



4. THE CONCEPT PLAN OPTIONS AND PREFERRED PROJECT

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4.1 Introduction

Based on the detailed site analysis two draft scenarios were originally developed, the 'Block Concept' (Option 1) and the 'Harbour View Concept' (Option 2).

Option 1 involved strengthening north-south linkages to improve access to the foreshore whilst Option 2 involved strengthening east-west linkages including extension of Nancarrow Avenue which would enhance access to and around the site. The options also contained different scenarios for building heights.

From analysis of the options for development and discussions with Council and the Department of Planning in response to the Director General's Requirements, a third preferred development scenario, Option 3 (the Terrace Option) was arrived at which incorporated elements of the two earlier scenarios.

NOTE: In the Concept Plan "height" is expressed in terms of number of storeys up to a maximum RL (which is to contain the rooftop structures such as lift overruns and plant). It is intended that the definition of "storey" contained in Ryde LEP 2010 be adopted as follows:

- storey means a space within a building that is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but does not include:*
- (a) a space that contains only a lift shaft, stairway or meter room, or*
 - (b) a mezzanine, or*
 - (c) an attic.*

4.2 Development Options explored

Option 1 - Block Concept

This Option was based generally on the principles established in Council's LEP and DCP, as varied by the built forms of the two significant recent developments - Waterpoint and Bay One in Shepherds Bay. This development concept explored the construction of a number of 'perimeter' style residential developments, with buildings orientated around central landscaped areas, while maximising the number of dwellings afforded views to the waters of Shepherds Bay and sunlight access.

This option introduced the possibility of additional north-south pedestrian, cycle and vehicular links between Constitution Road and the foreshore. It also incorporated the opening up of additional view corridors to the water from Constitution Road and beyond, over and above those identified in Council's existing and Draft DCP's.

The concept also made provision for the significant area-wide stormwater management upgrade works required.

Perhaps the most important aspect of this development concept was its objective to refocus future development on a revitalised, people friendly, active foreshore precinct.

Under the Block Concept it was envisaged that heights of buildings would range between 5 and 8 storeys generally uniform to the topography of the land and similar to more recent residential development nearby with a taller 16 storey signature building at the corner of Church and Well Streets.

This Option did not result in significant additional public open space when compared to a DCP compliant scheme as detailed in the EA.

Option 2 - Harbour View Concept

This Option was again, generally based on the principles established in Council's LEP with the exception of building heights. This development concept, while similar in built form to Option 1, relied more on upgrading the east-west pedestrian, cycle and vehicular links through the precinct by connecting Nancarrow Avenue to Belmore Street together with significantly more public parkland.

Under the Harbour View Concept it was envisaged that heights of buildings would generally range between 3 and 8 storeys, similar to more recent residential development nearby with several taller 18-22 storey buildings in the centre of the site and a taller signature building at the corner of Church and Well Streets.

The general principle in the proposed Harbour View Concept was to put taller buildings on the high parts of the site to take advantage of the view access to the south, southeast and southwest. It proposed a range of heights to include three to seven, four, eight, sixteen to eighteen storeys strategically proposed on the higher parts of the site and behind lower buildings. This Option had up to four to five storeys streetscapes and towers behind in the interiors of the Concept Plan site.

This Option resulted in larger areas of open space, improved solar access to adjacent public and private spaces and within the new development and overall resulted in better internal residential amenity and public domain quality. In summary, the smaller footprint, taller slimmer building envelopes increased opportunities for better solar access, views to the water and parkland when compared to a DCP compliant development as detailed in the EA.

Both of these Options relied on regrading of the significantly altered topography of the Concept Plan site to facilitate accessible access between the various precincts.

Option 3 - The Terrace Concept

This Option was the original submission 'Preferred Option'.

The general principle of the proposed layout and building height distribution is such that the proposal will present up to five storeys high buildings fronting Constitution Road, Bowden Street, Belmore Street and Rothesay Avenue with the taller components of the buildings set further back behind the main building lines.

Significant setbacks are proposed along Rothesay Avenue to appropriately address the adjacent foreshore reserve.

Option 3 involves:

- 4 - 9 storey building heights with two 12 storey buildings in the central area of the site to articulate and mark the central spine of the new development and one 16-18 storey signature building on the signature site fronting Church Road to act as 'gateway' entry statement;
- approximate GFA of 260,000sqm (based on LEP definition) made up of 250,000sqm residential plus 10,080sqm commercial and community across the Concept Plan site;
- Car parking based on Ryde DCP 2010 controls and dependant on landuse/ apartment mix (based on a sample mix of 2600 apartments, a maximum of 4500 car parking spaces will be provided);
- the strengthening of both north-south and east-west pedestrian and vehicular connections;
- provisions for area-wide stormwater management;
- maintaining views to existing development and creating new view corridors;
- providing better functionality in terms of street layout, building form and location of open spaces;
- taller building forms at the central core to create a sense of place and 'heart' to the development; and
- significantly more open space across the Concept Plan area than the other two options - approximately 4,125sq.m which is 280% more than a complying DCP scheme.

The general principle in Option 3 the Terrace Concept is to have a uniform height distribution with regard to the regraded topography of the Concept Plan site with taller buildings near the central core to engender a sense of place and to take advantage of the water views offered to the site.

All Options explored were informed and reviewed by Richard Lamb and Associated in their View Analysis included in the EA.

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29. CONCEPT OPTIONS EXPLORED

CONCEPT PLANS

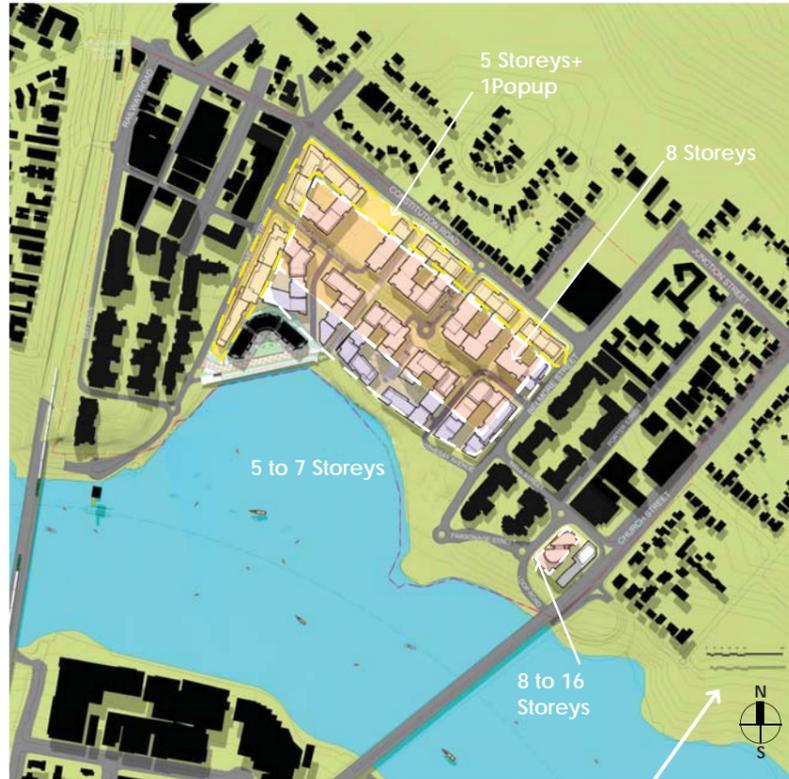


FIGURE 3. OPTION 1 - BLOCK CONCEPT PLAN

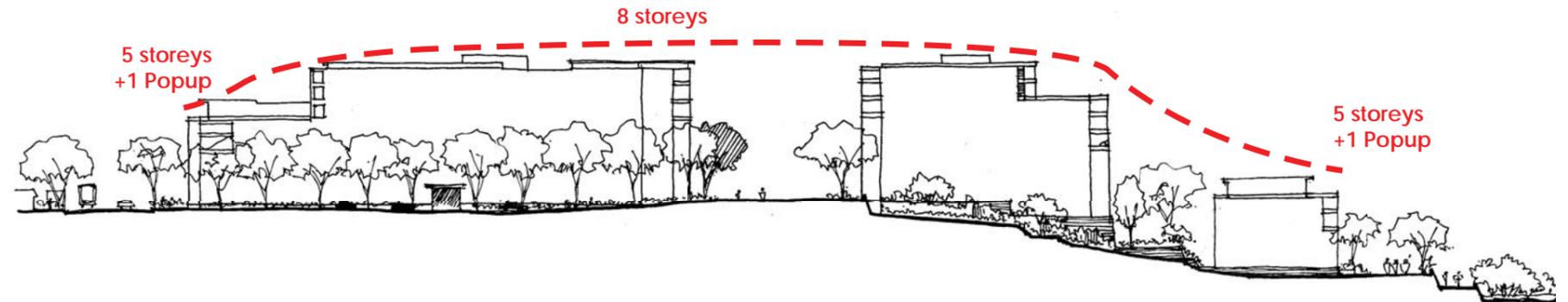


FIGURE 6. OPTION 1: BLOCK CONCEPT - LONG SECTION THROUGH SITE DOWN TO WATER



FIGURE 4. OPTION 2 - HARBOUR VIEW CONCEPT PLAN

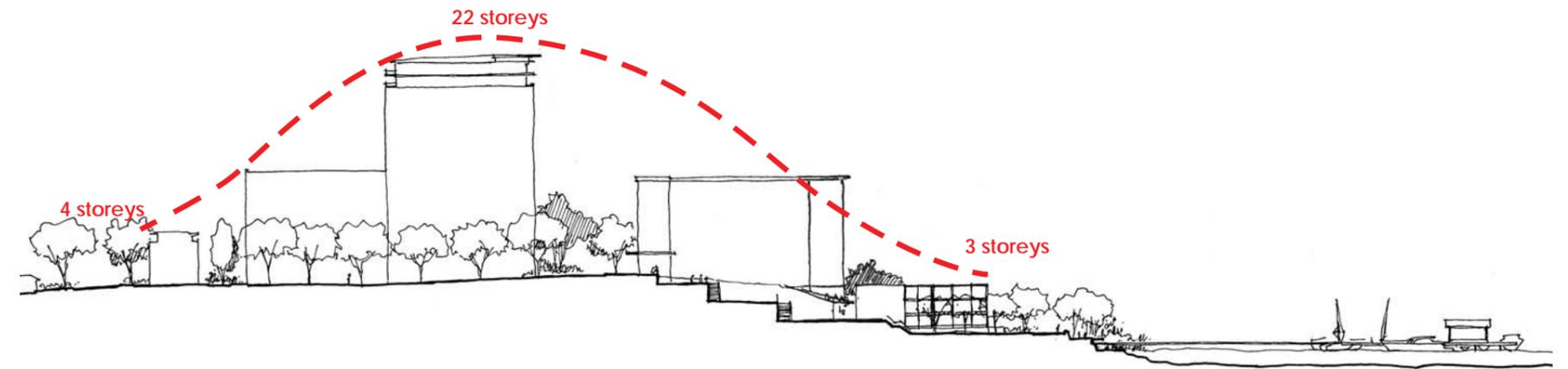


FIGURE 7. OPTION 2: HARBOUR VIEW CONCEPT - LONG SECTION THROUGH SITE DOWN TO WATER

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FIGURE 5. OPTION 3 -
TERRACE CONCEPT PLAN

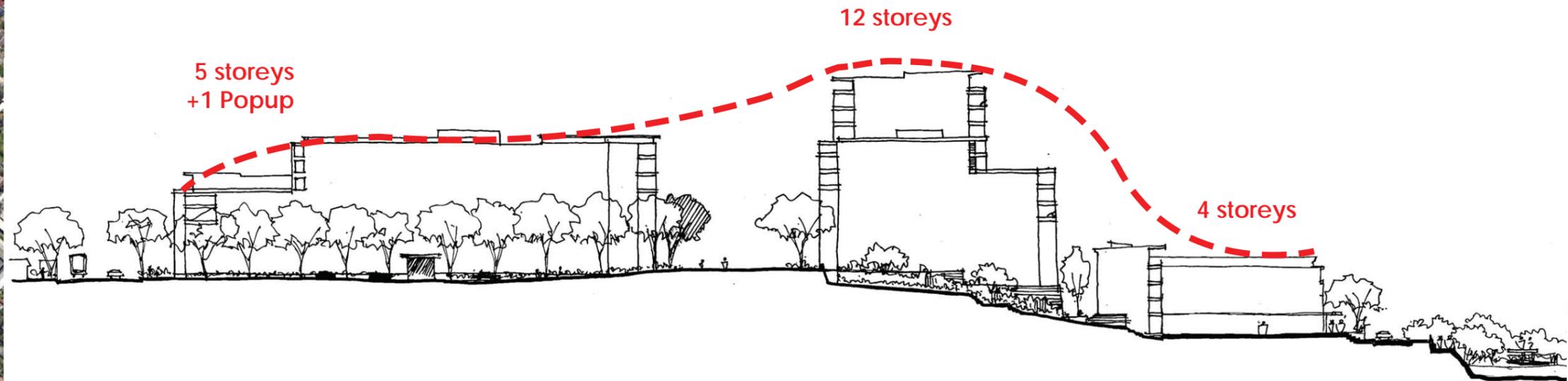


FIGURE 8. OPTION 3 - TERRACE CONCEPT - LONG SECTION THROUGH SITE DOWN TO WATER

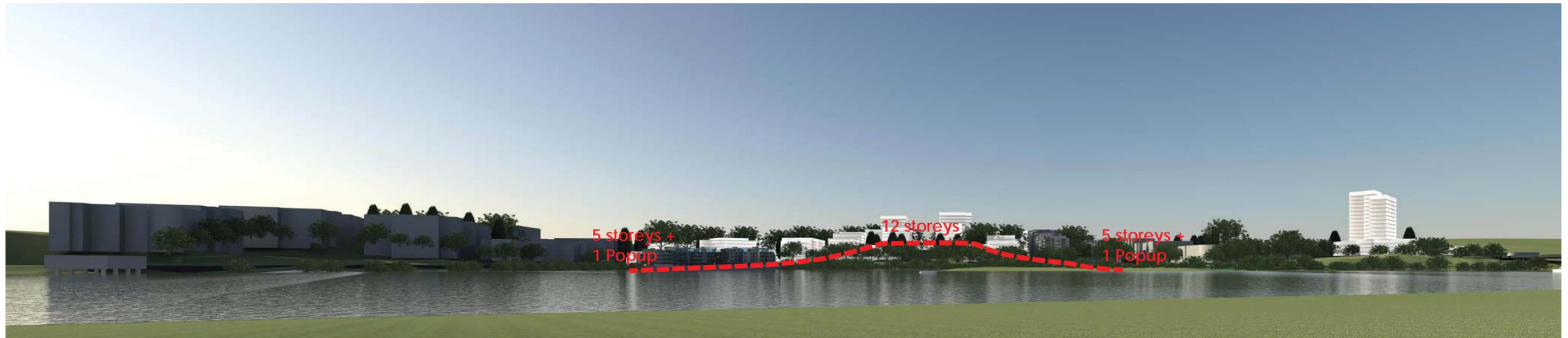


FIGURE 9. OPTION 3 - TERRACE CONCEPT - VIEW FROM NORTHERN BANK OF RHODES TO SHEPHERDS BAY

4.3 Concept Plan - Preferred Option

Option 4 involves:

