

## 3.2 Design Element 1 - Maximum Building Envelope (MBE) and Massing Diagram

### Development Objectives:

- » To achieve built form that responds to and reflects its setting while minimising impacts on adjoining land with respect to overshadowing and bulk/scale.
- » To respect and respond to primary and secondary / incidental views associated with the public realm and adjoining precincts, such as from roads and pedestrian linkages and other development.

**Design Rationale:** A podium and tower arrangement allows for building height which is necessary to achieve economies of scale associated with developing relatively narrow sites such as those within the RRNP. It also allows developers to take advantage of views to the Swan River and Perth City, which is a key feature of the site and its setting. However the tower/podium approach minimises overshadowing impacts on adjacent development while ensuring a human scale where the development sites interface with the public realm.

The Maximum Building Envelope (MBE) describes the outer limits that are allowable for any development on a site. It is not intended to be an indication of the final building form, mass or scale, but instead provides flexibility for the distribution of floorspace and built form on a site having regard to other development standards such as the permitted plot ratio.

It is expected that development at densities of R100 and/or R160 can be accommodated within the MBE.

Podium and tower arrangements in a River context can be found/have been provided for elsewhere along the eastern stretches of the Swan River at Burswood and Waterbank in East Perth for example. It is a built form outcome that is consistent with the locality. The different envelopes for each site will add variation and interest to the waterfront while minimising bulk and scale.

The building and massing envelopes have been divided into Front, Central and Rear Zones in order to reflect the varying topographical conditions (street frontage vs riverside for example) present across each site.

The provisions of this part override section 3.1.2 – Building Depth of the Design Guidelines.

### 3.2.1 General Acceptable Development Criteria

- » Buildings are to be contained within the envelopes (MBE) identified for each of the Building Zones applicable to the Development Sites, inclusive of heights and setbacks.
- » Side (east and west) building setbacks should be increased as building height increases per Figure 6. A lesser setback for upper storeys may be approved at the discretion of Council if it can be demonstrated that the design satisfies the bulk and scale criteria of the DAP and remains within the MBE.

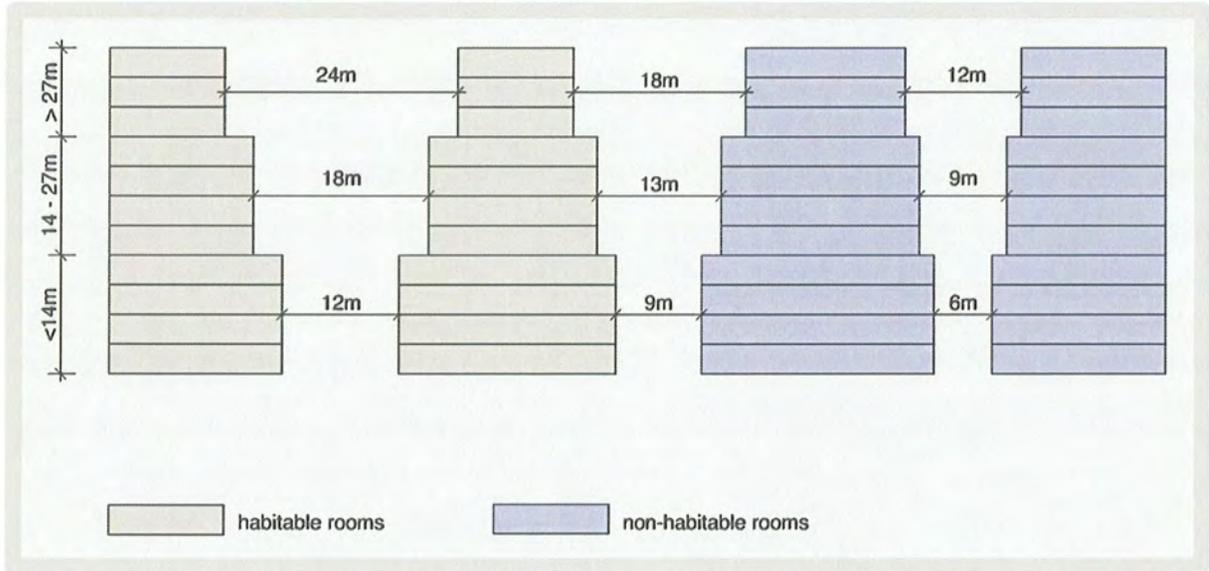


FIGURE 6- POTENTIAL BUILDING SEPARATION DISTANCES INCREASE WITH GREATER BUILDING HEIGHT (SOURCE: THE SPRINGS DESIGN GUIDELINES)

### 3.2.2 Site Specific Acceptable Development Criteria

- » A View Corridor Building Zone applies to the central portion of Site No.4 to provide for a view corridor through the Site from Riversdale Road.

### 3.3 Boundary Setback Requirements

#### Development Objectives:

- » To ensure that the bulk, scale and intensity of buildings reflect site, Precinct and locality characteristics.
- » To allow for primary and secondary (incidental) view corridors towards the Swan River.

Design Rationale: A site and needs responsive approach has been adopted with respect to setbacks. For instance the setbacks proposed allow for Primary View Corridors from the public realm through Cracknell Park and Site 4. Also, in relation to Site 5, a nil setback is proposed to Cracknell Park to provide for overlooking and activity adjacent to the open space.

The upper floors of the development are intended to be setback a greater distance from the front, side and rear boundaries than the podium as the height increases. This will achieve a central tower effect that minimises the bulk of the building notwithstanding height and minimises overshadowing and visual privacy impacts between adjacent sites..

Front setbacks reflect the desire to create an activated street environment that is well surveyed while the rear setback reflects the requirements of the Swan River Trust.

#### 3.3.1 General Acceptable Development Criteria

- » Setbacks are exclusive of shading instruments such as awnings.
- » Setbacks are inclusive of balconies.

##### Front Boundary Setback (Riversdale Road)

- » Development shall be setback from the front boundary in accordance with the setbacks shown on the MBE 's contained in this DAP for the applicable Site.

##### Rear Boundary Setback (Metropolitan Region Scheme Parks and Recreation Reserve)

- » Development shall be setback from the Metropolitan Region Scheme Parks and Recreation Reserve in accordance with Swan River Trust 'Policy D3 – Development Setback Requirements.'

##### Side Boundary Setback

- » Development shall be setback from side boundaries in accordance with the setbacks shown on the MBE 's and Massing Diagram contained in this DAP for the applicable site.

### 3.3.2 Site Specific Acceptable Development Criteria

#### Side Boundary Setback to Cracknell Park - Lot 80 Riversdale Road

- » Development with a nil setback to the eastern boundary of Site 5 (adjacent to Cracknell Park) shall not include blank expanses of wall and must be in the form of balconies to habitable rooms.
- » Should a greater setback than nil be implemented to Cracknell Park, fencing along the boundary must be of a visually semi-permeable nature.
- » Refer also to 3.7.2 for additional development requirements.

## 3.4 Building Height & Appearance

### Development Objectives:

#### Buildings with heights that -

- » Respond to and are sympathetic to the topography and characteristics of the Precinct;
- » Represent an appropriate interface with the Swan River foreshore;
- » Achieve an appropriate scale at street level; and
- » Reflect site context, including views to and from the City and Swan River and solar access to the north.

### Design Response:

Higher residential densities are appropriate for the RRNP given its inner city location – its proximity to the City, access to key transport routes, location relative to amenities such as the Swan River foreshore and access to views.

Higher densities also maximise the number of dwellings on site with high levels of solar access given the northern orientation of the land.

Given the narrow nature of the majority of sites, higher densities in the RRNP infer tower style development. This form of development is consistent with the locality and elsewhere along the Swan River setting.

Notwithstanding the densities and likely form of development, built form outcomes must also respect and reflect the site and its setting as expressed in, for example, Part 2 of this document and the other development criteria.

As such, towers shall be located in the Central portions of each Development Site and will be subject to greater Front/Rear setbacks than the surrounding podium of lesser height. The podium approach ensures an appropriate and human scale to both the street environment and the River foreshore.

The heights on Site 4 reflect that an important (public) view corridor exists at the termination of Riversdale Road and Rowe Avenue (which runs parallel to the Graham Farmer Freeway), through to the Swan River area (though it must be recognised that due to topography, water views are not assured). Lesser height centrally through Site 4 will maintain this corridor while height either side of it, will frame those views. The Swan River trust promotes a 2-3 storey maximum height plus roof terrace at the rear of the development sites.

In this regard it is intended that variations in height provided along the rear of the Development Sites adds variety to the presentation of the RRNP to the Swan River and beyond. Similarly the dense and high landscaping (consisting of mature trees) that exists within the foreshore will help to obscure or even hide development in the Rear Development Zone from view.

The heights proposed provide for a (non-mandatory) landmark building on Site 5 north of the intersection of Riversdale Road and Hawksburn Road and adjacent to Cracknell Park. Building Height is one element in landmark creation and this DAP therefore provides the potential for greater height in this location (than elsewhere in the Front Development Zone) as is reflected in the MBE. This landmark building would provide an edge to the green spine that runs north-south through The Springs comprising the Hawksburn Road Public Open Space, Cracknell Park and the Swan River foreshore.

