

BORONIA RENEWAL STRATEGY URBAN STRUCTURE REPORT

Prepared by **Hansen Partnership**
for **City of Knox**

JUNE 2021

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1.0 Introduction

1.1 Project History & Process

The Boronia Major Activity Centre (MAC) is one of the key Activity Centres within the City of Knox.

The current Structure Plan was prepared in 2006 to guide development within the defined Activity Centre area. This Structure Plan underpins the key planning policy which guides development and built form outcomes within Boronia, being Design and Development Overlay - Schedule 7 (DDO7). However, this built form control is due to expiry on 30 October 2021. Therefore, Council is in the midst of preparing a new Structure Plan for Boronia, to guide the future evolution and renewal of the Activity Centre. This strategic project is known as the Boronia Renewal Strategy. This urban design and built form work is to form part of this overall Renewal Strategy process.

1.2 Purpose of Report

Knox City Council has engaged Hansen Partnership to prepare the Boronia Urban Structure Report. This built form review will set a long term strategic framework to consider the potential future redevelopment scale and character for the Boronia MAC. This will incorporate preferred overall building heights, street wall profiles and interface treatments. It will also seek to establish a stronger sense of local character, responding to Boronia's position at the threshold between suburban Melbourne and the Dandenong Ranges.

The Boronia Urban Structure Report will inform the preparation of the broader Boronia Renewal Strategy.



Figure 1. The DDO7 area (red) and commercial core (blue)

1.3 Scope

To date this Urban Structure Report has been informed by a review of background documents, the Planning Scheme, site inspections, desktop spatial analysis and an awareness recently approved and current development proposals within the town centre.

The following background reports have informed our knowledge and understanding of Boronia:

- Boronia Commercial and Retail Needs Assessment – Ratio (2005);
- Boronia Activity Centre Structure Plan – Access Review – AAA (2005);
- Boronia Social Environment Study – Springboard Social Planning (2005);
- Boronia Structure Plan (2006);
- Knox Housing Strategy (2015);
- Boronia Mapping and Audit of Council Owned Assets – (2017);
- Playground Assets in Boronia Structure Plan Area (2017);
- Road and Drainage Assets in Boronia Structure Plan Area (2017);
- Draft Boronia Community Services and Facilities Review (2017);
- Boronia Activity Centre Movement and Access Study – GTA (2017),
- Draft Land Use and Planning Background report – (2017);
- Knox Land for Business Directions Plan – Urban Enterprise (2018); and
- Boronia Economic Analysis – HillPDA (2021).

1.4 Brief History

Boronia was named in 1915 by the local Councillor A. E. Chandler. The settlement was named 'Boronia' after a plant which grew on his property nearby at The Basin. Prior to this the area was considered to be part of

Bayswater and was predominantly an orchard and market garden based settlement at the base of the Dandenong Ranges.

The opening of the train station and post office in 1920 led to a rapid increase in population and the creation of a township.

During the 1960s and 1970s Boronia experienced its next wave of rapid growth and change as it was merged into the expanding urban fringe. This saw the introduction of supermarkets at the edge of the then Dorset Road and Boronia Road strip shops and resulted in the creation of competing retail anchors separated by the main junction of Dorset and Boronia Roads as well as the rail line.

In 1998 the railway line was grade separated, resulting in a new station and bus interchange, as well as the Boronia Junction Shopping Centre and extension of Erica Avenue to link across the northern end of the station and connect through to Dorset Road and Chandler Avenue.

In 2008 the Dorset Square (car-park) underwent significant public realm enhancement to 'green' and improve the appearance and function of the otherwise large surface car park which serves the Boronia Village and Boronia Mall shopping centres.



Figure 2. Historical aerial image looking toward Dandenong Ranges

2.0 Background Information

2.1 Strategic & Planning Context

The 2006 Boronia Structure Plan has allowed for moderate levels of change within the centre.

Boronia Structure Plan

The Structure Plan (October 2006) provided a series of guiding principles and a point of reference for Council when making decisions, planning and managing new development. The Structure Plan was translated into planning controls in the Knox Planning Scheme and therefore provides guidelines for future building height and where activity and development should be located.

As part of the State Government’s metropolitan strategy, Melbourne 2030, Council was required to develop a Structure Plan to direct any future development within the commercial area of Boronia and its surrounds. The Structure Plan responded to the following issues in Boronia:

- Variety of land uses within the Activity Centre;
- Variety of housing types available;
- Need for improved use of non-motorised and public forms of transport;
- Need for more community gathering places and focal points within the area.

The Structure Plan study area is loosely based on a 500m walkable distance from adjoining commercial areas.

Timeline of the Boronia Structure Plan and associated land planning framework:

- 2005 – Boronia Structure Plan prepared;
- 2006 – Boronia Structure Plan adopted by Council;
- 2009 – Planning Scheme Amendment C62 proposed by Council. Minister for Planning expressed initial concern that building heights in the centre were too restrictive;
- 2011 – Amendment C62 approved by Minister for Planning; and
- 2015 – Amendment C133 proposed by Council to address land use planning conflicts in the Activity Centre. Minister for Planning approved the Amendment on an interim basis, expressing concern that building heights are too restrictive.
- 2020 – DDO7 is set to expire 30 October 2021.

Given the impending expiry of DDO7 a new regime of built form control is required for the Boronia Activity Centre.

Design and Development Overlay – Schedule 7 (DDO7)

Implements the 2006 Structure Plan into the Knox Planning Scheme and seeks to guide built form outcomes for the Activity Centre. It contains the following Design objectives:

- To maintain views toward the Dandenong Ranges National Park from current and future public places on the western ridgeline of the study area, particularly the key views from Tormore Reserve and from Boronia Village.
- To recognise that within the Foothills areas the environmental and landscape significance outweighs the need for urban consolidation.
- To reinforce opportunities for terraced forms of development in the south-east section of the centre, where a multiplicity of views can be shared by residents.
- To visually offset increases in building height through substantial canopy planting of indigenous trees along nature strips, between buildings and the site’s street frontage.
- To develop underutilised land along the railway line where higher scale development can be built without direct streetscape, amenity or overshadowing concerns.
- To establish Boronia as an environmentally sustainable centre incorporating best practice ecologically sustainable design principles.
- To ensure that residential development provides an outstanding level of architectural quality, incorporating materials and finishes reflective of the indigenous character of the area and achieving an outstanding rating of ecologically sustainable design principles.
- To ensure the interface between the public realm and new development has regard to the human scale and perceived safety of these environments through active edges and opportunities for passive surveillance.
- To recognise Boronia’s heritage including buildings representative of significant periods of Boronia’s development.
- To ensure quality design outcomes and ‘inviting’ environments for all members of the community.
- To design building heights and form with regard to the topographical form and characteristics of the local area.
- To ensure that new residential development provide for transitional built form between changes in building heights as shown at Map 1 of this schedule.

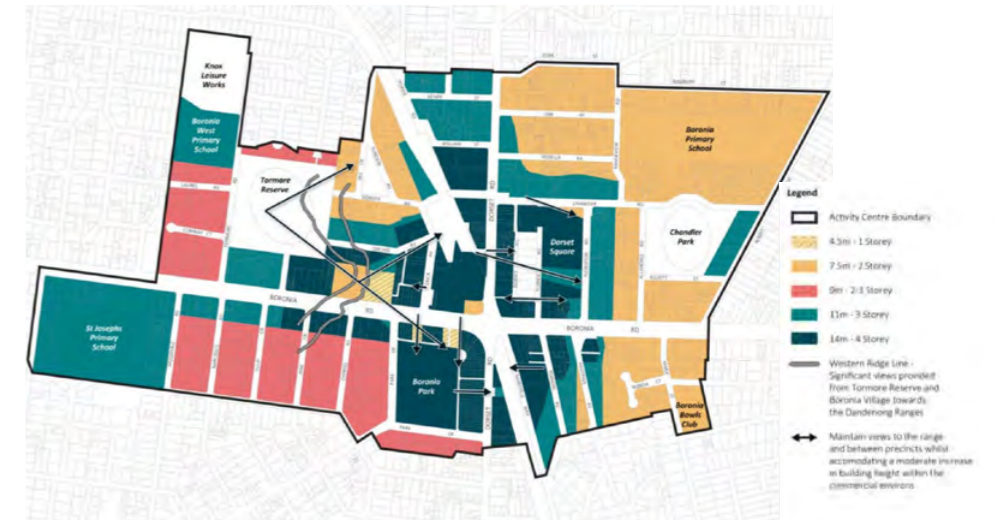
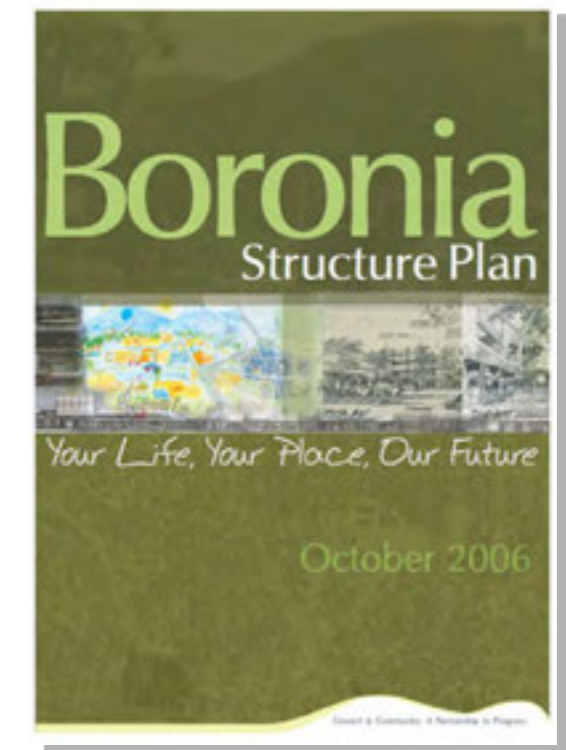


Figure 3. Current DDO control



2006 Boronia Structure Plan

2.2 Boronia Renewal Strategy

Boronia Renewal Strategy

The Draft Boronia Renewal Strategy 2019 is a Council led review of the Boronia Structure Plan (2006).

The draft Boronia Renewal Strategy outlines an emerging Vision and 9 Key Directions to guide changes and redevelop the Boronia Town Centre and surrounding neighbourhoods.

The emerging Vision is as follows.

Boronia 2040 Vision:

A connected and resilient place that values its history and environment and embraces its forward-thinking community to realise its potential for future generations.

The 9 Key Directions are as follows:

1. *Boronia is a unique local place.*
2. *Boronia has quality living environments.*
3. *Boronia is a healthy, active and connected community.*
4. *Boronia is resilient.*
5. *Boronia nurtures small/med scale businesses, micro-making and social enterprises.*
6. *Boronia is a green place with spaces to play.*
7. *Boronia is smart and digital.*
8. *Boronia has an active nightlife.*
9. *Boronia is growing through cohesive land use and urban structure.*



Figure 4. Existing planning zones

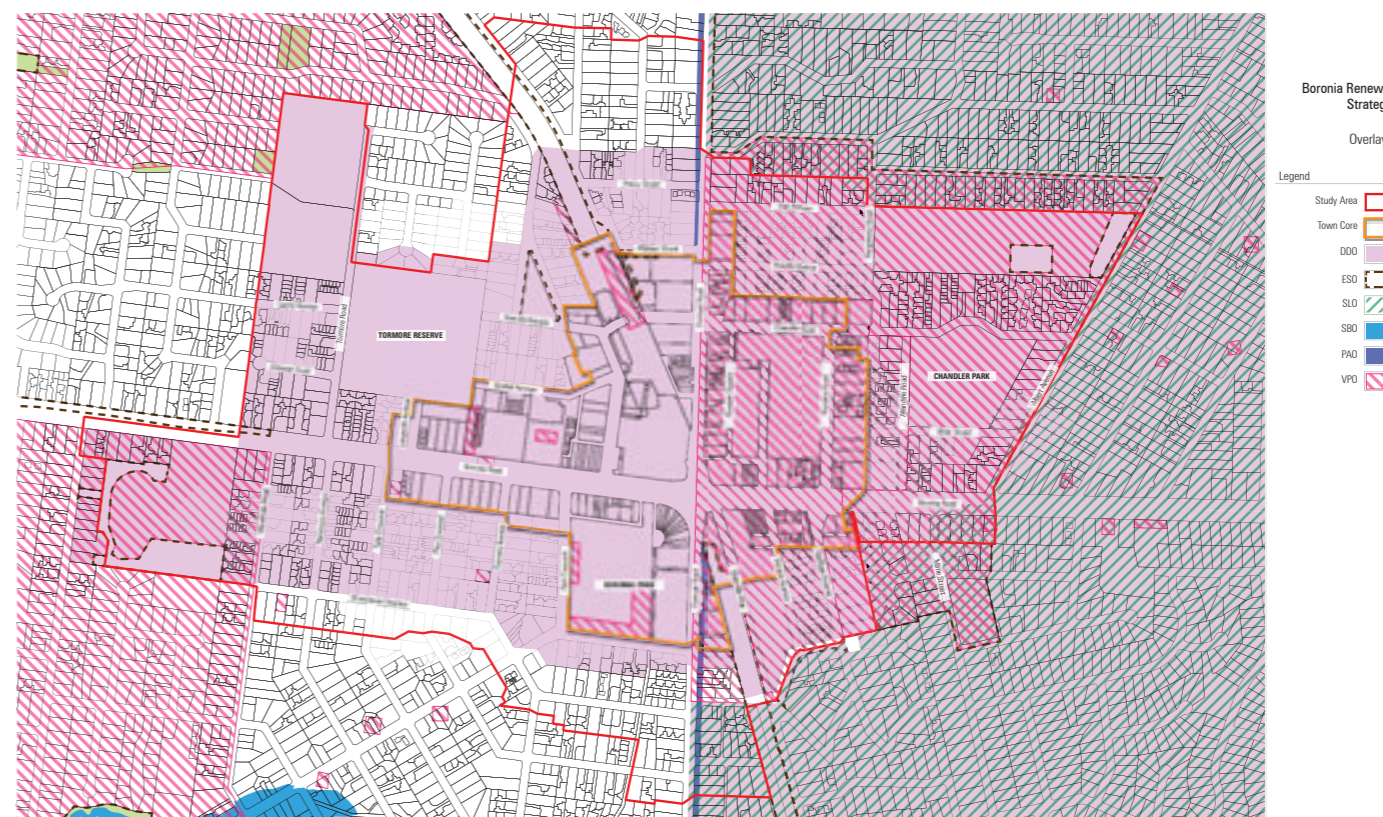


Figure 5. Existing planning overlays

3.0 Existing Conditions Analysis

3.1 Urban Structure

Lot Size

- The lot size analysis reveals the extent of subdivision that has occurred in the residential areas bounding the commercial core, particularly to the south-west. While there are some cases of dual-occupancies, the major form of development is 3+ townhouses with shared driveways.
- The commercial core presents the greatest development opportunity with the presence of large lots and rows of consecutive medium sized allotments presenting the potential for land amalgamation.
- Some urban blocks in the residential area have almost completely undergone subdivision for townhouse development, such as the residential block abutting the southern edge of Tormore Reserve and the residential block abutting the southern edge of Boronia K-12 College.
- Heavily strata-titled allotments within the commercial core and generally found in clusters, creating development potential for consecutive larger and wider lots.

Lot Frontage

- While there is a clear presence of fine grain allotments within the commercial core (<10m and as narrow as 5m), there are generally wider and larger lots present, yet to undergo subdivision.
- Narrower lots within the commercial core are generally located near the main junction and along the Dorset Road commercial strip, contributing to the 'village' nature of the strip shopping precinct.
- Unless significant land amalgamation was to be achieved, the 12 rounded lots at the south-west corner of the main junction are unlikely to change in the short-medium term future.

Lot Depth

- Lots fronting Boronia Road are generally deeper (50-70m) presenting greater development capacity.
- There is a clear pattern of north-south oriented lots running deeper (50-70m)
- Fine grain commercial allotments along Dorset Road are shallower (30-50m).
- Many of the deepest lots (>70m) have already undergone subdivision.

Key Implications

- The significant extent of subdivision that has occurred in the surrounding residential streets indicates areas unlikely to undergo change.
- The commercial core contains a mix of fine grain allotments and larger sites without strata-title.
- Larger commercial sites without strata-title indicate areas likely to undergo change.



Figure 6. Lot frontage width analysis



Figure 7. Lot depth width analysis



Boronia Renewal Strategy

Lot sizes

Legend

- Study Area
- Town Core
- Railway
- Open space

Lot frontage

- Small <300m²
- Medium 300-600m²
- Large 600-1200m²
- Extra large >1200m²

Development Pattern

- Existing subdivision (residential)
- Covenant Effected
- Valid planning permit to develop
- Non-developable* (commercial)

*Assumes that non-developable land:
 - is needed for public/community use.
 - contains building constructed from year 2000 onwards.
 - has valid planning permit.

