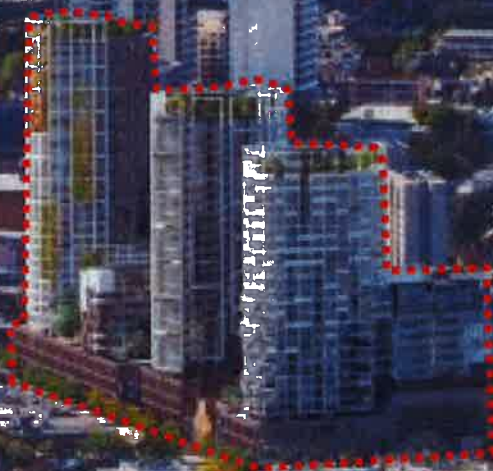




Waterloo Metro Quarter Concept

*State Significant
Development Assessment
(SSD 9393)*



November 2019

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Cover photo

Photomontage of indicative development (Source: Applicant's EIS)

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Glossary

Abbreviation	Definition
AHD	Australian Height Datum
BCA	Building Code of Australia
CIV	Capital Investment Value
Consent	Development Consent
Council	City of Sydney Council
CSSI	Critical State Significant Infrastructure
Department	Department of Planning, Industry and Environment
EESG	Environment, Energy and Science Group of the Department of Planning, Industry and Environment (former NSW Office of Environment and Heritage)
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
FRNSW	Fire and Rescue NSW
GFA	Gross Floor Area
Minister	Minister for Planning and Public Spaces
OSD	Over Station Development
Planning Secretary	Planning Secretary of the Department of Planning, Industry and Environment
RtS	Applicant's Response to Submissions
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SDCP	Sydney Development Control Plan 2012
SLEP	Sydney Local Environmental Plan 2012
SMDRP	Sydney Metro Design Review Panel
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SSD	State Significant Development
Transport for NSW (RMS)	Transport for NSW (Roads and Maritime Services Division)



Executive Summary

This report provides an assessment of a State Significant Development (SSD) Application seeking concept approval for an Over Station Development (OSD) around the approved Waterloo Metro Station.

The proposal would create a new mixed-use precinct featuring residential, commercial and community uses as well as additional public open space. The proposal would be accommodated within three residential towers and four mid-rise commercial towers above a three-to-four storey podium. The proposal seeks concept approval for building envelopes and GFA only. The detailed design of the proposal would be subject to future development applications. The Capital Investment Value (CIV) for the proposal is \$327 million and is expected to generate 400 operational jobs and 550 construction jobs.

The SSD was lodged and exhibited concurrently with a State Significant Precinct (SSP) Study seeking amendments to planning controls to increase the building height and floor space ratio for the site. The new planning controls were made on 12 September 2019.

The Applicant is Sydney Metro and the proposal is located in Waterloo, in the Sydney local government area. The Minister for Planning and Public Spaces is the consent authority, as the Applicant is a public authority.

Engagement

The Department publicly exhibited the Environmental Impact Statement (EIS) between 22 November 2018 to 30 January 2019 and received a total of 108 submissions, including 8 submissions from public authorities and 100 submissions from the public (with 89 objecting, 3 supporting and 8 providing comments).

Submissions raised concerns about the bulk, scale and density of the proposal; the amount and duration of affordable housing and social housing proposed; separation of the assessment process from the Waterloo Estate; traffic congestion impacts; the lack of trees and public open space; and overshadowing of Alexandria Park.

City of Sydney Council (Council) objected to the scale and density of residential development, building setbacks from Waterloo Congregational Church, lack of a competitive design process, the amount of affordable housing proposed, wind impacts, sustainability measures and separation of the assessment process from the Waterloo Estate redevelopment.

The Department established a Waterloo Project Review Panel (PRP) to assess the SSP rezoning proposal in collaboration with Council, Transport for NSW and the NSW Government Architect. The Waterloo PRP also provided advice on the preparation and assessment of the Design Guidelines submitted with the Concept Proposal, which set out criteria to ensure future design will provide good urban design and amenity outcomes for the site.

In response to the issues raised in submissions, the Applicant amended the proposal to:

- provide flexibility within the building envelopes to accommodate an increase in non-residential floor space from 12,000m² to 20,000m²
- extended the 6.5 m setback area by 12 m along Botany Road and increased the setback from the northern elevation of the Waterloo Congregational Church from 6.5 m to 10 m

The Response to Submissions (RtS) also included additional information on compliance with the Apartment Design Guide (ADG) and pedestrian and traffic modellings.

The Department made the RtS publicly available and sought feedback from Council, Waterloo PRP, Fire and Rescue, Police and the Environment, Energy and Science Group (EES) (former Office of Environment and Heritage). An additional 4 submissions from public authorities were received in response to the Applicant's RtS. The Waterloo PRP and Council recommended car parking should be reduced, tree canopy cover increased and improved ecologically sustainable development (ESD) commitments should be included.

In response, the Applicant increased the street tree canopy cover from 40% to 50%, reduced the car parking provision by approximately 47% and outlined a suite of ESD measures that would be incorporated into the development at the detailed design stage.

Assessment

The Department has undertaken a detailed assessment of the proposal and has carefully considered the issues raised in submissions. The Department considers the proposal is acceptable for the reasons outlined below.

Strategic Planning Framework

The Department considers the proposal is consistent with the broader strategic planning framework for the site as it would manage population growth and density by locating additional housing, job opportunities and open space around the new metro station. The recently finalised SSP process recognised the opportunity the new Waterloo Metro Station would provide and set new planning controls to accommodate a new mixed-use precinct integrated with public transport. The proposal fully complies with the recently adopted controls for the site.

Built Form

The Department's assessment found the proposed built form fully complies with the recently adopted development controls for the site, including the Floor Space Ratio (FSR) and maximum building height controls. The Department also notes the proposal is similar in scale to tower developments clustered around other nearby train stations at Redfern and Green Square. The height of the proposed residential towers (23 to 29 storeys) is also compatible with the existing 29 storey Matavai and Turanga towers located within the nearby Waterloo Estate.

The Department also supports the changes made to the proposal to address amenity and heritage issues and the length of the proposed podium along Botany Road. The changes include extending the 6.5 m setback area by 12 m along Botany Road and increasing the setback from the northern elevation of the Waterloo Congregational Church from 6.5m to 10 m.

Future Development Applications would also be guided by a set of Design Guidelines and a Design Excellence Strategy to ensure a high-quality architectural, landscape and urban design outcome is achieved on the site.

Overshadowing

The Department considers the overshadowing impacts on Alexandria Park are acceptable as the proposal complies with the Sydney Development Control Plan 2012 (SDCP), which requires 50% of the total Park area is to receive sunlight for 4 hours from 9am to 3pm on 21 June. The proposal will retain solar access to more than 70 % of Alexandria Park during the worst-case scenario between 9 am and 10 am mid-winter. Further, the Department notes the proposal would not overshadow Alexandria Park after 10 am or result in any overshadowing to Alexandria Oval or areas near the Alexandria Park Community School.

The Department also supports the recommendations of the Waterloo PRP which encourages further improvements to solar access to be achieved through the reallocation of floor space from the residential towers to the mid-rise commercial buildings when the land uses are confirmed in subsequent applications.

Land Uses

In response to Council's concerns about intensifying residential development on the site, given the amenity impacts of high traffic volumes and heavy transport on Botany Road, the Applicant amended the proposed building envelopes to allow for flexibility to increase in commercial floor space and improvements to residential amenity.

The Department is satisfied the amended residential building envelopes are capable of complying with solar access, noise and ventilation requirements of the Apartment Design Guide. The amended building envelopes also has the potential to increase the non-residential floor space from 12,000m² to 20,000m². The Department also supports a requirement to ensure no residential floor space will be proposed in the podium fronting Botany Road (**Condition B4**).

Car Parking

The Department notes the original proposal sought to provide 427 car parking spaces on the site. However, following concerns raised by the Department's independent expert and Council, the Applicant proposed a maximum limit of 170 car spaces for any residential uses and a substantial lower car parking rate for non-residential uses at 1 space per 435m².

The Department considers the reduced car parking rate is acceptable as it would take advantage of the sites location directly above the Waterloo Metro Station. It would also actively encourage a shift in travel mode from private car use to public transport consistent with strategic policies for reducing car dependency in highly accessible locations.

Pedestrian Movement

The Department is satisfied the proposed pedestrian connections and footpaths have sufficient capacity to meet the anticipated demand for the site and support transport interchange between the new Waterloo Metro Station and bus services along Botany Road. The submitted Transport Impact Assessment included modelling to demonstrate a 3 m wide footpath could provide safe and efficient operating conditions for over 7,000 persons per hour. Therefore, the proposed 6 – 10 m footpaths along Botany Road and 9.5 m and 7.4 m footpaths along Raglan Street and Wellington Street would comfortably accommodate pedestrian demand from the new metro station and OSD which are estimated to be less than 3,000 persons during peak hours in 2036.

Tree Planting

The Department notes the Applicant originally sought to provide an overall tree canopy of 20% and 40% for the street in its RtS. However, in response to concerns raised by the Department and Council about the need for additional trees, the Applicant increased the overall tree canopy cover to 23% and the street tree canopy cover to a minimum 50% which would meet the targets recommended by Council and the Waterloo PRP. The Department notes further building setback along Botany Road as recommended by Council and the Waterloo PRP would no longer be required as the canopy targets can be achieved by the current proposal.

Public Benefits

The proposal would deliver several public benefits including the provision of at least 5 % of its residential floor space as affordable housing and 70 apartments for social housing in perpetuity. The proposal would also provide 2,000 m² of community facilities and two new public Plazas at Cope Street and Raglan Street with a combined area of 2,200m². The Plazas would receive good levels of sunlight and would meet the wind comfort criteria for sitting, subject to further detailed design. The proposal also provides activated though site links together with tree

lined widened footpaths to support excellent site permeability and amenity for future pedestrians. The Department is therefore satisfied the proposal would provide significant public benefits to the local community.

Conclusion

Following a detailed assessment of the proposal, the Department considers the proposal is acceptable as it is consistent with the strategic planning framework adopted for the site which encourages jobs, community facilities and housing at this highly accessible location served by the new Metro network.

The proposal also fully complies with the planning controls adopted for the site and the height and scale of the proposal is not dissimilar to other nearby buildings. The Department also considers the proposal would not result in any significant amenity impacts, in particular, the proposal would maintain acceptable levels of sun light to Alexandria Park.

The Department is also satisfied that the RtS and subsequent changes to the proposal, with regards to increased tree planting, additional ESD commitments, reduced carparking together with the recommended conditions of approval, appropriately address the remaining concerns raised in submissions.

For these reasons, the Department considers the proposal is in the public interest and is approvable, subject to the recommended conditions of consent.



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1. Introduction

This report provides an assessment of a State Significant Development (SSD) for a Concept for the development of the Waterloo Metro Quarter precinct over and adjacent to the approved Waterloo Metro Station.

The application has been lodged by Sydney Metro (the Applicant). The site is located within the City of Sydney local government area.

The Waterloo Metro Station is one of seven new Metro stations approved by the then Minister for Planning as part of Critical State Significant Infrastructure Approval 7400 (CSSI 7400) for the Sydney Metro City and Southwest between Chatswood and Sydenham.

The SSD is a Stage 1 Concept application and seeks approval to establish building envelopes and an overall maximum gross floor area (GFA). The proposal comprises:

- a 3 and 4 storey podium building envelope along Botany Road
- three mid-rise building envelopes between 4 and 10 storeys addressing Cope Street
- three tower envelopes with heights up to 23, 25 and 29 storeys above the 3 and 4 storey podium along Botany Road
- concept use of the buildings for residential accommodation, commercial premises, community facilities and entertainment facilities
- a maximum gross floor area (GFA) of 68,750m²
- a minimum of 2,200m² of publicly accessible open space
- 70 dwellings for social housing
- a minimum of 5% of residential GFA dedicated as affordable housing
- car parking, bicycle parking and service vehicle spaces.

The detailed design and construction of the Waterloo Metro Quarter would be subject to separate applications. The Concept DA includes a Design Excellence Strategy and Design Guidelines to support the detailed design of future applications.

1.1 Waterloo

Waterloo is located to the south of the Sydney CBD. It extends north to Redfern, south to Green Square, east to Moore Park and west to Alexandria. Waterloo has excellent access to employment uses, public transport, urban services and regional open space. The closest existing rail stations are Redfern to the north and Green Square to the south. Waterloo Park and Waterloo Oval are at the corner of McEvoy and Elizabeth Streets, Redfern Park is north of the suburb and Alexandria Park is to the west. Moore Park and Centennial Park are to the east.

To the north-west of Waterloo is the Australian Technology Park containing significant employment generating technology, media and financial businesses providing approximately 20,000 jobs.

Much of the eastern end of Waterloo has transitioned from a former industrial suburb, as former warehouses and manufacturing sites have been redeveloped for mixed use development in the past 15 – 20 years. High density housing has been developed on former large industrial sites in clusters such as the Danks Street Precinct and former ACI Glass site.

Waterloo is characterised by a diverse mix of building heights ranging from single storey dwellings to 32 storey residential towers.

A large portion of the western end of the suburb is occupied by the Waterloo Estate social and affordable housing development owned and managed by the NSW Government. The Waterloo Estate is subject to a State Significant Precinct (SSP) investigation process and the landowners have prepared options and a preferred option for redevelopment.

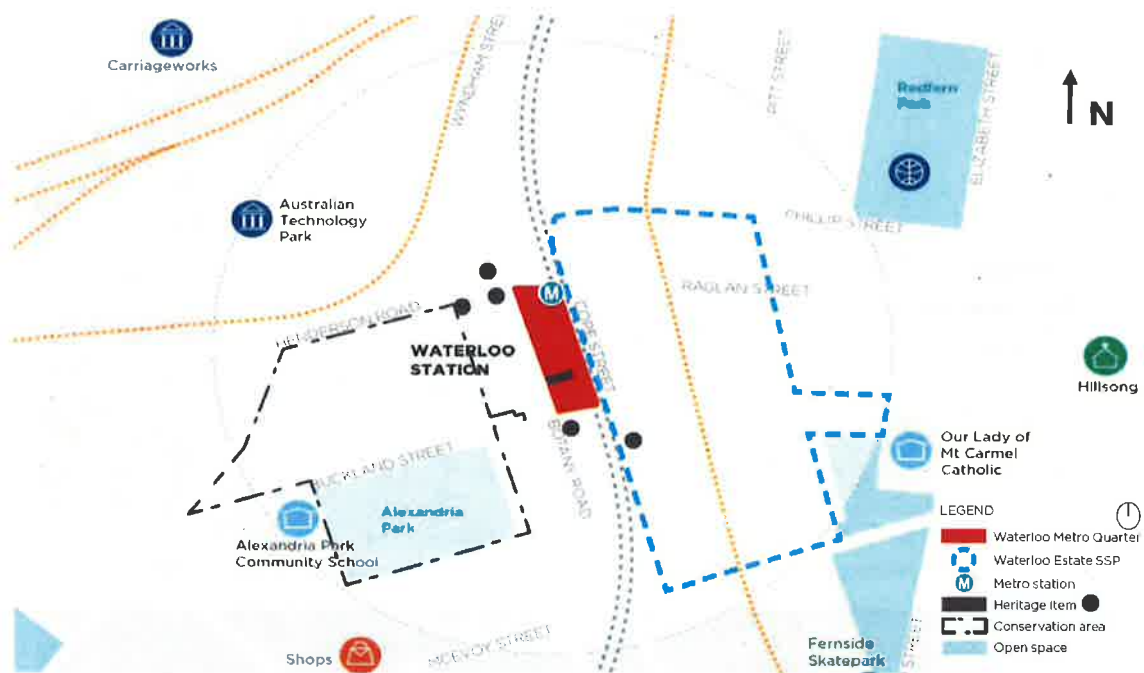


Figure 1 | Waterloo Metro Quarter and surrounding major land uses (Source: Applicant's EIS)

1.2 Waterloo Metro Quarter

The Waterloo Metro Quarter ('the site') is approximately 3.3 km south of the Sydney CBD, 700 m south-west of Redfern and five km north-east of Sydney Airport.