The heights proposed under this DAP for Site 6 reference the ultimate form of development anticipated for adjoining land, which is zoned R100 under the City of Belmont Local Planning Scheme No. 15. It also reflects the existing multi-storey development nearby, which has established a built form/density character for the area. The height proposed for Site 6 and adjoining land will help to frame Cracknell Park (located to the west) as a view corridor through to the Swan River.

### 3.4.1 General Acceptable Development Criteria

- » Unless otherwise stated, the height of any building and/or structure is not to exceed the upper limit of the Maximum Building Envelope.
- » In the Rear Building Zone the decision making authority may approve an additional (fourth) storey (which would be located outside the Maximum Building Envelope) subject to the third and fourth storeys being setback and additional 5 and 10 metres (from the 10 metre rear setback line) respectively and there be no adverse visual amenity impact on the Swan River foreshore.
- » Building heights in the Front and Central Building Zones shall be measured from the AHD of Riversdale Road.
- » Building heights in the Rear Building Zone shall be measured from the AHD at the 10 metre setback line from the foreshore/Development Site boundary.
- » Building heights referred to within this document assume a minimum floor to floor height of 3.0 metres (superceding clause 3.1.6 – Floor Levels of The Springs Design Guidelines (LPP7)).
- » Structures providing shade to the roofs of buildings in the Rear Building Zone may be approved in addition to the maximum building height identified on the MBE (except in the View Corridor Development Zone of Site 4). Any such structures are to be incorporated into the overall building design.
- » Projections and encroachments beyond the MBE for shade structures and pergolas may be permitted in the Rear Building Zone provided the structure is open on three sides. Buildings shall be constructed from a variety of compatible colours that are complimentary to the natural landscape.

### 3.4.2 Site Specific Acceptable Development Criteria

#### Site 4 View Corridor Building Zone

- » Buildings, including all roof-top structures, in the View Corridor Building Zone on Site No.4 shall not exceed the AHD level of Riversdale Road as measured from the centre of the front boundary of the lot.
- » Projections above the maximum building height for the View Corridor Building Zone on Site No.4 are not permitted.

## 3.5 Plot Ratio

### Development Objectives:

- » To provide for a scale and intensity of development that is site and precinct responsive, having regard to its visual prominence from the Swan River and other nearby areas;
- » To minimise building bulk and the associated impacts on adjoining properties and the locality.
- » To ensure the appropriate distribution of building floor area across the development;
- » To ensure that development is undertaken in a manner that is commensurate with its inner city, high amenity context.

**Design Rationale:** The Riversdale North Precinct has been identified as a high density inner city residential area, and the development standards of the Residential Design Codes for R100 and R160 reflect this. Notwithstanding this, given the site and precinct characteristics relevant to the Swan River, it is imperative that development is undertaken in a manner that minimises the perceived bulk and scale of buildings.

Unlike the MBE which identifies the confines of development, Plot Ratio is the critical mechanism for limiting the amount of floor space relative to the overall size of the lot. It in essence ensures that the overall size of the building is in proportion with the size of the lot. For example, a tall slender building with a smaller building footprint can in fact have less of a bulk impact than a building that is of medium height but with a wide building footprint. Plot Ratio therefore assumes that the larger the site, the more building floor area that can be accommodated without having an impact on the overall bulk.

A number of the sites in the Riversdale North Precinct are of modest size. It is therefore expected that as the height of development increases, the building should become narrower to ensure that buildings have enough separation from one another at upper levels and subsequently minimise building bulk.

It is noted that Clause 5.3.4 (2) and (3) of the City's Local Planning Scheme No. 15 gives Council the ability to consider variations to the R-Codes requirements for Plot Ratio in The Springs provided it's in accordance with the character of the locality, having regard to the objectives of the Structure Plan and Policy's that guide it.

The criteria below supersede clauses 3.1.2 Building Depth of the The Springs Design Guidelines (LPP7).

### 3.5.1 General Acceptable Development Criteria

- » The plot ratio requirement for development shall be in accordance with the acceptable development requirements of the Residential Design Codes relevant to the applicable density code.

## 3.6 Vehicle Access, Parking and End of Trip Facilities

### Development Objectives:

- » The supply of parking to satisfy the needs of development.
- » To avoid an oversupply of parking so that public transport and pedestrian/cycle transport is promoted.
- » To ensure that the amenity of the locality is not compromised in the provision of parking and access, including in relation to visual amenity.
- » Achieve appropriate location and positioning of vehicle access points to ensure safety for pedestrians and vehicles.

**Design Rationale:** Access points have been shown indicatively for each site in side set back areas in order to minimise the visual impact of driveways and parking areas on the street environment.

Where open air parking is provided in the front setback area or Front Building Zone then it must be appropriately landscaped to a high quality to soften its visual impact.

On most sites it is assumed that parking will be provided at basement level. Where parking is at ground level or above ground level, it must be designed in such a way that it is not directly visible from the street or Swan River Foreshore, such as through the use of screening or 'sleeving' development around it.

Parking provided internal to the built form but at ground level or above shall be screened from view.

The following criteria supersede section 3.4.5 (End of Trip Facilities) of the Design Guidelines.

### 3.6.1 General Acceptable Development Criteria

- » The number of car parking bays for dwellings and visitors shall be in accordance with the provisions of Part 7 of the Residential Design Codes (as amended). Notwithstanding this, the City may exercise its discretion to encourage and allow a reduction in the number of bays required to reflect the precinct's strong access to public transit services, having regard to any adopted car parking strategy for The Springs Precinct.
- » Car parking for residents and businesses (non visitor) is encouraged to be below ground level, in the form of basement car parking.
- » Uncovered visitor parking may be provided in the Front Building Zone of each MBE.
- » Side setback areas (where they exist through the MBE) may be used for the purpose of vehicle driveways at or below natural ground level.
- » The MBE's are exclusive of below ground parking and basement areas except within the Rear Development Zone to reflect natural topography. Basement parking shall be screened from public view.
- » On most sites it is assumed that parking will be provided at basement level. Where parking is at ground level or above ground level, it must be designed in such a way that it is not directly visible from the street or Swan River Foreshore, such as through the use of screening or 'sleeving' development around it.

- » The minimum 4.5m<sup>2</sup> storage area for each residential apartment will accommodate any demand for resident bicycle/scooter/motorcycle parking.
- » 1 secure (secure meaning being on the property) visitor bicycle parking space provided in a sheltered location for every 8 residential units or part thereof.
- » Car parking is not permitted in the Rear Building Zone, unless it is designed in such a way that it is not visible from the street or Swan River foreshore.

## 3.7 Passive Surveillance and Public Realm Considerations

### Development Objective:

- » To maximise passive visual surveillance of public spaces.
- » To ensure that development interfaces appropriately with the public realm – to promote high quality design and built form outcomes that make a positive contribution to public spaces.
- » To take advantage of the location and attributes of the site while ensuring built form impacts are positive and commensurate with the site's inner city location.

Design Rationale: A 'stepped' or tower/podium approach has been adopted to promote the creation of tall buildings that interface and scale well at street level. Shorter, squat buildings would not take advantage of the site's inherent characteristics (views/northern aspect) while reliance purely on towers (i.e. no podium) may result in inappropriate bulk and overshadowing impacts.

Building bulk will also be reduced through the articulation of buildings via features such as balconies and architectural detail. This will ensure a positive external presentation of the towers. This is particularly important due to the height of some of the developments.

Security and surveillance of streets and open space will be promoted through the location of windows and balconies with aspect to these areas and visually permeable boundary fences.

Site 5 is adjacent to Cracknell Park and located on a street intersection. It has the potential to perform a landmarking function. Any landmark building shall be oriented towards/interface to the street appropriately (if such landmark outcome is pursued).

It will likely be necessary to provide some level of retaining at the rear of the sites where they abut the Swan River foreshore reserve. This is by virtue of the sloping nature of the site from Riversdale Road down to the foreshore.

### 3.7.1 General Acceptable Development Criteria

#### General Provisions

- » Public Art to be provided in accordance with the City of Belmont's Local Planning Policy No. 11 – Public Art Contribution Policy.
- » All buildings must exhibit through architectural features and expressions a high level of articulation and design innovation to break up the visual bulk of the development.
- » Developments must incorporate high quality building edges that are oriented towards the street, the foreshore and Cracknell Park. This includes - as much as practical – glazing, balconies and/or courtyards.
- » All developments must include high quality colours, materials and finishes.
- » Fencing to Cracknell Park must be semi-permeable in nature providing for a high level of surveillance of parkland areas from development while satisfying security needs.
- » Buildings shall be designed to satisfy the Design Objectives and Acceptable Development Controls contained in the following sections of LPP7:

