical schools' on existing school sites or new sites (e.g. South Melbourne Primary School located in Ferrars Street, South Melbourne).

Service / Community infrastructure type	Key Assessment Findings	Recommended Response Measures for Subject Site
	University - Berwick Campus (approximately a 30 minute drive south west of the subject site). It is anticipated that the proposed development of the subject site will generate the additional following additional enrolments (approximate only): • 12 Government Primary school enrolments; • 4 Catholic Primary School enrolments; • 2 non-Government Primary School enrolments; • 11 Government Secondary school enrolments; • 3 Catholic Secondary School enrolments; • 2 non-Government Secondary School enrolments; • 30 TAFE enrolments; and • 70 University enrolments.	
Justice, Police & Emergency Services	The 1.5-kilometre catchment contains the Dandenong Police Station to the east of the subject site, the recently constructed Dandenong Ambulance Station to the north and the VicSES Dandenong facility to the west. Although located outside the 1.5 kilometre catchment area, the Dandenong Fire Station is located a short distance north of this catchment area. The 1.5-kilometre catchment also includes a significant justice / law court presence consisting of the Dandenong Magistrates Court, the Dandenong Drug Court and the Dandenong Justice Service Centre. The *Court Services Victoria Strategic Asset Plan 2016-2031* recommends to "undertake an expansion (potential for staging) of Dandenong court to meet current and future demand and upgrade it to a Level 2 headquarter court, including expansion of services to enable higher jurisdiction (County Court) inclusion if required".	The close proximity of existing police and emergency services in the catchment will ensure response times to the subject site will be satisfactory. A review of all the current strategic plans prepared by agencies responsible for the delivery of law courts, community legal services, police services and emergency services in the catchment area has not identified any new infrastructure priorities in the vicinity of the subject site.
Acute & Community Health Services	Future residents of the subject site will have excellent access to a wide range of public and private acute and community health services located in the nearby Dandenong Hospital (operated by Monash Health) Health Precinct and elsewhere in the 1.5 kilometre catchment area.	Given the catchment area is exceptionally well supplied with acute and community health services, and the low demand levels generated by the proposed development, additional public acute and community health service provision within the subject site is not considered a high priority.

Service / Community infrastructure type	Key Assessment Findings	Recommended Response Measures for Subject Site
	The Victorian Health Building Authority (VHBA) website identifies the following completed and planned health infrastructure initiatives within the 1.5 kilometre catchment area: • Monash Health – Dandenong Mental Health Renewal Project (Funded - CCTV, personal duress, repairs and amenities); • Dandenong Ambulance Branch (A five-bay garage, training facilities, rest and recline areas, fully fitted kitchen, improved security and car parking (completed); and • Monash Health - Dandenong Hospital (Completed - Medical Equipment Replacement Program). The Monash Health Strategic Plan 2023 has a strong emphasis on improving the quality and capacity if its existing health facilities including the Dandenong Hospital. The Plan states that "the expansion and renewal of Dandenong Hospital would improve local access to high volume, high complexity care in the rapidly growing south east growth corridor. This service would support a diverse community with a focus on general medicine, refugee health, abdominal surgical specialties including gastroenterology, and major head and neck/craniofacial care including plastic surgery and maternity care". The subject site generates the equivalent of 3 public and private hospital beds, 25 community health clients and 0.4 GP clinics.	
Residential Aged Care & Other Facilities for Older Persons	The 1.5-kilometre catchment contains the four residential aged care services and four Supported Residential Services (SRS). The services located in this catchment area are: • Southern Cross Dandenong - now Mercy Place Dandenong (120 beds); • Scottvale Aged Care (110 beds); • Kronstadt Gardens (72 beds); • Wintringham Eunice Seddon Home (62 beds); • Aaron Lodge SRS; • Rosewood Downs SRS; • Harrier Manor SRS; and • Mayfair Lodge SRS. The catchment area also includes the Clayton Senior Citizens Club / Centre located east of the subject site.	Although additional residential aged care provision is likely to be needed over the next 15 years (approximately 100 beds) in the Dandenong SA2 area, the subject site is not considered the most appropriate location for a new residential aged care facility given the range of other high density land use objectives being sought for the development area.

Service / Community infrastructure type	Key Assessment Findings	Recommended Response Measures for Subject Site
	The proposed development generates the equivalent of 4 additional aged care places (both residential and home based care). More broadly across the Dandenong SA2 area, additional residential aged care provision is likely to be needed over the next 15 years (approximately 100 beds).	

6 Conclusions and Recommendations

Based on the information presented and analysed in the previous sections of this report a summary of key conclusions and recommendations is summarised below.

6.1 Dwelling & Population Assumptions

The subject site development scenario assumed for this assessment will result in the following population and dwelling changes:

- The delivery of somewhere between 470 and 506 new apartment dwellings generating a resident population of somewhere between 810 to 870.
- Based on the upper end dwelling yield scenario, the development of in the order of 506 additional dwellings within the subject site will account for 2.8% of all dwellings in the Dandenong SA2 area by 2036; and
- An estimated population yield of 870 within the subject site will account for 1.7% of the total population of the Dandenong SA2 area by 2036.

6.2 Public Open Space & Recreation

Passive Open Space

1. This assessment strongly endorses the proposed inclusion of a minimum of 1,300 square metres of new public open space as part of the development. This represents 6.9% of the subject site land area, and significantly exceeds the current public open space contribution rates for the area (5%).
2. The Development Plan commissioned by Capital Alliance proposes new high quality public streets and spaces will be designed as attractive engaging, people-friendly, comfortable and safe places, which accommodate a range of passive activities. Key initiatives include:
   - Little India will be focussed on a new north-south oriented urban laneway, for pedestrians only; and
   - The Urban Courtyard plaza or park will be established on the south side of Foster Street, in between the north-south connectors of Mason Street and Little India (new laneway).
3. These proposed initiatives are also pivotal to prioritising pedestrian and cycling movement throughout the development.

Active Open Space

4. The subject site has insufficient land to be considered a feasible location for any typical sports ground. However, given Council is supportive of measures to incorporate unstructured recreation infrastructure into the planning and development of key open space areas to encourage increased levels of physical activity (i.e. outdoor gyms, basketball half courts, rebound walls etc.), this assessment recommends the proposed development include one or more outdoor fitness nodes offering a combination of static and dynamic fitness equipment.

Indoor Recreation Facilities

5. Given its proximity Dandenong Oasis and the Dandenong Stadium and Council's commitment to major redevelopments for both facilities, additional Council indoor recreation provision at the subject site is not warranted. However, the development of the subject site does present a potential opportunity to include a privately operated gym.

6.3 Council & Non-Council Community Services

Early Years Services

6. Long Day Child Care. Although there is currently a reasonable number of existing long day child care centres within the 1.5 kilometre catchment area, there is a potential need and opportunity to seek private market interest in establishing an additional facility as part of the proposed development. This recommendation should be interpreted as a non-mandatory requirement and to be explored on a commercial basis only.
7. Sessional Kindergarten. Based on the current supply and distribution of sessional kindergarten facilities, low subject site demand projections, and the proposed development of the Dandenong Hub facility which includes 2 kindergarten rooms (located a short distance north of the subject site), no additional sessional kindergarten rooms are recommended for the proposed development..
8. MCH. Based on the current supply and distribution of sessional MCH facilities, low subject site demand projections, and the proposed development of the Dandenong Hub facility which includes 3 MCH consulting rooms (located a short distance north of the subject site), no additional sessional MCH consulting rooms are recommended for the proposed development.
9. Occasional Child Care. Given the very low occasional child care demand estimate, this assessment does not support the need for an additional occasional child care service within the proposed development.

10. Youth services. Given the proposed development of the Dandenong Hub facility (located a short distance north of the subject site) will include spaces for youth services, no additional youth service provision is recommended for the proposed development.

Council & Non-Government Community Centres

9. Given the proposed development will include a new community facility / hub within the with a floor area of approximately 650 square metres, this assessment recommends Greater Dandenong Council be consulted to confirm its interest in establishing a NGO hub facility for the large array of service providers which are currently located in the RCD area. It is important that the proposed role of this future facility does not unnecessarily overlap with Council's two other major proposed community facility projects in the RCD area: 1) the Central Dandenong Community Hub and 2) the Dandenong New Art Project.
10. Given its proximity to the Dandenong Community and Learning Centre (DCLC), no additional Neighbourhood House provision is recommended for the subject site.

Libraries

11. Given its proximity the Dandenong Library (located within the Dandenong Civic Centre complex), no additional library provision is recommended for the subject site.

Arts / Cultural Facilities

12. Given the significant presence of existing and planned community facilities with an arts and cultural focus in Central Dandenong, additional provision catering for this sector is not recommended for the subject site.

6.4 Education

13. Based on the relatively modest enrolment demands generated by the subject site, the current supply and distribution of education facilities, and the general enrolment capacities of Government and Catholic Schools , this assessment concludes that no additional primary or secondary education facilities are likely to be required as part of the development of the subject site. However, it is recommended that this report be forwarded to the Department of Education (DET) and Catholic Education Melbourne (CEM) for comment and to confirm the capacity of the surrounding network of Government and Catholic schools to cater for future growth.
14. In relation to higher education the most significant deficiency, especially considering the RCD area is located in a designated Metropolitan Activity Centre, is the absence of a university campus. It is recommended the developer seek interest from existing higher education providers in establishing a high-density / vertical campus facility within the subject site. This should include higher education facilities with a vocational training focus despite the presence of the Chisholm TAFE Dandenong Campus north of the subject site. Preliminary discussions held with Federation University during the

course of preparing this assessment indicated a potential interest in establishing a campus within the Dandenong Metropolitan Activity Centre.

6.5 Justice, Police & Emergency Services

15. The close proximity of existing police and emergency services in the catchment will ensure response times to the subject site will be satisfactory.

16. A review of all the current strategic plans prepared by agencies responsible for the delivery of law courts, community legal services, police services and emergency services in the catchment area has not identified any new infrastructure priorities relevant to the subject site.

6.6 Acute & Community Health

17. Given the catchment area is exceptionally well supplied with acute and community health services, and the low demand levels generated by the proposed development, additional public acute and community health service provision within the subject site is not considered a high priority..

6.7 Residential Aged Care & Other Facilities for Older Persons

18. Although additional residential aged care provision is likely to be needed over the next 15 years (approximately 100 beds) in the Dandenong SA2 area, the subject site is not considered the most appropriate location for a new residential aged care facility given the range of other high density land use objectives being sought for the development area.

6.8 Consistency with Statutory Policies and Other Strategic Documents

19. The recommendations identified by this assessment are broadly consistent with the directions contained within Council and State Government strategies and other external agencies.

6.9 Further Process Related Recommendations

20. Further discussion with Greater Dandenong City Council is recommended to confirm its level of support for the conclusions and recommendations outlined by this assessment.

Appendices

Appendix 1. Review of Relevant Policies, Plans & Strategies

Appendix 1a. Greater Dandenong Planning Scheme & Plan Melbourne

Table 7 – Relevant Clauses from Planning Policy Framework

Clause	Objectives / Strategies
11.03 PLANNING FOR PLACES	
11.03-1S Activity centres	Objectives • To encourage the concentration of major retail, residential, commercial, administrative, entertainment and cultural developments into activity centres that are highly accessible to the community.
11.03-1R Activity centres - Metropolitan Melbourne	Strategies • Support the development and growth of Metropolitan Activity Centres by ensuring they: - Are able to accommodate significant growth for a broad range of land uses. - Are supported with appropriate infrastructure. - Are hubs for public transport services. - Offer good connectivity for a regional catchment. - Provide high levels of amenity. • Locate significant new education, justice, community, administrative and health facilities that attract users from large geographic areas in or on the edge of Metropolitan Activity Centres or Major Activity Centres with good public transport. • Locate new small scale education, health and community facilities that meet local needs in or around Neighbourhood Activity Centres. • Ensure Neighbourhood Activity Centres are located within convenient walking distance in the design of new subdivisions.
11.03-6S Regional and local places	To facilitate integrated place-based planning. Strategies • Integrate relevant planning considerations to provide specific direction for the planning of sites, places, neighbourhoods and towns. • Consider the distinctive characteristics and needs of regional and local places in planning for future land use and development.
19.02 COMMUNITY INFRASTRUCTURE	
19.02-1S Health facilities	Objective • To assist the integration of health facilities with local and regional communities.
19.02-1R Health precincts - Metropolitan Melbourne	Strategies • Facilitate health and community wellbeing precincts through the co-location of: • Hospitals, allied health services and not-for-profit health providers at the regional level. • General practitioners, community health facilities, allied health services and not-for-profit health providers at the neighbourhood level. • Create health precincts in new suburbs in or close to town centres. • Ensure health precincts are well serviced by community services.
19.02-2S Education facilities	Objective • To assist the integration of education and early childhood facilities with local and regional communities. Strategies • Consider demographic trends, existing and future demand requirements and the integration of facilities into communities in planning for the location of education and early childhood facilities. • Locate childcare, kindergarten and primary school facilities to maximise access by public transport and safe walking and cycling routes. • Ensure childcare, kindergarten and primary school facilities provide safe vehicular drop-off zones.

