

## 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.



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

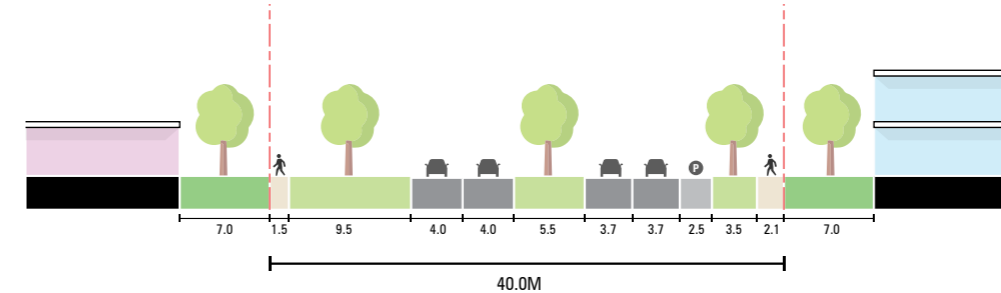
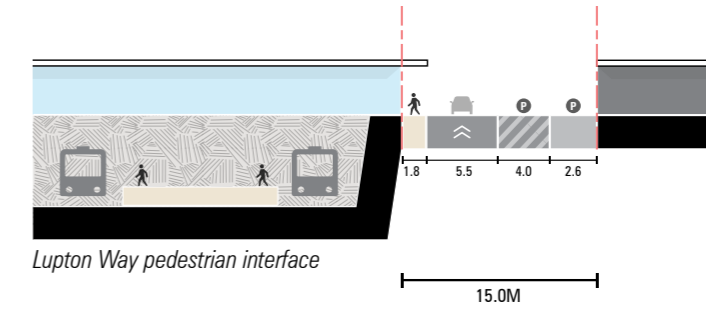
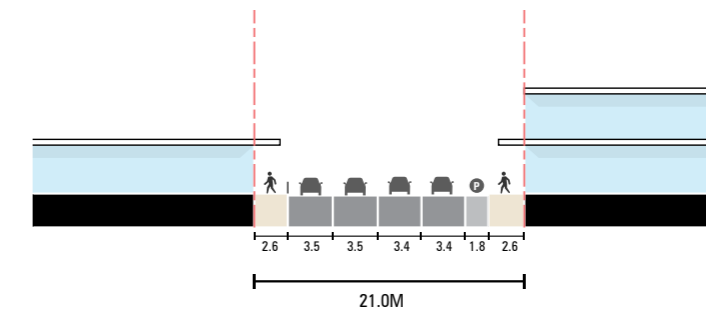
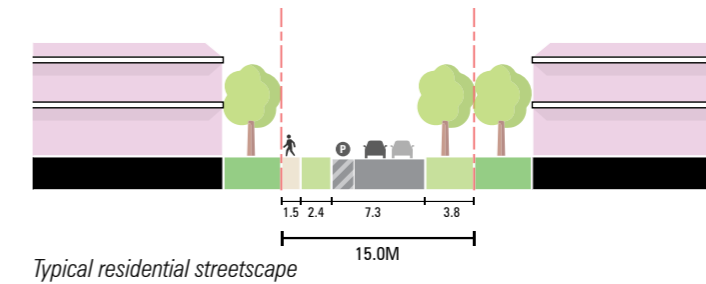




Figure 13. Landscape & Public Realm



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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.