The site has a rectangular shape that is bounded by Botany Road, Cope Street, Raglan Street and Wellington Street (**Figure 2**). All previous structures except for an office building at the corner of Botany Road and Wellington Street have been demolished as the site is being used to facilitate construction of the new Waterloo Metro Station. Previous development at the site included three to five storey commercial, light industrial and shop top housing buildings.

The Waterloo Congregational Church at 103-105 Botany Road (**Figure 3**) is a locally listed heritage item and does not form part of the site. The Church is surrounded by the site on three of its boundaries. The approved station works extend up to the Church boundaries.

The new Waterloo Metro Station will be located underground, with an entrance via the corner of Raglan and Cope Streets and active retail or other commercial uses along its Cope Street and Raglan Street frontages. Construction of the Sydney Metro is under way and Waterloo Station is scheduled to open in 2024.

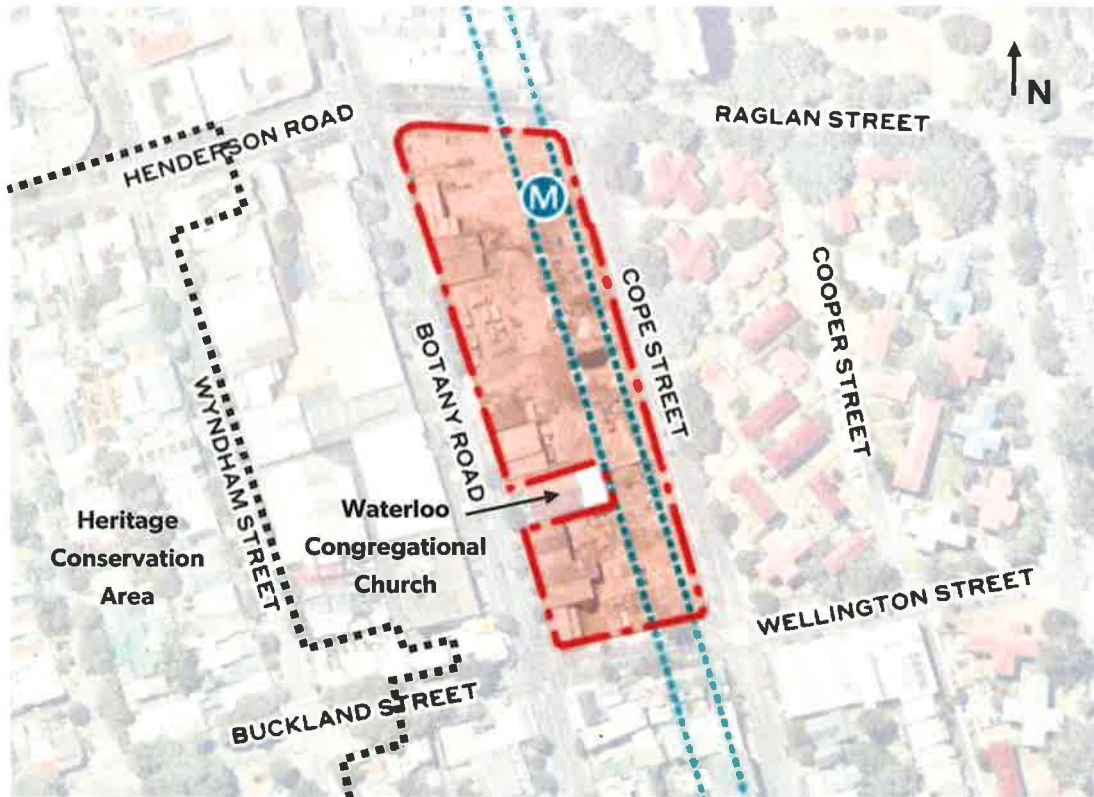


Figure 2 | Aerial photo of Waterloo Metro Quarter and surroundings (Source: Applicant's EIS)



Figure 3 | Waterloo Congregational Church as viewed from Botany Road (Source: DPIE)

1.3 Surrounding Context

Surrounding development comprises commercial premises to the north, light industrial and mixed-use development to the south, residential development to the east (Waterloo Estate) and predominantly commercial and light industry uses to the west.

To the north and beyond Raglan Street are 1 and 2 storey retail and commercial premises mostly accommodated in former terraces or other buildings. Further north is the Redfern Town Centre with a mix of residential, retail and student housing development of varying scale and configuration including numerous tall buildings and towers (**Figure 4**).

To the south beyond Wellington Street is a two storey hotel 'Cauliflower Hotel' on the corner of Botany Road and Wellington Street and two-storey terrace housing toward Cope Street (**Figure 5**).

To the east and beyond Cope Street is a mix of one and three storey mid-century residential flat buildings and attached dwelling houses that are part of the Waterloo Estate (**Figure 6**). Further east and north-east are high density residential towers in parkland settings that are also part of the Waterloo Estate.

To the west and beyond Botany Road are two to three storey commercial and light industrial premises and a large 5 storey mixed use residential flat building (**Figure 7**). No.'s 74-88 Botany Road is subject to development consent granted by Council for a four and five storey affordable housing development with ground floor retail premises fronting Botany Road. Further west are low scale terrace dwellings within the Alexandria Park Heritage Conservation Area and the Australian Technology Park with high density employment uses.

To the south-west is Alexandria Park, a regional open space containing formal and informal recreation areas (**Figure 8**). The eastern half of the Park comprises open grassed areas with walking paths and shade trees for passive recreation. The western half contains a grassed oval and other facilities used for active recreation including cricket, soccer, athletics, tennis and basketball. The adjacent Alexandria Park Community School has agreement with Council for the use of the Park.



Figure 4 | View of Raglan Street looking west from Cope Street roundabout showing existing commercial uses to the northern side of Raglan Street (Source: DPIE)



Figure 5 | View of Wellington Street from Cope Street roundabout showing existing two storey terrace dwellings on the south side of Wellington Street (Source: DPIE)



Figure 6 | View of Cope Street from the Wellington Street roundabout showing existing 2 and 3 storey housing and tall towers within the Waterloo Estate on the eastern side of Cope Street (Source: DPIE)



Figure 7 | Commercial and light industrial developments along western side of Botany Road (Source: DPIE)



Figure 8 | View to the east from within Alexandria Park showing open grassed areas, pathways and lighting which facilitate passive recreation and some active recreation (Source: DPIE)

1.4 State Significant Precinct Study

In March 2017, the former Minister for Planning nominated the Waterloo Precinct for investigation as a State Significant Precinct (SSP) as a State Significant Precinct (**Figure 9**). The Waterloo Precinct comprised an area of 18 hectares including the Waterloo Metro Quarter, the Waterloo Estate and some private properties.



Figure 9 | Waterloo State Significant Precinct Study Areas (Source: DPIE)

The SSP process for Waterloo Metro Quarter, however, was accelerated ahead of, and separated from the Waterloo Estate to allow alignment with the activation and the delivery of the new Waterloo Metro Station.

The Department supported the rezoning of the Waterloo Metro Quarter to enable the benefits of the Waterloo Integrated Station Development to be realised, delivering positive outcomes for the community through the provision of new land uses, publicly accessible open space and connections to public and active transport. The Department recommended additional controls in the rezoning, including requirements for Guidelines to be made by the Planning Secretary to inform the design of development for the site and the preparation of the Guidelines should be informed by advice from the PRP.

The Department assessed the SSP Study in collaboration with Council. A Waterloo SPP Project Review Panel (PRP) represented by executives from the Department, Council, Transport for NSW, and the NSW Government Architect provided advice at key stages of the SSP process. Further details of the SSP process are contained in the SSP Finalisation Report on the Department's website.

On 12 September 2019, State Environmental Planning Policy Amendment (Waterloo Metro Quarter) 2019 was made. The SEPP was self-repealing and amended the Sydney Local Environmental Plan 2012 and State Environmental Planning Policy (State and Regional Development) 2011. The final planning controls include:

Amendments to Sydney Local Environmental Plan 2012 (SLEP):

- increase the maximum building heights from 12m (3 - 4 storeys) and 15m (4 - 5 storeys) to a maximum height of RL 116.9m (29 storeys), stepping down to RL104.2 (25 storeys) and RL 96.9 (23 storeys)
- increase the maximum floor space ratio from 1.75:1 to 6.0:1 across the site
- introduce a clause which requires that a minimum of 12,000sqm of gross floor area be used for non-residential land uses including 2,000sqm of floor space for community facilities, and 2,200sqm of publicly accessible open space

- introduce a requirement for 5% of the total residential floor area to be dedicated as affordable housing in perpetuity
- introduce a clause for the Planning Secretary to make guidelines relating to the design and amenity of the Waterloo Metro Quarter
- introduce a satisfactory arrangements clause for the provision of designated State public infrastructure for residential land use
- exclusion from a 10% floorspace Design Excellence bonus applicable under the existing clause in the SLEP 2012
- introduce maximum car parking provisions for residential and commercial uses on the site
- introduce Active Street Frontage provisions to promote uses that attract pedestrian activity along ground floor frontages along Botany Road, Wellington Street, Cope Street and Raglan Street.

Amendments to SEPP (State and Regional Development):

- identify the site as a State Significant Site in Schedule 2 and specify that development by or on behalf of Sydney Metro or the Planning Ministerial Corporation is State Significant Development if the development has a capital investment value (CIV) of more than \$30 million.

1.5 Previous Approvals and Related Applications

Sydney Metro infrastructure approval (CSSI 7400)

Waterloo is one of the seven metro stations subject to the Critical State Significant Infrastructure approval for Sydney Metro City and Southwest between Chatswood and Sydenham (CSSI 7400) (**Figure 10**). The CSSI Approval was granted by the former Minister for Planning on 9 January 2017.

The CSSI Approval provides for construction of the station box as well as structural and service elements/spaces necessary for OSD components within the CSSI footprint.

The CSSI approval as it relates to Waterloo Station provides for:

- demolition of existing buildings within the site
- excavation of the rail tunnel, concourse, and platforms
- the establishment of two aboveground station footprints of approximately three to four storeys in height (RL 35.1)
- non-rail related structure within the station footprints for retail premises and OSD uses
- station entry via a large pedestrian entrance on Cope Street and a smaller entrance via through-site links from Botany Road
- public domain works.

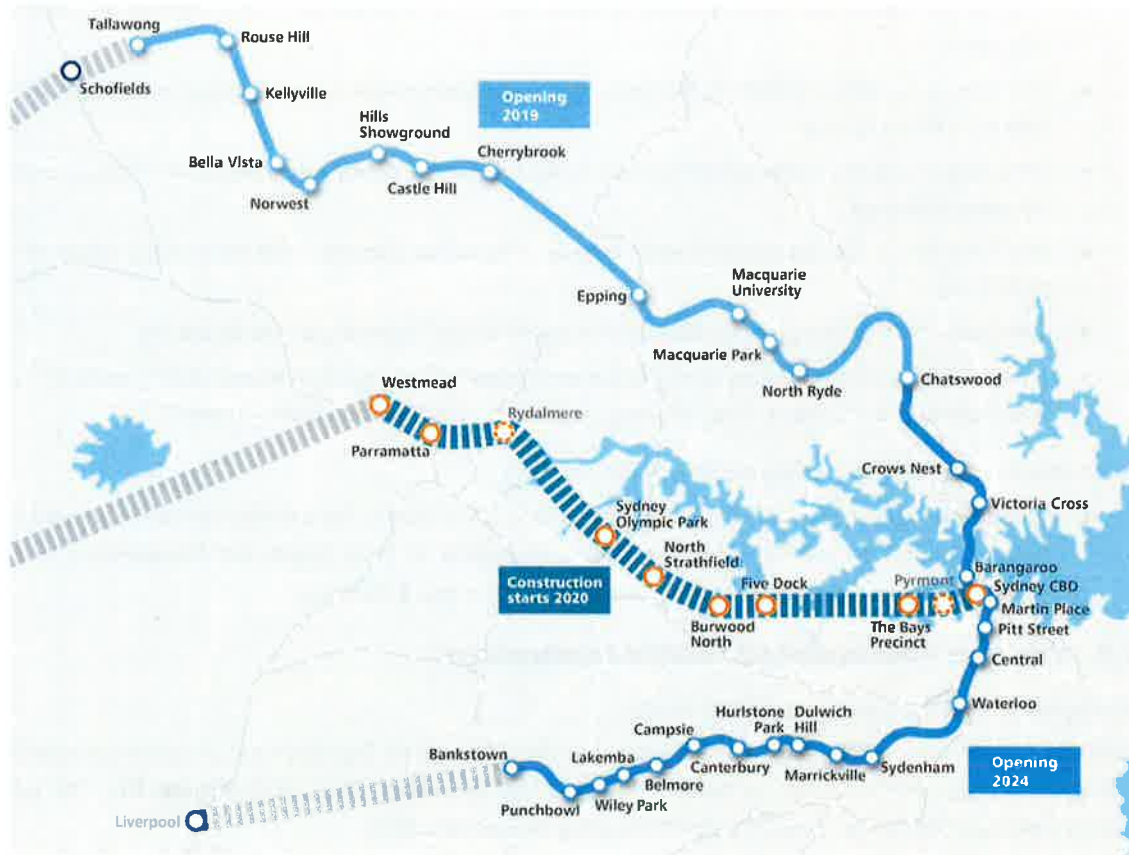


Figure 10 | Sydney Metro network map (as at September 2019) including Chatswood to Sydenham section of the network as approved under the CSSI approval (Source: Sydney Metro)

The CSSI approval conditions relevant to OSD at Waterloo Metro Station include:

- **Condition A4** which notes that any OSD, including associated future use, does not form part of the CSSI and will be subject to the relevant assessment pathway
- **Condition E92** requires an Interchange Access Plan (IAP) to be prepared and approved for each station, in consultation with the Sydney Metro Design Review Panel (DRP), to inform the final design of transport and access facilities and services, including footpaths, cycleways, passenger facilities, parking, traffic and road closures, and integration of public domain and transport initiatives
- **Condition E100** requires the Sydney Metro Design Review Panel (DRP) be established to refine the design objectives for the development and provide advice on place making, architecture, heritage, urban design, landscape design and artistic aspects. The DRP comprises five members, chaired by the NSW Government Architect and includes a representative of the Heritage Council of NSW, with the opportunity for Council or other stakeholders to be invited to attend
- **Condition E101** requires the preparation and approval of Station Design Precinct Plans (SDPPs) for each station. The SDPPs are to present an integrated urban and place making outcome. The SDPPs must be prepared in collaboration and consultation with relevant stakeholders, including council, the local community and the DRP. The SDPP must identify and address specific design objectives, principles and standards as are identified in Condition E101.

Six requests to modify the CSSI approval have been determined. These requests are:

- Modification 1 – Victoria Cross Station and Artarmon Substation – (SSI 7400 Mod 1 determined 18 October 2017)
- Modification 2 – Central Walk – (SSI 7400 Mod 2 determined 21 December 2017)
- Modification 3 – Martin Place Metro Station – (SSI 7400 Mod 3 determined 22 March 2018)
- Modification 4 – Sydenham Station and Metro Facility South – (SSI 7400 Mod 4 determined 13 December 2017)
- Modification 5 – Blues Point Acoustic Shed – (SSI 7400 Mod 5 determined 2 November 2018)
- Modification 6 – Administrative changes – (SSI 7400 Mod 6 determined 21 February 2019).