Clause	Objectives / Strategies
	• Locate secondary school and tertiary education facilities in designated education precincts and areas that are highly accessible to public transport. • Locate tertiary education facilities within or adjacent to activity centres. • Ensure streets and accessways adjoining education and early childhood facilities are designed to encourage safe bicycle and pedestrian access. • Develop libraries as community based learning centres.
19.02-2R Education precincts - Metropolitan Melbourne	Strategy • Ensure education precincts are well serviced by community services.
19.02-3S Cultural facilities	Objective • To develop a strong cultural environment and increase access to arts, recreation and other cultural facilities. Strategies • Encourage a wider range of arts, cultural and entertainment facilities including cinemas, restaurants, nightclubs and live theatres in the Central City and at Metropolitan Activity Centres. • Reinforce the existing major precincts for arts, sports and major events of state wide appeal. • Establish new facilities at locations well served by public transport.
19.02-3R Cultural facilities - Metropolitan Melbourne	Strategies • Maintain and strengthen Melbourne's distinctiveness as a leading cultural and sporting city with world-class facilities.
19.02-4S Social and cultural infrastructure	Objective • To provide fairer distribution of and access to, social and cultural infrastructure. Strategies • Identify and address gaps and deficiencies in social and cultural infrastructure, including additional regionally significant cultural and sporting facilities. • Encourage the location of social and cultural infrastructure in activity centres. • Ensure social infrastructure is designed to be accessible. • Ensure social infrastructure in growth areas, is delivered early in the development process and in the right locations. • Plan and design community places and buildings so they can adapt as the population changes and different patterns of work and social life emerge. • Support innovative ways to maintain equitable service delivery to settlements that have limited or no capacity for further growth, or that experience population decline. • Identify and protect land for cemeteries and crematoria.
19.02-5S Emergency services	Objective • To ensure suitable locations for police, fire, ambulance and other emergency services. Strategies • Ensure police, fire, ambulance and other emergency services are provided for in or near activity centres. • Locate emergency services together in newly developing areas.
19.02-6S Open space	Objective • To establish, manage and improve a diverse and integrated network of public open space that meets the needs of the community. Strategies • Plan for regional and local open space networks for both recreation and conservation of natural and cultural environments. • Ensure that open space networks: • Are linked, including through the provision of walking and cycling trails. • Are integrated with open space from abutting subdivisions. • Incorporate, where possible, links between major parks and activity areas, along waterways and natural drainage corridors, connecting places of natural and cultural interest. • Maintain public accessibility on public land immediately adjoining waterways and coasts. • Create opportunities to enhance open space networks within and between settlements.

Clause	Objectives / Strategies
	• Ensure that land is set aside and developed in residential areas for local recreational use and to create pedestrian and bicycle links to commercial and community facilities. • Ensure that land use and development adjoining regional open space networks, national parks and conservation reserves complements the open space in terms of visual and noise impacts, preservation of vegetation and treatment of waste water to reduce turbidity and pollution. • Improve the quality and distribution of open space and ensure long-term protection. • Protect large regional parks and significant conservation areas. • Ensure land identified as critical to the completion of open space links is transferred for open space purposes. • Ensure that where there is a reduction of open space due to a change in land use or occupation, additional or replacement parkland of equal or greater size and quality is provided. • Ensure that urban open space provides for nature conservation, recreation and play, formal and informal sport, social interaction, opportunities to connect with nature and peace and solitude. • Accommodate community sports facilities in a way that is not detrimental to other park activities. • Ensure open space provision is fair and equitable with the aim of providing access that meets the needs of all members of the community, regardless of age, gender, ability or a person's location. • Develop open space to maintain wildlife corridors and greenhouse sinks. • Provide new parkland in growth areas and in areas that have an undersupply of parkland. • Encourage the preparation of management plans or explicit statements of management objectives for urban parks. • Ensure exclusive occupation of parkland by community organisations is restricted to activities consistent with management objectives of the park to maximise broad community access to open space. • Ensure the provision of buildings and infrastructure is consistent with the management objectives of the park. • Ensure public access is not prevented by developments along stream banks and foreshores. • Ensure public land immediately adjoining waterways and coastlines remains in public ownership. • Plan open space areas for multiple uses, such as community gardens, sports and recreation, active transport routes, wildlife corridors and flood storage basins.
19.02-6R Open space - Metropolitan Melbourne	Objective • To strengthen the integrated metropolitan open space network. Strategies • Develop a network of local open spaces that are accessible and of high-quality and include opportunities for new local open spaces through planning for urban redevelopment projects. • Ensure major open space corridors are protected and enhanced. • Develop open space networks in growth areas and in the surrounding region of Metropolitan Melbourne, where existing open space is limited and demand is growing, including: - Cardinia Creek Parklands. - Cranbourne Regional Park. - Kororoit Creek Corridor. - Quarry Hills Regional Park. - Chain of Parks - Sandbelt. - Sunbury Regional Park - Jacksons Creek Valley. - Toolern Creek Regional Park. - Werribee Township Regional Park. • Create continuous open space links and trails along the: - Frankston parklands (linking existing parks from Carrum to Mornington). - Maribyrnong River parklands. - Merri Creek parklands (extending to Craigieburn). - Western Coastal parklands (linking Point Gellibrand, Point Cook and Werribee). - Yarra River parklands (extending from Warrandyte to the Port Phillip Bay).

Clause	Objectives / Strategies
	• Provide long term planning protection to meet demand for future open space along the Plenty Gorge parklands, Yarra Valley parklands, Cardinia Creek parklands, Heatherton/Dingley 'Sandbelt' parklands and Dandenong Valley parklands. • Protect the metropolitan water's edge parklands from intrusion and encroachment of development that impacts on open space and their natural landscape setting. • Continue development of the lower Yarra River as a focus for sport, entertainment and leisure. • Support establishing community gardens and productive streetscapes.

Table 8 – Relevant Clauses from Local Planning Policy Framework & Particular Provisions

Clause	Issues / Objectives / Strategies / Requirements
21.01 MUNICIPAL PROFILE	
21.02-2 Regional context	**Revitalising central Dandenong:** This partnership between Greater Dandenong City Council and State Government will help to reinforce central Dandenong as the economic hub and enhance its status as the regional commercial and retail centre. **Dandenong Hospital:** Is one of Melbourne's major acute care hospitals providing a range of services to the people living in Dandenong and surrounding areas. State Government plans for its expansion will enhance its status as an important regional health facility.
21.03 A VISION FOR GREATER DANDENONG	
21.03-2 Achieving the vision	**Central Dandenong** – Strategies to gather and disseminate information for central Dandenong over the next few decades; showcase central Dandenong as a preferred destination for high quality government services, housing, commercial, retail and entertainment activities; to work in partnership with State government to improve its potential in terms of its established infrastructure, support and commitment to world's best practice systems to facilitate development in central Dandenong. **Sustainable Community** – Strategies that improve the prosperity and contribute to employment growth, attractive and cared for natural and heritage areas; strategies to promote access to high quality sports and recreation venues, cultural expression and community services; strategies that facilitate employment and investment in Greater Dandenong's key economic areas and stimulate growth of industrial and business opportunities unique to the area and strategies that reinforce the green wedge as a 'break' in built form development.
21.06 OPEN SPACE AND NATURAL ENVIRONMENT	
21.06-1 Open space	Objective 1. To provide high quality open spaces and recreation facilities Strategies 1.1 Require as appropriate open spaces that: - Provide appropriate facilities that meet the needs of the diverse community. - Provide for a range of passive, active and structured recreational pursuits. - Maximise passive surveillance from surrounding residential, commercial - and/or industrial areas to promote community safety. - Ensure that private open space areas are well-designed and are of a sufficient - size, shape and configuration to best meet private and communal open space - needs. 1.2 Assess the need for additional open space facilities when considering changes to use, development and subdivision proposals. 1.3 Encourage the protection and enhancement of significant vegetation on properties abutting public open spaces. Objective 2. To ensure equitable provision and access to open space Strategies 2.1 Encourage the provision of open space in business and industrial areas. 2.2 Ensure that open space networks are within acceptable walking distance of urban residential areas. 2.3 Require major urban development projects to incorporate landscaped pedestrian and bicycle paths as links to open space and the broader path and open space network. 2.4 Encourage infill developments to provide for access to open space.
21.07 INFRASTRUCTURE AND TRANSPORTATION	
21.07-1 Physical, community and cultural infrastructure	Objective

Clause	Issues / Objectives / Strategies / Requirements
	1. To minimise the visual impact of physical infrastructure on the built and natural environment. Strategies 1.1 Ensure that the communication infrastructure and utilities do not have unreasonably adverse impact on the visual amenity of the built environment, open space and parkland areas and the natural environment. 1.2 Encourage the undergrounding of overhead powerlines and cables. Objective 2. To manage the impact of discharge of stormwater to minimise pollution and flooding. Strategies 2.1 Promote water sensitive urban design principles. 2.2 Require Environmental Management Plans for large developments. Objective 3. To minimise damage to physical infrastructure (including trees) from development. Strategies 3.1 Ensure that developments are appropriately designed and sited to minimise damage to the physical infrastructure. 3.2 Ensure works associated with development minimise the impact on tree roots. Objective 4. To ensure new developments meet the cost of infrastructure. Strategies 4.1 Identify the requirements of infrastructure (land, works and facilities) and put in place funding arrangements with reference to: The type and capacity of infrastructure already in place. Accepted standards of infrastructure provision. The need to improve local air quality and the quality and management of storm water run-off Objective 5. To provide for a range of community facilities and services appropriate to the needs of the diverse community of Greater Dandenong. Strategies 5.1 Encourage the type of community facilities, which respect the locality's population profile and residents' lifestyles. 5.2 Encourage the co-location of appropriate community facilities where possible with activity centres, community and transport nodes.
22.07 CENTRAL DANDENONG LOCAL PLANNING POLICY	
22.07-2 Future Direction and Vision	**Public open space** Public open space will be enhanced and added to by extending green spaces such as Dandenong Creek, Dandenong Park and John Hemmings Memorial Park into the city and by developing socially engaging urban open spaces within the public realm. Enhancement and development of urban squares, piazzas, pedestrian malls and green spaces, as environments dedicated to social recreation and exchange will form a strong foundation for creating a high quality living and working city. The earlier-mentioned role of urban design is a key strategy in achieving this goal.
22.07-5 Policy objectives and policy	**Central Dandenong** Objectives

Clause	Issues / Objectives / Strategies / Requirements
	• To support the relevant clauses of the Municipal Strategic Statement. • To support and deliver Council and VicUrban's shared vision for Central Dandenong. • To provide for the consolidation of a mix of residential, office, education and community service development. • To promote activity and vitality in the public realm. • To improve the form and function of Central Dandenong through high quality and innovative built form and urban design responses. • To support the development of further strategic studies and work. • To discourage developments that do not positively contribute towards the long term vision and outcomes envisaged by the policy. Policy It is policy to consider, as appropriate, the visions and policy of the following land use and development categories when considering an application to use or develop land for: • Residential. • Office and Service Industry. • Retail. • Education. • Community Services, and • Recreation/Leisure. **Offices and service industry** Policy It is policy to: • Increase office and service industry employment in Central Dandenong by encouraging development of new and diverse range of office and service industry types. • Develop active links between Central Dandenong and existing industry in the region. • Encourage the establishment by State Government of an increased number of its offices in Central Dandenong **Learning and education** Policy It is policy to: • Support the retention and enhancement of education facilities within and adjacent to Central Dandenong. • Encourage the location of tertiary, learning and educational facilities within or at the edge of Central Dandenong . When located within Central Dandenong , these facilities will need to contribute to active street frontages. • Promote a multiple function and community use of educational facilities which expands these into a socially rich asset base for the city and its residents. **Community services** Policy It is policy to: • Support the retention and enhancement of both public and private community service facilities such as administrative, vocational, health, welfare and places of worship in Central Dandenong and adjacent areas. • Encourage community facilities to locate so that they support, and do not compete with, the principles of urban consolidation in Central Dandenong . In this regard the location of community facilities at ground level within the Core of Central Dandenong should only be allowed where it can be demonstrated to add to the vision for the Core. **Recreation and leisure** **Policy**

<table>
<tr><th>Clause</th><th>Issues / Objectives / Strategies / Requirements</th></tr>
<tr><td></td><td>It is policy to:

• Facilitate the retention and enhancement of indoor and outdoor recreation and leisure facilities.
• Enhance the street environment and associated open space as an integrated part of Central Dandenong and adjacent areas.
• Encourage new uses and developments which contribute positively to the overall image of Central Dandenong .
• Concentrate the location of recreation and entertainment uses with a high potential for detrimental amenity impacts in the area bounded by McCrae, Foster, Pultney and Walker Streets.
• Facilitate the retention and enhancement of recreation and leisure facilities in the Dandenong Creek area as well as John Hemmings Memorial Park, as an integrated part of Central Dandenong and adjacent areas.
• Extend Dandenong Park across Foster Street to integrate with the Town Hall area and its associated public spaces.
• Facilitate the retention and enhancement of playing fields in the area.</td></tr>
<tr><td colspan="2">50. PARTICULAR PROVISIONS</td></tr>
<tr><td>Schedule to Clause 53.01 Public Open Space Contribution and Subdivision</td><td>Subdivision and public open space contribution
<table>
<tr><th>Type or location of subdivision</th><th>Amount of contribution for public open space</th></tr>
<tr><td>Any residential or commercial subdivision in the area bounded by Springvale Road to the west, Cheltenham Road, Dingley Freeway Reservation, Dandenong Southern Bypass to the north, EastLink to the east and Hutton/Greens Roads to the south (except for Lot 2, PS 524033N Volume 10804 Folio 885 and Lot1, PS 524033N Volume 10804 Folio 884).</td><td>20%</td></tr>
<tr><td>Lot 2, PS 524033N Volume 10804 Folio 885</td><td>10% Cash in Lieu Contribution</td></tr>
<tr><td>Lot 1, PS 524033N Volume 10804 Folio 884</td><td>10% Cash in Lieu Contribution</td></tr>
<tr><td>All Residential zoned land, except for land in the covered by DCPO1, land generally bounded by Kirkham Road, Eastlink, the Dandenong Southern Bypass and in the order of 500 metres east of the Dandenong Creek (Logis Residential site), and other residential land included in this schedule.

All Residential zoned land within the area identified in the Schedule to Clause 72.01 as the Declared Project Area –Central Dandenong will be subject to a public open space contribution of nil until the cessation of the Infrastructure Recovery Charge under the Victorian Urban Development Act 2003 , after which time the amount of contribution for public open space will be 5%.</td><td>5%</td></tr>
<tr><td>All INZ1, INZ2, INZ3, C2Z zoned land, except for land generally bounded by Ordish Road, Greens Road, Eastlink, Union Road, Hammond Road and the Dandenong Bypass (Logis Industrial site), and land covered by DCPO2 and DCPO3.

All Industrial land within the area identified in the Schedule to Clause 72.01 as the Declared Project Area – Revitalizing Central Dandenong will be subject to a public open space contribution of nil until the cessation of the Infrastructure Recovery Charge under the Victorian Urban Development Act 2003, after which time the amount of contribution for public open space will be 2%.</td><td>2%</td></tr>
</table></td></tr>
</table>

2. *Plan Melbourne 2017-2050: Metropolitan Planning Strategy (Department of Environment, Land Water and Planning, 2017).*

Plan Melbourne 2017 is a metropolitan planning strategy that defines the future shape of the city and state over the next 35 years. Integrating long-term land use, infrastructure and transport planning, Plan Melbourne sets out the strategy for supporting jobs and growth, while building on Melbourne's legacy of distinctiveness, liveability and sustainability. The plan includes:

- 9 principles to guide policies and actions
- 7 outcomes to strive for in creating a competitive, liveable and sustainable city
- 32 directions outlining how these outcomes will be achieved
- 90 policies detailing how these directions will be turned into action

In addition, a separate 5-year Implementation Plan with 112 actions has been developed. Of particular relevance to this assessment are the directions and policies outlined in Outcome 2 (housing related directions) and Outcome 5 (social infrastructure related directions). The directions and polices associated with these two outcomes are summarised below.