Figure 8. Lot size analysis

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3.2 Access & Movement

- Boronia Road provides the major vehicular movement through the study area to/from Melbourne in the west and the Dandenong Ranges National Park to the east.
- Dorset Road provides a arterial vehicular movement through the study area to/from Ferntree Gully to the south and Croydon to the north catering for truck movement to the Bayswater industrial area.
- This high degree of vehicular movement creates a threshold at the intersection between of Boronia Road and Dorset Road. The intersection involving 18 lanes of traffic creates a significant challenge for pedestrian connectivity and amenity.
- Pedestrian amenity approaching and at the intersection is further compromised due to the vastness and lack of human scale caused by the width of the movement corridors and expanded by supermarket car parking at the street edge and the rail corridor to the south. This results in large distances of up to 105m between building, resulting in a highly exposed pedestrian environment.
- A number of laneways and internal arcades increase pedestrian permeability between the Dorset Road commercial spine and Dorset Square, as well as the public transport precinct.
- The double fronted buildings fronting Dorset Square and Dorset Road creates some conflict regarding loading and back of house functions with public realm. There is little to no surveillance from buildings to the public realm, with rear fencing and blank building interfaces forming the street edge.
- The primary connection to the train station and bus interchange, Lupton Way, is poor in pedestrian amenity, flanked by back of house functions of Dorset Road and also predominantly vehicle oriented.
- Lower order pedestrian streets generally contain one or no pedestrian paths, allowing grassed verges to extend to the curb.
- Narrow commercial properties which lack access to a service lane are unlikely to redevelop.
- The section of Dorset Road through the commercial core has a 40kph speed limit.
- Boronia boasts a considerable number of pedestrian laneways and arcade links, which connect the large car parks through to the traditional main street shops and businesses.

Key Implications

- Boronia Road provides the major movement corridor, climaxing at the Dorset Road intersection.
- The junction presents a pedestrian connectivity challenge due to its vehicle dominance.
- Lupton Way presents a poor pedestrian environment to public transport commuters.
- Despite its narrower profile, Dorset Road has poor pedestrian amenity and is in places fenced to restrict crossing.
- The commercial core is generally permeable with a number of arcades and lanes providing connection to the transit hub and between commercial blocks.



The landscape setting and views to Dandenongs form the western entrance.



Existing laneway within the commercial core.



The grade separated Boronia Railway Station



- Legend
- Study Area
 - Town Core
 - Signalised intersection
 - Signalised pedestrian crossing
 - Pedestrian crossing
 - School crossing
 - Pedestrian overpass
 - Railway
 - Bus interchange
 - Bus stop / route
 - Drop off zone
 - Bridge
 - Pedestrian path
 - No footpath
 - Cycle trail
 - Primary movement spine
 - Secondary movement spine
 - Arterial road
 - Main road
 - Secondary road
 - Local road
 - Laneway
 - Pedestrian arcade / laneway
 - Surface carpark
 - Commuter carpark
 - Multi-deck carpark

Figure 9. Access & Movement

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3.3 Land Use & Activity

- There are three major retail nodes in the study area being Boronia Junction shopping Centre, Boronia Central and the Village shopping strip. The pedestrian connection between these nodes are generally confined to main roads or through lanes/arcades along Dorset Road. Greater legibility between the activity nodes could foster a more interactive precinct.
- While there is a high level of commercial activity leading to the junction along Boronia and Dorset Roads, it declines at the intersection due to the large car park at the north-western corner, train corridor and hostile pedestrian environment.
- Varying activity types have implication on the continuity on street edges, with customer parking of large format retail pushing buildings away from the street upwards of 60-80m, where as commercial streets built to the edge have a more consistent edge to the public realm.
- Dorset Road north of Boronia Road represents a more traditional commercial street typology with a consistent and active building edge to either side of the street.
- Dorset Square presents a challenge of servicing and loading to double fronted lots fronting the car park and Dorset Road.
- While Dorset Road and Boronia Road contain segments of commercial strip shopping typology, the more common format is large format retail or strips of shops fronting large surface parking such as Dorset Square, Boronia Junction and the shops at Cypress Avenue.
- There is limited activity fronting movement to the train station and bus interchange, which generally comprises back-of-house functions.
- The transit hub generally has a poor relationship with the commercial core despite being located within immediate proximity.
- Commercial properties fronting Boronia Road generally contain servicing and back-of-house functions to Boronia Park.
- Most community based activities such as recreation and schools are not located immediately centrally, but surrounding the commercial core.
- Boronia has a high proportion of stand-alone independent shops, salons and small businesses, which are often located along the secondary movement routes in the arcades, laneways and Boronia Mall.

Key Implications

- Activity tapers at the main junction due to large surface car parking, the train corridor and hostile pedestrian environment.
- Surface car parking pushes activity away from street edges, upwards of 80m from the public realm.
- Dorset Road (north) represents a more intimate and tradition commercial shopping spine.
- Dorset square presents a challenge of dual loading properties fronting the street and car park.
- There is a lack of integration between the transit hub and commercial core despite its immediate proximity.



The eastern edge of Dorset Road / Dorset Square commercial allotments.



The western edge of Dorset Road / Dorset Square commercial allotments.



Recent public realm works at Boronia Park.

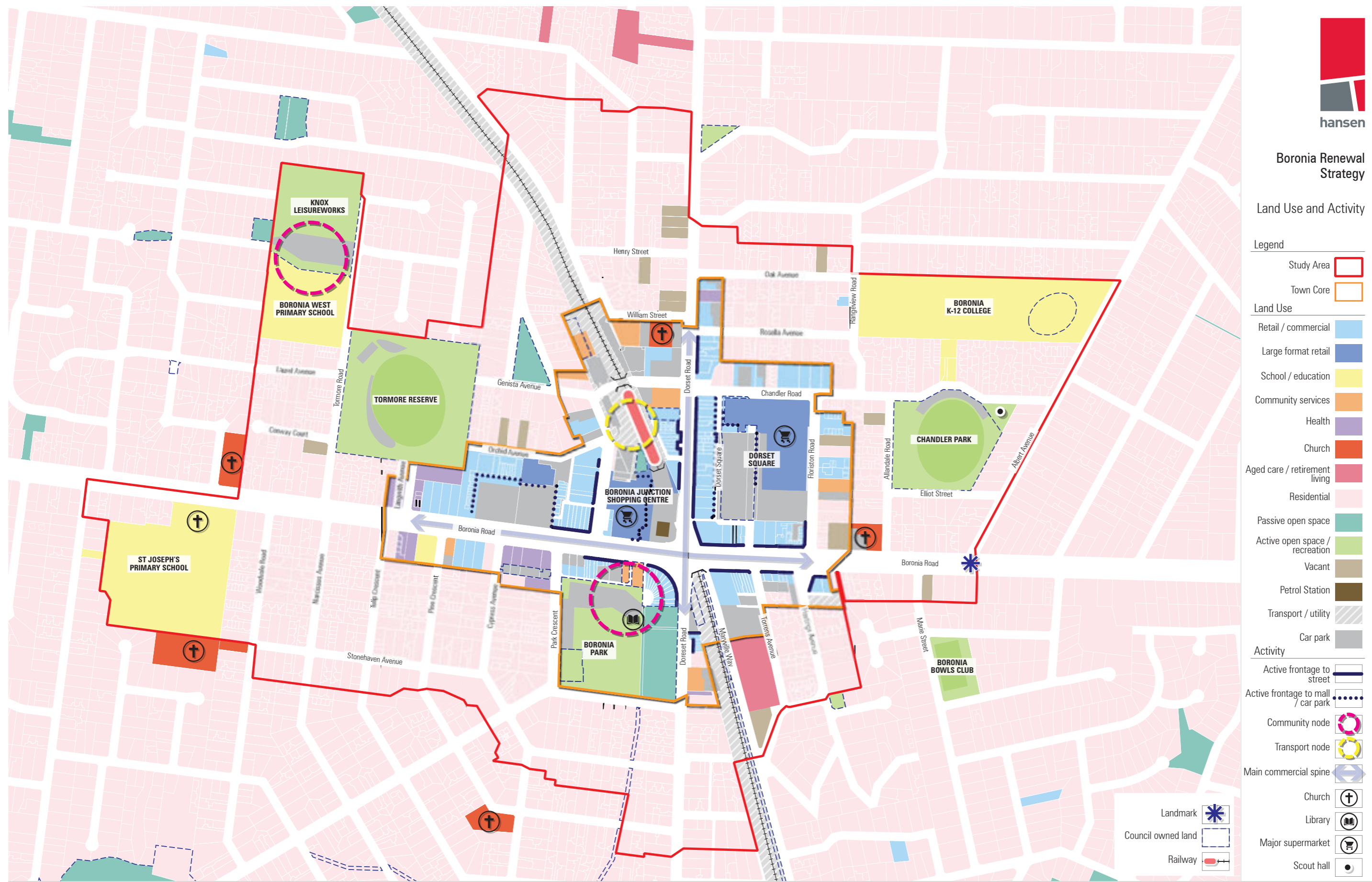


Figure 10. Activity & Land Use

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3.4 Built Environment

- Generally, a low-rise built form character predominates within the Activity Centre and largely still comprises the original commercial buildings, representing both the initial era of development within the township and the later period of suburbanisation.
- There are no identified heritage buildings within the town centre, although the timber Progress Hall, positioned on the south side of Boronia Road and the former Woolworth's supermarket building (now Dan Murphy's) are of historical merit and may warrant future protection.
- Along the southern side of Boronia Road the commercial properties largely comprise only single storey form, while the commercial properties to either side of Dorset Road comprise a mix of 1-2 storey forms, with a single 3 storey form.
- Commercial properties fronting either Boronia Road or Dorset Road predominantly contain verandas or awning over the footpaths for weather protection.
- There are limited landmark forms, with the highest and most visual prominent elements within the town centre being signage, such as the tall structures associated with the Boronia Junction and Boronia Central shopping centres and the Metro Cinemas building on Dorset Road, which also comprises prominent signage.
- The scale and proliferation of such signage, reinforces the car dominated nature of the town centre and the need for businesses to advertise to the motorist rather than the pedestrian.
- However, the lack of prominent and tall buildings, ensures that the natural elements and 'backdrop' of the nearby Dandenong Ranges is a defining and valued characteristic of Boronia.
- Recent development activity within the town centre has occurred at the fringe, in the form of 3-4 storey apartment buildings particularly behind Boronia Central, while there are a number of recent planning application along Erica Avenue. To date, very limited redevelopment has occurred along either of the Boronia Road or Dorset Road corridors. This is primarily due to vehicle access challenges, as well as the smaller and generally fine grain parcels requiring consolidation in order to achieve viable developments.
- The existence of expansive surface car park, associated with the larger format retail store as resulted in considerable 'gaps' or breaks in the build form and street wall definition within the town centre.

- There is a single dwelling convent which exists along Marie Street and Rubida Court which has restricted residential redevelopment within this south-east pocket of the study area. However, elsewhere within the residential zoned streets the vast majority of original single dwellings with large backyards have already been transformed into runs of townhouses. These new and medium density forms of housing, have generally maintained the green and suburban character of this residential street, through the retention of front garden setback and provision of landscaping, including canopy trees.
- However, due to their tight arrangements and requirement of car parking often results in poor ground level presentation and streetscape full of parked cars.
- Given the configuration of these recent developments with ground floor parking provision and a number of unbuilt permits comprising basements (for car storage) it would appear that the maturity of the property market that apartment development viability is marginal.

Key Implications

- The vehicle dominant environment in the commercial core is reflected in built form outcomes, with a number of buildings addressing large car parks rather than the public realm.
- There are limited 'landmark forms,' allowing natural elements such as views to the dandenongs to define the setting.
- Large areas of surface car parking results in 'voids' in the built form fabric of the commercial core.
- New townhouse developments generally have poor ground level interfaces dominated by vehicular entrances and ground level parking.
- Landscaped front setbacks in the residential areas are key to their landscape character.



Example of recent development with a ground level vehicle interface.



Recent 3 storey development along Dorset Road



Example of residential townhouse development.

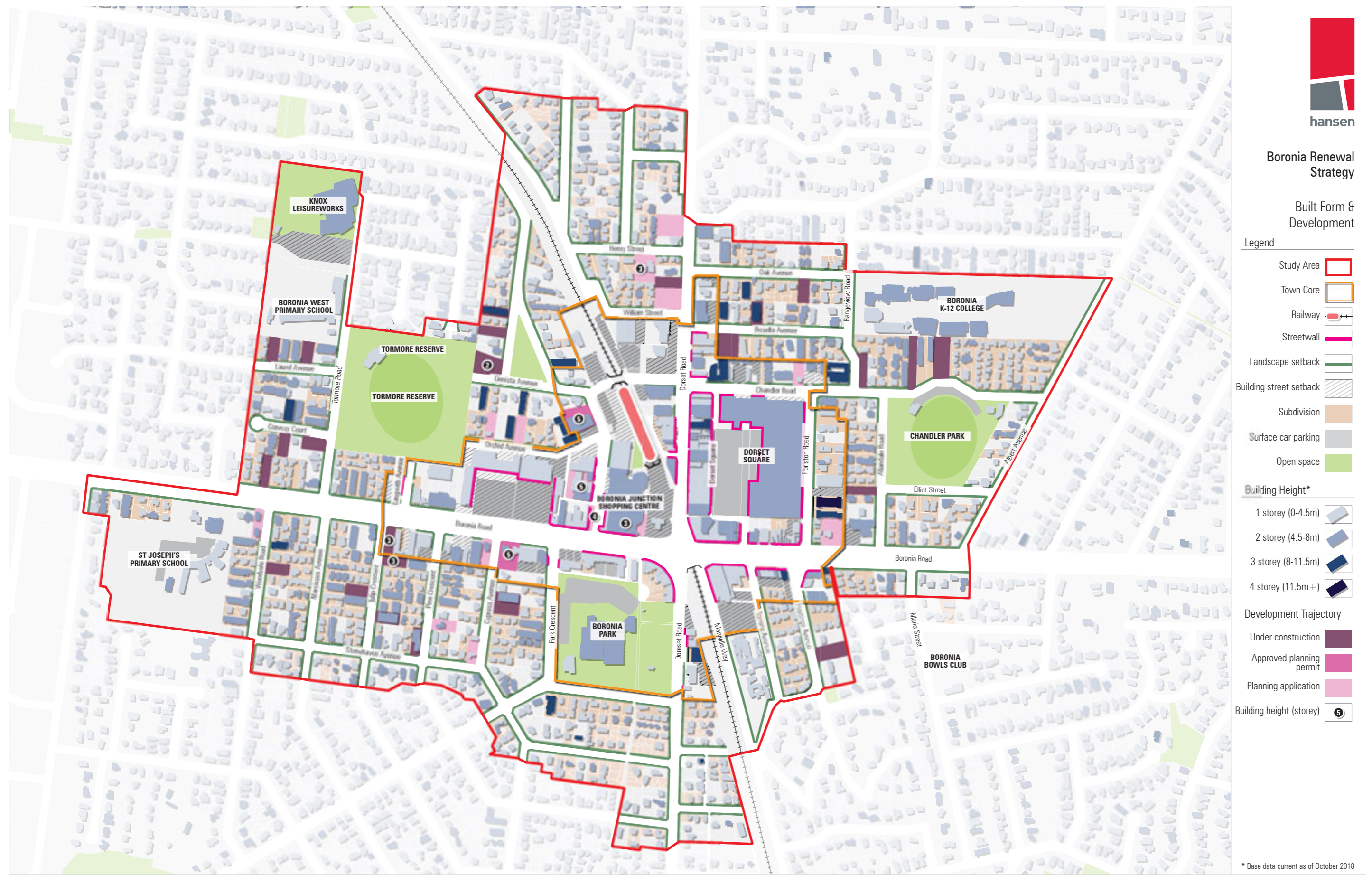


Figure 11. Built Form & Development

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3.5 Interface Conditions

Mapping the existing site interfaces provides insight to the range of sensitivities that exist in the study area which can assist in informing future development responses. Nine existing interface typologies have been identified. These are:

Condition 1: Residential (direct abuttal)

- This interface occurs at the direct boundary between commercial allotments and adjoining residential allotments.
- Future development controls should include interface management techniques in order to limit amenity impacts and achieve an appropriate transition to low scaled residential settings.

Condition 2: Residential (street separation)

- This interface condition occurs where a street separates the commercial boundary from residential allotments.
- Future development controls should include interface management techniques in order to limit amenity impacts to the public realm and the character of established residential settings.

Condition 3: Residential streetscape

- This interface condition occurs in residential streetscapes where both sides of streets contain land zoned Residential.
- Future development controls should include interface management techniques to ensure the preferred character of residential and landscape settings are not compromised by poor interface responses.

Condition 4: Open Space (direct abuttal)

- This interface condition occurs where an allotment directly abuts an open space. Across the study area this only occurs to the rear or sides of allotments.
- Future development controls should include interface management techniques in order to provide surveillance to open spaces and limit amenity impacts.

Condition 5: Open Space (street separation)

- This interface condition occurs where an allotment is separated from an open space by a street.
- Future development controls should include interface management techniques in order to provide surveillance to open spaces and limit amenity impacts.

Condition 6: Main Road

- This interface condition occurs along main commercial roads such as Boronia Road and Dorset Road.
- Future development controls should include interface management techniques in order to provide active ground level responses and limit amenity impacts such as overshadowing to pedestrian areas.