- New residential development to replace existing commercial and industrial uses;
- Establishment of a new foreshore neighbourhood in Meadowbank linking existing residential areas to the waterfront and public transport;
- The construction of new roads, sharedways, cycleways and pedestrian paths to public transport and the waterfront;
- The 'in principle' removal of existing buildings
- Building envelopes for new residential buildings with heights ranging between 4 to 12 storeys from a reformed ground level;
- Approximately 193,491.7sqm GFA of new residential development which equates to approximately 2002 new apartments (dependant upon mix) ranging between 60 to 115sqm (10% 1 bed, 75% 2 bed, 15% 3 bed) plus 10,080sqm of commercial, retail or community uses;
- Approximately 19,500sqm of the site to be publicly accessible open space;
- Car parking for approximately 2,954 residential car parking spaces, including 252 commercial and community spaces, based generally on the RTA Guidelines (1,800 less than Option 3);
- Strengthening of both north-south and east-west pedestrian and vehicular connections;
- Substantial improvement to area-wide stormwater management infrastructure;
- Remediation of land if required;
- New infrastructure including utility upgrades and under grounding of services;
- Maintaining views to existing development and creating new view corridors;
- Providing better functionality in terms of street layout, building form and location of open spaces;
- Permitting taller building forms at the central core to create a sense of place and 'heart' to the development;
- Providing significantly more publicly accessible open space across the Concept Plan site than a Council DCP compliant scheme;
- Landscaping and significant improvements to the public domain; and
- Localised reshaping of the topography of the site to create the street layout envisaged in Council's DCP, which will open up new view corridors to the water from the surrounding residential area and improve pedestrian and cyclist accessibility.

Adoption of the Concept Plan does not enable any construction works without further Development Approval from either the Minister for Planning (in the case of the submitted Stage One Project Application) or the City of Ryde Council.

Particular attention has been taken to setback building bulk from the Constitution Road frontages to respect lower density residential development opposite. It is important to note that the LEP height limits for the properties to the north of Constitution Road are lower than the height limits on the Concept Plan Site immediately opposite. In that instance, due to the topography, even a LEP compliant height development would block any potential views to the waterfront (currently generally blocked by industrial buildings). This also applies to the majority of other areas within the Concept Plan site, where compliant development heights would result in similar view impacts to the Concept Plan heights due to changes in topography.

On 21 December 2009 an initial Project Application was submitted providing a preliminary environmental assessment. The project was declared a 'Major Project' under Part 3A of the Environmental Planning and Assessment Act 1979 on 03 March 2010. The Minister required a Concept Plan to be lodged proving an overview of the project. The Director-General issued Environmental Assessment Requirements (Director General Requirements) 20 May 2010 outlining key issues to be addressed in the environmental assessment of the project. The submitted EA addressed the Director General Requirements and contained Draft Statements of Commitment.

Subsequent to this the Department of Planning issued another letter, dated 5 June 2011 following the public exhibition of the Application which contained a further list of Key Planning Issues to be addressed by the Proponent.

4.3.1 Concept Plan Vision Statement

"The reuse of the outmoded industrial area at Meadowbank to create a new vibrant waterside urban community of Shepherds Bay offering a quality lifestyle and amenities"

4.3.2 Community, Environmental and Economic Benefits

Community benefits offered by the Concept Plan include:

1. Greater emphasis on non-motorised modes of transport and connections to ferry, rail and buses, through new and improved pedestrian and cycle links to the three public transport nodes in the area
2. New view corridors to the water from the surrounding area in addition to those identified in Council's DCP
3. Seamless connections between the new development and existing neighbourhood
4. Better physical connections for pedestrians, cyclists and motorists improving public access and enjoyment of the foreshore
5. More defined, elegant built form when viewed from the water than a complying DCP development scenario or recent developments in Shepherds Bay
6. Potential for community facilities including community theatre space close to the foreshore and central core of the new development
7. Significant area-wide improvements to the stormwater management
8. Provision of approximately 19,660 sqm of land for new publicly accessible open space comprised of approximately 100% deep soil planting area.
9. Commitment to sustainable development practices such as green buildings, green infrastructure, facilitating alternative modes of transportation and integrated stormwater management planning
10. A diversity of housing types and sizes that exceeds the requirements of the DCP which will in turn increase housing choice and affordability in the area
11. New road and infrastructure improvements, including connection of Nancarrow Avenue through to Belmore Street
12. Increased rate revenues to be used by Ryde City Council for community-wide improvements and services as well as the creation of financial benefits that will result to the community from direct and indirect job creation

4.3.3 Proposed Land Uses

Strategic directions contained in Council and State planning policies indicate that commercial or industrial uses are no longer economically feasible and point to transforming the precinct for residential purposes. The Economic Assessment by Hill PDA land economist and studies carried out for Council indicated that the area is well serviced by larger employment areas in the region. The justification for the residential development is based on demand and supply in the region and site suitability. The Hill PDA Economic Assessment was included in the EA.

Accordingly, the Concept Plan facilitates residential development with some small-scale commercial, retail and community in central locations to activate the public spaces and foreshore area.

4.3.3.1 Residential

The Concept Plan proposes building envelopes for new buildings to include approximately 193,491.7sqm GFA of residential floorspace. It is envisaged that it will take at least 10 years for the Concept Plan site to be fully redeveloped. Indicative figures for the apartment number and mix have been prepared based on existing market conditions. It is recommended that development statistics be revised at each Project Application stage to enable response to any changes in market conditions. A summary of the indicative residential development statistics for the Concept Plan are outlined in **Table 3** below.

The apartment mix has been carefully considered and is designed to respond to current market demands as well as to meet the demographic profile for the locality. The mix of apartment sizes will provide for a variety of users ranging from single students to families.

Adaptable housing (10%) will also be provided to cater for the ageing and/or mobility impaired members of the community. A summary of the indicative average apartment mix is outlined in **Table 3** below.

Table 3. Apartment Mix and Size Summary

	Number	Apt. Mix	Average Apt. Size
Bed 1	200	10%	60
Bed 2	1502	75%	88
Bed 3	300	15%	115

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 CONCEPT PLAN SITE



FIGURE 10. OPTION 4:
PREFERRED CONCEPT PLAN

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4.3.3.2 Commercial and Community Uses

The Concept Plan makes provision for small-scale commercial development in key locations. Approximately 10,080m sq.m GFA commercial/ retail/ community uses will be encouraged at activity nodes across the site, particularly flanking the central foreshore plaza open space and within the podium levels of the signature building fronting Church St.

Convenience retailing, café's and the like will be encouraged in high use areas adjoining public open spaces. The purpose of the integration of commercial development is to activate public spaces, create a sense of place and draw people into the new foreshore neighbourhood.

Consistent with historic uses of the site, liveliness and energy will be brought back to the waterfront.

4.3.3.3 Reformed Topography

The current landform in many areas across the Concept Plan site has been modified through benching to provide for the existing large footprint industrial buildings and at-grade car parking and loading areas. In many cases, natural ground levels cannot be determined.

The Concept Plan proposes localised reshaping of the topography in various areas of the site to achieve better planning outcomes, particularly in terms of accessibility, views and functioning interfaces between buildings and their adjacent public domain.

4.3.4 Isolated Sites

The Concept Plan site spans approximately 9.3 hectares (comprising 8.1 hectares of privately owned land). Holdmark Property Group and their associated companies are the majority land owner. Whilst Holdmark Property Group endeavoured to acquire all sites within the Concept Plan area, acquisition of some properties was not possible. The full site description and land ownership details are provided in **Section 1**. The other land owners have been consulted and are aware of the Concept Plan.

At the request of the Director General, the Concept Plan provides an overall design concept for the Shepherds Bay site including sites not owned or controlled by Holdmark Property Group or their associated companies to facilitate a holistic approach to planning and avoid fragmentation of land or creation of isolated sites. It is envisaged that future development of land to which the Concept Plan applies would be required to be carried out in accordance with the Plan.

4.3.5 Carparking

Car parking based generally on the RTA *Guide to Traffic Generating Developments* and dependant on landuse/ apartment mix (based on a sample mix of 2000 apartments plus 10,080sqm commercial or community uses), a maximum of 2,954 car parking spaces including approximately 250 commercial and community spaces will be required to be provided by the Concept Plan (Preferred).

The Parking rates have been adopted in recognition of the Site's excellent access to public transport and in response to the DGR's to adopt a minimalist approach to car parking provision with on site parking reduced where feasible. Specifically rates applying to the Concept Plan developments are as follows:

- 1 space per 1 and 2 bed unit;
- 2 spaces per 3 bed unit; plus
- 1 space per 5 units for visitors
- 1 spaces per 40sqm for commercial or community uses

The Concept Plan also requires that bicycle parking be provided within all development stages which is easily accessible from ground levels and from apartments and commercial or community uses. This is to be provided in a combination of secured areas and chained bicycle storage in public domain areas.

4.3.6 Building Heights

Due to the highly modified existing topography, the Concept Plan defines the height of buildings envelopes illustrated on the Heights Map at **Figure 12** referenced to the RL's of the adjacent streets, as detailed in the Architectural Drawings at **Annexure 3** and as illustrated on **Figure 11**.

The resultant street wall height of the Concept Plan buildings are generally consistent with recent adjacent residential developments. However, variations to compliance with LEP building height controls are sought where view access to and from neighbouring development will not be impacted by marginally taller buildings. It is important to note that the LEP height limits to the properties to the north of Constitution Road are lower than the height limits on the Concept Plan Site immediately opposite.

The street wall height of buildings in Stage 1 are similar to the permissible LEP heights at the Belmore Street frontage but higher at the western and northern edge of the development where taller building height will not impact on existing view access for surrounding properties.

Particular attention has been taken in the Concept Plan to setback building bulk from the Constitution Road frontages to respect lower density residential development opposite. In that instance, however, due to the topography, even an LEP compliant height development would block any potential views to the waterfront (currently generally blocked by industrial buildings). This also applies to the majority of other areas within the Concept Plan site, where compliant development heights would result in similar view impacts to the Concept Plan heights due to changes in topography.

Building heights in the Concept Plan range between 4 to 8 storeys with six 12 storey towers in the centre of the site flanking the central spine and another 12 storey building fronting Church Street to act as a 'gateway element' at the entry to the new development area. Buildings are generally 3 storeys at Concept Plan Site

boundary fronting Constitution Road with additional floors setback. Other articulated building forms of varied heights are proposed along the other road frontages to protect views, maximise solar access and add interest in the streetscape. Specifically, building heights were designed based on the view analysis, recent developments, solar access and to enable the provision of significant areas of additional public open space.

Definition of Height

In the Concept Plan "height" is expressed in terms of RL's and number of storeys. Maximum RL's for specific building envelopes are determined by establishing the theoretical new ground plane by drawing a line between the RL's at relevant adjacent street frontages and adding the permissible number of storeys plus lift overrun allowance. Refer Building Envelope control diagrams for each development stage following at Figures 13 to 22.

Definition of Storey

It is intended that the definition of "storey" contained in Ryde LEP 2010 be adopted as follows:

storey means a space within a building that is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but does not include:

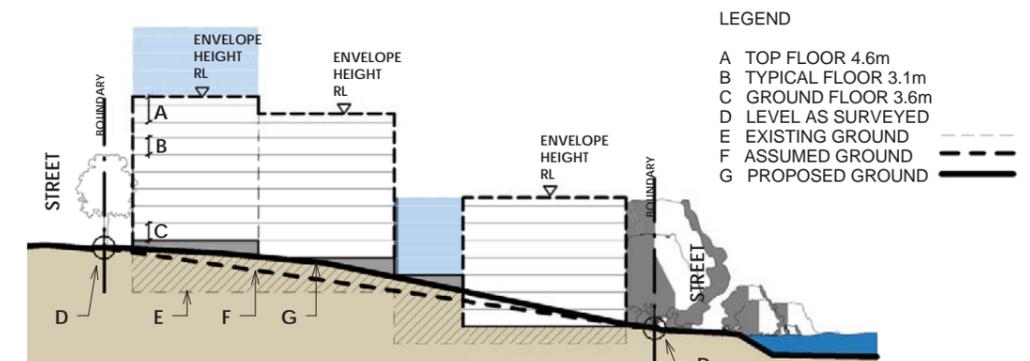
- (a) a space that contains only a lift shaft, stairway or meter room, or
- (b) a mezzanine, or
- (c) an attic.

A storey for the purpose of determining height does not include basement areas of buildings which protrude 1.4metres or less above the theoretical new ground plane RL defined above.

Recommended Development Principles

Building heights in the Concept Plan site are to be provided in accordance with the Height Plan at Figure 12 and Figures 13 to 22.