Outcome 02: Melbourne provides housing choice in locations close to jobs and services

Manage the supply of new housing in the right locations to meet population growth and create a sustainable city

- Maintain a permanent urban growth boundary around Melbourne to create a more consolidated, sustainable city
- Facilitate an increased percentage of new housing in established areas to create a city of 20-minute neighbourhoods close to existing services, jobs and public transport
- Plan for and define expected housing needs across Melbourne's regions
- Provide certainty about the scale of growth in the suburbs

Deliver more housing closer to jobs and public transport

- Facilitate well-designed, high-density residential developments that support a vibrant public realm in Melbourne's central city
- Direct new housing and mixed-use development to urban-renewal precincts and sites across Melbourne
- Support new housing in activity centres and other places that offer good access to jobs, services and public transport

- Provide support and guidance for greyfield areas to deliver more housing choice and diversity
- Require development in growth areas to be sequenced and staged to better link infrastructure delivery to land release

Increase the supply of social and affordable housing

- Utilise government land to deliver additional social housing
- Streamline decision-making processes for social housing proposals
- Strengthen the role of planning in facilitating and delivering the supply of social and affordable housing
- Create ways to capture and share value uplift from rezonings

Facilitate decision-making processes for housing in the right locations

- Support streamlined approval processes in defined locations
- Facilitate the remediation of contaminated land, particularly on sites in developed areas of Melbourne with potential for residential development

Provide greater choice and diversity of housing

- Facilitate housing that offers choice and meets changing household needs
- Provide a range of housing types in growth areas

Outcome 05: Melbourne is a city of inclusive, vibrant and healthy neighbourhoods

Create a city of 20-minute neighbourhoods

- Create mixed-use neighbourhoods at varying densities
- Support a network of vibrant neighbourhood activity centres

Create neighbourhoods that support safe communities and healthy lifestyles

- Improve neighbourhoods to enable walking and cycling as a part of daily life

Deliver social infrastructure to support strong communities

- Facilitate a whole-of-government approach to the delivery of social infrastructure
- Create health and education precincts to support neighbourhoods
- Support not-for-profit community services to build social capital and stronger communities
- Provide and protect land for cemeteries and crematoria

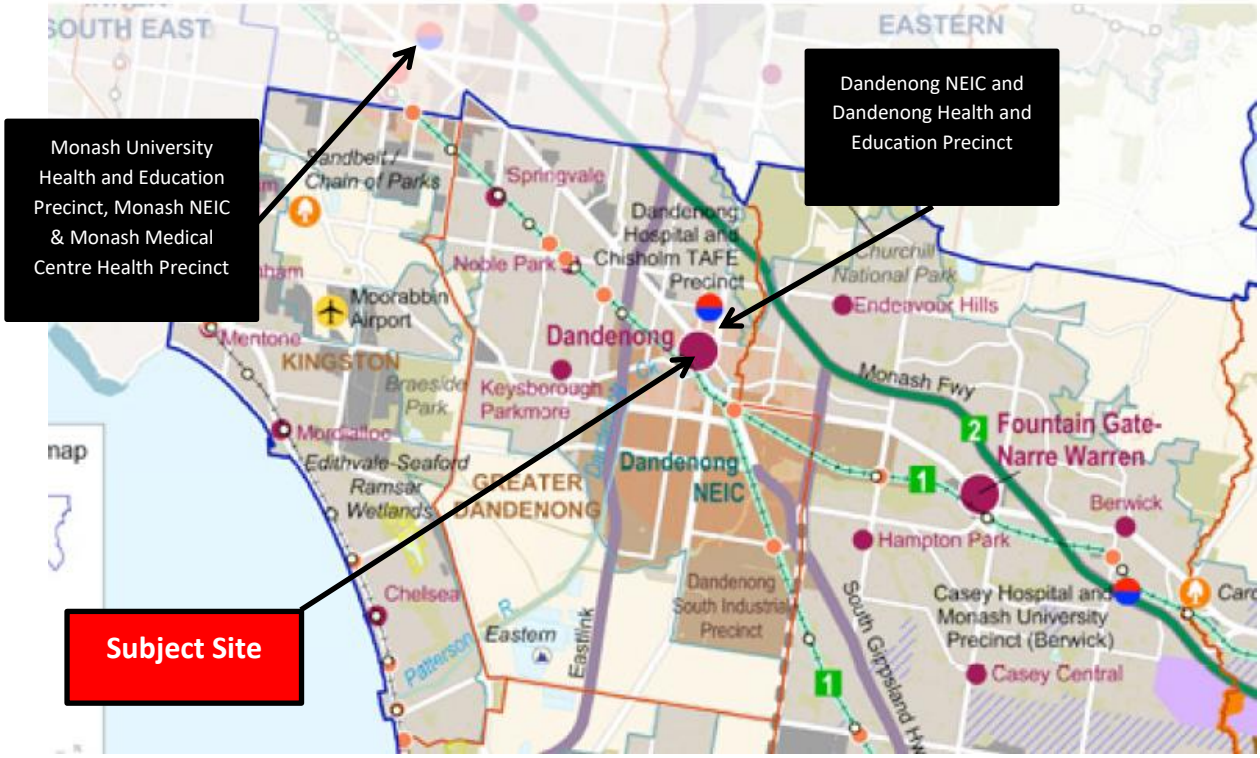
Deliver local parks and green neighbourhoods in collaboration with communities

- Develop a network of accessible high-quality, local open spaces
- Support community gardens and productive streetscapes

Southern Region Implementation Plan

Plan Melbourne's implementation plan for the Southern Region is shown in Figure 5. Figure 5 shows that subject site is located within the Dandenong National Employment and Innovation Cluster (NEIC) and just south of the Dandenong Health & Education Precinct.

Figure 5 - Plan Melbourne Implementation Plan: Southern Region



Source: Plan Melbourne 2017 Implementation Plan, Department of Environment, Land, Water and Planning

Appendix 1b. Relevant Greater Dandenong City Council Documents

Strategy Type and Name
Corporate Strategies
Council Plan 2021 – 25 (incorporating the Municipal Public Health and Wellbeing Plan) This plan outlines six key objectives for the City of Greater Dandenong and what Council hopes to achieve from now until 2025: 1. A socially connected, safe and healthy city 2. A city that respects and celebrates diversity, our history and the arts 3. A city of accessible, vibrant centres and neighbourhoods 4. A green city committed to a sustainable future 5. A city that supports entrepreneurship, quality education and employment outcomes 6. A Council that demonstrates leadership and a commitment to investing in the community Relevant actions include: • Increase emergency, crisis, transitional housing accommodation and support to address the needs of persons who are homeless in the public domain • Provide welcoming and active community precincts that enable residents and visitors to connect, participate and celebrate • Work with key partners to increase and support community access to affordable, healthy and culturally appropriate food, especially for vulnerable groups • Provide cultural facilities and infrastructure to meet the community's needs now and into the future • Improve access to quality infrastructure and spaces that enhance community participation, encourage visitors and deliver positive health outcomes for current and future generations • Create safe, inclusive and well-designed public spaces which encourage community participation • Provide quality community infrastructure to support the delivery of early years services to children and their families • Deliver improved amenity and a range of quality streetscapes and public places that build pride, respond to and respect the unique qualities of the activity centres and meet current and future needs • Encourage investment and infrastructure improvements through a collaborative approach to creating, enhancing and managing great people focused places • Increase the quantity and quality of diverse and accessible open spaces across the city The Municipal Public Health and Wellbeing Plan has been integrated with the Council Plan enabling an increased commitment across Council and stakeholders to support our community to achieve maximum health and wellbeing. Based on a review of Council's existing strategies and plans, municipal health status and determinants, community insights and key legislation and policy including the Victorian Public Health and Wellbeing Plan 2019-23, the following key health and wellbeing focus areas for the next four years have been identified: • Active living. Increasing participation in physical activity opportunities and access to open space. • Physical health and mental wellbeing. Includes increasing healthy eating and food security, injury prevention and access to health services across the life course. • Tobacco, alcohol and other drugs. Reducing harmful tobacco, alcohol and other drug use. • Social cohesion and community safety. Preventing all forms of violence and improving safety in a respectful, diverse and inclusive community. • Climate change and health. A resilient community that is adapting to the health impacts of climate change.
Long Term Financial Plan 2021-22 – 2030-31 The Long-Term Financial Plan (LTFP) exists primarily to provide the following outcomes for the City of Greater Dandenong (Council): 1. Establish a prudent and sound financial framework, combining and integrating financial strategies to achieve a planned outcome. 2. Establish a financial framework against which Council's strategies, policies and financial performance can be measured against. 3. Ensure that Council complies with sound financial management principles, as required by the Local Government Act 2020 and plan for the long-term financial sustainability of Council (Section 101). 4. Develop, adopt and keep in force a Financial Plan for at least the next 10 financial years in accordance with its deliberative engagement practices (Section 91). 5. Allow Council to meet the objectives of the Local Government Act 2020 to promote the social, economic and environmental sustainability of the municipal district including mitigation and planning for climate change risks and that the ongoing financial viability of the Council is to be ensured (sections 9 (2)(c) and 9(2)(g).

Strategy Type and Name
The Plan notes there has been significant investments in the previous 5 years including the $65 million Dandenong Civic Centre and Library development and the $26 million Dandenong Market redevelopment. Looking forward, the Plan includes the redevelopment of Dandenong Oasis ($62.5 million). Other notable community infrastructure projects proposed in Dandenong include: • Determining a forward Development Plan and implementing it in relation to the current Dandenong Community Hub ($25 million). Greater Dandenong City Council has commenced the first phase of the business case and concept plan for a Community Hub in central Dandenong in 2021. This project represents the next step to develop infrastructure in central Dandenong to meet current and future community needs. • Dandenong Stadium redevelopment – Stage 1 ($27 million).
Health, Early Years, Youth and Older Persons
City of Greater Dandenong Community Hubs Framework (2015) In 2014, Council endorsed a range of principles to underpin its approach to the development of community hubs. These principles are intended to guide the design, development and desired outcomes of community hubs. These principles include: 1. Centrally located – near retail activity precincts. 2. Accessible for users – on or near a main road. 3. Located where people already visit. 4. Able to provide a variety of services to meet the needs of the local community. 5. Integrated in service delivery. 6. Co-located with existing local users such as shops, transport, community facilities, parks and schools. 7. Flexible and adaptable to future changing needs. Challenges and Considerations • There are financial and practical challenges associated with community hubs that should be considered. These include the cost of land purchase and development, site suitability, availability of staff and other resources, partnering with the community to establish a trusting and positive relationship and ensuring ongoing engagement with local residents. • Consideration must be given to effective governance and management framework for community hubs and the commitment to engaging local communities prior to and during the development of a hub as well as the potential of utilising hubs as beacons of best practice in environmental and energy efficiency. • Just as community engagement is critical early on in the development of a community hub, continued community involvement is just as important in ensuring ongoing community investment and vibrancy in developing social capital and relevant and targeted programming and services. • Community hubs have the potential to bring economic, social and cultural benefits to Greater Dandenong communities. Whilst Council is committed to delivering community hubs in Dandenong, Springvale and Keysborough South, it will continue to support and advocate for other organisations to develop community hubs into the future. • Council will continue to advocate for and seek funding opportunities to support localised hub initiatives within the municipality. This includes advocacy support for existing school based hubs currently operating in the municipality and partner with schools and other services according to the Community Development Framework. • Assistance will be offered to facilitate and/or coordinate efforts to acquire project funding for existing or future localised hubs, emphasising their value in local communities.
Dandenong Community Hub Project - Community Consultation (2021) Greater Dandenong City Council is planning for a community hub in central Dandenong. This project represents the next step to develop infrastructure in central Dandenong to meet current and future community needs. Community hubs are multi-purpose community facilities providing a range of complementary services in a single accessible location and generally have a range of shared facilities and functions for the community, groups and organisations. Council is committed to engagement and consultation during the development of the hub. Council has commenced the process of the business case and concept plan for the Community Hub in central Dandenong in 2021. Community workshops and focus groups occurred in May 2021. The proposed functions identified for the Hub include: • Adult education/learning • Arts, craft, woodwork • Singing, dancing, exercise • Group meetings and social gathering • Small performance/presentation (indoor and outdoor) • Cooking and eating together • IT/technology access, homework, relaxing, chatting • Coffee/tea, eating and socialising

Strategy Type and Name
• Outdoor space for gathering, sitting, picnics, play and gardening • Carparking • Maternal and Child Health Services • Early Years: Kindergarten, Childcare and Playgroups. Concepts plans have been prepared for the Hub resulting in a proposed two-storey facility containing approximately 5,200 square metres of floorspace. Arising from the consultation process a preferred site was identified. The site is bounded by Stuart Street, Clow Street and Sleeth Avenue. Council has supported this site as the preferred location. Construction is proposed to commence in the 2023-2024 financial year.
City of Greater Dandenong Children's Plan 2021-2026 The Children's Plan outlines an integrated approach in working together with and for children 0–13 years, acknowledging the important role of parents, carers and their extended families in supporting each child's development in education, health and wellbeing. The strategic objectives of the Plan are: • Provide leadership and advocacy in planning for children and families • Strengthen health and wellbeing outcomes for children and families. • Support engagement in learning, skill development and vocational pathways • Improve safety and accessibility for children and families to participate in the community • Value active participation and engagement of children and families in the community Key actions include: • 1.2 Explore external funding opportunities to be responsive to policy change in implementing timely three year old kindergarten provision. • 1.6 Advocate for additional funding sources to support the Community Hubs in Schools model. • 1.7 Undertake infrastructure planning to ensure timely and targeted provision of facilities and services for children and families
City of Greater Dandenong Youth and Family Strategy 2021-26 The Youth and Family Strategy 2021-26 outlines a plan for Council to best direct services to meet the needs of young people aged 12-25 years and families in Greater Dandenong. Council's vision is that young people and families are valued, celebrated and supported to reach their full potential. The following 5 key priorities are identified by the Strategy: • PRIORITY 1: Lead and Advocate. Objective: Working in partnership, lead and advocate in response to the needs of young people and families • PRIORITY 2: Engaged and Valued. Objective: Facilitate and value active participation and engagement of young people and families in the community • PRIORITY 3: Learn and Work. Objective: Support engagement in learning, skill development and employment pathways • PRIORITY 4: Health and Wellbeing. Objective: Strengthen health and wellbeing outcomes for young people and families • PRIORITY 5: Safe and Inclusive. Objective: Creating a community where young people and families feel respected and safe Relevant actions include: • 1.1 Lead and facilitate strategic planning of service delivery, in partnership with key stakeholders. • 1.6 Advocate for increased support to address the lack of targeted service responses for young people in the middle years (8-14 years). • 5.4 Activate and promote safe and accessible public spaces and facilities for young people and families, catering to a diversity of needs and interests.
City of Greater Dandenong Positive Ageing Strategy 2017-25 The City of Greater Dandenong has developed this eight year strategy to guide the development, management and future directions for an integrated, whole-of-council approach to supporting, promoting, encouraging the contribution of older people in the community and in conjunction with older people advocating for their needs. Vision - Greater Dandenong is a place where the ongoing contribution of older people in our community is recognised, older people are respected and older people are able to safely and independently participate in activities and access services that meet their physical and social needs.