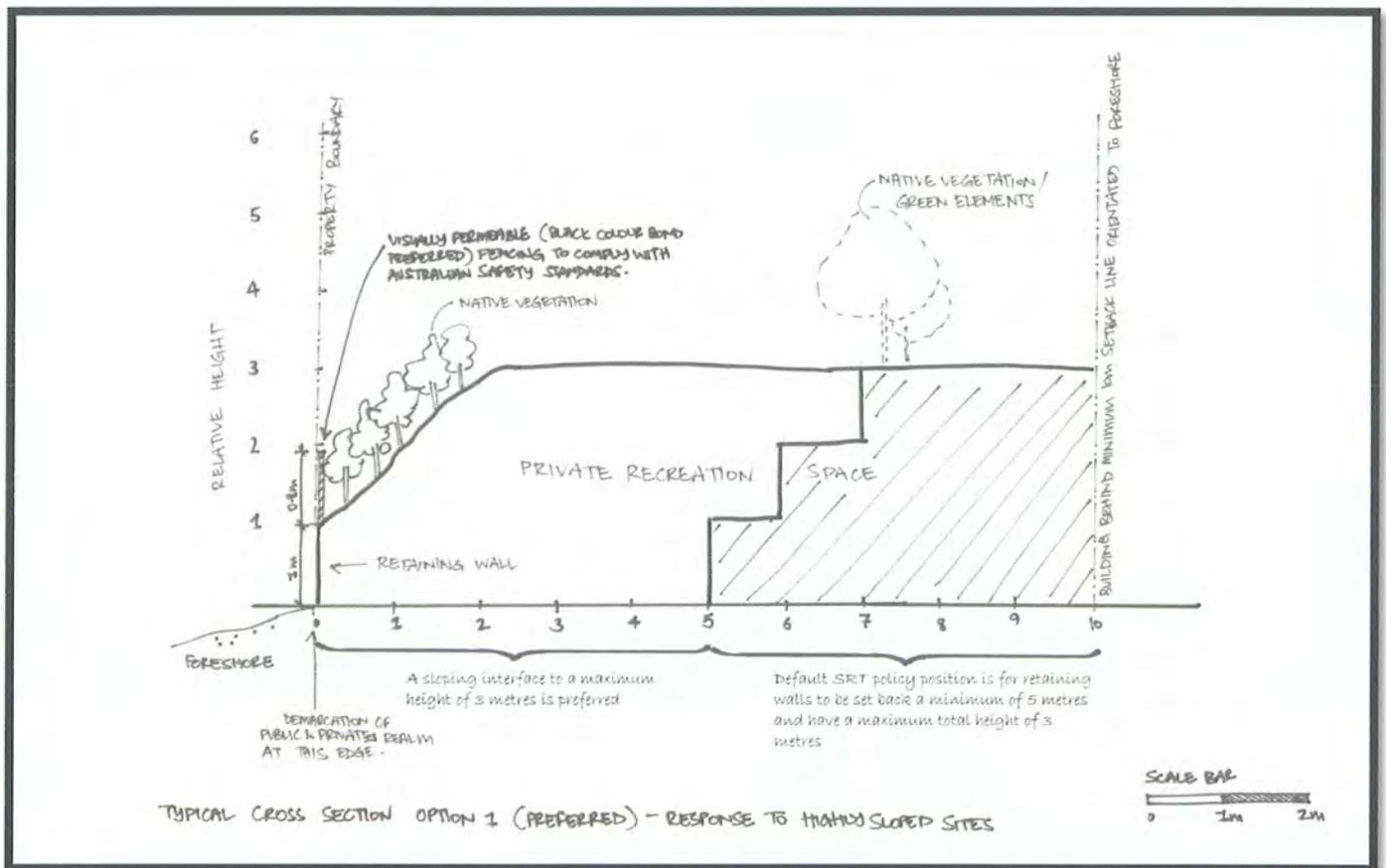
- 3.2.4 - Building Entrances; and
- 3.3.4 Building for Safety and Surveillance.

*Foreshore Related Provisions*

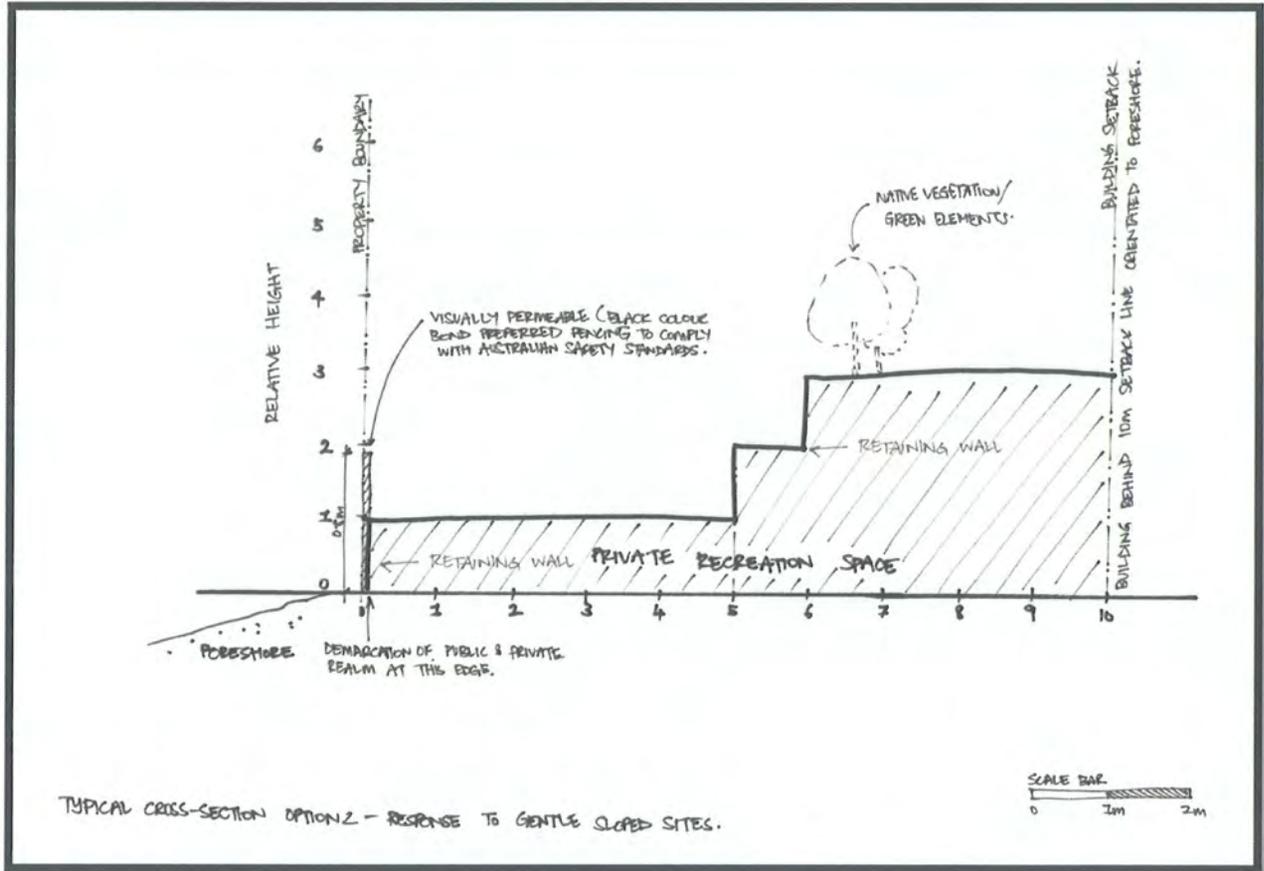
- » These criteria supersede clause 3.2.6 –Fencing from The Springs Design Guidelines (LPP7).
- » Development Applications must be supported by a Landscape Plan prepared by a suitably qualified landscape architect. Such plan must demonstrate how the application achieves the criteria set out below.
- » Options 1-3 below illustrate a series of principles for the development of the Landscape Plan.
- » Buildings and recreation areas must be oriented to front the foreshore to enhance amenity while contributing to personal and property security and deterrence of crime and vandalism.
- » There must be a consistent approach to the appearance of retaining walls that abut/are visible from the foreshore across development sites within the Precinct. Consistency must not be interpreted as 'uniformity.' Subtle variances in finish, texture and appearance are required to ensure edge treatments provide visual relief, a naturalistic appearance and a human scale for users of the foreshore reserve.
- » Edge treatments abutting the River Foreshore (including retaining walls) and land use/built form within the rear setback area must make a positive contribution to the landscape amenity of the Foreshore. Blank, sheer expanses of wall will not be supported. Retaining walls in this location must incorporate natural hues and maintain a naturalistic appearance such as a rocky finish. Natural stone (in combination with vegetation) is preferred for edge treatments and where block-work is proposed, it must be in dark earthy tones that are reflective of this section of the Swan River foreshore.
- » Visual and pedestrian access to the ground plane of the foreshore from adjacent Development Sites is encouraged. In such case, the clear demarcation of public and private land must still be demonstrated.
- » As a general principle, graduated levels (slope) are preferred instead of abrupt topographic changes and obtrusive retaining wall structures, which could dominate the river setting and its landscape (refer Option 1).
- » If retaining walls are proposed then per default SRT Policy, they are not to exceed an individual height of 1 metre and a total combined height of 3 metres from the natural ground level (this default position is also shown on Options 1 and 3).
- » Further per default SRT Policy, retaining walls should be setback no less than 5 metres from the property boundary that abuts the foreshore reserve (refer Options 1 and 3), except where retaining is less than 1m total height and forms the solid portion of open style boundary fence. (Option 2).
- » In instances where:
  - significant site constraints exist; and
  - there will be minimal impact on the adjoining Parks and Recreation reservation;

fill and retaining walls may be positioned closer to the Parks and Recreation boundary or Development Control Area (refer to Swan River Trust Policy) than 5 metres. Retaining walls are not to exceed an individual height of 1 metre and a total combined height of 3 metres from the average natural ground level at the Parks and Recreation boundary. Where more than one retaining wall is proposed, a minimum 1 metre separation distance is required between each retaining wall, which is to be planted with native shrubs. Refer Option 3.