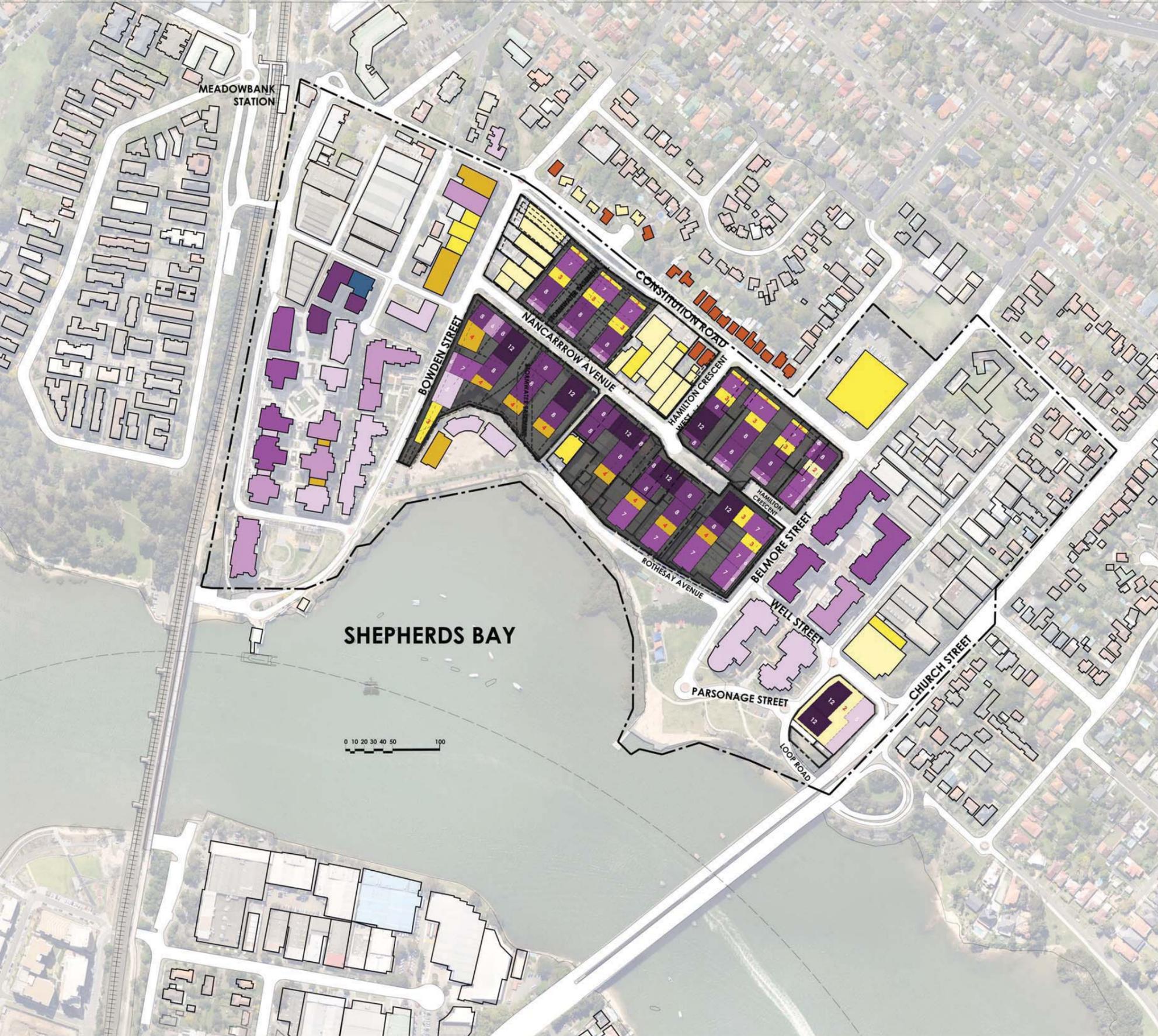
FIGURE 11. METHOD OF DEFINING HEIGHT



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FIGURE 12. OPTION 4: PREFERRED CONCEPT PLAN: MAXIMUM HEIGHTS

- LEGEND:
- Subject sites
 - 12 Storeys
 - 9 Storeys
 - 8 Storeys
 - 7 Storeys
 - 6 Storeys
 - 5 Storeys
 - 4 Storeys
 - 3 Storeys
 - 2 Storeys
 - 1 Storey
 - Building setback on upper 3 levels by 5.2m per floor to allow for sunlight access to Nancarrow Avenue



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BUILDING HEIGHTS (Cont.)

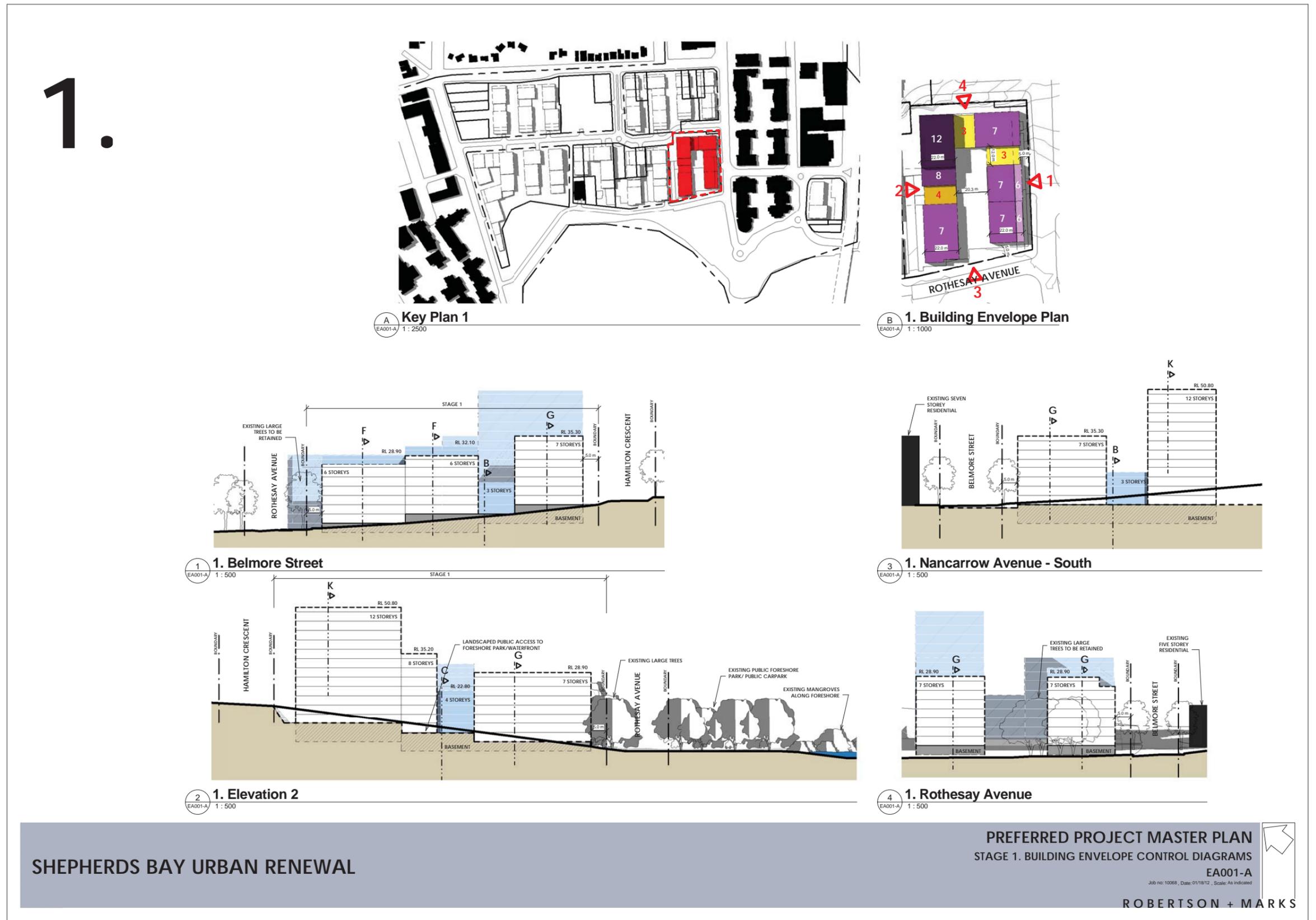
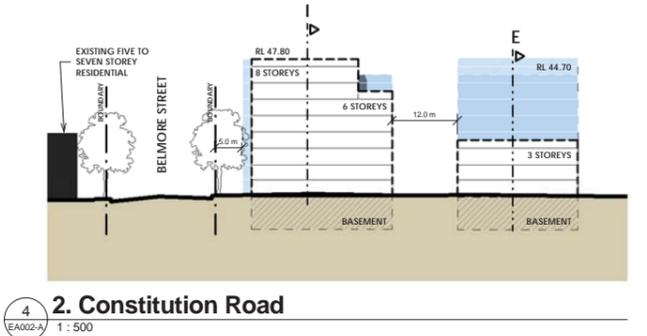
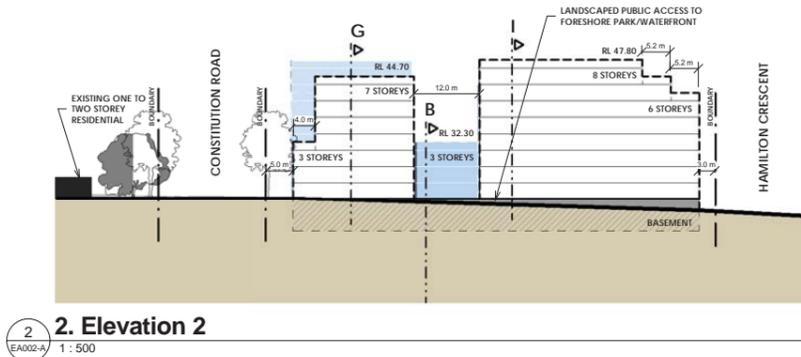
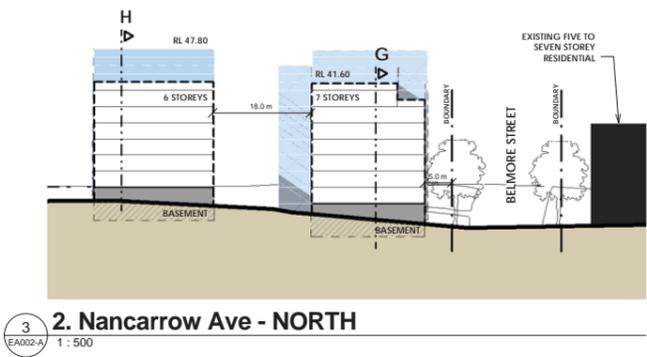
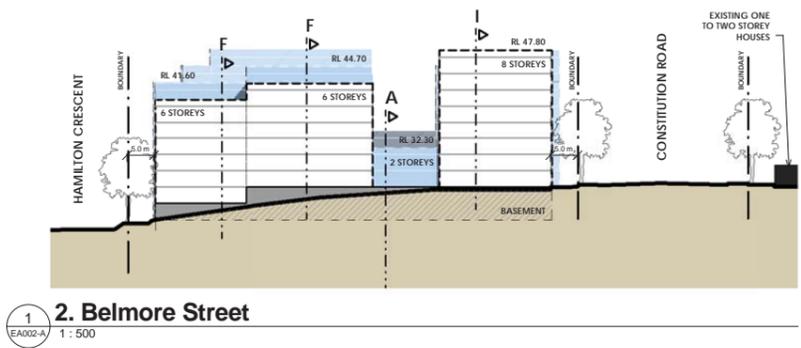


FIGURE 13. STAGE 1 BUILDING ENVELOPE CONTROLS

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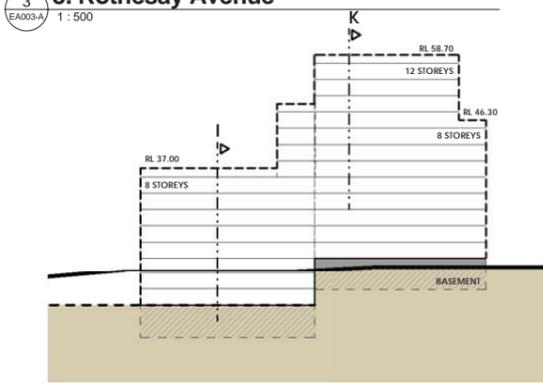
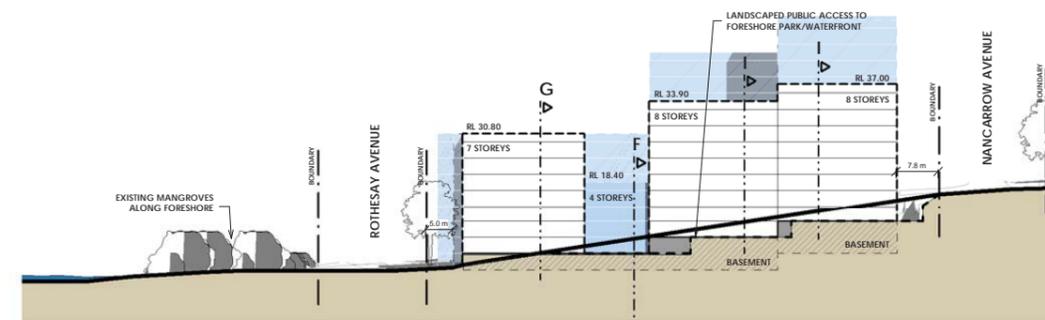
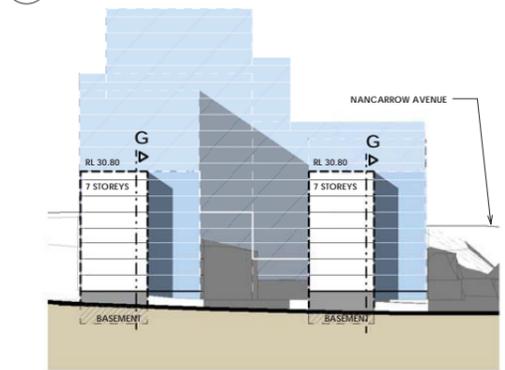
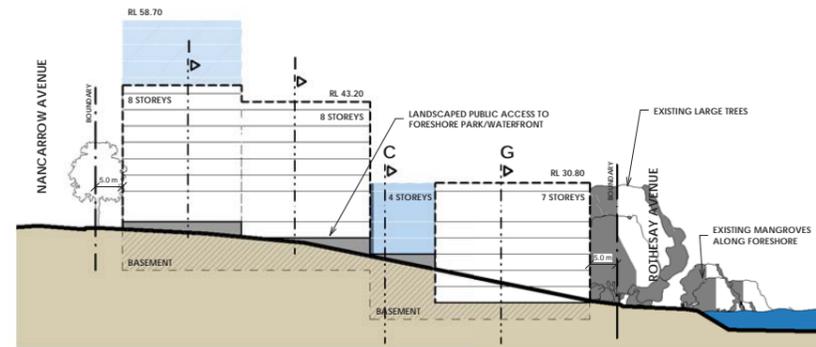
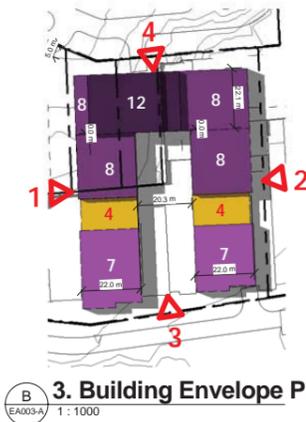


