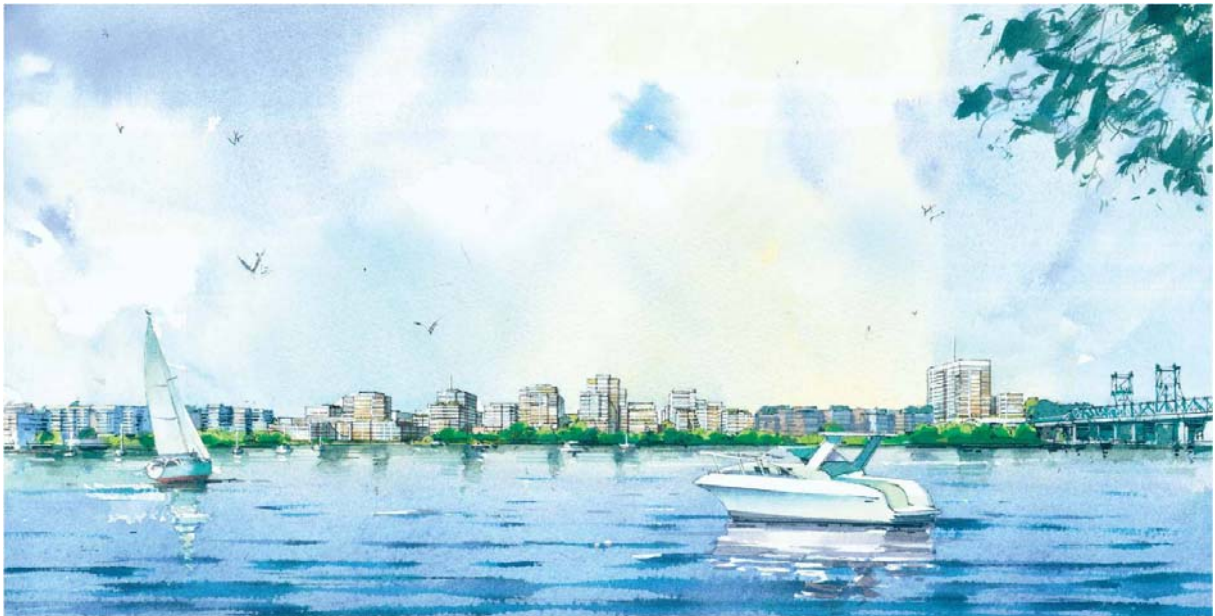




Planning &
Infrastructure

**MAJOR PROJECT ASSESSMENT:
Concept Plan and Stage 1 Project
Application at the Shepherd's Bay
Foreshore, Meadowbank and Ryde
(MP09_0216 and MP09_0219)**



Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

December 2012

ABBREVIATIONS

CIV	Capital Investment Value
Council	City of Ryde Council
Department	Department of Planning & Infrastructure
DGRs	Director-General's Requirements
Director-General	Director-General of the Department of Planning & Infrastructure
EA	Environmental Assessment
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
LATM	Local Area Traffic Management
LEP	Local Environmental Plan
MD SEPP	State Environmental Planning Policy (Major Development) 2005
Minister	Minister for Planning & Infrastructure
PAC	Planning Assessment Commission
Part 3A	Part 3A of the <i>Environmental Planning and Assessment Act 1979</i>
PEA	Preliminary Environmental Assessment
PPR	Preferred Project Report
Proponent	Holdmark Property Group
RMS	Roads and Maritime Services
RtS	Response to Submissions

Cover Photograph: Artist Impression of the proposal looking across Parramatta River to Shepherd's Bay (Source: Proponent's PPR)

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EXECUTIVE SUMMARY

This is a report on a Concept Plan Application and Stage 1 Project Application seeking approval for a mixed use development at the Shepherd's Bay Foreshore within the Meadowbank Employment Area. The site is within the Ryde Local Government Area (LGA).

The site is zoned B4 Mixed Use under Ryde Local Environmental Plan 2010 and draft Ryde Local Environmental Plan 2011. The proposed residential, retail and commercial uses are permissible within the B4 zone.

The concept plan proposal as exhibited sought approval for mixed use development over 10 indicative stages with building envelopes for 3 to 18 storeys accommodating up to 260,000m² of residential floor area (approximately 2,400 to 2,800 apartments) and up to 10,080m² of commercial and retail floor area (including community use); car parking; landscaping and infrastructure upgrades.

The Stage 1 proposal as exhibited sought approval for demolition and removal of existing buildings and construction of a residential development 5 to 9 storeys in height incorporating 242 residential apartments; car parking; landscaping and infrastructure works.

The Environmental Assessment (EA) was exhibited for 34 days between 26 January 2011 and 28 February 2011. As a result, the department received 7 submissions from public authorities, including Ryde Council, and 161 public submissions.

On 31 January 2012, the proponent submitted a response to submissions and a Preferred Project Report (PPR) and a further revised PPR was submitted on 7 August 2012.

The revised proposal seeks approval for mixed use development over 10 indicative stages with building envelopes for 12 buildings equivalent to between 1 to 17 storeys in height accommodating 193,500m² of residential floor area (2,005 apartments) and 10,000m² of commercial and retail floor area (including community use); 2,976 car parking spaces; 18,422m² of publically accessible open space, landscaping and public domain and infrastructure upgrades.

The revised Stage 1 proposal seeks approval for construction of a residential development of 3 to 13 storeys in height incorporating 246 residential apartments, 331 car parking spaces and landscape works.

The Concept Plan has a Capital Investment Value (CIV) of approximately \$702 million. The Stage 1 proposal has a CIV of approximately \$83.8 million.

The department received a further 7 submissions from public authorities in response to the PPR and Revised PPR. No further public submissions were received.

The key issues of the proposal include density, built form (particularly heights), amenity impacts, traffic and local road network impacts and adequate provision of open space and community facilities.

The department considers that the impacts of the revised proposal are reasonable and have been managed appropriately through the imposition of modifications and future assessment requirements. On this basis, the concept plan site provides an opportunity to enable high density residential development in close proximity to public transport and retail facilities, in line with the objectives of the Metropolitan Plan and draft Inner North Subregional Strategy.

On balance, the department considers that the proposed development is appropriate as it will result in renewal of industrial land in line with local and regional planning objectives; will make a significant contribution to local housing stock in close proximity to transport, services, facilities and employment opportunities; will deliver public benefits including road and stormwater infrastructure upgrades; and will provide publicly accessible open space areas and through site links of benefit to the wider community.

The department has assessed the merits of the application, taking into account the issues raised by the public and relevant public authorities. It is considered that identified impacts have been addressed in the PPR and by way of modifications to the Concept Plan and the Stage 1 proposal. The Concept Plan and Stage 1 proposal are recommended for approval.

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1. BACKGROUND

1.1 Site Description

The site is located on the Shepherd's Bay Foreshore in the suburbs of Meadowbank and Ryde, approximately 14 kilometres north-west of the Sydney CBD. This site is within the Ryde Local Government Area (LGA).

The site is irregular in shape and comprises two distinctly separate parcels of land. The main portion of the site (referred to as the 'main site') has frontages to Bowden Street, Belmore Street, Nancarrow Avenue, Rothesay Avenue, Constitution Road and Hamilton Crescent. Part of the site (referred to as the 'Church Street site') has frontage to Church Street, Well Street, Waterview Street and The Loop Road. The total area of the combined sites is approximately 6.7 hectares. The project location is shown in **Figures 1 and 2**.

The Stage 1 proposal is within the south east portion of the main site at 39-41 Belmore Street. This site is 8,269m² and has frontages to Hamilton Crescent, Belmore and Rothesay Streets.

The site is located near rail, ferry and bus services. Various parts of the main site are situated between 350 metres to 1 kilometre walking distance from the Meadowbank Railway Station and the Village Plaza and 250 metres to 1 kilometre from the Meadowbank Ferry Wharf. The Church Street site is also within 200 metres of bus services on Church Street, and approximately 1 kilometre from the railway station and ferry wharf.

The site currently accommodates industrial and warehouse buildings. The site is located within the Shepherd's Bay area (also referred to as the Meadowbank Employment Area), which has been identified by City of Ryde Council (Council) as an area for transition from traditional manufacturing and industrial uses to a higher density mixed use neighbourhood.

The site has an uneven topography with a significant fall of up to 18 metres from the north of the site to the south towards the Shepherd's Bay foreshore. There is also a fall of approximately 10 metres from the east to west along Constitution Road. The Church Street site is relatively level.

1.2 Surrounding Development

The locality is currently undergoing transition from manufacturing and industrial uses to predominantly residential uses. Therefore, the area features a mixed character of industrial/warehouse buildings, high density residential flat buildings and low density residential housing.

Key developments within the locality include:

- The Waterpoint development and Shepherds Bay Village Plaza, located to the west of the main site. The development is 5 to 6 storeys with buildings up to 8 storeys closer to the railway station, and provides approximately 18,500m² of retail/commercial floor space and 641 apartments. The Village Plaza includes two supermarkets and specialty retail shops.
- An approved (not yet constructed) residential development, located to the south of the site at 146 Bowden Street. The approval provides for a 5 storey residential flat building comprising 60 apartments.
- The Bay One development, located to the east of the main site and to the west of the Church Street site. The development is 5 to 6 storeys in height and accommodates approximately 11,000m² of commercial floor space, a health club and 355 apartments.
- Directly to the north of Bay One, approval has been issued for 2 x 6 storey residential flat buildings.



Figure 1: Local Context Plan (Base Image Source: Google Maps 2012)



Figure 2: Aerial photograph of the site and surrounds (Base Photo Source: Nearmap 2012)

- A Part 3A proposal for the redevelopment of the Achieve Australia site in Belmore Street was recently approved by the Planning Assessment Commission. The Achieve Australia development features approximately 430 dwellings within building envelopes of 4 to 8 storeys.
- Substantial areas of open space including a pedestrian/cycle path and children's playground along the Shepherd's Bay foreshore.
- The land to the north of Constitution Road is not within the Meadowbank Employment area and is characterised by one and two storey detached dwellings.

There are 9 properties which are located adjacent to the proposal. These properties were previously included within the Concept Plan but have been removed as landowners consent was not granted. These properties are located in 3 key areas:

- the corner of Constitution Road, Bowden Street and Nancarrow Avenue (5 properties) adjacent to Stage 10;
- the corner of Constitution Road, Hamilton Crescent West and Nancarrow Avenue (3 properties) adjacent to Stage 8; and
- Rothesay Street (1 property), between Stage 6 and 7.

The properties are currently occupied by industrial/warehouse buildings, however, the proponent has provided plans which demonstrate the potential redevelopment of these sites as mixed use or residential buildings in accordance with Council's planning controls. This issue is discussed in **Section 5.9** of this report.

Photos of the site and surrounds are provided in **Figures 3-10**.



Figure 3: The main site (looking east from the foreshore towards Belmore Street)



Figure 4: The Stage 1 site (looking north from Rothesay Street towards Hamilton Crescent)



Figure 5: The Church Street site (viewed from Parsonage Street looking east towards Church Street)

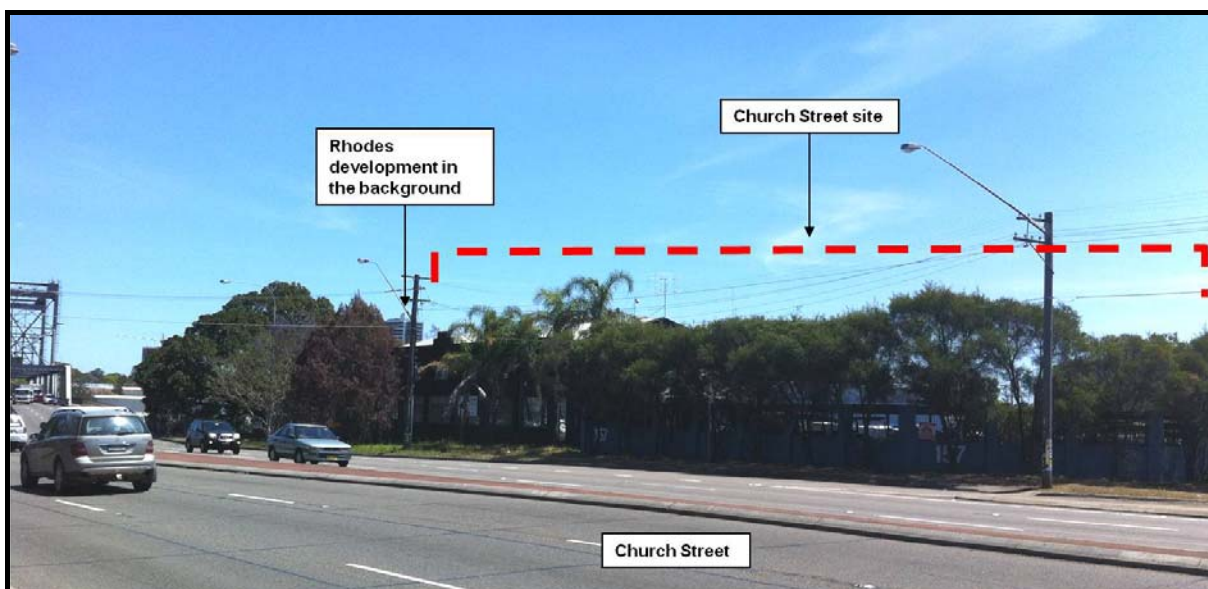


Figure 6: The Church Street site (viewed from Church Street looking west)



Figure 7: The site in the context of the Bay One and Waterpoint developments (looking west from Anderson Park)



Figure 8: The Bay One development (looking north from Rothesay Avenue)



Figure 9: The Waterpoint development (looking north along Bowden Street)



Figure 10: Existing residential dwellings to the north of Constitution Road

2. PROPOSED PROJECT

2.1. Project Description

2.1.1 Environmental Assessment (as exhibited)

The proposal as exhibited in the EA sought Concept Plan approval for the following:

- 10 indicative development stages with building envelopes for 3 to 18 storeys
- up to 260,000m² of residential floor area (approximately 2,400 to 2,800 apartments);
- up to 10,080m² of commercial and retail floor area (including community use);
- approximately 10,090m² of public domain, including 4,125m² to be dedicated to Council as public open space;
- up to 4,500 car parking spaces; and
- associated landscaping and localised reshaping of the topography.

The proposal as exhibited in the EA sought Project Approval for Stage 1 as follows:

- demolition and removal of all existing buildings on the Stage 1 site;
- removal of an Energy Australia sub-station;
- construction of a residential development 5 to 9 storeys in height;
- 242 residential apartments including:
 - 46 x 1 bedroom units;
 - 169 x 2 bedroom units; and
 - 27 x 3 bedroom units;
- 386 parking spaces ;
- associated landscaping;
- associated infrastructure, stormwater and utility works; and
- offer of dedication of land to Council for future construction of Nancarrow Road link, as well as a pedestrian connection on the western side of the site.

2.1.2 Preferred Project Report (PPR)

Following the public exhibition of the EA, the department advised the proponent of a number of issues which required further consideration and requested the submission of a PPR. The main issues raised were in relation to height, built form and density; traffic and transport; open space and public domain; and social infrastructure.

On 31 January 2012, the proponent submitted a response to submissions and a PPR. The department again advised the proponent of a number of issues which required further consideration or had not been satisfactorily addressed.

On 7 August 2012, the proponent submitted a revised response to submissions and a revised PPR. Further information was subsequently submitted, relating to road and stormwater infrastructure work to be delivered through a Voluntary Planning Agreement (VPA).

The proposal as refined within the Revised PPR is detailed in **Table 1**.

Table 1: Key Project Components

Aspect	Description
Concept Plan	Concept Plan for a mixed use development over an indicative 10 development stages
<i>Building envelopes</i>	Indicative building envelopes for 12 buildings with a maximum height of RL 63.7m AHD (equivalent to between 1 and 14 storeys within the main site and up to 17 storeys on the Church Street site)
<i>Gross floor area (GFA)</i>	203,500m ² overall GFA including 193,500m ² of residential floor space and 10,000m ² of commercial/retail/community floorspace
<i>Residential component</i>	2,005 apartments including an indicative dwelling mix as follows: <ul style="list-style-type: none"> • 10% (200) x 1 bedroom; • 75% (1504) x 2 bedroom; and • 15% (301) x 3 bedroom
<i>Commercial component</i>	10,000m ² of commercial/retail or community floor space located within: <ul style="list-style-type: none"> • the podium levels of the Church Street building (the floor space may also include some community uses); • a single storey building proposed as a café or similar on Bowden Street; and • possible kiosk style uses adjacent to the central foreshore plaza/open space
<i>Car parking</i>	A total of 2,976 car parking spaces, including <ul style="list-style-type: none"> • 252 commercial and community spaces and • 2,724 resident spaces
<i>Open Space</i>	A total of 18,422m ² of publicly accessible open space/through site links
<i>Traffic and Infrastructure Works (delivered through a VPA)</i>	Road infrastructure works on the site and in the surrounding area including: <ul style="list-style-type: none"> • construction of a new link road extending Nancarrow Avenue to Hamilton Crescent; • Local Area Traffic Management (LATM) works along Nancarrow Avenue / Hamilton Crescent; • signalisation of Bowden Street / Constitution Road intersection; • pedestrian signals at the Meadowbank Railway station; • pedestrian crossing on Belmore Street; and • LATM at Underdale Lane Yerong Street. Stormwater infrastructure works on the site and in the surrounding area: <ul style="list-style-type: none"> • lowering of Constitution Road; • upgrade to trunk drainage pipeline; and • provision of an overland flow path route through the site
Project Application	Stage 1: Residential flat building at 39-41 Belmore Street, Ryde
<i>Built form</i>	<ul style="list-style-type: none"> • residential flat building between 3 to 13 storeys in height; • 3 partial levels of basement parking; and • communal central courtyard area.
<i>GFA / FSR</i>	22,318m ² / 2.7:1
<i>Apartment Number and Mix</i>	246 apartments including: <ul style="list-style-type: none"> • 48 x 1 bedroom units; • 163 x 2 Bedroom units; and • 35 x 3 bedroom units
<i>Car parking</i>	331 car parking spaces in a 3 level basement including 281 resident spaces and 50 visitor spaces.
<i>Open Space</i>	<ul style="list-style-type: none"> • 877m² of publicly accessible open space/ through site link • 1,435m² of private communal open space

Key changes made by the proponent during the assessment process include:

- removal of sites not owned by the proponent from the Concept Plan area;
- revision of all building envelopes and building layouts to locate higher building forms in the central part of the site and on the Church Street site;
- revision of building massing across the site and resultant change to building heights, with building heights no longer measured in storeys but based on envelopes with maximum RLs;
- a reduction in unit numbers from 2,400 – 2,800 to 2,005 dwellings and associated reduction in residential floor space from 260,000m² to 193,500m²; and
- a reduction in car parking spaces from 4,500 to 2,976 spaces.

The revised concept plan layout is shown in **Figures 11 to 14** and a photomontage of the Stage 1 project application is shown in **Figure 15**.



Figure 11: Concept Plan layout (Source: Proponent's PPR)

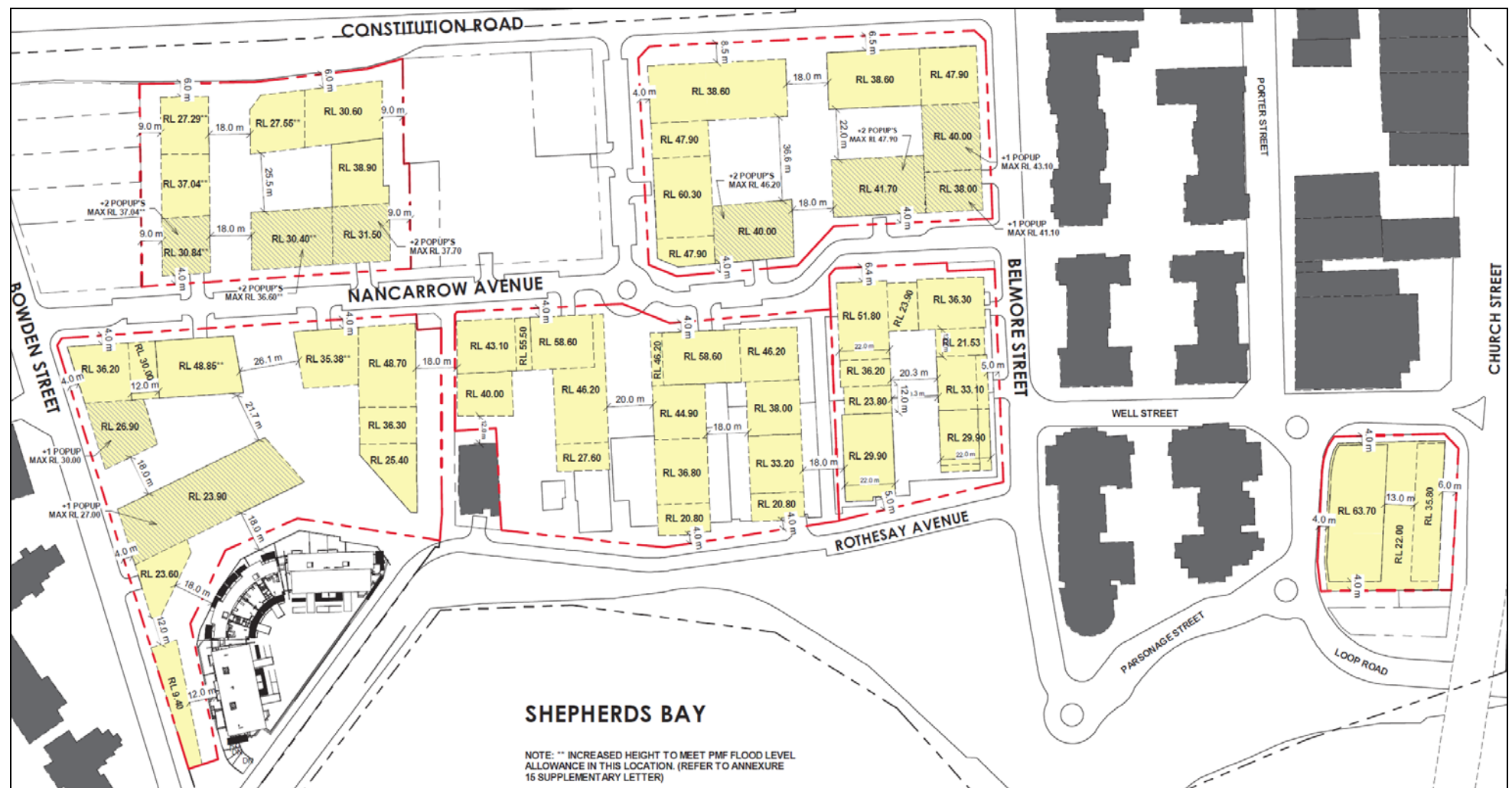


Figure 12: Proposed building envelopes and heights (in RL) inclusive to the top of plant (Source: Proponent's PPR)

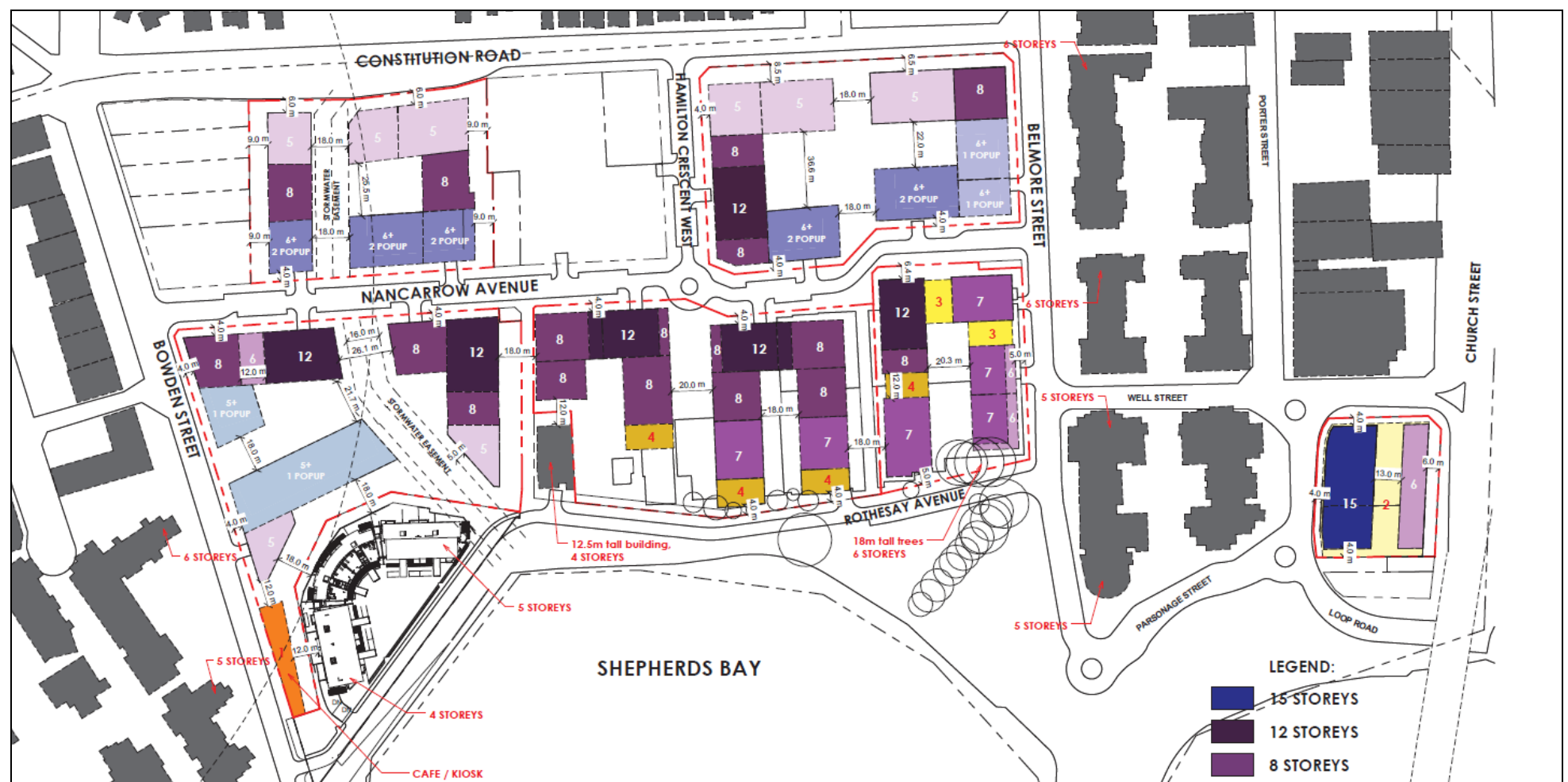


Figure 13: Proposed building envelopes and indicative* building heights (in storeys) (submitted for information purposes only) (Source: Proponent's PPR)

* The Department notes that the indicative number of storeys does not reflect the maximum number of storeys which may be achieved within the proposed RLs as discussed in Section 5.2.