Condition 7: Commercial Street

- This interface condition occurs along main road corridors, beyond the 'core' town centre where residential properties front the road.
- Future development controls include interface management techniques in order to maintain and enhance the 'bush boulevard' character of these main road approaches.

Condition 8: Commercial Street

- This interface condition occurs along lower order commercial streets such as Erica Avenue.
- Future development controls should include interface management techniques in order to provide active ground level responses and limit amenity impacts such as overshadowing to pedestrian areas.

Condition 9: Commercial Laneway

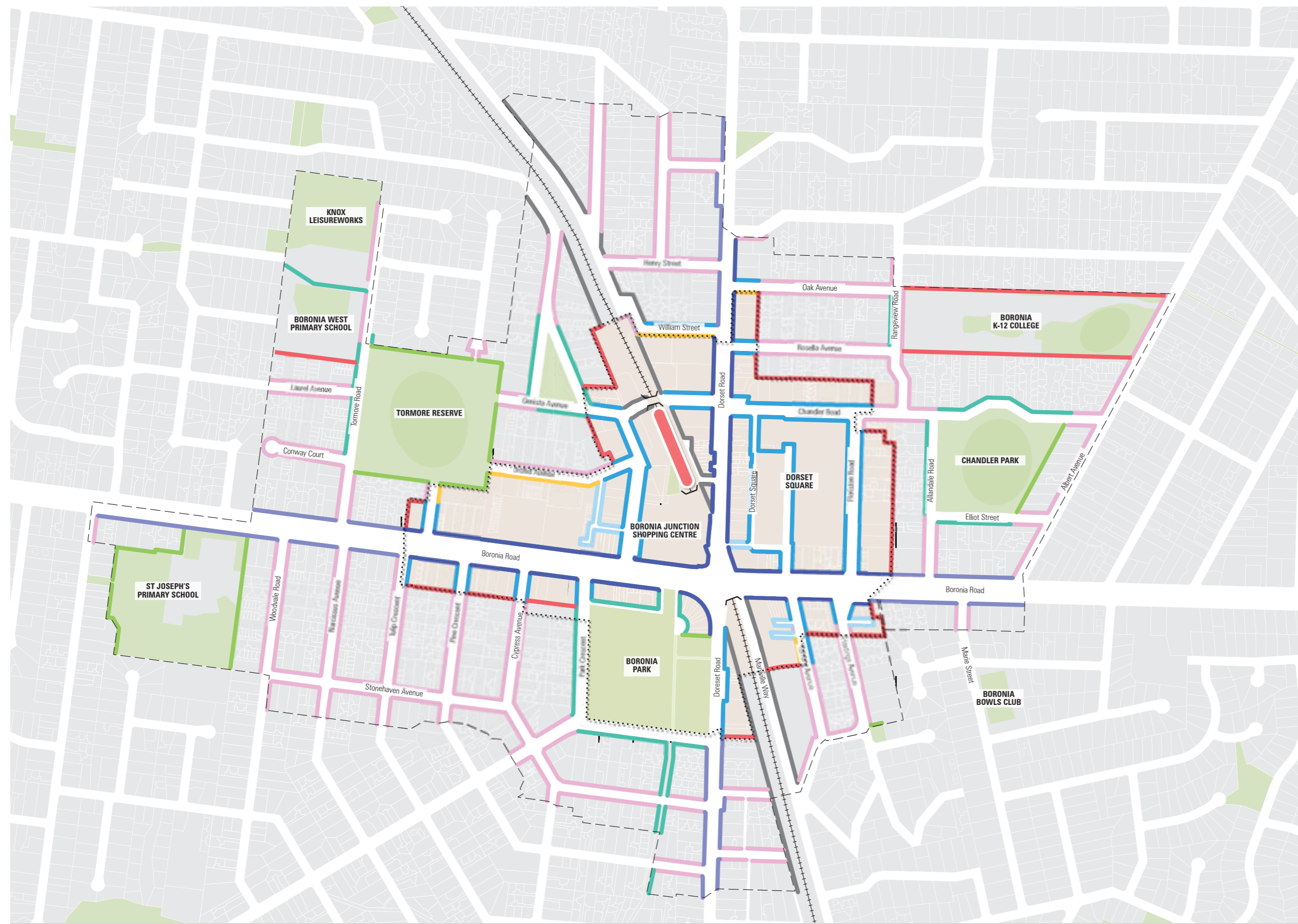
- This interface condition occurs where an allotment adjoins an existing laneway in the commercial core.
- Future development controls should include interface management techniques in order to provide safe connections and equitable development.

Condition 10: Rail Corridor

- This interface condition occurs where allotments directly adjoin the rail corridor.

Key Implications

- There are a large number of commercial properties directly abutting sides and rears of adjoining residential allotments.
- The interface between the commercial core and residential areas occurs mostly mid-block rather than across streetscapes.
- Where the commercial core is separated by a street to residential areas, dwellings typically front back-of-house commercial functions.
- The potentially strong commercial spine of boronia road is compromised by buildings set back from the street due to customer parking.



Boronia Renewal Strategy

Interfaces

Legend

- Study Area
- Town Core
- Railway
- Open space

Interfaces

- Residential (direct abuttal)
- Residential (GRZ to NRZ)
- Residential (street separation)
- Residential street
- Open Space (direct abuttal)
- Open Space (street/lane separation)
- Main Road
- Main Road Residential
- Commercial Street
- Commercial Laneway
- Rail Corridor

Figure 12. Interface Conditions



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3.6 Landscape & Public Realm

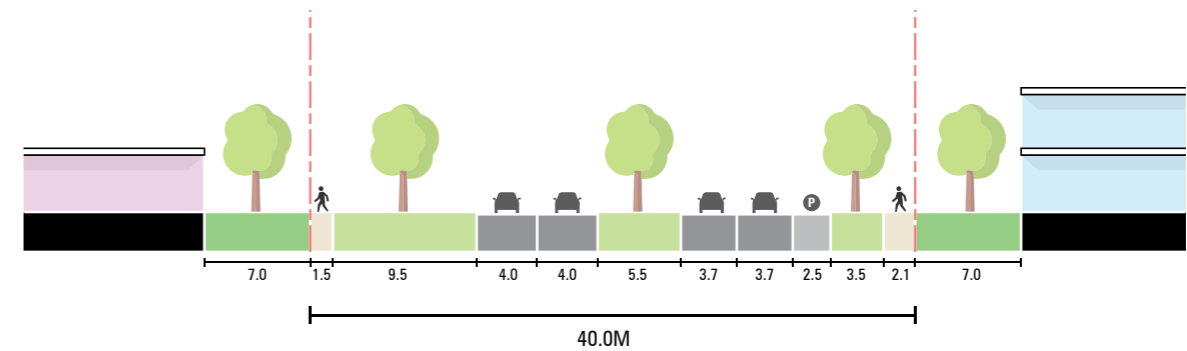
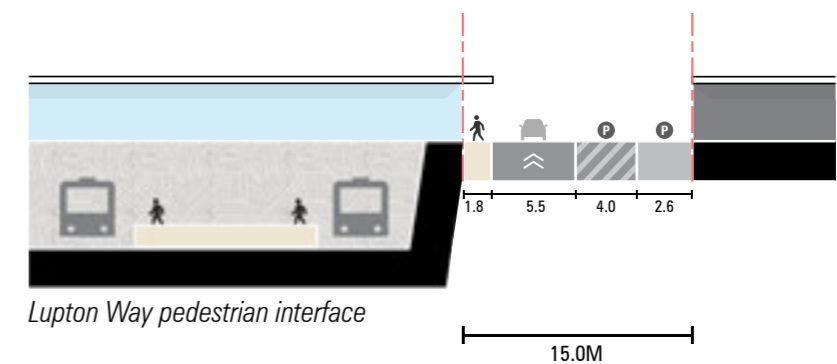
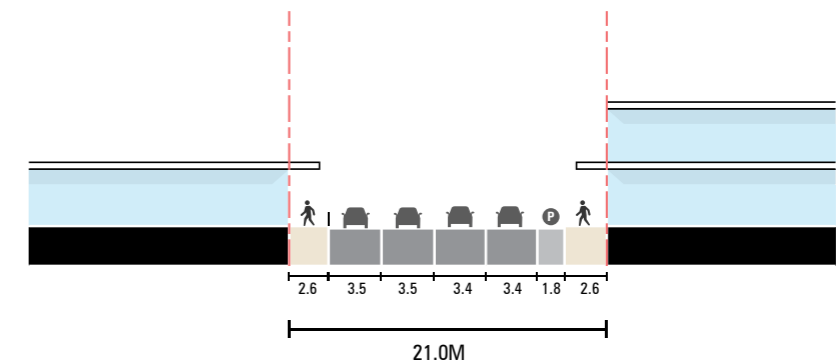
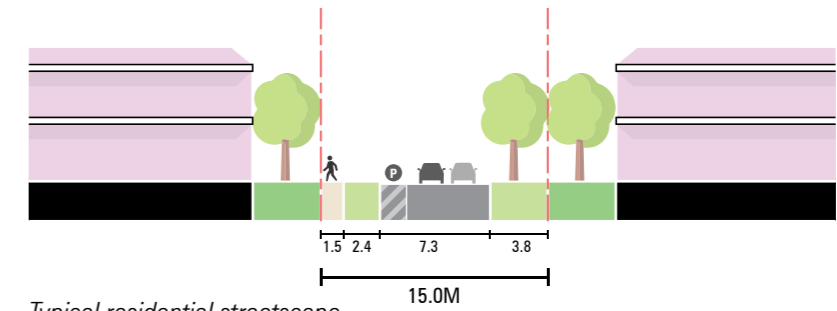
- The green character of the study area is largely due to trees planted in private property in front and rear setbacks. In residential streets, street trees are either lacking or small, while the green character of streets is owed to mature canopy trees in front yards of residential allotments.
- Aside from Boronia Park, the Commercial Core presents a void in the surrounding soft and green character. Hard surfaces and a lack of street trees particularly in and around the junction of Boronia Road and Dorset Road creates a harsh environment.
- Large car parks and the paved bus interchange with little vegetation contribute to the hard experience of the commercial core.
- Amenity along the commercial spine of Dorset Road is poor, with little to no vegetation and high volumes of traffic and parallel parking resulting in fencing for pedestrian safety to an otherwise narrow footpath.
- Avenue planting of established canopy trees are key to the arrival and departure into the commercial core from Boronia Road and Dorset Road, however this is not continued through the junction due to the vehicular dominance.
- The green character of lower order residential streets is strengthened by grassed verges extending to the curb and dwellings set back with generous front gardens containing established canopy trees and vegetation.
- Active commercial edges orient toward the junction and main roads with back of house functions generally occurring to the rear, with the exception of Dorset Square shops that double-front Dorset Road.
- Large format retailers such as K-Mart and Boronia Junction contain large segments of blank interfaces (high solid walls), offering little interaction with public realm.
- Aside from the entrance, the northern component of Boronia Central mall is mostly internal with minimal interaction with the public realm attributes of Dorset Square and Chandler Road.
- While the commercial core generally contains a large amount of active building edges, many of these are setback from streets due to customer parking, resulting in a disrupted street edge and intermittent street activity.
- Public parks are generally generously populated with clusters of established canopy vegetation.

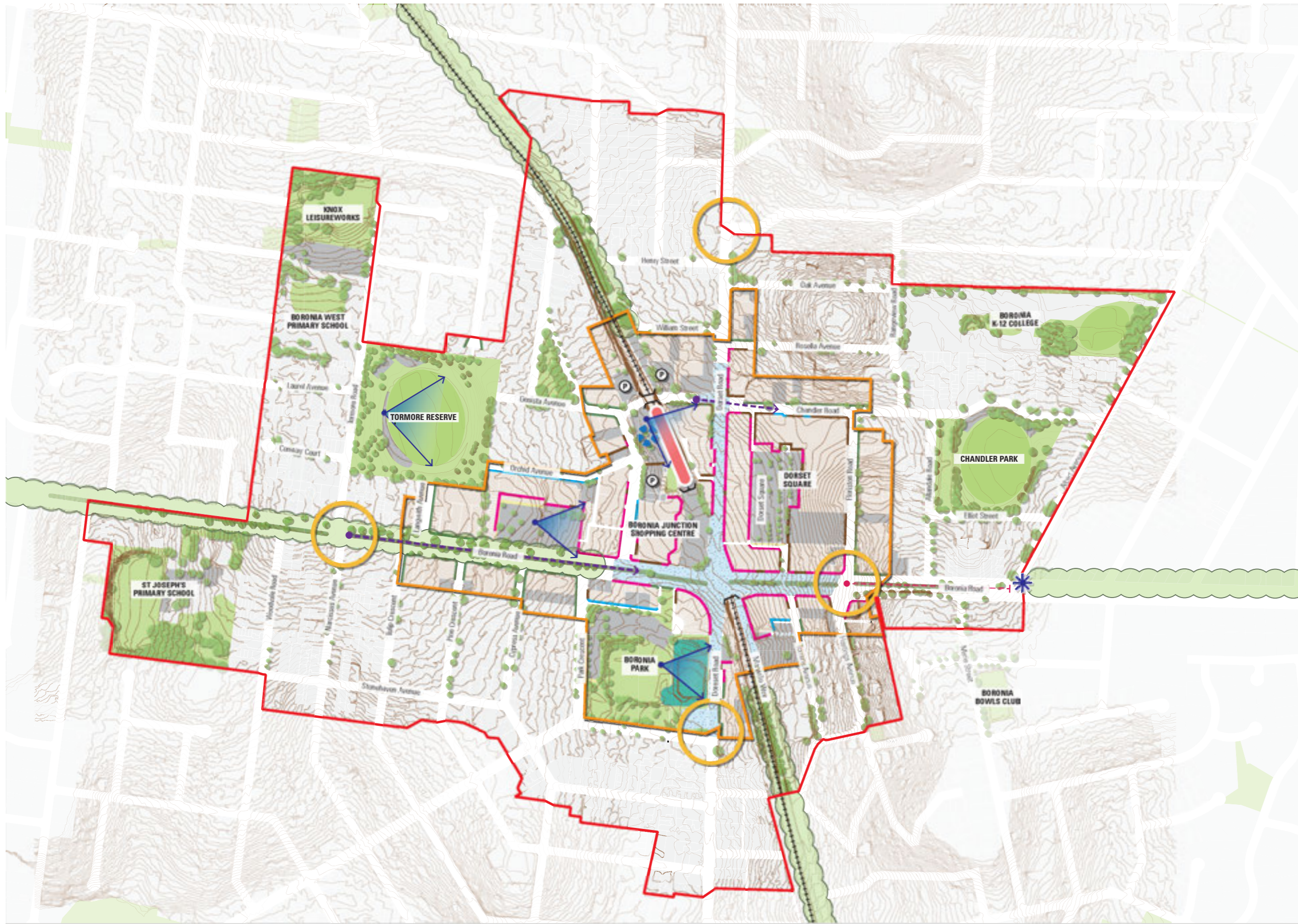
- Established canopy vegetation along the eastern perimeter of Tormore Reserve in tandem with trees in private open space contributes to concealing existing (and potentially future) structures in panoramic views from the oval and surrounds towards the ridges of the Dandenong Ranges National Park.
- Approaching the commercial core from the west along Boronia Road offers views toward the Dandenong Ranges, signifying the entrance into the Activity Centre at the crest and define the descent toward the main junction. While there is built form present in the view line, structures are generally concealed within canopy vegetation lining Boronia Road and within private open spaces of residential allotments.
- The contrasting openness of the Boronia Park wetland 'signals' the southern arrival into the town centre from the south, along Dorset Road.

Key Implications

- While the Boronia & Dorset Road entrances provide the foundation for a densely vegetated setting, the commercial core is a hard environment lacking in greenery.
- Vehicle dominance in streetscapes restricts opportunity for street greening as demonstrated particularly in the Dorset Road commercial strip.
- Views to the dandenongs define the entrance from the west along Boronia Road.
- Panoramic views to the dandenongs are pivotal to the setting of Tormore Reserve.
- Surrounding residential streets have a distinct green character due to canopy trees in front setbacks complementing wide grassed verges and street trees.

Typical Streetscapes





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Boronia Renewal Strategy

Public Realm

Legend

- Study Area
- Town Core
- Gateway
- Landmark
- Open view to Dandenong Ranges
- Canopy confined view
- Terminated view
- Active frontage
- Back of house frontage
- Landscaped frontage
- Blank frontage
- Avenue approach
- Public realm trees
- Median
- Open space
- Wetlands
- Hardscape
- Surface carpark
- Commuter carpark
- Railway
- Bus interchange
- Bridge
- 1m contour

Figure 13. Landscape & Public Realm

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4.0 Urban Foundation Synthesis

This chapter seeks to distil the analysis and key findings to form the Urban Foundation which will help formulate the key gestures in the Urban Form Vision, as the final output for this background and urban analysis report. Key themes of the Urban Foundation are as follows:

- Landscape & Public Realm
- Built Form & Development
- Movement
- Influences

Landscape & Public Realm

- The arrival and departure via Boronia Road is defined by the 'Bush Boulevard' setting owed to established canopy vegetation on wide grassed verges and central grassed median strips. As the road traverses through to the commercial core, there is a distinct departure from this landscape setting, with the dominance of cars and hard paved surfaces, smaller setbacks quickly becoming prevalent.
- Residential streetscapes perpendicular to Boronia Road have a distinct landscape character due to wide grassed verges and front garden setbacks allowing opportunity for canopy tree plantings. Outside of the commercial core, this landscape character seamlessly blends with the 'Bush Boulevard' but terminating at the commercial edge.
- The setting within the commercial core is distinctly hard and impervious due to streetscape profiles dominated by car lanes and large surface car parks. There is a lack in variety and softness on the ground plane, with generally narrow footpaths competing for space with parallel parking and traffic lanes.