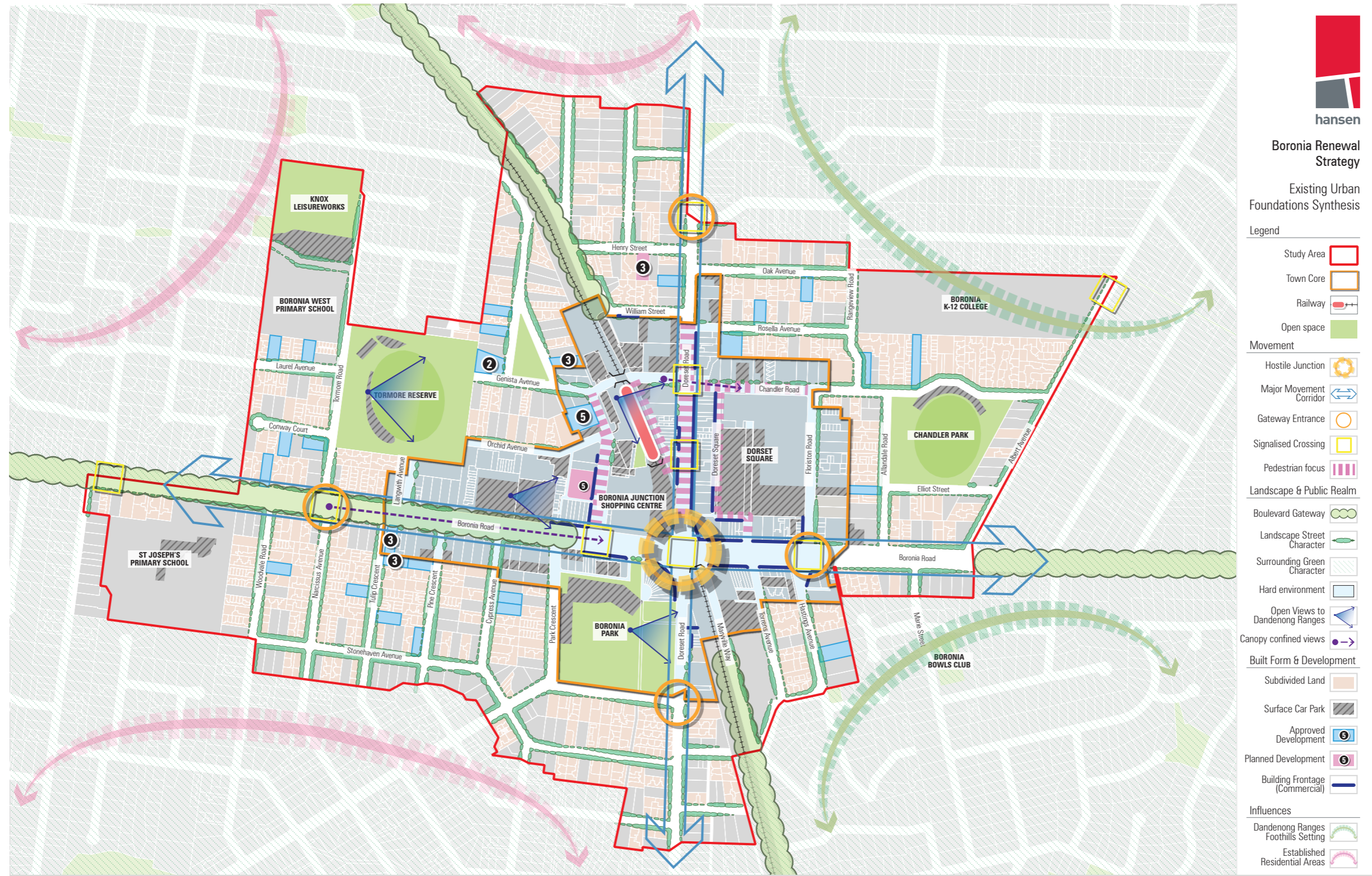


Figure 14. Foundations Diagram



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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 tire in with a cycle line along Springfield Road, to the broader Blind Creek trail.

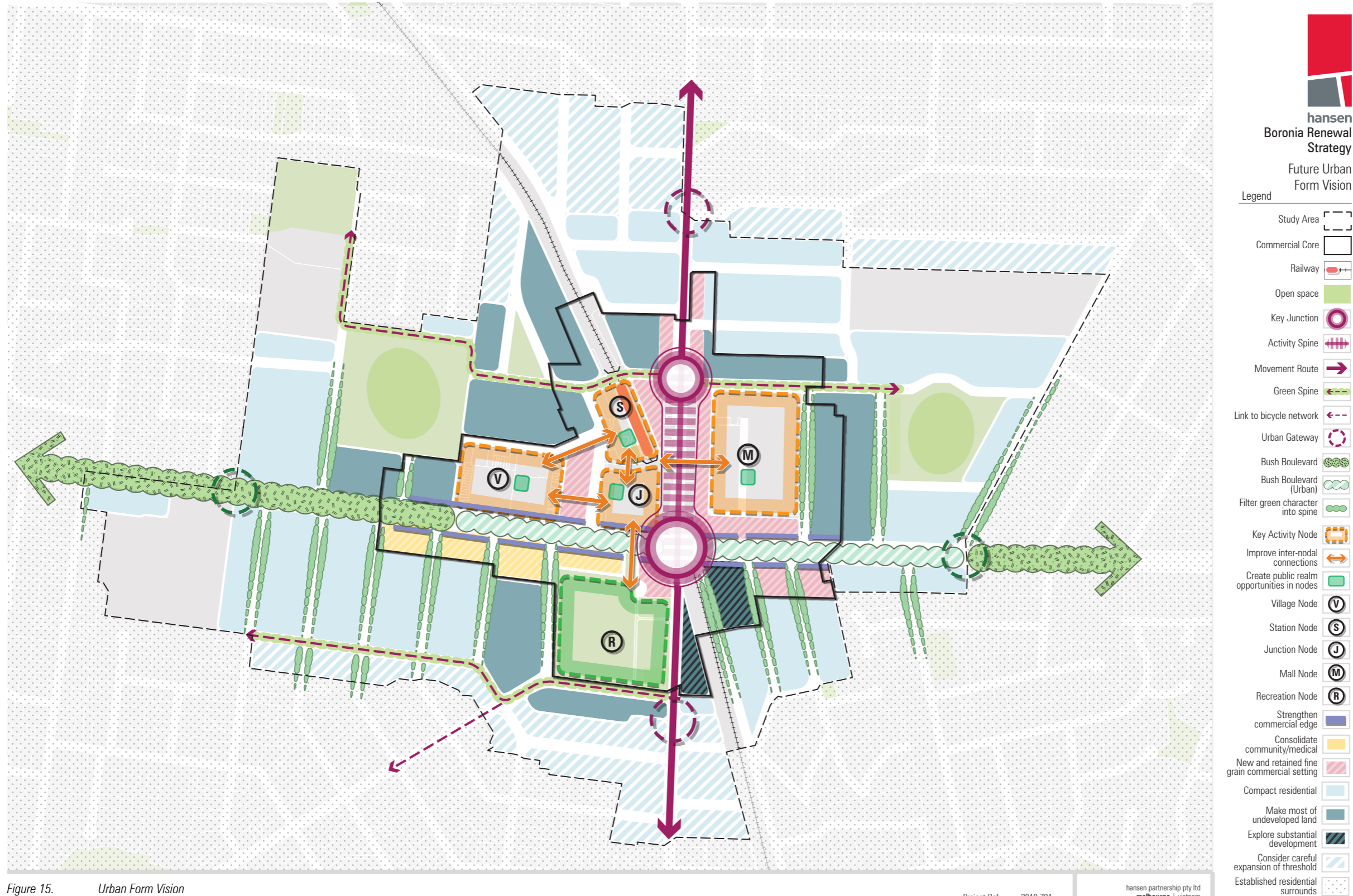
### Key Gesture 6: Connect the activity nodes

- 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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Legend

- Study Area [dashed line]
- Commercial Core [white box]
- Railway [red line with cross-ticks]
- Open space [green box]
- Key Junction [purple circle]
- Activity Spine [purple line with cross-ticks]
- Movement Route [red arrow]
- Green Spine [green arrow]
- Link to bicycle network [dashed line with cross-ticks]
- Urban Gateway [purple circle with cross-ticks]
- Bush Boulevard [green wavy line]
- Bush Boulevard (Urban) [green wavy line with cross-ticks]
- Filter green character into spine [green wavy line with cross-ticks]
- Key Activity Node [orange box with letter]
- Improve inter-nodal connections [orange arrow]
- Create public realm opportunities in nodes [green box with letter]
- 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 with diagonal lines]
- Consider careful expansion of threshold [light blue box with diagonal lines]
- 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 DD07 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.**



**CHAPTER 6**

Boronia Renewal Strategy - Built Form Proposition - Background & Foundations Report | Hansen Partnership Pty Ltd