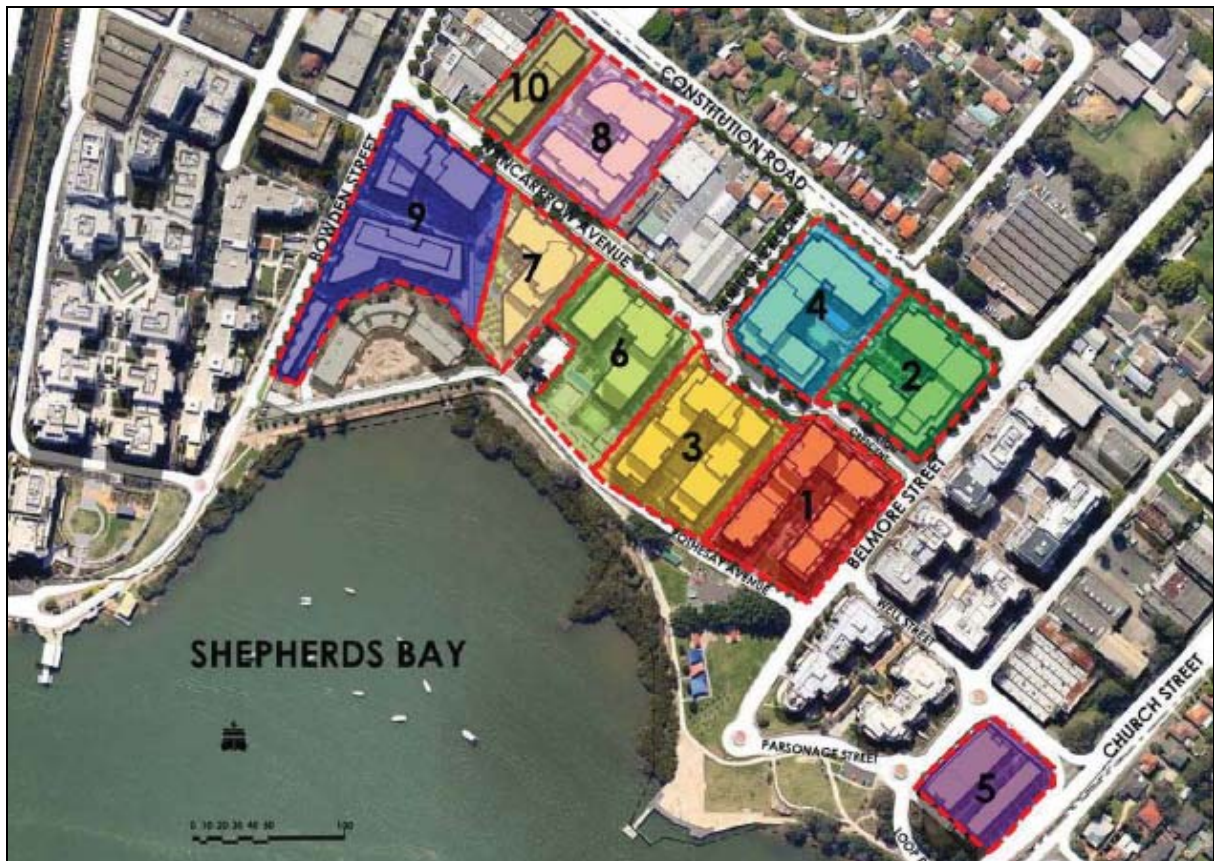


Figure 14: Indicative staging (Source: Proponent's PPR)



Figure 15: Photomontage of Stage 1 as viewed from the foreshore looking northeast (Source: Proponent's PPR)

2.2. Project Need and Justification

NSW 2021

NSW 2021 is the NSW Government's strategic business plan for setting priorities for action and guiding resource attention. NSW 2021 is a 10 year plan to rebuild the economy, provide quality services, renovate infrastructure, restore government accountability and strengthen the local environment and communities.

The site's proximity to the existing Meadowbank Village Centre and to public transport including the Meadowbank railway station and Meadowbank ferry wharf will contribute to the Plan's goal of building liveable centres. Further, the introduction of high density residential flat buildings will increase the supply and variety of housing stock to help provide more affordable housing and housing choice in the Inner North subregion.

Metropolitan Plan for Sydney 2036

The Metropolitan Plan aims to sustainably manage growth, enhance Sydney's position in the global economy, achieve greater housing affordability, enhance liveability and ensure equity for future generations.

The Metropolitan Plan forecasts a population increase for Sydney of 1.7 million people by 2036, taking the total population to 6 million. As a result, Sydney will need 770,000 additional dwellings by 2036, a 46% increase on the current housing stock of 1.68 million dwellings.

The proposal will make a significant contribution to the achievement of a number of the Metropolitan Plan targets. Specifically, the proposal will provide up to 2,005 new apartments in the locality and these apartments will have excellent access to public transport, jobs and retail facilities. A mix of apartment sizes and provision of adaptable dwellings allows for changing household demographics and ageing in place.

Draft Inner North Subregional Strategy

The Metropolitan Plan places the site in the Inner North subregion. The Draft Inner North Subregional Strategy identifies Meadowbank as a Small Village. The village includes a shopping centre with two supermarkets and a number of retail outlets as well as a small strip of shops at the railway station. The nearest points of the site are located approximately 400 metres walking distance from either the railway station or ferry wharf. The furthest part of the site is located up to 1 kilometre walking distance from rail or ferry. Bus services to a wide range of destinations including the City, Parramatta, North Ryde, West Ryde, Carlingford, Chatswood, Strathfield, Hurstville and Rhodes are also available along Church Street and Victoria Road as well as services from Constitution Road and Bowden Streets

The Draft Strategy sets targets of an additional 60,000 jobs and 30,000 new dwellings for the subregion by 2031. However, the Metropolitan Plan provides updated targets for the subregion of an additional 62,000 jobs and 44,000 dwellings by 2036.

A key action of the Draft Strategy is to provide increased residential densities within the walking radius of smaller local centres and public transport. The provision of high density residential development in an area with good accessibility to transport, services and employment makes a substantial contribution to the dwelling target for Ryde LGA as updated by the Metropolitan Plan and satisfies the key objectives for housing in the Draft Strategy.

The proposal is considered to be consistent with the key directions and will assist in meeting the targets within the Draft Strategy.

Local Planning Strategies/Plans

The site falls within an area known as the Meadowbank Employment Area (**Figure 2**). A Masterplan for the Meadowbank Employment Area was first prepared by Council in 1998 which established the guiding framework and strategic intent for future development in Meadowbank over a 20 year timeframe. The Masterplan sought to broaden the traditional industrial character of the area to include a vibrant mix of light and high-tech industry, commercial, housing, retail and recreation activities.

The Masterplan has since evolved following the changes in strategic direction for the Meadowbank Employment Area and wider Ryde LGA. Council's current planning controls for the area are contained within the Ryde Local Environmental Plan 2010 (RLEP2010) and Ryde Development Control Plan 2010 (RDCP 2010). The area is zoned for mixed use development under RLEP 2010 and the RDCP 2010 encourages commercial and light industrial uses in the area, and advises that while medium density residential development will be a significant feature of the area, it will not dominate.

The draft Ryde Local Environmental Plan 2011 (draft RLEP 2011) and draft Ryde Development Control Plan 2011 – Part 4.2 Shepherd's Bay, Meadowbank (draft RDCP 2011) provide an updated framework and strategic intent for the area. The area would remain zoned for mixed use development, however the draft DCP 2011 no longer refers to the locality as an employment area and envisages that Shepherd's Bay will become a higher density transit-oriented mixed use neighbourhood. The central area of Shepherd's Bay located away from Church Street and the Railway station (which includes the main area of the Concept Plan site) is envisaged to predominantly accommodate residential uses. The draft DCP envisages that the site should accommodate approximately 1,200 dwellings with building heights between 4 and 6 storeys. The draft LEP 2011 height controls permit heights between 15.5 and 21.5 metres, resulting in building heights between 5 and 7 storeys.

2.3. Concept Plan

The proponent has applied for approval of a Concept Plan under section 75M of the *Environmental Planning & Assessment Act 1979* (EP&A Act). The Concept Plan application seeks approval for the building envelopes and land uses described above in the section detailing the PPR. Any further development of the site (with the exception of Stage 1) will require separate and detailed development applications to be submitted to Council for consideration.

3. STATUTORY CONTEXT

3.1. Major Project

The proposal is a Major Project under Part 3A of the EP&A Act because it is development for the purpose of a residential, commercial or retail project under the former provisions of clause 13 of Schedule 1 of the *State Environmental Planning Policy (Major Development) 2005*. The proposal has a capital investment value over \$100 million.

Part 3A of the EP&A Act, as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A to the EP&A Act, continues to apply to transitional Part 3A projects. Director-General's environmental assessment requirements (DGRs) were issued for this project prior to 8 April 2011, and the project is therefore a transitional Part 3A project.

Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or his delegate) may approve or disapprove of the carrying out of the project under section 75O of the EP&A Act.

The Minister has delegated his functions to determine Part 3A applications to the Planning Assessment Commission (PAC) where an application has been made by persons other than by or on behalf of a public authority and also in cases where the relevant local council objects to the proposal and there are more than 25 public submissions in the nature of objections, as is the case for this application.

Therefore, the application is to be determined by the PAC under delegation from the Minister.

3.2. Related Development

The Part 3A declaration by the former Minister for Planning was for a residential development, which did not include commercial or retail uses. The department considers that as the commercial and retail uses are "related development" under the EP&A Act, they are therefore able to be considered as part of the Concept Plan proposal.

3.3. Permissibility

The site is subject to the provisions of the RLEP 2010. The site is zoned "B4 Mixed Use". The proposed residential, retail, commercial and community uses are permissible in the zone and compatible with the zone objectives which seek to provide a mix of suitable business, office, residential, retail and other land uses; maximise public transport patronage and encourage walking and cycling.

The draft RLEP 2011 was placed on public exhibition between 30 May and 13 July 2012. The draft LEP 2011 proposes to retain a "B4 Mixed Use" zone for the site, in which the proposed development would be permissible.

3.4. Environmental Planning Instruments

Under Sections 75I(2)(d) and 75I(2)(e) of the EP&A Act, the Director-General's report for a project is required to include a copy of, or reference to, the provisions of any State Environmental Planning Policy (SEPP) that substantially governs the carrying out of the project, and the provisions of any environmental planning instruments (EPI) that would (except for the application of Part 3A) substantially govern the carrying out of the project and that have been taken into consideration in the assessment of the project.

The department's consideration of relevant SEPPs and EPIs is provided in **Appendix D**.

3.5. Objects of the EP&A Act

Decisions made under the EP&A Act must have regard to the objects of the EP&A Act, as set out in Section 5 of the EP&A Act. The relevant objects are:

- (a) *to encourage:*
 - (i) *the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment, and*
 - (ii) *the promotion and co-ordination of the orderly and economic use and development of land, and*
 - (iii) *the protection, provision and co-ordination of communication and utility services,*
 - (iv) *the provision of land for public purposes, and*
 - (v) *the provision and co-ordination of community services and facilities, and*
 - (vi) *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
 - (vii) *ecologically sustainable development, and*
 - (viii) *the provision and maintenance of affordable housing, and*
- (b) *to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The proposed Concept Plan is consistent with the relevant objects of the EP&A Act. In particular:

- the benefits provided by the proposal, including the contribution to the housing stock within a highly accessible location, in close proximity to public transport, services, facilities and employment opportunities;
- the renewal of a former industrial precinct for mixed use development achieves orderly and economic use and development of the site;
- provision of a substantial area of publicly accessible open space including through site linkages to the waterfront achieves provision of land for public purposes; and
- the proposed mix of apartment sizes and types will provide a range of housing options for future residents of varying income levels and household size.

3.6. Ecologically Sustainable Development

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) *the precautionary principle;*
- (b) *inter-generational equity;*
- (c) *conservation of biological diversity and ecological integrity; and*
- (d) *improved valuation, pricing and incentive mechanisms.*

The department considers that the proposal represents a sustainable use of the site, as it proposes a mix of residential, retail and commercial uses within an established urban area with good access to public transport, amenities, services and employment. The EA has explored key ESD opportunities which may be incorporated into the development as part of future applications.

Further consideration of relevant of ESD principles is included at **Appendix D**.

4. CONSULTATION AND SUBMISSIONS

4.1. Exhibition

Under section 75H(3) of the EP&A Act, the Director-General is required to make the EA of an application publicly available for at least 30 days. After accepting the EA, the department publicly exhibited it from 26 January 2011 until 28 February 2011 (34 days) on the department's website, and at the Department of Planning & Infrastructure Information Centre, Ryde Council Civic Centre and West Ryde Library. The department also advertised the public exhibition in the Sydney Morning Herald, The Daily Telegraph and Ryde/Gladesville Weekly Times on 26 January 2011 and notified landholders and relevant State and local government authorities in writing.

The department received 168 submissions during the exhibition of the EA, comprising seven submissions from public authorities and 161 submissions from the general public and special interest groups.

The PPR and the further revised PPR were also referred to all agencies and placed on the Department's website. An additional 5 submissions from public authorities including the Council were received in response to the PPR, and a further 2 were received in response to the revised PPR.

A summary of the issues raised in submissions is provided below.

4.2. Public Authority Submissions

Seven submissions were received from public authorities in response to the EA; a further 5 submissions were received in response to the PPR and a further 2 in response to the revised PPR. Submissions were received from Council, Transport for NSW, Roads and Maritime Services, Office of Environment & Heritage, NSW Maritime and Sydney Water. The submissions from public authorities are summarised in **Table 2** below:

Table 2: Summary of Issues Raised in Public Authority Submissions

City of Ryde Council	
EA	<ul style="list-style-type: none">• Raised numerous issues with the Concept Plan which were repeated in subsequent submissions. Refer to discussion under 'Revised PPR' below for more detail.• Raised issues with the Stage 1 Project Application including street setbacks, side setbacks, the deep soil zone, open space, parking, BASIX, building typology, waste management, public liability and stormwater.
PPR	<ul style="list-style-type: none">• Raised similar issues with the Concept Plan and repeated much of the original submission to the EA. Refer to discussion under 'Revised PPR' below for more detail.• Provided the following comments on the Stage 1 Project Application:<ul style="list-style-type: none">• Advised that previous concerns have not been satisfactorily addressed.• Advised of the correct section 94 contributions plan applicable.• Waste management facilities are considered inadequate.• Solar access to communal open space is insufficient.• Building separation does not comply with RFDC as a result of the heights and density proposed.• Re-iterates that concerns regarding stormwater are not addressed.• Advises that further information required is required in relation to OSD, overland flow paths, WSUD measures and pipe connections.

<i>Revised PPR</i>	<p><i>Regarding the Concept Plan:</i></p> <ul style="list-style-type: none"> • Building heights are considered to be excessive and well above controls, resulting in poor urban form, streetscape and amenity impacts. • Street setbacks should be increased to compensate for height and to provide landscaping. Particular setback concerns raised in relation to the foreshore setbacks within Stage 9 and Stage 1. • Inadequate building separation issues resulting in amenity impacts. • There has been no exhibition of the amended PPR. • The number of dwellings is excessive and unnecessary to meet targets. • The Council's traffic assessment finds that the area can cater for the development, subject to provision of certain works. It should be used as the framework for road infrastructure provision, rather than the proponent's study which is not supported. • Other transport issues include the need for a travel plan, the adequacy of cycle and pedestrian routes and access issues. • Open space issues include the problems with the design and adequacy of the proposed areas as well as a lack of 'active' areas and indoor facilities and a lack of detail. • Suggests all 10,000m² of proposed non-residential uses should be located within the Church Street site. • No consideration given to SREP 2005 or to Ryde DCP 2010 and the incorrect section 94 contributions plan is referred to. • Does not support the draft voluntary planning agreement where there are outstanding concerns regarding the level of development. Negotiating a VPA after approval is also problematic. • A multipurpose community facility is needed. The proposal does not provide enough detail on how much space would be made available or for what purpose. • The Public Art Strategy needs more development. • Flooding and stormwater issues including the need for drainage calculations and modelling for Council's review, the need for further studies and assessment and issues relating to responsibility for funding and delivery of the works. • ESD issues raised and suggests defined targets should be imposed. • Building design excellence provisions should be applied to future stages through condition. The Church Street building should be subject to a design competition. • Issues with location of substations and screening. • Waste collection areas should be amalgamated and approved as part of the Concept Plan. <p><i>Regarding Stage 1 Project Application:</i></p> <ul style="list-style-type: none"> • Advise that previous concerns have not been satisfactorily addressed including issues relating to contributions, waste management, solar access, building separation and stormwater.
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Roads and Maritime Services (Previously RTA)	
<i>EA</i>	<ul style="list-style-type: none"> • Concerns regarding access to RTA property. • Issues with Traffic Modelling and impacts to intersections. • Bicycle paths should be extended to Meadowbank Station.
<i>PPR and Revised PPR:</i>	<ul style="list-style-type: none"> • Part of Transport for NSW (see below)

Transport for NSW (Previously Transport NSW)	
<i>EA</i>	<ul style="list-style-type: none"> A detailed transport review is required considering cumulative impacts with detailed modelling and mode share analysis. The TMAP should be in accordance with the guidelines. Recommends lower parking rates and increased bicycle parking and facilities. Recommends extension of bicycle networks to Meadowbank Station. Recommends Travel Access Guide and Workplace Travel Plan as conditions of approval.
<i>PPR</i>	<ul style="list-style-type: none"> Previous concerns have not been addressed. In particular: <ul style="list-style-type: none"> the Transport Impact Assessment (TIA) is not adequate; a Transport Management and Accessibility Plan (TMAP) is still needed including mode share analysis; the traffic modelling is not supported; the proposal needs reduced parking; and pedestrian and bicycle access has not been addressed. Suggests conditions in relation to access to RTA property.
<i>Revised PPR</i>	<ul style="list-style-type: none"> Previous concerns still not adequately addressed. In particular: <ul style="list-style-type: none"> the TIA does still not adequately cover all the issues; the traffic modelling is still questioned; parking rates are still considered to be too high. The VPA should include upgrade of bicycle and pedestrian paths from the site to the station and to the regional cycle network. The proponent's response to the issue of access to RTA property is reasonable pending further details at DA stage. The proponent's commitments to provision of bicycle parking as well as a Travel Access Guide and Workplace Travel Plan are supported.
Office of Environment and Heritage (EPA) (Previously Department Environment, Climate Change & Water)	
<i>EA</i>	<ul style="list-style-type: none"> Threatened species assessment and further fauna surveys required. Flood risk management issues including the need for design to mitigate against blockages, carpark and egress design and controls to ensure dwellings can withstand flooding.
<i>PPR</i>	<ul style="list-style-type: none"> Previous concerns regarding threatened species have been adequately addressed. Flood risk management comments previously raised still apply
Department of Primary Industries, Office of Water	
<i>EA</i>	<ul style="list-style-type: none"> Riparian land issues. Groundwater issues. Recommends conditions of approval.
<i>PPR</i>	<ul style="list-style-type: none"> Questions why the extension of Rothesay Avenue is in the foreshore reserve rather than the development site. Questions the proposed riparian setbacks. Landscape Plan does not match statement of commitments in that no water features are shown. Supports the draft Statement of Commitments with respect to groundwater.
Sydney Water	
<i>EA</i>	<ul style="list-style-type: none"> Amplification works needed to the current drinking water mains. Amplification works needed to the wastewater mains.
<i>PPR</i>	<ul style="list-style-type: none"> Suggests conditions and advisory notes regarding Section 73 Certificate requirements and Sydney Water e-planning.

4.3. Public Submissions

Submissions to the EA

A total of 161 submissions were received from the public. This included a submission from the Meadowbank West Ryde Progress Association.

All 161 public submissions objected to the proposal. The key issues raised in public submissions to the EA are listed in **Table 3**.

Table 3: Summary of Issues Raised in Public Submissions

Issue	Proportion of submissions (%)
Traffic generation (including impacts on the local road network, pedestrian safety and residential amenity)	83
Excessive height	55
Excessive density and overdevelopment	55
Infrastructure capabilities (including social, health, road/public transport and utilities)	47
Need for increased usable public open space	32
Objects to the planning process under Part 3A and/or inadequate community consultation	25
Insufficient parking in the existing locality and within the proposal	14
Loss of amenity for existing residents	13
Visual impacts and view loss	12

The department has considered these issues in its assessment of the project.

4.4. Proponent's Response to Submissions

The proponent provided a response to the key issues raised by the public submissions in response to the exhibition of the EA and PPR.

The proponent's full response to submissions to the EA and PPR is included at **Appendix C** and **D**. The department is satisfied that the issues raised in submissions have been addressed and can be managed by conditions of approval as required.

5. ASSESSMENT

The department considers the key environmental issues for the project to be:

- density;
- built form;
- residential amenity;
- infrastructure contributions and VPA;
- transport, traffic and access;
- stormwater and flooding;
- open space and community facilities; and
- heritage.

All other issues have been satisfactorily addressed in the EA, PRR and the department's recommended modifications, future assessment requirements and conditions.

5.1. Density

While RLEP 2010 does not include floor space ratio (FSR) controls for the site, the draft RLEP 2011 includes an FSR control of 2.0:1 for the main site and 2.7:1 for the Church Street site. Council also advises that the recently exhibited planning controls allow for approximately 1,200 dwellings within the Concept Plan area. The proposal seeks to provide up to 2,005 new dwellings and a total GFA of 203,500m² across the site. This results in an average floor space ratio of approximately 2.9:1 for the main site and 5.6:1 for the Church Street site.

This additional density was a key issue raised by the general public in response to the EA. Residents were concerned about the impacts of density in terms of the increase in resident population, the scale of proposed buildings, traffic impacts and a lack of open space.

The proponent has justified the proposed density by suggesting the project is consistent with regional housing targets and priorities of increasing density in areas close to public transport and key employment areas.

The department supports the provision of increased residential densities within the walking distance of local centres and public transport in line with the key objectives of the Metropolitan Plan and the Draft Strategy, subject to a full merit assessment of impacts.

In this regard, it is considered that the site is strategically located to provide for increased densities given its proximity to public transport and retail services. All parts of the site are a short walk from Meadowbank railway station (between 400 metres to 1 kilometre), Meadowbank ferry wharf (300 metres to 800 metres) and numerous bus routes on Victoria Road and Church Street as well as services adjoining the site on Bowden Street and Constitution Road. Retail services including a shopping centre with 2 supermarkets are also a short walk (100 metres to 700 metres) from all parts of the site.

The site is also well suited to the provision of increased densities due to the large area encompassed by the Concept Plan site. These features enable a greater density of development to be provided towards the central part of the site without significant adverse impacts to adjoining residential areas, including shadow impacts from the taller components of the development.

In considering the appropriateness of density on the site, the key issues are considered to be:

- built form and resulting amenity impacts;
- traffic impacts on the surrounding road network; and
- adequate provision of open space, public domain works and community facilities.

These issues are assessed in detail in this report (see **Sections 5.2, 5.5 and 5.7**). In each case the department considers that each issue is able to be satisfactorily addressed with some modifications, future assessment requirements and conditions so that no unacceptable impacts arise. On this basis the department considers the site can support the proposed density and average floor space ratio of 2.9:1 across the main site and 5.6:1 on the Church Street site.

Council raised a related concern regarding dwelling numbers. In particular, they advise that the proposal is not necessary in order to achieve the target for additional dwellings in the Ryde LGA under the *Inner North Subregion: Draft Subregional Strategy*. However, the department notes that this does not take into account the revised new dwelling targets for the subregion which were increased from 30,000 to 44,000 (refer to discussion in **Section 2.2** above).

In any case, the department does not consider that urban renewal opportunities on large sites should be artificially 'capped' to ensure housing targets are not exceeded. Density impacts should be assessed on their merits, as is the case with this proposal.

5.2. Built Form

5.2.1 Building Heights

The original exhibited scheme described the proposed heights in terms of number of storeys and proposed heights of between 3 to 18 storeys across the Concept Plan site.

The revised PPR scheme describes the height in terms of maximum RLs for each of the 12 building envelopes (refer to **Figure 12**). To allow for comparison with the original scheme, the proponent has indicated the number of storeys likely to be achieved under these RLs, however, assessment of the 'Indicative Storey Plan' has shown that it is possible that additional storeys could be achieved within each of the building envelopes. This has been demonstrated with the Stage 1 project application where in many instances, the proposed building presents as 1 – 2 storeys greater than the indicative storey heights.

Proposed heights range from RL9.4 to RL63.7m AHD which is equivalent to between 1 and 16 storeys in height. Building heights vary within each stage. **Table 4** summarises the maximum RLs, building heights and likely maximum number of storeys for the highest part of each stage. Note that the maximum RL proposed and the heights described in the following table are inclusive of all roof level plant and lift overruns.

Table 4: Maximum heights for each stage

	<i>Approximate Maximum Height above ground level (likely maximum no of storeys)</i>	<i>Draft RLEP 2011 control (likely maximum no of storeys)</i>
Stage 1	42.3 metres* (13)	15.5 metres - 21.5 metres (5 – 7)
Stage 2	31 metres (10)	15.5 metres - 21.5 metres (5 – 7)
Stage 3	42 metres (13)	15.5 metres - 21.5 metres (5 – 7)
Stage 4	41 metres (13)	15.5 metres - 21.5 metres (5 – 7)
Stage 5	53 metres (17)	15.5 metres (5)
Stage 6	41 metres (13)	15.5 metres - 21.5 metres (5 – 7)
Stage 7	43 metres (14)	15.5 metres - 21.5 metres (5 – 7)
Stage 8	31 metres (10)	15.5 metres - 21.5 metres (5 – 7)
Stage 9	42 metres (13)	15.5 metres – 18.5 metres (5 – 6)
Stage 10	30 metres (9)	15.5 metres - 21.5 metres (5 – 7)

* based on heights detailed in the project application

Council's draft RLEP 2011 controls for the area would permit maximum heights of 15.5 to 21.5 metres, or equivalent to 5 to 7 storeys. The proposal significantly exceeds these controls, with maximum proposed heights for each stage exceeding the controls by 8.5 to 37.5 metres.

Council and community concerns

Council has raised concerns about the departures from the draft RLEP 2011 height controls. In addition, Council notes that while the draft RLEP provides maximum heights, this is further refined within the draft RDCP 2011 which envisages heights of 4 – 6 storeys throughout the site. Particular concern is raised with heights along Constitution Road, where the draft RDCP 2011 envisages built forms of 4 storeys in height and the proposal includes 5 storeys. Council considers that the proposed heights across the site will:

- result in poor urban form that lacks human scale;
- be out of context with the surrounding area;
- have unreasonable and unacceptable impacts on views to and from the site;
- result in poor amenity for future and surrounding residents; and
- create streetscapes dominated by large scale buildings.

Associated concerns relate to the proponent's method of calculating height, the potential for additional storeys to be added within the proposed envelopes or parking levels extending above ground level detrimentally affecting the streetscape, and the height (in metres) of the proposed single storey building being excessive and capable of accommodating extra storeys.

Proponent's justification

The proponent has justified the proposed heights with reference to regional strategic plans for urban renewal near transport hubs, and provision of much needed housing supply.

In addition, the proponent advises that the stepped approach to building heights has been designed to allow the development to blend with the environment. This includes building heights along Constitution Road being 5 storeys with appropriate setbacks from the street, and heights at the foreshore being stepped down to reduce visual impact, minimise overshadowing and offset any impact of taller buildings.

The proponent further advises that although variations are sought from Council's controls, the proposed heights have been designed with respect to the site context and to recent developments adjacent to the site.

The Department's consideration

Despite the variation from Council's height controls, the department considers that the size of the main concept plan site is large enough that it could support taller building forms towards the centre of the site where there is not a strong visual relationship with existing surrounding development, or where adjoining sites are likely to be similarly redeveloped. The proposed building envelopes, resulting in heights generally equivalent to 13 storeys along Nancarrow Avenue (towards the centre of the site), are considered acceptable in terms of overall urban design as they are located away from existing adjoining development and are interspersed by smaller building forms to break up overall massing. Further, there is a precedent of similar building heights approved within the wider locality. Areas with examples of similar heights nearby include:

- Rhodes, on the opposite side of Parramatta River, which includes buildings 25 storeys in height; and
- Top Ryde, which is currently being developed and includes approved built forms up to 17 storeys in height.