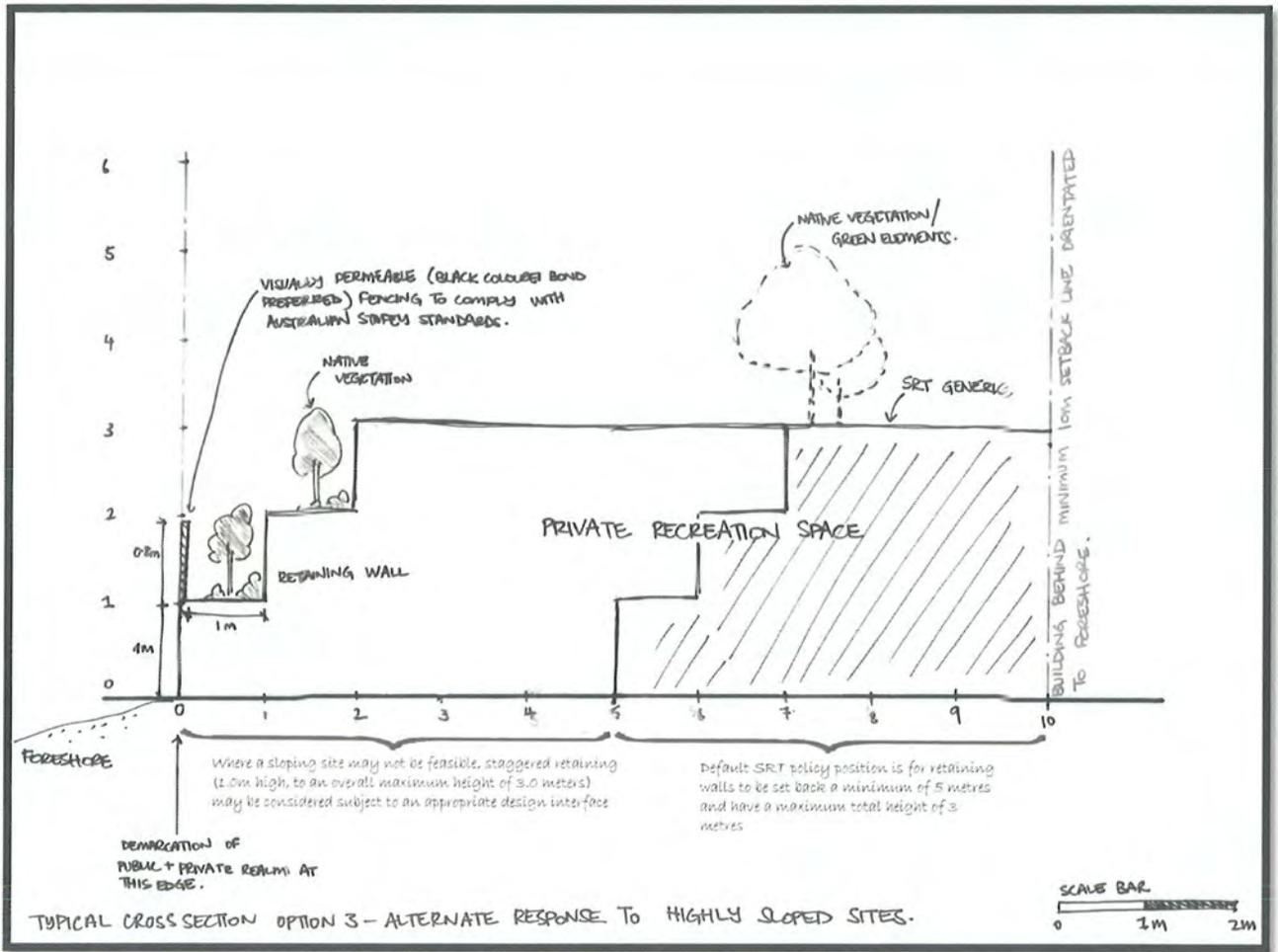
- » Vegetation within the rear setback area must be retained as far as possible with particular regard to Priority Specimens as defined in the Arbor Study that forms part of The Springs Local Structure Plan. Where significant specimens require removal for construction purposes, the Landscape Plan should provide for their replacement with a native specimen capable of maturing to an equivalent size as the tree removed. The position of the replacement specimen shall avoid affecting the integrity of the building.
- » Swimming pools may be approved within the rear setback area where it is consistent with Swan River Trust policy.
- » The Landscape Plan should demonstrate consistency with the principles of the Foreshore Management Plan for The Springs.



Option 1 - Rear Setback Zone



Option 2 – Rear Setback Zone



Option 3 – Rear Setback Zone

### 3.7.2 Site Specific Acceptable Development Criteria

#### Site No. 5

- » Provision is made for a portion of Site 5 to have a nil setback to Cracknell Park. This shall only be available where balconies are situated immediately adjacent to the Park. Openings to habitable rooms must be setback a minimum 3 metres from the boundary and open directly onto the balcony. Excessive blank expanses of wall, other than for retaining of the site, shall not be supported.
- » Where a greater than nil setback is implemented, visually semi-permeable fencing must be provided along the boundary with Cracknell Park.
- » Should the landowner seek to implement a landmark site where shown at the MBE for Site 5 it will be necessary to demonstrate a high level of interface and activity at the public realm via building orientation, glazing, balconies, courtyards etc.

### 3.8 Overshadowing

**Development Objective:** To maximise solar access to buildings and to minimise shadow impacts on adjoining developments.

**Design Rationale:** The tower/podium approach helps (through setbacks and corridors between buildings) to provide sunlight penetration through the Development Sites and to adjacent development. However, because the site is inner city and by reason of the density of development proposed, some level of commensurate overshadowing must be reasonably expected.

This DAP seeks to maximise the number of dwellings within the RRNP with solar access.

The provisions below supersede section 4.2 (Passive Solar Design/Solar Access and Shading) of the Design Guidelines.

#### 3.8.1 General Acceptable Development Criteria

- » Development will not overshadow adjacent 'parent lots' and those on the south side of Riversdale Road by more than 50% at noon on the day of the winter solstice (by way of illustration refer to Figure 7).
- » Development applications must be accompanied by an Overshadowing diagram demonstrating the manner in which the above criterion is achieved.
- » North facing openings must all be provided with a fixed or moveable shading device.



FIGURE 7 - INDICATIVE MAXIMUM OVERSHADOWING PLAN

## 3.9 Waste Collection

### Development Objectives:

- » To minimise waste;
- » To maximise opportunities for recycling;
- » To provide for an appropriate and effective system of waste disposal.

### 3.9.1 General Acceptable Development Criteria

- » These provisions override section 3.4.3 – Waste Collection of the Design Guidelines.
- » A Waste Management Plan must be prepared in consultation with the City of Belmont Health Services and submitted with all development applications.
- » Provide every dwelling with a waste cupboard or temporary storage area of sufficient size to hold a single day's waste to enable source separation.
- » Rubbish storage areas must be located away from the front of the development and be completely screened from the street.
- » Screen rubbish/storage areas from residential units that overlook the area.

## 3.10 Acoustic Separation

**Development Objective: To ensure an appropriate level of residential amenity is maintained.**

### 3.10.1 General Acceptable Development Criteria

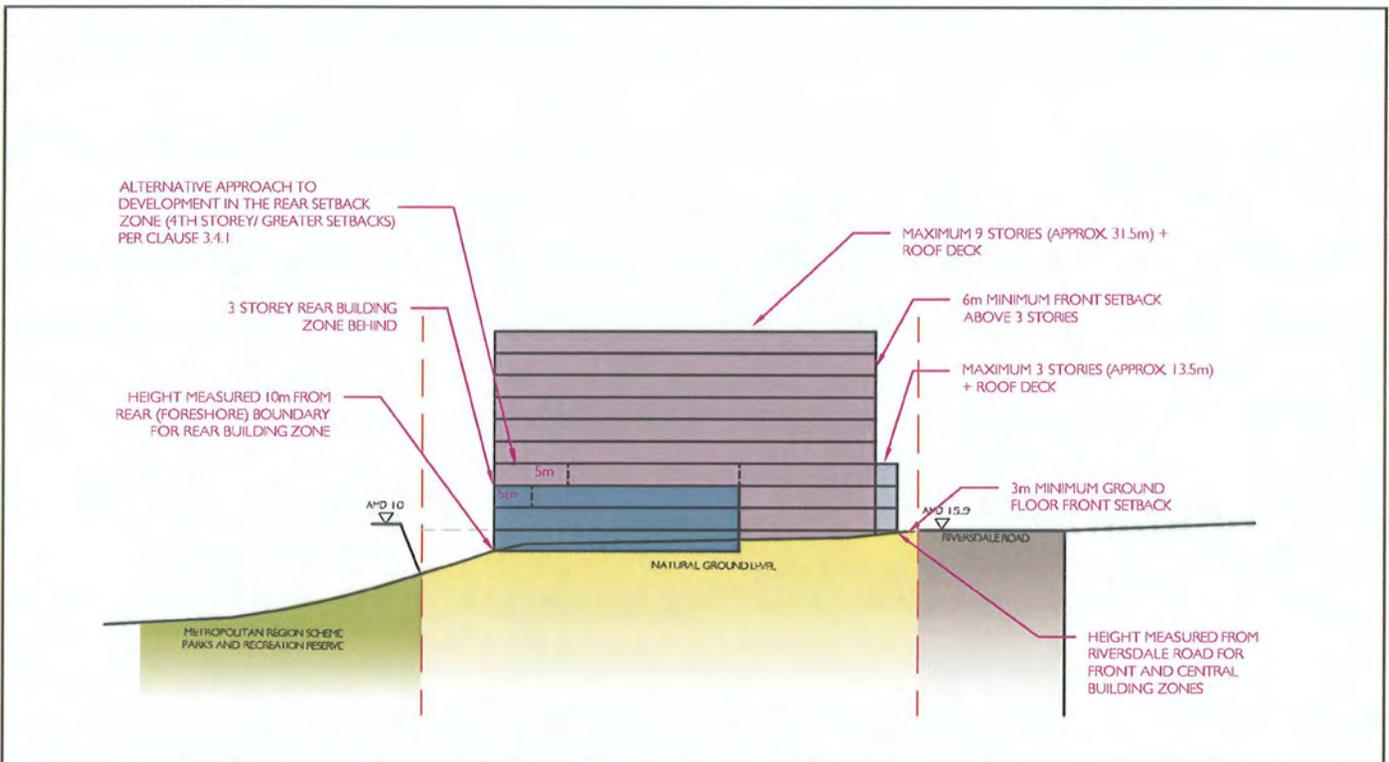
- » Sound attenuation treatments to all buildings within The Springs must meet design sound levels in table 1 of Australian Standard 2107:2000.
- » All buildings within The Springs must comply with State Planning Policy 5.4 "Road and Rail Transport Noise and Freight Considerations in Land Use Planning."