Strategy Type and Name
Key relevant actions include: • 1.1.3 Identify the needs of older people and design and develop high quality open spaces and recreational facilities across the city • 1.3.1 Review the current and anticipated need for community facilities and resources to accommodate use by older people • 7.2.1 Support the provision of a digital events and training program through the library and community centres
Open Space & Recreation
Greater Dandenong Open Space Strategy 2020 – 2030 The Strategy provides a framework for Council to manage and improve the quality, design and provision of open space over the next 10 years to ensure the needs of the existing residents and future generations are met. The Strategy includes a comprehensive analysis of open space needs for the municipality broken down by each suburb that takes particular consideration of walkability, land use and population growth. The Strategy also includes guiding criteria and park development standards to inform the implementation of a range of actions, such as site selection for new open space and open space improvements. A Framework, Action and Monitoring Plan, Open Space Contributions Plan and Council Policy will guide the implementation of the Strategy. In relation to Dandenong the main issues identified for the suburb were: • Increasing population density in and around the activity centre will place greater demand on open space. • Barriers to pedestrian flow from the creek, rail and highway. • Intermittent and insufficient east-west ecological links. • Poor connectivity and amenity between open spaces through pedestrian and cycling links. Key actions for Dandenong are listed below. PRIORITY ACTIONS P-1. Continue to revitalise the Dandenong Metropolitan Activity Centre: • Open space, streetscape, pedestrian connectivity and public realm improvements (Boyd Lane, Cleeland/ Clow St, Pultney St, Thomas St, Halpin Way, Vanity Lane, Mason/Robinson St). • Prepare and implement 10 year tree planting plan. • Landscape and tree planting improvements in Harmony Square. • Prepare and implement the Dandenong Activity Centre Laneway Strategy. P-2. Support the use of the regional trails as key walking/ cycling connections through improved way finding, street amenity and shade: • Yarraman Station to Dandenong Station along Djerring Trail extension. • North of railway line to Eastlink Trail. • Dandenong Creek Trail along Herbert St. P-3. Prepare and/or implement the Development Plan/concept plans for Fifth Ave Reserve, Dandenong Park (including Thomas P Carroll Reserve, Greaves Reserve, Hemmings Park, Woodcock Reserve and Pioneer Park to address the 'higher projected open space needs'. P-4. Identify and facilitate options to increase the provision and diversity of open space within the 'higher projected open space needs' areas. P-5. Prepare and implement Palm Plaza/ McCrae St Mall upgrade including open space and landscaping improvements to increase the provision and diversity of open space within the 'higher projected open space needs' area. P-6. Implement landscape improvements to Dandenong Creek Reserve, Foster St East Reserve and Keneally Reserve. P-7. Facilitate improved access and connectivity to Dandenong West Primary School and Dandenong High School for the broader community. P-8. Improved streetscape and way finding to Gerard Reserve to address the 'gap' area. P-9. Improved connections to Dandenong Park and Dandenong Creek trail through the level crossing removal. ACTIONS A-1. Continue to implement and investigate biodiversity improvements along Dandenong Creek through the Living Links Program. A-2. Support the use of the regional trails as key walking/ cycling connections through improved way finding, street amenity and shade: • Dandenong Bypass Regional Trail. • Cleeland St to JC Mills Reserve. A-3. Facilitate streetscape improvements, such as tree planting to address the 'gap' in the industrial area. MASTER/CONCEPT PLANS AND LANDSCAPE IMPROVEMENTS

Strategy Type and Name

- Prepare and/or continue to implement master/concept plans and open space improvements for ten reserves (Dandenong Floodplain (South of Heatherton Rd), Fotheringham Reserve, Gardiner Reserve, George Andrews Reserve, Gerard Reserve, J C Mills Reserve, Norine Cox Reserve, Robert Booth Reserve, Stuart St Reserves, Vivien Reserve).
- Implement landscape improvements at twelve reserves (Bassett Reserve, Cheltenham Rd Reserve, David Street Reserve, Hornsby St Reserve, Jim Hardy Reserve, Keating Reserve, Keshava Grove Reserve, Kyla Reserves 1 & 4, Morwell to Dawn Creek Reserve, Progress Hall Reserve, Wilma Reserve).

Figure 6 - Dandenong Access and Open Space Map

Greater Dandenong Physical Activity Strategy 2020–2030

The research has identified the key benefits of Physical Activity are improved health and wellbeing and social outcomes, however, to achieve this, there needs to be positive behavioural change by individuals towards a healthier and more active lifestyle.

Aim

Increase the physical activity levels and health of our community.

Focus Populations

General Community with a focus upon the following specific populations:

- Adults aged 18-30 years old
- Children aged 3-12 years old and their families
- Girls aged 12-16 years old
- Older adults aged 65 years and older
- People with a disability aged 18 years and older (incl. families and carers)

Relevant actions include:

- Offer opportunities to be physically active with a focus on self-organised activities.
- Collaborate with sport and active recreation providers, supporting them to provide innovative new ways the community can participate in physical activity.
- Provide a diversity of physical activity opportunities and infrastructure that support the needs of local communities.
- Increase the opportunities to participate in physical activity by making spaces, services and facilities more affordable, safe, inclusive and functional to the needs to local communities.
- Improve pathways and connection linkages to physical activity opportunities for our community.

Strategy Type and Name
Sports Facilities Plan: Implementation Plan Update (2018) The Sports Facilities Plan 2015 was undertaken to guide the planning and strategic delivery of new and improved sporting facilities throughout the City of Greater Dandenong. This Implementation Plan Update will replace the previous Implementation Plan outlined in the Sports Facilities Plan 2015 and specifically addresses the changes in the prioritisation of Capital Works Projects. The 2018 Update also includes Lawn Bowls and Tennis infrastructure which was previously addressed in the Lawn Bowls Plan 2015 and Tennis Plan 2015. In relation to Dandenong sports reserves the 2018 Plan identifies the following improvement projects: Dandenong Park • Greg Dickson pavilion upgrade (subject to feasibility study) • Installation of lighting (training standard) Shepley Oval • Lighting upgrade (competition) • Indoor cricket/multipurpose training centre (subject to feasibility study) Thomas Carroll Reserve • Pavilion redevelopment • Cricket practice net upgrade • Install electronic score boards on each oval • Ground 2 (west) lighting upgrade (training standard) • Ground 1 (east) lighting upgrade (training standard) Greaves Reserve • Dandenong Tennis Club – court resurfacing and removal of sloped area • Dandenong Tennis Club – pavilion upgrade • Dandenong Tennis Club – lighting installation (2 courts) • Dandenong Tennis Club – ensure accessibility of site (exterior) with Disability Discrimination Act requirements • Dandenong Tennis Club – fencing repair/replacement • WR Monahan pavilion upgrade • Ground 1 lighting upgrade • Ground 2 lighting upgrade Mills Reserve • Indoor stadium upgrade (subject to feasibility study) • Upgrade playing fields and install lighting on second pitch (subject to feasibility study) Robert Booth Reserve • Floodlighting installation (diamond 1) • Athletics pavilion upgrade • Floodlighting installation (diamond 2) George Andrews Reserve • Upgrade lighting (training standard) - pitch 2
ACTIVATE: Sport & Active Recreation Strategy 2014-19 (November 2014) The purpose of ACTIVATE is to develop and increase participation in sport and active recreation for all communities within Greater Dandenong. This strategy is focused on developing and increasing opportunities for sport and active recreation, which has a direct and positive impact on physical activity levels and on the health and wellbeing of the community. Relevant actions include: • 1.13 Investigate opportunities for privately owned facilities to address the needs of community sport and recreation. • 2.5 Review the Redevelopment Options Report completed in 2008 to guide the future development of Dandenong Oasis. Undertake the next planning phase for the Centre (pending the outcome of the redevelopment options). • 3.9 Continue to develop Shepley Oval as a regional facility, through the completion of building works and other priorities in accordance with the approved Development Plan and Sports Facilities Plan. • 3.14 Progressively undertake facility improvements at Robert Booth Reserve in accordance with Sports Facilities Plan, to improve conditions for local clubs. • 3.30 Develop artificial turf pitches in accordance with the Sports Facilities Plan and in line with master plans for Greaves Reserve, Ross Reserve and Tatterson Park, and explore options for multi-use. • 3.31 Develop partnerships with local schools to open up new grounds for community access and the establishment of community use agreements with existing schools.

Strategy Type and Name
• Incorporate unstructured recreation infrastructure into the planning and development of key open space areas to encourage increased levels of physical activity (i.e. outdoor gyms, basketball half courts, rebound walls etc.). • Explore opportunities for the development of informal multi use games areas (MUGAs) across CGD especially in high density areas (e.g half courts, tennis or handball hit up walls, four square courts, outdoor table tennis tables, running tracks and outdoor gyms).
Greater Dandenong Aquatic Strategy (2019) The Aquatic Strategy was adopted by Council on 23 September 2019 to guide the future provision of aquatic and leisure facilities in the City of Greater Dandenong. The strategy includes recommendations that relate to both of Council's aquatic centres - Dandenong Oasis and the Noble Park Aquatic Centre (NPAC). The key recommendations of the Strategy were as follows: 1. That the City of Greater Dandenong provide two complementary aquatic and leisure centres into the future. a. The Dandenong replacement facility to be a multi-purpose aquatic and leisure facility offering all year-round services with a focus on: allied health, passive activity, education, fitness and wellness and in particular catering for special needs and targeted groups. b. NPAC to be a family friendly facility offering all year-round services with a focus on: leisure, recreation and fitness, sport-based usage (e.g. school carnivals) and summer activities. 2. That a new aquatic and leisure centre be developed to replace the existing Dandenong Oasis. 3. That the new Dandenong facility comprise a range of complementary aquatic and leisure facility components. ▪ 50m 8 lane pool (with moveable boom / swim wall) • Two (2) warm water pools • Learn to swim pool • Leisure pool / water play • Spa, sauna and steam room • Gymnasium • Program / group fitness rooms (3). • Amenities – café, meeting room, crèche, change rooms etc. 4. That the future Dandenong aquatic and leisure centre be located in Mills Reserve. 5. That NPAC be redeveloped into the future to include an expanded range of year-round services. a. Proposed improvements / facility components: • Expanded indoor pool hall: • Dedicated learn to swim pool. • Enclosure of water play / leisure water. • Spa, sauna and steam room. • Redeveloped program pool. • Health and wellness gymnasium. • Enhanced accessible change rooms. b. Retention of 50m pool as an outdoor pool (short to medium term) and reassess the future enclosure of the pool as a long term option.
Dandenong Park Regional Leisure Precinct Master Plan (2007) The Dandenong Park Regional Leisure Precinct Master Plan was adopted by Council in July 2007. The master plan establishes the long term vision and direction for the district park in Central Dandenong and was developed after extensive community and stakeholder consultation. The master plan forms an integral part of the Revitalising Central Dandenong project being delivered by the Victorian Government, through Development Victoria and the City of Greater Dandenong. The vision for Dandenong Park is to bring the park into the 21st century, while respecting its past. The master plan aims to transform the park to become a multi-purpose open space area that enables a broad range of passive and active recreational pursuits, supports the diverse community, and strongly links to the Central Dandenong Activity Centre. Key achievements to date include: Riverside Precinct • District playground • Large picnic area with bbqs, seating, tables and shelters • Shared concrete pathway, including lighting, tree planting and seating • Heritage interpretative signage of the former RSL Drill Hall and River Red Gums • Tree planting and landscaping.