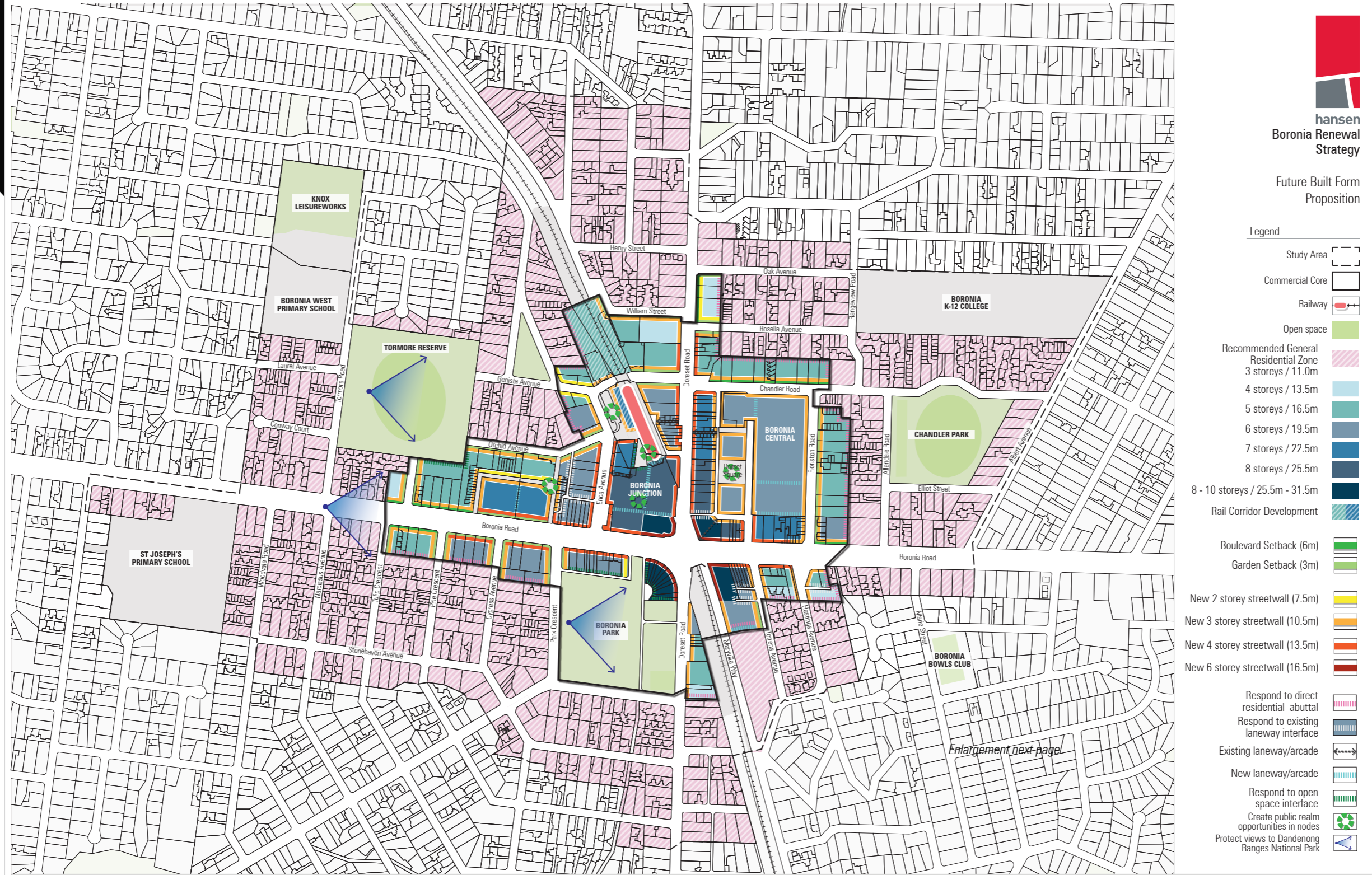


Figure 16. Urban Form Vision (Boronia Activity Centre)



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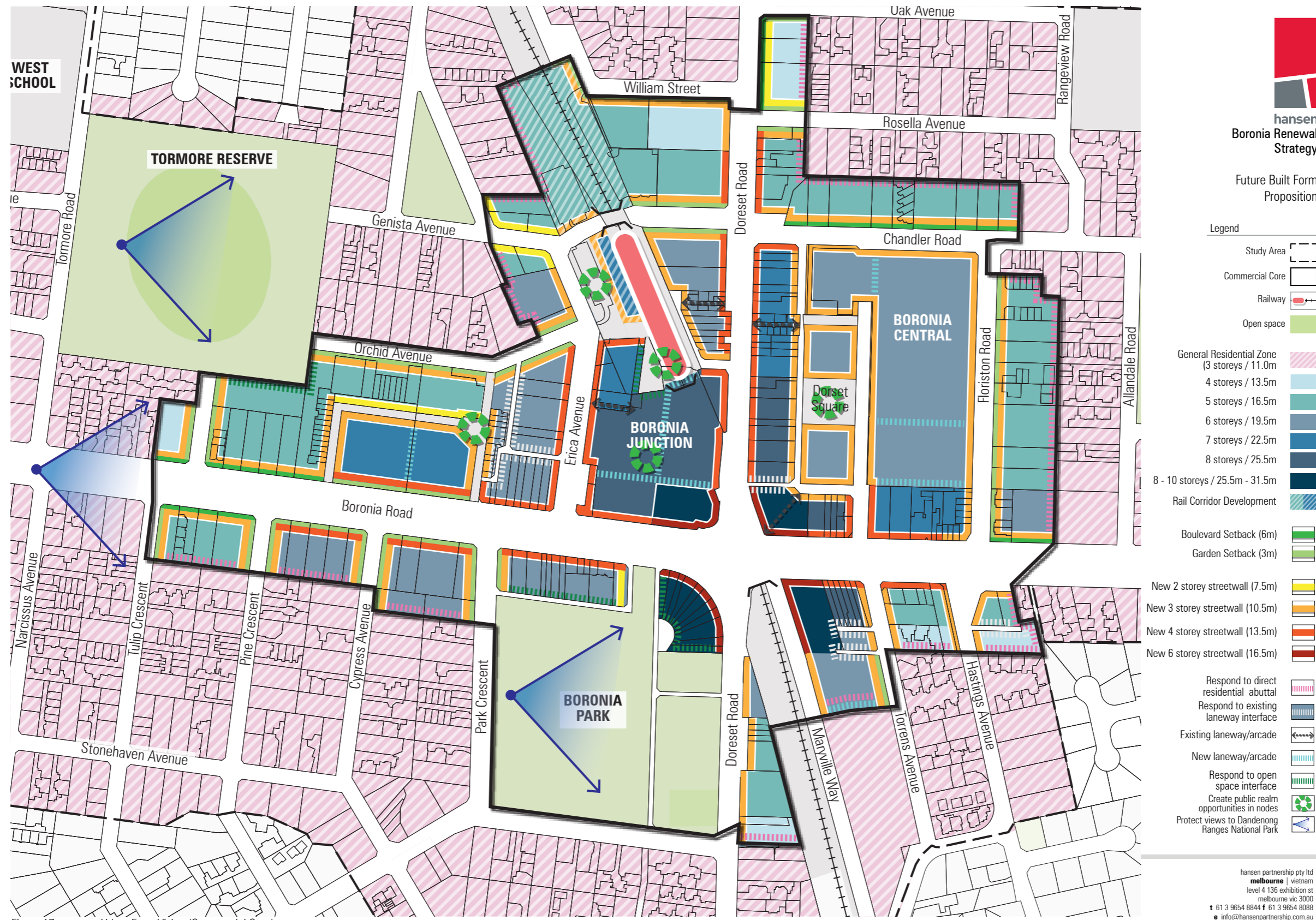
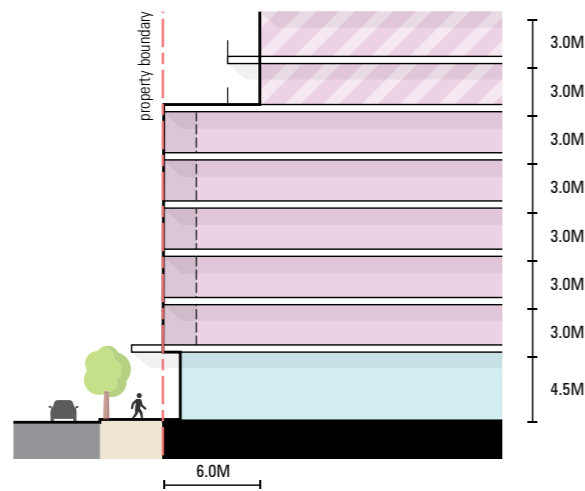