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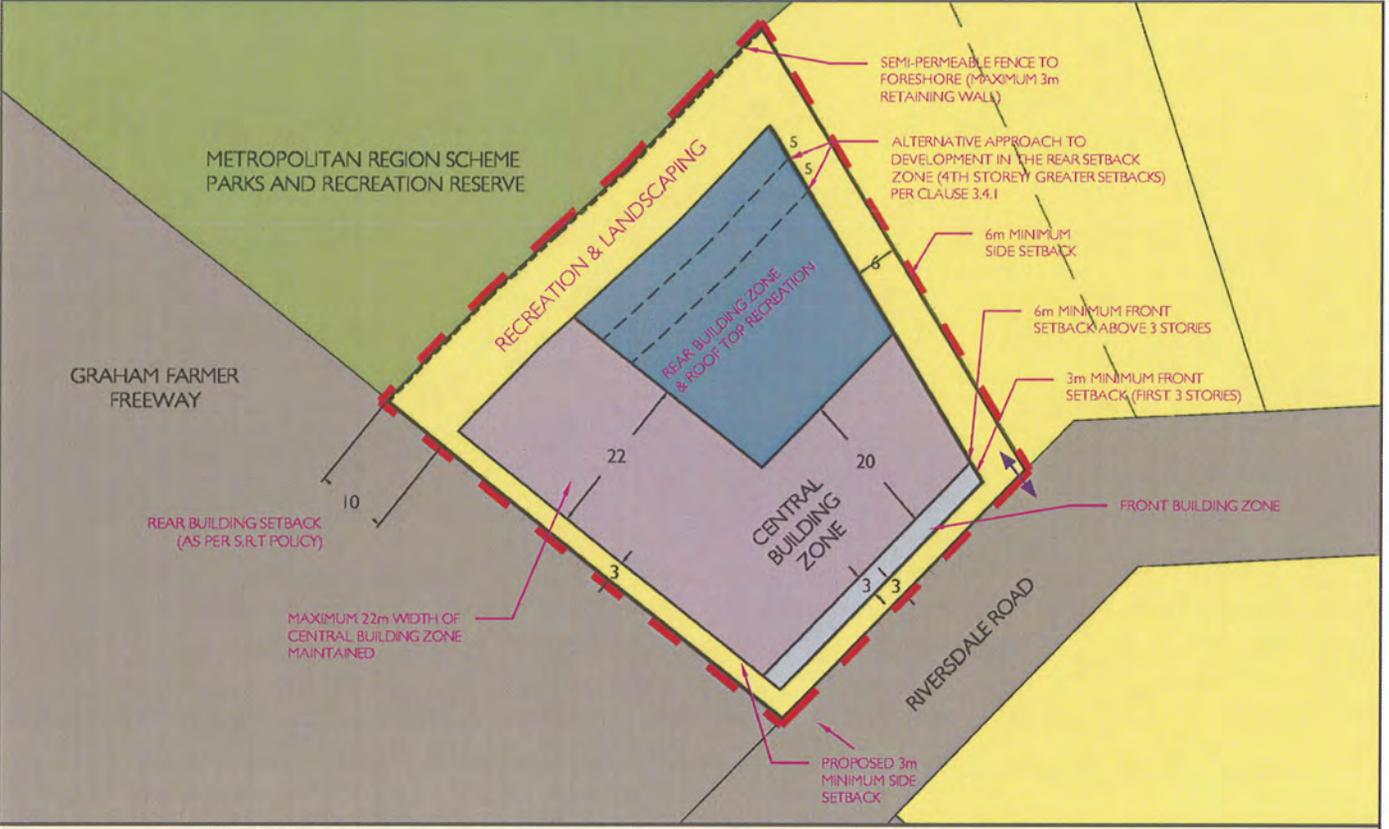
# APPENDIX I

## MAXIMUM BUILDING ENVELOPE AND MASSING DIAGRAMS

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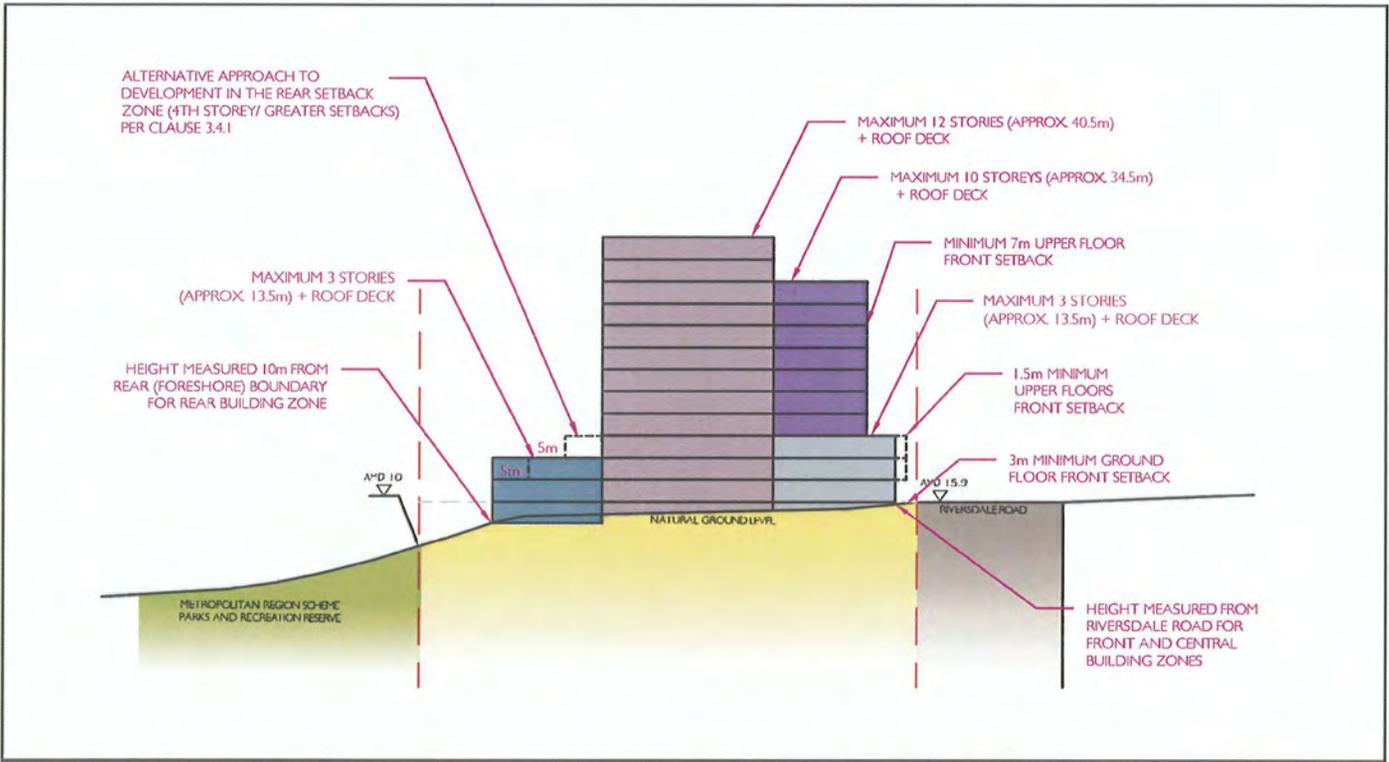
DEVELOPMENT SITE NO. 1 - MBE MASSING DIAGRAM (SCALE 1:1000)