Strategy Type and Name
North Area Precinct • New shared cycle and walking pathway with lighting and park furniture connecting Lonsdale Street in the city centre to the Dandenong Creek trail • New public toilet • The new Stan Prior Stage • A new large social gathering space with shelters, bbqs, tables and seating • Two table tennis tables • Multi-purpose activity court with basketball and futsal goals • Tree planting, garden beds and open lawn • New path networks. Future projects planned for the North Area Precinct include: • The 'Tan Track' along Pultney Street and Lonsdale Street to create a circuit path • Fitness equipment • Improvements to the park entrance at Foster Street, including upgrading the Rotary Wheel garden area with new seating, paving and landscaping • New paths and seating • Heritage interpretation of the kindergarten, bowling club, centenary gates and croquet club • Tree planting and landscaping.
Arts / Cultural & Libraries
City of Greater Dandenong Library Strategy (2018-2023) The City of Greater Dandenong Library Strategy is presented as two documents: • A strategy that outlines the longer term vision and strategic directions for Library Services for the City of Greater Dandenong. • An Action Plan with a set of specific, targeted and measurable initiatives that will be implemented over an initial three-year period 2018-21. The Library Strategy responds to the objectives of the Council Plan, including those relating to a vibrant, connected and safe community, a creative city that respects and embraces diversity, a city planned for the future and a diverse growing economy Under the theme of 'spaces' the Strategy indicates Council will: 1. Provide flexible, inclusive, welcoming multi-purpose spaces to cater for a broad range of programs and services. 2. Adopt a planned approach to keeping the library services and spaces up-to-date. 3. Explore innovative models for providing accessible library spaces. The Strategy states that this will be achieved in the following manner: • Increased Library user satisfaction in the look and feel of Library spaces and facilities functionality (Benchmark 2015/16 - 85 per cent). • Increase in library membership to 60 per cent following the opening of the Springvale Community Hub (measured as a proportion of the City of Greater Dandenong population) (Benchmark 2015/16 - 53 per cent) • Increase number of physical visits to libraries by 5 per cent per annum (Benchmark 2015/16 - 1.242 million. Allows for the opening of Springvale Community Hub).
Discover, Create, Share: Draft City of Greater Dandenong Arts and Cultural Heritage Strategy 2022-2026 The City of Greater Dandenong Arts, Culture and Heritage Strategy 2022–26 sets the direction for the next four years, guiding Council's efforts to promote, support and grow arts, culture and heritage in the City of Greater Dandenong. Within it, are themes of discovery, creation and sharing. The Strategy's vision statement is: "A vibrant City that celebrates and represents the richly diverse stories of its people; supports local creative and cultural activity and economy to thrive; and enables all to participate, enjoy and be inspired by arts, culture and heritage". The following 4 priorities are identified by the Strategy: • Priority 1: Support the development of strong and connected local arts, culture and heritage sectors • Priority 2: Strengthen the resilience of the local arts, culture and heritage sectors to withstand the challenges of today and tomorrow • Priority 3: Elevate and expand the impact and representation of arts, culture and heritage • Priority 4: Foster inclusive pathways for community to participate in arts, culture and heritage activity

Strategy Type and Name
Relevant actions include: • 1.4 Continue to provide accessible and fit for purpose arts, culture and heritage spaces and infrastructure locally. • 2.3 Progress planning and development of creative industry production hub in central Dandenong. • 2.4 Complete and launch Dandenong New Art. • 2.5 Undertake a feasibility study for Civic Archive Capacity Expansion. • 3.1 Deliver arts, culture and heritage initiatives through local cultural facilities and beyond, including exhibitions, performances, festivals and events. • 3.3 Activate public places to create innovative and immersive arts, culture and heritage experiences. • 3.6 Integrate arts, culture and heritage expression in new and existing infrastructure projects. • 4.6 Increase the accessibility of our arts, culture and heritage programming, activities and infrastructure.
Dandenong New Art (DNA) Redevelopment Project The Dandenong New Art (DNA) Redevelopment project for the former 1920s Masonic Hall at 5 Mason Street is an exciting initiative celebrating art and culture in Greater Dandenong. Refurbishments and extensions will create Dandenong New Art – a new centre with facilities for touring art exhibitions, curation space for artists, and community spaces for creative activities and community gatherings. As the former Masonic Hall is a significant heritage building, concept designs for Dandenong New Art respect the importance of the Masonic Hall while introducing a contemporary art space. Dandenong New Art will consolidate central Dandenong's growing reputation for arts participation and expression and will allow for a significant expansion of the Walker Street Gallery's visual arts programs, building on its current 16,000 annual visitors. The gallery will include: • State-of-the-art exhibition spaces for touring and local artists • Community, creative and workshop spaces • Cafe and retail opportunities • Active outdoor spaces along Halpin Way and Mason Street • New and engaging public art Construction of the facility is anticipated to be completed by 2023.

Appendix 2 – Quantitative Demand & Supply Estimates for RCD Subject Site & Dandenong SA2 Area by 2036

Community Infrastructure Category	Provision rate / ratio / participation rate	Description of measure	Source of measure	Subject Site	Dandenong SA2 by 2036
Public Open Space					
Public Open Space Contribution	5%	Amount of public open space (land and / or cash-in-lieu) required as part of a residential subdivision	Schedule to Clause 53.01 of the Greater Dandenong Planning Scheme (Public Open Space Contribution and Subdivision)	942	Not applicable
Organised Sport Facility & Participation Estimates					
Indoor and outdoor recreation facilities				44	5,235
Indoor recreation centres / courts	10,000	Total population per court	Typical standard used by some Melbourne Growth Area Councils (note: individual LGAs vary on their views about the "desired" benchmark and some have no documented working benchmark).	0.1	5.1
Council recreation centre visits per annum	3.5	Number of visits per person per annum	Based on 2014 CERM PI® Operational Management Benchmarks for Australian Public Sports & Aquatic Centres (Group 4 Centres)	3,043	177,359
Council aquatic leisure centre visits per annum	8.9	Number of visits per person per annum	Based on 2014 CERM PI® Operational Management Benchmarks for Australian Public Sports & Aquatic Centres (Group 7 - Indoor Pools)	7,739	450,998
Organised Sport Participation					
Participation in organisation/venue based activity: Adults (people aged 15 and over)					
Fitness/Gym	32.2%	% of people aged 15 years and over participating in organised physical activity or sport at least once per year	Australian Sports Commission, AusPlay Survey (AusPlay): January 2019 - December 2019 Victoria Data (Table 11)	259	12,960
Swimming	9.7%	As above	As above	78	3,904
Golf	4.0%	As above	As above	32	1,610
Pilates	3.9%	As above	As above	31	1,570
Basketball	4.1%	As above	As above	33	1,650
Tennis	3.1%	As above	As above	25	1,248
Football/soccer	3.3%	As above	As above	27	1,328

Community Infrastructure Category	Provision rate / ratio / participation rate	Description of measure	Source of measure	Subject Site	Dandenong SA2 by 2036
Yoga	4.2%	As above	As above	34	1,690
Netball	3.2%	As above	As above	26	1,288
Australian football	3.4%	As above	As above	27	1,368
Athletics, track and field (includes jogging and running)	3.9%	As above	As above	31	1,570
Walking (Recreational)	2.9%	As above	As above	23	1,167
Cycling	1.4%	As above	As above	11	563
Bowls	1.4%	As above	As above	11	563
Cricket	2.2%	As above	As above	18	885
Organised participation by activity - top 10 activities (children aged 0 to 14)					
Swimming	35.5%	% of children aged 0-14 participating in organised physical activity or sport at least once per year	Australian Sports Commission, AusPlay Survey (AusPlay): January 2019 - December 2019 Victoria Data (Table 10)	10	2,330
Australian football	16.8%	As above	As above	5	1,103
Basketball	13.7%	As above	As above	4	899
Cricket	6.4%	As above	As above	2	420
Dancing (recreational)	10.2%	As above	As above	3	670
Netball	5.8%	As above	As above	2	381
Football/soccer	10.1%	As above	As above	3	663
Tennis	6.4%	As above	As above	2	420
Gymnastics	11.8%	As above	As above	3	775
Karate	5.2%	As above	As above	1	341
Early Years Services					
Kindergartens					

Community Infrastructure Category	Provision rate / ratio / participation rate	Description of measure	Source of measure	Subject Site	Dandenong SA2 by 2036
% of 3 and 4 year olds participating in Kindergarten	100.0%	% of all eligible children particpating in 3 and 4 Year Kindergarten	Based on aspirational goal for all 3 and 4 years olds to attend a kindergarten program	9	1,545
Total number of enrolments in 4 year old sessional Kindergarten	73.0%	% of participating children (see above) enrolled at a 4 year old sessional Kindergarten service	Victorian Child and Adolescent Monitoring System (VCAMS), Department of Education & Training Based on indicator 31.4 Number of four year old kindergarten enrolments in a long day care or integrated children's services setting for City of Greater Dandenong: 25.9% (2015 data).	2	564
Total number of enrolments in 3 year old sessional Kindergarten	73%	% of participating children (see above) enrolled at a 3 year old sessional Kindergarten service	ASR assumption based on proposed introduction of subsidised 3 year old Kindergarten program	4	564
Total 3 & 4 year old enrolments attending sessional kindergarten			Total of 3 and 4 year old sessional kindergarten enrolments (see above)	7	1,128
Number of sessional kindergarten rooms required	66	Total 3 and 4 year old enrolment capacity per room (licensed for 33 places)	ASR constructed calculation	0.1	17.1
Maternal & Child Health					
Number of MCH Full-Time Nurses	130	1 FT nurse per 130 children 0 years	ASR Research estimate	0.1	5.9
Number of MCH consulting units	1	Number of MCH consulting units required per FT nurse	Based on above	0.1	5.9
Playgroup					
Number of 2 hr playgroup sessions per week	245	Total number of children aged 0-3 years required to generate demand for a 2 hour playgroup session per week	ASR Research constructed measure using Playgroup Victoria	0.1	12.6
Occasional Child Care					
Number of occasional child care places	33.1	Total number of licensed places per 1,000 children aged 0 to 4 years	Victorian Planning Authority, Melbourne Metropolitan Community Infrastructure Assessment: Local and Subregional Rates of Provision (MMCIA). A provision rate of long day child care places equal to that documented by the MMCIA report (2015) for the City of Greater Dandenong	1	128
Number of occasional child care centres	30	Total number of facilities required based on number of	ASR Research constructed measure based on a typical sized occasional child care facility.	0.0	4.3

Community Infrastructure Category	Provision rate / ratio / participation rate	Description of measure	Source of measure	Subject Site	Dandenong SA2 by 2036
		licensed places generated (see above)			
Long Day Child Care Centres					
Number of Long Day Child Care places	4	Total number of children aged 0-6 years per licensed LDC place	Australian Children's Education and Care Quality Authority (ACECQA) National Register Data (Metropolitan Melbourne), June 17, 2020	11	1,309
Number of Long Day Child Care centres	120	Total number of facilities required based on number of licensed places generated (see above)	ASR Research constructed measure based on a typical large sized long day child care facility.	0.1	11
Community Centres, Meeting spaces, Neighbourhood Houses & Libraries					
Local multipurpose community centre	10,000	Number of people per local facility	ASR Research constructed measure typically applied in Melbourne's outer growth areas.	0.1	5.1
Neighbourhood Houses					
Number of Neighbourhood House users per week	3%	Percentage of population using a Neighbourhood House in a given week	Neighbourhood Houses Victoria, Neighbourhood Houses Survey 2017	26	1,520
Number of Neighbourhood Houses	23,000	Approximate total population per facility in Metropolitan Melbourne (2016)	ASR calculation of the number of Neighbourhood Houses identified by Neighbourhood Houses Victoria operating in the Melbourne metropolitan area.	0.0	2.2
Libraries					
Number of library loans annum	4.6	Total loans per person	Public Libraries Victoria Network, 2018-19 PLVN Annual Statistical Survey (2019), Greater Dandenong Libraries	4,000	233,100
Number of library visits per annum	5.9	Total visits per person	Public Libraries Victoria Network, 2018-19 PLVN Annual Statistical Survey (2019), Greater Dandenong Libraries	5,130	298,977
Number of library facilities	84,000	Approximate population per library facility (2021)	Public Libraries Victoria Network, 2020-21 PLVN Annual Statistical Survey (2021), Greater Dandenong Libraries	0.0	0.6
Education Enrolment & Facility Estimates					
Primary Schools					

Community Infrastructure Category	Provision rate / ratio / participation rate	Description of measure	Source of measure	Subject Site	Dandenong SA2 by 2036
Govt Primary Enrolment	61%	% of 5-11 year old population	Australian Bureau of Statistics, 2016 Census of Population and Housing, based on data for the City of Greater Dandenong	12	2,858
Catholic Primary Enrolment	19%	% of 5-11 year old population	As above	4	890
Non Govt Primary Enrolment	8%	% of 5-11 year old population	As above	2	375
Total Primary Enrolment	88%	% of 5-11 year old population	As above	18	4,123
Govt Primary School	3,000	Total number of dwellings per facility	Department of Education & Training	0.2	2.9
Secondary Schools					
Govt Secondary Enrolment	65%	% of 12-17 year old population	Australian Bureau of Statistics, 2016 Census of Population and Housing, based on data for the City of Greater Dandenong	11	2,284
Catholic Secondary Enrolment	19%	% of 12-17 year old population	As above	3	668
Non Gov Secondary Enrolment	10%	% of 12-17 year old population	As above	2	351
Total Secondary Enrolment	94%	% of 12-17 year old population	As above	17	3,303
Govt Secondary School	10,000	Total number of dwellings per facility		0.1	0.9
TAFE					
TAFE Full-Time Enrolment (15 to 24)	6.4%	% of 15-24 year old population	Australian Bureau of Statistics, 2016 Census of Population and Housing, based on data for the City of Greater Dandenong	14	407
TAFE Full-Time Enrolment (25+)	1.0%	% 25 + year old population	As above	6	339
TAFE Part-Time Enrolment (15 to 24)	2.0%	% of 15-24 year old population	As above	4	127
TAFE Part-Time Enrolment (25+)	0.9%	% 25 + year old population	As above	5	305
Total TAFE Enrolments				30	1,178
Universities					
University Full-Time Enrolment (15 to 24)	22.5%	% of 15-24 year old population	As above	50	1,430
University Full-Time Enrolment (25+)	1.7%	% 25 + year old population	As above	10	576
University Part-Time Enrolment (25 to 24)	2.3%	% of 15-24 year old population	As above	5	146

Community Infrastructure Category	Provision rate / ratio / participation rate	Description of measure	Source of measure	Subject Site	Dandenong SA2 by 2036
University Part-Time Enrolment (25+)	0.8%	% 25 + year old population	As above	5	271
Total University Enrolments				70	2,423
Primary & Acute Health Services					
Number of public and private hospital beds	3.86	Number of public and private beds per 1,000 people (Australian hospital statistics (2015–16)	Australian Institute of Health & Welfare, Australian hospital statistics 2015–16	3	196
Number of public hospital beds	2.41	Number of public beds per 1,000 people (Australian hospital statistics (2015–16)	Australian Institute of Health & Welfare, Australian hospital statistics 2015–16	2	122
Community health clients	3%	Proportion of population that is a registered community health client	Victorian Auditor-General's report, Community Health Program (June 2018)	25	1,454
Allied health service sites	0.7	Number of allied health service sites per 1,000 people (City of Greater Dandenong)	Department of Health and Human Services, City of Greater Dandenong Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	1	35
General practices	0.50	Number of general practice clinics per 1,000 people (City of Greater Dandenong)	Department of Health and Human Services, City of Greater Dandenong Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	0	25
Dental services	0.40	Number of dental service sites per 1,000 people (City of Greater Dandenong)	Department of Health and Human Services, City of Greater Dandenong Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	0	20
Pharmacies	0.30	Number of pharmacies per 1,000 people (City of Greater Dandenong)	Department of Health and Human Services, City of Greater Dandenong Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	0	15
Projected hospital admissions	470.5	Hospital inpatient separations per 1,000 people (City of Greater Dandenong). Note: projected to increase by 3.2% per annum until 2026/27.	Department of Health and Human Services, City of Greater Dandenong Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	409	23,842
Emergency presentations	273.8	Emergency department presentations per 1,000 people (City of Greater	Department of Health and Human Services, City of Greater Dandenong Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	238	13,875