Figure 17. Urban Form Vision (Commercial Core)

## 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.

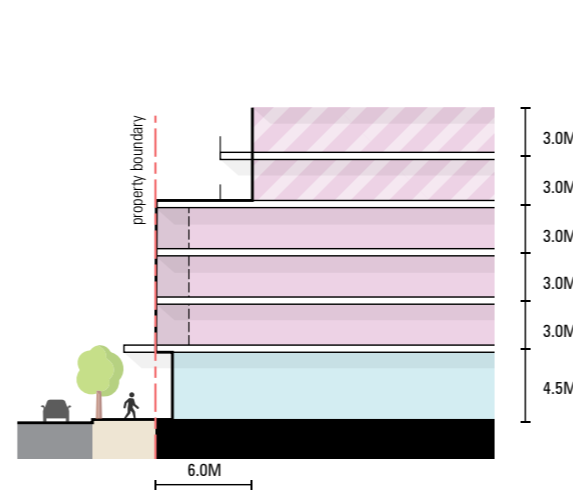
#### Interface Response

- 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.

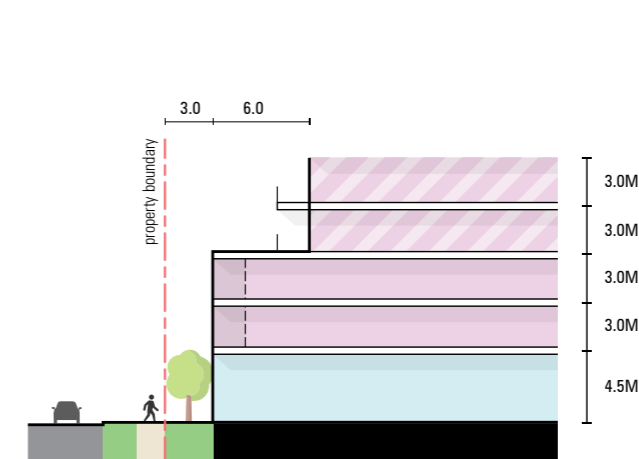
#### Interface Response

- 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.

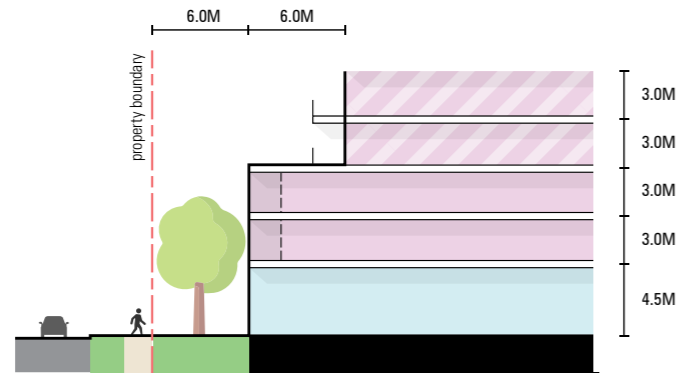
#### Interface Response

- 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.

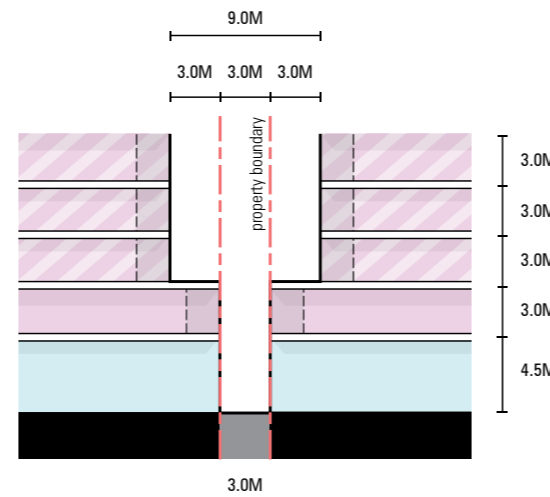
**Interface Response**

- 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).