Built Form & Development

- The extent of subdivision that has occurred in the residential areas (in the form of dual occupancies and strata title development) surrounding the urban core is significant, and indicates there is a lack in capacity for low-medium density development to continue to occur in these areas.
- Large portions of land within the commercial core are occupied by surface car parking, resulting in 'voids' in the built form fabric and disruptions to street edges and street frontage activity.
- Recent development applications within the commercial core are seeking greater heights upwards of 5 storeys.
- Dorset Road north of the 'junction' contains a more consistent built form edge to the street. Boronia Road west of the 'junction' has a varied built form edge, comprising sections of zero setbacks as well as significant setbacks for surface car parks which create 'gaps' to the street.

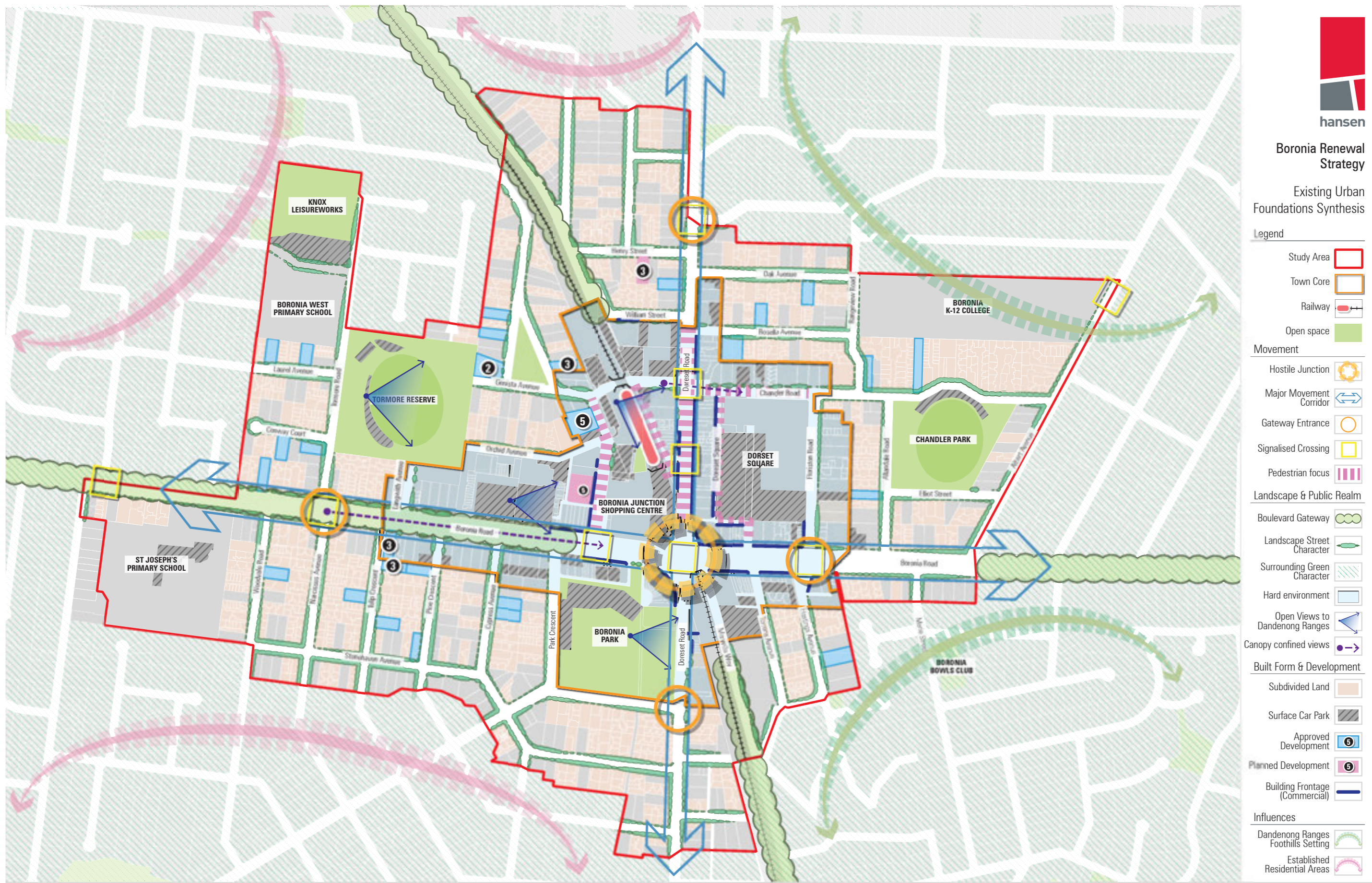
Movement

- The 'junction' of Boronia Road and Dorset Road presents the most hostile pedestrian environment due to the number of traffic lanes and lack of human scale with vast distances between building edges, particularly across Boronia Road.
- The visual experience to the Dandenongs Ranges defines the entrance to the commercial core from the west by forming a dominant visual 'backdrop' to the centre. While the return to the 'Bush Boulevard' typology to the east defines the entrance/exit towards the foothills, through 'strong' landscape character.
- Lupton Way has a poor pedestrian experience due to challenging land ownership patterns presenting a back-of-house interface, as well as large areas within the street profile used for servicing and car parking.

Influences

- The major influences at the edges of the study area is the presence of the Dandenong Ranges in the landscape setting, as well as the established residential areas surrounding.
- The visual presence of the Dandenong Ranges emphasises the study area's setting as a unique, local place nestled in the landscape with a strong sense of seclusion within the landscape setting.
- The established green character of the surrounding residential areas owed to wide grassed verges and canopy vegetation in streetscapes and within front setbacks filters into the study area, but ceases at the edge of the commercial core.
- The presents of established canopy trees within residential streets is also important in reinforcing Boronia's position at the foothills of the Dandenong Ranges.
- The residential areas that tightly bound the study area represent a sensitive interface for the future urban form of Boronia to respond to.





Boronia Renewal Strategy
Existing Urban Foundations Synthesis

Legend

- Study Area
- Town Core
- Railway
- Open space
- Movement**
- Hostile Junction
- Major Movement Corridor
- Gateway Entrance
- Signalised Crossing
- Pedestrian focus
- Landscape & Public Realm**
- Boulevard Gateway
- Landscape Street Character
- Surrounding Green Character
- Hard environment
- Open Views to Dandenong Ranges
- Canopy confined views
- Built Form & Development**
- Subdivided Land
- Surface Car Park
- Approved Development
- Planned Development
- Building Frontage (Commercial)
- Influences**
- Dandenong Ranges Foothills Setting
- Established Residential Areas

Figure 14. Foundations Diagram

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5.0 Urban Form Vision

Key Gesture 1: Green Boronia Road

- Seek to continue the existing and valued bush boulevard character through the Activity Centre, as a strong and defining public realm character. This includes encouraging the green and leafy condition of the residential side street continuing into the Boronia Road profile. Given the different built form character of the Activity Centre, from the surrounding residential areas it is likely that the provision of landscape planting is likely to be provided via canopy tree planting within a central median, complemented by small shrubs and ground covers along or within the footpath.

Key Gesture 2: Anchor the junction

- The expansive road junction of Dorset and Boronia Roads is the central point of Boronia and requires a stronger definition, through more prominent buildings and an enhanced and expanded public realm provision. Presently a car dominated environment, it requires investigation to enhance the public realm, address localised flooding issues and link to four corners of the junction closer together to encourage increased pedestrian movements. Such traffic calming measures should be continued northward along Dorset Road to Chandler Road to reinforce the existing 'main street' function and qualities of this section of Dorset Road.

Key Gesture 3: Define Dorset Road main street

- Dorset Road comprises the foundation of a main street condition, including a relatively narrow road reserve, fine-grain subdivision pattern and associated commercial properties. It is also strategically well positioned between key retail anchors and in close proximity to the train station. Encouraging a stronger built form character and enhanced public realm provision along this section of Dorset Road is recommended to 'bridge' the gap between the east and west areas of the town centre and foster connectivity for local movement.

Key Gesture 4: Strengthen pedestrian connections

- Boronia already comprises a considerable network of laneway and arcade links. These links generally provide convenient pedestrian access from the traditional main street, strip shop areas through to the more recent car based large format retail anchors. This network of local connections is to be strengthened as a unique element of the Boronia town centre structure as they serve an important function in both the local movement network and foster small business activities.

Key Gesture 5: Create green spines, linking public open spaces

- Encouraging a secondary network of east-west connections is recommended, in order to complement the gestures within the core retail and to link together Boronia existing green and public open space assets. Consequently, to creation of two 'green spines' is recommended, one within the northern reaches of the Activity Centre, that would link the Boronia Leisure Centre, Boronia West Primary School, Tormore Reserve, Genista Avenue reserve and Chandler Park along a single east-west spine, which also passes the train station. The second 'green spine' would define the southern extent of the Activity Centre and link St Josephs Primary School to Boronia Park and tie in with a cycle line along Springfield Road, to the broader Blind Creek trail.

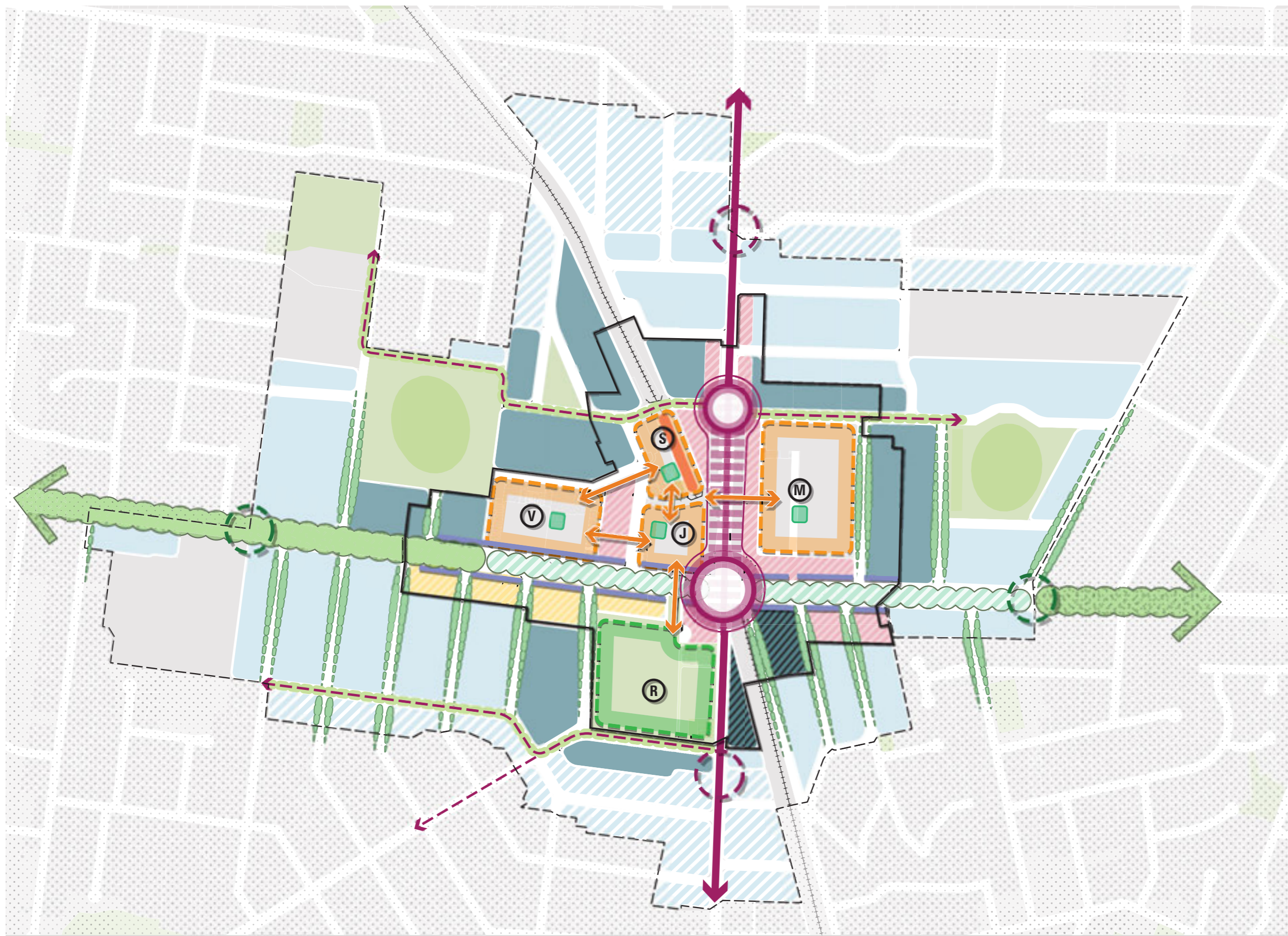
Key Gesture 6: Connect the activity nodes

- The Boronia town centre, due to its evolution comprises a number of distinct active nodes and anchors along the northern side of Boronia Road. The central anchor is the train station and bus interchange which provides a key point of arrival into the town centre as well as a destination for commuters. The main retail anchors are the Boronia Village, Boronia Junction and Boronia Central shopping centres. These primarily car-based centres are presently poorly linked. Therefore, creating a network of high-quality pedestrian connections, with associated small public nodes is recommended.

Key Gesture 7: Optimise development potential within the core

- Seek to reinforce the natural hierarchy and existing regime of development intensity within the 'core' of the Activity Centre. Including realisation of 'spot' redevelopment potential on key sites that have capacity to successfully accommodate taller forms, without impacting upon the defined views and vistas towards the Dandenong Ranges profile or existing residential properties. Built form scale should gradually transition down to more modest forms towards the edge of the commercial areas and result in the creation of future consistent streetscape character.





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Boronia Renewal Strategy
 Future Urban Form Vision

Legend

- Study Area [---]
- Commercial Core [white]
- Railway [red line]
- Open space [green]
- Key Junction [purple circle]
- Activity Spine [purple line]
- Movement Route [purple arrow]
- Green Spine [green arrow]
- Link to bicycle network [dashed line]
- Urban Gateway [dashed circle]
- Bush Boulevard [green circles]
- Bush Boulevard (Urban) [green circles]
- Filter green character into spine [green circles]
- Key Activity Node [orange box]
- Improve inter-nodal connections [orange arrow]
- Create public realm opportunities in nodes [green square]
- Village Node [V in circle]
- Station Node [S in circle]
- Junction Node [J in circle]
- Mall Node [M in circle]
- Recreation Node [R in circle]
- Strengthen commercial edge [blue box]
- Consolidate community/medical [yellow box]
- New and retained fine grain commercial setting [pink box]
- Compact residential [light blue box]
- Make most of undeveloped land [dark blue box]
- Explore substantial development [dark blue box]
- Consider careful expansion of threshold [light blue box]
- Established residential surrounds [dotted box]

Figure 15. Urban Form Vision

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6.0 Built Form Proposition

6.1 Basis of Height Parameters

The Built Form Proposition for the Boronia Renewal Strategy sets street by street parameters for the Activity Centre's evolution. The parameters identified are neither fixed or absolute, but intended as benchmarks to guide built form change and the next evolution of Boronia. They are represented in Figure 16 and are derived from the Urban Foundation, Urban Vision and the following basis:

- Street Role & Character
- Street Corners & Junctions
- Street Walls & Upper Levels
- Transition
- Slope
- Architectural Considerations
- Solar Access
- Active and Semi-Active Frontages
- Local Views & Vistas
- Pedestrian Links
- Public Realm Opportunities
- Service Laneway Interfaces

Street Role & Character

The Boronia Activity Centre comprises a range of street characters, generally defined by their role and landscape attributes. The Built Form Proposition seeks to retain and where necessary, enhance the prevailing street characters. Boronia Road and Dorset Road are important movement corridors, accommodating significant through-traffic movement. As a general urban design principle, taller buildings line the higher order streets and movement corridors while respecting transition to more sensitive adjoining land uses.

While the movement corridors are particularly wider in street profile, particularly Boronia Road, and therefore can accommodate greater building heights that are proportionate to the street width. This also reinforces their role as movement corridors and activity spines. The frontages of these primary commercial streets are defined by buildings built to their street boundary (zero setback), which should be reinforced by future development to capitalise on pedestrian movement and continue providing activity to the footpath. Exception to this is where a landscape setback is required on Boronia Road to contribute to the 'Bush Boulevard' character.