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PREFERRED PROJECT MASTER PLAN
STAGE 2. BUILDING ENVELOPE CONTROL DIAGRAMS
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FIGURE 14. STAGE 2 BUILDING ENVELOPE CONTROLS

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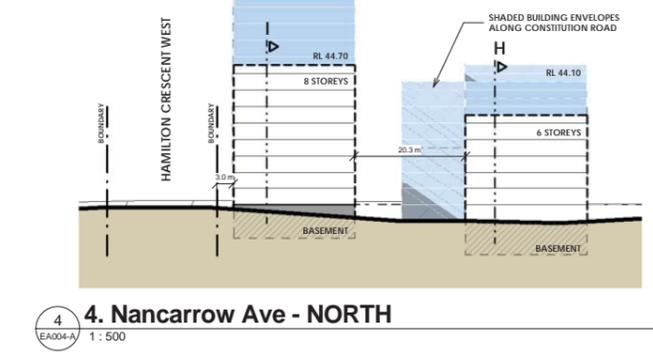
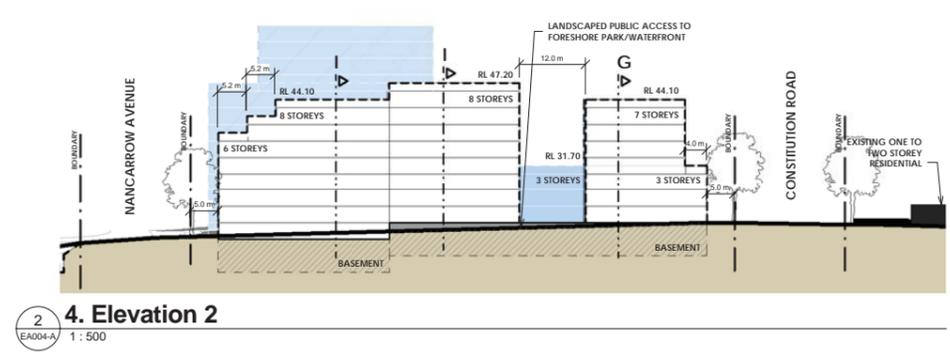
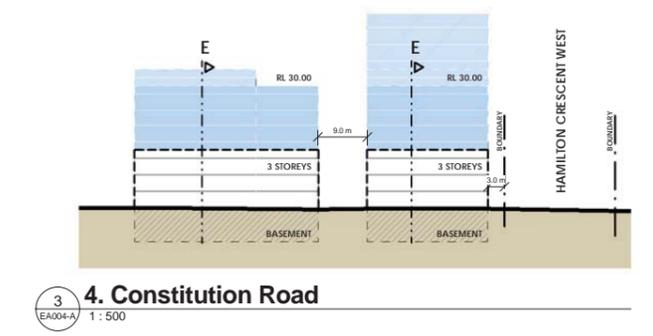
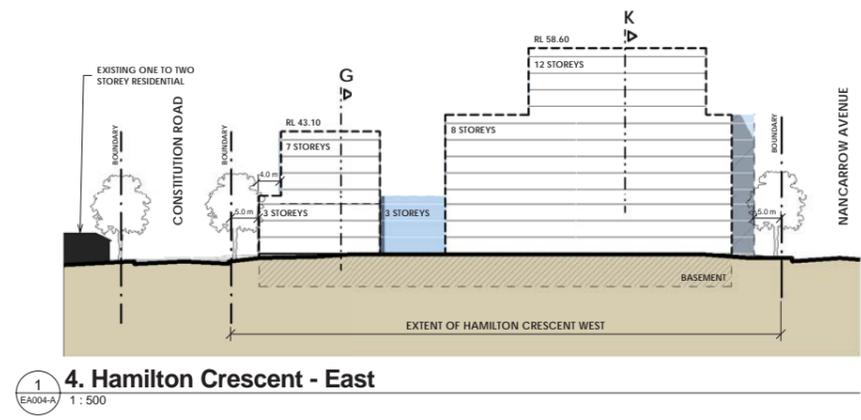
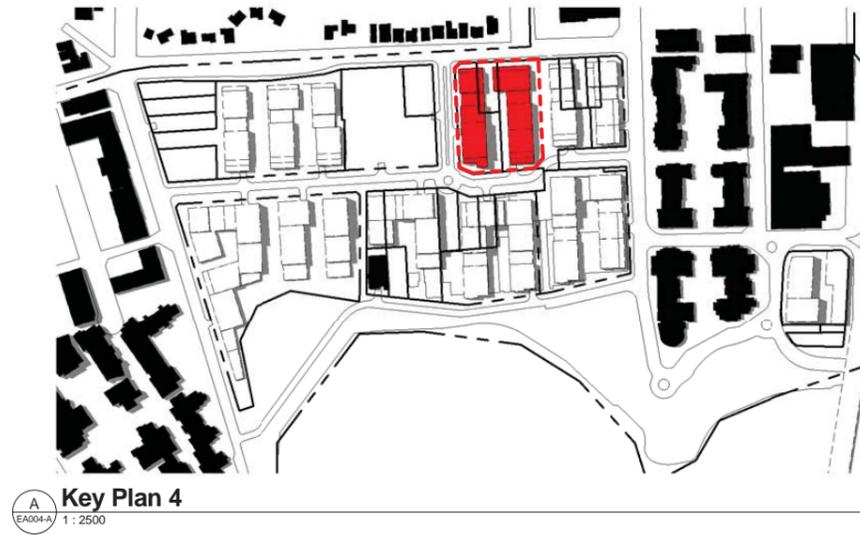
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STAGE 3. BUILDING ENVELOPE CONTROL DIAGRAMS
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FIGURE 15. STAGE 3 BUILDING ENVELOPE CONTROLS

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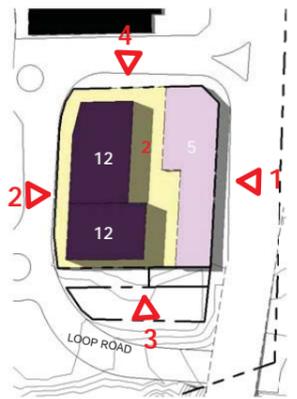
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STAGE 4. BUILDING ENVELOPE CONTROL DIAGRAMS
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FIGURE 16. STAGE 4 BUILDING ENVELOPE CONTROLS

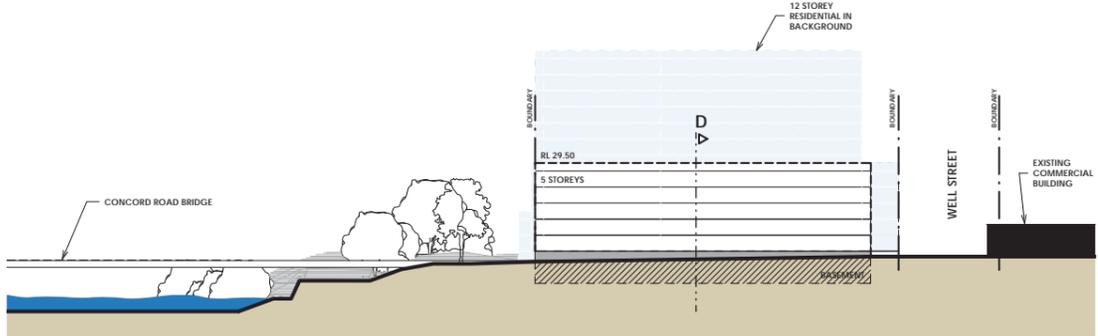
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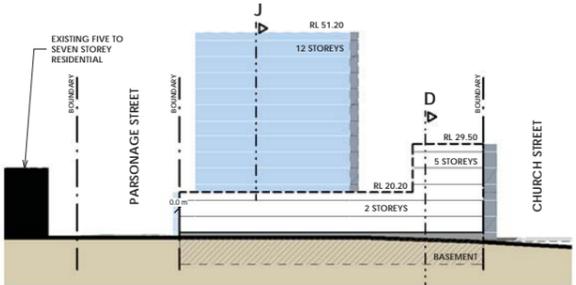
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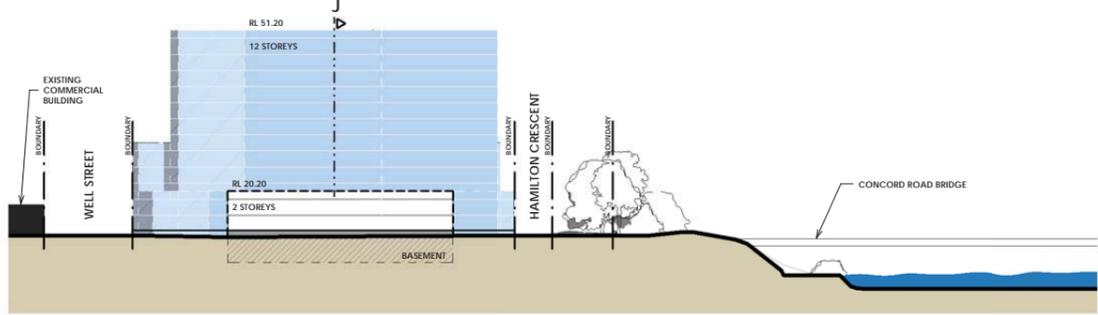
B 5. Building Envelope Plan
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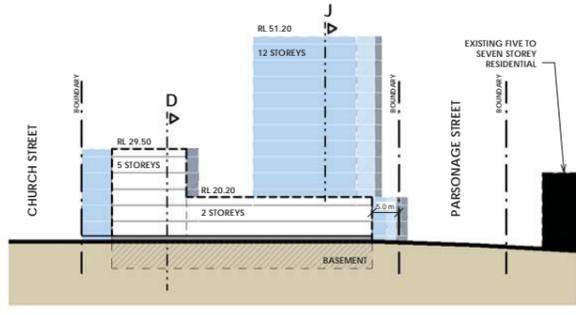
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3 5. Elevation 3
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2 5. Parsonage Street
EA005-A 1: 500



4 5. Well Street
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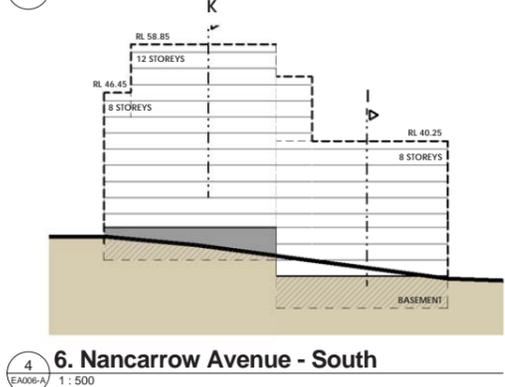
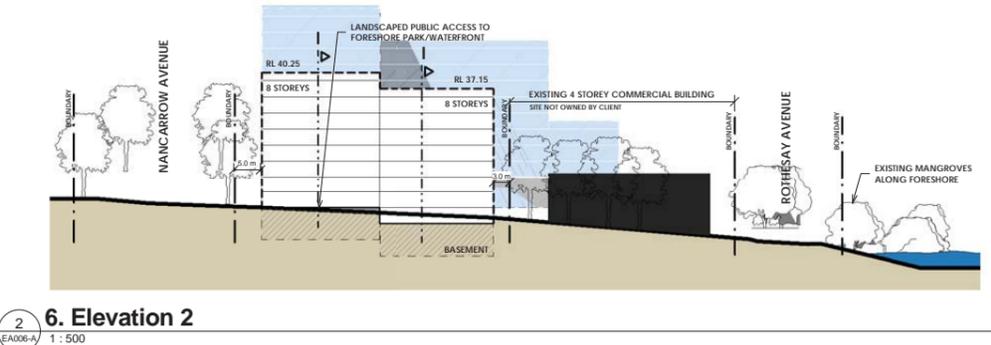
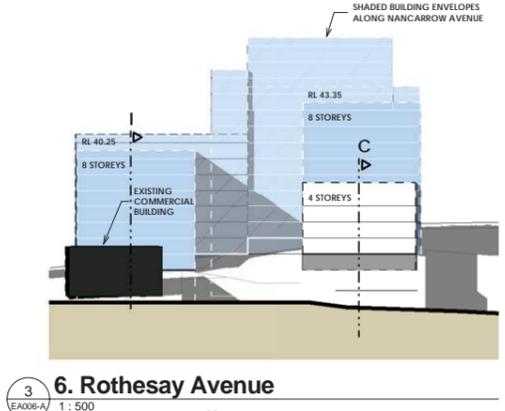
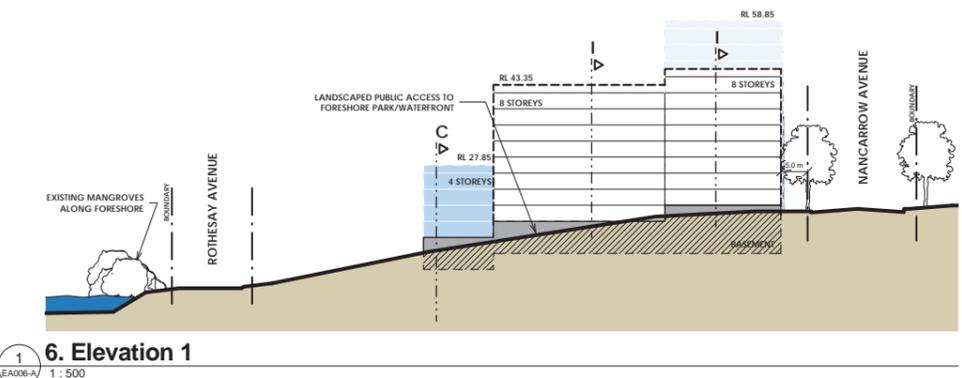
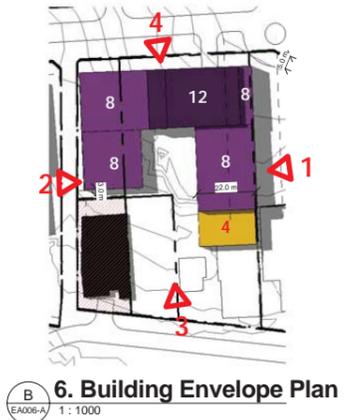
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PREFERRED PROJECT MASTER PLAN
STAGE 5. BUILDING ENVELOPE CONTROL DIAGRAMS
EA005-A

Job no: 10068, Date: 01/10/12, Scale: As indicated
ROBERTSON + MARKS

FIGURE 17. STAGE 5 BUILDING ENVELOPE CONTROLS

6.