Community Infrastructure Category	Provision rate / ratio / participation rate	Description of measure	Source of measure	Subject Site	Dandenong SA2 by 2036
		Dandenong). Note: projected to increase by 3.1% per annum until 2026/27			
Drug & alcohol clients	6.3	Number of registered Alcohol & Drug Treatment clients per 1,000 people (City of Greater Dandenong)	Department of Health and Human Services, City of Greater Dandenong Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	5	319
Mental health clients	11.3	Number of registered mental health clients per 1,000 people (City of Greater Dandenong)	Department of Health and Human Services, City of Greater Dandenong Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	10	573
Aged Care & HACC					
Aged Care					
Number of aged care places (residential and home care)	123	Number of aged care places per 1000 people aged 70 years +	Australian Government Planning Ratio 2019	4	518
Short Term Restorative Care Programme	2	Number of STRC places per 1000 people aged 70 years +	Australian Government Planning Ratio by 2019	0	8
Arts & Cultural Activities					
Type of arts / cultural activity participated in (people aged 15 and over)					
Performing in a drama, comedy, musical or variety act	6.2%	% of 15+ population participating in activity	Australian Bureau of Statistics, Participation in Selected Cultural Activities, Australia, 2017–18 (Catalogue Number 4921.0)	50	2,495
Singing or playing a musical instrument	4.3%	As above	As above	35	1,731
Dancing	4.8%	As above	As above	39	1,932
Writing	2.8%	As above	As above	23	1,127
Visual art activities	1.9%	As above	As above	15	765
Craft activities	1.8%	As above	As above	14	724
Designing websites, computer games or interactive software	2.8%	As above	As above	23	1,127

Community Infrastructure Category	Provision rate / ratio / participation rate	Description of measure	Source of measure	Subject Site	Dandenong SA2 by 2036
Fashion, interior or graphic design	5.7%	As above	As above	46	2,294
Type of arts / cultural activity participated in (children aged 0 to 14)					
Drama activities	8%	% of 0-14 population participating in activity	Australian Bureau of Statistics, Participation in Selected Cultural Activities, Australia, 2017–18 (Catalogue Number 4921.0)	2	519
Singing or playing a musical instrument	23%	As above	As above	7	1,510
Dancing	17%	As above	As above	5	1,090
Art and craft activities	39%	As above	As above	11	2,547
Creative writing	23%	As above	As above	6	1,477
Creating digital content	17%	As above	As above	5	1,083
Screen based activities	90%	As above	As above	26	5,928
Reading for pleasure	79%	As above	As above	22	5,153

Appendix 3 – Audit of Existing & Planned Social Infrastructure Surrounding Subject Site

Figure 7 - Location of Nearest Early Years & Youth Facilities

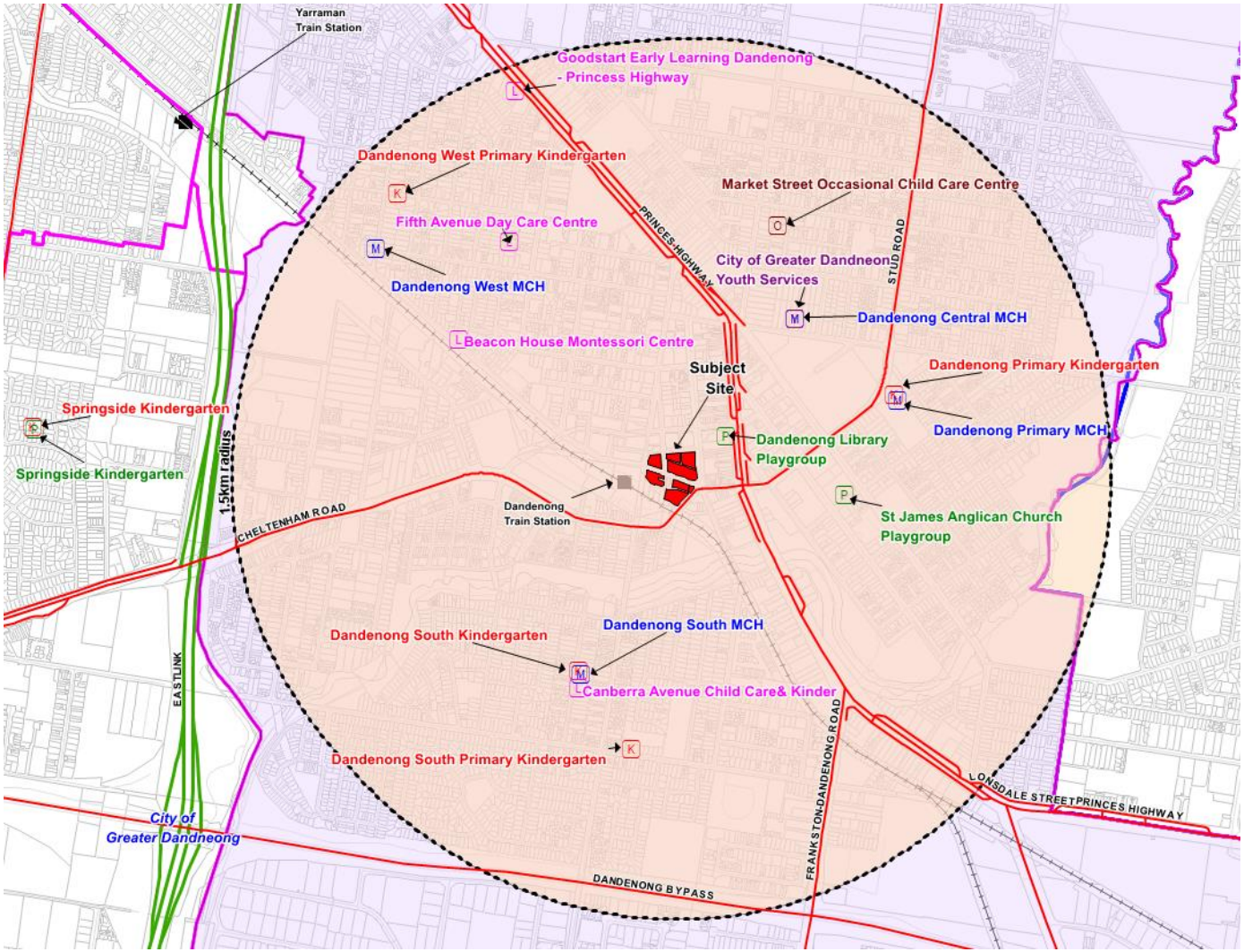


Figure 8 – Location of Nearest Education Facilities

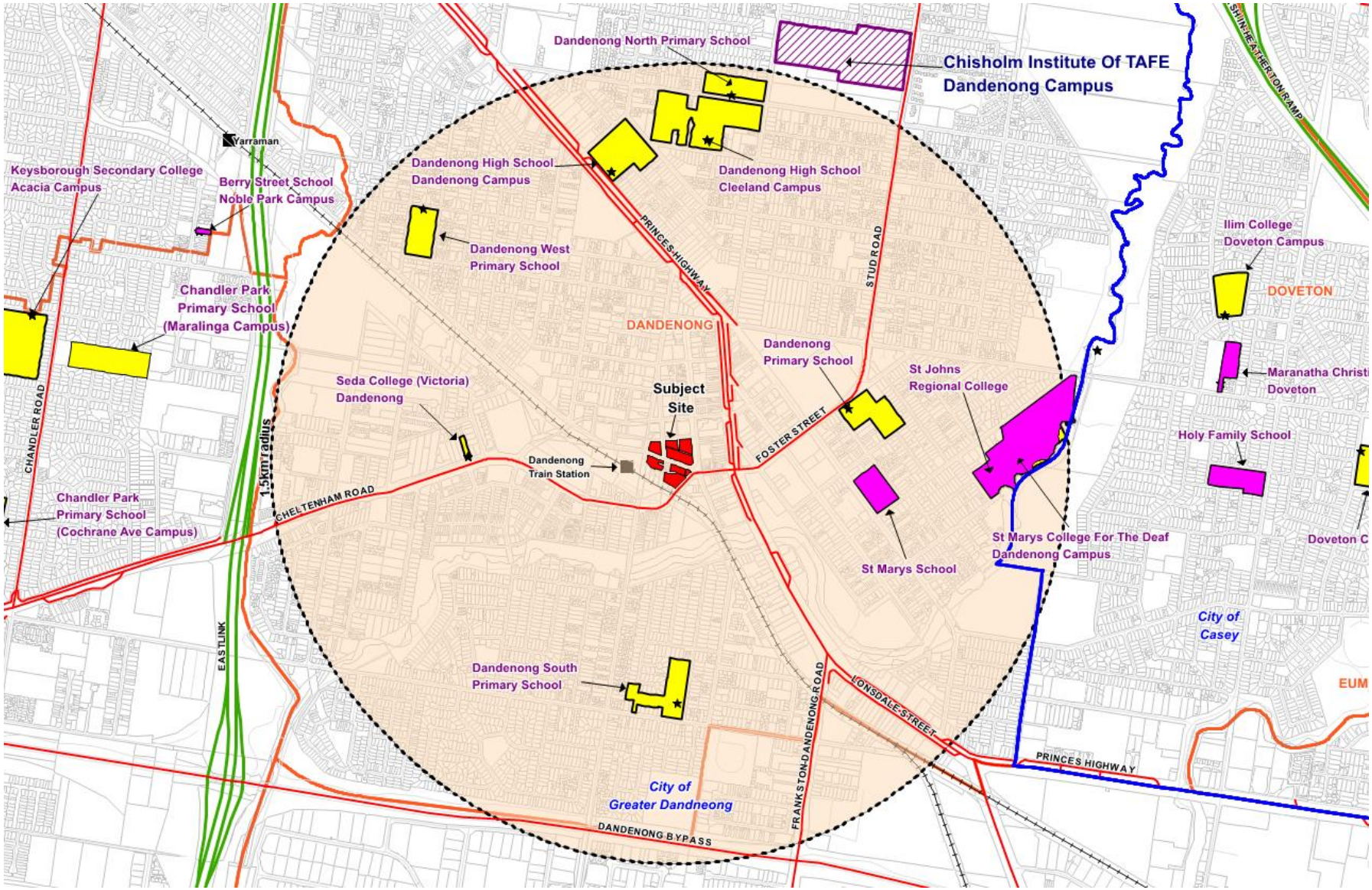


Figure 9 - Location of Nearest Open Space Reserves within 1.5 Kilometres of Subject Site