Residential amenity throughout the Concept Plan is discussed in detail in **Section 5.3**. Amenity impacts to neighbouring properties, including overshadowing and view impacts, are discussed in detail in **Section 5.9**. The proposal is unlikely to cause unacceptable impacts on neighbouring properties. With regard to the maximum heights proposed, the department considers any impacts can be appropriately managed through conditions or future assessment requirements. Amenity within the site and to surrounding properties would not be substantially improved by a reduction in heights through the central section of the site.

However, it is considered that both in urban design terms and to ensure no undue amenity impacts arise to neighbours, the proposed building heights at the site boundaries should more appropriately relate to adjoining development.

This is discussed in detail below, with a number of modifications recommended.

Constitution Road

Buildings on the northern side of Constitution Road, opposite the site, include single storey detached dwellings, as well as a two storey Council building on the corner of Constitution and Belmore Roads. Buildings on this side of the street do not form part of the Meadowbank Employment Area and are unlikely to be significantly redeveloped.

The draft RLEP 2011 permits building heights of up to 15.5 metres (5 storeys) along Constitution Road within the Concept Plan site and 9.5 metres on the opposite side of Constitution Road.

The proposed development would exceed these controls. The RLs of the building envelopes proposed by the proponent would permit building forms which are generally 18 – 20 metres above existing ground levels, or 6 storeys in height along Constitution Road.

The proponent has advised that all buildings along Constitution Road will be 5 storeys in height and that the proposed RLs allow for inclusion of lift overruns and in some cases increased height to meet flood level allowances. They also advise that street setbacks of 6 to 8.5 metres have been applied in accordance with the draft RLEP 2011 and draft RDCP 2011 controls.

The department considers that the main issue with heights along Constitution Road is the visual relationship between the proposed development and the development on the opposite side of Constitution Road. Due to orientation and the 20 metre separation provided by the road reserve, no other impacts such as overshadowing or privacy arise.

In terms of visual impacts, it is noted that the opposite side of the street is not within the Meadowbank Employment Area and is subject to very different planning controls. As such the department accepts that the character will remain significantly different between the two sides of the street.

The department considers that buildings presenting as 5 storeys in height to Constitution Road would allow an appropriate level of development on the Concept Plan site and a reasonable scale relationship with development on the opposite side of the street. If provided in conjunction with generous setback landscaping, appropriate façade design and articulation, it is considered that no unacceptable visual impacts would arise. This approach is also generally consistent with the draft RLEP 2011 controls which would permit heights of up to 5 storeys.

The proposed RLs are considered acceptable to allow some flexibility in design to accommodate for flood levels, variations in topography and roof design including lift overruns. A future assessment requirement is recommended to ensure buildings along Constitution Road do not exceed 5 storeys in height.

Belmore Street

The recently constructed 'Bay One' development on the eastern side of Belmore Street typically presents as 5 to 6 storeys in scale, including an upper floor which is generally setback from the main building line as seen in **Figure 16**. To allow comparison with the proposed development in terms of RLs, the level of the upper roof lines of the Bay One development (in RLs) are also included in **Figure 17**.

The proposed envelopes fronting onto Belmore Street would allow for building forms presenting as 8 to 9 storeys in height and would be significantly taller than existing Bay One buildings on the opposite side of the street.



Figure 16: Bay One development on Belmore Street

The department considers the contextual relationship between the two sides of the street to be the main issue arising from the proposed heights. Overshadowing, privacy, and view impacts are considered elsewhere in this report, and no unacceptable impacts are considered to arise from the proposed heights in this regard.

To ensure a reasonable visual relationship the proposed height should be reduced to achieve a transition with the height of existing buildings on Belmore Street. The following changes to Stage 2 are recommended:

- Replace RL 47.90 with RL 41.90 (6 metres or 2 storey reduction);
- Replace RL 40.00 with RL 37.00 and Popup RL 43.10 with RL 40.10 (3 metres or 1 storey reduction); and
- Replace RL 38.00 with RL 35.00 and Popup RL 41.10 with RL 38.10 (3 metres or 1 storey reduction)

These changes are depicted in **Figure 18**.

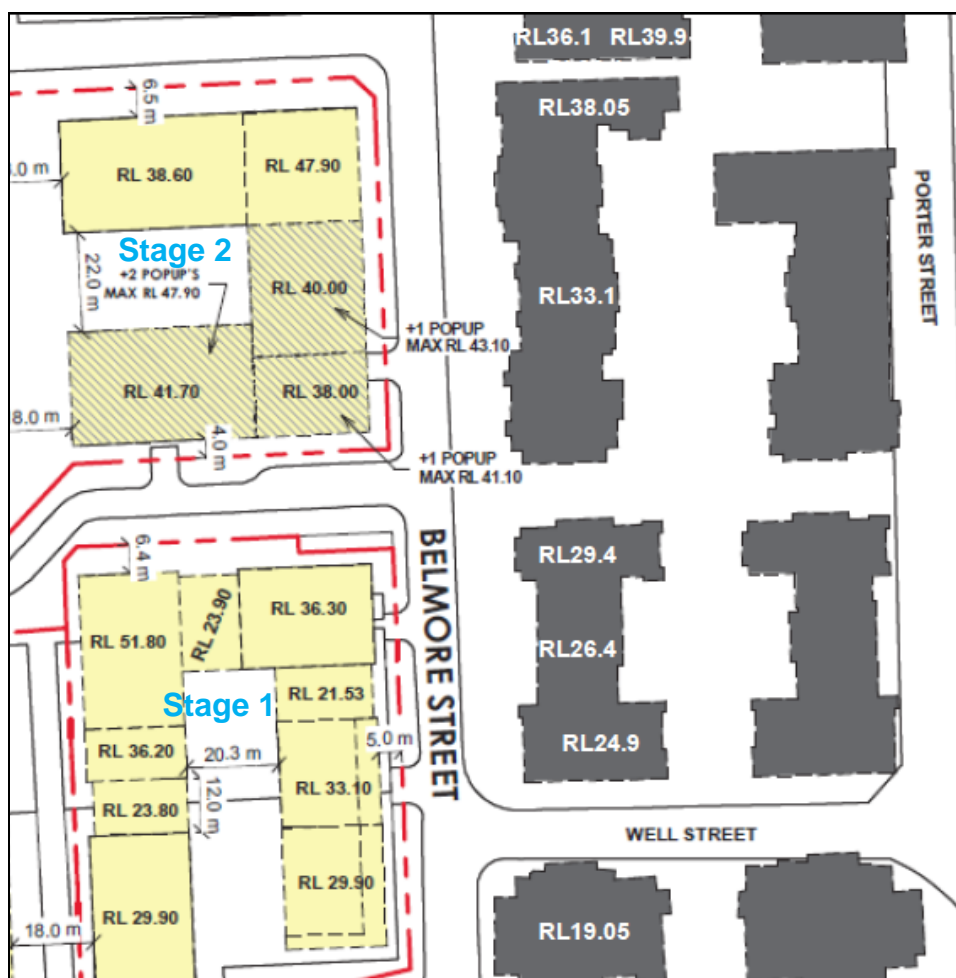


Figure 17: Proposed and existing building RLs along Belmore Street (Base Image Source: Proponent's PPR)

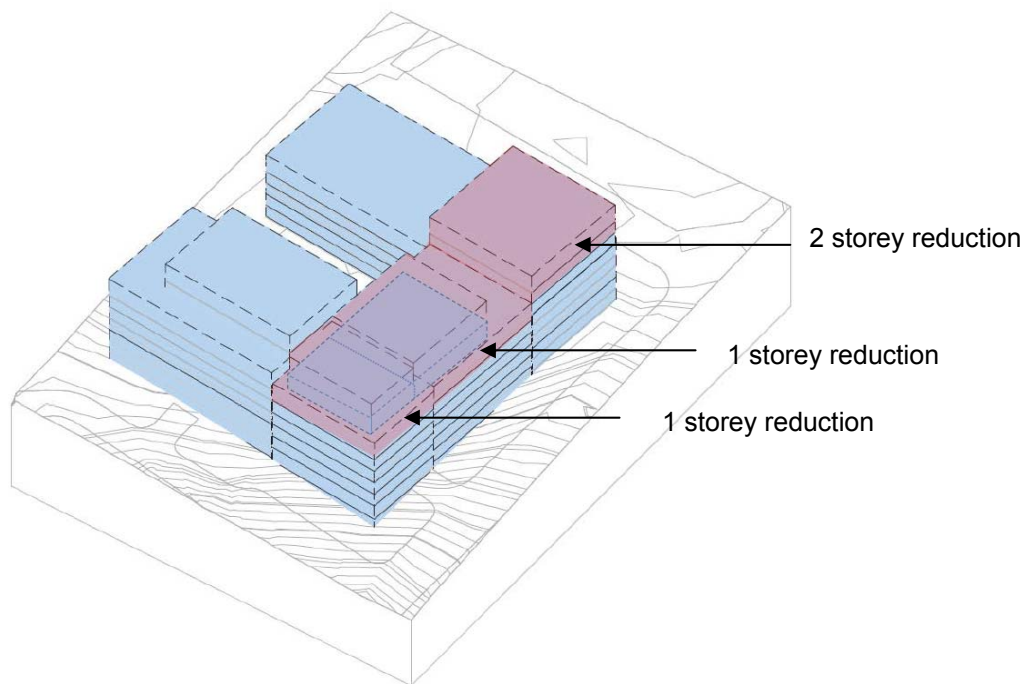


Figure 18: Areas of proposed envelopes within Stage 2 recommended for deletion (Base Image Source: Proponent's PPR)

The proposed changes still result in heights up to 1 – 2 storeys greater than existing development on the opposite side of Belmore Street but allow for a 'stepping down' in built form to achieve a more coherent height transition and appropriate contextual relationship with the character of the surrounding area.

Modifications are also recommended to the Stage 1 development fronting Belmore Street as discussed in detail further in this report.

Rothsay Avenue / Foreshore

The draft RLEP 2011 controls allow a maximum height of 15.5 metres along Rothsay Avenue, which would permit 5 storey buildings. Adjoining development fronting the foreshore includes the 'Bay One' development which is 4 storeys plus a roof level pergola (refer to **Figure 8**) and 146 Bowden Street which is not yet constructed, but is approved to be 5 storeys in height.

The proposed building envelopes have generally been designed to step down in scale towards Rothsay Avenue, or as they present to the foreshore. The proposed building envelopes include RLs which would permit a range of heights for buildings fronting Rothsay Avenue and the foreshore as shown in **Table 5** and **Figure 19**.

Table 5: Heights at the Foreshore

	RL to Foreshore	Approximate Maximum Height at Foreshore	Likely number of storeys
Stage 1	29.9	27m*	8*
Stage 3	20.8	17.5m	5
Stage 6	27.6	20m	6
Stage 7	25.4	20m	6

* based on heights detailed in the project application

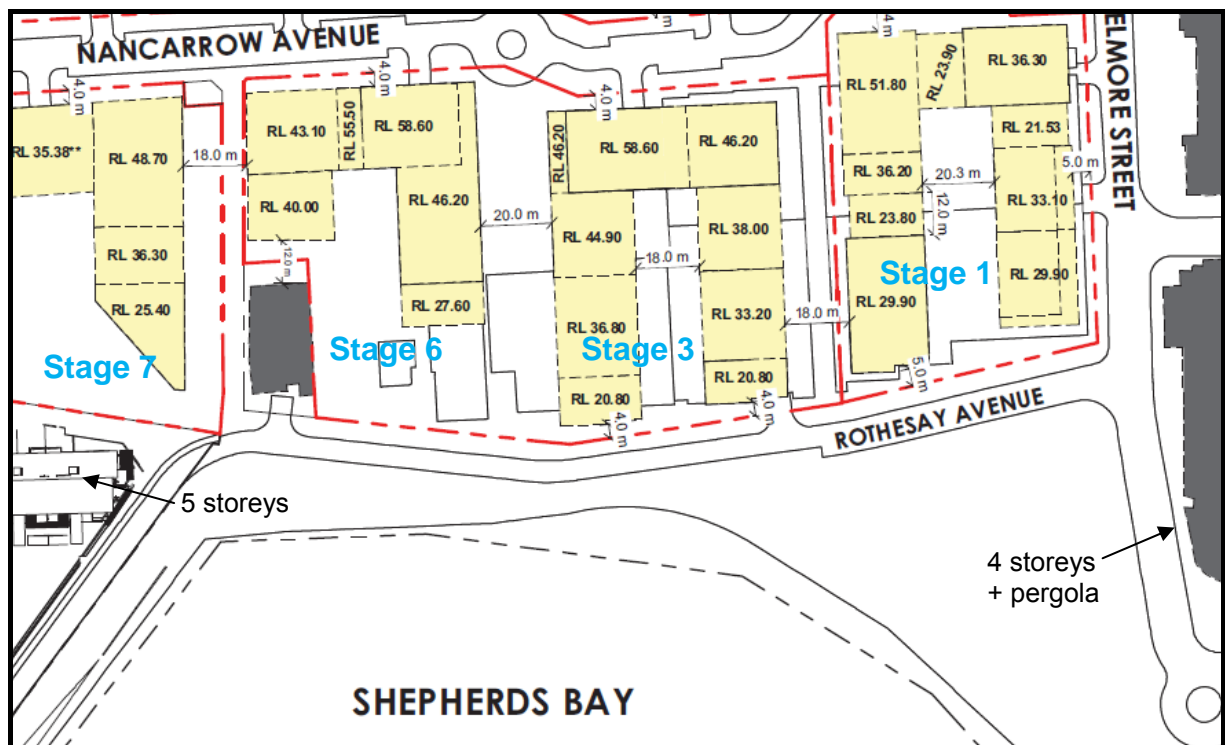


Figure 19: Proposed RLs along the foreshore (Base Image Source: Proponent's PPR)

The department considers that a stepping down in built form in this area is necessary to reduce the visual impact of the proposal as it presents to the foreshore and the waterway and to minimise amenity impacts for users of the foreshore area, particularly to ensure a human scale that does not create a sense of overbearing and to minimise overshadowing of this area. A height equivalent of 5 storeys is appropriate, having regard to the LEP controls and the heights of adjoining development. A height equivalent to 6 storeys for Stage 6 is acceptable given that it will be well setback behind the adjoining building lines and therefore would be less dominant as viewed from the public foreshore area.

Amendments are therefore recommended to Stages 1 and 7. Amendments to Stage 1 are discussed in the following section.

The southern-most tip of Stage 7 has the potential to present as noticeably higher than surrounding development. While the building presents only a narrow tip to the foreshore, the 7 storey form will be noticeably higher than the surrounding buildings. It is therefore recommended that the southern tip of the building be required to present as no more than 5 storeys to the foreshore / Rothesay Avenue. This is consistent with the proponent's 'Indicative Storey Plan' which indicates that only 5 storeys are proposed in this location. A modification is recommended in this regard.

Stage 1: Belmore Street and Rothesay Avenue

The detailed drawings submitted with the Stage 1 proposal include heights of up to 27 metres or 8 storeys on both Belmore Street and Rothesay Avenue. This results in a presentation out of character and scale with adjacent development on Belmore Street and with the presentation to the foreshore.

The following changes to the built form of Stage 1 are therefore recommended:

- delete 1 storey from the northern-eastern block on Belmore Street (resulting in maximum RL 33.00; eaves line RL31.85);
- delete 2 storeys from the mid-block on Belmore Street (resulting in maximum RL 26.7; eaves line RL25.7);
- delete 2 storeys from the south-eastern block on Belmore Street (resulting in maximum RL 23.63; eaves line RL22.65 to Belmore Street) and setback the upper floor from the Rothesay Avenue façade by at least 10 metres (resulting in eaves line of RL 19.5m towards Rothesay Avenue); and
- setback 3 storeys on the south-western block from the Rothesay Avenue façade by at least 10 metres (resulting in eaves line of RL 19.5m towards Rothesay Avenue).

These changes are depicted in **Figures 20** and **21**. Conditions are recommended within the Stage 1 Project Approval.



Figure 20: Recommended reductions in height on Belmore Street elevation (as shown in red)
(Base Image Source: Proponent's PPR)



Figure 21: Recommended reductions in height on Rothesay Avenue elevation (Base Image Source: Proponent's PPR)

Bowden Street

Approximate RLs for the adjoining Waterpoint Development are indicated in **Figure 22**. Sites to the north on Bowden Street are yet to be developed, but under the draft RLEP 2011, could achieve a height of 21.5 metres (equivalent to 7 storeys or RL 32 adjacent to Underdale Lane). The proposed building envelopes along Bowden Street are considered to provide a reasonable transition to the existing and likely future scale of development on the opposite side of Bowden Street and no further amendments of proposed building envelopes in this location are considered necessary.

Council raised a concern that the building envelope of the intended single storey building on Bowden Street permitted an excessive floor to ceiling height. The site is intended to be developed as a single storey café / kiosk, and the proposed building envelope permits a total height of approximately 6.5 metres. This is considered to be an acceptable height in the context of surrounding development and permits a high level of internal amenity with good internal floor to ceiling height as well as the ability to include a pitched roof or other architectural features to the roof form to complement the proposed use. See also **Section 5.2.2** in relation to street setbacks for this building.

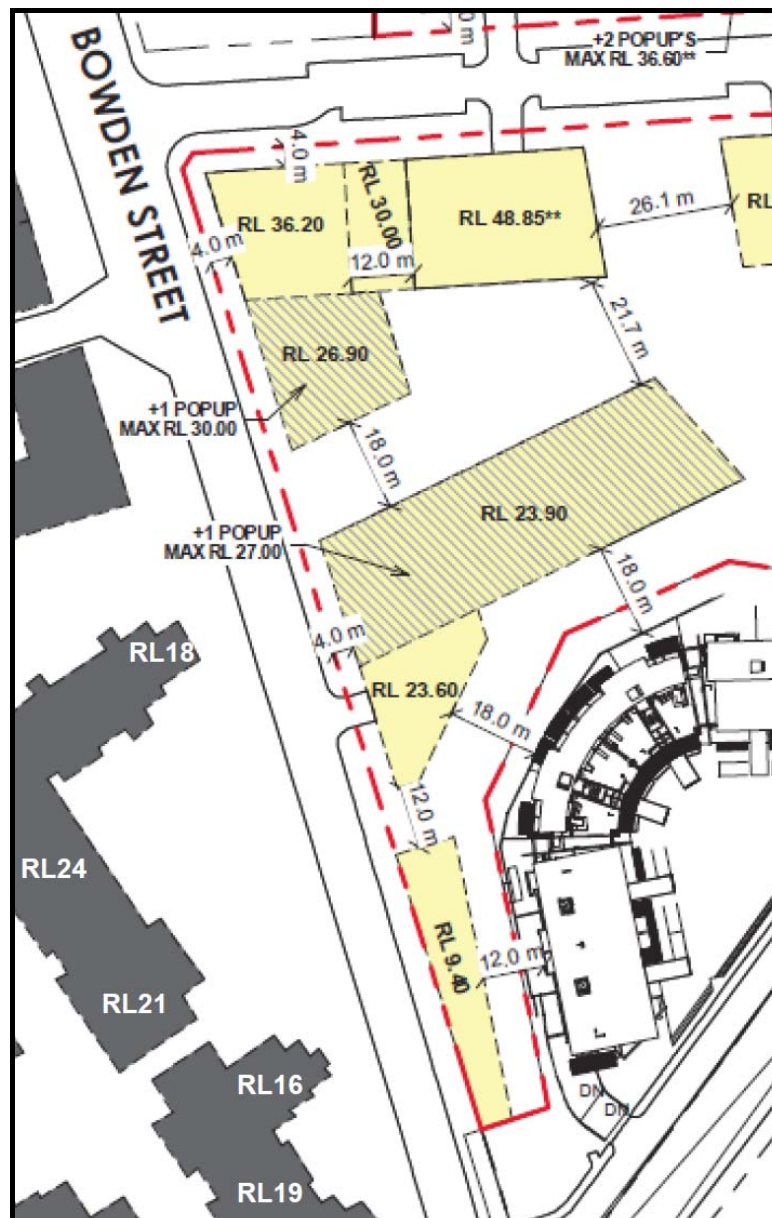


Figure 22: Proposed and existing building RLs along Bowden Street (Base Image Source: Proponent's PPR)

Church Street Site

The proposed building envelope on the Church Street site would have an RL of 63.7, which equates to a maximum height of approximately 53 metres above existing ground levels. The proponent advises that this height will equate to 15 storeys, including a 13 storey tower above a 2 storey podium. However, up to 17 storeys could theoretically be achieved under the proposed building envelope, even accounting for greater floor to ceiling heights at the podium / commercial levels.

The proposed building envelope would result in a significant departure from the height controls in the draft RLEP 2011 which permits a maximum height of 15.5 metres on the site. Adjoining sites on Church Street are 1 to 2 storeys in height, however under draft RLEP 2011 a height of 21.5 metres would be permitted, equivalent to 7 storeys. The Bay One development to the west of the site on Porter Street is 4 storeys in height immediately opposite the site and 7 storeys in height on the northern side of Well Street as shown in **Figure 23**.



Figure 23: Bay One Development opposite the Church Street site on Porter Street

It is the proponent's intention to create a high quality signature building to act as a gateway entry statement to announce the development at its entry point to Church Street and the Ryde Bridge. It is intended that the proposed taller signature building will add a significant feature to the area distinguishing as a new urban living area in the locality.

Council has not raised any specific objection to the height of the building in this location, but has suggested that given its visual prominence, it should be the subject of a design competition.

The department considers that the location of the site on a major arterial roadway and on the foreshore make it a suitable location for the provision of a "gateway" development. The location of greater building heights on a site that fronts a higher order street and results in minimal overshadowing of adjoining development is a good urban design and amenity outcome.

Although the site will be highly visible, once adjacent sites on Church Street are developed to up to 7 storeys (in accordance with draft controls), the department considers that the height of the building will be compatible with the context of surrounding development and as viewed within the Church Street streetscape.

In terms of visual impacts as viewed from the Parramatta River and foreshore areas, the department notes that there are examples of other tower buildings along this section of Parramatta River including the 25 storey towers located at Rhodes as shown in **Figure 24**.

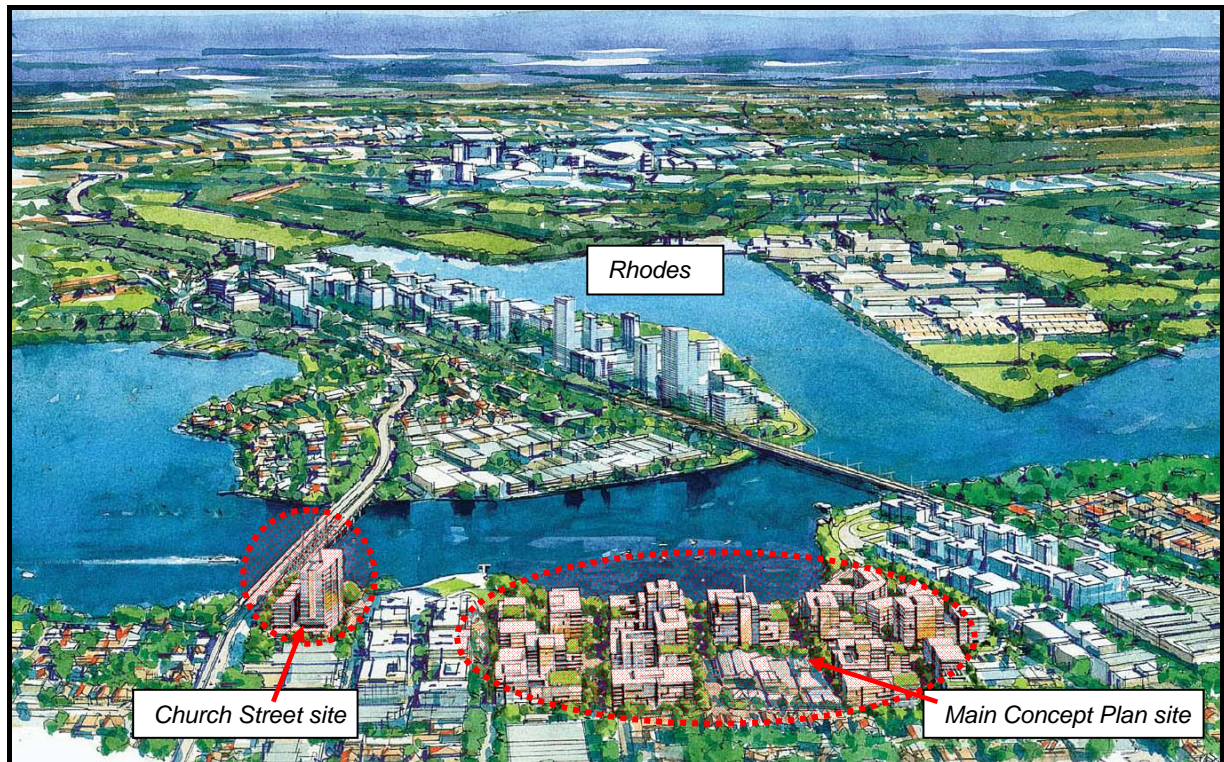


Figure 24: Artists Impression of the proposal and comparison with development at Rhodes (Base Image Source: Proponent's PPR)

The location of the tower above a two storey podium will also help to ensure the site presents a human scale at the pedestrian level. The tower is proposed to be slightly setback from the podium (by 1 metre) to provide visual separation of the two elements. Refer also to discussion of street setbacks in **Section 5.2.2**.

As such the proposed height of the building can be supported providing the development makes a significant contribution to the area in terms of urban design. The department supports Council's recommendation for a design competition and recommends that the future design of this stage be subject to a competition as set out in the Director General's Design Excellence Guidelines. The future design should also have regard to the heritage significance of the Church Street Bridge, being a state listed heritage item immediately adjoining the site. Appropriate future assessment requirements have been recommended.

Impacts of proposed changes to total floor space

The recommended changes in this section would result in a reduction of approximately 4,500m² of residential floor space from that proposed. This equates to around 2% of the overall floor space proposed.

However, it is not recommended to reduce the maximum permissible floor space nor the maximum number of units across the Concept Plan site.

As discussed above, due to the topography of the site, the building envelopes and maximum RLs proposed are capable of accommodating additional storeys in many locations. Subject to ensuring amenity and urban design standards can be met through careful design, this 2% reduction in floor space could therefore potentially be accommodated within the approved envelopes elsewhere on the site, without resulting in any increases in the height or bulk of those envelopes. This will be assessed as part of future development applications. As future assessment requirements have been recommended to ensure development will meet amenity and urban design standards, the department considers there is no need to reduce the amount of floorspace or dwelling numbers to be approved.

5.2.2 Building Setbacks

Street setbacks are generally proposed to be 4 metres across the Concept Plan although greater setbacks are proposed to Constitution Road (6 – 8.5 metres) and to Church Street (6 metres). The Stage 1 site also includes slightly greater setbacks of approximately 5 metres.

The proposed building envelope setbacks are generally consistent with draft RDCP2011 which requires 6 metre setbacks to Church Street and Constitution Road and 4 metre setbacks in all other cases.

However, Council has raised a concern that the proposed setbacks do not account for the additional height proposed by the development and that an increased setback should be provided commensurate with any increased heights to allow for sufficient landscaping.