None of the above modifications have any direct relevance to the proposal and its assessment.



2. Project

The application seeks approval for a Concept for the development of the Waterloo Metro Quarter precinct around the new Waterloo Metro Station (SSD 9393). It consists of a new mixed-use precinct including residential, retail uses, commercial uses, community facilities and public plazas.

The key components of the project are outlined in **Table 1** below.

The Stage 2 detailed design and construction of the components of the project would be subject to a separate SSD application or applications.

Table 1 | Main components of the Project

Aspect	Description
Built Form	<ul style="list-style-type: none"> a 3 and 4 storey non-residential podium along Botany Road (RL 29.95 to RL 34.8) three mid-rise buildings between 4 and 10 storeys above podium level along Cope Street (RL 56.2, RL 64.6 and RL 71.6 respectively) three residential towers with heights up to 23 storeys (RL 96.9), 25 storeys (RL 104.2) and 29 storeys (RL 116.9) above the 3 storey podium along Botany Road
Gross Floor Area (GFA)	<ul style="list-style-type: none"> over station development GFA of 68,750 m², of which is a minimum 12,000m² of non-residential uses including a minimum of 2,000m² of community facilities
Land Uses	<ul style="list-style-type: none"> conceptual use of the building envelopes for residential accommodation, commercial premises (retail, office and business premises), community facilities and entertainment facilities 70 dwellings for social housing minimum 5% of total residential GFA to be dedicated as affordable housing use of non-rail related structure within the station footprint for retail, business and office premises
Vehicular Access, Car Parking and Bicycle Parking	<ul style="list-style-type: none"> car parking spaces located in basement levels, subject to final land uses selected at the detailed design phase car parking accessed from Cope Street and Wellington Street loading and waste services accessed from Botany Road and Wellington Street up to 907 bicycle parking spaces for residential and non-residential uses, subject to the final land uses selected at the detailed design phase
Employment	<ul style="list-style-type: none"> 550 construction jobs, between 400 and 1,800 operational jobs
Capital Investment Value (CIV)	<ul style="list-style-type: none"> \$327 million

2.1 Project Layout

The following figures provide the proposed building envelope footprints and general layout.

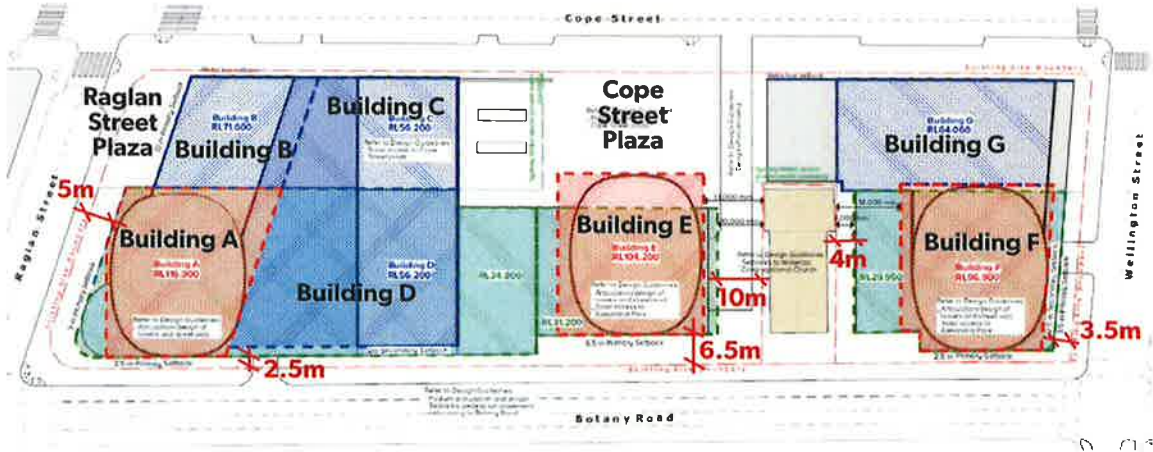


Figure 11 | Building Envelope Plan (Source: Applicant's RTS)

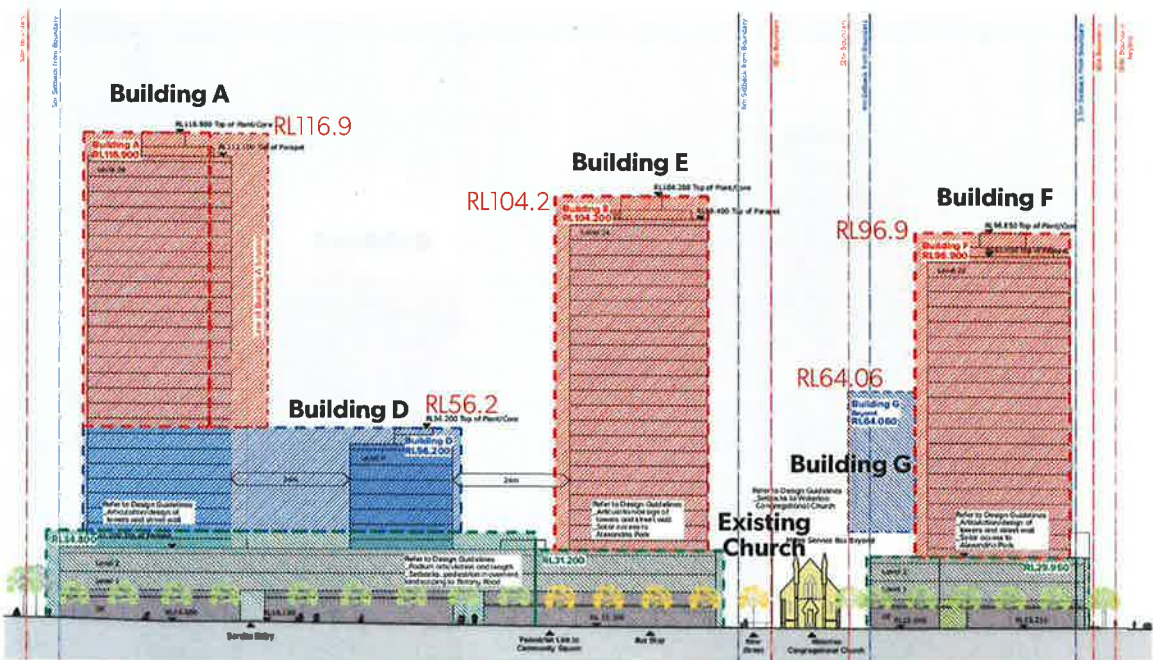


Figure 12 | Building Envelope Elevation Plan – Botany Road (Source: Applicant's RTS)

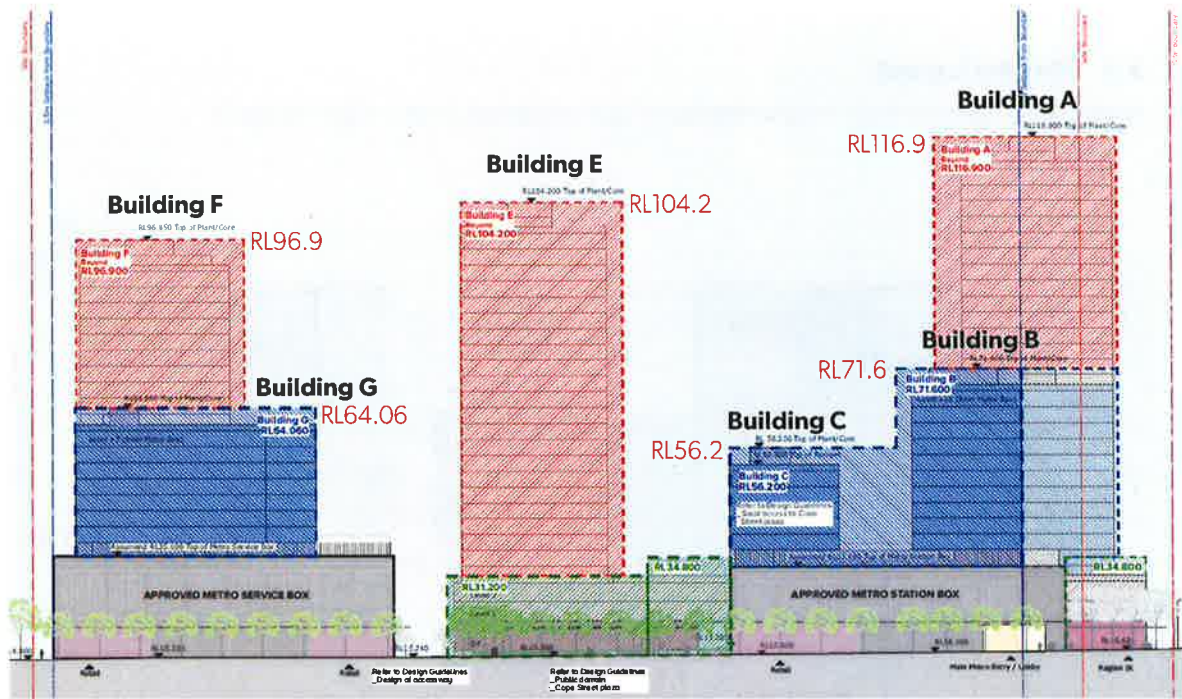
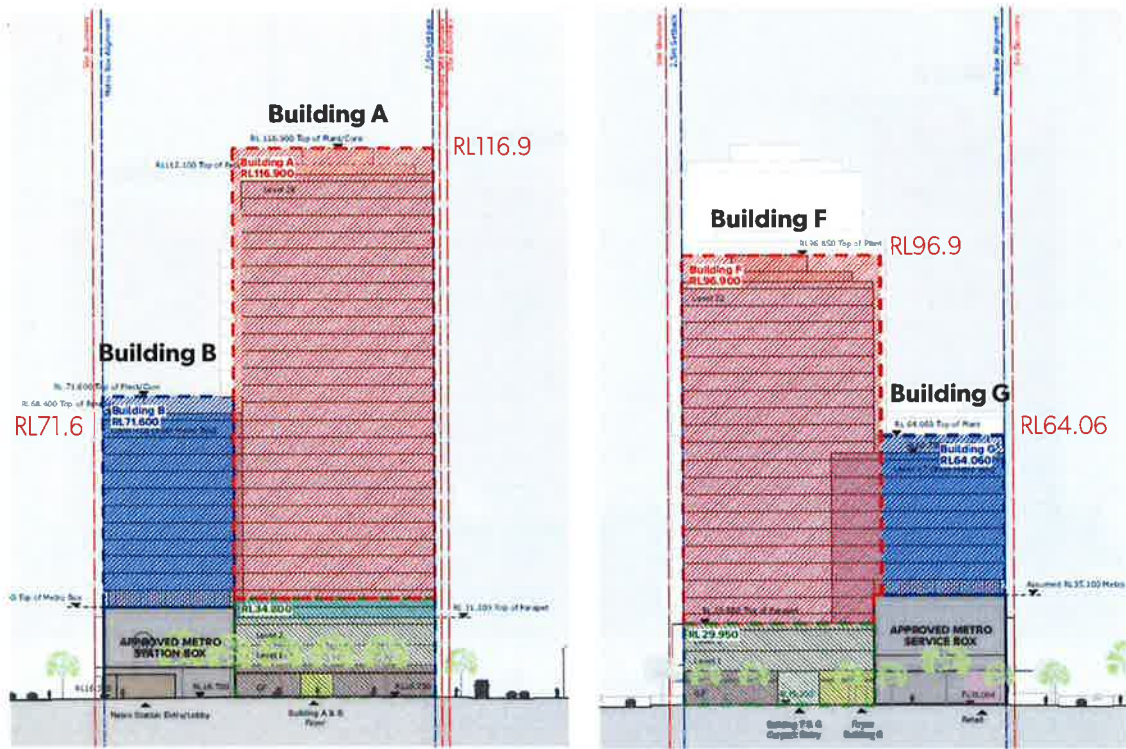


Figure 13 | Building Envelope Elevation Plan – Cope Street (Source: Applicant's RtS)



Figures 14 and 15 | Building Envelope Elevation Plans – Raglan Street (left), Wellington Street (right) (Source: Applicant's RtS)



Figure 16 | Indicative Landscape Plan identifying public open spaces and publicly accessible space (Source: Applicant's RtS)

2.2 Staging and related station development

The Concept Application does not seek approval for construction works. The detailed design and construction of the development would be subject to a separate SSD application or applications.

The Applicant is targeting concurrent construction of the station infrastructure, public domain works and the OSD (**Figure 17**). The Applicant's preferred delivery model is to seek concept approval, invite tenders for the OSD from the private sector, allow for the successful bidder to seek approval for the detailed design and construction, then build the station and OSD within one construction period. The Waterloo Metro Station is scheduled for completion in 2024.

The Department notes that concurrent construction would likely reduce construction impacts on the surrounding community and station users and will enable earlier realisation of the employment generation and housing provision of the OSD. However, as the construction of the OSD is subject to market conditions and market forces there may be a time lag between completion of the station and the OSD.

The following staging options have been identified in the EIS:

- Scenario 1: the station and OSD are constructed concurrently and both are completed in, or prior to, 2024. Under this scenario the construction method would involve the construction of the transfer slab first, then building the OSD above and partly below.
- Scenario 2: the station is constructed and completed in 2024, with the OSD still under construction
- Scenario 3: the station is constructed first and completed in 2024, with the OSD being built at a later stage.

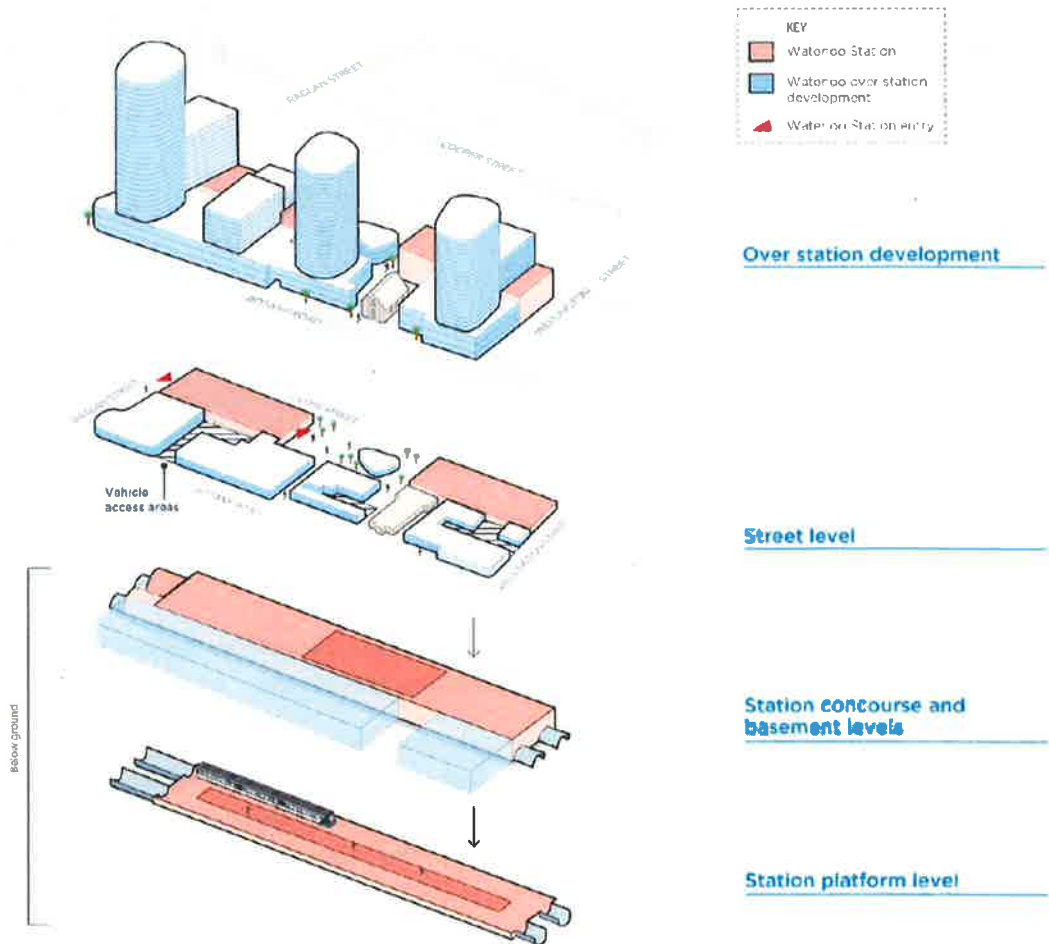


Figure 17 | Diagram indicating the relationship between the metro station and OSD (Source: Applicant's EIS)



3. Strategic Context

3.1 Sydney Metro City and Southwest Project

Sydney Metro is Australia's largest public transport project and a city-shaping project. The Sydney Metro City to Southwest stage of the project has an investment value over \$11 billion. With this significant public investment in world-class transport infrastructure comes a number of benefits and opportunities for placemaking and transit-oriented development to provide jobs, homes, a new public domain and community infrastructure around new stations.