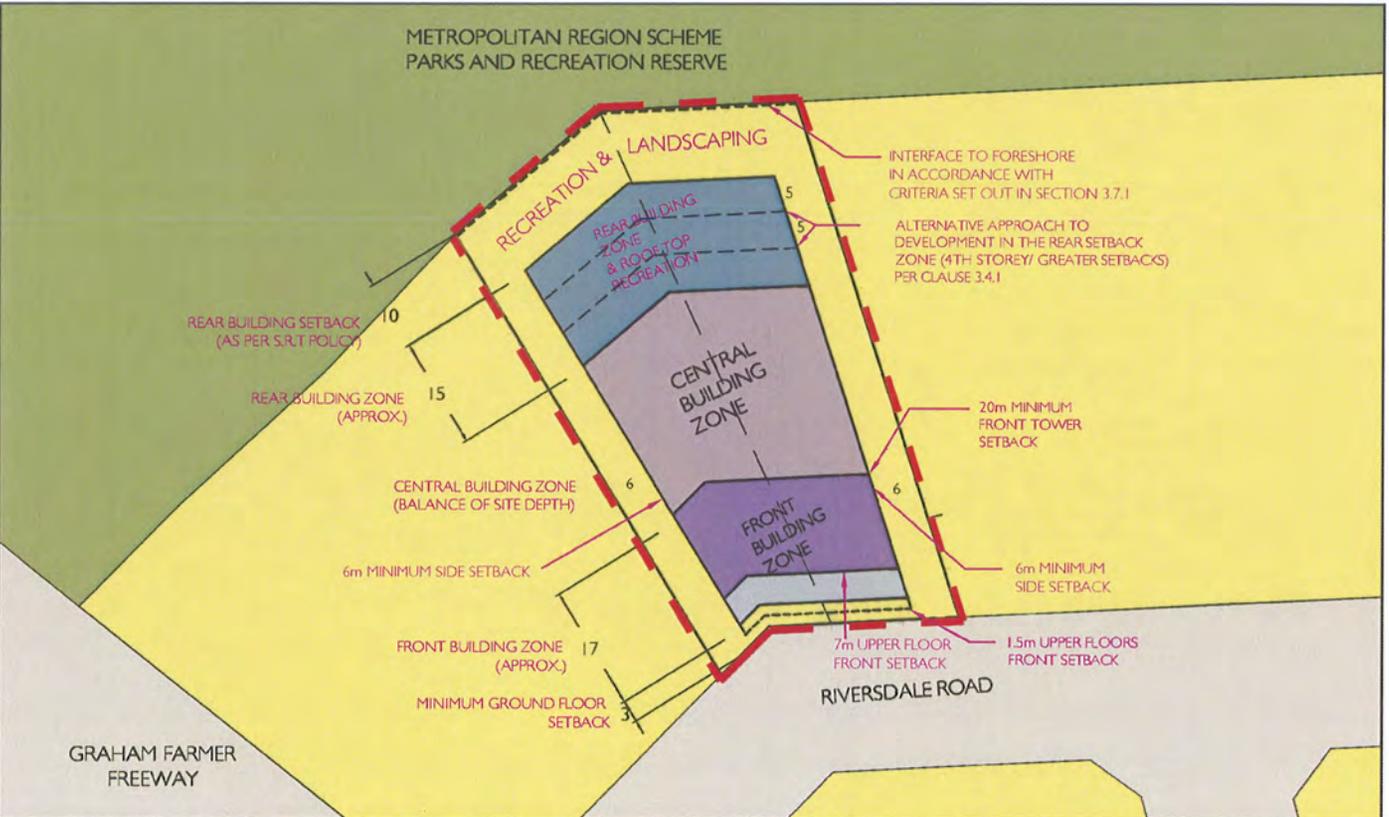
DEVELOPMENT SITE NO. 1 - MAXIMUM BUILDING ENVELOPE (SCALE 1:1000)

legend

	Preferred Access Point		Front Building Zone		Rear Building Zone
	Development Site Boundary		Central Building Zone		



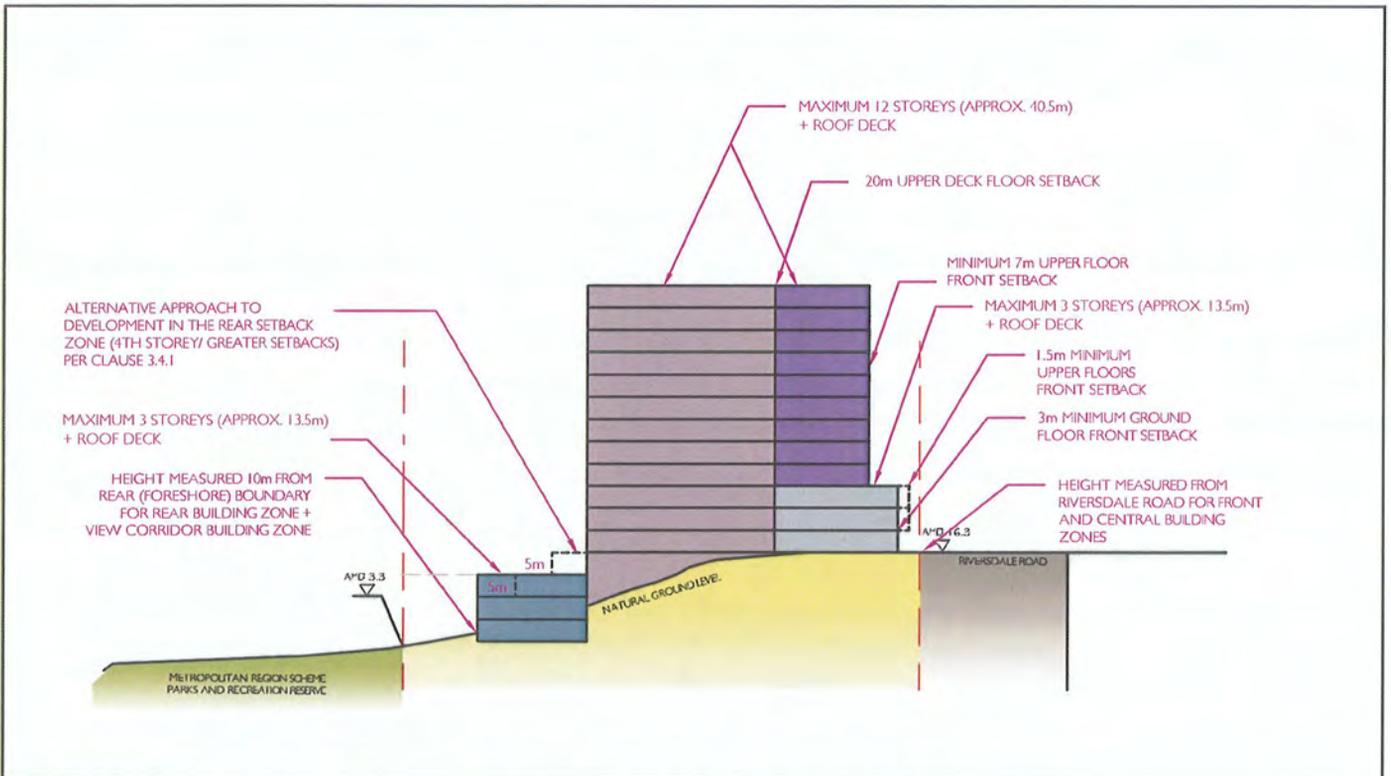
DEVELOPMENT SITE NO. 2 & 3 - MBE MASSING DIAGRAM (SCALE 1:1000)