The department considers that the proposed street setbacks are adequate to provide sufficient landscaping to enhance the streetscape. With the proposed reduction in heights recommended in **Section 5.2.1**, the buildings at the interface with adjoining residential areas no longer warrant an increased setback to offset any visual impact. Within the site on Nancarrow Avenue and Hamilton Crescent, the streetscape will be characterised by much taller buildings. However the proposed 4 metre setback, in conjunction with street tree plantings is considered sufficient to provide an attractive streetscape.

The department considers that setbacks should be appropriately landscaped to make a significant contribution towards the streetscape and to soften the visual built form impacts of the proposed buildings. As such all street setback areas should be free of any below ground structures or basement parking, to permit deep soil planting. A future assessment requirement has been recommended in this regard.

Minor modifications to setbacks are also necessary in relation to stages 1, 5, 6, and 9.

Stage 1

The Stage 1 Project Application includes basement parking occupying virtually all of the northern street setback area. The setback area does not provide extensive landscaping, but rather includes substantial areas of paving as well as a substation (refer to **Figure 42** in **Section 5.9**). The department considers it appropriate to redesign this setback area to rationalise paved areas and provide extensive deep soil plantings that could significantly improve the presentation of the site to the street.

As a result of a reduced parking demand due to a number of units being deleted through recommended built form changes discussed in **Section 5.2.1**, and reduced parking rates recommended in **Section 5.5.4**, it is possible to delete basement structures from below the front setback to achieve this. Conditions have been included in the project application recommendation.

Stage 5

The proposed building envelope controls for Stage 5 (the Church Street gateway site) indicated 3 metre street setbacks for the podium element of the building to both Well Street on the northern side of the site and Parsonage Street on the western side. This is inconsistent with the details shown on the Preferred Concept Plan drawing and the Building Setback Plan which indicate a 4 metre setback to these streets. The department considers the development should provide a 4 metre setback to both streets to provide a reasonable level of landscaping consistent with the draft RDCP 2011. This is important given that the proposed gateway building on this site will present as significantly taller than surrounding development. The detailed building envelope controls also indicates that the tower element would be setback 1 metre behind the podium building line on both of these facades. The department considers that this 1 metre setback to the modified podium setback should also

be retained. A modification requiring increased podium and tower setbacks by 1 metre on these facades has therefore been recommended.

Stage 6

Building envelopes of Stage 6 include a nil setback along its western side to the adjacent publicly owned pedestrian accessway. A 1 metre setback to the public accessway is recommended as a modification to the proposal to ensure a minimum level of privacy and amenity can be achieved, and to permit a small amount of screen planting on the development site rather than rely entirely on screening on public land.

Stage 9

The single storey kiosk on Bowden Street is shown to have a nil street setback on the building envelopes diagram. This is inconsistent with the Building Setback Plan which indicates a 4 metre setback from Bowden Street, consistent with draft RDCP 2011. To ensure a consistent built form setback to the streetscape and to retain view lines down Bowden Street, a modification is recommended requiring a 4 metre building setback. However, having regard to the single storey scale of the building and the constrained nature of the narrow allotment, the modification does allow for some incursions into the setback such as eaves, pergolas, outdoor seating areas or other unenclosed structures providing the design does not result in unacceptable impacts to the streetscape or view lines.

5.2.3 Building Design

Stage 1

A concern raised by Council in relation to building design issues is the protrusion of basement parking levels above the ground. Within Stage 1, upper parking levels are more than a full storey above ground resulting in a poor interface between the building and the public domain at pedestrian level.

This arises due to the topography of the site as Stage 1 is located in the steepest part of the Concept Plan site. The amount of stepping of basement levels and ramps which would be required to ensure that the basement was not more than 1 metre above ground level, is considered unreasonable. In addition, the basement levels are also influenced by the need to provide flood free access to the basement car park entrances. To ameliorate the impacts of the Stage 1 parking levels, a condition is recommended requiring amended landscape plans which include dense landscape screening to all facades of basement parking areas which protrude above ground.

Overall, the department considers that the Stage 1 proposal results in a high quality façade design (refer to **Figure 15**). Building massing and materials distinguish a base, a middle and a top to the building and the building is well-articulated to break up the massing. A palette of various external materials, finishes and elements ensure interesting and attractive facades on all elevations and include rendered and painted facades, glass balustrading, glazed brick elements, aluminium screening, timber elements and iron cladding.

However, the palette of materials is considered to be very dark, incorporating black, dark greys and browns. It is considered that a lighter palette of materials would be more appropriate, given that surrounding development incorporates lighter colours, but more importantly, to allow for greater reflected light within the development. As discussed in **Section 5.3.2** below, the Stage 1 development and future stages across the Concept Plan are unlikely to achieve minimum accepted solar access requirements. A lighter palette of materials would ensure better reflected light or daylight access to improve residential amenity. A condition is recommended to be included on the project application approval.

Concept Plan Site

Building design for remaining stages will be assessed at the development application stage. Development applications for all future stages will be required to demonstrate articulation and quality materials and finishes to provide attractive buildings and streetscapes. A light coloured palette of materials is also recommended to improve daylight provision across the site.

A future assessment requirement is also recommended to ensure that basement parking levels in future stages do not exceed 1 metre above ground level and that buildings are designed to provide an interface with surrounding streets and public domain areas at pedestrian level.

As discussed in **Section 5.2.3**, the Church Street site will also be the subject of a design competition to ensure that design excellence is achieved for this prominent gateway building.

With the imposition of these future assessment requirements, the department considers that the Concept Plan and Project Application approvals will ensure a good level of building design is delivered through each stage.

5.3. Residential Amenity

The residential amenity provided by the proposal has been considered against relevant policies including, *State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Buildings* (SEPP 65) and the accompanying *Residential Flat Design Code* (RFDC).

The Concept Plan only provides indicative building and apartment layouts. More comprehensive compliance with the RFDC criteria can be demonstrated by the proponent in future development applications. Notwithstanding, the department has assessed the level of residential amenity in terms of building separation, building depth, solar access, and privacy. A more detailed assessment has been undertaken for Stage 1.

5.3.1 Building separation

The RFDC recommends minimum building separation distances, dependent on building height, in order to maximise visual and acoustic privacy between residential flat buildings and to minimise the bulk and scale of buildings. The RFDC recommendations for minimum separation between buildings are outlined in **Table 6**.

Table 6: RFDC Building separation recommendations

Building height	Minimum separation (metres)		
	Habitable rooms	Habitable rooms and non habitable rooms	Non habitable rooms
Up to 4 storeys (12 metres)	12	9	6
Between 5 and 8 storeys (12 to 25 metres)	18	13	9
Exceeding 8 storeys (25 metres)	24	18	12

The proposed building envelopes generally provide for a minimum of 18 metres building separation for elements up to 8 storeys in height, in accordance with that recommended within the RFDC. The 12 storey tower elements are setback in excess of 24 metres from each other.

However, there are 3 main areas where the proposed building separation does not comply with the RFDC guideline within Stage 1, Stage 5 (the Church Street site) and between Stage 6 and an adjacent property. These are discussed below.

Stage 1

The Stage 1 development features a stepped building height with three 'cut-outs' along the frontages to Belmore Street, Hamilton Crescent (proposed new link road) and the new pedestrian through site link to the north west of Stage 1.

The proposal provides between 12 and 18 metres separation in these locations (refer to **Figures 25, 26 and 27**). The proponent considers that the separation complies with the RFDC guideline on the basis that a podium is provided by the lower levels of the buildings which establishes a new ground plane (thereby reducing separation requirements).

The department does not agree with this approach and has measured the height in storeys from existing ground level for the purposes of determining an appropriate building separation. The basement is included as a storey in some locations where it is greater than 1.2 metres above the ground level consistent with the definition in the RFDC.

Strict application of the RFDC guideline would require 18 metres separation in each of these locations. The department is satisfied that 12 metres is adequate separation along the Belmore Street and through site link frontages. The recommended reductions in height as outlined in **Section 5.2.1** will assist in reducing the visual bulk of the building along these frontages. In addition, visual privacy can be provided by increasing the sill height of windows to two apartments marked with a red star in **Figures 25 and 27**. On the level below, the landscaped roof terrace provided to each of these apartments will provide adequate privacy between apartments.

It is recommended that the 15 metre separation along the Hamilton Crescent frontage be increased to 18 metres in line with the RFDC. As this is the north-eastern elevation, any increased setback will provide an improvement in solar access to the development.

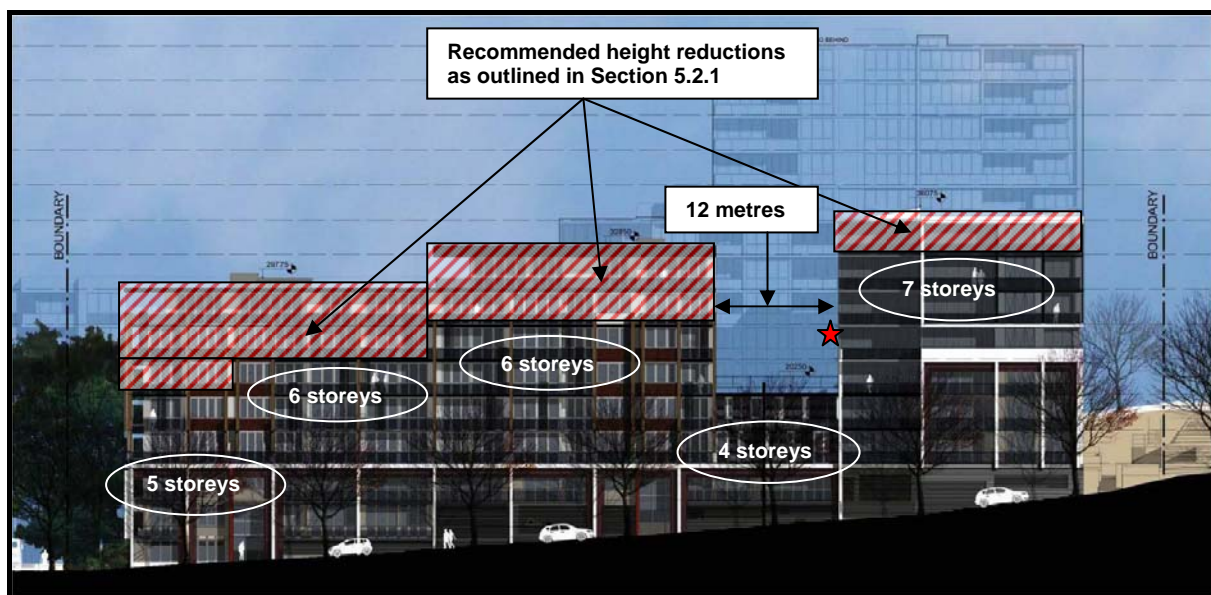


Figure 25: Belmore Street elevation (Base Image Source: Proponent's PPR)

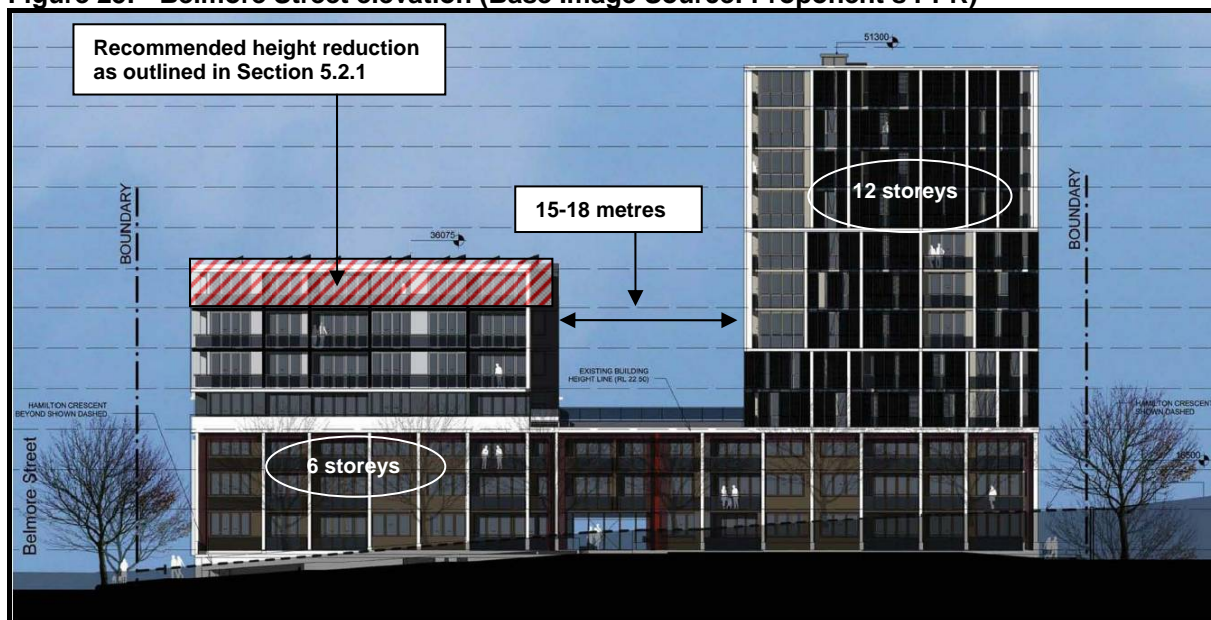


Figure 26: Hamilton Crescent elevation (Base Image Source: Proponent's PPR)

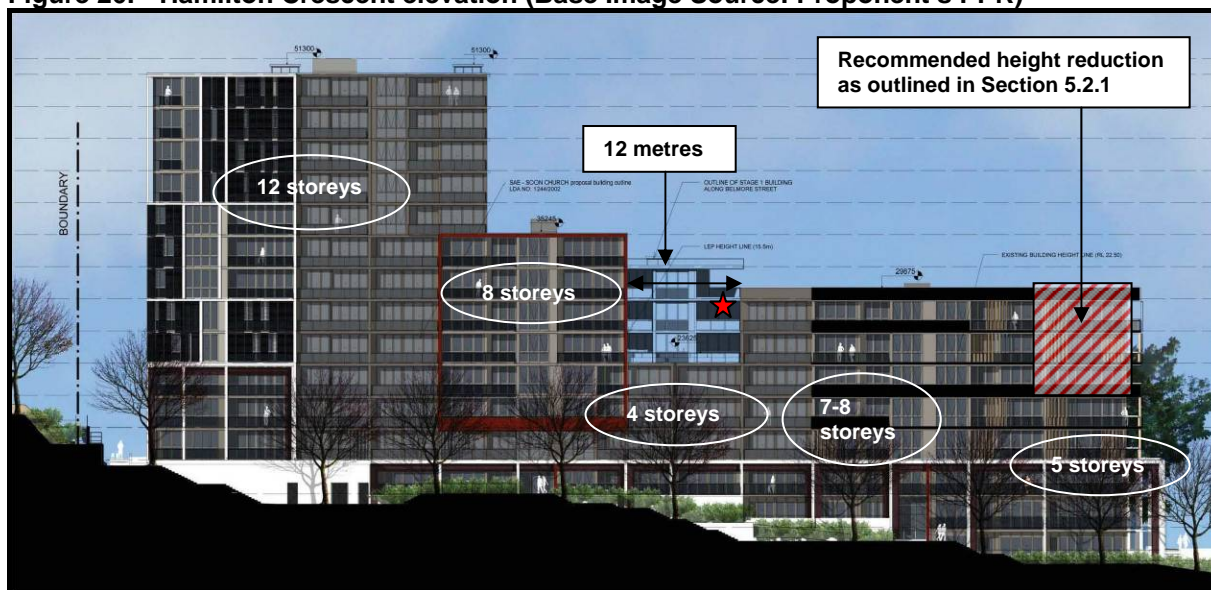


Figure 27: Proposed through site link elevation (Base Image Source: Proponent's PPR)

Stage 5 – The Church Street site

The proposal provides a 13 metre separation between the two tower elements of the signature building on the Church Street site as shown in **Figure 28** below.

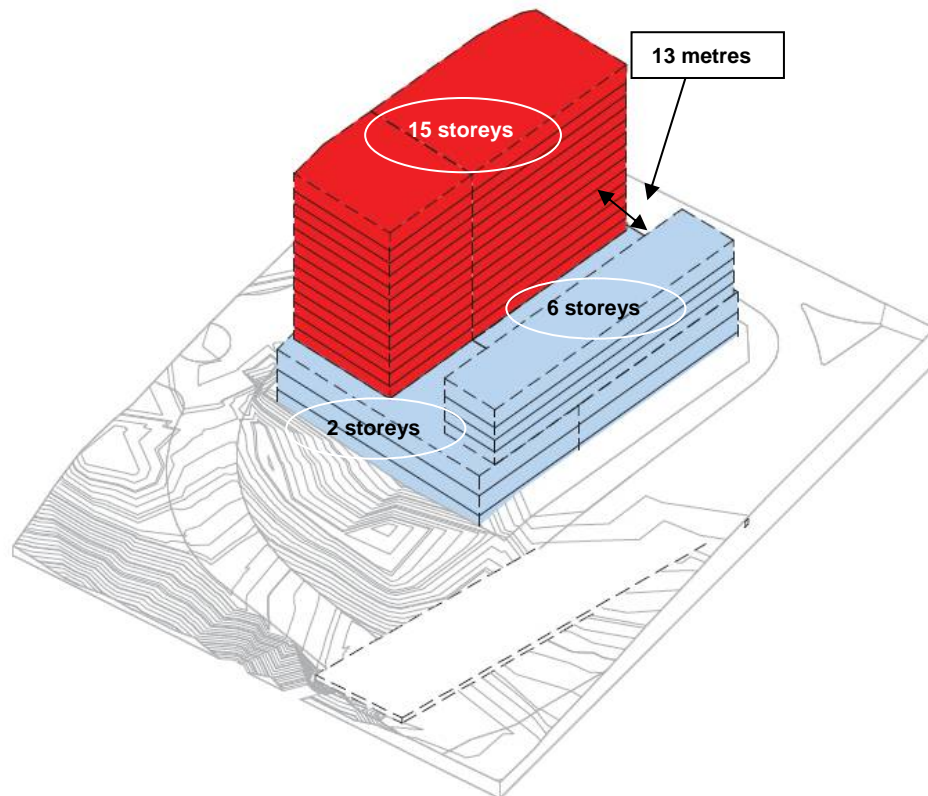


Figure 28: Stage 5 building envelope showing the proposed separation between the two towers (Base Image Source: Proponent's revised PPR)

In order to incorporate windows to habitable rooms in both elevations of buildings above 5 storeys, the RFDC recommends that 18 metres be provided. Notwithstanding, the RFDC acknowledges that 13 metres is sufficient where habitable rooms face non-habitable rooms. The department considers that this is acceptable in this instance, noting that this can be assessed in detail in the future development application for the site. In addition, it is noted that the development application will involve articulation of the facades which will likely increase the setback between the two towers and that privacy can be achieved through offset windows and balconies and use of screens or other measures.

Stage 6

The proposal provides a 12 metre separation (approximately 5 metres on the subject site and 7 metres on the adjoining site) between the Stage 6 building envelope and the existing building on the adjoining site to the south as shown in **Figure 29**. The adjoining site is not within the Concept Plan site and it may be developed separately in the future. The proponent considers that this site may accommodate a 4 storey building if it was developed in accordance with the draft RLEP 2011 and RDCP 2011 controls for the site.

In this instance, the RFDC recommends that a 12 metre separation is sufficient. However, in order to allow for the potential redevelopment of this adjoining site above 4 storeys, and equitable distribution of the minimum separation across both sites it is recommended that the setbacks of the Stage 6 envelope be increased as follows:

- 6 metres up to 4 storeys (to allow for a total of 12 metres); and
- 9 metres above 4 storeys (to allow for a total of 18 metres).

The department also considers that setting back the upper 4 levels of this portion of the Stage 6 building envelope, by an additional 3 metres than the lower 4 levels, will assist in reducing the bulk and visual impact from the foreshore.

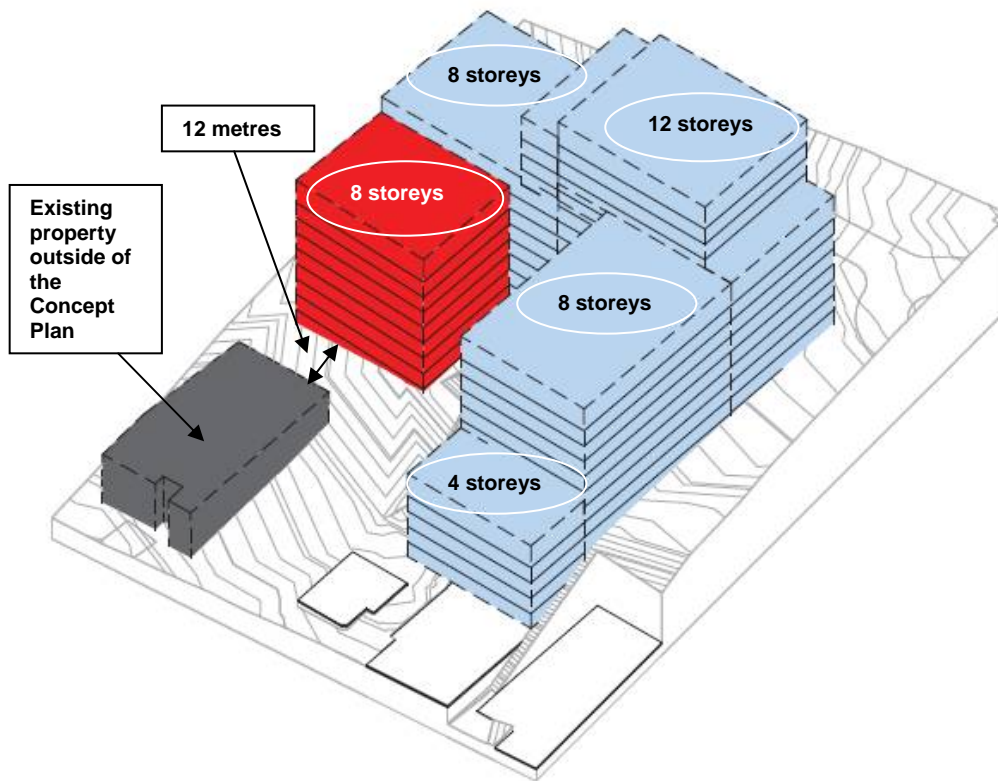


Figure 29: Stage 6 building envelope showing the proposed separation to the adjoining property to the south (Base Image Source: Proponent's revised PPR)

5.3.2 Solar Access

The RFDC seeks to ensure that adequate daylight access is provided to apartments to reduce reliance on artificial light, improve energy efficiency and provide a high level of residential amenity. The RFDC recommends in dense urban areas such as Meadowbank, that living rooms and private open spaces in at least 70% of apartments achieve 2 hours solar access between 9 am and 3 pm in mid winter.

Proponent's justification

The proponent engaged Mr Steve King to undertake an analysis of solar access for the Concept Plan and Stage 1 Project Application.

Mr King's detailed assessment of the Stage 1 Project Application indicates that only 50% of apartments are expected to receive 2 hours of solar access to living areas. Although the RFDC does not specify any requirements for bedrooms, it is estimated that an additional 14% of apartments will receive solar access to bedrooms for 2 hours in mid winter, thereby increasing the overall number of units with solar access to living areas or bedrooms to approximately 64%.

The department further requested that the proponent consider the shadow impact of future stages to the north (Stages 2, 3 and 4) on Stage 1. Mr King has reviewed the proposed building envelopes for Stages 2, 3 and 4 and considers that only 45-47% of apartments within Stage 1 will achieve more than 2 hours solar access to living areas or bedrooms.

Notwithstanding that the proposal does not meet the RFDC guideline, Mr King considers that the site orientation, southerly slope, and the desire to maximise private views to the south and maintain/create north-south view corridors through the site, severely limit the ability to achieve high levels of winter solar access. This is particularly relevant for Stage 1 which is situated on the steepest portion of the site.

A detailed assessment of each building envelope has not been undertaken. However given that the future Stages generally have a less adverse slope than Stage 1, Mr King considers that the remaining stages in the Concept Plan will achieve equal or better solar access than Stage 1.

Department's consideration

As outlined earlier in this report, the site features a steep slope falling from the northern part of the site to the foreshore. Due to the southerly orientation of the site and steep slope, it is difficult to achieve compliant levels of solar access in accordance with the RFDC guideline for dense urban areas.

The department requested that the proponent consider alternate building envelopes which result in a higher proportion of apartments achieving solar access. In response, the proponent redistributed heights and included additional 12 storey tower elements on the northern elevation of each of the envelopes in the south of the site. The envelopes in the northern part of the site have been reoriented to provide additional north facing apartments.

While the Concept Plan is unlikely to comply with the RFDC guideline for solar access, the department considers that an acceptable level of amenity will be provided throughout the development in the following respects:

- south-west facing apartments in the buildings south of Nancarrow Avenue will enjoy water views to Shepherd's Bay/Parramatta River;
- many south-east and north-west facing apartments in these buildings will also enjoy views from balconies towards the water;
- the buildings in the south of the site have exposure to cooling breezes off the water;
- north-east facing apartments which do not enjoy views to the south will generally have improved solar access; and
- the lighter colour palette, as recommended in **Section 5.2.3** will provide better reflected light / daylight access to improve residential amenity throughout the development.

The proponent has also agreed to accept a future assessment requirement which requires at least 70% of apartments to achieve 2 hours of solar access in mid winter or be designed to provide improved amenity by:

- including extensive glazing (minimum 70% of the external façade) to living rooms;
- permitting cross-ventilation; and
- exceeding RFDC guideline by at least 10% in at least one of the following areas:
 - increased floor to ceiling height; or
 - increased minimum apartment areas.

In relation to Stage 1, the department has made some recommendations for reductions in building height along Belmore Street and Rothesay Avenue, and increased building separation between the 7 and 12 storey elements on the northern elevation. This will result in a reduction of dwellings from 246 to approximately 221 (a reduction of approximately 25 units). This is unlikely to alter the proportion of units which gain acceptable levels of solar access.

The department notes that apartments which do not achieve the minimum 2 hours of solar access generally have a view towards Shepherd's Bay from living rooms, bedrooms or balconies providing an alternate source of residential amenity.

In addition, the proponent has incorporated light wells into a number of south east facing apartments on the uppermost level to provide solar access into living rooms in these apartments. To ensure that the recommended height reductions do not impact on the incorporation of light wells, it is recommended that an additional condition be imposed requiring all apartments on the uppermost levels of the development which do not achieve 2 hours solar access to living rooms to be provided with light wells.

5.3.3 Cross Ventilation

Concept Plan

The RFDC recommends that 60% of apartments are naturally cross ventilated. The internal layout of future stages of the Concept Plan will be subject to detailed assessment in future development applications. To ensure a high level of residential amenity is achieved across the Concept Plan site, it is recommended that a future assessment requirement be imposed requiring a minimum of 60% of apartments to achieve natural cross ventilation.

Stage 1

Of the 246 apartments proposed within Stage 1, only 118 (48%) of apartments are capable of being naturally cross ventilated. However, based upon the wind conditions in the vicinity of the site, the proponent's consultant, Mr King considers that a further 65 north-east and south-east facing apartments (which are exposed to cooling breezes) are likely to be capable of being naturally cross ventilated. These apartments also feature deep recesses in the façade and in many cases have distinct corner conditions for living areas and/or bedrooms to enhance local pressure differentials achieving movement of air. The apartments also have an open plan layout to living, dining and kitchen areas.

On this basis, up to 74% of apartments are capable of being well ventilated achieving compliance with the guideline.