Secondary commercial streets such as Erica Avenue or within Dorset Square and Village Shopping Centre should also respond to their commercial character with zero ground level street setbacks, but defining their role as secondary to the major movement corridors can be achieved through a lower street walls (3-4 storeys) and building heights tapering away from the primary Activity Centre junction.

Key to the street character of the Boronia Activity Centre and surrounds is the established green character in streets, particularly along Boronia Road as it enters the Activity Centre, and in adjoining side streets. Ground level setbacks ranging from 3m – 6m are recommended to capture the 'Bush Boulevard' setting at the entrances to the Activity Centre and to continue the established green character of residential streetscapes into the commercial core.

Street Corners & Junctions

The definition of street junctions and local corners assists in the legibility of an area. The 'junction' of the primary movement corridors Dorset Road and Boronia Road marks an important threshold at the centre of the Activity Centre, which can be reflected in the street profile with a higher street wall response (6 storeys). At other corner locations, it is also important that buildings address both street frontages and are designed to 'wrap' around the corner and present a generally consistent presentation to both streets. In the 'core' commercial areas ground floor presentations are encouraged to incorporate splayed or chamfered corners or glazing to allow pedestrians to easily see around corners, particularly into pedestrian laneways.

Street Walls & Upper Levels

In urban areas, urban design guidelines seek to introduce a 'street wall' and 'upper level front setback measures.' The purpose of such a distinction and separation is to ensure predominance of traditional forms and parapets within the streetscape, while enabling the provision of new and greater building heights in a recessive fashion. Thereby maintaining the prevailing street character and pedestrian scaled experience. While there are limited heritage attributes within the Boronia Activity Centre, the existing fine grain building stock along commercial spines such as Dorset Road represent the traditional form of the precinct. The visual distinction between street walls and upper levels is important in relation to new street walls. A default 6m setback to upper levels above a new street wall is encouraged to:

- Provide a clear separation between the street wall and upper forms;
- Ensure upper levels do not visually dominate streetscapes or overwhelm the pedestrian scaled experience;
- Ensure a level of consistency in upper level setbacks along streetscapes; and
- Enforce the visual dominance of street walls

Transition

The geometry of the Activity Centre is defined by the commercial core punctuated by its central junction, gradually transitioning out to the tightly bounding established residential areas in each direction. Broadly, while the commercial core on site, its lower plane of topography has the potential to absorb greater building heights, a future built form proposition must demonstrate a clear transition in building height to its adjoining residential areas.

Where the commercial core immediately abuts adjoining residential land, specific site responsive measures are required to provide an appropriate transition between areas of varying degrees of potential change, sensitively responding to the residential abuttal. While the ResCode B17 profile provides a provisional envelope to treat sensitive interfaces, it is recommended that in order to avoid undesirable 'wedding cake forms,' minimal 'steps' in built form massing is encouraged along transitional interfaces. Transitions in scale within this envelope should occur in paired levels, as a minimum.

Slope

The topography of Boronia is key to its landscape character and in framing views and vistas to the Dandenong Ranges National Park. New development should respond to the topography of Boronia, particularly on sites with broad street frontages or spanning the breadths of entire urban blocks.

New development on sites which 'span' an entire urban block and contain frontages to multiple streets should be designed to ensure that topographic change between the street interfaces is managed within the design and floor levels to ensure new buildings address all street frontages at natural ground level.

Consideration to the slope of the Activity Centre is closely tied with consideration to transition and views. The 'junction' of Boronia Road and Dorset Road sits on the lower reaches of the Activity Centre, with land rising as it moves away toward the north, east and west. This provides the opportunity for the 'junction' to accommodate a greater scale of building height, before tapering down to transition toward the lower scale residential edges and to protect views to the Dandenong Ranges National Park.

Architectural Considerations

To street frontages expansive blank walls should be avoided and where visible from within the public realm. Any blank walls need to be visually divided into small elements through architectural treatments to reduce visual mass.

Fenestration patterns and facade solid to void proportions need to reflect the prevailing streetscape rhythm and presentation. New forms should 'fit' within the prevailing streetscape character. Avoid overly busy and complex architectural expressions.

The design of upper levels set back behind a street wall should:

- Be well articulated to 'break up' building mass;
- Distinguish between podium and upper levels through materiality and articulation;
- Provide passive surveillance of adjacent streets and open space;
- Demonstrate design legibility to side walls to ensure they read as part of the overall building design and do not detract from the streetscape when viewed from direct and oblique views along the streetscape.

Solar Access

In urban areas and Activity Centres such as Boronia, sunlight to public realm and key pedestrian spines is vital to the 'life' of the streetscape experience. The Urban Design Guidelines for Victoria contains the following objective and guidelines relating to solar access in Activity Centres:

- Objective 5.1.1: To ensure buildings in Activity Centres provide equitable access to daylight and sunlight; and
- Guideline 5.1.3a: Locate and arrange the building to allow daylight and winter sun access to key public spaces and key established street spaces.

In Boronia, it is recommended that solar access is ensured to pedestrian pathways opposite new development to avoid overshadowing, as follows:

- Southern footpaths between 11am and 2pm at the Spring Equinox (September 23);
- Western and eastern footpaths between 11am and 2pm at the Spring Equinox (September 23).

To ensure that the amenity of existing and future open spaces is protected, it is recommended that development should not cause overshadowing to at least 50% of open spaces between 11am and 2pm at the Winter Solstice (June 22).

Active & Semi-Active Frontages

In Activity Centres areas of mixed-use, buildings must provide sufficient activation at street level to foster 'life' on the street and provide opportunities to maximise safety via passive surveillance. Along the key movement corridors of Boronia Road and Dorset Road, active ground frontages are encouraged. Active frontages along these streets need to incorporate doors, and transparent windows at ground level which enable visual interaction and engagement between the inside of buildings and the street. New mixed use development within the commercial 'core' should provide at least 80% of the building's façade at ground level as an entry or as windows with clear glazing, and at least 50% of the building façade onto pedestrian laneways.

Along the local streets and within the Activity Centre such as Chandler Road, Floriston Road and Orchid Avenue, semi-active frontages are more appropriate. As these less active frontages still maintain an appropriate level of passive surveillance to occur, while also providing more privacy and seclusion to the inside of the building, befitting the nature of the use being either primarily office or dwelling. Direct pedestrian entry into ground floor uses is encouraged, particular on larger sites with broad frontages. Upper levels also provide 'eyes on the street' and contribute to passive surveillance of the public realm. Windows and balconies that orientate towards the street are encouraged.

Local Views & Vistas

The built form proposition has been largely derived from the protecting views to the Dandenong Ranges National Park from the following key public locations:

- Tormore Reserve (western car park straddling sporting oval)
- Boronia Park (west)
- Western gateway (Boronia Road & Tormore Road intersection)

This is a consistent approach to that of the existing DDO7 control. However, two of the above identified views (Boronia Park and Western gateway) are not currently considered by the current control. While, any views from within private land were dismissed as it was considered too restrictive to limit future development scale, based on existing views from on private land. Even if the private land is used as a publicly accessible surface car park. These key views have been identified in the Existing Conditions Analysis, with proposed building heights and setbacks tempered through built form testing to ensure that views to the Dandenong Ranges National Park are not unreasonably overwhelmed or compromised by future development. As found in the Existing Conditions Analysis, the presence of the Dandenong Ranges are integral to the landscape setting of Boronia and should remain as a prominent backdrop within the Activity Centre.

Pedestrian Links

The Boronia Activity Centre is already subject to a number of pedestrian links (in the form of either public laneways or arcades in private ownership), that increase mid-block permeability. Future development should seek to retain and enhance these existing links, and in larger urban blocks create new ones to strengthen the overall pedestrian network, and strengthen cross-modal connections between the pedestrian and public transport networks. Future development abutting future pedestrian connections should respond with equitable development responses consistent with other laneway recommendations outlined in this report. Opportunities for new pedestrian connections exist through potential future development at:

- Boronia Junction site;
- Dorset Square;
- Village Shopping Centre site;
- Southern boundary of Zagame's site adjoining the existing aged care service at Mercy Place.

Service Laneway Interfaces

Existing and future laneway/pedestrian links provide an increase in pedestrian permeability as well as the opportunity for servicing buildings. For a cohesive Activity Centre, new development should provide a design response that considers the equitable development opportunity for adjacent properties abutting an existing or future laneway/pedestrian connection. To provide equitable outlook, daylight and solar access to windows, development should be set back from common boundaries to provide separation between buildings at the upper levels:

- A minimum of 4.5m from the boundary where a habitable room window is proposed
- A minimum 3m from the boundary where a non-habitable window or commercial window is proposed;
- A minimum for 4.5m from the edge of a proposed balcony or terrace.
- Ensure a minimum 9m building separation of upper levels.

Where the common side or rear boundary is a laneway, the setback is measured from the centre of the laneway.

6.2 Urban Design Principles

Based on existing contextual analysis described in the previous chapters, a series of Urban Design Principles have been prepared to guide the development of the Built Form Proposition for the Boronia Activity Centre, and to develop a succinct set of Built Form Objectives to be included in a future Design & Development Overlay (DDO). In response to varied fabric of the Centre the future profile of the Centre will continue to build on this very diversity, encouraging consolidation within its commercial core and gradual transition along its edges to the established residential surrounds. These Urban Design Principles include:

1 Activity Centre Definition

Objectives

- To define the Activity Centre as a urban form that is distinct from its low density residential surrounds, through built form typologies that correspond to the MAC status.
- To define the Activity Centre's edges and improve its image and legibility.
- To encourage land consolidation and development within the commercial core of Boronia.
- To encourage development of high-quality built form and landscape values that heightens the sense of arrival at the Boronia Activity Centre at key junctions and entries into the centre.
- To define the Boronia Road and Dorset Road intersection with prominent built form.

2 Street Definition

Objectives

- To encourage new development with a clear street wall that is proportionate to its abutting street width.
- To adopt upper level setbacks above the street wall to emphasise the prevailing street wall effect at street level.
- To encourage continuous street edges with active ground floor frontages.
- To locate servicing, loading and vehicle access located away from primary frontages.
- To encourage utilisation and extension of the existing laneway network for pedestrian connections and services, through ground level setback to achieve widened lanes and increased permeability through the Activity Centre.
- To ensure the interface between the public realm and new development has regard to the human scale and perceived safety of these environments through active edges and opportunities for passive surveillance.

3 Transition

Objectives

- To ensure that new development abutting residential land provides for appropriate transition between changes in building heights as shown in Figure 16.
- For new development abutting residential land, to encourage the consolidation of upper level setbacks within the ResCode B17 profile to avoid repetitive stepped forms and to limit visual bulk.
- To ensure that new development abutting residential land provides for appropriate transition between changes in building heights as shown in Figure 16.
- To ensure a rear setback at the edge of the Activity Centre to provide provision of canopy trees.

4 Landscape & Environment

Objectives

- To retain the established garden setting of residential streets and filter it into the commercial core through new tree planting in front and side landscape setbacks.
- To maintain views toward the Dandenong Ranges National Park from current and future public places on the western ridgeline of the study area, particularly the key views from Tormore Reserve, western Boronia Park and the western Activity Centre entrance along Boronia Road.
- To support increased development intensity on larger sites, without diminishing the importance of the environmental and landscape significance of the Foothills area.
- To visually offset increases in building height through substantial canopy planting of indigenous trees along nature strips, between buildings and the site's street frontage.
- To retain and strengthen the bush boulevard character of Boronia Road and rail corridor approaches to the Activity Centre through canopy tree planting in front landscape setbacks and streetscapes.
- To enhance existing open spaces and provide opportunity for new open space on redevelopment sites.

5 Amenity

Objectives

- To ensure building heights do not result in the impact of unreasonable overshadowing impact on private land and public (footpaths and open space).
- To ensure future development maintains solar access to footpaths between 11.00 to 14.00 at the equinox (22 September).
- To ensure future development minimises overshadowing impact to existing and future open space between 11.00 to 14.00 at the winter solstice (22 June).
- To provide separation between buildings (above street wall/ podium) to facilitate outlook and amenity for existing and future building occupants.

6 Development

Objectives

- To encourage site specific development responses on particularly large or strategic sites.
- To explore new transit-oriented development opportunities above the rail corridor and bus interchange to encourage higher density development, new public realm opportunities and a more connected and cohesive Activity Centre.
- To encourage new public pedestrian links through large or strategic development sites.
- To develop underutilised land along the railway line where higher scale development can be built without direct streetscape, amenity or overshadowing concerns.
- To encourage consolidation of smaller sites to create viable sites to accommodate mixed use/apartment development.

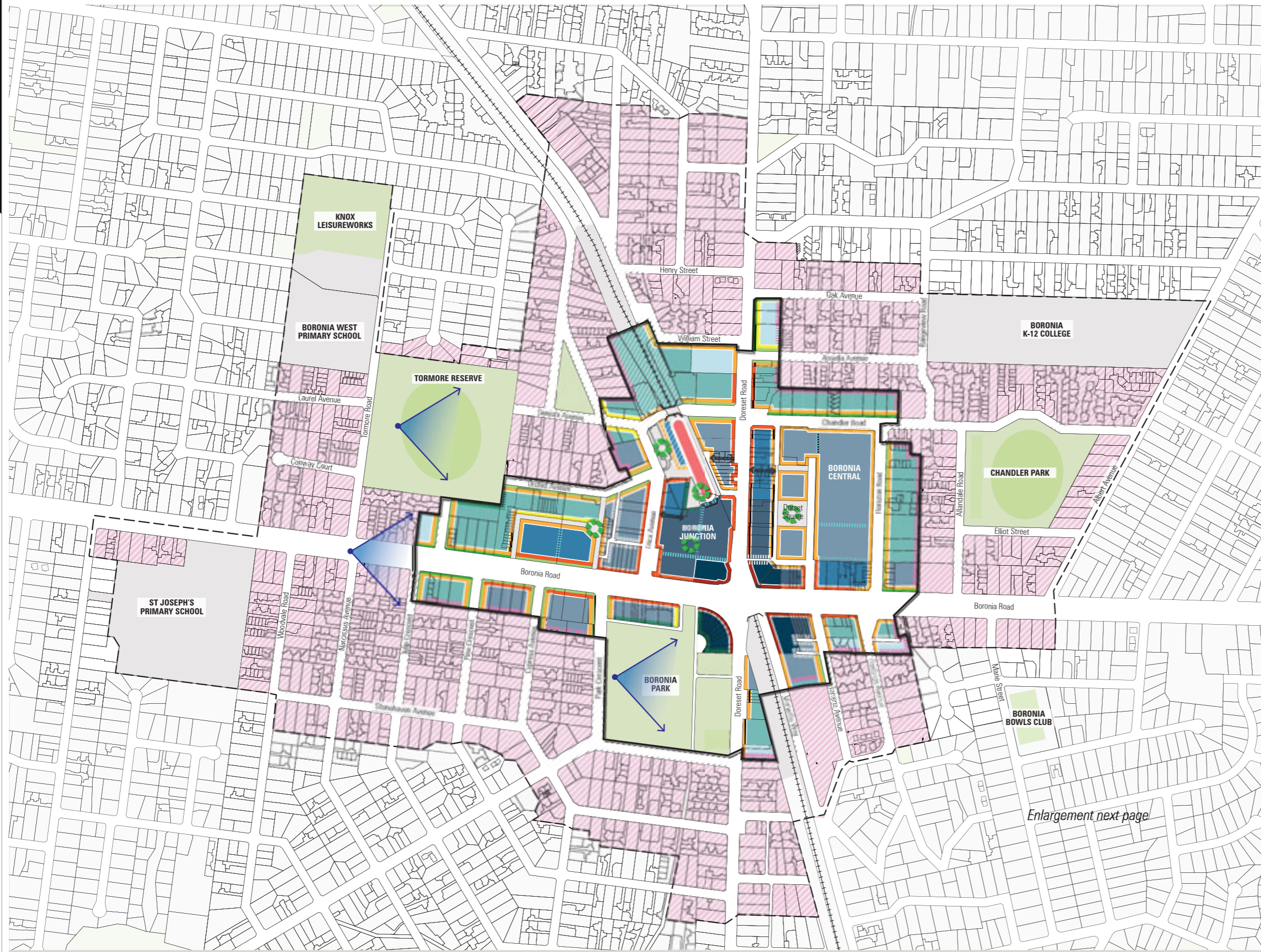
6.3 Recommended Built Form Objectives

Given Council's desire to replace DDO7 with a new DDO control, to guide the future built form of Boronia and the guidance of Practice Note No. 60 : Height and Setback Controls for Activity Centres) to require clear and concise design objectives. To assist Council in formulating such objectives (to implement the Boronia Renewal Structure Plan) we have drafted the following 6 objectives:

Draft Built Form Objectives

- **To maintain key views toward the Dandenong Ranges National Park from defined public locations within Tormore Reserve and Boronia Park.**
- **To encourage urban consolidation and development within the commercial core of Boronia.**
- **To enhance the 'bush boulevard' character along Boronia Road.**
- **To define the Boronia Road and Dorset Road intersection with prominent forms.**
- **To strengthen the pedestrian connections between Boronia's key retail anchors and the train station, through a network of high-quality public laneways and arcades.**