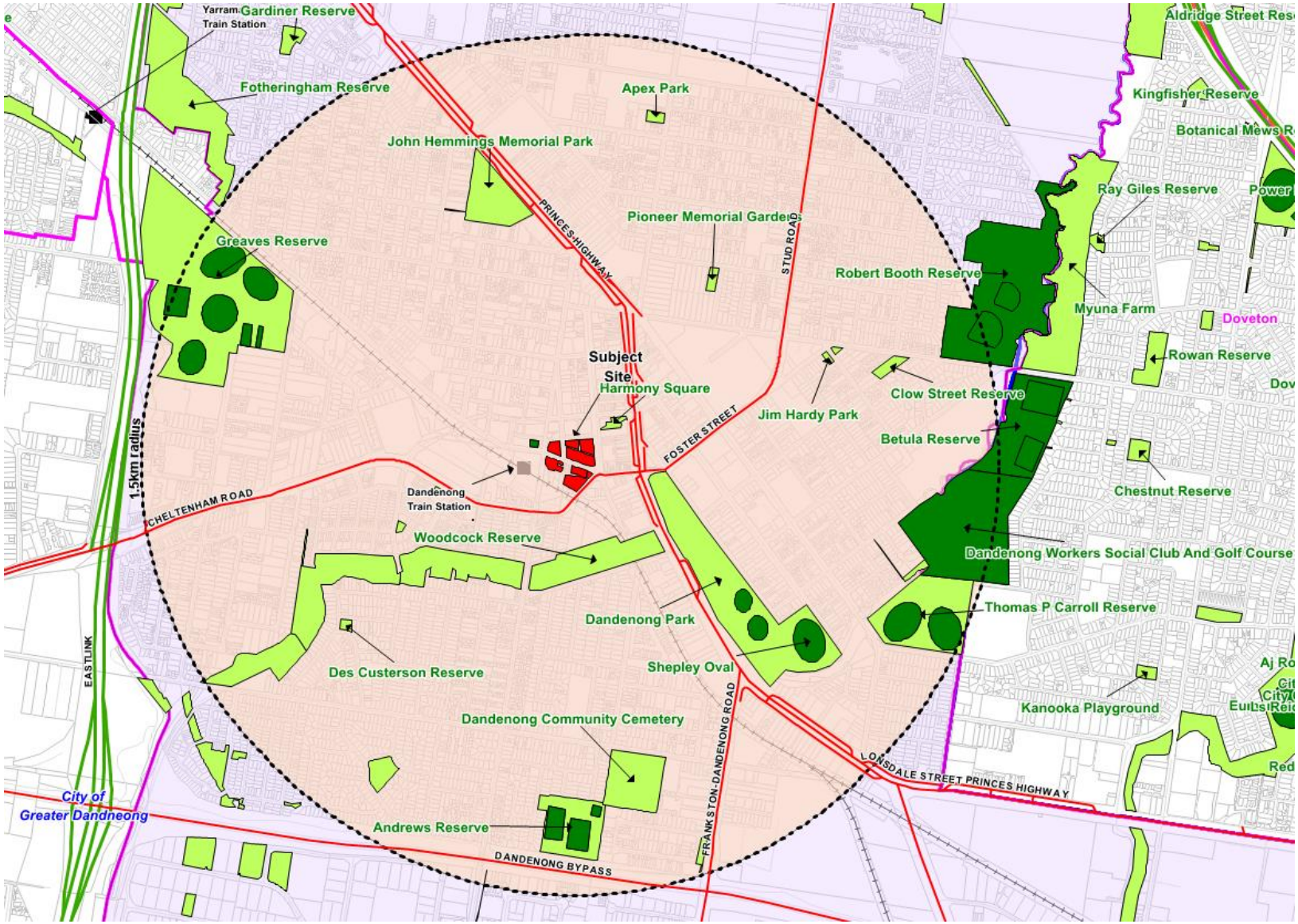


Figure 10 - Location of Nearest Active Open Spaces and Recreation Facilities

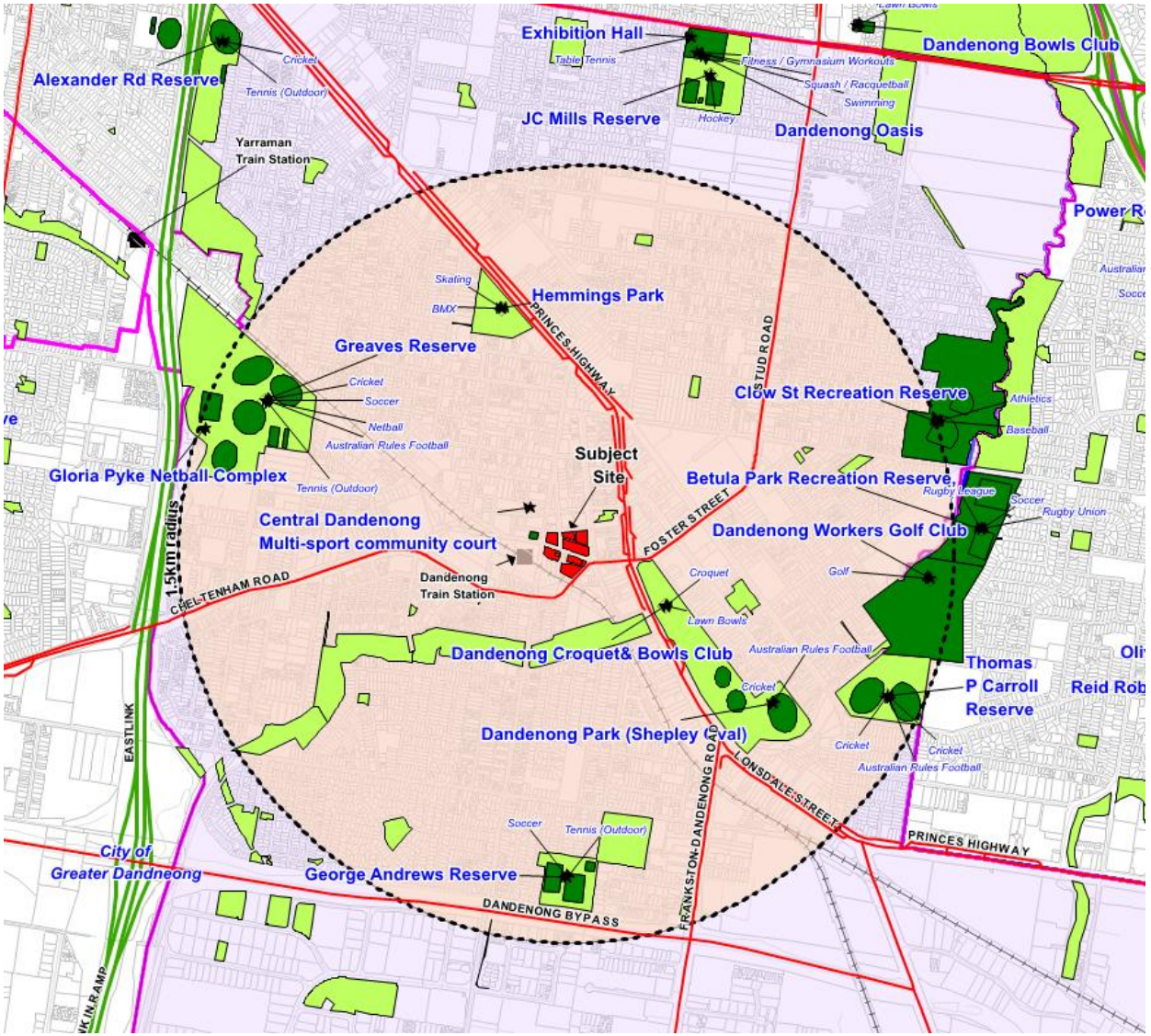


Figure 11 - Location of Nearest Existing & Planned Libraries, Neighbourhood Houses, Community Centres and Meeting Spaces