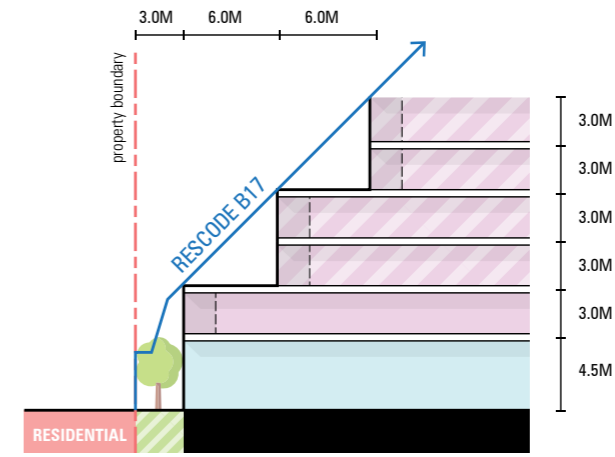
**Interface Response**

- 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.

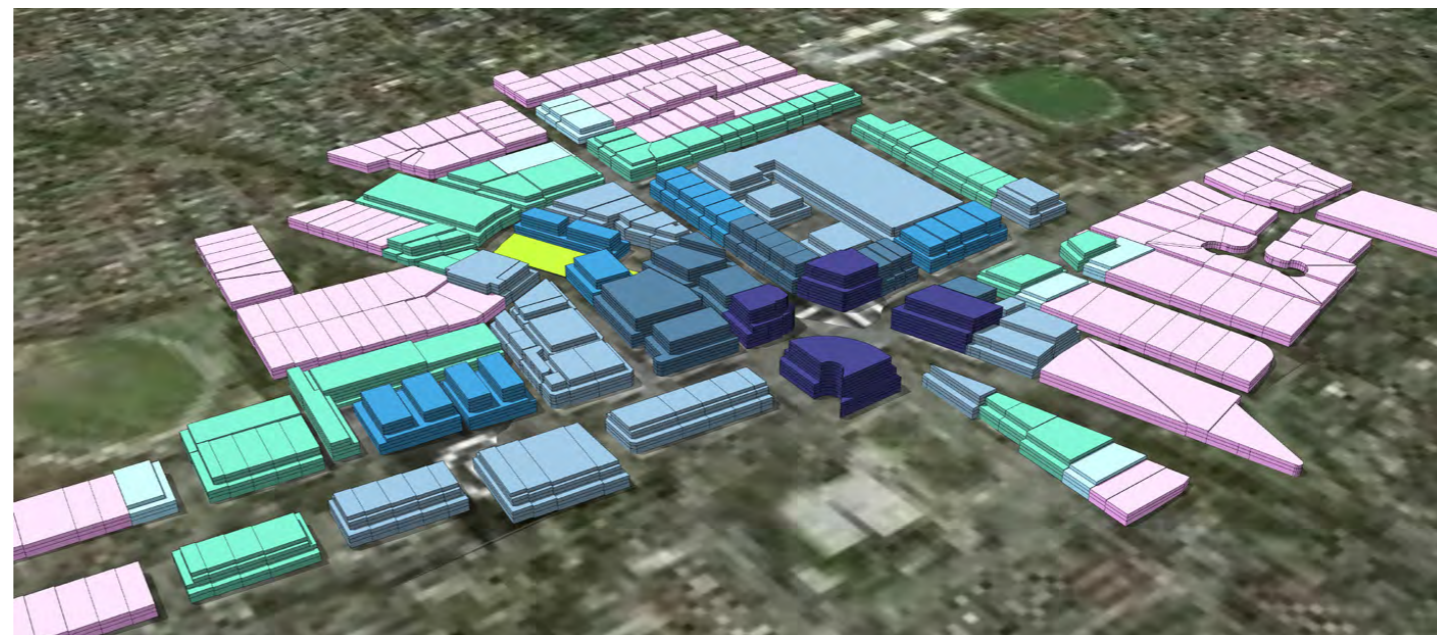


Figure 18. 3D perspective image of Built Form Proposition looking north-east.

### 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 DD07 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 DD07 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.

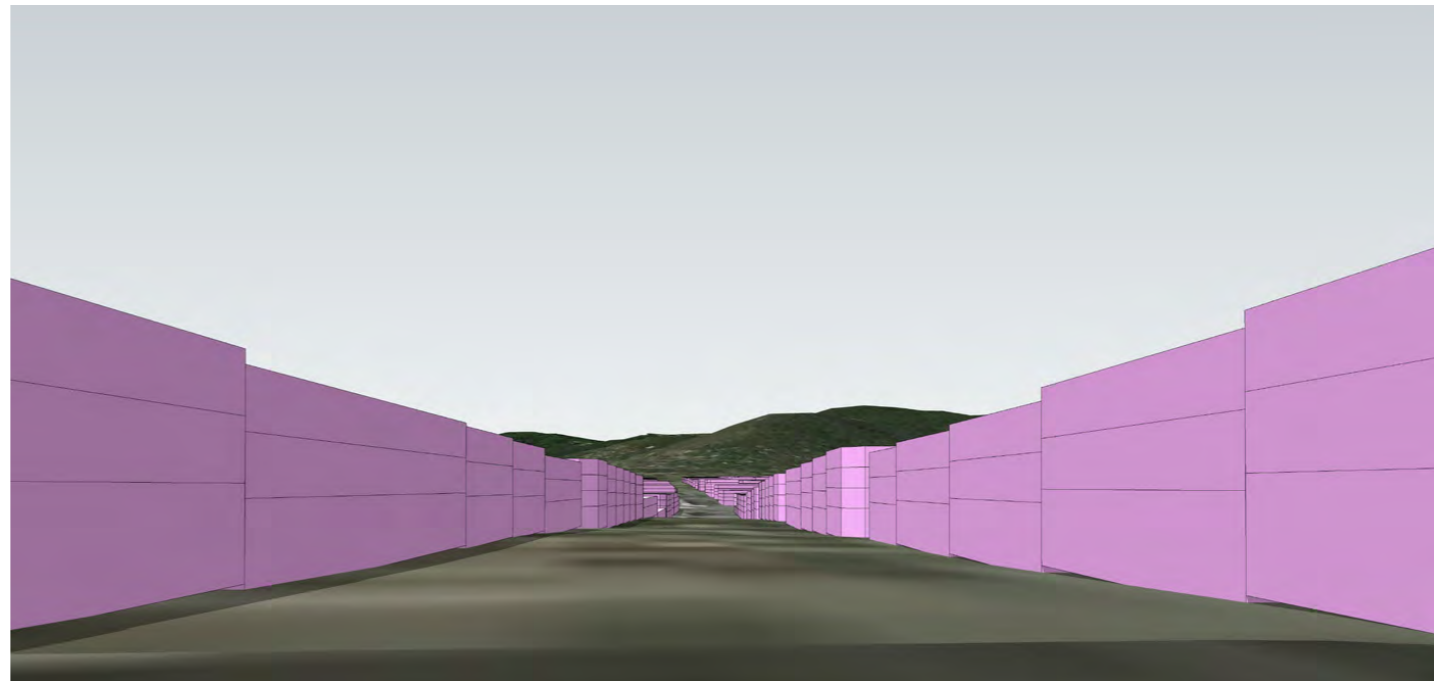
*Note: Visual testing is confined to envelopes and topography, not inclusive of existing canopy vegetation along Boronia Road.*