The concept proposal would take advantage of the Government's investment in public transport by locating between 450 and 700 new homes (depending on the land use selection at the detailed design phase), up to 1,800 operational jobs, 2,200m² of public open space and new community facilities around the new Waterloo Station. It would also create a vibrant precinct which is well connected to transport options with a high standard of design.

3.2 Greater Sydney Region Plan

In March 2018, the Greater Sydney Commission published the Greater Sydney Region Plan (the Region Plan) and associated District Plans.

The Region Plan outlines how Greater Sydney will manage growth and change and guides infrastructure delivery. It sets the vision and strategy for Greater Sydney to be implemented to 2056 at a local level through District Plans.

The Region Plan states that the City of Sydney local government area will accommodate 32% of the District's total population growth to 2036, comprising an increase of 102,600 people.

The proposal is consistent with the Greater Sydney Region Plan, as it supports productivity through growth in jobs and housing within the Harbour CBD. It also supports integrating land use and transport contributing to a walkable and '30 minute city', through an increase in employment and residential floorspace in a highly accessible part of the Harbour City (Objective 14).

3.3 Eastern City District Plan

The Precinct is located within the Eastern City District Plan area. The Eastern City District Structure Plan emphasises how the principal spatial elements are interconnected and integrated to deliver on the vision for the District. The integration of the existing and future transit network, including the new Metro network, with the identified economic corridors, centres and urban renewal areas is of key importance to increase Sydney's global competitiveness, boost business-to-business connections and attract skilled workers with faster commute times.

The District Plan identified the Metro station at Waterloo as a key driver in supporting urban renewal in the area. Growth is targeted at well-connected, walkable, places that build on local strengths and deliver quality places.

The proposal is consistent with the objectives of the Eastern City District Plan, as it would:

- deliver integrated land use and transport planning and a '30-minute city' (Planning Priority E10)
- provide housing supply, choice and affordability with access to jobs, service and public transport (Planning Priority E5)
- grow investment, business opportunities and jobs within the Harbour CBD (Planning Priority E11)
- contribute to a stronger and more competitive Harbour CBD (Planning Priority E7).

3.4 Future Transport Strategy 2056

The Strategy was published by Transport for NSW to align with the Greater Sydney Commission's Regional Plans and sets out a transport vision, directions and outcomes framework for NSW to guide transport investment and policy. The aim is to achieve greater capacity, improved accessibility to housing, jobs and services and continued innovation. A planned and coordinated set of actions is set out to address challenges faced by the NSW transport system to support the State's economic and social performance over 40 years

The proposed development is consistent with the key outcomes of the Strategy as:

- it would provide new homes, jobs and open space above and around a new Metro station
- it will encourage the use of the new Metro station, other forms of public transport, walking and cycling
- the site is located within walking distance to other high frequency public transport services including bus services and existing rail stations
- the proposal provides for active transport options by providing bicycle parking spaces and end-of-trip facilities for walkers, runners and cyclists
- the proposal would reduce reliance on private vehicles by having significantly less car parking than permissible for the site in the Sydney LEP.

3.5 NSW State Infrastructure Strategy 2018-2038

The Strategy sets out the government's infrastructure vision for the state over 20 years across all sectors. The Strategy is underpinned by the Greater Sydney Region Plan and District Plans and the Future Transport 2056 Strategy to bring together infrastructure investment and land-use planning.

The Strategy, among other things, aims to ensure capital investment keeps pace with new homes and jobs in priority locations to support population growth while maintaining local amenity.

The Department is satisfied the proposal is consistent with the strategy as it capitalises on the investment in the Metro network and comprises a well-connected, well-serviced and accessible proposal.

3.6 NSW Premier's Priorities

In April 2019 the NSW Premier released a set of priorities for NSW with associated targets. One of these priorities, comprising well connected communities with quality local environments, has sub-set targets associated with "Greening our City" of:

- increasing tree canopy and green cover across Greater Sydney by planting one million trees by 2022
- increasing the proportion of homes in urban areas within 10 minutes' walk of quality green, open and public space by 10 per cent by 2023.

The proposal would help increase tree canopy and green cover by increasing street tree canopy cover around the site from current 6% to 50%, increasing tree canopy within the site from 0% to 23% and by providing 2,200m² of publicly accessible open space and good connections to regional open space.

Tree planting and open space are discussed in further detail in **Section 6.3**.

3.7 Sustainable Sydney 2030

Sustainable Sydney 2030 sets out City of Sydney's vision to make Sydney a more Global, Green and Connected metropolis by 2030.

The proposal will contribute to several strategic directions in Sustainable Sydney 2030 as it would deliver jobs growth to contribute to a globally competitive and innovative city (Strategic Direction 1) and benefit from public transport improvements to deliver integrated transport for a connected city (Strategic Direction 3).



4. Statutory Context

4.1 State Significant Development

The proposal is SSD under Section 4.36 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and Clause 8(1)(b) of State Environmental Planning Policy (State and Regional Development) 2011 (the SRD SEPP) as:

- the development has a CIV of more than \$30 million and is proposed by Sydney Metro on land identified as the Waterloo Metro Quarter in Schedule 2, Clause 16 of the SRD SEPP
- the development has a CIV of more than \$30 million and is for residential accommodation and commercial premises associated with railway infrastructure under Schedule 1, Clause 19(2) of the SRD SEPP.

In accordance with Section 4.5 of the EP&A Act and Clause 8A of the SRD SEPP the Minister for Planning and Public Spaces is designated as the consent authority as the application has been made by a public authority.

4.2 Permissibility

The site is zoned B4 Mixed Use in the SLEP 2012. Commercial premises (comprising offices, business premises, shops and food and drink premises), residential accommodation and other proposed uses are permissible with consent.

4.3 Mandatory Matters for Consideration

4.3.1 Environmental Planning Instruments

Under Section 79C of the EP&A Act, the Secretary's assessment report is required to include a copy of, or reference to, the provisions of any EPIs that substantially govern the project and that have been taken into account in the assessment of the project. The following EPI's apply to the site:

- State Environmental Planning Policy (State & Regional Development) 2011 (SRD SEPP)
- State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)
- State Environmental Planning Policy (Urban Renewal) 2010
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
- State Environmental Planning Policy No. 55 - Remediation of Land
- Draft State Environmental Planning Policy (Remediation of Land)
- State Environmental Planning Policy No. 64 – Advertising and Signage
- State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development
- Sydney Local Environmental Plan 2012 (SLEP 2012).

The Department has undertaken a detailed assessment of these EPIs in **Appendix F** and is satisfied the application is consistent with the requirements of the EPIs.

4.3.2 Objects of the Act

Decisions made under the EP&A Act must have regard to the Objects as set out in Section 1.3 of that Act. A response to the Objects of the EP&A Act is provided at **Appendix F**.

4.3.3 Ecologically Sustainable Development (ESD)

The EP&A Act adopts the definition of 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:

- the precautionary principle
- inter-generational equity
- conservation of biological diversity and ecological integrity
- improved valuation, pricing and incentive mechanisms.

The Department considered the project in relation to the ESD principles. The Precautionary and Inter-generational Equity Principles have been applied in the decision-making process by a thorough assessment of the environmental impacts of the project. Refer to **Section 6.7** in relation to the project ESD commitments and the Department's recommended conditions.

The development proposes ESD initiatives and sustainability measures, including targeting minimum performance standards of 6 Green Star Communities Tool, 5 Green Star Design and As Built Tool for residential and office uses, 5.5-star NABERS Energy, 4.5-star NABERS Water and better than BASIX compliance.

4.3.4 Environmental Planning and Assessment Regulation 2000

Subject to any other references to compliance with the EP&A Regulation cited in this report, the requirements for Notification (Part 6, Division 6) have been complied with.

4.3.5 Secretary's Environmental Assessment Requirements (SEARS)

On 5 November 2018, the Department notified the Applicant of the Planning Secretary's Environmental Assessment Requirements (SEARs) for the SSD application. The Department is satisfied that the EIS and RtS adequately address compliance with the SEARs to enable the assessment and determination of the application.

5. Engagement

5.1 Department's Engagement

The application was exhibited concurrently with the State Significant Precinct (SSP) Study for the Waterloo Metro Quarter. The public were invited to provide their feedback on both applications.

In accordance with Clause 10 of Schedule 1 to the EP&A Act and Clause 118 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), the Department exhibited the SSD application from 22 November 2018 until 30 January 2019 (70 days):

- on the Department's website
- at NSW Service Centres
- at City of Sydney Council
- at Green Square Library.

A physical three-dimensional model of the proposal has been on display during the assessment period at the Council's offices.

The Department placed a public exhibition notice in the *Central Courier*, the *Daily Telegraph* and the *Sydney Morning Herald* on 21 November 2018.

The Department created a page on its website containing information and details on how to lodge a submission.

The Department also notified a large catchment area of surrounding owners and occupiers due to the concurrent exhibition with the SSP. The exhibition area extended north to Redfern Station, south to Green Square Station, east to Bourke Street (taking in all of the Waterloo Estate and also the Danks Street Precinct) and west beyond the Australian Technology Park. Notification included letters detailing the elements of the application, brochures explaining the stages of the SSD assessment process and Frequently Asked Questions on the differences between the SSP and SSD exhibitions.

The Department inspected the site and the surrounds on 20 November 2018 and 9 October 2019.

The Department also attended community information drop-in sessions ran by the Applicant to answer questions on the SSD assessment process. The Department attended the following sessions:

- Waterloo community drop-in sessions at Alexandria Town Hall on 4 December 2018 and Redfern Town Hall on 18 January 2019
- Waterloo Estate drop-in sessions at the community rooms within the Estate on 6 December 2018, 12 December 2018 and 19 December 2018.

5.2 Summary of Submissions

During the exhibition period, the Department received 108 submissions on the proposal as follows:

- eight submissions were received from government agencies
- one submission from the City of Sydney Council objecting to the proposal

- 100 submissions were from the public. Of the public submissions, 89 were objections, eight provided comments and three supported the proposal. Four of the submissions were from special interest groups, with 3 objecting and 1 providing comments.

5.3 Key Issues – Government Agencies

No government agencies objected to the project. The key issues raised by agencies were either addressed through the provision of additional information or addressed through the recommended conditions of consent/approval. **Table 2** summarises the key issues raised in government agency submissions.

Table 2 | Summary of Government Agency submissions

Submitters

NSW Environment Protection Authority:

- the proposal will not require an Environment Protection Licence
- EPA recommend any consent include acceptable vibration and groundbourne noise limits from the EPA's Rail Infrastructure Guideline (2013) and Assessing Vibration: a technical guide (2006)

NSW Health, Sydney Local Health District:

- support the consideration given to active and public transport; sustainability and adaptation; equity and affordable housing; and mixed-use development associated with major transport
- emphasised the importance of implementing all reasonable feasible mitigation measures to minimise adverse impacts during and after construction
- recommend consideration be given to negative health impacts if the population is greater than the supporting infrastructure and services
- public risks from using recycled water will need to be managed appropriately
- recommend NSW Health's *Building Better Health Guidelines* be used as a reference

Federal Department of Infrastructure, Regional Development and Cities:

- approval is granted, subject to recommended conditions, under the Airports Act 1996 and the Airports (Protection of Airspace) Regulations 1996 for the intrusion of the development into prescribed airspace for Sydney Airport.

Environment, Energy and Science Group of Department of Planning, Industry and Environment (former NSW Office of Environment and Heritage):

- consideration should be given to delivering new, improved and accessible open space to avoid placing pressure on existing open space, such as Centennial Parklands, and the biodiversity values of these areas.
- the proposed plazas may not provide adequate accessible open space and a connection to nature as they are predominantly hard paved with some planted trees
- recommend increasing public open space, contribute to increasing urban tree canopy, the Green Grid and biodiversity
- recommend amendments to provide additional open space and publicly accessible open space
- recommend further tree planting, and larger sized trees in an advanced stage of growth, from local native species to increase urban tree canopy, promote connection to nature and provide a resilient, healthy and diverse urban forest
- justification is required for use of hard paving and non-native plant species
- recommend the Registered Aboriginal Parties associated with the 2016 assessments are updated on what is proposed
- recommend conditions be imposed specifying protocols for dealing with Aboriginal objects or suspected objects
- satisfied by the level of flood assessment carried out

NSW Police, South Sydney Command, Crime Management Unit:

- Crime Prevention Through Environmental Design (CPTED) treatments need to be considered to reduce opportunities for anti-social and criminal behavior
- the site is located within a high 'hotspot' for assault, robbery, break-and-enter dwelling and non-dwelling, malicious damage, steal from vehicle and motor vehicle theft offences
- natural and mechanical CPTED treatments need to be considered.
- conditions of consent are recommended for surveillance, lighting, space management, territorial reinforcement, access control and general security and crime prevention.

Fire and Rescue NSW:

- it is important firefighters can effectively and readily locate all fire services
- recommend Fire and Rescue be consulted regarding operation and configuration of fire and life systems
- recommend Fire and Rescue be consulted during the design and construction of the buildings
- recommended conditions of consent.