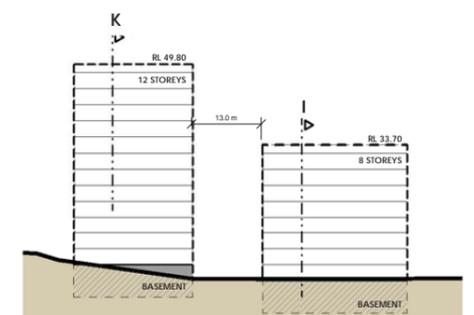
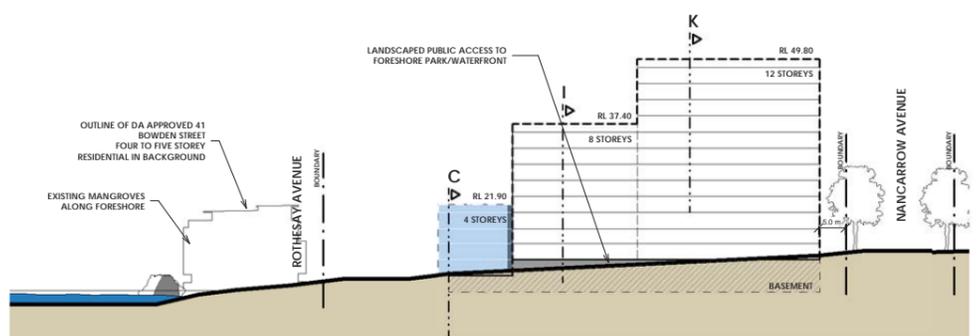
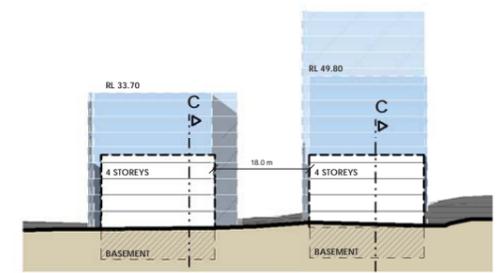
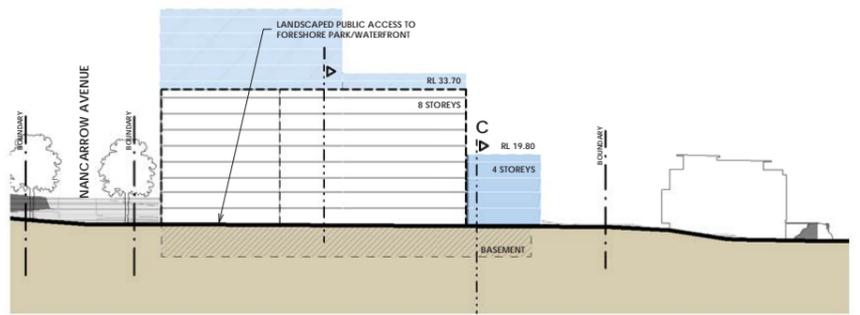
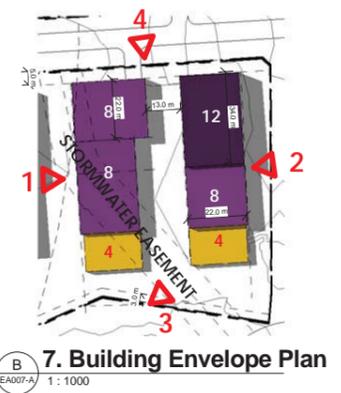


SHEPHERDS BAY URBAN RENEWAL

PREFERRED PROJECT MASTER PLAN
STAGE 6. BUILDING ENVELOPE CONTROL DIAGRAMS
EA006-A
Job no: 10068 , Date: 01/18/12 , Scale: As Indicated
ROBERTSON + MARKS

FIGURE 18. STAGE 6 BUILDING ENVELOPE CONTROLS

7.



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PREFERRED PROJECT MASTER PLAN
STAGE 7. BUILDING ENVELOPE CONTROL DIAGRAMS
EA007-A
Job no: 10068, Date: 01/19/12, Scale: As indicated

ROBERTSON + MARKS

FIGURE 19. STAGE 7 BUILDING ENVELOPE CONTROLS

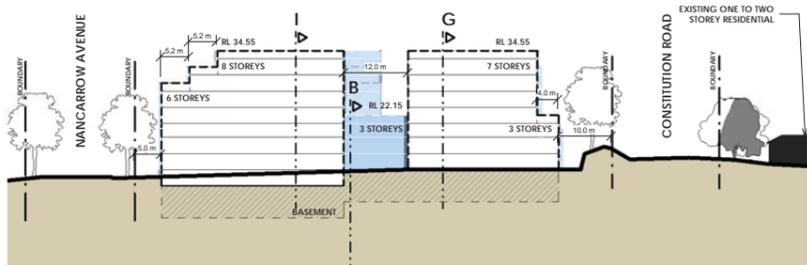
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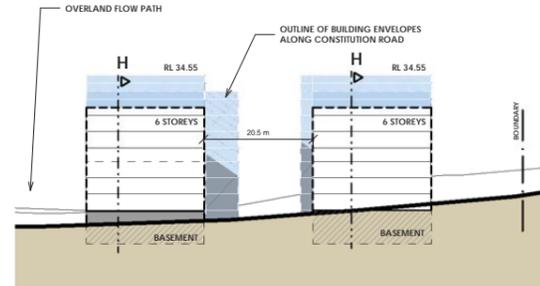
A Key Plan 8
EA008-A 1:2500



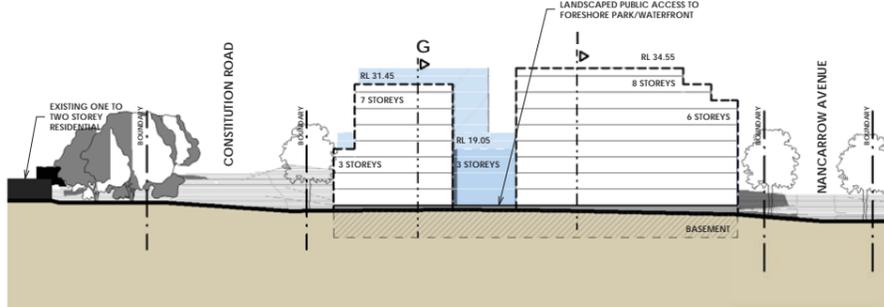
B 8. Building Envelope Plan
EA008-A 1:1000



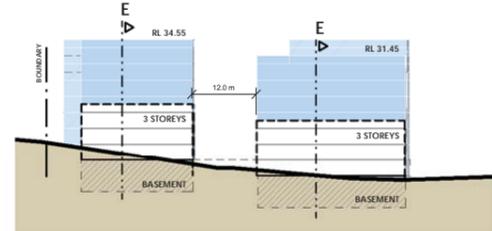
1 8. Elevation 1
EA008-A 1:500



3 8. Street elevation - Nancarrow Ave - NORTH
EA008-A 1:500



2 8. Elevation 2
EA008-A 1:500



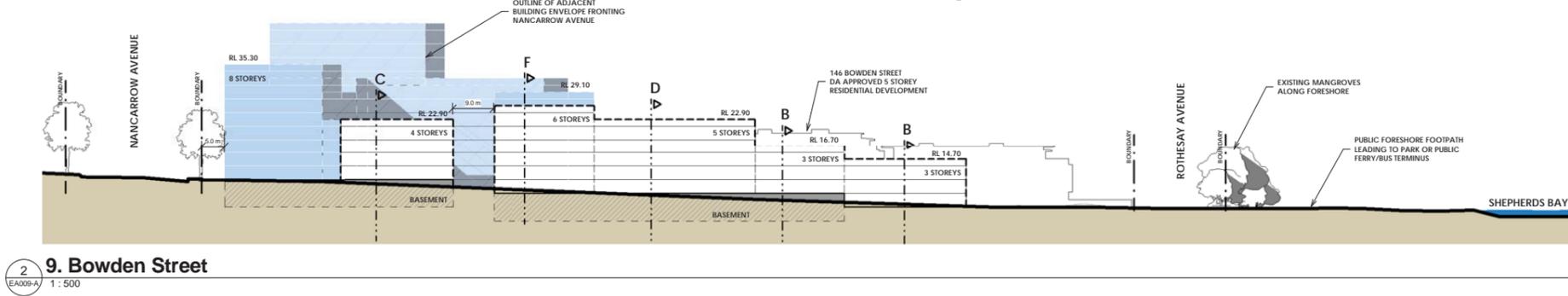
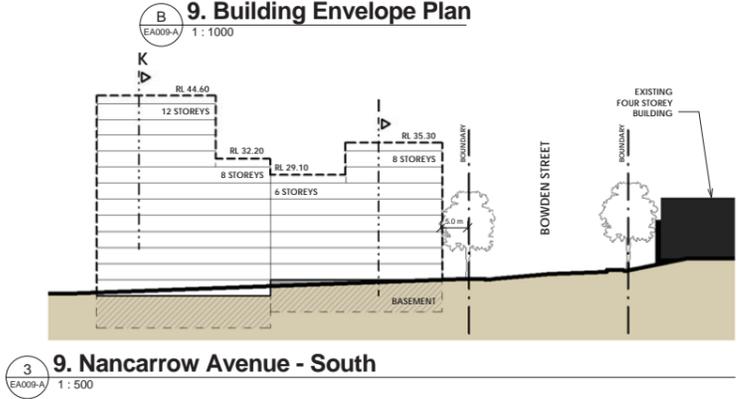
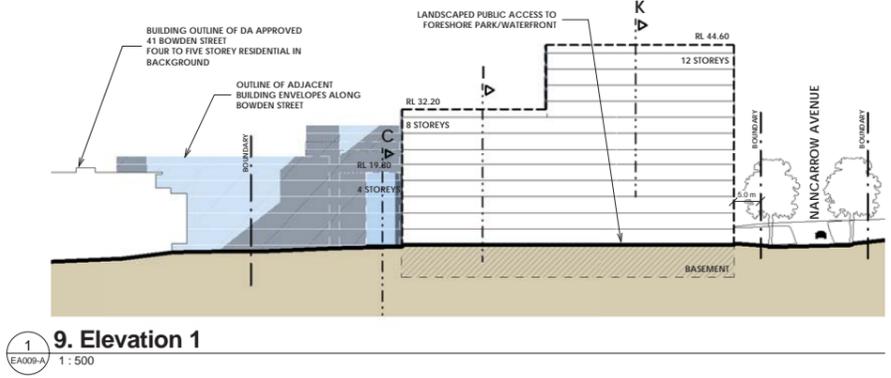
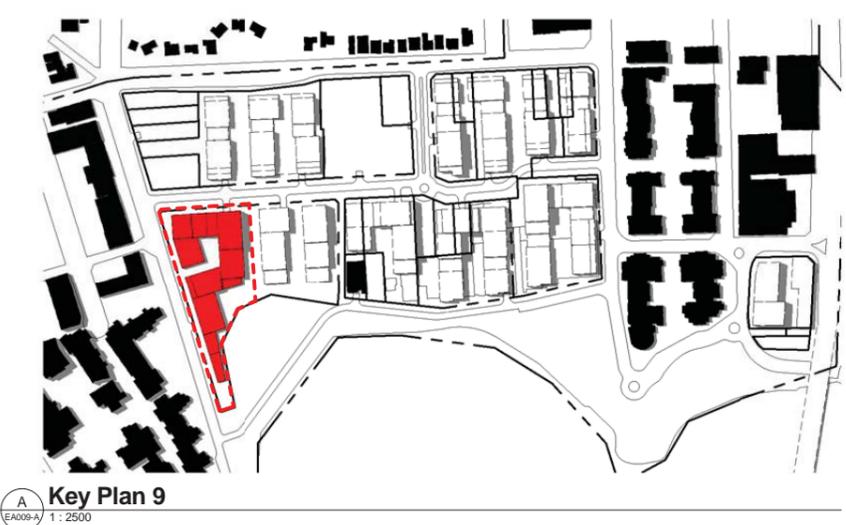
4 8. Constitution Road
EA008-A 1:500

SHEPHERDS BAY URBAN RENEWAL

PREFERRED PROJECT MASTER PLAN
 STAGE 8. BUILDING ENVELOPE CONTROL DIAGRAMS
 EA008-A
Job no: 10069, Date: 01/19/12, Scale: As indicated
ROBERTSON + MARKS

FIGURE 20. STAGE 8 BUILDING ENVELOPE CONTROLS

9.