Future Built Form Proposition

- Legend
- Study Area [dashed box]
 - Commercial Core [white box]
 - Railway [red line with cross-ticks]
 - Open space [green box]
 - Recommended General Residential Zone
 - 3 storeys / 11.0m [pink hatched box]
 - 4 storeys / 13.5m [light blue box]
 - 5 storeys / 16.5m [medium blue box]
 - 6 storeys / 19.5m [darker blue box]
 - 7 storeys / 22.5m [dark blue box]
 - 8 storeys / 25.5m [darkest blue box]
 - 8 - 10 storeys / 25.5m - 31.5m [black box]
 - Rail Corridor Development [blue hatched box]
 - Boulevard Setback (6m) [green line]
 - Garden Setback (3m) [light green line]
 - New 2 storey streetwall (7.5m) [yellow line]
 - New 3 storey streetwall (10.5m) [orange line]
 - New 4 storey streetwall (13.5m) [red line]
 - New 6 storey streetwall (16.5m) [dark red line]
 - Respond to direct residential abuttal [pink hatched line]
 - Respond to existing laneway interface [blue hatched line]
 - Existing laneway/arcade [dashed line]
 - New laneway/arcade [dotted line]
 - Respond to open space interface [green hatched line]
 - Create public realm opportunities in nodes [green circle with arrows]
 - Protect views to Dandenong Ranges National Park [blue arrow]

Enlargement next page

Figure 16. Urban Form Vision (Boronia Activity Centre)

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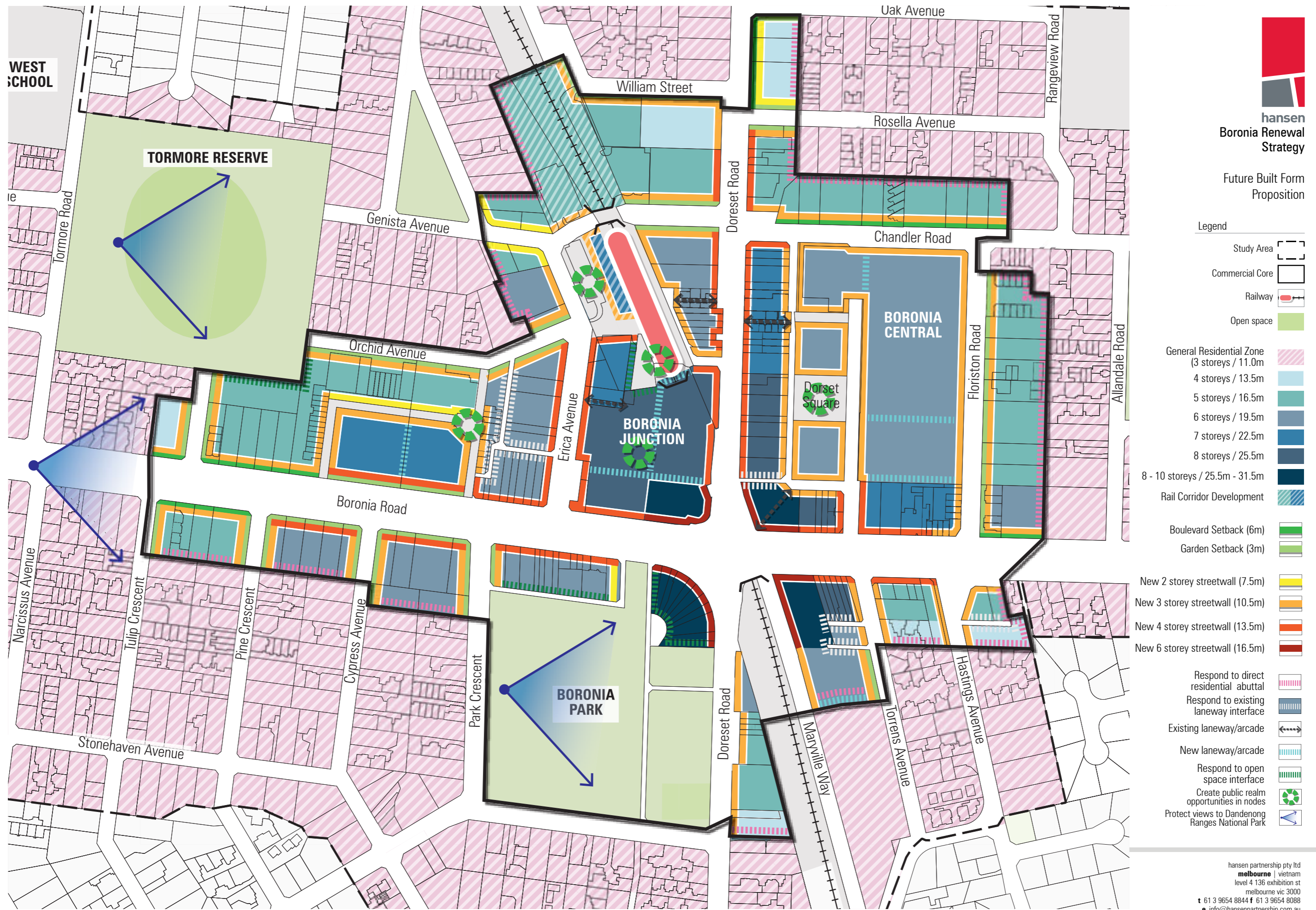


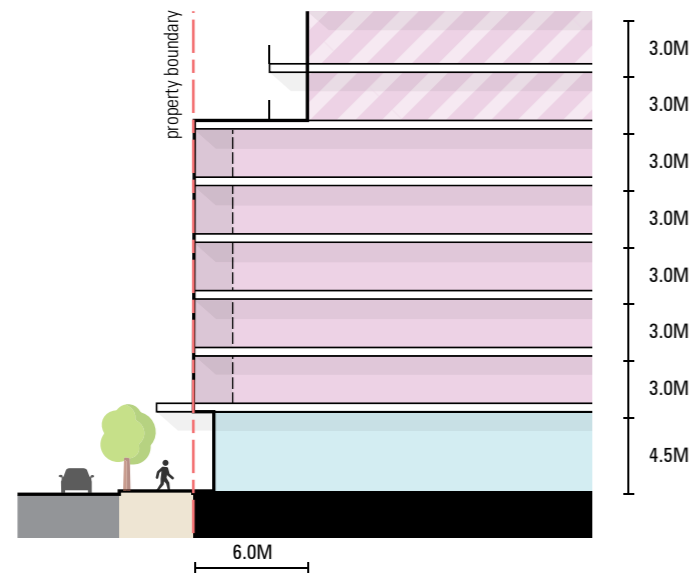
Figure 17. Urban Form Vision (Commercial Core)

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6.4 Typical Interface Treatments

This section illustrates recommended development outcomes at specific street, laneway and rear interface conditions.

Treatment 1 - Key Junction



Application

- Street frontages of allotments located at the intersection of Boronia Road and Dorset Road.

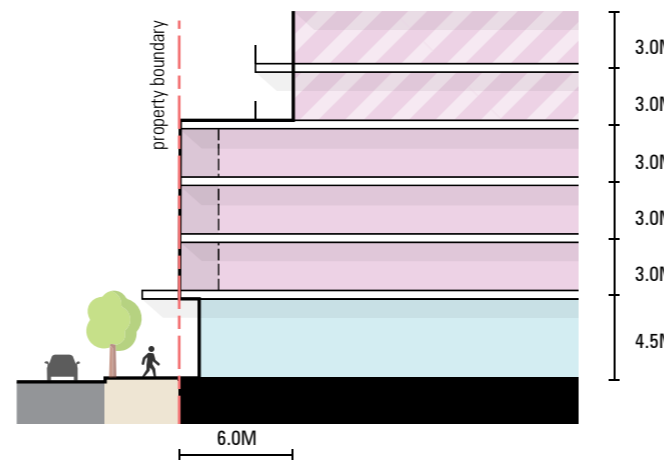
Interface Response

- 6 storey (19.5m) street wall.
- Ground floor setback along pedestrian priority routes where footpath/verge is less than 4m.
- Setback behind street walls/ podiums:
 - Minimum 6m.
 - Greater than 6m on sites subject to overshadowing of footpaths (at equinox between 11.00- 14.00).

Rationale

- To demarcate the major 'junction' of the Activity Centre with a prominent street edge condition.
- To adopt a street wall response that is proportionate to its street width.
- To adopt upper level setback above the street wall to emphasise the prevailing street wall/ podium effect at street level to create a wider footpath condition.
- To encourage continuous street edges which invite active ground floor frontages conducive to main streets and commercial areas.
- To create a wider footpath condition in commercial areas.
- To avoid overshadowing of footpaths on Boronia Road (south side) and Dorset Road (both sides) between 11.00-14.00 at Spring equinox.

Treatment 2 - Commercial Street



Application

- Other commercial streets with focus on activation and street definition.
- Pedestrian priority routes.
- Non residential streetscapes.

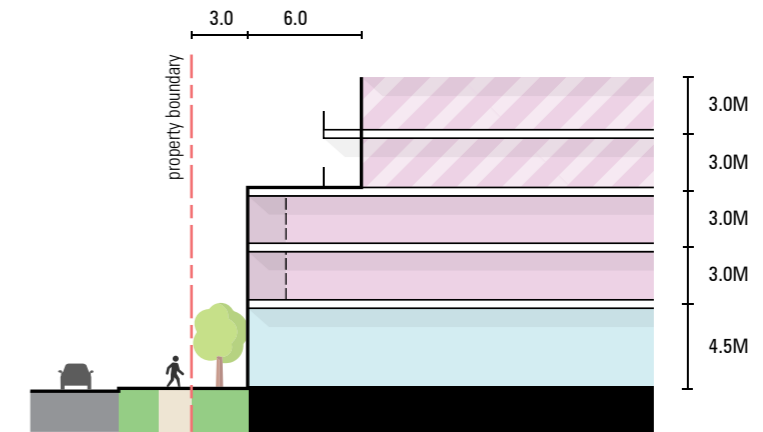
Interface Response

- 3 storey (10.5m) - 4 storey (13.5m) street wall.
- Ground floor setback along pedestrian priority routes where footpath/verge is less than 4m.
- Setback behind street walls/ podiums:
 - Minimum 6m.
 - Greater than 6m on sites subject to overshadowing of footpaths (at equinox between 11.00- 14.00).

Rationale

- To adopt a street wall response that is proportionate to its street width.
- To adopt upper level setback above the street wall to emphasise the prevailing street wall/ podium effect at street level.
- To encourage continuous street edges which invite active ground floor frontages conducive to main streets and commercial areas.
- To avoid overshadowing of footpaths on Boronia Road (south side) and Dorset Road (both sides) between 11.00-14.00 at Spring equinox.
- To create a wider footpath condition in commercial areas.

Treatment 3 - Landscape Setback



Application

- Sideages to local streets (typically 15m wide).
- Residential streetscapes.

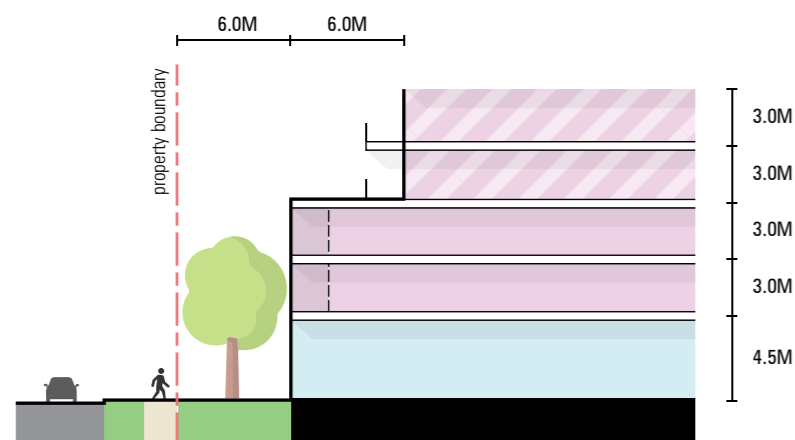
Interface Response

- 3 storey (10.5m) - 4 storey (13.5m) street wall.
- 3m ground level setback from street frontage.
- Avoid SPOS provision within front setback at natural ground level, can be permitted if appropriately elevated to surveil the public realm.
- Minimum 6m setback above podium.

Objectives

- To filter the established green setting of the surrounding residential streets into the commercial core.
- To retain and enhance the established garden setting of residential streets.
- To provide opportunities for new landscaping including additional street trees and understorey vegetation.
- To adopt upper level setback above the street wall to emphasise the prevailing podium effect at street level.
- To provide appropriate transition at the edge of the commercial core and the residential surrounds.

Treatment 4 - Bush Boulevard Setback



Application

- Boronia Road spine at Activity Centre entrances.

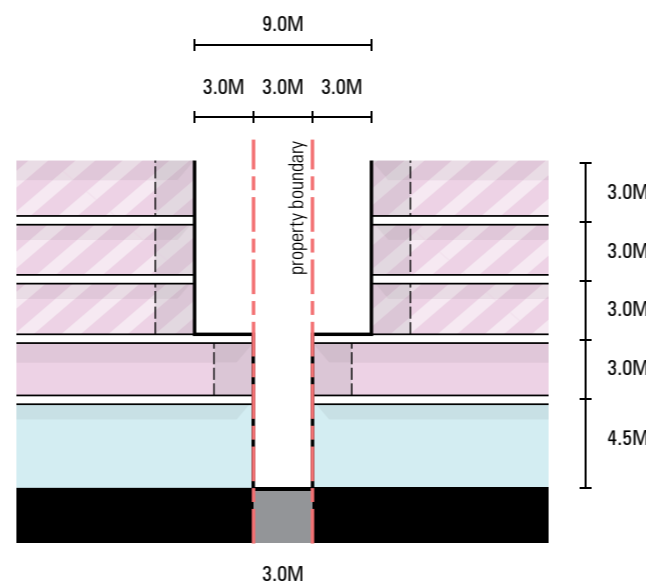
Interface Response

- 3 storey (10.5m) street wall.
- Avoid SPOS provision within front setback at natural ground level, can be permitted if appropriately elevated to surveil the public realm.
- Minimum 6m setback above podium.
- Discourage car parking in the front setback.

Rationale

- To retain and strengthen the Bush Boulevard character of Boronia Road, signposting the arrival into the Activity Centre.
- To adopt upper level setback above the street wall to emphasise the prevailing street wall/ podium effect at street level.
- To achieve a legible transition to residential precinct.

Treatment 4 - Existing / New Laneway



Application

- Existing and future laneway/ mid-block pedestrian links, typically 3-4m wide (ie. Chandler Arcade).

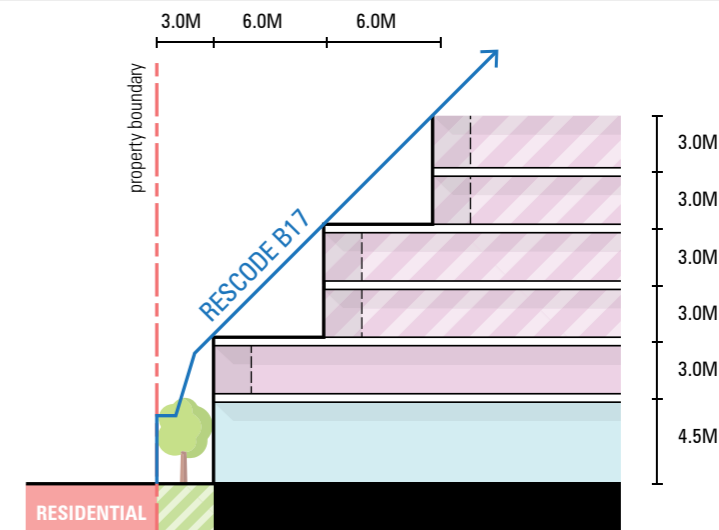
Interface Response

- 2 storey (7.5m) building base/ podium.
- Minimum 1.5m ground level setback from centreline of laneway.
- 3m upper level setback above building base/ podium for a minimum 9m building separation between upper levels of balconies and habitable room windows.

Objectives

- To encourage utilisation and extension of existing laneway network for pedestrian connection and passive surveillance through upper level activities.
- To provide separation between buildings (above street wall/ podium) to facilitate outlook and amenity to existing and future building occupants (residents/ workers).

Treatment 7 - Direct Abuttal to GRZ



Application

- Where an Activity Centre allotment directly abuts the rear or side boundary of land zoned Residential.

Interface Response

- 2 storey podium (7.5m) with a minimum 3m ground level setback from boundary to GRZ.
- Levels above the podium must be consolidated into a maximum of 2 setbacks within a the ResCode B17 profile.
- Development adjoining a side boundary of land zoned Residential must comply with the ResCode 'North-facing windows' Standards A13 and B20.

Rationale

- To achieve a legible transition to residential precinct.
- Specifying a specific ground level setback avoids built form immediately abutting residential properties, increasing the sense of space.
- To provide the integration of landscaping for screening and transition to the residential surrounds.
- To provide space for provision of canopy trees within the rear setback.