Sydney Water:

- trunk drainage and wastewater systems have adequate capacity to service the development
- amplification or extensions to existing systems may be required

Heritage Branch of the Department of Premier and Cabinet (former Office of Environment and Heritage):

- there are no State Heritage concerns with the project and the Heritage Branch has no comments

5.4 Key Issues – Council/Community/Special Interest Groups

5.2.1 Council key issues

Council objected to the proposal on the following grounds:

- it is premature to submit a Concept Application when a planning framework and revised controls are not certain or imminent
- lack of detail on ESD, public domain, design excellence, traffic impacts, urban design considerations and heritage considerations
- the Concept should be exhibited with the Waterloo Estate proposal to consider cumulative impacts
- the Design Excellence Strategy does not include a competitive design process to achieve excellent design outcomes, through a comparative evaluation of competing design concepts
- the EIS and Visual Impact Assessment questionably rely on the achievement of design excellence, without a competitive design process, to address the visual impacts of the proposed towers
- social and affordable housing should be provided in perpetuity
- social and affordable housing should be distributed equitably across all unit sizes and levels of buildings
- building setbacks on all four street frontages are minimal and do not tie the development into the context and creates unacceptable heritage impacts on Waterloo Congregational Church and other heritage items on opposite corners to the north, west and south
- an impermeable wind deflection structure above the through-site link between the Church and central podium is not acceptable and the design must be amended to preserve the setting and fabric, such as by changing the tower setbacks, tower shape, façade modulation or the like
- the basement size and configuration should be revised to minimise excavation impacts on the Church
- the Acoustic Report is based on incorrect noise criteria and assumptions that require greater justification
- the EIS does not demonstrate amelioration of wind, noise and overshadowing along Botany Road and, as such, there is a lack of certainty about the achievement of acceptable residential amenity
- the EIS does not demonstrate compliant levels of natural ventilation, natural cross ventilation and solar access
- non-compliances with minimum building separation are not supported due to poor residential amenity

5.4.2 Community issues

Key issues raised within community submissions at the EIS stage are summarised in **Table 3**. The issues raised specifically by special interest groups are outlined in **Section 5.4.3** below.

The community submissions included an objection from the Federal Member for Sydney, Ms. Tanya Plibersek.

Table 3 | Key issues within community submissions

Issue	% of Submissions
Objections	
Excessive bulk and scale – the proposal seeks too much height and too many apartments	63 %
Rate of social and affordable housing is low and affordable housing is only provided for 10 years	63 %
Proposals for Waterloo Metro Quarter and Waterloo Estate should be considered/assessed together as they will have cumulative impacts	60 %
Increase in existing road congestion	60 %
No need for car parking above the Metro station / too much car parking	54 %
Proposals for Waterloo Metro Quarter and Waterloo Estate will triple the existing density of the area, making it one of the highest density precincts in Australia	52 %
Proposals for Waterloo Metro Quarter and Waterloo Estate will generate 4,300 additional vehicles in the local road network	50 %
Low rate of public open space proposed (15%) and the 53% amount quoted in the application is misleading as this is mostly private gardens and rooftops	50 %
Infrastructure NSW should deliver social and affordable homes and not leave to it a developer	43 %
Impacts on surrounding dwellings and character of the area	20 %
Overshadowing of Alexandria Park	7 %
Support	
The metro station will provide new connections across Sydney	2 %
A higher density development should be introduced to Waterloo Metro Quarter considering its strategic location.	1 %
The proposed height is considered reasonable compared with existing or approved developments near train stations in Sydney metropolitan area. The three tower approach is supported.	1 %
The scale and density will achieve best practice Transport Oriented Development.	1 %
Private residential development will work. There are already many social housing options for low income earners.	1 %

Note: The above percentage do not add up to 100% as the figures quoted are the percentage of the 89 objections received. The total exceeds 100% as many submissions discussed multiple issues.

5.4.3 Special interest groups

The key issues raised by special interest groups are outlined in **Table 4** below.

Table 4 | Key Issues at EIS stage – Special Interest Groups

REDWatch

- object as the SSD is based on an inadequate SSP study and as it does not address or mitigate the impacts of the development on the surrounding area or the adjacent public housing community.

- urge the Department to require further work be done on the SSP before the SSD is assessed
- the Metro Quarter and Waterloo Estate SSPs need to be assessed together. For example, solar access to the proposed public open space may be affected by the Estate design casting shadows.
- traffic generated from the cumulative impact of the Metro Quarter and Waterloo Estate is unworkable for the local road network
- recommend reduced traffic generation through tight restrictions on car parking or decrease the size of the development
- recommend the proponent provide solutions to traffic congestion estimated on the local road network predicted by pedestrian delays with the Station and Waterloo Estate traffic
- the SSD has high car parking generation and the SSP has not set the controls
- it may be more appropriate for the development to be commercial with minimal parking rather than residential, if residential comes with significant parking
- the development should be required to review options for underground exits from the station across the busy roads, especially the western side of Botany Road to bus interchange
- the density proposed is excessive when seen alongside the public benefit of only 15% open space
- the density proposed is too great for the location and the need for the public domain and open space
- the site should deliver 10% affordable housing
- object to the affordable housing only being provided for 10 years. Affordable housing must be permanent.
- the development needs to deliver 5% affordable housing for low income Aboriginal working people to maintain a viable mixed age and mixed income community
- to utilise the privatised public domain or public space you have to be a paying customer. Low cost retail and low cost services need to be provided.

WalkSydney

- the application should be placed on hold until the planning framework has been finalised as separate planning processes often lead to deferred or uncertain responsibilities
- recommend signalisation of Cope St with Raglan St intersection and Cope St with Wellington St intersection with pedestrian crossings on all legs
- recommend high-quality slow-speed Shared Zones around the station in Cope, Raglan and Wellington Street
- recommend no car parking be provided for all land uses as the proposed parking will undermine a high-pedestrian environment and car ownership should not be encouraged
- recommend the new street within the site be used by pedestrians and cyclists only
- recommend traffic signals are based on the number of people and not delays to drivers
- recommend an on-street pedestrian crossing between the station and the west side of Botany Road
- recommend widened footpaths and protected bicycle lanes on both sides of Botany Road to give greater priority to walking movements

Inner Sydney Voice

- it is impossible to make an assessment of the proposal without considering the cumulative impacts from Waterloo Estate redevelopment including density, congestion and amenity like overshadowing. Waterloo Metro Quarter should be assessed together with Waterloo Estate
- impossible to make comments about the proposed extent of social housing in the proposal without having precise numbers for the Waterloo Estate
- the exhibition period for the SSD should remain open until the Preferred Plan for the Waterloo Estate has been published.

Groundswell Redfern Waterloo

Groundswell's submission says that it documents the discussions of a roundtable meeting of the Groundswell Non-Government Agencies, including disagreements, debates and opinions. It says the notes of the meeting do not indicate those participating all agreed and does not represent the views of any participating agency or persons.

As such, the Department has treated the submission by Groundswell as comments. No one comment was raised as an opinion or grounds for objection or support. As such, the format of the submission does not provide the Department with overall sentiments which the Department can express as a key issue of concern or support.

5.5 Response to Submissions

Following the exhibition period, the Department placed copies of all submissions received on its website and requested the Applicant provide a response to the issues raised in the submissions.

The Applicant provided a Response to Submissions (RtS) report on 21 October 2019 and supplementary information for the Department's assessment on 7 and 15 November 2019. The RtS and supplementary information were accompanied by the following:

- amended Building Envelope drawings which the Applicant contended address submissions regarding an allowance for greater amount of employment generating uses and submissions regarding articulation, expression and allowance for alternative design responses particularly to the curvilinear envelopes of the towers in the EIS
- revised Design Guidelines providing design and amenity controls to guide the future detailed design
- supplementary technical reports and assessments, including pedestrian wind study, acoustic assessment, solar access analysis and traffic analysis
- amended approach to car parking, comprising a maximum overall number of spaces for residential accommodation (170 spaces) and adoption of non-residential car parking rates with significantly less overall parking than exhibited
- additional undertakings in relation to Ecologically Sustainable Development (ESD).

The RtS was made publicly available on the Department's website and was referred to relevant public authorities. An additional 4 submissions were received from public authorities and 1 from Council. A summary of issues raised in submissions is provided at **Tables 5 and 6** and a link to the submissions is contained in **Appendix C**.

Table 5 | Key Issues at RtS stage - Government agencies

NSW Health, Sydney Local Health District

NSW Health advised it had no further comments.

Environment, Energy and Science Group of Department of Planning, Industry and Environment (former NSW Office of Environment and Heritage)

EESG advised it had no further comments.

NSW Police, South Sydney Command, Crime Management Unit

NSW Police advise that their previous recommendations on Crime Prevention Through Environmental Design are sustained and the following are specific items:

- proposal should provide less car parking spaces which may reduce vehicle related crime
- it is unclear what specific crime prevention techniques or infrastructure would be used/adopted for such a high number of proposed bicycle parking spaces, with bicycles being highly desirable for theft

Fire and Rescue NSW

Fire and Rescue advised their EIS submission had been adequately addressed and no further comment is required.

Table 6 | Key Issues at RtS stage – Council

City of Sydney Council

Council maintained a number of its concerns raised at the EIS stage, specifically:

- the Design Excellence Strategy should include competitive design processes
- a minimum of 10% affordable housing should be provided
- the commitment to provide affordable housing in perpetuity is supported
- heritage impacts on Waterloo Congregational Church from building setbacks, wind mitigating structures and excavation
- suitable residential amenity is not demonstrated in terms of noise, ventilation, building separation and solar access to communal open space, therefore density of residential is not supported
- increased podium and tower setbacks to Botany Road should be incorporated for increased street trees, improved streetscape and wind mitigation
- large canopy trees should be included along Botany Road and set back 3 m from the kerb
- the proposed extent of overshadowing on Alexandria Park is not supported
- support the redistribution of floorspace from Towers E and F to mid-rise buildings to reduce overshadowing on Alexandria Park
- support removal of Building H from Cope Street Plaza
- previous issues raised with public domain and SDPP and IAP remain – design should be accelerated
- revised wind assessment should be prepared for the altered tower forms
- public domain along through-site link and alongside Church should have wind conditions suitable for outdoor dining or pedestrians to dwell
- car parking amount (up to 427 spaces) is unnecessary and excessive and proposal should strive for zero or absolute minimum car parking
- ESD commitments are minimums and higher targets should be pursued
- an approach for public art should be developed for all five Metro stations in the City of Sydney area
- community facilities should support the proposal and Waterloo Estate development and the operating model should be clarified.



6. Assessment

The Department has considered the EIS, the issues raised in submissions and the Applicant's RtS in its assessment of the proposal. The Department considers the key issues associated with the proposal are:

- Built form
- Density and land use
- Open space and public domain
- Residential amenity
- Car parking
- Design excellence.

Each of these issues is discussed in the following sections of this report. Other issues taken into consideration during the assessment of the application are discussed in **Section 6.7**.

6.1 Built Form

The proposal seeks approval for seven building envelopes. This includes three residential towers above a 3 to 4 storey podium along Botany Road and four mid-rise buildings fronting Cope Street.

The key issues associated with the proposed built form relate to:

- the scale and height of the proposed towers
- articulation of the podium
- interface with the Waterloo Congregation Church
- solar access to Alexandria Park

The Department's assessment of the proposed built form is discussed below.

Towers

The proposal seeks approval for three residential towers fronting Botany Road of 23, 25 and 29 storeys. The tallest tower (Building A) would be located at the northern end of the site, near the corner of Botany Road and Raglan Street, to identify the location of the Metro station from key vantage points. The tower heights then step down towards the south to minimise overshadowing of properties to the south west and to Alexandria Park.

Public submissions raised concern about the height and scale of the proposed towers as they would not be in keeping with existing character of the area and would overshadow Alexandria Park. Council did not raise concerns about the proposed tower heights, but did raise concern about overshadowing of Alexandria Park, which is discussed later in the report (see **Solar Access to Alexandria Park**).

The finalised Waterloo SSP increased the height controls for the site from 15m to RL 96.9 (82m), RL 104.2 (89m and RL 116.9 (101m) (**Figure 18**) and the floor space ratio (FSR) control from 1.75:1 to 6:1. The height and FSR controls were increased to take advantage of the introduction of a new Metro station at the site and the opportunity it provides to create a new mixed use precinct.

The Department notes the proposal fully complies with the recently adopted height controls for the site. As shown in **Figure 18** below, the building heights step down from the tallest tower, (Building A 29 storey) to the shortest tower (Building F 23 storey) consistent with the height controls established for the site.

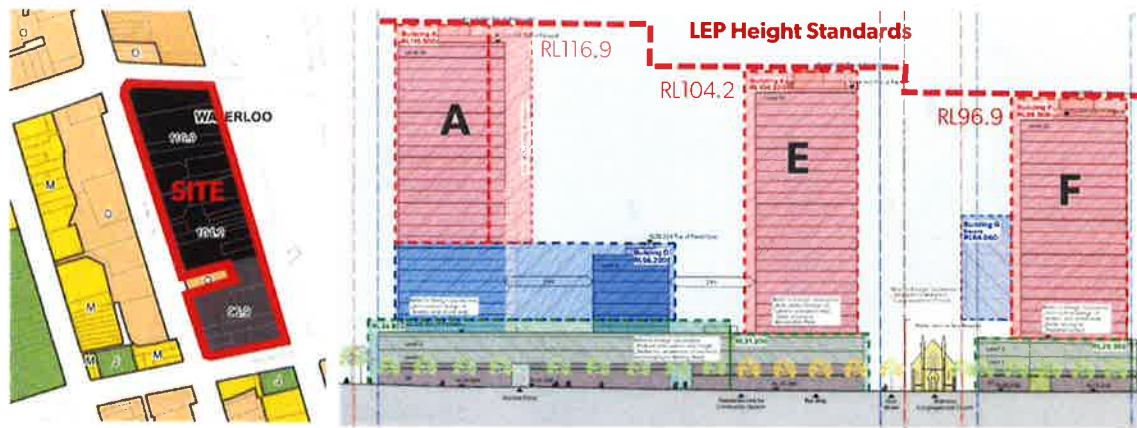


Figure 18 | Extract from Sydney LEP Maximum Building Height Map (left) and elevation of proposed envelopes (right)
(Source: SLEP and Applicant's RtS)

The Department also notes the Concept proposal fully complies with the new FSR standard. The proposal seeks a maximum 68,750m² of GFA for a mix of residential, retail, commercial, community facilities and potential entertainment uses. The proposed GFA together with appropriately 8,500m² of station floorspace for the new Waterloo Metro Station would result in an overall FSR of 6:1 which meets the FSR standard.

The Department has also assessed the merits of the proposal in the context of the surrounding development and the broader Waterloo area. The Department considers the proposal is acceptable noting:

- the height and scale of the proposed towers are similar to other tall buildings clustered around existing rail stations at Redfern and Green Square
- the proposed building heights respond to the existing heights of Matavai and Turanga towers within the Waterloo Estate which are 29 storeys
- the proposed building separation complies with the requirements of the ADG
- the proposal would not result in any significant amenity impacts on the surrounding locality in terms of solar access, acoustic privacy, visual privacy and views.

The Department also notes the future development of the site will be supported by Design Guidelines and a Design Excellence Strategy. The proposed Design Guidelines include floorplate limits and other criteria to ensure subsequent developments deliver slender towers with diverse design approach to massing, articulations, materials and finishes. Further, the Design Excellence Strategy would ensure the design of the development is guided by a design review panel chaired by the NSW Government Architect. The Department considers the Design Guidelines, together with the Design Excellence Strategy would ensure the proposal results in a positive visual and urban design outcome for the site.

The Department considers the introduction of taller buildings at the Waterloo Metro Station is therefore acceptable.

Podium articulation

The Waterloo SSP PRP, Council and public submissions raised concerns about the length of the proposed podium extending over 100 m along the northern section fronting Botany Road (**Figure 19**) and the need for greater articulation and setbacks.