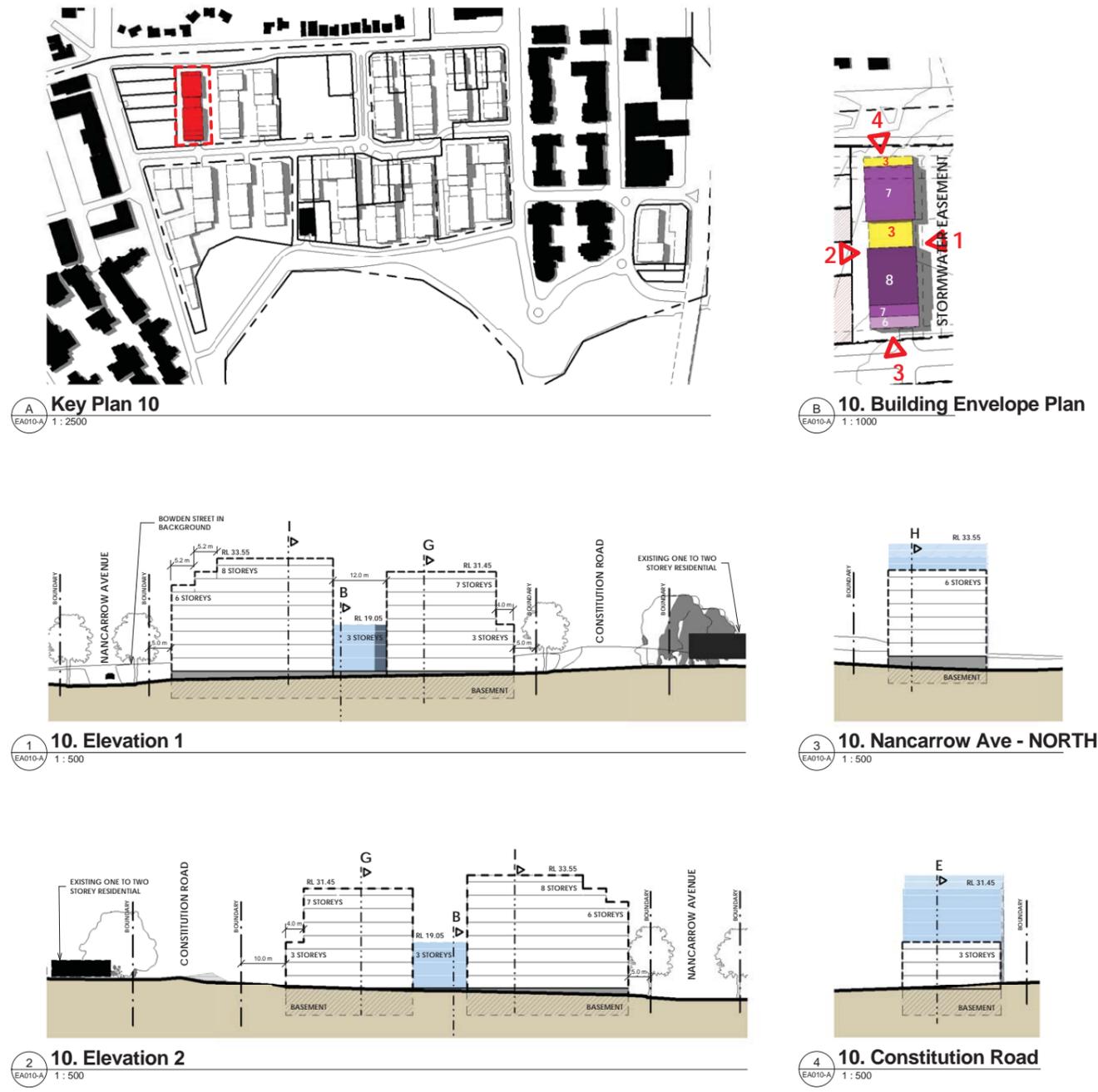
SHEPHERDS BAY URBAN RENEWAL

PREFERRED PROJECT MASTER PLAN
STAGE 9. BUILDING ENVELOPE CONTROL DIAGRAMS
EA009-A
Job no: 10068, Date: 01/18/12, Scale: As Indicated

ROBERTSON + MARKS

FIGURE 21. STAGE 9 BUILDING ENVELOPE CONTROLS

10.



SHEPHERDS BAY URBAN RENEWAL

PREFERRED PROJECT MASTER PLAN
STAGE 10. BUILDING ENVELOPE CONTROL DIAGRAMS
EA010-A
Job no: 10068 , Date: 01/18/12 , Scale: As Indicated

ROBERTSON + MARKS

FIGURE 22. STAGE 10 BUILDING ENVELOPE CONTROLS

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4.3.7 Building typologies

The Concept Plan (Preferred) envisages three basic building typologies, the Low Rise Residential, Slender Central Tower over Podium and the Perimeter Block form. All building envelopes have been designed to be consistent with SEPP 65 and the RDFC. Refer SEPP 65 Compliance Report, prepared by Robertson Marks architects at Annexure 9.

1. LOW RISE RESIDENTIAL

Low Rise Apartments are two to four storey residential flat buildings that are designed in a variety of different configurations, depending upon the size and context of the site, with landscaped grounds. The buildings will contain more than four dwelling units, single and two storey apartments, sharing a common foyer or stairwell at the building entrance and amenity space within the building or on the property. Low-rise apartments generally offer greater privacy and utilities than high-rise apartments, although they may have fewer amenities and typically don't have building lifts.

2. SLENDER CENTRAL TOWER OVER PODIUM

A Slender Central Tower over Podium is a multi unit high rise residential flat building with a central service core surrounded by units over a repetitive number of floors. It has an 8 storey base with a larger footprint as podium with smaller more slender 4 storey tower setback from the main building line. Podiums can be used as private communal green open spaces for the residents.

The tower is generally setback by 3 to 4m along the street front to present a human scale sized development along the edges. The height of the towers varies across the Concept Plan site as detailed on the Height Map. (Figure 12)

Within its envelope, the tower has the freedom to vary in overall shape and facade design to create interest and variety within the broader master plan.

3. PERIMETER BLOCK APARTMENTS

A Perimeter Block is a residential flat building that wraps around the site boundaries enclosing a central communal landscaped open space.

The width of the buildings are 25m from glass line to glass line.

The heights of the perimeter blocks vary from five storeys to nine storeys as shown in the height plan diagram.

This building typology is applied in Council's DCP and is reflected in the recent building forms in Shepherds Bay



FIGURE 23. EXAMPLES OF LOW RISE RESIDENTIAL APARTMENTS.



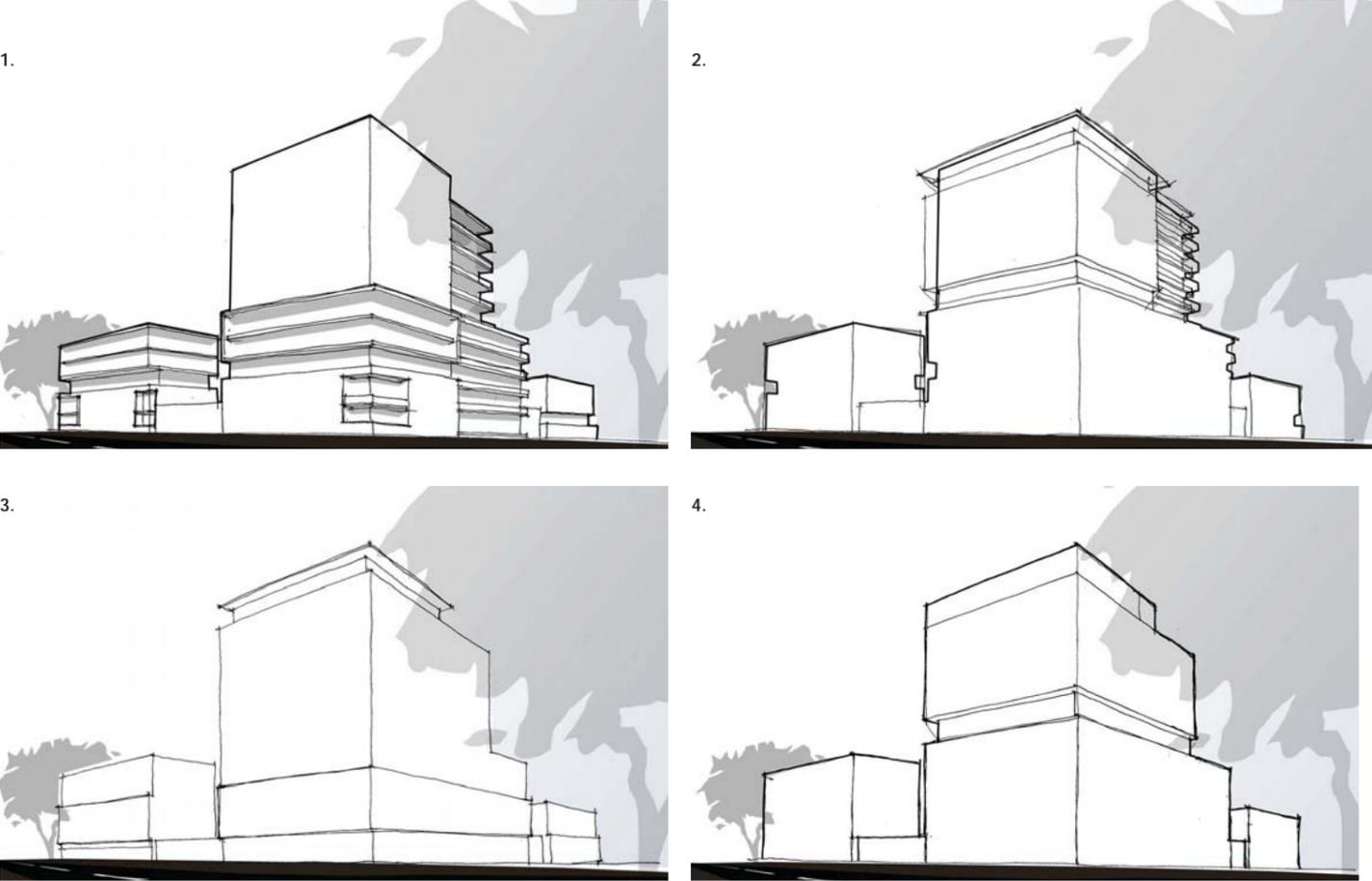
FIGURE 24. EXAMPLES OF PERIMETER BLOCK RESIDENTIAL APARTMENTS.

SHEPHERDS BAY URBAN RENEWAL



FIGURE 25. EXAMPLES OF RESIDENTIAL TOWER LAYOUTS AND LANDSCAPED PODIUMS

SHEPHERDS BAY URBAN RENEWAL - TOWER OPTIONS:



building typologies | 21 October 2011 | REV A

ROBERTSON + MARKS ARCHITECTS | 2

FIGURE 26. TOWER FORMS

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4.3.8 Building Setbacks

LEGEND:

- 3m Setback
- 5m Setback

The Concept Plan building envelopes have been set back from all street frontages to retain human scale and maximise solar access in the public streets. The required Building Setbacks for development within the Concept Plan site are shown in Figure 27. A generous setback is also required to the foreshore consistent with nearby development.

Residential buildings are to be setback a minimum of 25m from Church Street consistent with relevant standards and The Department of Planning Interim Guidelines for Development near Rail Corridors and Busy Roads.

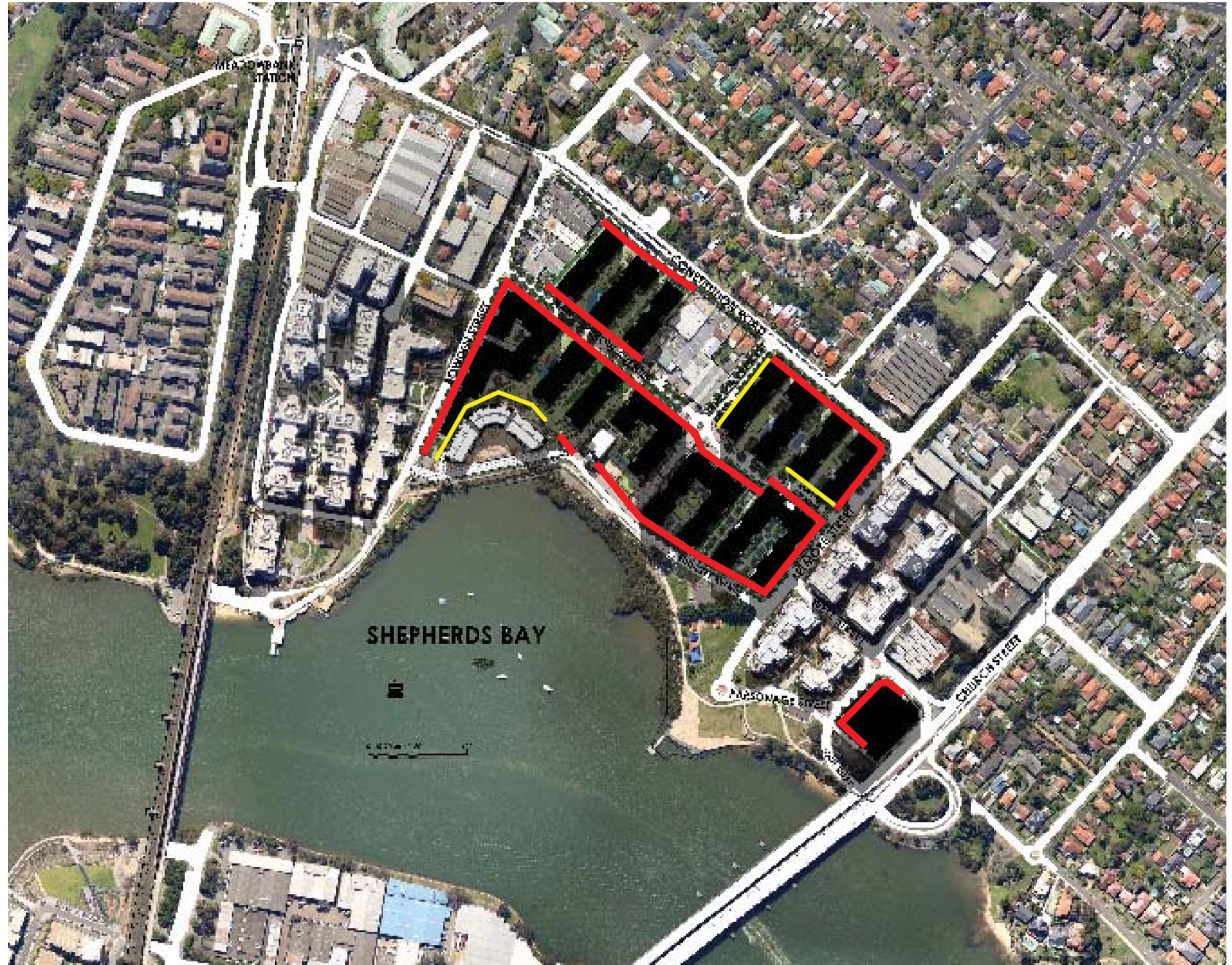


FIGURE 27. INDICATIVE BUILDING SETBACKS

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4.3.9 Open Spaces

One of the main objectives of the Concept Plan is to consolidate development into taller, smaller building footprints where appropriate to maximise the amount of open space for the site and to enhance the existing natural areas. Approximately 19,500sqm of the site is to be publicly accessible open space, which will be provided as 'deep soil'. This is significantly more than achievable under the base case DCP compliant development scenario illustrated in the EA.