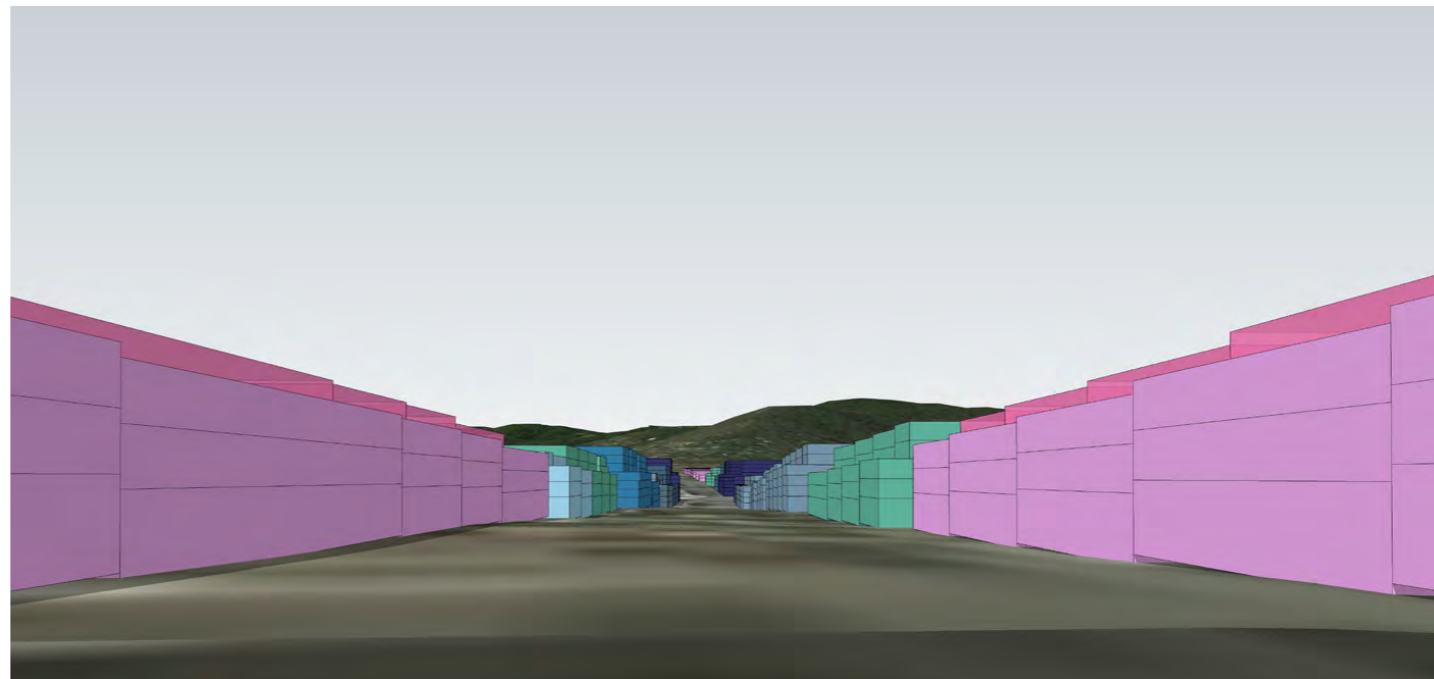
View Location



Existing View (approximate)



Existing DD07 Control



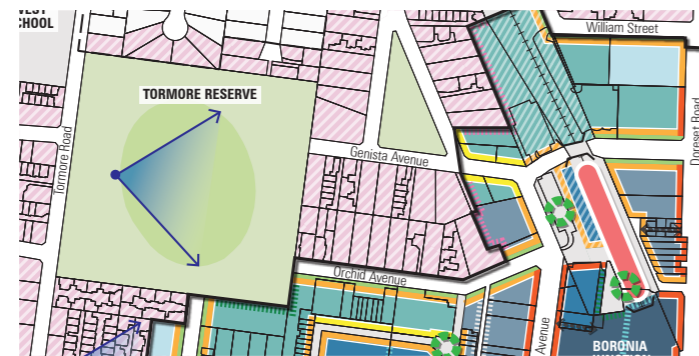
Proposed Built Form Proposition

**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 DD07 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 DD07 envelopes and the proposed Built Form Proposition.