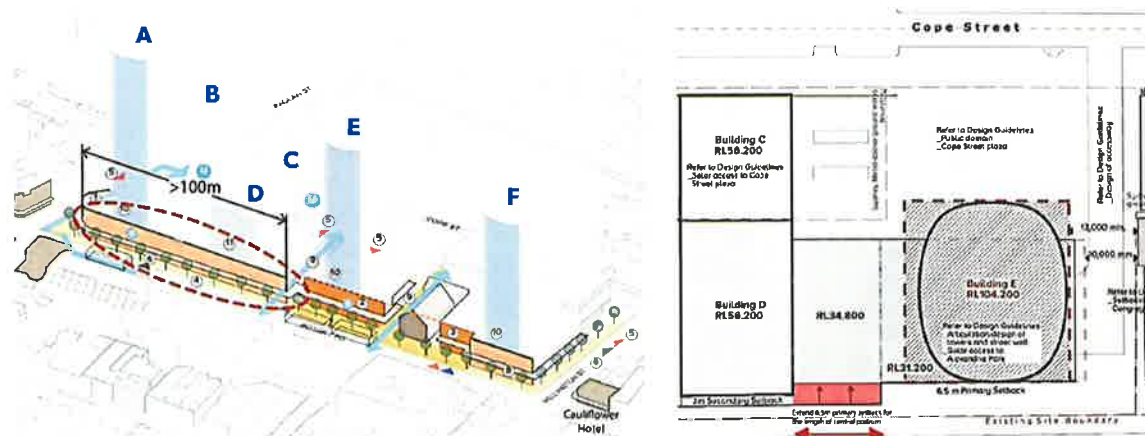


Figure 19 | Left: Podium length along Botany Road greater than 100m requiring articulation and breaking up (Source: Applicant's EIS). Right: Extract from Applicant's RTS showing extension of 6.5 m setback along Botany Road (red area)

In response to these concerns, the Applicant's RTS extended the 6.5 m Botany Road setback further to the north by approximately 12 m and relocated a pedestrian through-site link to connect the northern entry to the Metro Station on Raglan Street to the Botany Road bus stops (**Figure 19**). The Applicant also amended the Design Guidelines to encourage articulation of the podiums as a separate element from the towers and requires the use of accessways or building cut-outs to break up the overall length of the podium into shorter lengths.

The Department supports the extension of the 6.5 m setback towards Building D as it would reduce the overall length of the podium, improve the opportunity for landscaping and provide additional public domain space around the bus stops on Botany Road. The relocation of the pedestrian through-site link is also supported as it would break up the length of the podium frontage into two distinct and shorter sections (**Condition A14**).

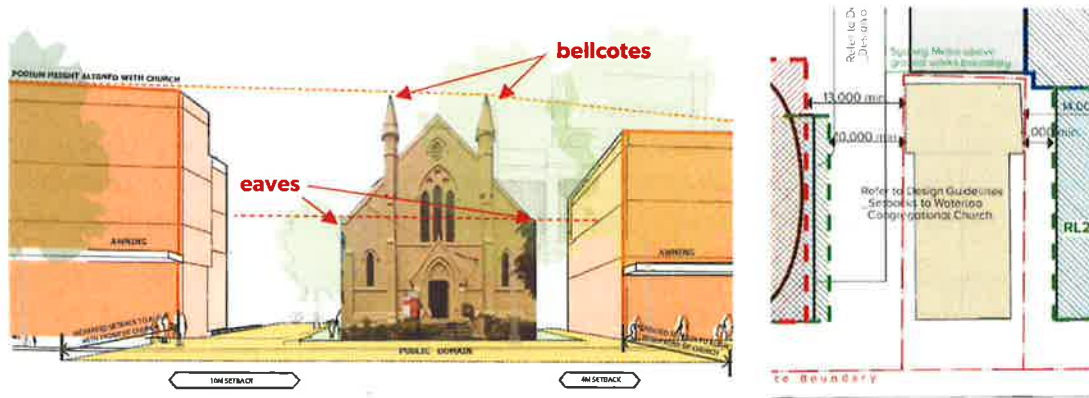
The Department is also satisfied that the Design Guidelines provide appropriate design criteria to ensure the detailed design of the podium would be appropriate with the articulation of the podiums as a separate element from the towers above and use accessways or building cut-outs to break up the overall length of the podium and use of materials and finishes reflecting local architecture.

The Department is therefore satisfied the amended podium building envelope together with the Design Guidelines would effectively break up and articulate the podium to achieve a high-quality design outcome.

Interface with Waterloo Congregational Church

Council raised concern about the proposed setbacks and potential heritage impact on the Church. The Waterloo SSP PRP recommended built form, massing and setbacks to be informed through detailed heritage consideration of relationship of built form to the Church.

In response, the Applicant's RTS increased the northern Church setback from 6.5m to 10m (**Figures 20 and 21**). The Applicant submits the alignment of the podium setback to Botany Road adjacent to the Church is designed to increase the Church's visual presence within the streetscape and to increase views to and from the Church along Botany Road.



Figures 20 and 21 | Elevation and site plan extracts showing 10m setback to the northern side of Waterloo Congregational Church and 4m setback to the southern side

The Applicant also contends the height of the podium envelopes to the north and south of the Church are appropriate as they reflect the height of the Church bellcotes (shown in **Figure 20**). The RtS states a reduction in height to the eaves line does not reflect the Church's historic context and would have a poorly scaled street wall to Botany Road. The Applicant argues the proposed podium height relates to the existing two to three storey developments along Botany Road.

The Applicant also notes that prior to the demolition of the surrounding buildings for the Waterloo Metro Station, the streetscape presence of the Church was limited as:

- the two buildings either side of the Church were built to their boundaries and to the street
- the southern building's parapet was above the eaves of the Church, and
- the Church had dense landscaping concealing it from the street (**Figure 22**).



Figure 22 | Setting of Waterloo Congregational Church prior to demolition of buildings for the station works (Source: Applicant's EIS)

The Department supports the increase of the northern Church setback from 6.5 m to 10 m as it would improve visual separation and views towards the Church along Botany Road. However, the Department recommends amendments to the Design Guidelines (**Condition A14**) requiring greater articulation and treatment of the podium immediately to the north and south of the Church. The Department considers the detailed design of the podium facing the Church should complement its the scale, proportion and architecture, to provide an appropriate transition between the lower scale of the Church building and the podium height along Botany Road.

The Department also recommends the Design Guidelines (**Condition A14**) should include additional objectives and criteria to support the future design of the interface between the Church and the site to:

- encourage active uses at the southern setback of the Church and design the space to promote opportunities for users to meet and assemble (in consultation with the Church)
- promote safe access and passive surveillance in and around the setback areas between the site and the Church consistent with Crime Prevention Through Environmental Design principles.

Solar access to Alexandria Park

Public submissions raised concern about overshadowing impacts to Alexandria Park. Council acknowledged the proposal technically complies with the SDCP but recommended the proposal should aim for a high-quality outcome rather than numerical compliance. Council also advised any overshadowing of the Park is not acceptable as the proposed development places greater pressure on existing open space.

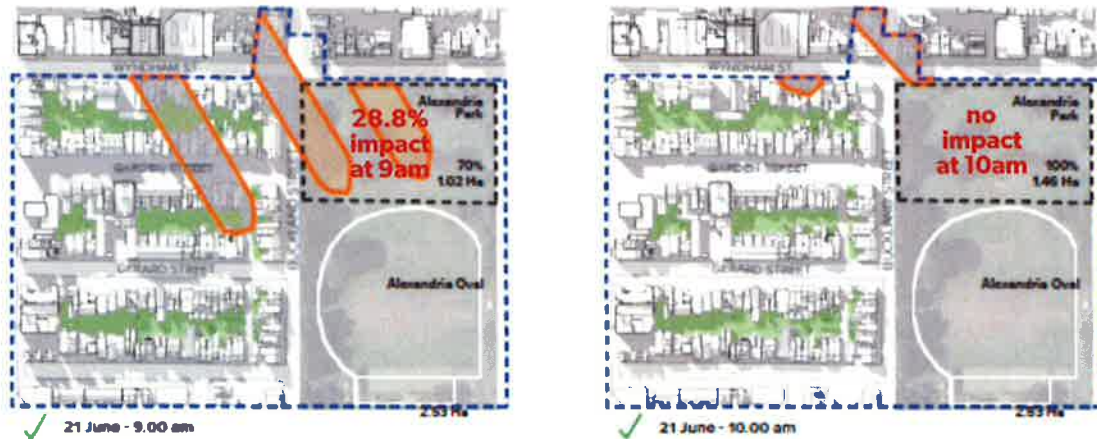
In response, the Applicant's RtS proposed additional objectives to minimise overshadowing impacts on Alexandria Park and the wider public domain in the Design Guidelines. The additional controls would ensure:

- the development does not result in any additional overshadowing of Alexandria Park after 10am on 21 June
- no more than 30% of Alexandria Park (excluding the oval) is overshadowed by the development as measured at any time after 9am on 21 June.

The Department notes the SDCP requires:

- overshadowing effects of new buildings on publicly accessible open space are to be minimised between the hours of 9am to 3pm on 21 June. (Section 3.2.1.1 (1))
- in relation to parks (i.e. non-linear public open space): 50% of the total area is to receive sunlight for four hours from 9am to 3pm on 21 June (Section 3.1.4 (3)(a)).

The overshadowing diagrams submitted with the proposal show the proposed central and southern towers would result in overshadowing impacts to Alexandria Park. During the winter solstice, the proposal would result in 28.8% of Alexandria Park being overshadowed at 9 am (**Figure 23**). By 10.00 am, the Park would not be overshadowed by the proposed development (**Figure 24**). The Department also notes the shadows cast by the proposal between 9.00am and 10.00am include areas of the Park which are already overshadowed by existing mature trees.



Figures 23 and 24 | Solar access diagrams for Alexandria Park in midwinter showing shadow impacts at 9am to the left and 10am to the right

The Department accepts the proposal would deliver better outcomes than the minimum SDCP requirements for solar access to open space. The proposal would retain solar access to more than 70% of the Park between 9 am and 10 am and thereafter would have no impact on the Park. Overshadowing would also progressively decrease as the length of daylight increases, and at the equinox (March 21 and September 21), there is no overshadowing of the Park as a result of the proposal. Further, the proposal would not cast shadows over the Alexandria Oval or areas near the Alexandria Park Community School.

The Department also notes the Applicant’s revised proposal provides opportunity to further improve solar access to Alexandria Park when floor space and building bulk can be redistributed from the residential towers to the mid-rise building envelopes for commercial uses. The Department recommends the redistribution of floorspace within the proposed building envelopes should maximise improvements to solar access to Alexandria Park when compared with the indicative scheme as assessed with the Concept proposal . The Department’s recommended additional design guideline (**Condition A14**) is consistent with the recommendations from the Waterloo PRP and Council.

The Department is therefore satisfied the proposal would retain an acceptable level of solar access to Alexandria Park as it complies with the overshadowing controls in SDCP and the revised Design Guidelines would provide sufficient parameters to control overshadowing impacts of the design of future buildings.

Conclusion

The Department’s assessment therefore concludes the proposed built form is acceptable as:

- it fully complies with the height and FSR controls set by the site-specific amendments to the SLEP 2012
- the scale and height of the proposed towers would appropriately identify the location of the new Waterloo Metro station and are comparable in height to existing towers in the Waterloo Estate
- the amended plans and Design Guidelines would address the SSP PRP and Council concerns about the need to break up the length of the northern podium along Botany Road and increase the setback from the northern elevation of the Waterloo Congregational Church
- the proposed built form would retain solar access to more than 70% of Alexandria Park between 9 am and 10 am at mid-winter and no impact thereafter or the adjoining oval area
- the future redistribution of floor space would provide an opportunity to further improve solar access to the Park.

6.2 Land Use Mix

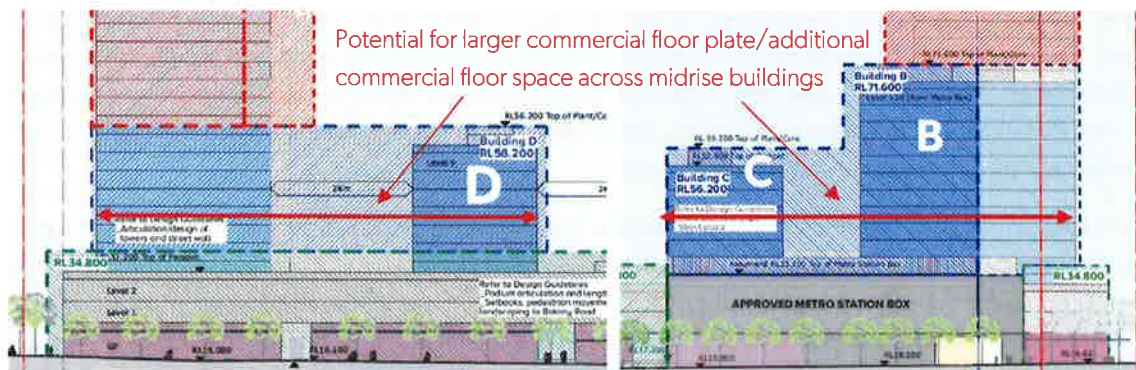
Non-residential floor space

The indicative proposal lodged with the Concept incorporated 56,200m² of residential floorspace and a minimum 12,000m² of non-residential floor space within the podiums.

The proposed minimum 12,000m² of non-residential floor space is consistent with the requirements of the finalised Waterloo SSP which included minimum non-residential floorspace requirements to support greater strategic opportunities for employment generation (adopted Clause 6.45 of SLEP).

However, Council objected to intensifying residential development on the site given the noise and air quality impacts of high traffic volumes and heavy transport on Botany Road. Council considered the site should have increased employment and cultural uses.

In response, the Applicant amended the proposed building envelopes C and D to allow for an increase of commercial floor space above the minimum of 12,000m², and up to approximately 20,000m² of commercial premises, to support employment generation and this strategic location and a wider range of suitable uses (**Figures 25 and 26**).



Figures 25 and 26 | Botany Road elevation of Building D envelope (left) and Cope Street elevation of Building C envelope showing expanded commercial use opportunities

The Department considers the amended proposal has appropriately addressed concerns about apartments facing Botany Road by limiting the use of the podium for commercial purposes only. The Department has also undertaken a detailed assessment of the indicative proposal against the requirements of the ADG and is satisfied the amended building envelopes can comply with solar access, noise and ventilation requirements. The Department is therefore satisfied the proposal can provide appropriate levels of residential amenity for future occupants.

The Department also considers the proposed increase in additional commercial floor space is acceptable as it would allow for the redistribution of floor space from the residential towers to the mid-rise commercial towers. This would reduce the overall bulk of the towers and provide an opportunity to reduce the overshadowing impacts to Alexandra Park. Increasing the commercial floor space would also increase employment generation at the site and allow for reduced carparking to be provided.

The Department also notes the podium would be activated on all street frontages providing a vibrant precinct around the new Metro Station.

The Department is therefore satisfied the proposal can accommodate a suitable mix of residential and commercial uses at the detailed design stage to maximise employment generation while at the same time, maximising residential amenity.

6.3 Open Space and Public Domain

Open Space

The Concept proposal includes a new publicly accessible open space adjacent to the entrance to the new Waterloo Metro Station along Cope Street and a smaller plaza on Raglan Street.

Public submissions raised concern the proposal does not provide enough open space, citing that only 15% of the site area has been proposed as public open space. Some submissions also raised concern about the proposed Cope Street plaza having low amenity because it is overshadowed, and that consideration should be given to alternatives to the Plaza with softer landscaping.

The Applicant's RtS amended the Concept proposal to increase the size of the Cope Street Plaza from 1,370 m² to 1,650 m² (**Figure 28**). The proposed Cope Street Plaza together with the proposed publicly accessible plaza on Raglan Street (with a minimum area of 550m²) would now provide a total of 2,200m² open space to satisfy the requirement adopted for the Waterloo SSP (Clause 6.45 (1)(c) of SLEP).

The Applicant's RtS also deleted Building H (**Figures 27 and 28**) to reduce overshadowing and improve the amenity of the Cope Street Plaza.