The landscape design vision is for an integrated residential/ parkland environment reflecting the natural history and culture of the site. Water usage and movement will be reflected throughout the landscape design in both public and communal spaces. Retention and rehabilitation of significant existing vegetation, integration with the natural riparian environment and creation of view corridors through existing and proposed open spaces are key components of the landscape design.

4.3.9.1 Public Open Spaces

The Concept Plan comprises a number of north-south public through-site pedestrian linkages to break up the development and enhance and strengthen foreshore access. The open space concept has been integrated with recent foreshore upgrades, adjoining open space network and riparian vegetation. The public domain will consist of a number of public spaces that support passive and active recreation. The new neighbourhood will have access to small pocket parks, widened footpaths, pedestrian through-site links and large foreshore parks. The major open spaces along the waterfront provide opportunities for events which would encourage activity to return to the waterfront making the area vibrant, lively and people orientated.

The natural landform is recognised throughout the landscape design with split-level designs throughout. A large 9m cascade waterfall is proposed on the central promenade to define the upper and lower levels of the site and provide a dramatic entrance to the proposed waterfront plaza at the water's edge. The main plaza area at the base of the waterfall will comprise outdoor seating areas, landscaping and radial water features.

All public accessible open space in the Concept Plan site can potentially be deep soil zone. Refer Figure 50.

4.3.9.2 Communal and Private Open Spaces

Central communal spaces will be provided to each building in the new development. These spaces will be accessible and will be high quality attractive spaces that will comprise landscaping, paving, lighting and water features. The communal spaces will be linked to the public domain and defined by fencing and landscaping.

An area map of all public, private and communal open spaces within the Concept Plan is included in Annexure 3.

Recommended Development Principle

Open spaces across the Concept Plan site are to be provided generally in accordance with the Landscape Plan at Figure 28 and Landscape Report at Annexure 10.



FIGURE 28. LANDSCAPE PLAN

SHEPHERDS BAY URBAN RENEWAL

4.3.10 Vehicular Access and Streets

LEGEND:

-  Vehicular Access
-  Internal road and destinations
-  Foreshore pedestrian access
-  Ferry access
-  Railway line
-  Bus stop

The existing grid-style road typology has been adopted with additional connections proposed in compliance with Council's DCP. This will facilitate better connections, greater legibility and improved access for vehicles, pedestrians and cyclists.

Street designs are to generally comply with Section 5 (Meadowbank) of Council's Public Domain Technical Manual.

4.3.10.1 Existing Streets to be Upgraded

The urban renewal project will involve upgrading landscaping of the streets to improve the attractiveness and usability of the public domain and strengthen linkages. Improved streets will be an important element in the creation of character and sense of place for the new residential neighbourhood.

4.3.10.2 New Roadways or Realignments Proposed

The proposed upgrading and extension of Nancarrow Avenue to Belmore Street will be integrated with the streetscape upgrades of the adjoining roads within the site. The new roadway will provide significant benefits including strengthening east-west connections and improving access, circulation, legibility and safety.

4.3.10.3 Provision of Street Lighting

Street lighting will be provided to streets, pathways, cycleways, public open spaces and communal areas in accordance with Council's Public Technical Domain Manual (Section 5 - Meadowbank).

Refer to road designs included in the EA and Landscape Plan at Annexure 10.

Recommended Development Principle

Streets and accessways in the Concept Plan site are to be provided generally in accordance with Figure 29 and the Access Plan included in the EA.

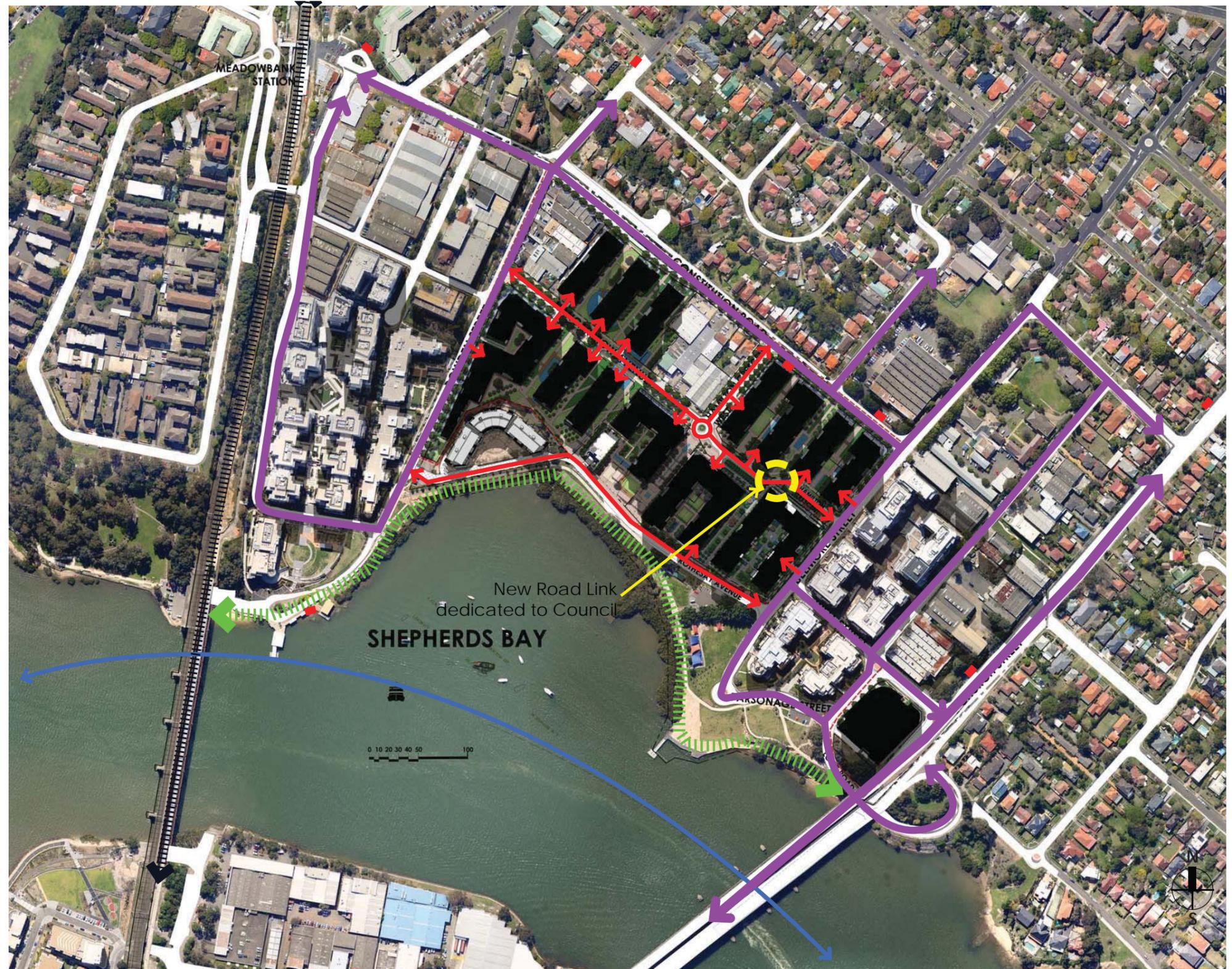


FIGURE 29. VEHICULAR ACCESS AND PUBLIC TRANSPORT PLAN

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4.3.11 Significant Views

LEGEND:

-  Existing view corridors
-  Potential vista
-  Neighbours views
-  DCP - Panoramic views
-  DCP - Vista
-  DCP - Partially obscured vista
-  DCP - Vista to Olympic Park

The sloping land form affords excellent views of Shepherds Bay and beyond to properties in the area. It is important that appropriate view sharing is maintained in the redevelopment of the subject lands.

The subject lands are highly visible from the Parramatta River and its foreshores, particularly from the eastern waterways and the Ryde Bridge beyond. It is also visible to some extent from the northern end of the Rhodes peninsula. Council's DCP identifies significant views to be retained in the redevelopment of the Concept Plan site. Currently a number of these views are blocked by existing industrial buildings.

One of the primary objectives of the Concept Plan is the protecting of existing and maximising additional views to Shepherds Bay and beyond from within the Concept Plan site and the surrounding area.

Recommended Development principle
View corridors identified on **Figure 30** 'Significant View Corridors' are to be protected or created in any redevelopment within the Concept Plan site.

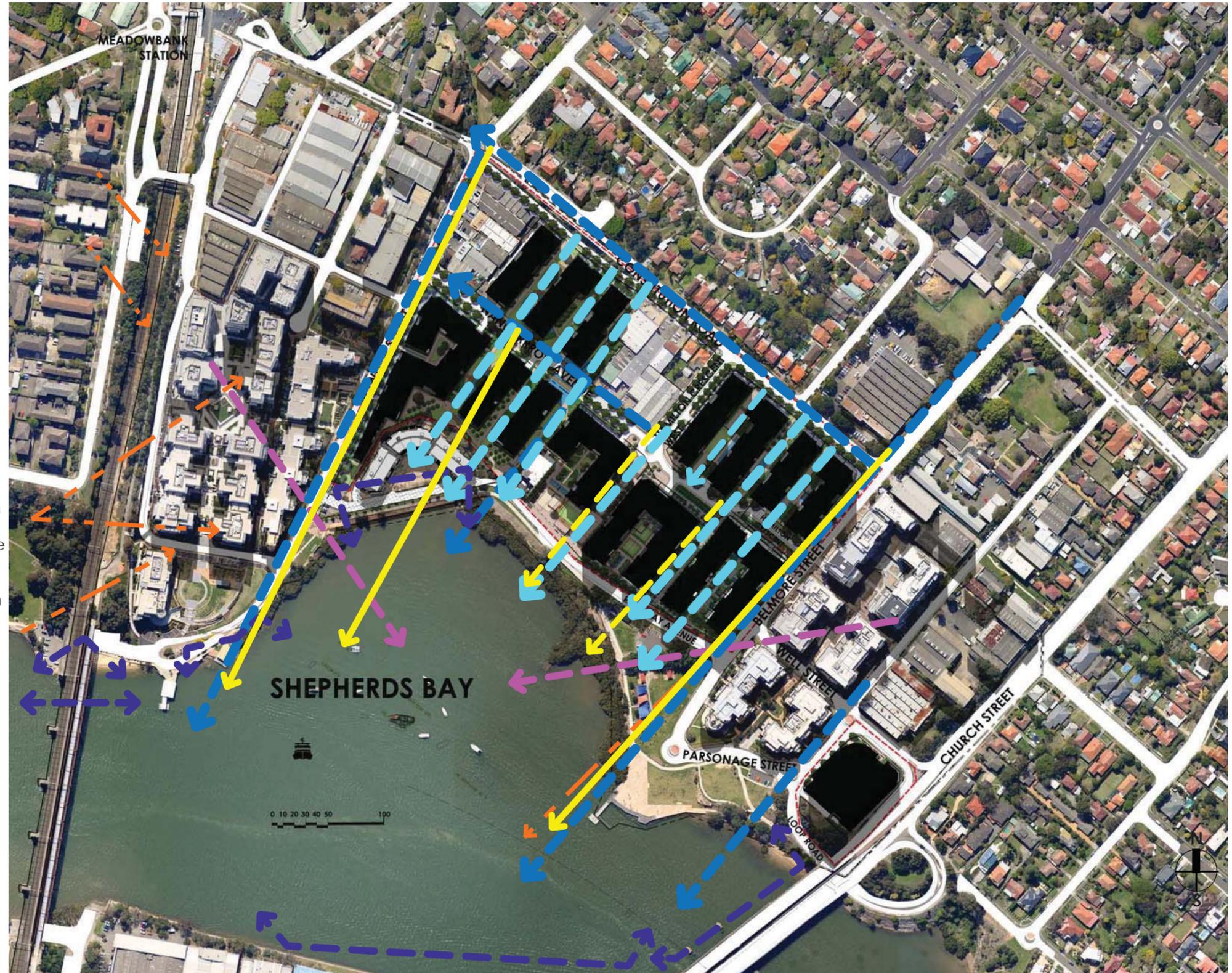


FIGURE 30. SIGNIFICANT VIEW CORRIDORS

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4.3.11 Pedestrianways, Cycleways and Shared Zones

LEGEND:

-  Pedestrian access
-  Bicycle paths

The Concept Plan requires the provision of clear, legible pedestrian access through the site. Four (4) north-south pedestrian spines are provided through the new public open spaces and roads. These have been designed to provide attractive and direct linkages through the development and connect to the east-west pathways which run along Constitution Road, Nancarrow Avenue and the foreshore. The extension of the foreshore pedestrian and cycle connections to the foreshore park will assist in completing the link as planned in Council's Riverwalk Plan, which will provide direct off-road access to a number of existing parks along the foreshore, Meadowbank Ferry wharf and beyond. The openness of the paths and their location close to residential development and roads will create opportunities for passive surveillance and maximise the safety of public domain users. At night lighting will be provided to pedestrian paths to enhance safety.