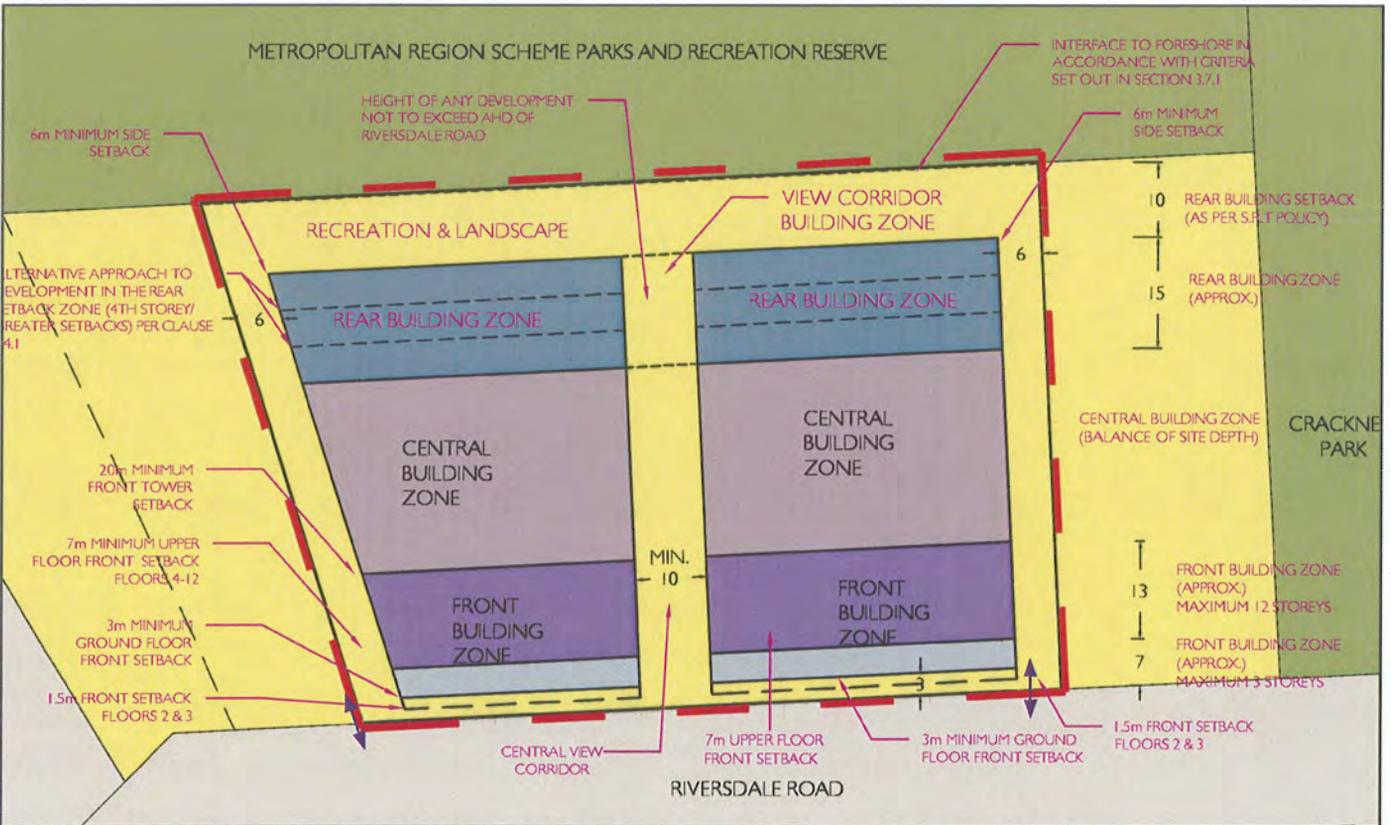
DEVELOPMENT SITE NO. 2 & 3 - MAXIMUM BUILDING ENVELOPE (SCALE 1:1000)

Legend

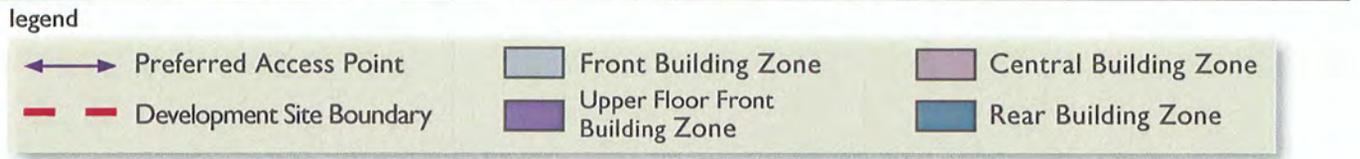
- Preferred Access Point
- Development Site Boundary
- Front Building Zone
- Upper Floor Front Building Zone
- Central Building Zone
- Rear Building Zone

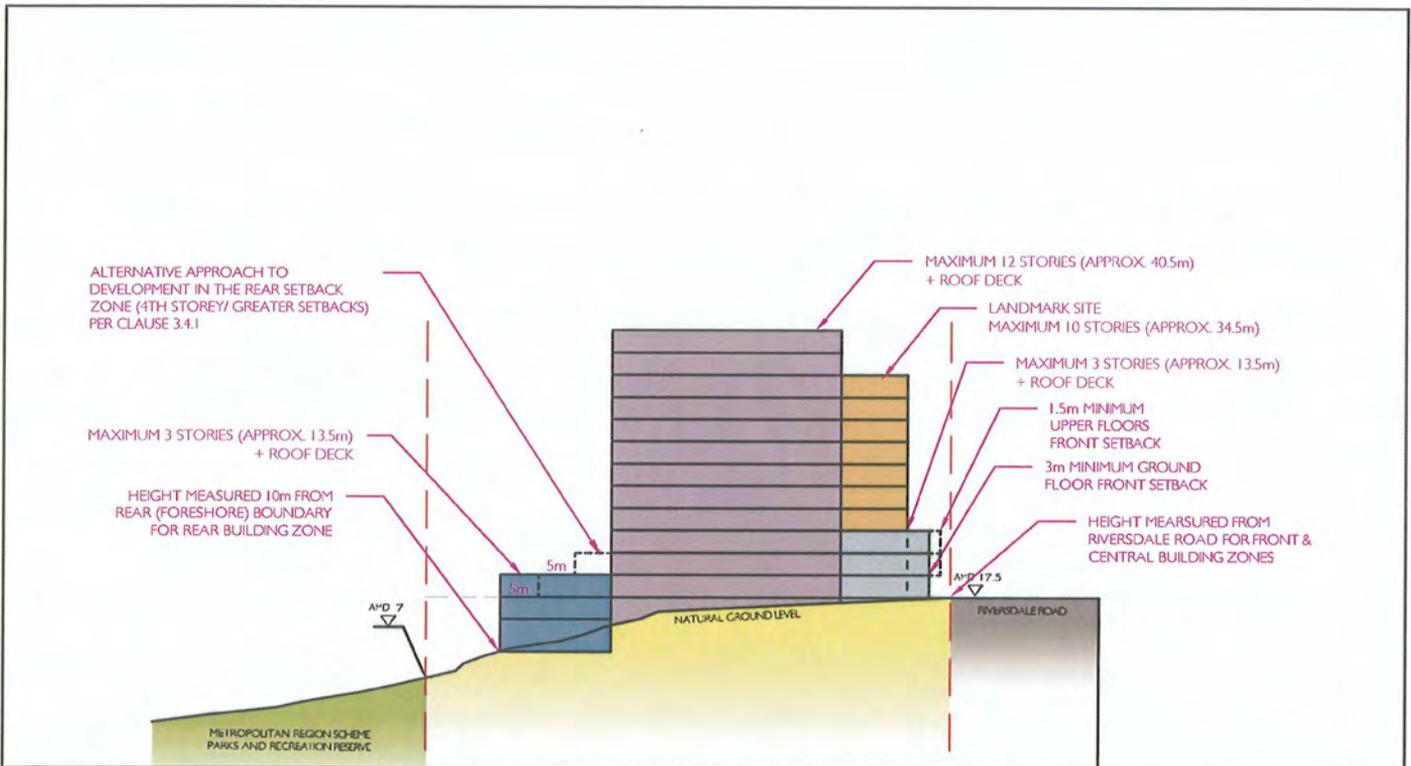


DEVELOPMENT SITE NO. 4 - MBE MASSING DIAGRAM (SCALE 1:1000)

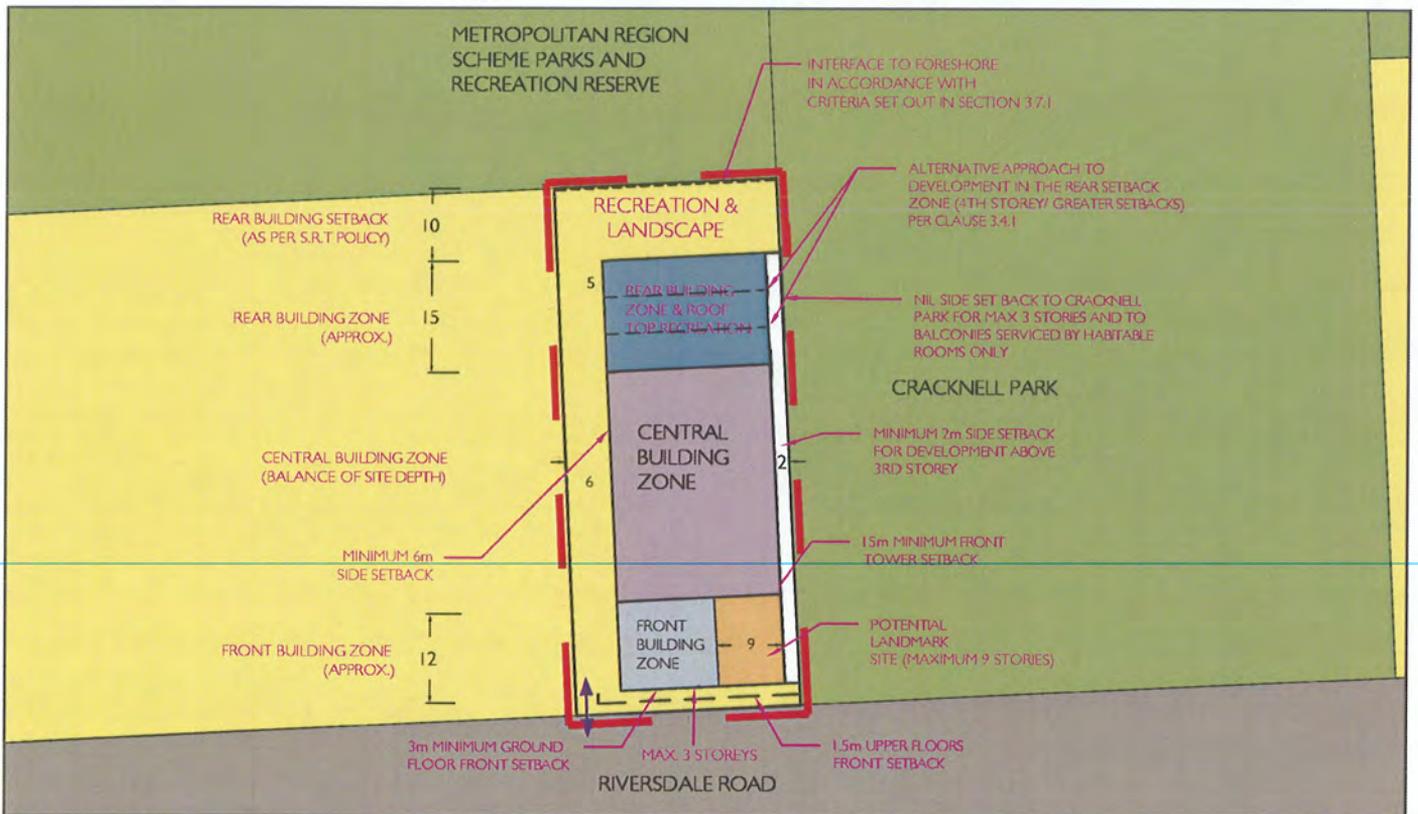


DEVELOPMENT SITE NO. 4 - MAXIMUM BUILDING ENVELOPE (SCALE 1:1000)