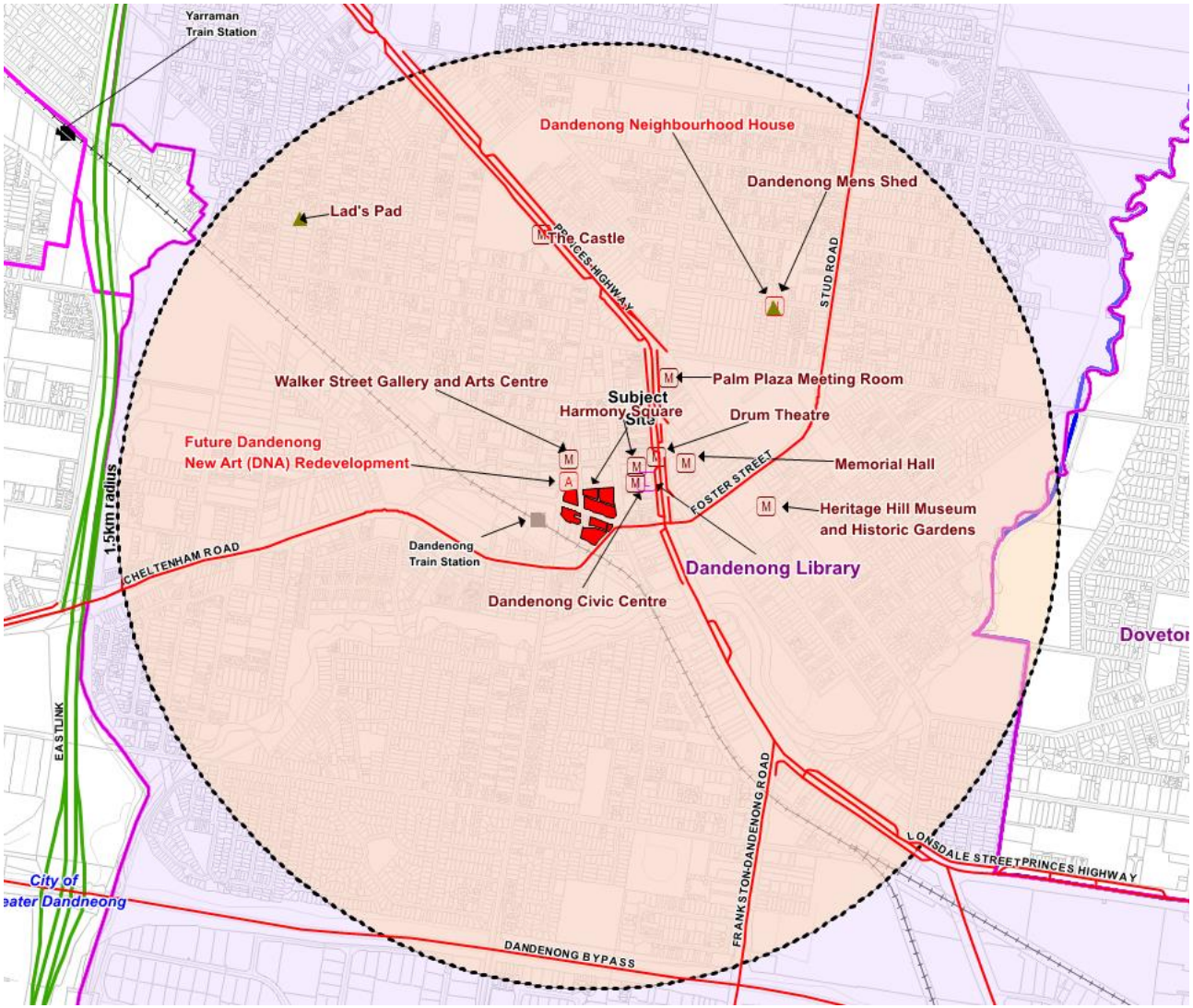


Figure 12 - Location of Nearest Acute & Community Health Facilities

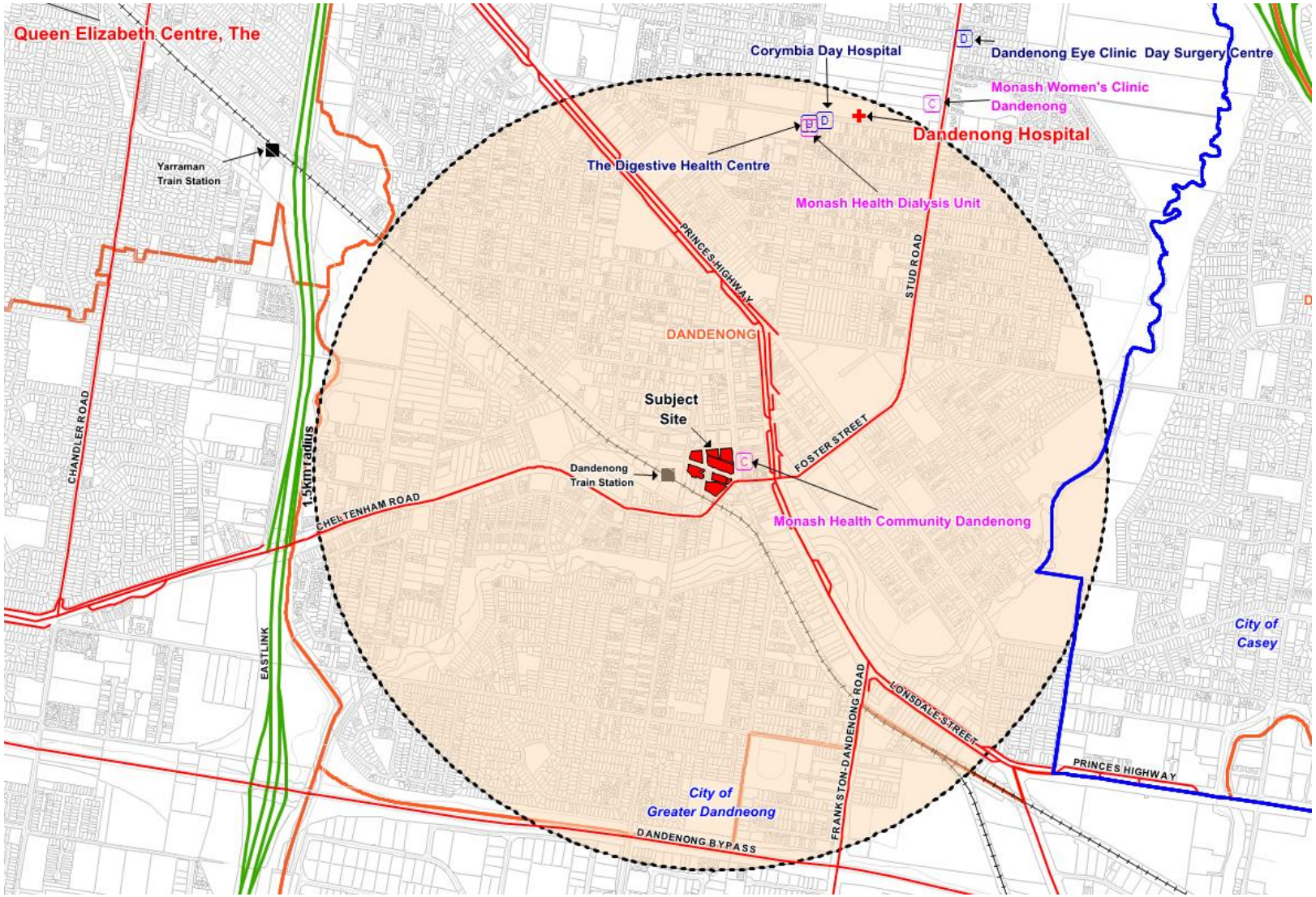


Figure 13 - Nearest Justice & Emergency Services

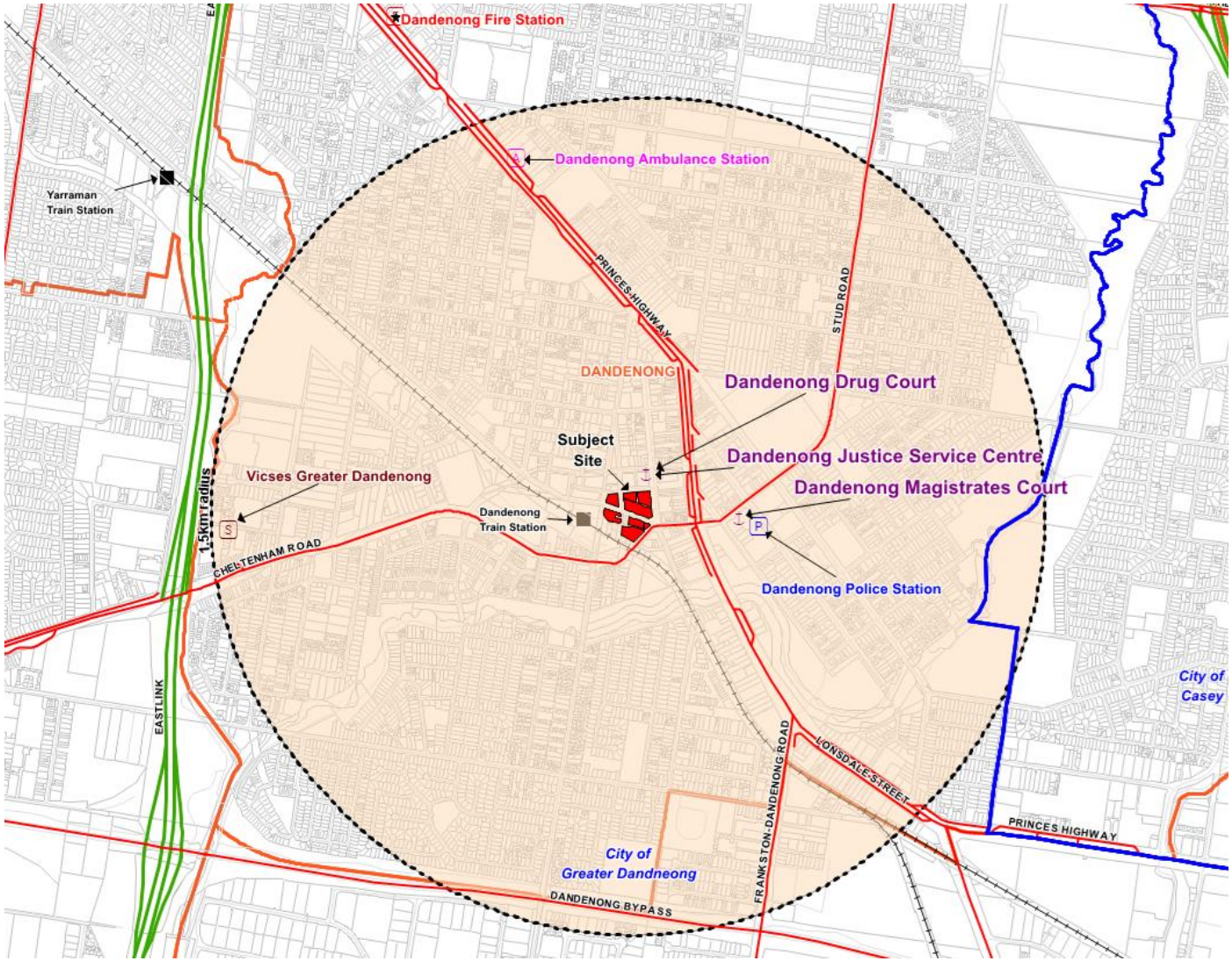


Figure 14 - Location of Nearest Residential Aged Care Services

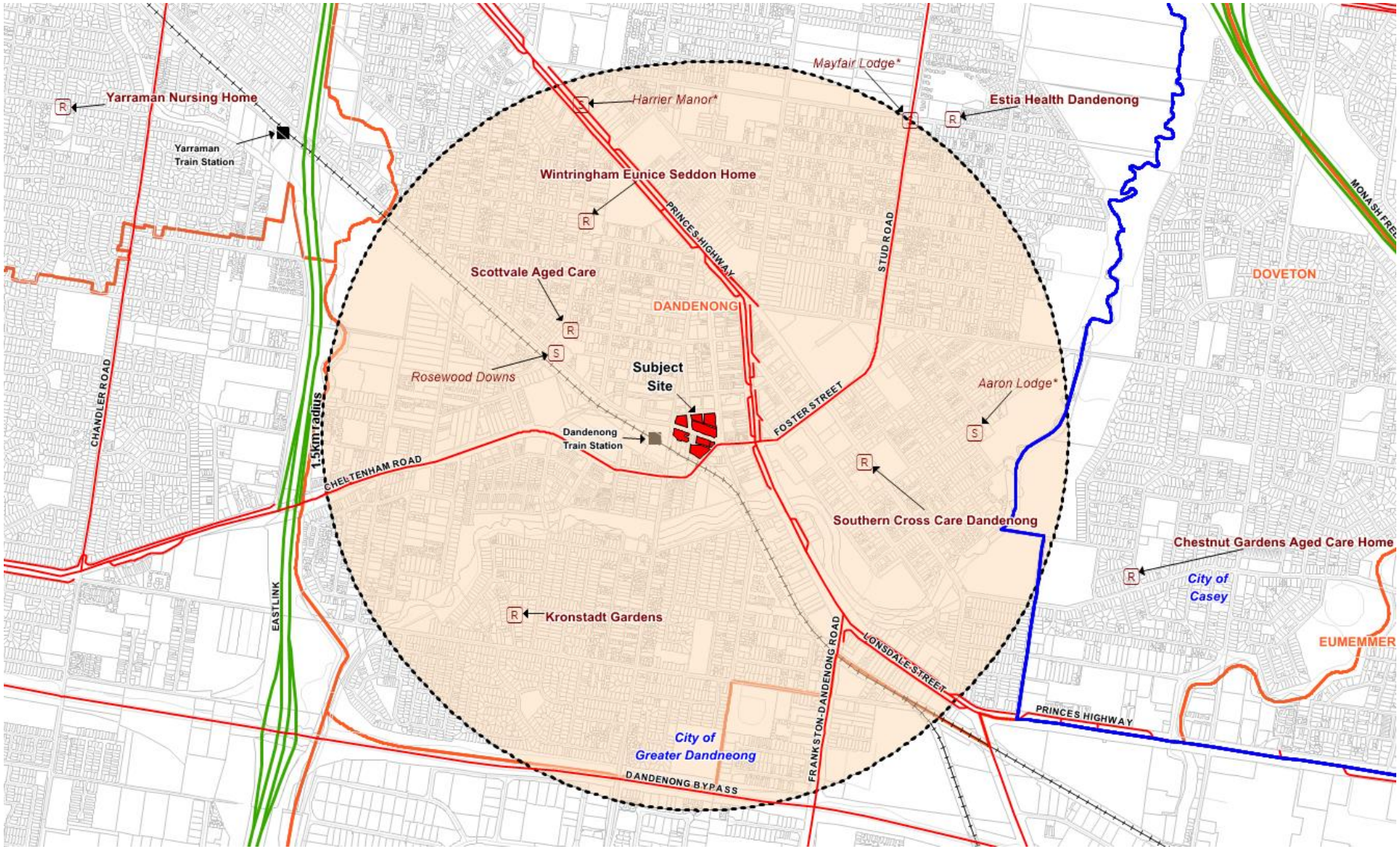
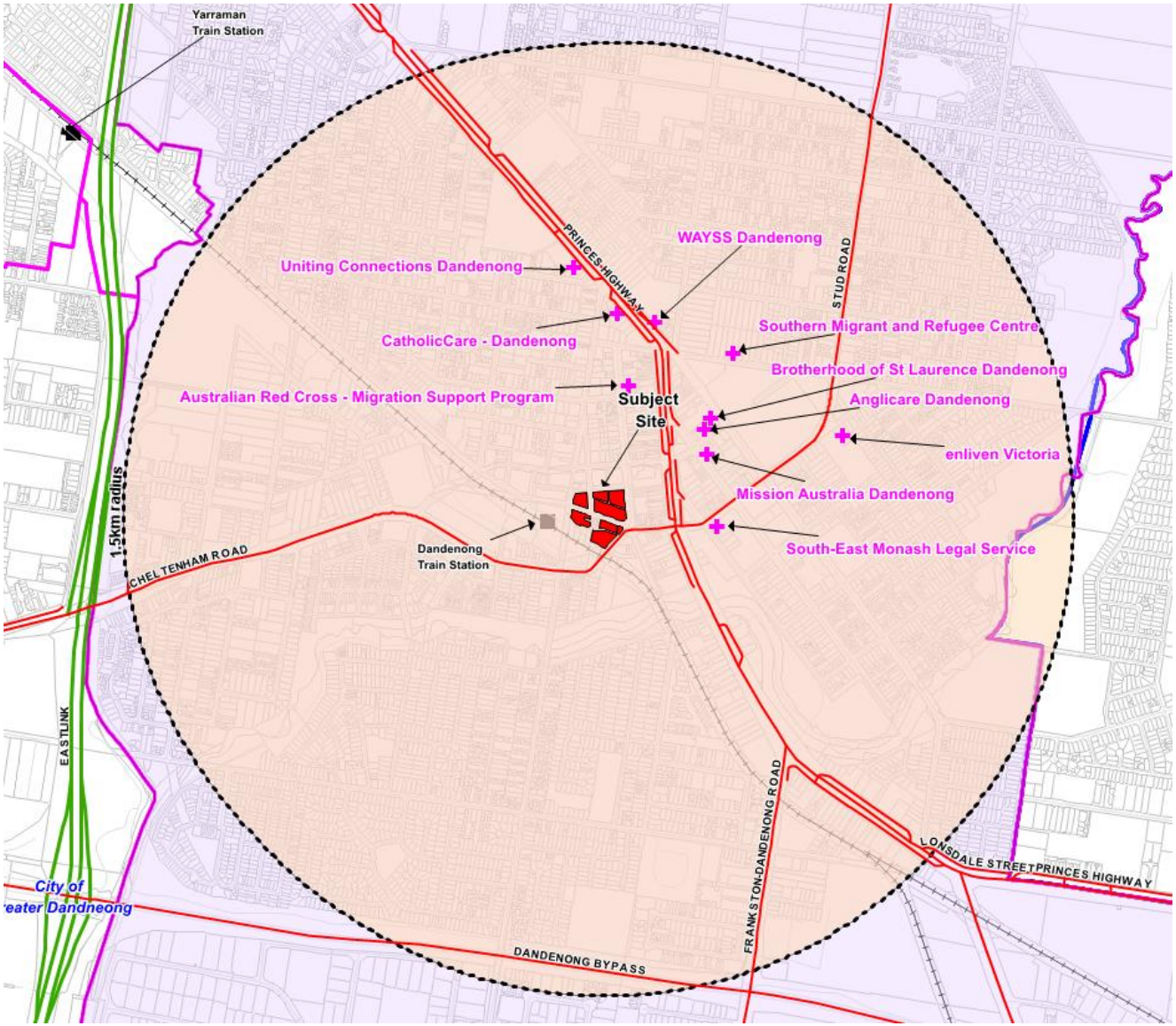
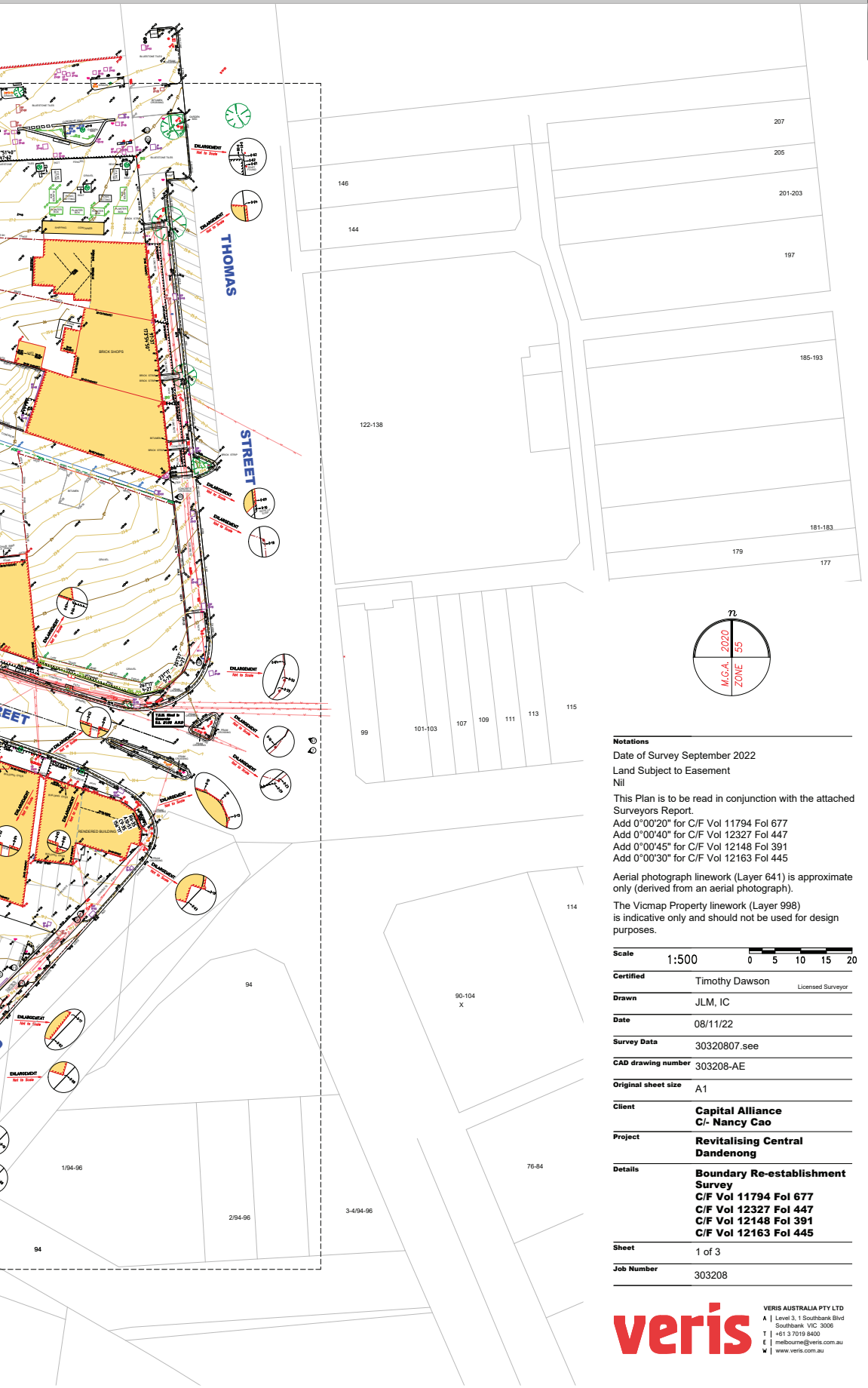


Figure 15 - Major Non Government Organisations (NGOs)



Appendix F: Site Survey / Contour Plan

F



Notations

Date of Survey September 2022

Land Subject to Easement
Nil

This Plan is to be read in conjunction with the attached Surveyors Report.
Add 0°00'20" for C/F Vol 11794 Fol 677
Add 0°00'40" for C/F Vol 12327 Fol 447
Add 0°00'45" for C/F Vol 12148 Fol 391
Add 0°00'30" for C/F Vol 12163 Fol 445

Aerial photograph linework (Layer 641) is approximate only (derived from an aerial photograph).

The Vicmap Property linework (Layer 998) is indicative only and should not be used for design purposes.

Scale	1:500 (0 5 10 15 20)
Certified	Timothy Dawson — Licensed Surveyor
Drawn	JLM, IC
Date	08/11/22
Survey Data	30320807.see
CAD drawing number	303208-AE
Original sheet size	A1
Client	**Capital Alliance C/- Nancy Cao**
Project	**Revitalising Central Dandenong**
Details	**Boundary Re-establishment Survey C/F Vol 11794 Fol 677 C/F Vol 12327 Fol 447 C/F Vol 12148 Fol 391 C/F Vol 12163 Fol 445**
Sheet	1 of 3
Job Number	303208

veris
VERIS AUSTRALIA PTY LTD
A | Level 3, 1 Southbank Blvd Southbank VIC 3006
T | +61 3 7019 8400
E | melbourne@veris.com.au
W | www.veris.com.au