7.0 Built Form Testing

7.1 Modelling Assumptions

This section illustrates and describes the outcomes of the 3-Dimensional testing. In determining appropriate building heights and setbacks, visual testing from the 3 key viewpoints identified in the Built Form Proposition was completed. The workflow of this exercise was as follows:

- Modelling the existing DDO7 building envelopes;
- Incrementally adding/subtracting additional levels until key views to the Dandenong Ranges were overwhelmed or dominated by additional form;
- Applying setbacks based on the Urban Design Objectives and typical interface responses discussed in Chapter 6;
- Lowering envelope levels that caused inconsistencies with the Urban Design Objectives discussed in Chapter 6 (ie. overshadowing of pedestrian paths or open spaces)
- Presenting and discussing visual testing with Council Project Working Group, at a workshop session.

Formula for deriving numerical building heights

The maximum building height have been calculated to accommodate higher than minimum floor to floor heights, in order to:

- Allow for greater than minimum building standards and provide flexibility for future uses;
- Encourage provision of higher floor to ceiling dimensions to enhance internal amenity; and
- Allowance for other design elements to be accommodated, such as parapets, railings and roof features.

The following numerical floor to floor dimensions where employed:

- Ground Floor: 4.5m
- First Floor and above: 3m

Height (Storeys)	Height (Metres)
1	4.5m
2	7.5m
3	10.5m
4	13.5m
5	16.5m
6	19.5m
7	22.5m
8	25.5m
10	31.5m

Building envelopes for residential areas abutting the commercial core were modelled to provide accurate context for the foreground of view testing. Building envelopes for the residential areas comply with their relevant zoning mandatory maximum heights.



Figure 18. 3D perspective image of Built Form Proposition looking north-east.

Balconies

Provision of balconies is assumed to occur within the defined street walls, with recessed balconies. At upper levels (above the street wall) balconies may project a maximum of 2m forward of the building façade.

Roof Top Terraces

Provision of roof top terraces is encouraged. However, for the purposes of built form modelling it was assumed their provision would occur within the defined heights and number of storeys. Depending on detailed design considerations, roof top terraces could be provided 'on top' of the defined heights provided that the terrace:

- Does not constitute a 'level' or storey;
- Is setback from the storey below;
- Is not visible from standing eye level of the opposite side of the street; and
- Does not impact of the key views towards the Dandenong Ranges National Park from the three identified public vantage points.

Top Floor Depth

For the purpose of determining the maximum height for properties not constrained by the identified views towards the Dandenong Ranges, a minimum depth of 10m has been used for the upper most level. This dimension is based on the top level being able to accommodate a typical apartment depth and corridor access.

Car Parking

Provision of car parking is assumed to occur at either:

- Basement level; or
- At ground level, provided it is not visible from the street frontage or public realm and a viable building depth (sleeve) is provided to the street to ensure appropriate ground floor activation.
- Basement car parking is encouraged.
- Podium level car parking is not encouraged, unless above the rail corridor.

7.2 View testing

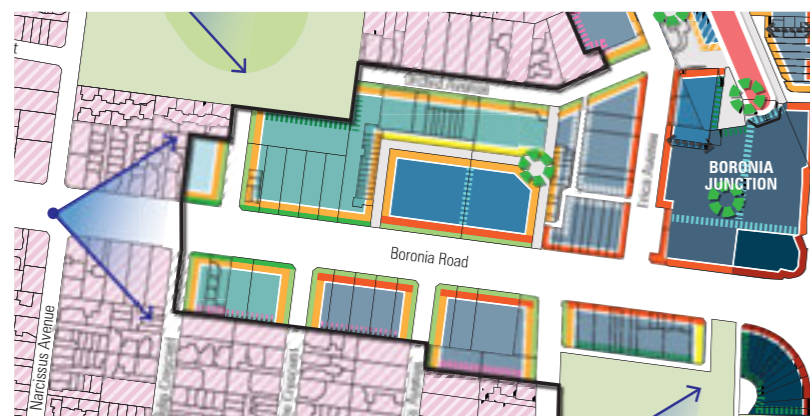
This section documents the outcomes of key view testing exercises. By way of comparison the below massing illustrates potential future building mass envelopes and those currently within the DDO7 provisions, comparing them to the Proposed Built Form Proposition. No vegetation is shown within the massing model, however existing canopy trees and landscape provision within the private and public realms will soften and filter views towards the building envelopes. Therefore, these images will appear starker than in reality.

View 1: Western Gateway

Key Findings

- Speckles of urban settlement on the foothills of the Dandenong Ranges are visible in the existing view.
- The proposed additional heights within the Built Form Proposition do not overwhelm or significantly encroach into views of the Dandenong Ranges more so than the existing DDO7 control.
- Proposed 'Landscape' and 'Bush Boulevard' ground level setbacks under the Built Form Proposition contribute to providing a wider viewshed in framing views toward the Dandenong Ranges.
- The topography of the Activity Centre sloping down toward the 'junction' of Boronia Road and Dorset Road allows greater heights to be accommodated in the lower reaches of the commercial core without overwhelming the Dandenong Ranges in the viewshed.
- The additional heights are recessive, due to their setbacks and do not impact on the profile of the Dandenong Ranges.

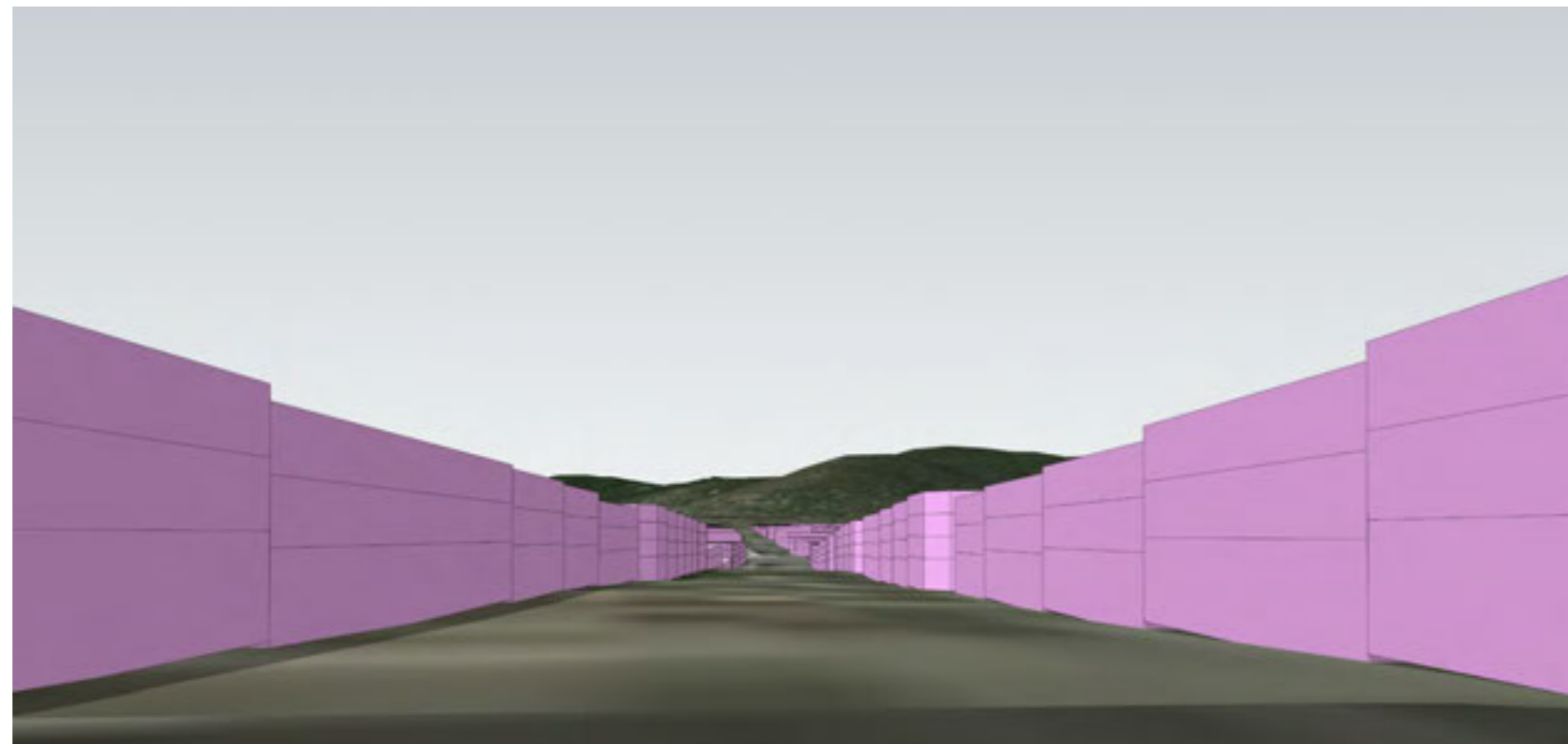
Note: Visual testing is confined to envelopes and topography, not inclusive of existing canopy vegetation along Boronia Road.



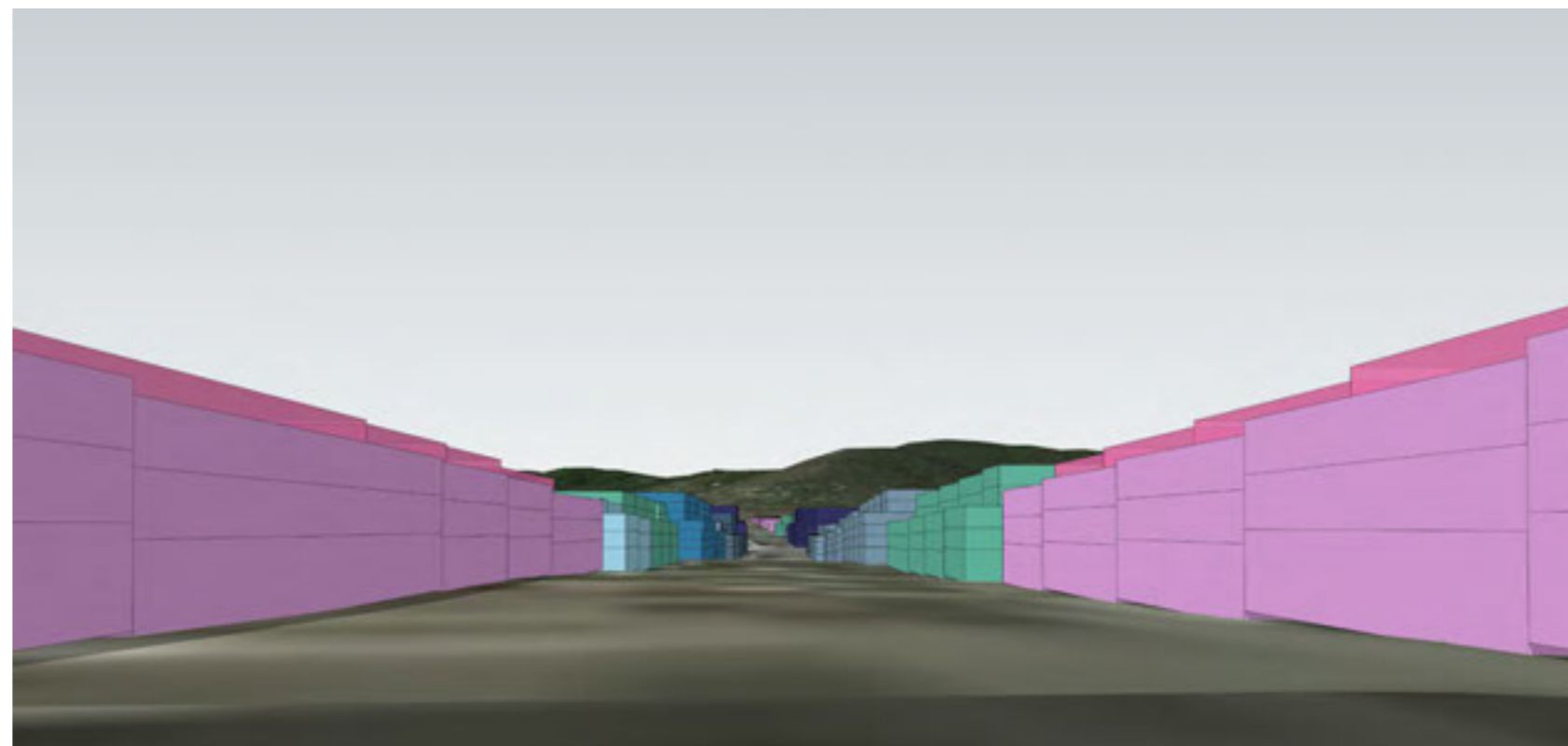
View Location



Existing View (approximate)



Existing DDO7 Control



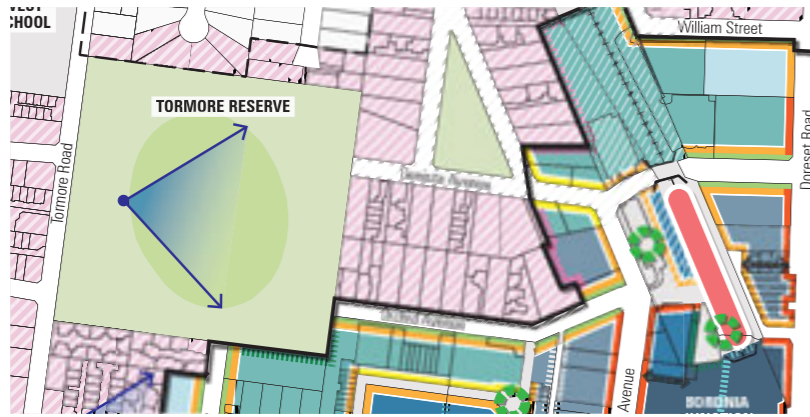
Proposed Built Form Proposition

View 2: Tormore Reserve (West)

Key Findings

- The proposed additional heights within the Built Form Proposition do not overwhelm or significantly encroach into views of the Dandenong Ranges more so than the existing DDO7 control.
- The additional level applied to residential land in the foreground (under a potential rezoning to Residential Growth Zone), creates visual screening to taller elements in the background, ie. 7-8 storeys along Dorset Road.
- Views toward the Dandenong Ranges are considered to be equally prominent from the viewpoint under both the existing DDO7 envelopes and the proposed Built Form Proposition.

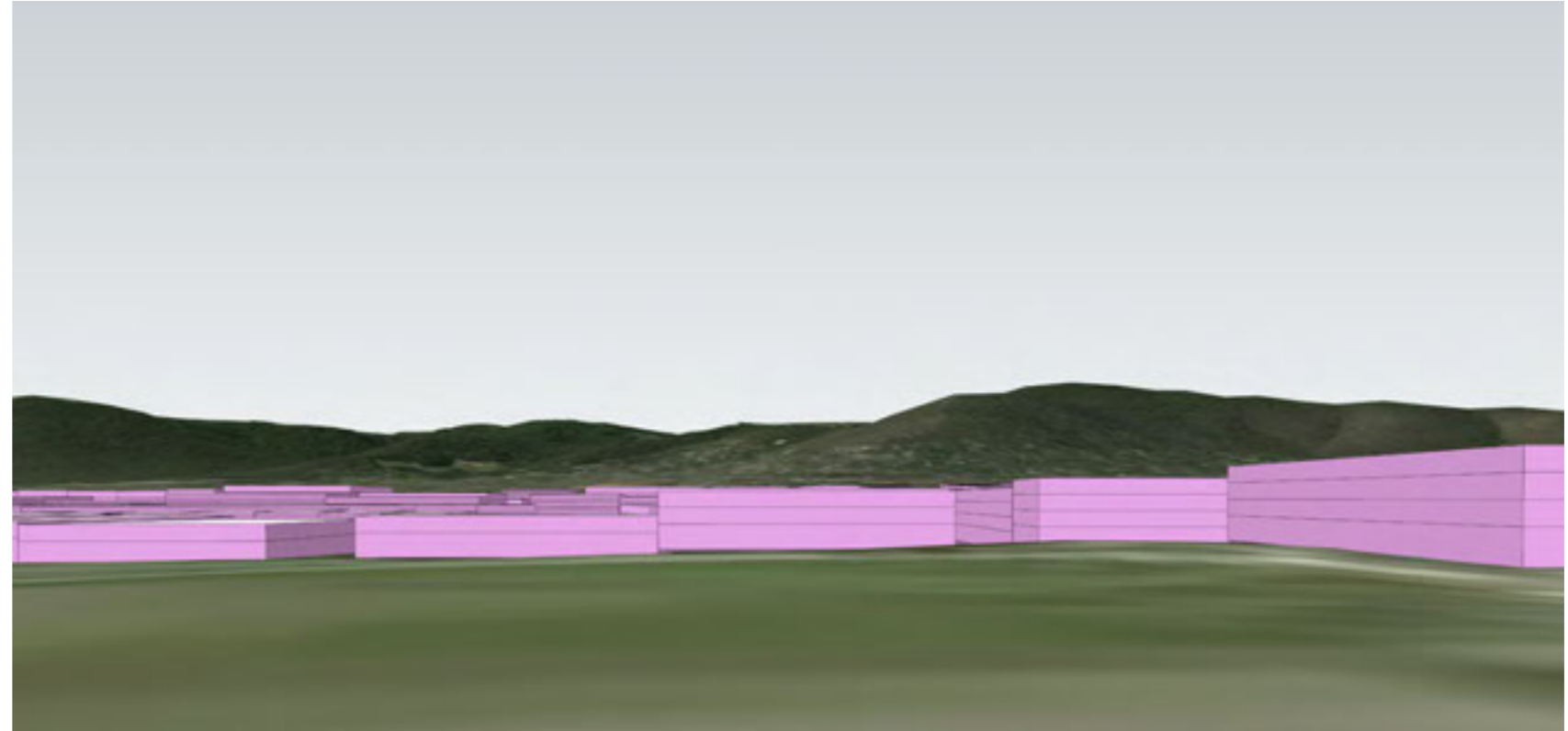
Note: Visual testing is confined to envelopes and topography, not inclusive of existing canopy vegetation along the western boundary of Tormore Reserve.