It is recommended that additional wind modelling be undertaken to confirm this can be achieved. An appropriate condition has been recommended to ensure that a minimum of 60% of apartments are cross ventilated or achieve equivalent natural ventilation.

5.3.4 Building depth

Concept Plan

The RFDC recommends a building depth of between 10 and 18 metres. The proposal provides for building depths ranging from 22 to 25 metres. While this exceeds the recommendation of the RFDC, the department considers the proposed building envelopes are acceptable at the Concept Plan stage given that:

- the likely internal layout of future stages will be similar to Stage 1 providing a central corridor with double loaded apartments (approximately 10 metres in depth);
- balconies will be provided within the envelope thereby reducing the building depth by up to 4 metres; and
- building articulation and recesses will be introduced at the future development application stage.

On this basis, the department is satisfied that the internal layout of these buildings will not be compromised by the extra depth of the building envelopes.

Stage 1

The building depth for Stage 1 is generally 18 metres to 20 metres. The department is satisfied that the level of articulation provided to facades is acceptable and that apartment depths are generally no greater than 10 metres which will provide an acceptable level of amenity.

5.3.5 Privacy

Concept Plan

The department is satisfied that the separation provided between the proposed building envelopes (subject to those additional requirements as discussed in **Section 5.3.1**) in future stages of the Concept Plan is sufficient to provide for adequate visual and acoustic privacy. In addition, adequate separation is provided from existing residential properties and adjoining sites which may be redeveloped in the future to ensure privacy is maintained.

Stage 1

The Stage 1 development features a U shape design, where apartments either overlook the street or communal open space. While the balconies face one another, the 20 metre separation provides an acceptable level of privacy to residents using balconies.

In response to concerns raised by the department, balconies in corner locations are provided with screens to prevent overlooking into one other, and roof top terraces are provided with pergolas protect them from overlooking from units above.

In terms of acoustic privacy, the internal layout has generally provided separation between potentially noisy and quiet spaces, by grouping living areas and bedrooms to minimise noise transition.

5.4. Contributions and VPA

The proponent has committed to enter into a Voluntary Planning Agreement (VPA) to deliver public infrastructure such as area wide road works, stormwater, other public domain works and affordable housing. The proponent has had some initial discussions with Council regarding the VPA. However, Council has advised that it has difficulties in supporting or considering a VPA as the Council has significant outstanding concerns regarding the level of development and is not in a position to agree on a VPA until the development addresses all outstanding issues. Council has also advised negotiating a VPA after any Concept Plan approval is problematic and impractical.

The proponent recently submitted a draft VPA for the Council's and the department's consideration. However, the draft VPA does not offer to provide contributions over and above what would normally be required under the Section 94 Contributions Plan. It also seeks a partial or full off-set against section 94 contributions for the cost of delivering many of the proposed public infrastructure works.

As such, the Department considers that the VPA would not deliver any public benefits over and above what would normally be achieved through section 94 contributions and usual conditions requiring public infrastructure necessary to support the development. Therefore it is not considered to have any relevant public purpose.

Given the lack of overall public benefit and Council's reluctance to enter into what is a voluntary process, the Department has not pursued a VPA any further. Rather, where infrastructure works are considered to be necessary or triggered as a direct consequence of the proposed development, conditions have been imposed requiring their provision. Refer to detailed discussions in **Sections 5.5 to 5.9** below in relation to these infrastructure works. Section 94 contributions in accordance with Council's Section 94 Contributions Plan will also be payable for Stage 1 and then for each stage under future development applications.

The department notes that the absence of a VPA attached to the Concept Plan at this stage does not preclude the possibility for the Council and proponent to enter into a VPA at a later date in relation to any of the proposed works and the like that have a public benefit or purpose.

5.5. Traffic, Transport and Access

5.5.1 Local Road Network and Infrastructure upgrades

Traffic generation and impacts on the local network were the primary concerns raised by the public during the notification period. Significant concerns were also raised by Council, Transport for NSW (TfNSW) and Roads and Maritime Services (RMS).

The local road network in the vicinity of the site already experiences high volumes of traffic in peak periods. This is primarily as a result of "rat running" to avoid arterial road traffic on Victoria Road and Church Street.

The main existing issues relate to queuing times and congestion in the area, and particularly along Constitution Road, in the vicinity of the station, and along Bowden Street. Submissions raised concerns about exacerbation of these issues as a result of increased traffic generation by the proposal.

Following concerns raised by the department, the proponent prepared an updated traffic report which was submitted with the revised PPR. The traffic report identified a number of infrastructure upgrades to the local road network which would be required to sustain satisfactory operation of the local road network following development of the site including:

- signalisation of the Constitution Road / Bowden Street intersection;
- Hamilton Crescent West to be transformed to one-way southbound;
- installation of left in-left out treatment at the intersection of Belmore Street and Nancarrow Avenue;
- access to the Church Street site (Stage 5) to be left in left out only; and
- traffic calming measures to be implemented on Nancarrow Avenue and Rothesay Avenue to restrict regional traffic movements

Council's Consideration

The Council has raised issues with the proponent's traffic modelling. In particular, concerns related to the accuracy of the modelling as well a lack of certainty as the Council was unable to verify the data or the modelling.

The Council commissioned its own Traffic Needs Assessment prepared by Bitzios Consulting (the Bitzios Report) for the Meadowbank Employment Area which was published following submission of the revised PPR. The assessment looked at the ability of the local traffic network to accommodate additional traffic as a result of the Concept Plan proposal along with future development within the MEA and to identify what works or upgrades would be required to accommodate additional growth in traffic.

The Bitzios Report found that any additional traffic in Meadowbank would exacerbate existing congestion issues but that the local network could accommodate development of the area, providing that a range of local road infrastructure upgrades (18 items in total) were introduced to manage the traffic impacts and congestion in the area.

Of the 18 recommended upgrades, 10 were determined to be partly or wholly attributable to the development of the Concept Plan site, and therefore recommended to be partly or wholly funded by the proponent. These are summarised in **Table 7** and **Figure 30**.

Table 7: Bitzios traffic upgrade recommendations associated with the proposal

ID No.	Upgrade Description	% funded by the proponent	Reasoning	Timing / Trigger
1	Pedestrian signals replacing the zebra crossing on Railway Road at the Station.	50%	Moderate contribution associated with additional traffic movements generated at the crossing	Stage 1 of Concept Plan
4	Signalising Bowden Street / Constitution Road	100%	Major contribution associated with development-related traffic and increasing pedestrian demands through this intersection.	Stage1
6	Completion of the Rothesay Avenue Link, connections to it plus the roundabouts at Rothesay/Bowden and Rothesay / Belmore	100%	Local connection primarily for development access	Stage 1
10	Yerong/Belmont left in/out	50%	Reasonable increase in Belmont due to Holdmark; exacerbating existing safety issue	Stage 1
12	Hamilton Crescent & Nancarrow Avenue LATM and two-way construction between Belmore and Bowden	100%	Within the site and related to connections made	Stage 1
13	Underdale Lane/Bowden Street signalised intersection	100%	Directly linked to traffic and pedestrian management associated with Shepherds Bay	Stage 1
14	Underdale Lane LATM	100%	Directly linked to reducing traffic from Shepherds Bay development through this area and Facilitating pedestrian movements between the site and the retail / station area.	Stage1
16	Hamilton Crescent/Belmore Street left in/left out	100%	As part of the connection of Hamilton Crescent to Belmore Street	Stage1
17	Well Street LATM	50%	Partly as a consequence of local Holdmark traffic	When 1000 dwellings have been constructed
18	Belmore Street/Parsonage Street roundabout – remove u-turn potential and modify alignment	50%	Partly as a consequence of local Holdmark traffic	When 1000 dwellings have been constructed



Figure 30: Location of Bitzios recommendations for traffic upgrades (Source: Bitzios, 2012)

The Proponent's Response

In response to the Bitzios Report, and at the Department's request, the proponent prepared a draft Voluntary Planning Agreement (VPA) and updated the Statement of Commitments outlining the road works that it was prepared to undertake. The proponent generally accepted the list of infrastructure upgrades recommended in the Bitzios Report, but disputed the need for 4 of the items being:

- Item 6 - Rothesay Avenue link: no longer a need for this work as the Council has subsequently confirmed that it intends for the road to remain closed to avoid it becoming a regional traffic 'rat run' and to ensure maximum pedestrian and cyclist priority along the riverfront, although the roundabout at Rothesay Avenue / Belmore Street is still to be provided.
- Item 13 – signalisation at Underdale Lane / Bowden Street and realignment of Nancarrow Avenue: there is no need for traffic signals at this location other than to permit pedestrians to cross the street safely. A pedestrian crossing is therefore proposed instead. No road realignments are therefore necessary. A realignment would also open up additional detrimental rat runs.
- Item 17 - Well Street LATM: as Well Street has now been closed, there is no longer any need for LATM works.
- Item 18 - Removal of u-turn potential from Belmore Street roundabout: the proposed works will only increase vehicle speeds and the u-turn manoeuvre would be negligible given alternative arrangements are available from the signalised intersection of Belmore Street / Constitution Road and the proposed roundabout on Belmore Street at Rothesay Avenue

The proponent also disputed the timing of the delivery of the items and the proportion of the cost it should fund. Where the portion of the cost attributable to the development was less than 100%, the proponent has offered to carry out the works in full, but seeks an off-set against future Section 94 contributions for that part of the works not attributable to the development. A summary of the proponent's response is outlined in **Table 8**.

In addition to the above works, the proponent proposes improvements to Constitution Road, although these are predominantly being carried out in conjunction with the lowering of the road for stormwater and flooding reasons as discussed in **Section 5.6.1**.

The proponent also proposes dedication of land including the Nancarrow Avenue link road (approximately 325m²); a small area of land required for the construction of the new Nancarrow Avenue roundabout and potentially other small areas of land to be determined as necessary for road adjustments. In all cases the proponent is seeking a reduction or off-set against future Section 94 contributions for the full value of any land dedicated.

Table 8: Proponent's response / offer of traffic upgrade works

ID No.	Upgrade Description	% funded by proponent (exclusive of s94 contributions)	Bitzios recommended funding by the proponent	Comments	Timing / Trigger	Bitzios recommended timing/trigger
1	Pedestrian signals replacing the zebra crossing on Railway Road at the Station.	10%	50%	No objection to proposed works. Reduced % is based on proponent's modelling.	Stage 3	Stage 1
4	Signalising Bowden Street / Constitution Road	30%	100%	No objection to proposed works but suggests a slightly amended design. Reduced % is based on proponent's modelling.	Stage 6	Stage 1
6	Completion of the Rothesay Avenue Link, connections to it plus the roundabouts at Rothesay/Bowden and Rothesay / Belmore	N/A 100%	100%	Rothesay Avenue link and Bowden Street roundabout not supported. Belmore Road roundabout still to be provided	N/A Stage 2	Stage 1
10	Yerong/Belmont left in/out	30%	50%	% is based on proponent's modelling.	Stage 4	Stage 1
12	Hamilton Crescent & Nancarrow Avenue LATM and two-way construction between Belmore and Bowden	0%	100%	This also involves regrading works and new roundabout. No objection raised to the works but no reason given by the proponent for not funding these works other than that it was previously agreed with Council.	Stages 4, 8 and 10	Stage 1
13	Underdale Lane/Bowden Street signalised intersection	100%	100%	Does not support signalisation but supports a pedestrian crossing instead.	Stage 4	Stage 1
14	Underdale Lane LATM	100%	100%	Agree with Bitzios / Council on funding	Stage 4	Stage 1
16	Hamilton Crescent/Belmore Street left in/left out	100%	100%	Agree with Bitzios / Council on funding	Stage 2	Stage 1
17	Well Street LATM	N/A	50%	Not supported	N/A	When 1000 dwellings have been constructed
18	Belmore Street/Parsonage Street roundabout – remove u-turn potential and modify alignment	N/A	50%	Not supported	N/A	When 1000 dwellings have been constructed

Transport for NSW

RMS, as part of TfNSW, has advised that they have specific requirements relating to vehicular and pedestrian volumes at intersections in order to consider the installation of traffic signals at an intersection. They advise that the two locations where signalisation is proposed (the pedestrian crossing on Railway Road and the Bowden Street / Constitution Road Intersection) existing traffic and pedestrian movements do not currently meet necessary volumes to justify the installation of signals at these locations at this time.

However, it is acknowledged that as the development of the concept plan site progresses, it is likely that increased pedestrian and vehicle movements from future stages of the development will result in the need for signalisation at these locations. However, RMS have advised that they will not give approval for the works based on future projections. As such, RMS has recommended that revised and updated traffic data be submitted with each stage, and the installation of traffic signals at either location be included as part of the first stage where the number of pedestrian or vehicle movements have increased to the point where RMS traffic volumes are met.

Independent Traffic Advice

The department engaged ARUP to provide an Independent Transport Assessment for the proposal having regard to the concerns raised by the public, Council and agencies. Following additional submissions and reports by Council/Bitzios, TfNSW, and the proponent, ARUP provided a comprehensive review and assessment of all reports and made recommendations in respect of necessary local road network infrastructure upgrades. This report is included in **Annexure E**.

A summary of ARUP's recommendations regarding upgrades to the local road network is outlined in **Table 9** below.

Table 9: Infrastructure upgrades recommended by ARUP (Independent Traffic Assessment)

<i>Upgrade Description (Bitzios Item No)</i>	<i>Justification for works</i>	<i>Staging</i>
Pedestrian signals replacing the existing zebra crossing on Railway Road at Meadowbank railway station. (1)	Increased residential development in the MEA will increase the number of pedestrian movements across this intersection. Signals are required to improve traffic capacity and pedestrian safety.	When the relevant RMS warrants are met.
Installation of traffic signals at the Constitution Road / Bowden Street intersection (4)	This intersection currently operates at capacity in peak hours and this is forecast to deteriorate following further development in the MEA. Traffic signals are required to provide sufficient capacity and accommodate pedestrian movements to Meadowbank Station	When the relevant RMS warrants are met.
Implementation of left-in / left-out arrangement at Belmore Street / Yerong Street intersection (10)	Required to mitigate impacts of increased traffic volumes in the precinct and conflicts with right turning vehicles in and out of Yerong Street.	Prior to the occupation of more than 800 dwellings on the Shepherds bay site.
Underdale Lane Local Area Traffic Management (LATM) measures (14)	To facilitate good pedestrian connections between the Shepherds Bay development and Meadowbank railway station. LATM measures will also reduce the extent of through traffic utilising this local street, improving pedestrian and residential amenity	Prior to the occupation of the second stage of development within the main Concept Plan site.

<i>Upgrade Description (Bitzios Item No)</i>	<i>Justification for works</i>	<i>Staging</i>
Implementation of left-in / left-out arrangement at Belmore Street / Hamilton Crescent intersection (16)	Required to ameliorate traffic impacts from Shepherds Bay development and maintain a satisfactory level of service on Belmore Street	Prior to the occupation of the second stage of development within the main Concept Plan site.
Installation of roundabout at Belmore Street / Rothesay Avenue (6)	Required to manage the increased traffic flows on Belmore Street following the development of the Concept Plan site	Prior to the occupation of the second stage of development within the main Concept Plan site.
Installation of a pedestrian crossing facility at Bowden Street / Nancarrow Avenue (13)	<p>The key desire line for pedestrians accessing Meadowbank station from the development will be via Nancarrow Avenue and Underdale Lane. A zebra pedestrian with a raised threshold is recommended to facilitate safe pedestrian crossings of Bowden Street.</p> <p>Based solely on pedestrian and vehicle volumes, warrants for the introduction of a zebra crossing are unlikely to be met at this location. The zebra crossing can be justified however on safety grounds on safety grounds as a number of schoolchildren will be walking from the Shepherds Bay development to Meadowbank Station.</p> <p>In the event that a zebra crossing is not acceptable due to failure to meet relevant warrants, a pedestrian refuge is recommended at this location.</p>	Prior to the occupation of the second stage of the development
Nancarrow Avenue Area Traffic Management (LATM) measures (12)	These measures are proposed to reduce the level of through traffic along this new route and provide local access to the Shepherds Bay development.	Prior to the occupation of the second stage of development within the main Concept Plan site.
Nancarrow Avenue extension (12)	To provide a publically accessible road link between Belmore Street and Nancarrow Avenue to service the proposed development.	Prior to the occupation of the second stage of development within the main Concept Plan site.

ARUP also made recommendations in relation to provision of pedestrian footpaths which is discussed further in **Section 5.5.3**.

In relation to the provision of signalised intersections, ARUP has also recommended that traffic counts be undertaken at the intersections as part of future development applications, and that where the counts demonstrate that warrants are met, the traffic signal should be installed as part of the development of that stage.

The Department's Consideration

The department considers that the Bitzios Report prepared on behalf of Council provides a comprehensive modelling and assessment of future traffic impacts in the precinct. However, the department agrees with the proponent and with ARUP's independent assessment that

some of the infrastructure upgrades recommended in that report are no longer necessary as a result of changed circumstances or new information.

It is noted that the infrastructure works recommended by ARUP align closely with those suggested by the proponent in response to the Bitzios recommendations. The department considers that the proponent should be responsible for providing these infrastructure upgrades as the works are necessary to enable the development of the site without creating additional adverse impacts on the surrounding local road network. The department agrees with the justification provided for each of the items summarised by ARUP in **Table 9** as it demonstrates that there is a direct link or trigger between the proposed development and the need for the works that would support their requirement.

The department also agrees with ARUP's suggested staging of the required upgrades. The Nancarrow Avenue road link and associated works along the length of Nancarrow Road and Hamilton Crescent must be provided as part of the second stage of the development to provide vehicular access routes to all other stages within the main site other than Stage 1. **Section 5.5.3** discusses this issue further. Once the link is constructed, the main pedestrian desire line for Stage 1 will be along Underdale Lane to the shops and station and therefore triggers the need for proposed works on Underdale Lane and the adjacent pedestrian crossing on Bowden Street.

A future assessment requirement is recommended in line with the RMS and with ARUP's recommendations in relation to provision of signalisation and intersection upgrades. It will require the proponent to monitor the intersections and provide updated counts as part of each future development application. Signalisation at either site is to be included as part of the first stage where the number of pedestrian or vehicle movements have increased to the point where RMS warrants are met. ARUP has suggested that this is likely to occur at the second stage of the development.

In terms of delivery of these items, the department notes that the proposed works are included within the proponent's Statement of Commitments although it was always intended by the proponent that the works be provided through a VPA agreement. As discussed above in **Section 5.4**, the department does not consider it necessary for the works to be included in a VPA as the works are integral to the development proceeding. For the reasons outlined in **Table 9**, all of the proposed infrastructure works are necessary to facilitate the development without resulting in adverse impacts to the surrounding road network. Therefore the works can be required through conditions or future development assessment requirements. As such, appropriate future assessment requirements and conditions have been recommended to ensure delivery of the infrastructure works as part of future stages.

5.5.2 State Road Network

Major arterial roads in the vicinity of the site include Victoria Road to the north and Church Street immediately adjacent to the east.

Transport for NSW concerns

Transport for NSW has raised a concern about the traffic data used by the proponent and the level of detail in the modelling in order to determine impacts on state road infrastructure. They have also indicated that should the proposal have any adverse impacts on the state road networks then the proponent should be responsible for any necessary works to mitigate impacts.

Proponent's Response

In response to these concerns, the proponent's consultant, Road Delay Solutions, carried out additional modelling to ascertain the impacts of the proposal to the state road network. In particular it modelled the operation of 2 key intersections on Victoria Road and 3 key intersections on Church Street following full development of the Concept Plan site. The

analysis looked at the levels of service for each of the intersections as well as average delays and queue lengths.

To address the issue of data raised by TfNSW, Road Delay Solutions used the future year traffic projections provided by the Council / Bitzios Report.

This modelling indicates that the future operation of traffic signals on Church Street and Victoria Road would be satisfactory to good. In particular, it demonstrates that all Church Street intersections would retain a level of service at "A" (good) following development of the Concept Plan site. Victoria Road intersections were found to have future levels of service at "B" (good with acceptable delays) and "C" (satisfactory) without the development, and the modelling demonstrated that these levels would not be reduced following development of the Concept Plan site.

Changes to average vehicle delay at intersections were nil or negligible. The analysis also demonstrates that queue lengths would not impede the operation of preceding intersections along the corridor, and that all turn movements would be adequately contained within existing turn bays.

As such the assessment finds that the future traffic generation from the proposed development will have no detrimental impact on the operations of these arterial roads and that no justification can be drawn for any improvements to road infrastructure as a result of the development.

Independent Traffic Advice

ARUP has independently reviewed the modelling undertaken by Road Delay Solutions and advised that it supports the modelling and the data used. ARUP also advise that the analysis indicates little change in the operation of key intersections as a result of the full Concept Plan Development and that negligible increase in queue lengths and vehicle delays between the two scenarios were reported. As such ARUP agrees with the proponent's analysis that the extra traffic from the Concept Plan site in itself would be unlikely to result in any requirement for additional road network upgrades.

Department's Assessment

The department notes ARUP's support of the modelling through its independent review, and on this basis accepts the modelling provided and its results. As all intersections would continue to operate at good to acceptable levels of service and would continue to accommodate queue lengths and turn movements, the proposal does not gives rise to any requirements in relation to State Road infrastructure improvements

5.5.3 Internal Street Design, Pedestrian Links and Cycleways

The proposal includes a new section of roadway within the site, as well as improvements to existing road reserves through the provision of pedestrian and cycle links, as well as proposed additional links to be provided through open space areas within the proposal. A range of issues around the design and functionality of these links have been raised.

Council Concerns

Council have raised a concern relating to the design of the extension and upgrade of Nancarrow Avenue and Hamilton Crescent. The schematic designs provided by the proponent for the road link provide no details other than a horizontal and vertical alignment. Council has concerns regarding the 'chicane' nature of the design and potential sight line risk. Further, as a retaining wall is likely to be required along the southern side of the link road, a pre-design road safety audit will be required. No details of swept paths or feasibility of gradients for waste collection vehicles have been provided with the design.

It is also unclear whether the design of the link road and the design of other existing roads within the site to be upgraded can accommodate cycle paths as well as pedestrian paths on both sides of the road. These are considered to be essential in order to enhance the desirability of alternate forms of transport (refer also to discussion in **Section 5.5.4** below). Council suggests that detailed cross sections at several locations need to be provided to ensure that there is sufficient space within the public domain to accommodate vehicles, pedestrians and cyclists as proposed by the proponent's Access Plan. Council considers that these detailed plans or any realignment of the road may affect proposed building footprints, particularly the Stage 1 site. The Council also believes the new road should be included as part of Stage 1.

In relation to cycle paths, a concern is raised that some of the paths shown on the proponent's pedestrian and cycle access plan include stairways and therefore limit its functionality as a cycle path. Furthermore, the Council is concerned that the proposed cycle network fails to connect with surrounding established cycle routes.

Other concerns in relation to pedestrian access include that a number of proposed public open spaces will have extended stairways and are therefore an impediment to people with mobility impairments. Further, the landscaped area between stages 2 and 4 will not be publically accessible and therefore breaks a potential pedestrian connection between Gale Street and the landscaped area immediately adjacent to Stage 1.

Transport for NSW

TfNSW has raised a concern that the proposal does not include cycleway and pedestrian linkages to Meadowbank Station and the regional cycleway network. It recommends that a VPA between the Council and the developer include the cost of funding such linkages.

Proponent's Submission

With regard to the inclusion of the Nancarrow Avenue extension as part of Stage 1, the proponent advises that as details of the design of this roadway are still being discussed with Council, it is not possible to include it within the Stage 1 Project.

With regard to the design of the new roadway as well as the design of pedestrian and cycle paths, the proponent considers that the level of detail submitted is sufficient for a Concept Plan application, and that more detailed plans can be submitted as part of future stages as necessary.

The proponent advises that four north-south pedestrian links will be provided through new public open spaces and that these links have been designed to connect with east-west pathways along Constitution Road, Nancarrow Avenue and the Foreshore. It also advises that a shared path / cycleway through the site will link the development to the existing networks and public transport will help promote alternate modes of transport. Further, it advises that publically accessible open spaces have been designed to provide appropriate access to people of all mobility levels as illustrated on the Indicative Accessible Circulation Plan.

The proponent has submitted a 'Pedestrian and Cycle Access Plan' and an 'Indicative Accessible Circulation Plan' (**Figures 31 and 32**). The landscape report submitted with the Revised PPR also includes basic layouts indicating footpath locations.

As discussed in detail below, the department considers that there are a number of inconsistencies between these two plans, the plans within the landscape report and with the description provided by the proponent.