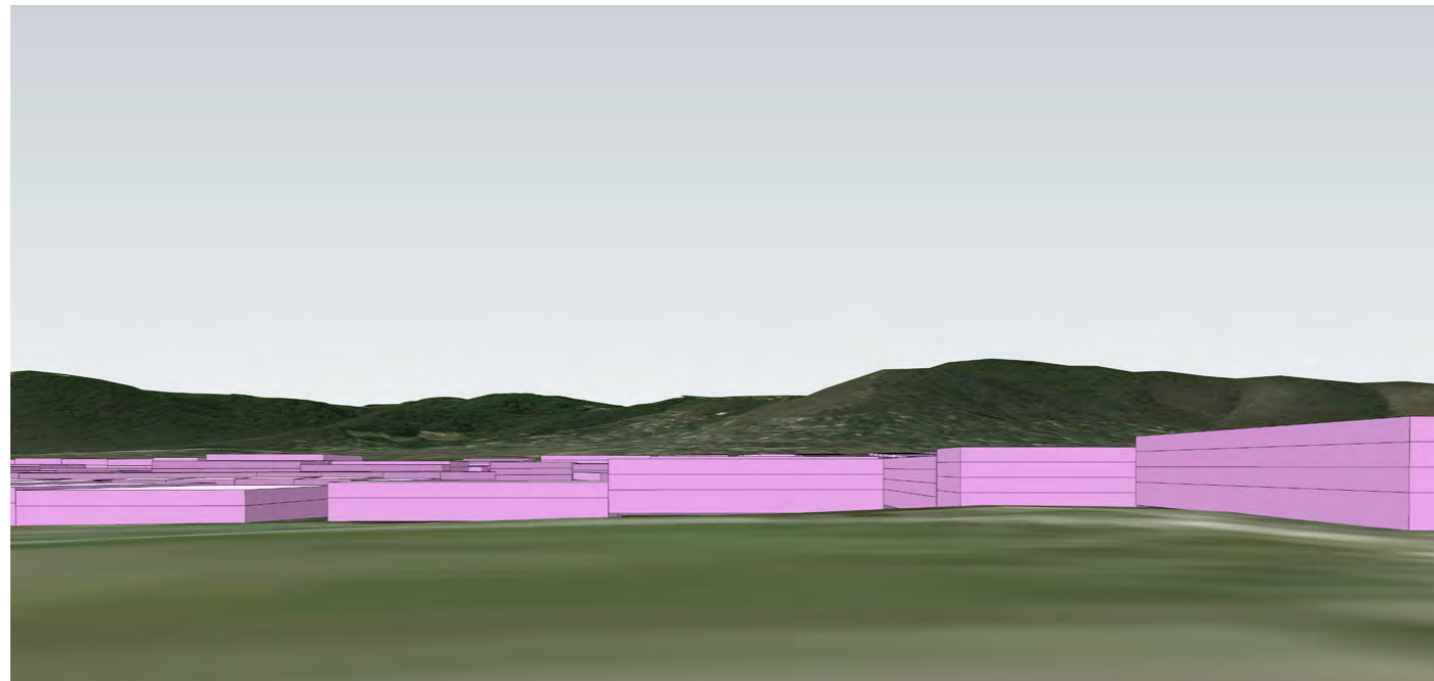
*Note: Visual testing is confined to envelopes and topography, not inclusive of existing canopy vegetation along the western boundary of Tormore Reserve.*



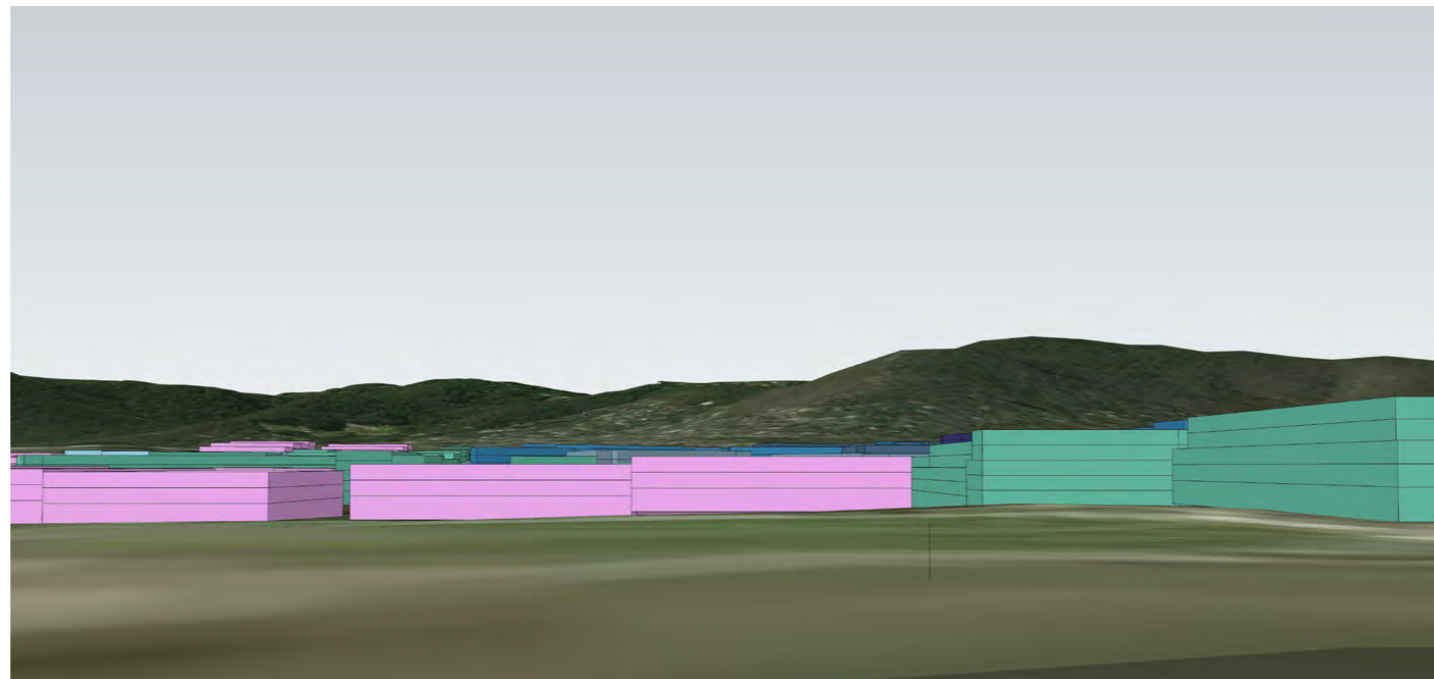
View Location



Existing View (approximate)