The development of a shared path/ cycleway through the site linking the development to the existing network and public transport will help to promote alternate modes of transport. The installation of cycle racks/ bicycle rooms in the buildings and open spaces in and around the development will encourage a healthy lifestyle.

Accessible pedestrian access
The publicly accessible open spaces have been designed to provide appropriate access to people of all mobility levels as illustrated on Figure 31A.

Recommended Development Principle
Pedestrian ways, cycleways and shared zones across the Concept Plan site are to be provided generally in accordance with the Pedestrian and Cycle Access Plans at **Figure 31 & 31A**.



FIGURE 31. PEDESTRIAN AND CYCLE ACCESS PLAN



POTENTIAL ACCESSIBLE CIRCULATION
(Subject to detailed design and variations)

- Public Routes
- Private Routes

FIGURE 31A. POTENTIAL ACCESSIBLE CIRCULATION PLAN

SHEPHERDS BAY URBAN RENEWAL

4.3.12 Interface of the proposed development and public domain

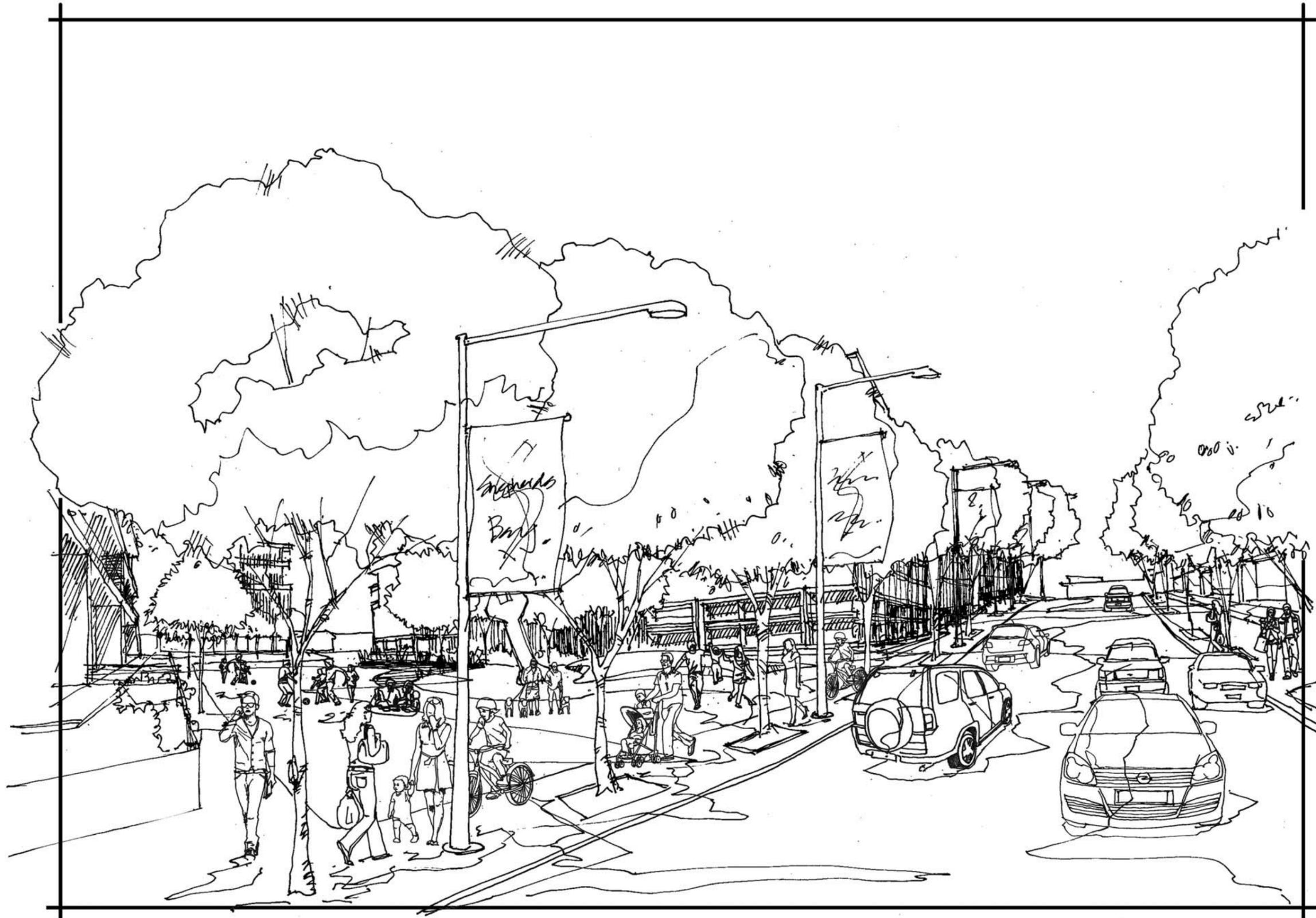


FIGURE 32. INDICATIVE PERSPECTIVE VIEW OF NANCARROW AVENUE

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4.3.14 Flooding

A number of areas within the Concept Plan site are subject to localised flooding. This issue has been taken into account in the design of the building envelopes, floor levels and reshaped topography and is addressed in the engineering reports included in the EA.

Additional details are submitted with this report confirming the concept plan design has been informed by flood modelling as recommended by Council and would accept development consent conditions with regard to Council's suggested safety design measures in basement car parks and provision of identified refuge areas. Refer Annexure 15: Flood modelling maps.

4.3.15 Stormwater Management

Council's existing area-wide stormwater infrastructure in the area is inadequate and in need of upgrading between Constitution Road and the waterfront.

A Stormwater Management Plan has been prepared for the Concept Plan site which makes recommendations for infrastructure upgrading required to accommodate the new development envisaged in the concept Plan.

The benefits of the proposed stormwater management include:

- a reduction in environmental impacts on the riparian vegetation along the foreshore of the site (including debris which is washed downhill)
- improved water quality for stormwater entering the Parramatta River
- improved flood mitigation
- removal of current risk of flood inundation of private properties in Ann Thorn Park

Recommended Development Principle

Stormwater upgrades in the Concept Plan site are to be provided generally in accordance with the Integrated Water Management Plan and Stormwater Management Plan included in the EA and letter and drawings by Cardno at Annexure 20.

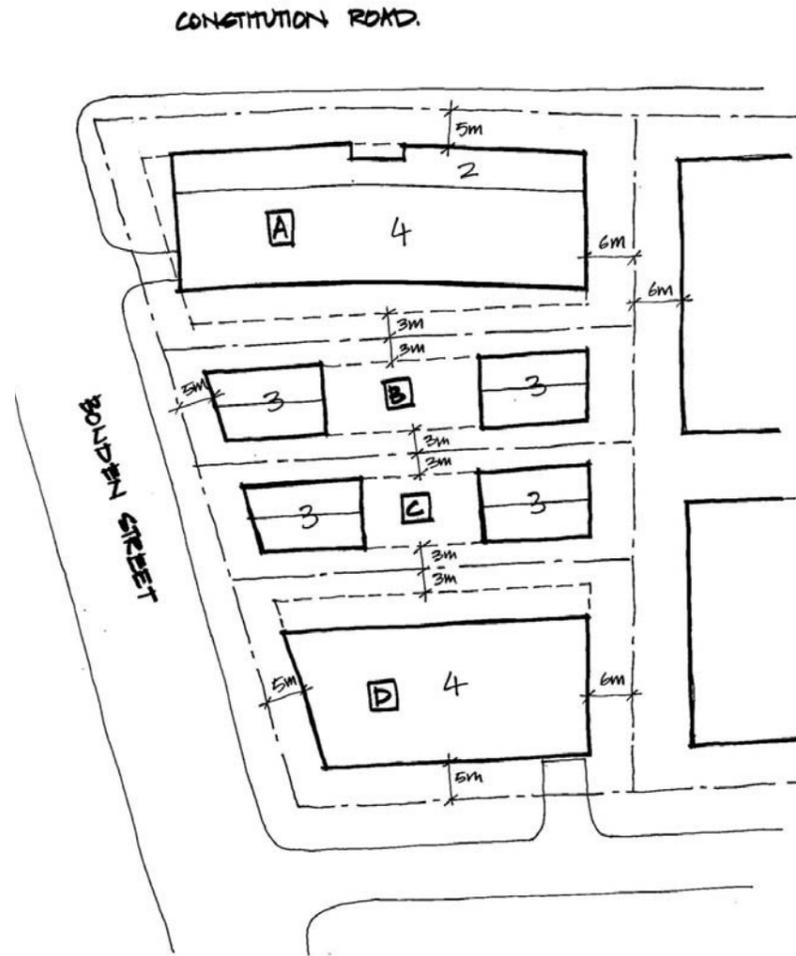
4.3.16 Utilities

Underground utility lines will be installed throughout the development. Consultation with Energy Australia has confirmed that underground cabling is feasible on the site. The benefits of installing underground cabling include improved sight lines, better streetscape treatment and enhancement of site aesthetics.

A letter from George Floth utility consultants confirms that all relevant authorities have been contacted and the required services can be supplied to the proposed development lopment, refer Annexure 14.

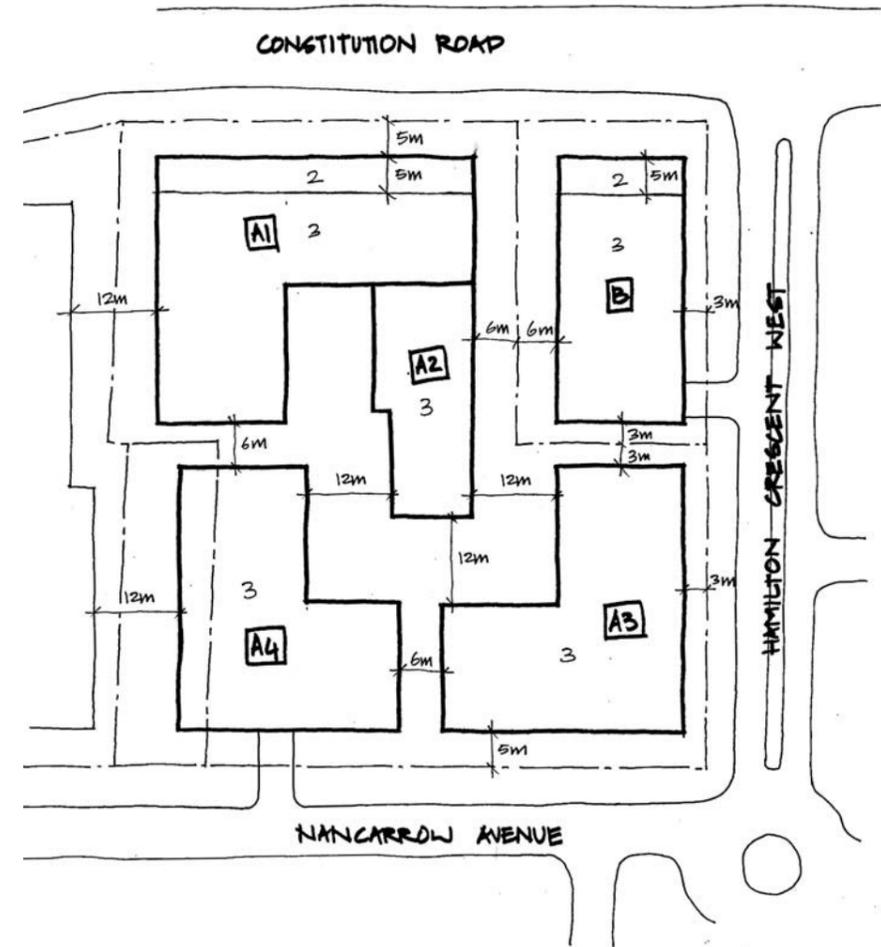
4.4 Impact on isolated sites

As illustrated the development studies on Figures 32A & 32B, prepared by Roberston + Marks, the Concept Plan does not prejudice the future redevelopment development of amalgamated sites adjoining but not included in the Concept Plan site.



	1 bed units	2 bed units	3 bed units	totals	
Site A	2	12	2	16	Holdmark Group owned
Site B	4	4	0	8	Terrace units
Site C	4	4	0	8	Client owned / Terrace
Site D	2	15	3	20	

FIGURE 32A. INDICATIVE DCP COMPLIANT DEVELOPMENT YIELD STUDY OF ISOLATED SITES ADJOINING DEVELOPMENT STAGE 10 ON CORNER BOWDEN ST & CONSTITUTION RD



	1 bed units	2 bed units	3 bed units	totals	
Site A1	3	20	4	27	
Site A2	7	7	0	14	Terrace units
Site A3	2	18	4	24	Holdmark Group owned / Terrace
Site A4	2	16	3	21	
Site B	2	12	2	16	Holdmark Group owned

FIGURE 32B. INDICATIVE DCP COMPLIANT DEVELOPMENT YIELD STUDY OF ISOLATED SITES ADJOINING DEVELOPMENT STAGE 8 ON CORNER HAMILTON CRES WEST & CONSTITUTION RD