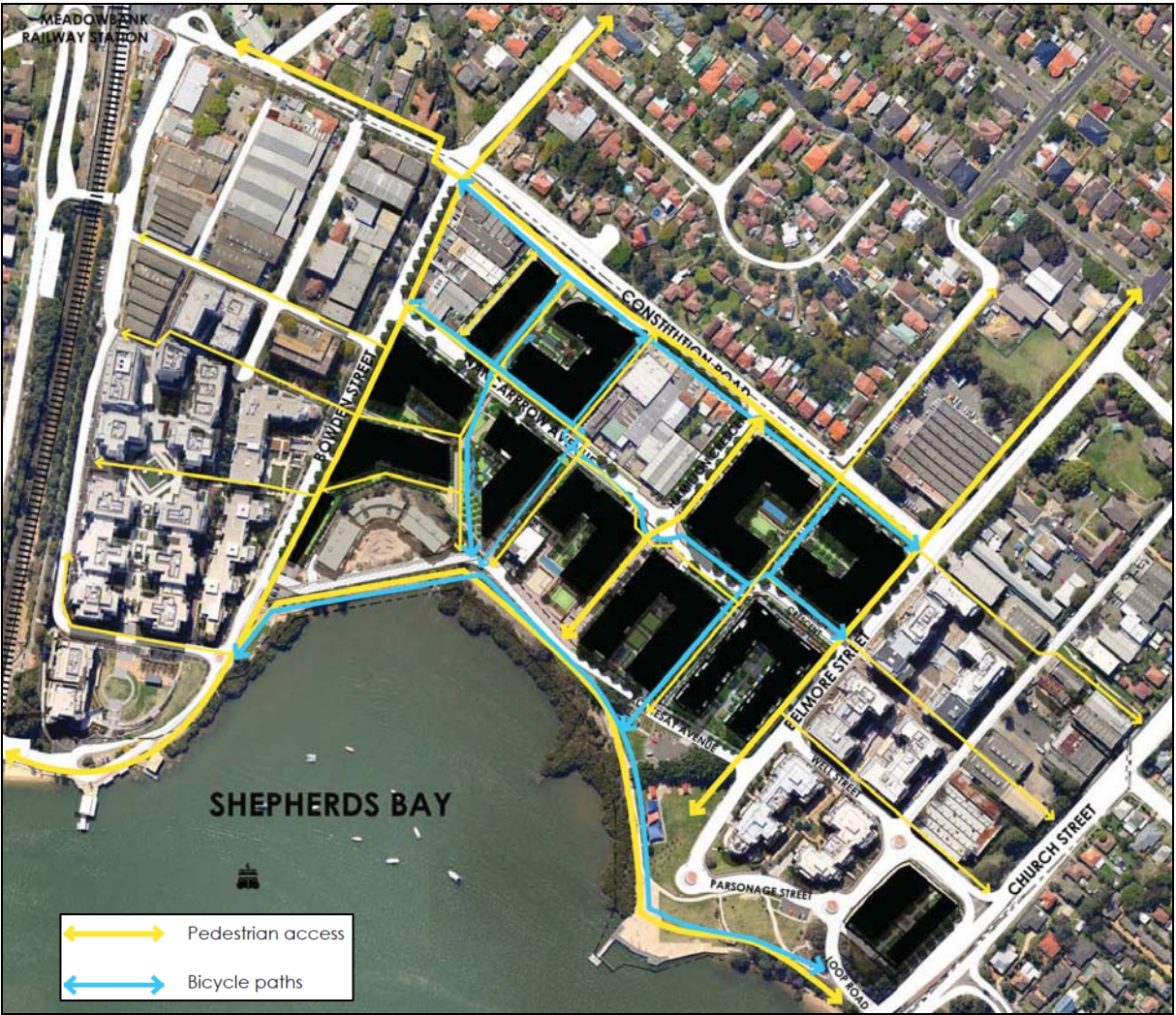


Figure 31: Pedestrian and Cycle Access Plan (Source: Proponent's PPR)

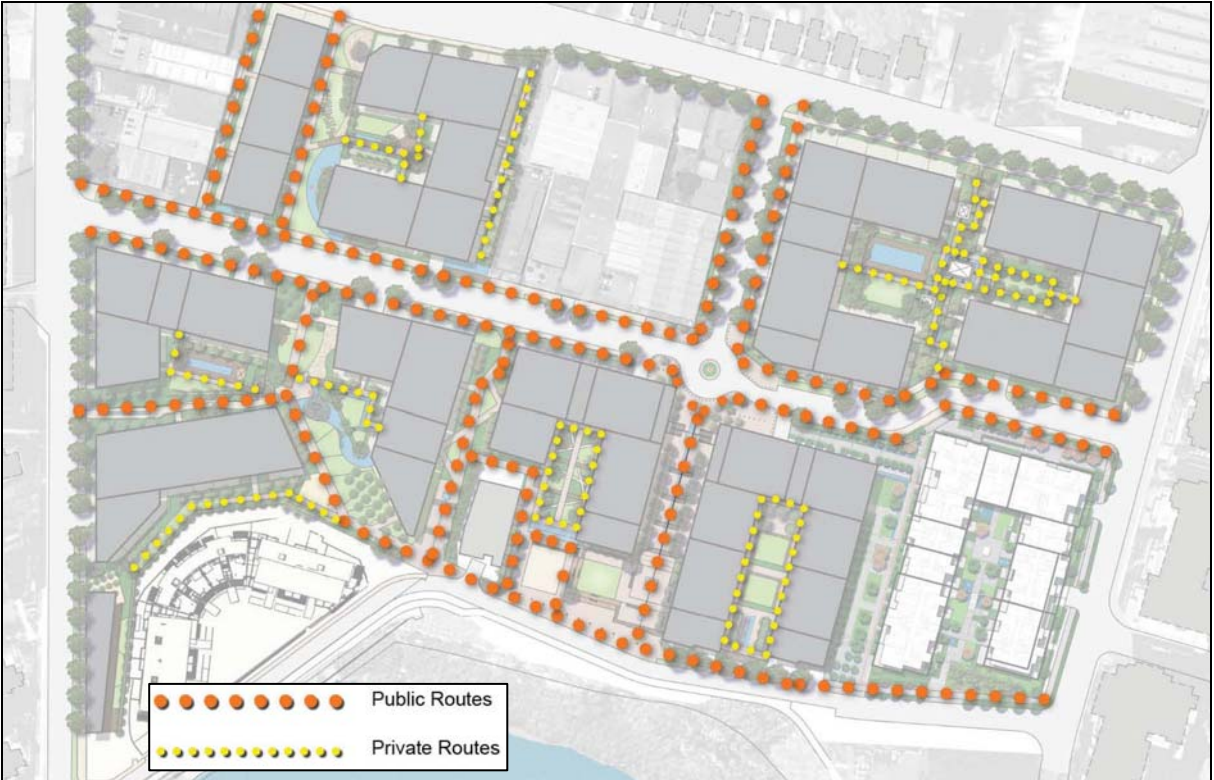


Figure 32: Indicative Accessible Circulation Plan (Source: Proponent's PPR)

Independent Traffic Advice

In its comprehensive review of traffic and transport issues, ARUP has included recommendations relating to accommodation of pedestrian and cycle facilities in the road reserve. They recommend:

- the Nancarrow Avenue extension and associated LATM works should be provided prior to the occupation of the second stage of development;
- pedestrian footpaths should be provided on both sides of all publically accessible roads adjacent to the Concept Plan site;
- the footpaths should be a minimum of 3 metres wide to accommodate the significant numbers of pedestrians from the development; and
- Rothesay Avenue and Nancarrow Avenue could be designated as mixed traffic streets through the use of pavement markings indicating the presence of cyclists.

Department's Consideration

The department considers that the Nancarrow Avenue link extension does not need to be constructed until the second stage of development within the main concept plan site, as Stage 1 does not rely on this road for vehicular access. However, the road design should be fully resolved prior to finalisation of Stage 1 design to determine whether the detailed design of the link road and associated infrastructure can be accommodated within the area designated by the proponent for a road reserve, and that gradients, alignments, and sight lines can comply with Austroad's standards. There is a possibility that the proposed road reserve would need to be widened or re-aligned in which case the building setbacks for adjoining stages, including Stage 1, would need to be amended.

Similarly, the department also considers that detailed design plans for the upgrade of the adjoining existing section of the roadway to the north of Stage 1 should also be approved prior to construction of Stage 1 for the same reason.

While the Pedestrian and Cycle Access Plan (**Figure 30**) does not indicate that pedestrian paths will be provided along both sides of Nancarrow Avenue and Hamilton Crescent, the Accessible Circulation plan does (see **Figure 31**). However, no accessible pathways are indicated along Bowden Street, Constitution Road, or Belmore Street. The department considers that it is essential for a development of this density to provide pedestrian pathways accessible for all persons on both sides of the street within all road reserves adjacent to the development.

It is also considered that the development should provide some pedestrian routes accessible to all persons in a north-south direction to allow all pedestrians to connect with the foreshore. The Indicative Accessible Circulation Plan indicates there will be numerous public routes for people of all mobility levels but is inconsistent with the concept landscape plans which show stairs provided in some of these locations. It is clear that some of the proposed accessible routes could not be provided due to the steep slope of the site.

The department considers that the detailed landscape plans, to be submitted as part of future stage applications, should ensure public access paths are provided for all persons for at least two of the indicated north-south routes between Constitution Road and the Foreshore. It is recommended that one of the routes should include the area known as the Lower Riparian linear park (being a key pedestrian desire line between the foreshore and the retail / railway area) (see **Figure 33**). With the provision of two north-south accessible routes of travel, the proposal is considered to deliver a reasonable level of accessibility through the site.

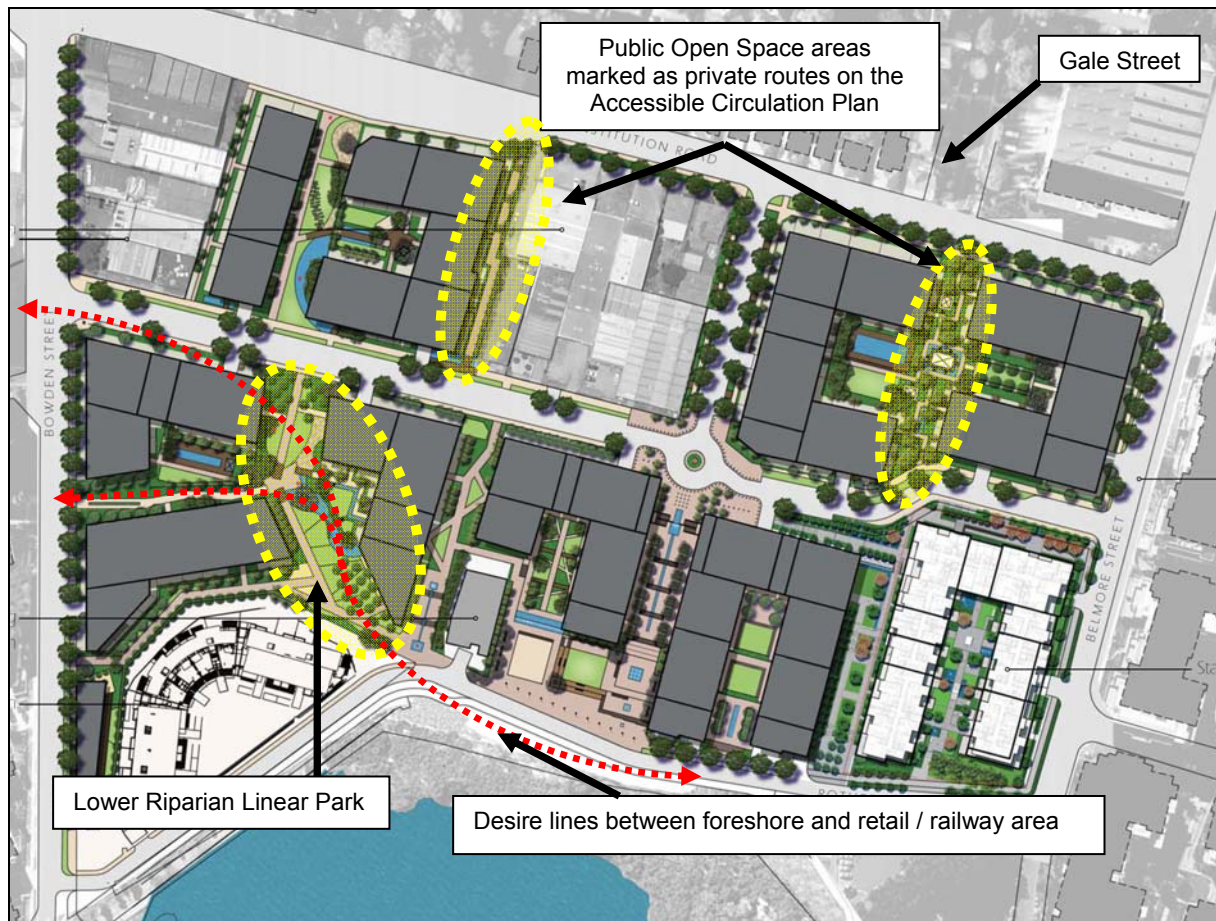


Figure 33: Landscape Masterplan indicating some of the open space areas (Base Image Source: Proponent's PPR)

Although the landscaped areas between Stages 2 and 4 and to the east of Stage 8 are indicated as being private access routes on the Indicative Accessible Circulation Plan, this plan is inconsistent with the proponent's publically accessible open space area calculations which includes these areas (refer to **Figure 37** in **Section 5.7**) and with the information within the proponent's statement of commitments which indicates that the areas are designated as publically accessible open space. The amount of public open space provided under the proposal, inclusive of these two access routes, is already below the existing rate of open space provision in the Ryde LGA (refer to discussion in **Section 5.7**). As such, the department considers that these areas should not be deleted from the public open space provision. A future assessment requirement is recommended to ensure these areas are provided as public access routes, and therefore address Council's concerns in relation to pedestrian connections from Gale Street to the foreshore.

The Pedestrian and Cycle Access Plan also proposes cycle paths along Constitution Road and Nancarrow Avenue. The department supports the provision of cycle paths along these two streets. However the indicative path along Nancarrow Avenue appears problematic as it shows the path repeatedly crossing over the road. The paths should be designed to provide a continuous route travelling in both directions without the need to cross over the street. It is recommended that detailed designs in conjunction with the road and LATM designs as required for the local road infrastructure upgrades discussed in **Section 5.5.1** above be required. The plan also indicates bicycle paths through the north-south open space corridors, however as discussed above, landscape plans indicate stairs will be provided in some of these locations, making them inaccessible to bicycles. Similar to accessible pedestrian routes, the department considers that at least 1 north-south cycle path, without stairs or other impediments, should be provided to link the site to the existing foreshore cycleway.

The department also notes that LATM works to Underdale Lane will be required as discussed in **Section 5.5.1** above. The works are aimed at both improving pedestrian and cycle linkages between the site and the station / retail area.

With provision of the pedestrian and cycle paths as discussed, the department considers that the proposed development would provide acceptable pedestrian and cycle routes within the site and acceptable connections to public transport and retail areas and the regional cycleway network (shown in **Figure 34** below)

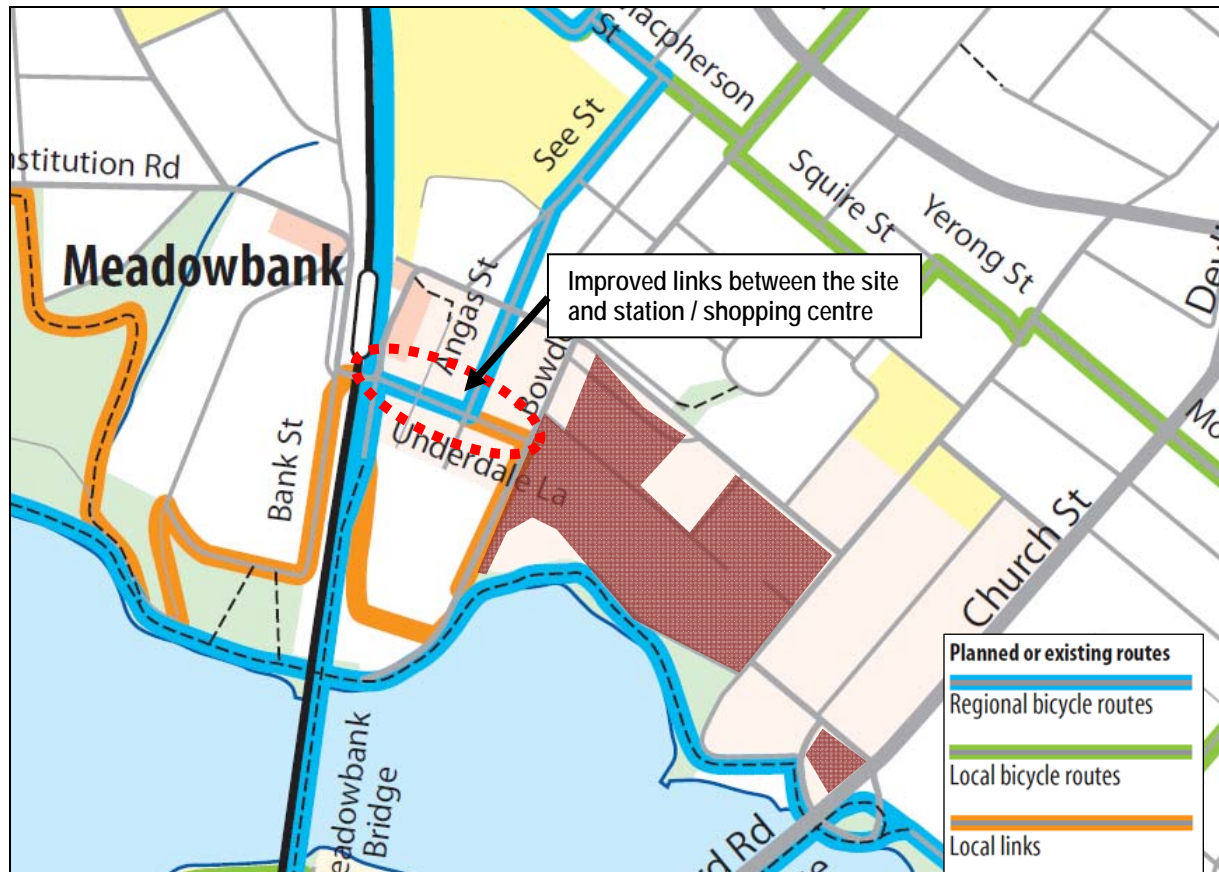


Figure 34: Extract from Ryde Council's Bicycle Strategy and Master plan showing the bicycle network in the vicinity of the site (Base Image Source: Ryde Council, 2012)

Appropriate conditions and future assessment requirements are included in the recommended instruments of approval to ensure appropriate roadway design, pedestrian paths and cycle paths as discussed in this section.

5.5.4 Parking Rates and Alternate Forms of Travel

Car parking provision and impacts to on-street parking was an issue raised within the public submissions. Concerns were also raised by Council and TfNSW, particularly in relation to encouraging alternative forms of travel

The revised PPR proposes a maximum of 2,976 basement level parking spaces, based on the following parking rates as set out in **Table 10**. A comparison with Council's Draft DCP 2011 rates and the RTA guide to traffic generating development is also included.

Table 10: Parking Rates of Proposal, Council and RTA controls

	<i>Proposal Parking Rates</i>	<i>Ryde DCP 2010</i>	<i>Draft Ryde DCP 2011</i>	<i>RTA Guide (recommended minimum)</i>
1 bedroom unit	1 space	1 space	0.6 – 1 space	0.6 spaces
2 bedroom unit	1 space	1.2 – 1.4 spaces*	0.9 – 1.2 spaces	0.9 spaces
3 bedroom unit	2 spaces	1.5 – 1.6 spaces*	1.4 – 1.6 spaces	1.4 spaces
Visitors	1 space / 5 units	1 space / 4 units	1 space / 5 units	1 space / 5 units
Non-residential	1 space / 40m ²	1 space / 50m ² offices 1 space / 30m ² retail	1 space / 40m ² offices 1 space / 25m ² retail	1 space / 40m ²

* lower control is for development within 400m of Meadowbank Station, higher control for all other development.

TfNSW has raised a concern that the parking rate remains high (albeit an improvement to that originally proposed). In particular the proponent relies on a 10% reduction in traffic volumes in its modelling based on a mode shift to public transport but this reduction in traffic generation rates does not carry through to development car parking rates.

Council advise that given the extent of existing traffic problems within the area, the proponent should seek to achieve a significant uptake of alternative means of transport.

The department notes that the parking rates proposed by the proponent were derived having regard to the existing RDCP 2010 provisions. However, as discussed above in **Section 2.2**, the strategic intent for the Meadowbank area is currently being revised and the Draft RDCP 2011 better reflects Council's emerging intentions for the area and better relate to the proposed development.

The department supports the additional density on the site partly due to the opportunity to provide increased residential densities in areas with good accessibility to transport and services in line with key objectives of the Metropolitan Plan and Draft Subregional Strategy. On this basis it is considered that the proposal should be designed to encourage a mode shift away from private car use. This should be achieved through both low parking rates and through enhancing the desirability of alternative forms of transport.

It is considered that parking rates should reflect the lower end of the Draft RDCP2011 controls to encourage a mode shift away from private vehicle trips. It is noted that these are equivalent to the rates specified by the RTA Guide to Traffic Generating Development. Development in accordance with the RTA rates is considered to be consistent with the Director General's requirements which required the proponent to "*demonstrate that a minimalist approach to car parking provision is taken based on the accessibility of the site to public transport*". This results in a reduction of approximately 430 parking spaces in total (from 2,976 to 2,546) based on the proposed dwelling numbers. Relevant conditions and future assessment requirements are recommended.

Council and TfNSW have raised the point that it is not sufficient to simply lower parking rates and expect that individuals will no longer use cars, but that the proponent must enhance the desirability of alternate forms of transport.

In this regard the proponent has included a commitment to provide a Sustainable Travel Plan for the Concept Plan site, as well as stage-specific sustainable travel plans and has advised it will include a Travel Access Guide and Workplace Travel Plan. An independent transport assessment by ARUP also recommended that site specific travel plans be prepared as a

component of the development application process for each future stage and that provision for car sharing initiatives should be considered in the future planning of the development to reduce reliance on private vehicles. It is recommended that a future development assessment requirement be included in the Concept Plan approval to reflect this. Requirements for bicycle parking and end of trip facilities for cyclists in commercial developments are also recommended.

The department considers that a robust sustainable travel plan for the site, in conjunction with the provision of well-designed pedestrian and cycle ways as discussed in the previous section and lower parking rates will encourage a mode shift away from private vehicle reliance.

5.6. Stormwater and Flooding

5.6.1 Stormwater and flood mitigation infrastructure

The Concept Plan site is located within the Ann Thorn Catchment, which is an extensive 42 hectare drainage catchment almost entirely upstream from the main site. The majority of the catchment currently drains to an entrapment point on the northern side Constitution Road opposite the site near Ann Thorn Park. This causes flooding of upstream properties north of Constitution Road and also downstream when the water overtops the embankment and travels through the subject site.

Council has undertaken a number of investigations into the stability of the Constitution Road embankment under flood conditions, which have revealed a high risk of potential collapse/failure.

In response, Council has adopted a flood management strategy which involves the following infrastructure works:

- lowering and reconstruction of the Constitution Road embankment;
- construction of an upgraded trunk drainage pipeline from Richard Johnson Crescent (northern end of Ann Thorn Park) to Parramatta River;
- construction of an engineered culvert or spillway to facilitate overland flow; and
- provision of a 16 metre overland flow path from Ann Thorn Park to Parramatta River.

The above works and are shown diagrammatically in **Figure 35**.

Council has identified that the cost of implementing the works within the flood management study is approximately \$6.5 million and considers the works should be fully funded by the following 3 property owners as part of future re-development of the sites:

- 33-37 Nancarrow Avenue (within the Concept Plan site);
- 20-36 Nancarrow Avenue (within the Concept Plan site); and
- 146 Bowden Street.

No. 146 Bowden Street is located immediately to the south of the site. Development Consent has been issued by Council for a 5 storey residential flat building development. As a condition of this consent, a Voluntary Planning Agreement is required to be executed between Council and the landowner involving a contribution of \$1.45 million towards the works identified in the flood management study. This contribution was negotiated between the applicant and Council prior to approval of the development.

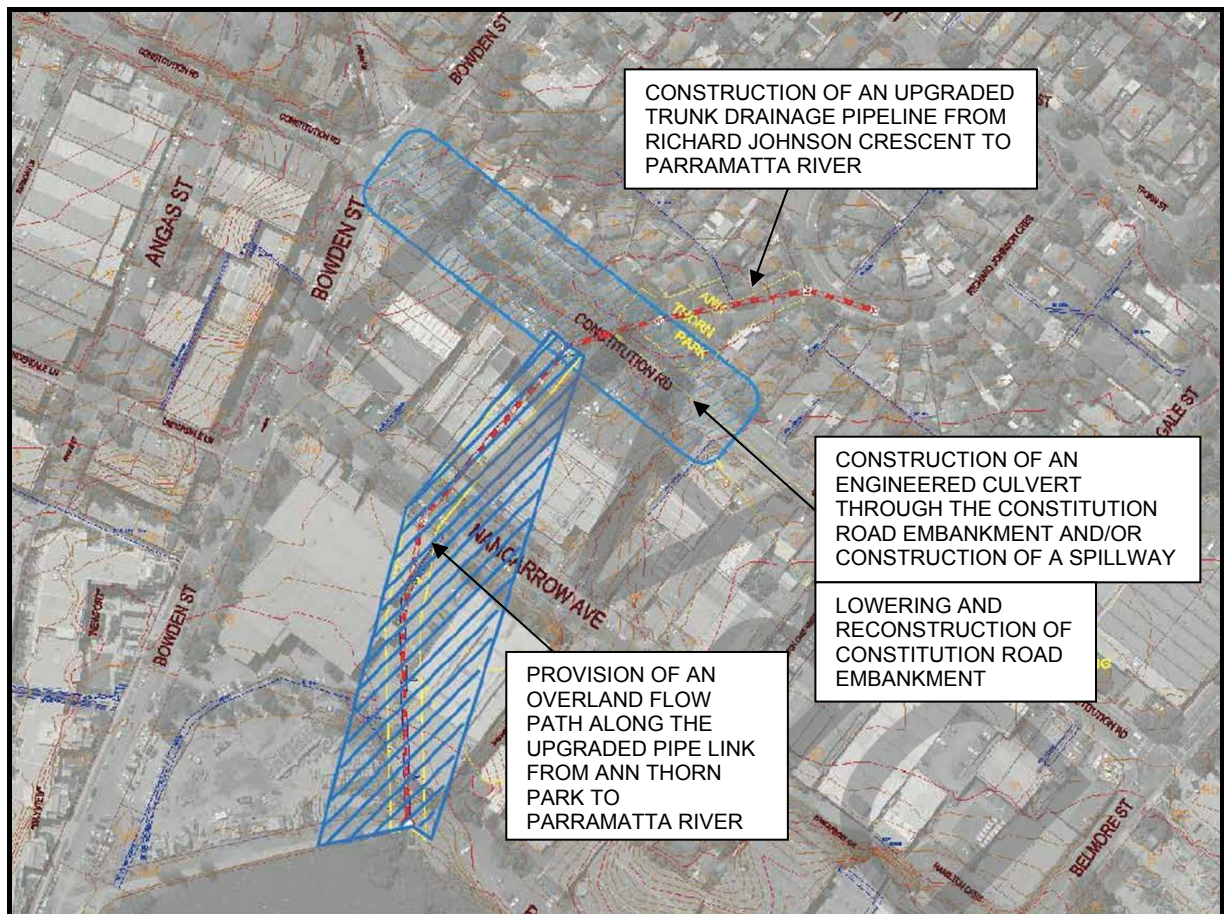


Figure 35: Proposed works within the adopted flood management study (Base Image Source: Draft Ryde DCP 2011 Part 4.2, Shepherds Bay, Meadowbank, page 44)

The proponent has agreed to undertake the required trunk drainage infrastructure and the lowering of Constitution Road as part of Stages 7 and 8 of the Concept Plan. However, in its view these works are required to resolve flooding issues within the wider catchment and therefore considers that it should be responsible for:

- 50% of the cost of the trunk drainage pipeline and overland flow path through the site; and
- 0% of the cost of lowering and reconstructing Constitution Road and associated culvert or spillway.

The proponent has put forward a draft VPA offer to Council reflecting the above as discussed in **Section 5.5**. Council has indicated that it will not support or consider a VPA as the Council has significant outstanding concerns regarding the level of development proposed. Council has also not provided any comments on the proposed staging of the upgrade works required.

There is a significant disparity between the proponent's offer and the previous adopted position of Council that the 3 landowners should jointly fund the full cost of implementation of the flood management strategy. The department therefore engaged Evans & Peck to provide independent advice on the required drainage infrastructure upgrades and staging.

The report by Evans & Peck is provided in **Appendix F**. As part of the review, Evans & Peck consulted with the proponent and Council.

The independent review identified that there is currently a flooding risk associated with Stages 7 to 10 which needs to be mitigated before development can occur. To mitigate this risk and allow the development to proceed, a new trunk drainage system is required from

Ann Thorn Park to Parramatta River as outlined in the PPR. Evans & Peck advised that the trunk drainage pipeline should be designed to convey the peak flow from a 1 in 20 year storm. A 16 metre wide overland flow path to convey any excess overland flow up to a 1 in 100 year storm is also required.

Evans & Peck consider that the proponent should be required to carry out the works between the northern property boundary at Constitution Road and Parramatta River at its own expense given that they are required to enable the development. However, the portion of works within Constitution Road and Ann Thorn Park serve a wider benefit to upstream properties and the general public and therefore Evans & Peck have recommended that a cost sharing arrangement is appropriate for this portion of works.

Evans & Peck also consider that the risk of failure of the Constitution Road embankment needs to be mitigated prior to the development of Stages 7 to 10 to ensure the new residential population is not put at risk. However, it is suggested that there may be more than one option to mitigate the existing risk of failure of the Construction Road embankment. Evans & Peck has therefore suggested that the proponent undertake further modelling to ascertain the most cost effective way of managing stormwater in this location. Possible alternate options include installation of:

- a large box culvert beneath the existing road; or
- a high level spillway for large floods.

Given the wider public benefits associated with mitigating the risk of failure of the Constitution Road embankment and benefits to upstream properties, Evans & Peck considers it unreasonable to require the proponent to bear the full cost of these works. A cost sharing arrangement has therefore been recommended.