DEVELOPMENT SITE NO. 5 - MBE MASSING DIAGRAM (SCALE 1:1000)

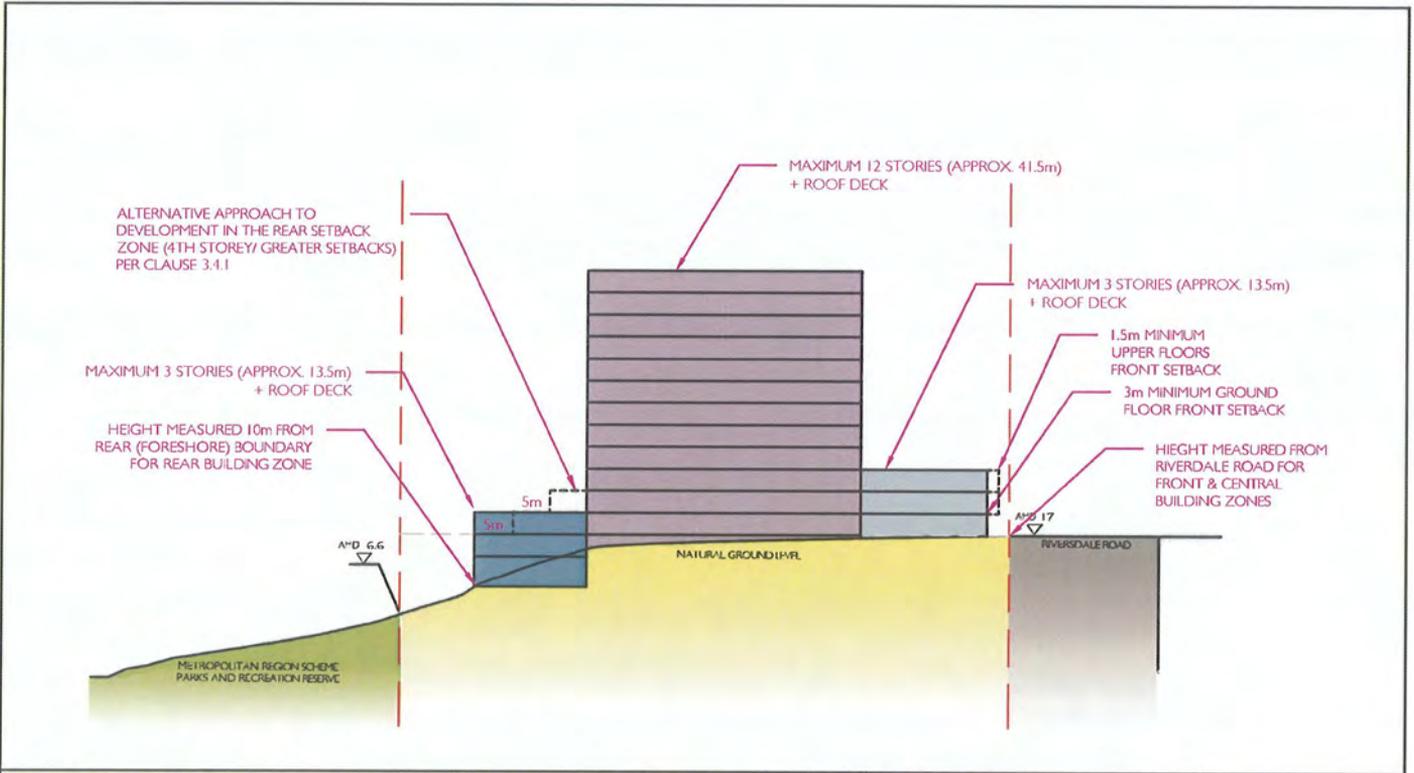


DEVELOPMENT SITE NO. 5 - MAXIMUM BUILDING ENVELOPE (SCALE 1:1000)

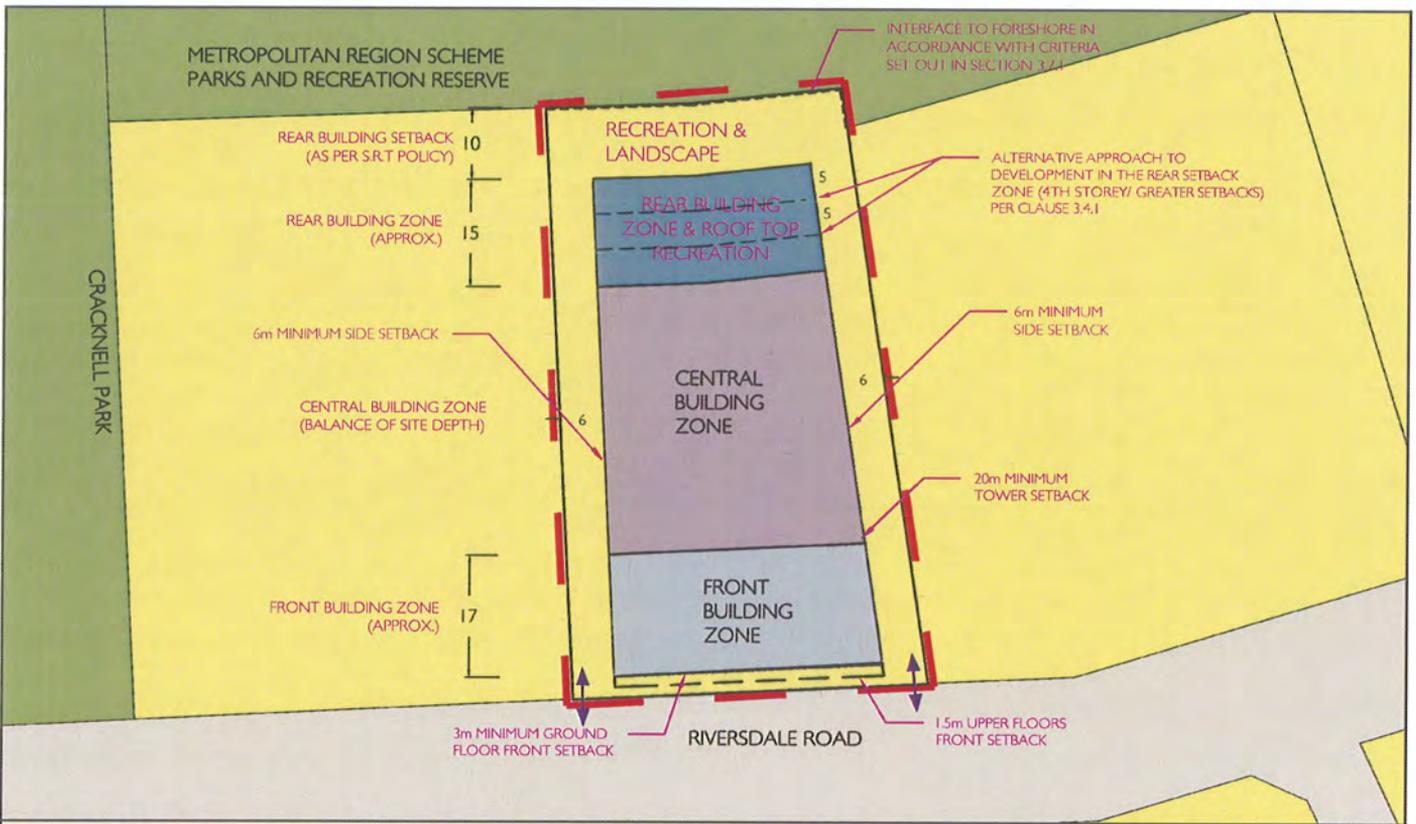
Legend

- Preferred Access Point
- Front Building Zone
- Rear Building Zone
- Development Site Boundary
- Central Building Zone
- Potential Landmark Site





DEVELOPMENT SITE NO. 6 - MBE MASSING DIAGRAM (SCALE 1:1000)



DEVELOPMENT SITE NO. 6 - MAXIMUM BUILDING ENVELOPE (SCALE 1:1000)

Legend

- Preferred Access Point
- Front Building Zone
- Rear Building Zone
- Development Site Boundary
- Central Building Zone