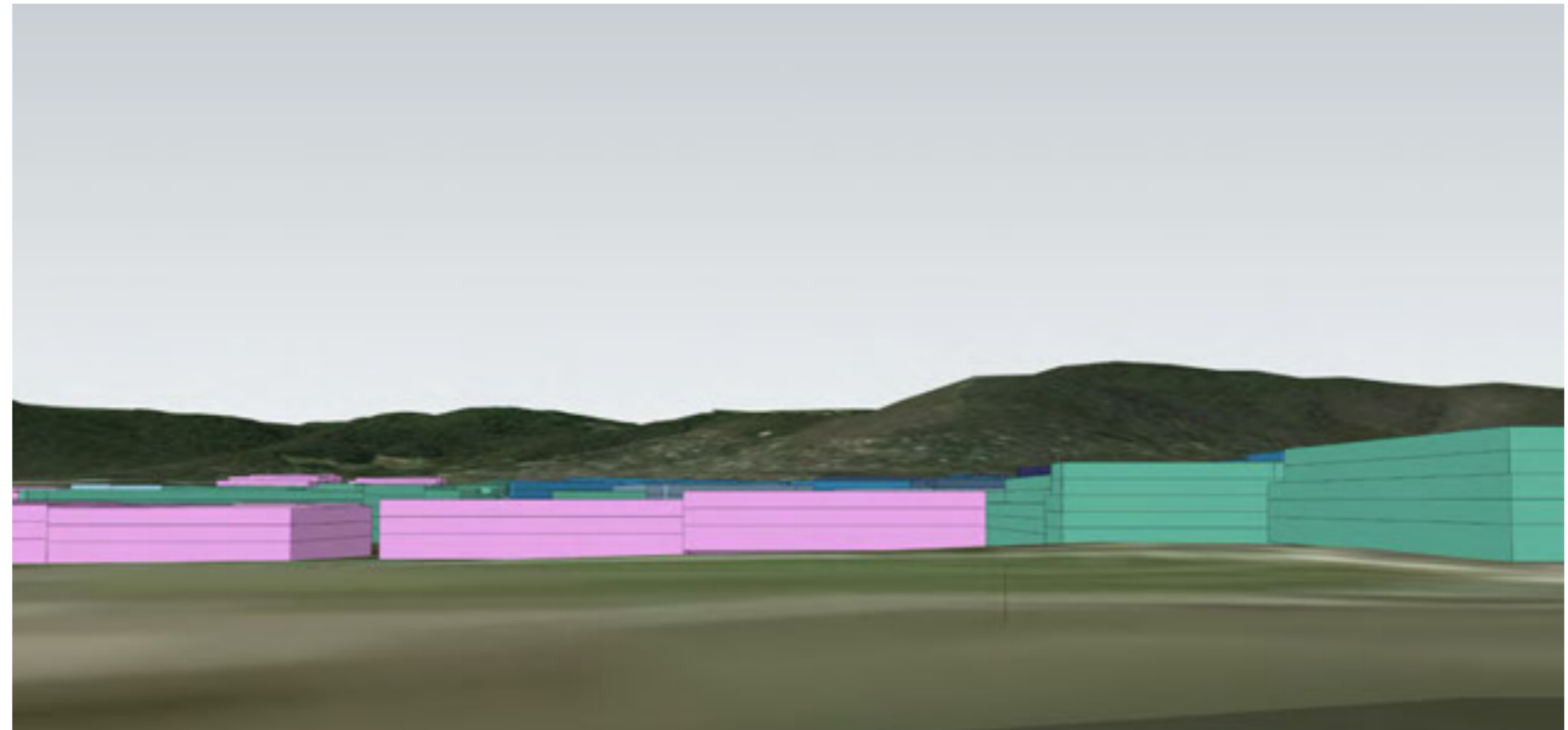
View Location



Existing View (approximate)



Existing DDO7 Control



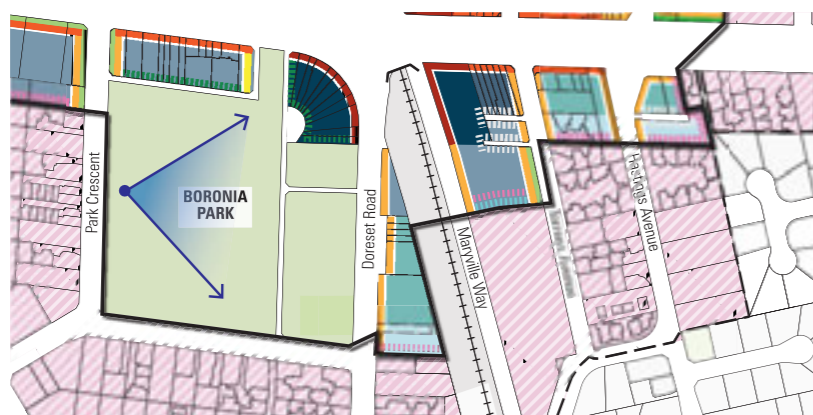
Proposed Built Form Proposition

View 3: Boronia Park (West)

Key Findings

- The proposed additional heights within the Built Form Proposition do not overwhelm or significantly encroach into views of the Dandenong Ranges more so than the existing DDO7 control.
- Views towards the higher ridgelines (right of screen) are considered to be equally prominent from the viewpoint under both the existing DDO7 envelopes and the proposed Built Form Proposition.
- While glimpses to lower ridgelines have been lost under the Built Form Proposition (left of view), these were not considered to be integral to the setting after the application of the current DDO7 control, particularly at the junction where greater heights can be accommodated in the remaining two key viewpoints.

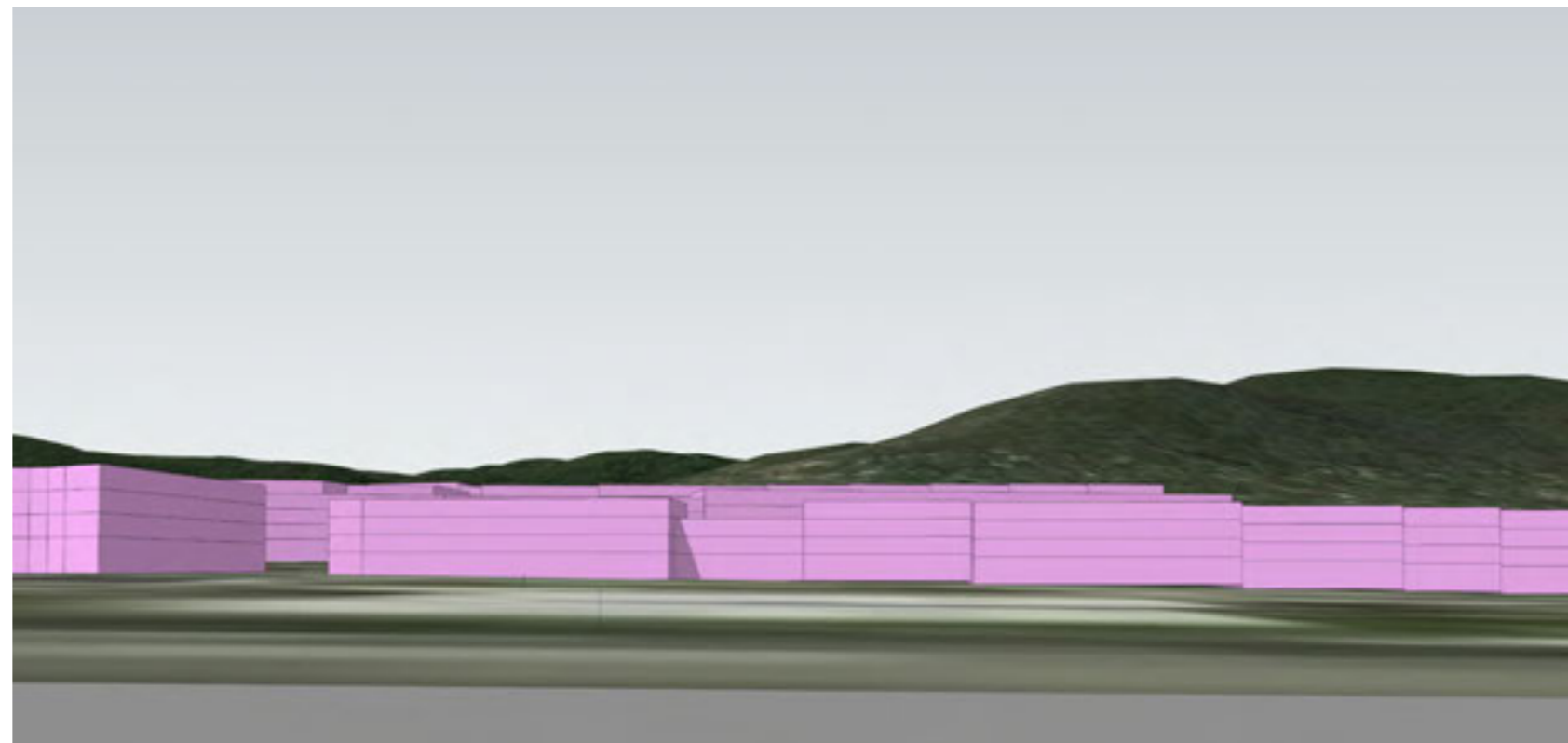
Note: Visual testing does not consider the existing structures (Basketball Stadium or Library) or canopy vegetation within Boronia Park.



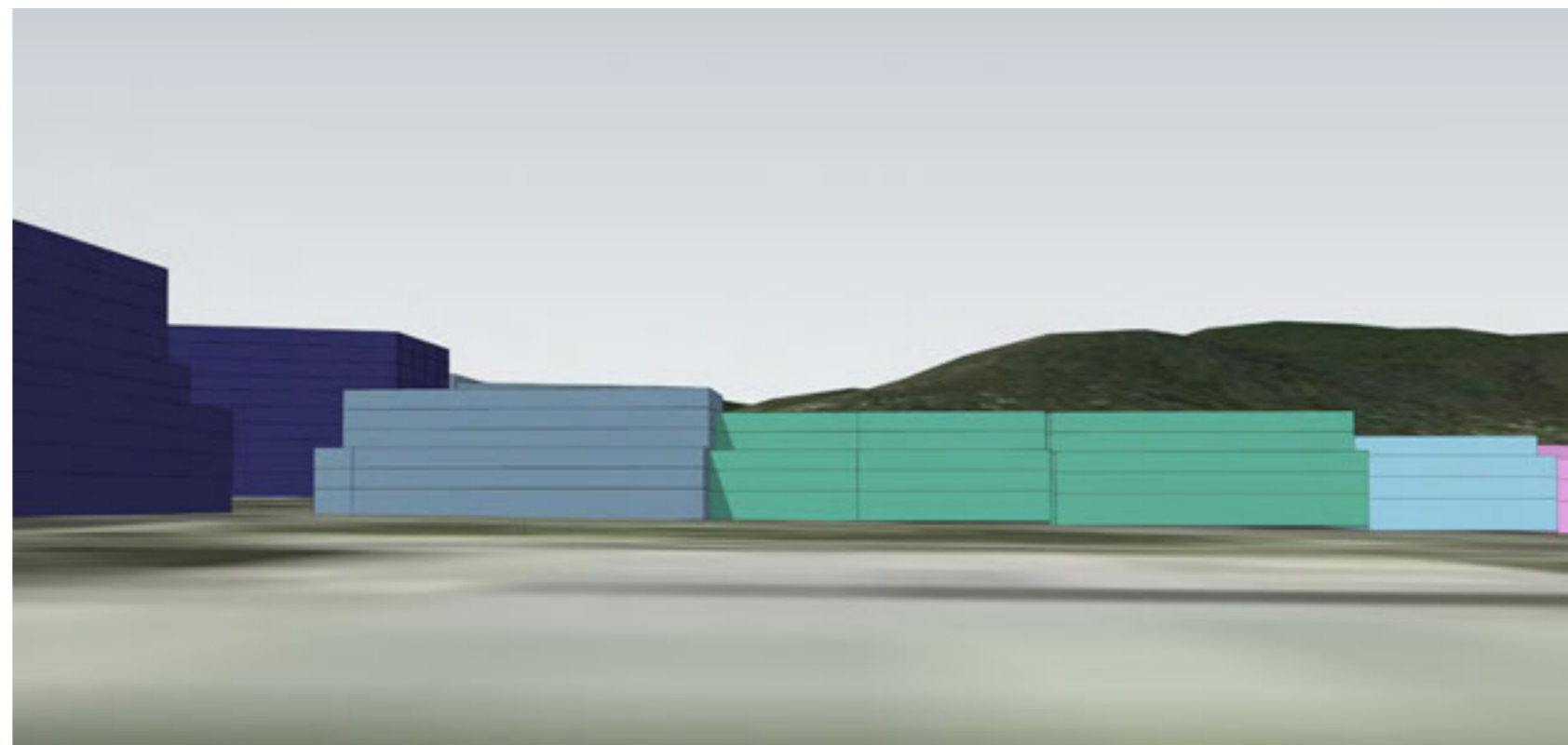
View Location



Existing View (approximate)



Existing DDO7 Control



Proposed Built Form Proposition

7.3 Indicative Yield Study

This section details the findings of an indicative yield study completed to provide Council with an indicative number of dwellings that can be achieved under the heights proposed in the Built Form Proposition.

Yield Calculation Assumptions

From the outset of this project, Council had a strategic yield target of accommodating 2173 dwellings within the suburb of Boronia and at least 60% of these dwellings (or approximately 1305 dwellings) with the Boronia Activity Centre. Council also wants to encourage apartment style dwellings within the Activity Centre.

Assumption	Value	Description
Net Saleable Area (NSA)	80%	Absorbs inefficiencies such as shared circulation and servicing.
Average Dwelling Size	80m ²	Considered to be a standard area for a two bedroom apartment.
Coverage Type A	50%	Site with residential and landscape interface treatments. Or large strategic site requiring internal access, open spaces, separation.
Site Coverage Type B	60%	Site with either residential or landscape interface treatments.
Site Coverage Type C	70%	Site in secondary commercial streets not constrained by residential or landscape interface treatments.
Site Coverage Type D	80%	A Site in primary commercial streets not constrained by residential or landscape interface treatments.

- Yield calculation generally applies to land within 'Commercial Core' (existing C1Z and MUZ)
- Excludes allotments identified by Council GIS mapping as already having undergone recent development.
- Ground floors are not included in yield calculation to assume the provision of commercial uses and car parking at ground level only.
- Calculation method is as follows:
 - Lot area x estimated site coverage (varying between 50%-80% depending on factors such as ground/upper level setbacks/transition/solar access) = residential Gross Floor Area (GFA).
 - Residential GFA x NSA rate (80%)
 - NSA / average dwelling size (currently using 80sqm to factor in a mix of apartments and townhouses).
- This is not a lot-by-lot yield given the expanse of the study area, but achieved through the clustering of adjoining lots of the same proposed height.

Yield Summary

SUMMARY				
Areas	Dwellings			
	100% uptake	75% Uptake	50% Uptake	25% Uptake
Area 1	144	108	72	36
Area 2	1,036	777	518	259
Area 3	446	334	223	111
Area 4	1,906	1,430	953	477
Area 5	741	556	370	185
Area 6	1,149	862	575	287
Area 7	805	603	402	201
Area 8	465	348	232	116
Area 9	155	116	77	39
Total	6,846	5,135	3,423	1,712

Given the predictive nature of a yield study for an entire Activity Centre, comprising many properties (of diverse attributes) and multiple landowners it is impossible to accurately anticipate future land speculation and development activity. Therefore, our yield calculation comprises 4 scenarios based on 'uptake' of sites and development. We consider that an uptake of 25% to best represent the level of change and development within the Boronia Activity Centre into a 20 year horizon. Based on this uptake rate, we predict approximately 1,712 dwellings can be accommodated within the Boronia MAC.





Figure 19. Map identifying clustered 'blocks' for yield purposes.

APPENDIX A

DETAILED YIELD SUMMARY

APPENDIX B

SHADOW TESTING

Appendix B: Shadow Testing

Spring Equinox 11am



Spring Equinox 12pm



Spring Equinox 1pm



Spring Equinox 2pm



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