In summary, Evans & Peck has provided the following key recommendations to the department:

- the piped drainage system and overland flow path from Ann Thorn Park to Parramatta River and works to eliminate the risk of embankment failure of Constitution Road shall be undertaken prior to the commencement of Stage 7, 8, 9 or 10, whichever occurs first;
- the proponent should bear the full cost of the trunk drainage system from the property boundary at Constitution Road to Parramatta River; and
- allocation of costs for works within Constitution Road and Ann Thorn Park should be agreed between Council and the proponent (suggesting that an equal 50/50 shared funding arrangement is fair and reasonable).

The department considers that the implementation of the recommendations of the independent review carried out by Evans & Peck will provide for the delivery of the necessary drainage infrastructure upgrades to mitigate the existing risks in terms of flooding and potential failure of the Constitution Road embankment.

The department agrees that the proponent should be responsible for managing the flood risk on its site which involves the installation of the trunk drainage pipe and overland flow path from the property boundary at Constitution Road to Parramatta River.

The department also agrees that whilst these works are necessary to enable the development of the site, the works associated with the treatment of Constitution Road will also provide substantial benefits to Council, upstream properties and the wider community. While approval of the Concept Plan would result in the introduction of a new residential community living in a 'risk' area, the development of the site does not in itself create or increase the risk of failure of the Constitution Road embankment.

The department therefore notes that:

- both onsite and offsite works are required to mitigate the flood risks to enable the development of the site;
- these works will also provide a material public benefit to Council, upstream properties and the wider community;
- the works must be completed prior to construction commencing on Stages 7, 8, 9 or 10 (whichever occurs first); and
- a portion of works may be cost shared with Council (as offsets to the Section 94 Contributions Plan) as accommodated in the Section 94 Plan through further negotiation with Council.

In this regard, future assessment requirements have been recommended to require the detailed design of the required infrastructure works and negotiations between the proponent and Council occur as part of the future development application for Stage 7, 8, 9 or 10 (whichever occurs first). The works will be required to be completed prior to construction commencing for any of these stages.

5.6.2 Flooding assessment

The proponent engaged Cardno to undertake flood modelling and provide advice on flood levels to inform the minimum finished floor levels for the development.

Council has accepted that the proposed stormwater and flood mitigation infrastructure as outlined above is generally in accordance with the adopted flood management strategy. However, it has not undertaken a detailed assessment of the flood modelling undertaken by the proponent.

The department therefore recommends that a future assessment requirement be imposed requiring the proponent to prepare flooding assessments for each future stage of the Concept Plan.

The Stage 1 site is located away from the Ann Thorn Catchment, however is affected by localised flooding from upstream water making its way to Parramatta River. Whilst the Council has not disputed the proponent's flooding assessment, it has not verified this information or agreed with its recommendations. As such, it is recommended that a condition be imposed requiring the proponent to:

- prepare and submit flood modelling in a format accepted by Council for its approval to verify the adopted flood levels for the Stage 1 development;
- provide a minimum 300 mm freeboard above the 100 year flood level for all residential floors and entrances to basement car parking; and
- prepare and implement any flood evacuation plans required.

These matters should be complied with to the satisfaction of the Council prior to issue of a Construction Certificate.

5.6.3 Stormwater Drainage

The Proponent also engaged Cardno to prepare a stormwater and drainage design for the Stage 1 Project Application.

The proposed stormwater system involves the removal of the existing stormwater network within the site and replacement with a new network including:

- downpipes to drain 5,000m² of roof surface area to a 50kL rainwater tank for re-use on site (eg. car washing and irrigation);
- a 40m² rain garden at the Rothesay Avenue frontage for treatment of water from the courtyards and planter beds before connection to the piped system;
- reconstruction of the existing 600mm diameter outlet to the sea wall; and
- a new energy dissipater (similar to the recently completed Belmore Street system outlet).

Council considers that the connection to Council's drainage system should be made directly to an existing pit located nearby and the 325mm pipe and pipes downstream of this pit upgraded where required to accept the flows rather than building a new separate line connecting to an existing headwall. Council also noted that the plans do not show how other drainage lines and inlet pits are connected to the proposed stormwater line.

Given that the local stormwater system is a Council asset it is considered appropriate that the stormwater infrastructure for Stage 1 be designed to connect into Council's existing system in accordance with Council's requirements. In this regard, it is recommended that a condition be imposed requiring an amended Stormwater Drainage Plan be submitted to Council for approval prior to issue of a Construction Certificate.

5.7. Open space and community facilities

The future estimated population of the completed development is 3,699 people as outlined in **Table 11** below. During the assessment of the proposal, the department requested that the proponent consider the open space and community facility needs of this future resident population.

Table 11: Estimated population of the proposed Concept Plan

<i>Concept Plan site (2,005 dwellings)</i>				
<i>Indicative dwelling mix</i>	1 bedroom 200	2 bedroom 1504	3+ bedroom 301	Total 2,005
<i>Occupancy rate*</i>	1.5	1.8	2.3	
<i>Resultant population</i>	300	2707	692	3,699

* Occupancy rates in accordance with City of Ryde Section 94 Development Contributions Plan 2007

In response, the proponent engaged Cred Community Planning (Cred) to provide advice on the open space and community facilities needs of future residents.

5.7.1 Open space

Cred notes that the site is situated nearby approximately 31 hectares of open space, including Meadowbank Park, Memorial Park, Anderson Park and Faraday Park (refer to **Figure 36**).

The site is also located adjacent to the Ryde Riverwalk which consists of an 8 kilometre landscaped pathway along the banks of the Parramatta River, between Kissing Point Park and Melrose Park. The Shepherd's Bay wharf, near Anderson Park, also provides access to water based recreation activities such as boating and fishing.

The proposal provides 18,422m² of publicly accessible open space in addition to 5,052m² of communal open space (total 23,474m²) (refer to **Figure 37**). The open space includes:

- four linear north-south parkland areas generally 18 metres in width providing connections between Constitution Road and the foreshore;
- a plaza/square along the foreshore within Stage 6 of the Concept Plan; and
- communal private open spaces for residents of individual buildings.

The total open space provision across the Concept Plan site is approximately 6,000m² (or 0.6 hectares) per 1,000 people (based on an estimated population of 3,699 people).



Figure 36: Existing open space in the vicinity of the site (Base Image Source: Nearmap, 2012)

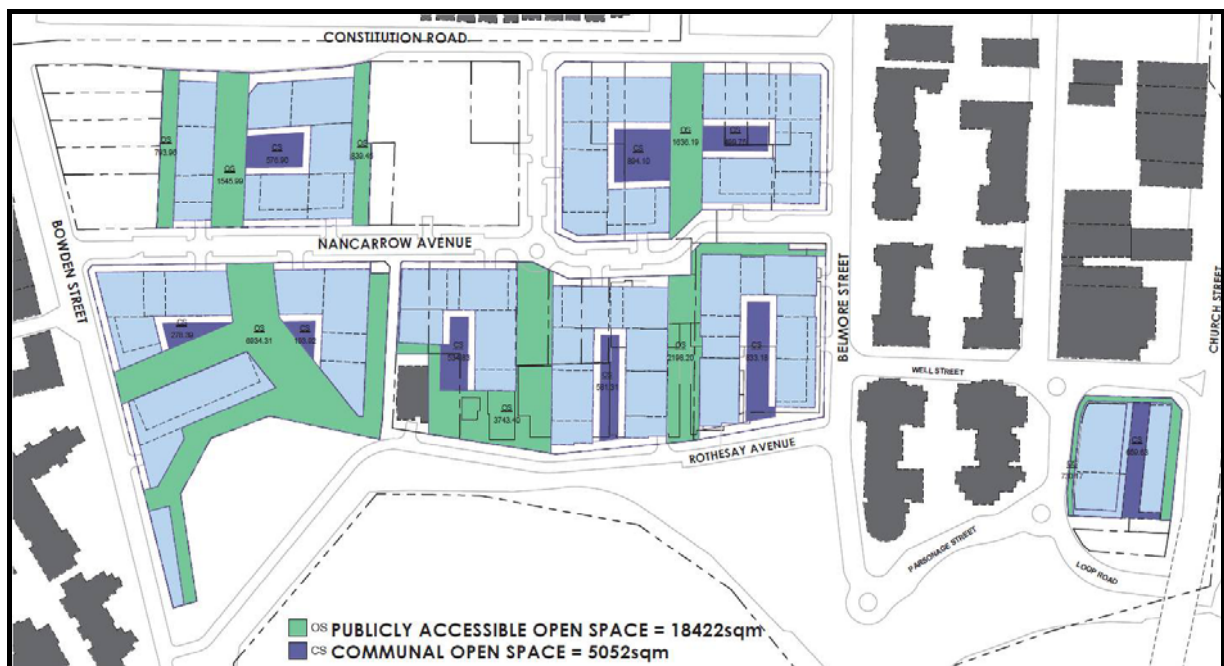


Figure 37: Proposed publicly accessible and communal open space (Source: Proponent's PPR)

Cred considers that the proposed open space provision is sufficient given the high level of accessibility to existing open space in the locality. Further, it considers that the proposed linear open space from Constitution Road to the foreshore will encourage the community to access the Riverwalk and the wharf. Cred recommends that the proposed linear open spaces include a variety of recreation facilities which may include BBQs, seating, water features, grassed areas, paths, shade trees, bicycle racks and exercise equipment/games.

Cred also recommends that the plaza/square include seating, a place for small community events/markets, public art and informal play elements for children.

Cred has also recommended that the proponent contribute to improvements to Meadowbank Park or Anderson Park playgrounds.

Council has raised concern that the proposed open space is insufficient for the needs of existing and future residents and provides the following comments on Cred's assessment:

- the parkland areas surrounding the site are incorrectly identified;
- the active recreation needs of future residents have not been considered;
- the existing sporting facilities are currently at capacity; and
- private gyms do not provide a suitable alternative for public open space.

Council also raised the following general concerns:

- the proposed open space areas include water features which reduce the functionality and flexibility of the use of these spaces;
- insufficient information has been submitted on the proposed use of the plaza;
- clear definition on publicly accessible and private open spaces is required;
- consideration should be given to retaining existing trees; and
- the level of solar access provided to open spaces is minimal.

The department notes that the existing open space provision in the Ryde LGA is at a rate of 1.88 hectares per 1,000 people. On this basis, 6.65 hectares would be required for the future resident population (based on an estimated population of 3,699 residents).

The proposed amount of publicly accessible open space represents only 32% of the required provision to maintain the provision of 1.88 hectares per 1,000 people. However, it is also noted that Council collects Section 94 contributions from developers to assist in providing increased and improved open space across the LGA in line with population growth. Based on the indicative dwelling mix provided by the proponent across the Concept Plan, the overall development will contribute in the order of \$12.8 million towards open space (based on the current rates in the Ryde Section 94 Contributions Plan 2007).

Therefore, while the proposal will not provide all of the required open space on the site, the proponent will be required to pay Section 94 contributions towards open space in the LGA.

The department has considered the concerns raised by Council and notes that:

- the site has access to a number of large active and passive open space areas including the Ryde Riverwalk and Meadowbank Park;
- the proposed linear parkland areas will provide a benefit to the wider community by providing direct access in 4 locations between Constitution Road and the foreshore.
- large sections of the site are too steep to provide conventional active open space areas (e.g. playing fields) and therefore the linear parkland is considered a reasonable response to this constraint; and
- the proponent will be contributing to open space in the LGA through Section 94 contributions which Council may use to provide new open space areas and/or improvements to existing open space (e.g. Meadowbank Park).

The detailed design of the open space will be subject to future assessment as part of Development Applications for each stage. The proposed design of each of these spaces provided within the Concept Plan is indicative and to be further refined in each future stage. Appropriate future assessment requirements are recommended to ensure a high quality of landscaping is provided in these spaces.

The department considers that the proposed plaza as part of Stage 6 will complement the existing parkland along the Shepherd's Bay foreshore, including Anderson Park and Faraday Park and may provide an alternate place for people to gather. The detailed design and potential use of this site for markets or the like will be subject to future assessment in the future development application for Stage 6.

On this basis, the department considers that the amount of open space provided and the Section 94 Contributions payable are sufficient for the future residents of this development.

5.7.2 Community facilities

Cred identified that there are six community facilities within close proximity to the site, including a community centre, three child care centres, scout hall and primary school. The site also has access to additional facilities, including primary and secondary schools, Meadowbank TAFE, Ryde Leisure Centre and libraries at Top Ryde and West Ryde.

Cred considers that there is a need for additional community space within the development to provide for indoor community events and potentially additional child care spaces.

Cred has recommended that the proponent lease part of the commercial floor space within the signature building (Stage 5) on the Church Street site to a community organisation (eg. YMCA).

While the Concept Plan has indicated that a community facility may be accommodated within the Stage 5 development, it has not provided any commitment to provide a facility. Council is concerned that leaving the delivery up to market forces would provide no certainty of the facility being provided.

As recommended by Cred's assessment, the department recommends that a future assessment requirement be imposed requiring the Stage 5 development to set aside floor space specifically designed for a community facility. The amount, configuration and design of community floor space should be provided in consultation with the Council and relevant community organisations. The designated community floor space must not be used for any other commercial, retail or residential use.

5.7.3 Public Art

The proposal includes a public art strategy as part of the Concept Plan landscape design. This identifies a number of locations for public art, including:

- along the foreshore near the Plaza to be provided in Stage 6;
- at the main entry points at Constitution Road and Bowden Street; and
- along the stormwater easement (refer to **Figure 38**).

Council has requested that the Public Art Strategy be expanded to provide more detail and an Arts and Cultural Plan be developed by a professional public artist including consideration of:

- materials to be used, with particular attention to durability;
- location and dimension of artwork;
- public art themes to respond to site history and or social, cultural or natural elements;
- integration into the site and surrounds; and
- budget and funding.

The department considers that public art should be a key element within the future landscape design for the future stages within the Concept Plan. The proposed locations for public art are considered appropriate as they mark the key publicly accessible links through the site and will also assist in way finding and interpretation of the site. The department agrees that additional detail should be provided with each relevant stage as requested by Council. An appropriate future assessment requirement is recommended.



Figure 38: Proposed public art locations (Base Image Source: Proponent's PPR)

5.8. Heritage

The Concept Plan site includes one locally listed heritage item, being a factory at 37 Nancarrow Avenue (refer to **Figure 39**). The building is known as the former Automatic Totalisators Limited factory and is listed as being significant as a “*reasonably intact factory of high quality to a design by Dennis and Odling housing the Automatic Totalizers*”.



Figure 39: Heritage Item at 37 Nancarrow Avenue

Council has not raised any objection to the proposed demolition of the heritage item. Rather, Council has previously recognised that the demolition of the factory at 37 Nancarrow Road is required to facilitate stormwater management upgrades and provide a safe overland flow path from Constitution Road to Parramatta River (as discussed in **Section 5.6.1**). On 7 August 2007 Council endorsed a Flood Management Strategy for the Ann Thorn Park catchment which included a requirement for the future demolition of the building and provision of an overland flow path through the site. At the same time, the Council also recognised that there would be a need to document and display the heritage values of the existing building should redevelopment take place in the future.

The department considers that the safety benefits of the proposed stormwater management upgrades that will necessitate the demolition of the building outweigh the benefits to the community of retaining the heritage item. The department notes that this building has only been designed to cater for a 1 in 2 year ARI storm event, and therefore does not meet current minimum accepted safety standards.

However to mitigate against the impacts arising from the loss of the item, the following conservation measures are recommended as part of any assessment of Stage 8:

- a detailed heritage assessment of the site which includes a professionally written history of the site;
- full photographic record; and
- interpretation strategy to display the heritage values of the existing building on the newly developed site.

Appropriate requirements have been included in the recommended future assessment requirements.

There is one other heritage listed item in the vicinity of the site, being the Ryde Bridge over the Parramatta River (refer to **Figure 40** below).



Figure 40: Heritage listed Ryde Bridge

The bridge is listed on the State Heritage Register and is significant for its rarity value as the only lift span bridge on Sydney Harbour, and is also relatively rare within NSW. The bridge also has local significance as an engineering structure and for its contribution to the development of the area. Stage 5 of the Concept Plan, a 15 storey mixed use development,

is located immediately adjacent to the proposed bridge. No concerns have been raised in the submissions with respect to heritage impacts, and the department considers that the proposed building will not impact on the heritage significance of the bridge. However, the future design of the stage 5 building should take into account the heritage significance of the item and include a detailed heritage assessment at development application stage. Appropriate future assessment requirements have been included in the recommended instrument of approval.

5.9. Other Issues

Other issues considered in the Department's assessment are outlined in **Table 12**.

Table 12: Other issues

<i>Issue</i>	<i>Consideration</i>
Isolated sites	<p>The Director General's requirements required the proponent to seek to amalgamate with adjacent properties. The proponent was required to address the development potential of any isolated sites, if amalgamation was not possible. The proponent advised that they made offers to purchase the adjoining properties to incorporate their redevelopment within the Concept Plan. It has been successful in purchasing a number of properties, and obtaining owners consent for other properties to be including in the proposal.</p> <p>However, a number of properties will be isolated by the development. These include 5 properties fronting Bowden Street, 1 property fronting Rothesay Avenue and 3 properties fronting Constitution Road/Hamilton Crescent/Nancarrow Avenue.</p> <p>The development potential of the properties which front Bowden Street, Constitution Road, Hamilton Crescent and Nancarrow Avenue will be optimised if these properties are amalgamated into a single development. The proponent has also prepared indicative plans which show that the properties may accommodate 4 to 6 storey development.</p> <p>The department is satisfied that these sites are large enough and regular in shape to enable their redevelopment in isolation of the Concept Plan. In addition, the Concept Plan provides 9 metre setbacks to these properties which will allow adequate building separation for buildings up to 8 storeys in height on the adjoining sites (subject to the same setback being provided on the adjoining site).</p> <p>As discussed in Section 5.3.1, the department has also recommended that the setback of Stage 6 building envelope to the adjoining site in Rothesay Avenue be increased to 6 metres up to 4 storeys and 9 metres up to 8 storeys. This will also enable the equitable redevelopment of this site. While the site is an individual isolated site, the proponent has calculated that the site may accommodate a 4 storey building which is generally consistent with the character of existing and proposed buildings along the foreshore.</p>
Soil and Groundwater Contamination	<p><i>Concept Plan</i></p> <p>The proponent submitted a Preliminary Screening Contamination Assessment prepared by Douglas Partners which involved a site history assessment and walkover of accessible areas of the site. No soil sampling and testing were undertaken across the Concept Plan site.</p> <p>Based on the investigations undertaken, Douglas Partners consider there is a moderate potential for contamination caused by past potentially contaminating activities including; demolition works, importing fill materials, industrial activities involving use of chemicals and underground</p>

fuel storage. Douglas Partners therefore recommend that a detailed contamination assessment (involving sampling and testing of soil) be undertaken as part of the future stages of the Concept Plan. This investigation should also include an assessment of the presence of acid sulphate soils and salinity.

While the potential for widespread or extensive groundwater contamination is low, Douglas Partners have also recommended that a 'regional' groundwater assessment should be undertaken as part of an early stage of works. This would involve assessment of groundwater across the Concept Plan site, with a more targeted and detailed assessment of any individual sites/areas with signs of contamination required as part of subsequent development stages.

Notwithstanding the above, Douglas Partners consider that the site is capable of being made suitable for the proposed development. Given that the soil profile comprises of shallow sandstone bedrock, Douglas Partners consider that any soil or groundwater contamination would most likely be confined close to the source and, if necessary, the site could be remediated on a stage by stage basis in a relatively straight forward manner.

Future assessment requirements have been recommended requiring the detailed assessments outlined above, and any necessary remediation, to be undertaken as part of future development applications. It is recommended that the 'regional' groundwater assessment be undertaken prior to Stage 2 of the development and that targeted assessment be undertaken with future stages, as required.

Stage 1

The former industrial building has been demolished and excavation has been undertaken on the Stage 1 site. The proponent has also advised that remediation is being undertaken in accordance with the previously issued development consent and that a Validation Report and Site Audit Statement will be submitted to Council upon completion.

The department notes that the remediation is being undertaken in accordance with two previous assessments:

- a Contamination Assessment undertaken by Egis Consulting in 2000; and
- an Environmental Site Screening Assessment prepared by EIS in 2004.

Council was satisfied with the findings of the contamination assessment in granting its approval of the residential development. Douglas Partners, however, consider that there is a potential gap in the groundwater assessment and that further assessment should be undertaken to assess the potential for groundwater contamination.

It is recommended that conditions be placed on the Stage 1 project, if approved, that require the proponent to submit a Validation Report and Site Audit Statement prior to issue of a Construction Certificate. In addition, an assessment of groundwater contamination for the Stage 1 site should be undertaken prior to issue of a Construction Certificate and any required remediation undertaken in accordance with the recommendations of the assessment.

Flora and Fauna

The proponent submitted a Flora and Fauna Assessment prepared by Lesryk Environmental Consultants.

This assessment revealed the presence of Narrow-leaved Black Peppermint trees (*Eucalyptus nicholli*) on the site which are to be

	<p>removed. An assessment was provided against the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) and the EP&A Act. Lesryk notes that the Narrow-leaved Black Peppermint is commonly planted as a street tree, but it is not considered an important population for the purposes of the EPBC Act. It is also noted that the trees on the site comprise a small area which is well outside of the species' natural distribution range. In this regard, the removal would have minimal impact on the on-going protection of the species. In addition, no endangered populations (which may use the species for habitat) were recorded within the study area. On this basis, it is considered that the removal of these trees will not have any impact on the overall local population or viability of the species.</p> <p>Lesryk also noted the presence of a Grey-headed Flying-fox near the site, however it is considered that this individual is likely to have originated from the Sydney Botanic Gardens Flying-fox colony (approximately 13 km from the site). The proposal will not remove or have any effect on any Grey-headed Flying-fox colonies or significantly affect foraging resources available to both the Flying-fox and migratory birds.</p> <p>Lesryk also undertook surveys to determine the presence of any microchiropteran (microbat) habitat within any of the industrial buildings to be demolished. During the field surveys, no evidence of any species of bat were found.</p> <p>The department is satisfied that an acceptable flora and fauna assessment has been undertaken and that the proposal will not have any unacceptable impacts on flora and fauna on the site and in the locality. It is not considered necessary to impose any further environmental assessment requirements.</p>
Overshadowing	<p>The department requested that the proponent provide information on the shadowing impacts of the proposal on adjoining properties, particularly the Bay One development (to the south of Stage 1) and the approved development at 146 Bowden Street (to the south of Stage 9).</p> <p>The analysis provided by the proponent shows that the north-western elevation of the Bay One development will be overshadowed in the afternoon from 1pm. While this development currently receives good solar access in the afternoon, given the orientation of the site and southerly slope any development of the subject site to the scale envisaged by the current planning controls will cause a shadow impact. The department notes that the recommendations to reduce the height by 1 to 3 storeys along the Belmore Street frontage will result in a greater level of solar access being maintained to this development.</p> <p>The analysis provided by the proponent shows that solar access will generally be maintained to the northern elevation of the approved development at 146 Bowden Street. The lower level apartments will be affected by overshadowing however the proponent notes in this instance that the shadowing will affect only bedrooms as the living areas are oriented to the south. The department is satisfied that the building separation and height in this location is appropriate. Similar to the impacts on the Bay One development, given the orientation and southerly slope, a level of shadowing impact would result with any redevelopment of the site.</p>
Views	<p>The proposal will result in a change in the southerly outlook from private residential properties to the north, however, given that the topography in this location is generally much flatter, these properties do not currently enjoy water views. Apartments within the Waterpoint and Bay One developments which are oriented towards the south will generally retain existing views. Some</p>

	<p>oblique views toward the water may be interrupted by the proposal, however primary water views will largely be unaffected.</p> <p>The Concept Plan seeks to provide 3 main north-south corridors, each a minimum of 18 metres in width, which will provide public access through the site and also views through to Shepherd's Bay. The provision of new public views through the site is considered a positive aspect of the Concept Plan.</p>
ESD	<p>An ESD report was submitted with the proposal including 'base' (lower end) targets and 'stretch' (upper end) targets for ESD initiatives relating to community, water, energy, materials, waste, ecosystems, management, emissions and innovation.</p> <p>The proponent advises that it is intended that the individual developments meet as a minimum the base ESD targets in these guidelines. However in some cases no base target is provided and the report only refers to a stretch target.</p> <p>Council has raised concerns that targets may be unrealistic and therefore may not be met and that some are ambiguous. Council also suggest that that the stretch targets should be incorporated into the base targets or that new achievable base targets be provided.</p> <p>The department considers that future stages can be designed to meet the ESD base targets as well as the stretch targets in the report. Achievement of the targets in the report would ensure a good level of environmental sustainability to the development.</p> <p>In addition, all future development will need to comply with BASIX requirements to ensure specific energy and water efficiency targets are met</p> <p>The department also considers that the requirements and language are clear and provide enough certainty in order to assess compliance with ESD targets at future stages, while still providing the proponent flexibility in how each target is to be achieved.</p> <p>To ensure clarity and an acceptable ESD level is met, it is recommended that where no base target is provided, the development must comply with the stretch target. A future development assessment requirement is recommended in this regard.</p>
Waste Management	<p>Council suggest that due to the topography of the site, identified areas for waste collection should be approved as part of the Concept Plan and that consideration should be given to amalgamating collection points. It also raises a concern that the design of the new Nancarrow road extension has not been detailed to demonstrate feasibility of waste collection vehicles accessing the site.</p> <p>With regard to Stage 1, Council advises that a flat kerbside area capable of temporarily storing bins for collection needs to be detailed on the plans.</p> <p>As discussed above in Section 5.6, detailed design of the Nancarrow Avenue extension is recommended to be required for approval prior to the construction certificate for Stage 1. This will allow for confirmation that the road design will permit waste collection vehicles to access future stages of the Concept Plan a required. However, in relation to identifying waste collection areas, the department considers that waste collection points for each future stage can be designed and determined as part of the relevant development application. Almost all future stages will have vehicle entry (and therefore waste collection) from Nancarrow Avenue, which is not unduly steep. As such the department considers there are no significant topography constraints that would require determination of collection</p>

points as part of the Concept Plan.

With regard to Stage 1, a further plan detailing a kerbside bin collection area is recommended to be submitted to the Council for approval prior to the Construction Certificate. This would be done in conjunction with amended detailed landscape setback plans also required as discussed in **Section 5.2.3** above.

Substations

Council suggest that future substations associated with the development should be required to be located outside of the public domain and should be appropriately screened. A future assessment requirement is recommended accordingly.

A particular concern was raised regarding an existing substation on Ausgrid land adjacent to the Stage 1 site which currently presents an unsightly appearance to the street.



Figure 41: Ausgrid substation adjacent to Stage 1 site

Landscape plans submitted with the application indicate planting in this area, but the land is outside of the site boundary and no owners consent has been provided by Ausgrid for the works. The proposed landscaping is therefore unlikely to be provided, resulting in adverse streetscape impacts from the substation as well as the proposed building.