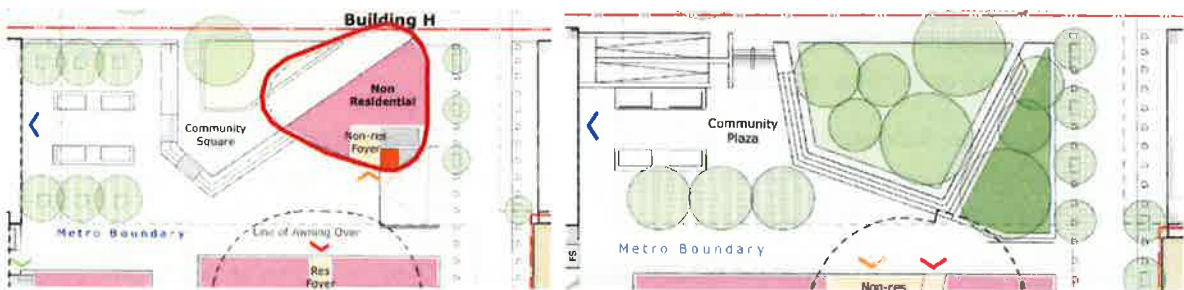


Figure 27 | Left: Exhibited Cope Street Plaza at ESI stage containing Building H, with total building footprint in red outline. Right: **Figure 28** | Cope Street Plaza layout at RtS stage with Building H removed

The Applicant's RtS also included additional Design Guidelines for the proposed open spaces including:

- at least 50% of the publicly accessible open space meets the wind criterion for sitting
- at least 50% of the area of the Cope Street Plaza receives at least two hours sunlight between 9am and 3pm on 21 June
- at least 50% of the publicly accessible open space meets the wind comfort criteria for sitting. Outdoor dining and casual seating areas should correspond with these areas.

The Applicant's RtS also submitted an additional Pedestrian Wind Environment Study (Wind Study) and Solar Access Analysis demonstrating the proposal is capable of meeting the above additional Design Guidelines.

The Department accepts the findings of the RtS Solar Access Analysis and Wind Study which demonstrated the proposed Cope Street Plaza will support good amenity. The Solar Access Analysis demonstrated Cope Street Plaza will receive more than 50% solar access for more than 2 hours in midwinter (**Figure 29**). The Department also notes Raglan Street Plaza will receive excellent solar access due to its northern orientation.

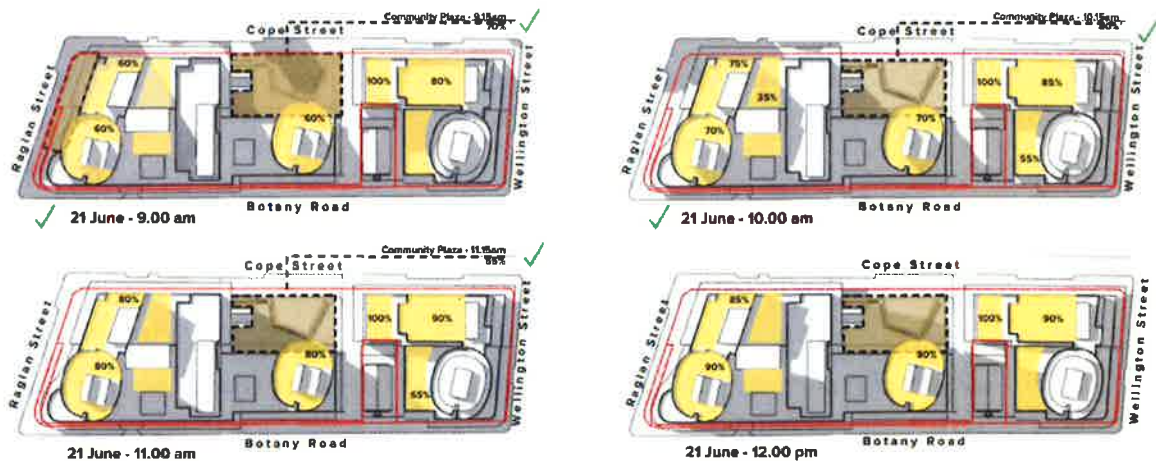


Figure 29 | Shadow diagrams showing solar access to Cope Street Plaza from 9am to 12noon in midwinter

The updated Wind Study indicated the whole area of the proposed Cope Street Plaza will achieve comfort criteria for sitting subject to mitigating measures comprising a deep impermeable awning along the western edge of the plaza and planting of evergreen shrubs along the southern edge.

The Wind Study also indicated the proposed Raglan Street Plaza will achieve sitting criteria for the area intended for potential outdoor uses, complementary to proposed retail shop fronts, and will achieve standing criteria for the area near the entrance to the Metro Station.

Although the Wind Study is based on the indicative design, and the detailed design may generate a different built form within the envelopes, the Department is satisfied the worst-case scenario has been tested as the building height and bulk parameters are currently set as maximums.

The Department is therefore satisfied the amended proposal complies with the amount of open space required under the SLEP and would achieve an acceptable level of amenity subject to the proposed Design Guidelines, and further refinement of the detailed design at the detailed application stage.

Pedestrian Capacity and Connections

The proposal provides for new public domain areas and through site-links to support interchange from the Metro Station to buses along Botany Road and to improve pedestrian capacity, connection and amenity around the site and along street frontages. The Concept proposal identifies:

- A. a 10m wide laneway between the south-west corner of Cope Street Plaza and Botany Road providing more direct access to Botany Road bus interchange and development to the south and south-west of the site (marked A with red arrow in **Figure 30**)
- B. a 6.5m wide podium setback from the Botany Road property boundary along the same alignment as the Waterloo Congregational Church which provides space for bus stops and waiting areas for the proposed Botany Road bus interchange (marked B with red arrow in **Figure 30**)
- C. an indicative covered walkway or arcade within the proposed podium from the new Metro Station entry to bus stop on Botany Road (marked C and shown in yellow in **Figure 30**).

The proposal is supported by an indicative car parking, access and circulation plan (**Figure 30**). The proposal will need to be coordinated with the Station Design Precinct Plan (SDPP) and Interchange Access Plan (IAP) required under the infrastructure approval (CSSI 7400). The finalisation of both the SDPP and IAP is not required before the commencement of above ground works for the station.

The Department notes the submitted Transport Impact Assessment Report and the Waterloo Interchange Planning Technical Note estimates an additional 373 pedestrian trips will be generated by the proposed OSD development during the AM peak hour in the year 2036. This represents only 6 % of the total peak pedestrian trip generation of 6,423 movements for the site, which will be dominated by commuters accessing the new Waterloo Metro Station.

The pedestrian demand applied within the Applicant’s pedestrian assessment includes the Waterloo Station demand for peak periods in 2036, current background movement and assumed growth resulting from the staged development of the wider precinct and its surroundings (including Metro Quarter, Waterloo Estate, and Australian Technology Park). It also considers demand surges and the operation of Sydney Metro, traffic signals and bus services.

The modelling provided in the Waterloo Interchange Planning Technical Note found a generic 3 m wide footpath can provide safe and efficient operating conditions at Level of Service C (meaning typical average pedestrian occupancy and flow volume per square metre, neither free flowing nor congested) for two-way pedestrian flow for over 7,000 people per hour. The assessment of forecast demand indicates peak hour flows of less than 3,000 along the respective footpaths surrounding the site.

The Department therefore accepts the proposed footpath widths of 6 – 10 m along Botany Road and 9.5 m and 7.4 m along Raglan Street and Wellington Street would be sufficient to accommodate anticipated pedestrians and these footpaths have additional capacity and amenity for active outdoor uses. The Department therefore considers the PRP recommendation to extend the to 6.5 m Botany Road setback further north to allow a 10 m wide footpath is not required to meet the needs for pedestrian capacity.

The Department also notes the Applicant’s RtS is supported by a Pedestrian Wind Environment Study which confirmed the key intersections and areas along the active street frontages of the site will meet comfort criteria for standing subject to recommended mitigating measures (**Figure 33**).



Figure 33 | Extract from Pedestrian Wind Environment Study showing wind criteria applied to street frontages and public domain (Source: Applicant’s RtS)

The Department also accepts the findings of the Transport Impact Assessment that pedestrian movements would be well serviced by a covered walkway or arcade (marked “C” in **Figure 30**) between the new Metro Station and the bus stops on Botany Road. The modelling indicated a Service Level of A would be achieved by this covered connection, meaning the highest available pedestrian occupancy and flow volume per square metre.

The Department also supports the proposed through-site link providing a weather protected pedestrian route for Metro and bus interchange. The Department notes the location and design of this through-site link will be confirmed with future detailed design and be guided by the detailed contents of the Design Guidelines (**Condition A14**).

The Department is therefore satisfied the proposed pedestrian connections would have sufficient capacity to meet pedestrian demand and comfort criteria.

Pedestrian Safety

The Concept proposal includes a 10 m setback between the proposed podium below Building E (central tower) and the Waterloo Congregational Church. The setback would be designed as a laneway for vehicles to access car parking to/from Cope Street and also supports pedestrian and cyclist through-site access between Cope Street Plaza and Botany Road.

Council raised concern that the traffic study did not contain vehicle queuing information for the proposed laneway and raised concerns about vehicle and pedestrian/cyclist movement and functionality of the new laneway in peak hours. Council also considered there should be a mid-block pedestrian crossing along Botany Road alongside the same or similar alignment as the proposed laneway.

The Applicant submits the proposed 10 m wide laneway next to the Church will be a pedestrian and cyclist friendly environment with low vehicle volume. The Applicant’s additional Traffic Impact Assessment submitted at the RtS stage identified the maximum peak hour traffic volume in the laneway is approximately 104 trips per hour. This equates to an average of approximately one vehicle every 35 seconds during peak hour and will result in no queuing along this laneway.

The submitted Design Guidelines indicates a 6 m wide two-way carriageway and separate 4 m wide pedestrian/cyclist path can be provided within the 10 m setback (**Figures 34 and 35**).

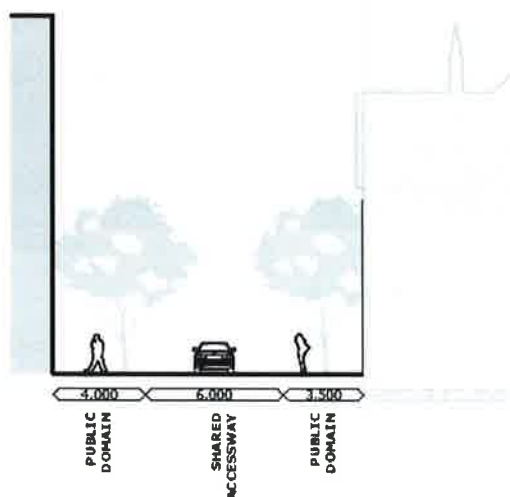


Figure 34 | Section of proposed shared laneway
(Source: Applicant’s RtS)



Figure 35 | Artist’s impression of proposed laneway (Source: Applicant’s EIS)

The Department notes the proposal would result in approximately 104 trips per hour during the peak, which slightly exceeds the maximum 100 vehicles per hour recommended in the Transport for NSW Safer Speeds Policy and Guidelines for Shared Zones. The Department notes the 104 trips is based on an indicative mix of land uses and the proposed car parking rates. As discussed further in Section 6.5 of the report, there is an opportunity to reduce this trip generation through reduced car parking rates to meet the safety threshold for a Shared Zone.

The Department also notes the proposed 10 m wide laneway provides a range of design options to deliver a safe environment for pedestrians, cyclists and drivers. As shown in **Figure 34** above, there is sufficient width to provide a separate driveway and footway. As such the Department is satisfied a safe pedestrian-friendly environment can be provided subject to further detailed design refinement at the detailed application stage.

With regards to Council's concerns about the need for a new pedestrian crossing over Botany Road, the Department notes the pedestrian traffic from the over station development represents only 6 % of the total peak pedestrian trip generation for the site. Therefore, the Department is satisfied the proposed OSD would not generate the need for a new pedestrian crossing on Botany Road. The Department considers the detailed design of pedestrian connections at the site will need to be coordinated with the SDPP and IAP requirements under the infrastructure approval (CSS1 7400). The IAP will need to accommodate the increased pedestrian movements to and from the new Waterloo Metro Station and the interchange between Metro and bus services.

Tree Canopy Cover

The Concept proposal is supported by an indicative landscaping plan which identifies opportunities for tree planting and landscaping to improve site amenity and to increase urban tree canopy (**Figure 36**).

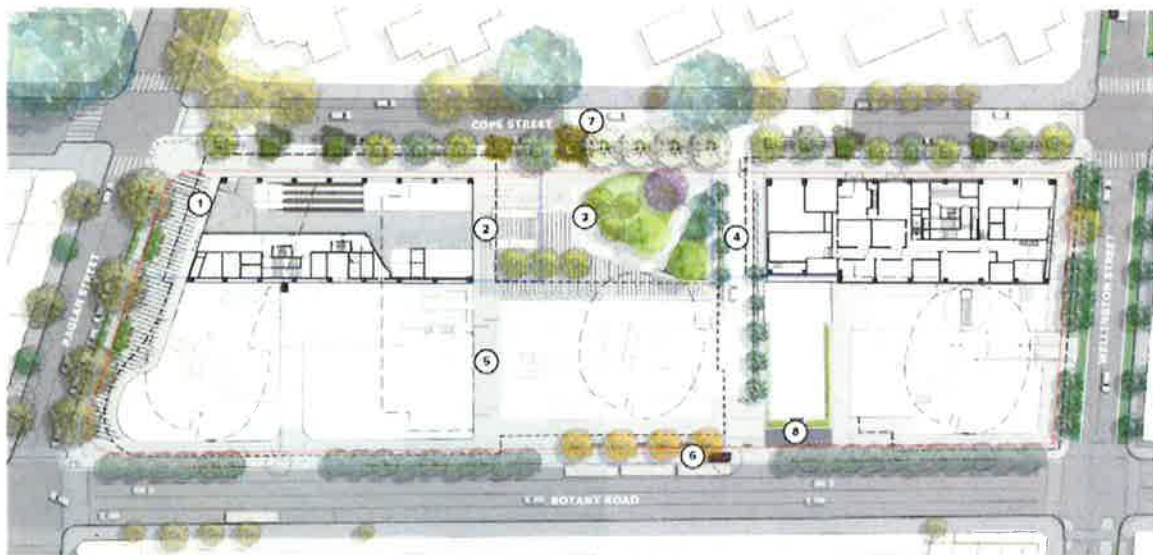


Figure 36 | Indicative Landscape Plan for the development (Source: Applicant's RtS)

The Environment, Energy and Science Group of the Department (formerly the Office of Environment and Heritage) recommended further tree planting to increase soft landscaping, promote connection to nature and provide a resilient, healthy and diverse urban forest.

Council's submission supported the provision of street trees along Botany Road but raised concerns over the positioning of the trees close to the kerb due to Roads and Maritime Services (RMS) restrictions. Council recommended the street trees along Botany Road be setback from the kerb a minimum of 3 m to enable a more complete canopy and reduce the likelihood of vehicle strike. Council also raised concern about the alignment of the basement providing inadequate soil depth for street trees.

The Waterloo SSP PRP recommended that additional podium and basement setbacks should be provided from Botany Road to accommodate tree planting and increase tree canopy cover in response to the Premier's Priority for increasing tree canopy and green cover across Metropolitan Sydney. The Waterloo SSP PRP recommended 50% street tree canopy target should be achieved by increasing the setback of the proposal from Botany Road.

In response to these issues, the Applicant has further investigated the Concept's ability to support tree planting along Botany Road (and other street frontages) and within the site. The RtS amended the basement setback along Botany Road to accommodate deep soil for proposed street trees in the vicinity of bus stops and shelters (Figures 37 and 38).