Existing DD07 Control



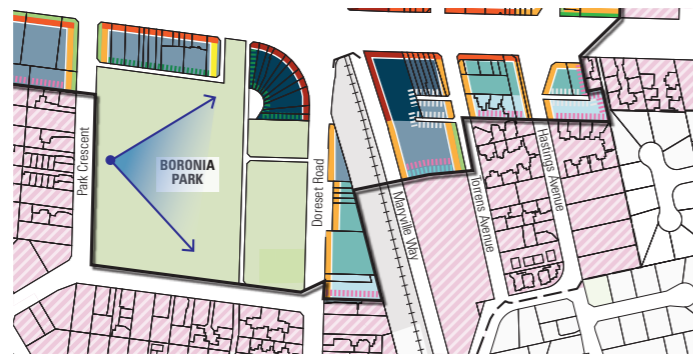
Proposed Built Form Proposition

**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.

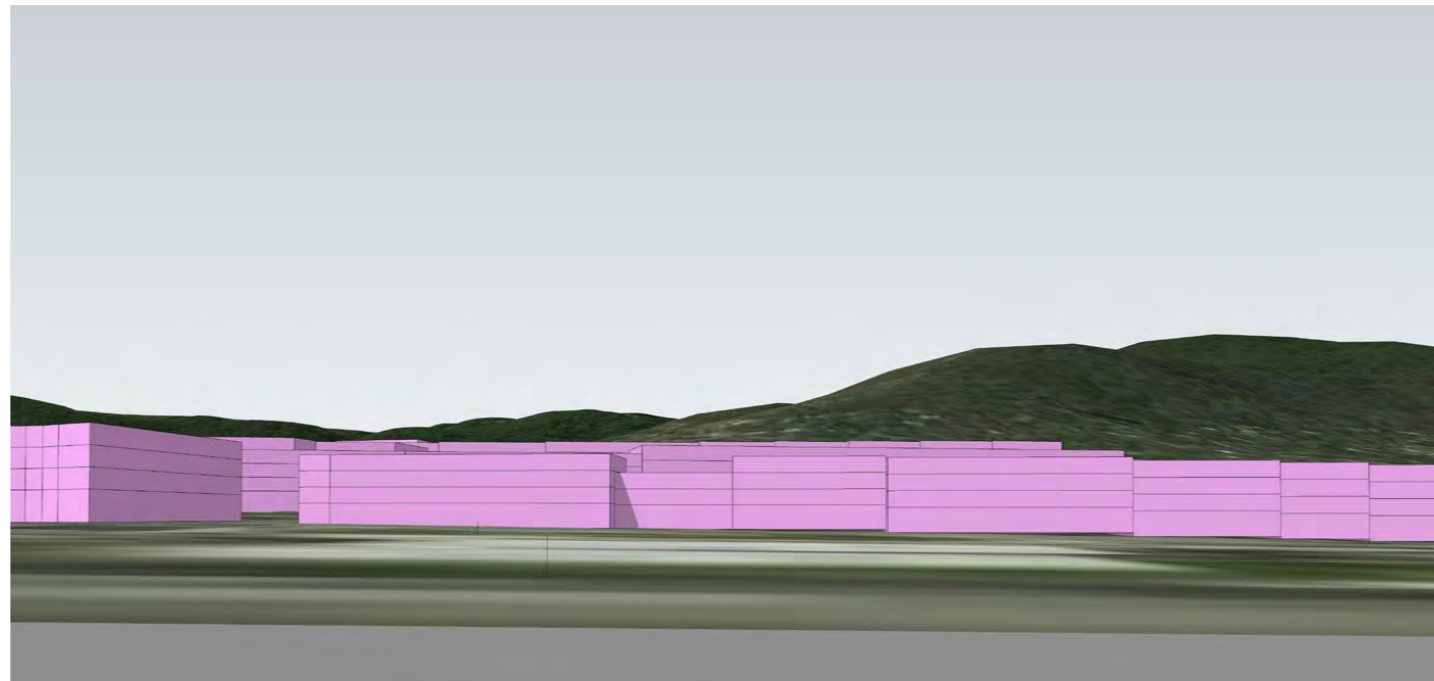
*Note: Visual testing does not consider the existing structures (Basketball Stadium or Library) or canopy vegetation within Boronia Park.*



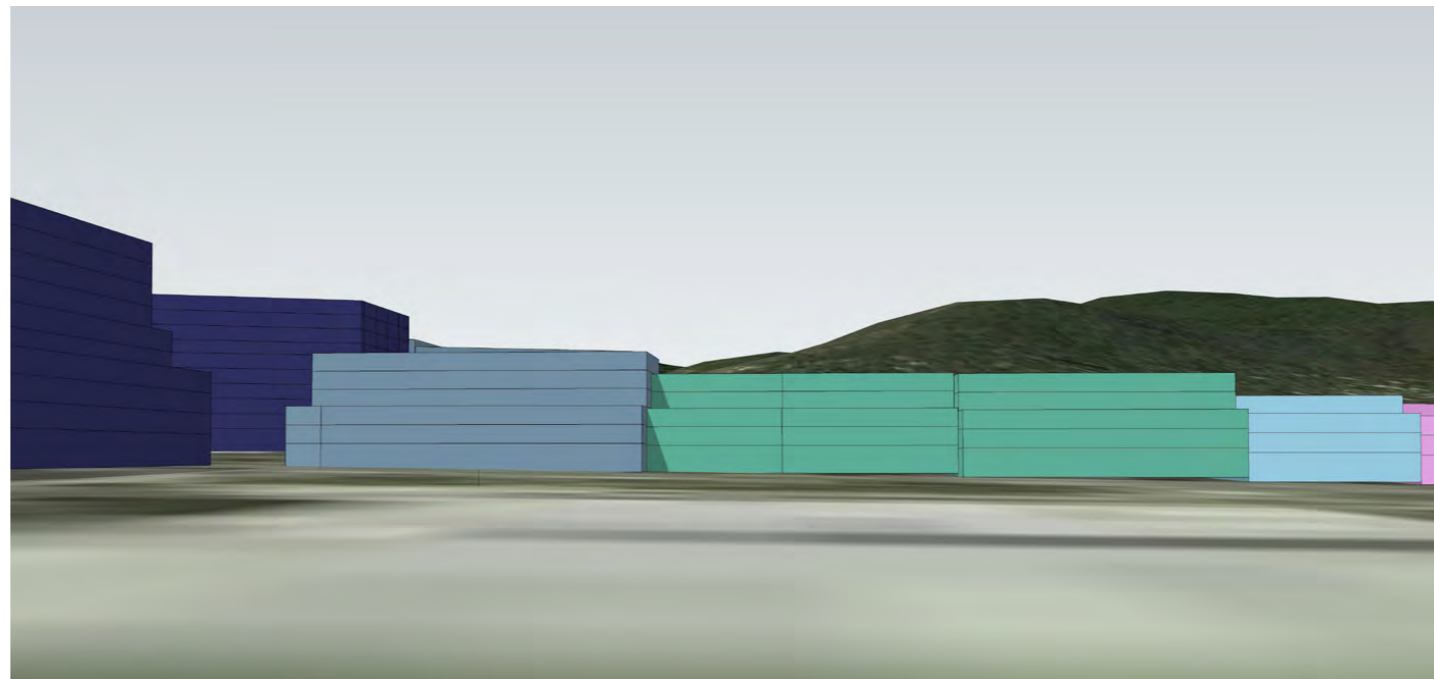
View Location



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 <sup>2</sup>	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
<b>Total</b>	<b>6,846</b>	<b>5,135</b>	<b>3,423</b>	<b>1,712</b>

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.