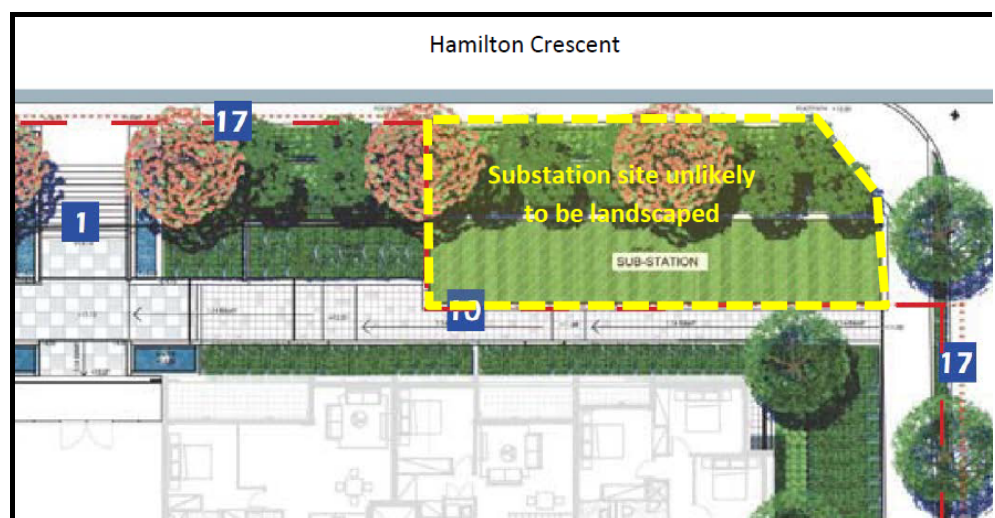


Figure 42: Extract from proposed landscape plan (Base Image Source: Proponent's PPR)

A condition requiring either landscaping of the substation site in consultation with Ausgrid or otherwise updated landscape plans providing landscape screening by way of planting within the public domain and on the subject site is recommended. As the screening would involve planting on Council land, the details will need to be provided to Council for approval in conjunction with public domain landscape plans required as discussed in **Section 5.2.2**.

6. CONCLUSION

The department has assessed the merits of the proposal taking into consideration the issues raised in public and agency submissions.

The key issues considered in the assessment of the proposal are density, built form and traffic impacts of the proposal. The site was found to be well suited to provision of increased densities due to its location in close proximity to public transport and retail services. The consolidation of a large number of landholdings to form the 6.7 hectare Concept Plan site enables greater density to be provided with minimal impacts on adjoining residential areas. On this basis the Concept Plan provides an excellent opportunity to enable high density residential development in close proximity to public transport and retail facilities, in line with the objectives of the Metropolitan Plan and draft Inner North Subregional Strategy.

In arriving at this conclusion, the department considered a range of issues and impacts arising from the density including built form (particularly heights), amenity impacts, traffic and local road network impacts and adequate provision of open space and community facilities to support the proposal.

In terms of built form, the department considers that the site is capable of supporting the scale of development proposed, including heights of up to 13 storeys in the centre of the site and 15 storeys on the Church Street site. A number of modifications to building envelopes at the edges of the site have been recommended to provide a better interface with surrounding development and the foreshore.

The site benefits from southerly water views to Shepherds Bay and Parramatta River. The building envelopes have therefore been designed to seek to maximise view sharing across the development. As a consequence, however, many apartments will not have good access to northerly solar access. This is exacerbated by the southerly slope of the site. Notwithstanding, the department considers that overall, the proposal will provide an acceptable level of residential amenity, following some recommended modifications to building separation and design and incorporation of other measures to offset a reduced level of solar access. The department considers that solar access to the development is unlikely to be significantly improved through reduced densities given its southerly orientation.

An assessment of traffic and road network impacts revealed that while the local road network is congested during peak times, it is capable of supporting the proposed density subject to the provision of local road network upgrades to offset traffic impacts arising from the proposed density and provide a public benefit to the wider area. Reductions in parking rates in conjunction with improved cycle and pedestrian routes have also been recommended to encourage a mode shift away from reliance on private vehicles, being a key objective of high density developments.

The proposal will provide 18,422m² of publicly accessible open space, in addition to the payment of substantial Section 94 Contributions, which will ensure adequate provision of open space for both the existing community and future residents of the Concept Plan. Further, a future assessment requirement has been recommended to ensure that community floor space is provided within the Stage 5 development in consultation with Council and community organisation/s.

The department has also considered a range of other issues including stormwater and the need for infrastructure upgrades, heritage impacts, contamination issues, impacts to isolated sites, building design issues and impacts to flora and fauna. With the imposition of appropriate modifications, future assessment requirements and conditions, the department is satisfied that all other impacts have also been satisfactorily addressed.

The department is satisfied that the site is suitable for the proposed development and that the Concept Plan will provide environmental, social and economic benefits to the locality. On balance, the Concept Plan is considered appropriate for the following reasons:

- the proposed renewal and upgrade of a former industrial precinct represents an orderly redevelopment of the land in line with local and regional planning objectives and the objects of the EP&A Act ;
- the proposal will make a significant contribution to the housing stock of the Ryde LGA, with excellent accessibility to transport, services, facilities and employment opportunities; and
- the proposal will deliver public benefits including road and stormwater infrastructure upgrades; provision of publicly accessible open space areas and through site links of benefit to the wider community.

In forming this view, the department has recommended the following key modifications and future assessment requirements be imposed on the Concept Plan:

- provision of key road network upgrades including new traffic signals at the intersection of Bowden Street and Constitution Road, signalised pedestrian crossing adjacent to Meadowbank Station, provision of a new link road, and various LATM works within the site and surrounding area;
- reductions in parking rates by approximately 430 spaces and requirement for a travel plan to encourage a mode shift away from reliance on private vehicles;
- key stormwater infrastructure upgrades both on and offsite to deliver public benefits to the wider community;
- reduction of building heights at the Belmore Street and Rothesay Avenue boundaries of the site;
- restricting development on Constitution Road to 5 storeys in height;
- increases to building setbacks for Stages 5, 6 and 9;
- application of Director General's Design Excellence Guidelines including a design competition for the Stage 5 'gateway' building;
- requirements for provision of high quality design for all other buildings;
- restricting parking levels to below ground (with the exception of Stage 1) and within the building footprint;
- further design requirements to ensure an acceptable level of residential amenity for apartments which do not achieve adequate solar access, including minimum ventilation requirements, increased floor to ceiling heights or increased apartment sizes;
- further details of road reserve design incorporating landscaping, cycle and pedestrian routes, and where necessary, amendments to building envelopes to ensure this is achieved;
- further assessment in relation to contamination and flooding to ensure the site is appropriately remediated and future buildings not subject to flooding risk;
- further details to ensure appropriate recording and interpretation of the heritage item to be demolished and further assessment of future design to ensure no adverse impacts to the adjacent heritage Church Street Bridge; and
- requirements to ensure a high level of environmentally sustainable development.

The Stage 1 project application is also considered to provide a good quality development consistent with the Concept Plan and with local and regional planning strategies, subject to the following key modifications and conditions:

- reduction in height of building elements on Belmore Street and Rothesay Avenue facades by 1 to 3 storeys;
- increased building separation between elements on the northern side of the site to improve privacy and solar access;
- deletion of 2 sub-floor dwellings;
- deletion of basement parking levels from the street setback area and increased deep soil planting;

- detailed public domain and landscape plans for the footpath, street setbacks and open space areas on site;
- detailed design of Nancarrow Link Road through to Belmore Street including pedestrian paths and cycleways, and where necessary, amendments to the Stage 1 building envelope to accommodate the road reserve.
- amended external colours/materials including a lighter palette of materials; and
- further details/plans/reports in relation to flood modelling, stormwater drainage, soil and ground contamination, salinity and acid sulphate soils.

The department recommends that the Concept Plan be approved, subject to the modifications and future assessment requirements set out in the attached instrument and the Stage 1 project application be approved, subject to the conditions set out in the attached instrument.

7. RECOMMENDATION

It is recommended that the Planning Assessment Commission, as delegate for the Minister for Planning and Infrastructure:

- consider the recommendations of this Report;
- approve** the Concept Plan application under the repealed Section 75O of part 3A of the *Environmental Planning and Assessment Act, 1979*;
- approve** the Stage 1 Project application under the repealed Section 75J of part 3A of the *Environmental Planning and Assessment Act, 1979*;
- sign** the attached Instruments of Approval (**Appendix G**).


Director 7/12/2012
Metropolitan & Regional Projects South


Executive Director
Major Projects Assessment

7.12.12


Deputy Director-General
Development Assessment & Systems Performance

7/12/12

APPENDIX A ENVIRONMENTAL ASSESSMENT

See the Department's website at

- http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=3745; and
- http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=3746

APPENDIX B SUBMISSIONS

See the Department's website at

- http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=3745; and
- http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=3746

APPENDIX C PROPONENT'S RESPONSE TO SUBMISSIONS

See the Department's website at

- http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=3745; and
- http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=3746

APPENDIX D CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS

Ecologically Sustainable Development

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) *if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (the precautionary principle);*
- (b) *the principle of inter-generational equity - that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations (the inter-generational principle);*
- (c) *the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making (the biodiversity principle); and*
- (d) *improved valuation, pricing and incentive mechanisms should be promoted (the valuation principle).*

The department has considered the proposed development in relation to the ESD principles and has made the following conclusions:

- **Precautionary Principle** – The application is supported by technical and environmental reports which conclude that the proposal's impacts can be successfully mitigated. No irreversible or serious environmental impacts have been identified. No significant climate change risks are identified as a result of this proposal.
- **Inter-Generational Principle** – The location of new residential development on a site with good access to public transport will enable residents to make sustainable travel choices which will protect the environment for future generations.
- **Biodiversity Principle** – There is no threat of serious or irreversible environmental damage as a result of the proposal. . The proposal is confined to the redevelopment of a site already occupied by industrial buildings and, as such, is unlikely to impact upon biological diversity or ecological integrity. The department has considered flora and fauna in **Section 5.9** of this report
- **Valuation Principle** – The valuation principle is more appropriately applied to broader strategic planning decisions and not at the scale of this application. The principle is not considered to be relevant to this particular Concept Plan application.

The Proponent submitted an assessment of the ESD initiatives prepared by Ecospecifier Consulting. This report states that the proponent will strive to achieve the targets in four of the following six key areas:

- community (consultation, sustainable transport, safe design, local facilities, accessibility, ventilation, noise);
- water (reduction in use, reuse and recycling of water);
- energy (design to reduce heating and cooling requirements, reduction in greenhouse gas emissions, energy efficient hot water, lighting and appliances);
- materials (use of sustainable, reused and recycled materials in construction, non-toxic materials, local products);
- waste (minimise waste, recycling and reuse of materials); and
- biodiversity (maintain native vegetation, protection of habitat for native animals, maintain water quality, minimise disruption to landform)

It is recommended that a future assessment requirement be imposed to require future development applications to incorporate measures to achieve these targets in a minimum of four of the six areas as outlined within the ESD report. On this basis, the department is satisfied that the proposal is consistent with the principles of ESD.

Section 75I(2) of the Act / Clause 8B of Regulations

Section 75I(2) of the Environmental Planning and Assessment Act 1979 and clause 8B of the Environmental Planning and Assessment Regulation 2000 provides that the Director General's Report is to address a number of requirements. These matters and the department's response are set out below:

Section 75I(2) criteria	Response
Copy of the proponent's environmental assessment and any preferred project report	The Proponent's EA and PPR are located at Appendices A and C to this report respectively.
Any advice provided by public authorities on the project	All advice provided by public authorities on the project for the Minister's consideration is set out in Section 4 of this report.
Copy of any report of a panel constituted under Section 75G in respect of the project;	No statutory panel was required or convened in respect of this project.
Copy of or reference to the provisions of any State Environmental Planning Policy that substantially governs the carrying out of the project;	Each relevant SEPP that substantially governs the carrying out of the project is identified below, including an assessment of proposal against the relevant provisions of the SEPP.
Except in the case of a critical infrastructure project – a copy of or reference to the provisions of any environmental planning instrument that would (but for this Part) substantially govern the carrying out of the project and that have been taken into consideration in the environmental assessment of the project under this Division	An assessment of the development against relevant Environmental Planning Instruments is provided below.
Any environmental assessment undertaken by the Director General or other matter the Director General considers appropriate	The environmental assessment of the project application is this report in its entirety.
A statement of compliance with the environmental assessment requirements under this Division with respect to the project.	In accordance with section 75I of the EP&A Act, the department is satisfied that the Director-General's environmental assessment requirements have been complied with.
Clause 8B criteria	Response
An assessment of the environmental impact of the project	An assessment of the environmental impact of the proposal is discussed in Section 5 of this report.
Any aspect of the public interest that the Director-General considers relevant to the project	The public interest is discussed in Section 5 of this report.
The suitability of the site for the project	The suitability of the site for the proposed development is discussed in Section 5 of this report. The proposed density, built form, traffic and other impacts have been considered by the department and the site is considered suitable for a high density development.
Copies of submissions received by the Director-General in connection with public consultation under section 75H or a summary of the issues raised in those submissions.	A summary of the issues raised in the submissions is provided in Section 4 of this report. The Proponent's response to the submissions appear at Appendix C . A copy of the submissions are provided at Appendix B .

State Environmental Planning Policy (Major Development) 2005

The Project remains a Part 3A project under the former provisions of Schedule 1, Clause 13, Group 5 of the Major Projects SEPP, “*residential, commercial or retail projects*” as DGRs were issued prior to 8 April 2011. The project has a capital investment value (CIV) of more than \$100 million satisfying the non-discretionary criteria of Clause 13.

State Environmental Planning Policy 55 – Remediation of Land

The proponent submitted a Preliminary Screening Contamination Assessment prepared by Douglas Partners as discussed in **Section 5.9** of this report. There is a moderate potential for contamination caused by past potentially contaminating activities including; demolition works, importing fill materials, industrial activities involving use of chemicals and underground fuel storage. Douglas Partners consider that the site is capable of being made suitable for the proposed development given that any contamination would most likely be confined close to the source and, if necessary, the site could be remediated on a stage by stage basis in a relatively straight forward manner.

In order to ensure that the site is made suitable for the development, the Department has recommended the imposition of future assessment requirements:

- detailed contamination assessment (involving sampling and testing of soil) and an assessment of the presence of acid sulphate soils and salinity be undertaken as part of the future stages of the Concept Plan;
- a ‘regional’ assessment of groundwater contamination across the Concept Plan be undertaken as part of Stage 2 of the development; and
- a more targeted and detailed assessment of any individual sites/areas with signs of groundwater contamination are required as part of subsequent development stages.

In addition it is recommended that the following conditions are placed on the Stage 1 Project, if approved:

- a Validation Report and Site Audit Statement will be submitted to Council upon completion of all remediation works; and
- an assessment of groundwater contamination be undertaken prior to issue of a Construction Certificate, and any required remediation undertaken in accordance with the recommendations of the assessment.

State Environmental Planning Policy (Infrastructure)

The proposal involves up to 2,005 residential apartments. The proposal therefore exceeds the apartment number thresholds (300 dwellings with access to any road) referred to in Clause 104 and Schedule 3 of the Infrastructure SEPP. Accordingly, the proposal was referred to the Roads and Maritime Services as a ‘Traffic Generating Development’. The RMS comments are discussed in **Sections 4.2** and **5.5** of this report.

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The site is identified as a strategic foreshore site in the Sydney Harbour Catchment SREP. The SREP requires that a Masterplan be prepared and adopted out for the site which addresses:

- (a) design principles drawn from an analysis of the site and its context;
- (b) phasing of development,
- (c) distribution of land uses including foreshore public access and open space,
- (d) pedestrian, cycle and motor vehicle access and circulation networks,
- (e) parking provision,
- (f) infrastructure provision,
- (g) building envelopes and built form controls,

- (h) heritage conservation (including the protection of archaeological relics and places, sites and objects of Aboriginal heritage significance), implementing the guidelines set out in any applicable conservation policy or conservation management plan,
- (i) remediation of the site,
- (j) provision of public facilities,
- (k) provision of open space, its function and landscaping,
- (l) the impact on any adjoining land that is reserved under the *National Parks and Wildlife Act 1974*,
- (m) protection and enhancement of the natural assets of the site and adjoining land,
- (n) protection and enhancement of the waterway (including water quality) and any aquatic vegetation on or adjoining the site (such as seagrass, saltmarsh, mangroves and algal communities).

Ryde Council has previously adopted the Meadowbank Employment Area Masterplan which has been superseded by the controls within Ryde LEP and DCP 2010. These in turn will be updated when the Ryde LEP 2012 and DCP 2012 are made.

The department is satisfied that the Concept Plan adequately addresses the issues (a) to (n) above and has recommended future assessment requirements as appropriate to ensure that no adverse impacts are caused on the Sydney Harbour Catchment.

State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings (SEPP 65)

SEPP 65 seeks to improve the design quality of residential flat development through the application of a series of 10 design principles. An assessment against these principles is provided below.

The EA confirms the development has been designed having respect to the design principles of SEPP 65.

Key Principles of SEPP 65	Department Response
Principle 1: Context	<p>The site is located in an area in transition from industrial/warehousing to predominately residential uses, and therefore features a mix of industrial warehouse buildings, high density residential flat buildings and low density residential housing to the north of Constitution Road. The proposal responds to its context by focusing the greatest height and density in the central portions of the site and the Church Street site. The building heights at the Constitution Road and foreshore frontages of the site are generally 5 storeys which relate to the context of the site.</p> <p>The department has recommended a number of modifications to the Concept Plan and Stage 1 Project Application to ensure that the proposal relates to its context as outlined in Section 5.2.</p>
Principle 2: Scale	<p>The proposal involves building heights ranging from 4 to 13 storeys on the main site and up to 15-17 storeys on the Church Street site. The proposed heights at the Constitution Road frontage are a maximum of 5 storeys provides a transition from the surrounding low density residential area. The heights at the foreshore are also generally 5 storeys, with greater heights of 8 to 13 storeys in the central portions of the site.</p> <p>The department has recommended a number of modifications to the Concept Plan and Stage 1 Project Application including reductions of height at the Belmore Street frontage to improve the scale relationship with the existing development to the east. These are outlined in Section 5.2.</p>

Principle 3: Built Form	It is considered that the proposed building envelopes, subject to modifications recommended within this report, will provide an appropriate built form outcome as outlined in Section 5.1 of this report. Future assessment requirements have been recommended to ensure a high quality architectural design of future buildings.
Principle 4: Density	The provision of up to 2,005 apartments on the site is consistent with local and regional planning strategies which seek to locate housing within centres with access to transport, jobs and services. The department has undertaken a detailed assessment of density in Section 5.2 of this report.
Principle 5: Resource, Energy and Water Efficiency	As outlined in Section 5.3 of this report, the site orientation and topography make it difficult to achieve good levels of solar access into the development. Apartments, however, will provide extensive glazing to maximise access to daylight and cross ventilation to minimise the need for air-conditioning. The development will also comply with BASIX in relation to resource, energy and water efficiency. A future assessment requirement has also been recommended to require ESD measures into the future design, construction and operation of the development.
Principle 6: Landscape	The Concept plan provides for landscaping between buildings and within areas of open space throughout the site. Future applications will be required to provide landscape design to enhance the appearance and amenity of the development.
Principle 7: Amenity	The department has assessed the proposal in terms of solar access, cross ventilation and privacy. Adequate separation is provided between proposed building envelopes. Noting the constraints of the site, the department is satisfied that the building envelopes will enable a satisfactory level of amenity throughout the development as outlined in Section 5.3 . More detailed consideration of amenity will be undertaken in the assessment of future applications.
Principle 8: Safety and Security	10,000m ² of commercial/ retail floor space is proposed across the Concept Plan. The majority of this space will be within the podium of the signature building on the Church Street site, with the remainder located at ground floor locations adjacent to the main areas of public open space. This will provide a level of activation of this space in accordance with CPTED principles. It is also considered that the development will provide passive surveillance of public areas from residential living rooms and balconies and use of controlled access points to ensure clear definition of public and private spaces.
Principle 9: Social Dimensions and Housing Affordability	The Concept Plan provides for a mix of apartment types which would encourage a diverse social mix within the area. Adaptable housing will also be provided in accordance with Council's DCP which requires 10% of dwellings to be designed as adaptable dwellings.
Principle 10: Aesthetics	Future assessment requirements have been recommended to ensure that the elevations of the proposed building envelopes provide a high level of articulation as well as varied and high quality textures, materials and colours to make a positive contribution to the streetscape and amenity of open spaces. It is recommended that the signature building on the Church Street site be subject to the Director General's design excellence requirements given its prominent location and proposed building height of 15-17 storeys.

Residential Flat Design Code (the Code)

The Residential Flat Design Code (the Code) is closely linked to the principles of SEPP 65. The Code sets out a number of “rules of thumb” which detail prescriptive standards for residential flat development that would ensure the development complies with the intent of the Code.

An assessment has been undertaken of the Stage 1 Project Application.

Residential Flat Design Code Compliance			
	RFDC requirement	Proposed	Complies?
Part 1 Local Context			
Building Depth	Max 18m	15 - 21.5m	NO Acceptable on merit (see Section 5.3)
Building Separation (habitable rooms & balconies)	<ul style="list-style-type: none"> Up to 4 storeys :12m between habitable rooms/balconies Five to 8 stories: 18m 9 stories and above: 24m 	18-20 metres building separation is generally provided for up to 8 storeys with the exception of 2 locations.	NO Acceptable on merit, subject to recommended modifications and additional privacy measures (see Section 5.3)
Street Setbacks	Compatible with desired streetscape character	A 5 metre setbacks is provided to Belmore Street (DCP requires 4 metres), 7 metres to Hamilton Crescent and 7-10 metres to Rothesay Avenue. The setbacks are consistent with the established and desired streetscape character.	YES
Part 2 Site Design			
Deep Soil Landscaping	Min 25% of open space	Approximately 900m ² of deep soil planting area is provided in the Rothesay Avenue and Belmore Street setbacks	YES
Communal Open Space	25-30% or if this is not achieved increased private open space and / or in a contribution to public open space	Approximately 1,100m ² of communal open space is provided for residents which represents approximately 13% of the site.	NO Acceptable on merit given that the proposal provides 877m ² of publicly accessible open space within Stage 1 (and 18,422m ² across the Concept Plan) and will also provide Section 94 contributions for open space

Part 3 Building Design			
Solar Access	70% of living rooms & private open space to achieve 2 hours solar between 9am-3pm on 21 June	Approximately 45% of units will receive 2 hours of solar access.	NO Acceptable on merit given the site constraints (see Section 5.3)
Single aspect units	Limit those with southerly aspect to no more than 10%	There are no direct south facing single aspect apartments. However, 18% of units are single aspect with a south easterly aspect and a further 4% are single aspect with a south-west facing aspect	YES Acceptable on merit given the site orientation and water views to the south
Single aspect units - distance from window	Max 8m	Maximum 10m	NO Acceptable on merit given the floor space greater than 8 metres from a window is generally non-living space (eg. bathrooms)
Naturally cross ventilated	Min 60% of units	48% of apartments are capable of being naturally cross ventilated. However, based upon the wind conditions in the vicinity of the site, up to 74% of apartments are capable of being well ventilated.	NO Acceptable on merit, subject to additional wind modelling testing (see Section 5.3)
Max No. of units off a circulation core	Max 8 units	6 units	YES
Accessible Storage facilities	One bedroom= 6m ² Two bedroom= 8m ² Three bedroom = 10m ² exclusive of wardrobes	Storage is provided within apartments	YES Acceptable on merit subject to condition to ensure adequate provision within apartments, exclusive of wardrobes
Kitchens with natural ventilation	Min 25%	Approx 14%	NO Acceptable on merit as all kitchens are attached to living room which has natural ventilation
Apartment Size (min)	1 bedroom = 50m ² - 63.4m ² 2 bedroom= 70m ² -121m ² 3 bedroom = 95m ² -124m ²	1 bedroom = 54m ² - 70m ² 2 bedroom = 83m ² - 94m ² 3 bedroom = 102m ² - 118m ²	YES

Balcony Depth	Min 2m	>2m	YES
Floor to ceiling heights	≥2.7m	Ground floor 2.9m – all other floors 2.7m	YES

Ryde Local Environmental Plan (LEP) 2010

The provisions of Ryde LEP 2010 apply to the site. The table below contains a summary of the numerical compliance of the development against the LEP controls.

Clause	Control	Proposed	Compliance
Permissibility: B4 Mixed Use	Residential, retail and commercial and community uses are permissible with consent.	Residential, retail, commercial, community and open space uses.	Yes – the proposed uses are permissible in the zone and are compatible with the zone objectives.
Height of buildings	Concept Plan: maximum building height ranges from 9.5 metres to 15.5 metres. The Church Street site has a maximum height of 15.5 metres. Stage 1: 15.5 metres	Concept Plan: Proposed building height varies from 30 to 53 metres as outlined in Section 5.2.1 . Stage 1: proposed building height is 42.3 metres.	No – Refer to detailed consideration in Section 5.2.1 of this report. The non-compliances with the LEP controls throughout the site are generally acceptable, subject to modifications to buildings heights fronting Belmore Street.
Heritage	The site contains a heritage item (factory) at 37 Nancarrow Avenue.	The existing heritage item will be demolished as a result of the necessary stormwater management upgrades in accordance with Councils adopted Flood Management Strategy.	Refer to discussion in Section 5.8 . A future assessment requirement is recommended to require a heritage assessment, photographic record and interpretation strategy to be developed.
Acid Sulphate Soils	Concept Plan: affected by Class 2, 3 and 5 acid sulphate Soils. Stage 1: affected by Class 5 acid sulphate Soils Development consent for works below natural ground level (Class 2) or more than 1 metre below natural ground level (Class 3) must not be granted unless an acid sulfate soils management plan has been prepared for the proposed works in accordance with the <i>Acid Sulphate Soils Manual</i> .	-	Refer to discussion in Section 5.9 . Concept Plan: A future assessment requirement is recommended to require an assessment acid sulphate soils for each stage. Stage 1: Given that the excavation extends below 5 metres AHD and the proximity to Class 2 and 3 acid sulphate soils, a condition is recommended to require an assessment to be undertaken prior to issue of a construction certificate.

Draft Ryde Local Environmental Plan (LEP) 2011

The Draft Ryde LEP 2011 was exhibited between 30 May and 13 July 2012.

The table below contains a summary of the numerical compliance of the development against the LEP controls.

Clause	Control	Proposed	Compliance
Permissibility: B4 Mixed Use	Residential, retail and commercial and community uses are permissible with consent.	Residential, retail, commercial, community and open space uses.	Yes – the proposed uses are permissible in the zone and are compatible with the zone objectives.
Height of buildings	Concept Plan: maximum building height ranges from 15.5 metres to 21.5 metres. The Church Street site has a maximum height of 15.5 metres. Stage 1: 15.5 - 21.5 metres	Concept Plan: Proposed building height varies from 30 to 53 metres as outlined in Section 5.2.1 . Stage 1: proposed building height is 42.3 metres.	No – Refer to discussion above and detailed consideration in Section 5.2.1 of this report.
Floor space ratio	Concept Plan: main site – 2:1 Church Street site – 2.7:1 Stage 1: 2:1	Concept Plan: main site – 2.8:1 Church Street site: 5.5:1 Stage 1: 2.9:1	No – Refer to detailed consideration of density in Section 5.1 of this report.
Heritage	As per Ryde LEP 2010 - The site contains a heritage item (factory) at 37 Nancarrow Avenue.	Refer to discussion above.	Refer to discussion above.
Acid Sulphate Soils	As per Ryde LEP 2012 Concept Plan: affected by Class 2, 3 and 5 acid sulphate Soils. Stage 1: affected by Class 5 acid sulphate Soils	-	Refer to discussion above.

APPENDIX E INDEPENDENT TRAFFIC ASSESSMENT

APPENDIX F INDEPENDENT STORMWATER/FLOOD ASSESSMENT

APPENDIX G RECOMMENDED CONDITIONS OF APPROVAL