The Applicant also confirmed that RMS accepted trees can be planted along the existing tree line adjacent to Botany Road (at 650 mm centres off kerb). The Applicant also further investigated the opportunity to increase tree setbacks from the kerb line to 1 m and up to 1.5m. The actual alignment will be further determined by additional underground services investigation.

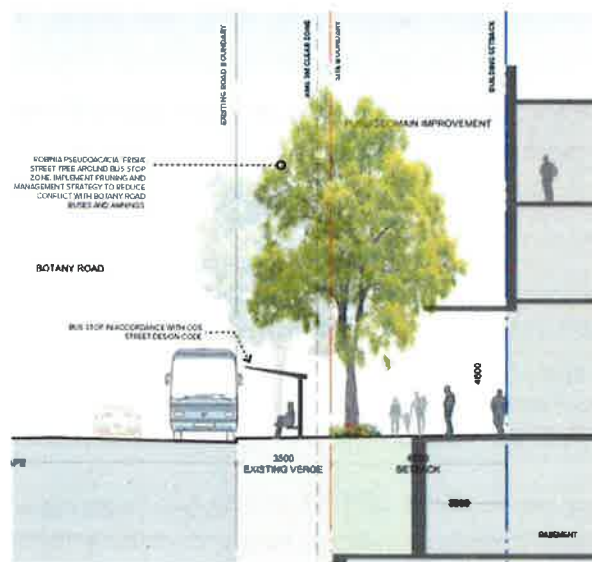


Figure 37 | Street section showing street tree soil planting depth from basement setbacks off boundary (Source: Applicant's RtS)

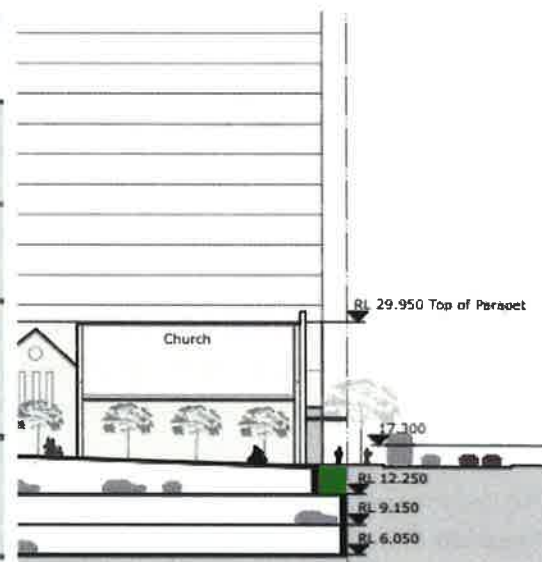


Figure 38 | Extract of section of indicative design showing increased basement setbacks off site boundary marked as green (Source: Applicant's RtS)

The Department acknowledges the importance of planting trees to soften the appearance of the development, improve the amenity of the site and reduce urban heat effects consistent with strategic priorities to increase the tree canopy across Metropolitan Sydney. The Department therefore required the Applicant to consider increasing the canopy cover. The Applicant subsequently amended the proposal to increase the proposed tree canopy cover targets. The Applicant proposes the targets be increased to:

- a minimum 23% overall canopy cover (i.e. the combined canopy area of all trees contained within the site and adjacent streets measured to the centre line of the roads)
- a minimum 50% street canopy cover (i.e. the combined area of all tree canopy contained within the road reserve including footpaths and pedestrian areas and measured from the property boundary to the centreline of the adjoining roads).

The Department considers the proposed tree canopy cover targets as amended are acceptable, noting the targets:

- represent a significant increase from the existing 6 % street tree canopy cover and no on-site trees

- are consistent with Waterloo PRP advice, which recommended a 50 % street tree canopy cover
- are significant for a site which is heavily constrained by rail infrastructure and extensive underground services.

The Department notes further building setback along Botany Road as recommended by Council and the Waterloo PRP will no longer be required as the canopy targets can be achieved by the current proposal.

However, the Department considers further investigation during detailed design development must be undertaken to confirm actual tree planting location, size and species to maximise tree planting and tree canopy cover. The Department recommends the Design Guidelines be amended (**Condition A14**) to guide the detailed design including:

- incorporating recommendations from the Waterloo PRP that the setbacks and articulation of built form, including awnings and canopies, should support street tree planting and tree canopy cover
- the selection of species and planting locations must be appropriate to site and local conditions such as Council's relevant street tree policy, potential impacts from heavy vehicles traffic, and services and infrastructure.

The Department's assessment therefore concludes that the amended proposal has satisfactory commitments to provide an appropriate level of street and on-site tree canopy cover, subject to the recommended amendments to the Design Guidelines (**Condition A14**).

6.4 Residential Amenity

The Concept proposal does not seek approval for a minimum residential floor space or residential dwellings. An indicative scheme is provided to demonstrate future development could comply with the requirements of SEPP 65 and the Apartment Design Guide (ADG). The indicative scheme relates to a land use mix with approximately 700 residential apartments which represents an option if residential use is maximised in the proposed building envelopes.

The Department's detailed assessment of the proposal with respect to SEPP 65 and the ADG is provided in **Appendix F**. The key issues associated with the proposal relates to solar access, noise and natural ventilation. These issues are further discussed below.

Solar Access

The ADG requires at least 70 % of apartments and 50% of communal open space receiving a minimum of 2 hours solar access between 9 am – 3 pm at mid-winter. However, the initial proposal had apartment orientations toward Botany Road which responded to the noise environment but prevented solar access to living rooms and balconies. To address this issue, the Applicant's RTS included minor modifications to the proposed building envelopes to allow more options for apartment orientations to address amenity concerns. The RTS's indicative scheme demonstrated a minor rotation of the proposed towers (15 degrees to achieve true north) will result in compliance with solar access under the ADG (**Figure 39**).



Figure 39 | Typical floor level of indicative scheme identifying a possible layout for residential uses in mid-rise and tower buildings and their solar access compliance

The Department accepts the proposed building envelopes above the podium are capable of ADG solar access compliance for apartments and communal open space.

Noise attenuation and natural ventilation

SEPP 65 and the ADG requires 60% of apartments within the first 9 storeys of a residential flat development to achieve natural cross ventilation (Section 4B-3). The Department acknowledged road noise from Botany Road, with high traffic volumes and heavy vehicle movements, presented challenges for the achievement of acceptable residential amenity with respect to acoustic attenuation and natural ventilation. The Department requested additional information to allow further assessment on these residential amenity criteria, which have been provided in the Applicant's RtS as discussed below.

The Applicant's Noise Assessment Report submitted with the EIS notes the proposal will meet indoor residential noise criteria under State Environmental Planning Policy - Infrastructure (ISEPP) with closed windows and mechanical ventilation. However, SEPP 65 and the ADG maintains a requirement for natural ventilation for noise affected apartments, with windows or other means of natural ventilation open.

The Applicant's RtS includes an additional acoustic assessment report to address concerns that acoustic attenuation to road noise from Botany Road would conflict with ADG requirements for natural ventilation. The additional acoustic assessment made references to SDCP requirements and a draft document prepared by Council, *Draft alternative natural ventilation of apartments in noisy environments performance pathway guideline*.

A comparison of maximum internal residential noise criteria under ISEPP and the SDCP is provided below:

Table 2 - Applicable Design Criteria for Waterloo Metro Quarter

Operational Scenario	Internal Space	Most Onerous Noise Criteria	Relevant Guideline Reference
Windows Closed	Bedrooms (10pm – 7am)	35 dBA	Infrastructure SEPP
	Main living areas (24 hours)	40 dBA	Infrastructure SEPP
Windows Open	Bedrooms (10pm – 7am)	45 dB LAeq (1hour)	SDCP 2012
	Main living areas (24 hours)	55 dB LAeq (1hour)	SDCP 2012

Figure 40 | Extract from additional Acoustic Assessment lodged with RtS showing noise criteria considered (Source: RtS)

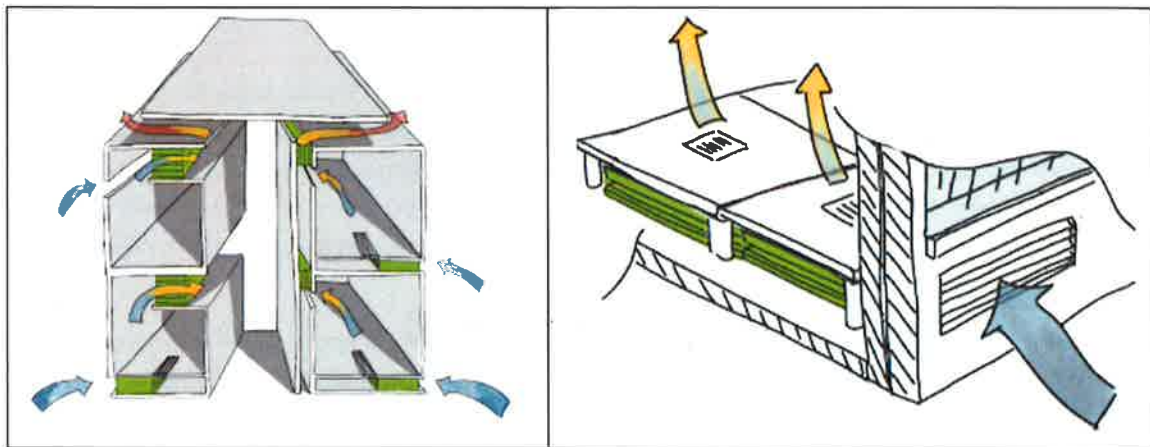
The additional acoustic assessment considered options for acoustically attenuated openings to meet both ventilation and acoustic requirements with reference to SDCP and Infrastructure SEPP controls. The SDCP controls were adopted as these were more stringent and appropriately relate to SEPP 65 ventilation requirements. The

impact is measured with windows or other passive systems open and does not consider mitigation through conventional means such as thick laminated glazing or double glazing when windows are closed.

The RtS additional acoustic assessment demonstrated 45 apartments (6.7%) modelled in the indicative scheme will require acoustically attenuated openings in accordance with the ADG and Council's draft alternative ventilation guideline.

The Department accepts natural ventilation and acoustic attenuation along Botany Road is achievable with appropriate design and building technology. The Department notes other residential developments along busy roads, including the approved development at 74-88 Botany Road opposite the site, have acoustically treated openings that achieve natural ventilation with the use of ventilation chimneys or plenum systems (**Figures 41 and 42**).

Furthermore, the Department notes the revised proposal no longer includes apartments within the podiums and the redistribution of residential floor space to commercial floor space would further improve residential amenity (**Condition A14**).



Figures 41 and 42 | Examples of acoustically attenuated openings allowing for natural ventilation (Source: Applicant's RtS)

Conclusion

The Department is satisfied the Concept proposal demonstrates acceptable residential amenity, compliance with SEPP 65 and the Infrastructure SEPP can be achieved and future residential development may require detailed acoustic and ventilation solutions along Botany Road.

6.5 Car Parking

The original proposal sought approval for 427 car parking spaces based on the maximum car parking rates adopted in SLEP and an indicative mix of land uses including up to 700 apartments and 12,000m² of non-residential floor space.

The Applicant's RtS also provided additional information on traffic and parking with an alternative land use mix, with a higher level of non-residential floor space at 20,000m². **Table 7** below provides a breakdown of the car parking generation of the original proposal and the additional proposal considered in the RtS.

Table 7 - Comparison of car parking spaces based on two indicative land use scheme

Land uses	SLEP maximum car parking rates	Exhibited indicative land use scheme		RtS indicative land use scheme	
		GFA / Number of dwellings	Car spaces	GFA / Number of dwellings	Car spaces
Residential	0.1 space per studio dwelling	22	2	14	2
	0.3 space per 1 bedroom dwelling	294	88	189	57
	0.7 space per 2 bedroom dwelling	314	220	202	141
	1 space per 3+ bedroom dwelling	70	70	45	45
Retail	1 space per 260m ² GFA	3,905m ²	15	3,905m ²	15
Commercial	1 space per 270m ² GFA	8,645m ²	32	20,000m ²	74
Total	GFA/Car Spaces	700 dwellings 12,550m ² retail and commercial	427	450 dwellings 23,905m ² retail and commercial	334

Council acknowledged the proposed quantum of car parking complies with the SLEP rates, but considered it to be an excessive amount of car parking for a development above a Metro station. Council raised concern this amount of parking would impact the objective of the Metro station which aims to shift people from cars to public transport. Council recommended the proposal should strive for zero car parking provision or absolute minimum, so it would generate less vehicle trips and reduce traffic impacts on the congested road network.

Public submissions provided inconsistent views on the proposed car parking provisions. Some submissions supported the position that minimal parking should be provided, in recognition that a new Metro station would be delivered on site. Other submissions considered additional parking should be provided to reduce on-street parking impacts.

The Department engaged an independent traffic and transport consultant to review the submitted traffic and transport reports. The independent consultant considered that adopting the maximum SLEP car parking rates is not consistent with best-practice transit-oriented development and the achievement of the project's modal split targets (40% travel by train, 25% walking, 20% private vehicle, 10% bus, 5% cycling). The independent consultant supports reducing car parking below the maximum permissible car parking rates under SLEP to actively encourage transport use over car ownership. The independent consultant also recommended the proposal should adopt lower car parking rates similar to other over station developments, rather than the applicable maximum rates.

The Department notes all approved and proposed over station developments along the Sydney Metro City and South West corridor seek to maximise the transport benefits of the Metro service by limiting the provision of car parking spaces on site. The Department notes the maximum car parking rates applying to the approved Concept Applications for the Pitt Street over station developments are the same rates as those applying to Waterloo Metro Quarter. However, the Pitt Street Concept Approvals adopted maximum numbers of 35 and 60 spaces for Pitt Street South (SSD 8875) and Pitt Street North (SSD 8876) respectively, well below the maximum car parking rates.

Following consideration of the Applicant's RtS and advice from the independent traffic consultant, the Department requested the Applicant to reduce car parking below the maximum car parking rates contained in the SLEP.

In response, the Applicant reduced the overall provision of car parking by providing a maximum cap for all residential car parking and seeking a significantly lower parking rate for non-residential uses. This would comprise a maximum limit of 170 car spaces for all residential uses and a non-residential car parking rate of 1 space per 435m². The Department notes the amended car parking provisions represent an overall 47% reduction in the number of car parking spaces compared to the exhibited proposal.

The Department is satisfied the amended car parking provisions are appropriate, noting:

- the reduced car parking spaces would actively encourage a shift in travel modes from private car use to public transport consistent with strategic policies for reducing car dependency in highly accessible locations
- the reduction in car parking spaces is consistent with other approved over station developments which have sought to maximise the transport benefits of the Metro service by limiting the provision of car parking spaces.
- the reduced car parking rate is consistent with census data showing strong trends in the increase of households with no car spaces in Waterloo. The majority of households (65 %) in Waterloo do not own a motor vehicle
- the proposed car parking rate is supported by the Department's independent consultant.

The Department also recommends future detailed applications be supported by a Car Parking Strategy and Management Plan to (**Condition B9**):

- ensure an even distribution of residential car spaces by specifying the allocation of residential car spaces up to the proposed limit should not the maximum rates under the SLEP
- provide accessible car spaces, motorcycle spaces, bicycle spaces and end-of-trip facilities based on SDCP requirements.

Subject to the recommended conditions, the Department is satisfied the reduced car parking provision is acceptable and will support a shift in travel mode from private car use to increased public transport, in a highly accessible location.

6.6 Design Excellence

The finalised Waterloo SSP adopted Clause 6.21 of SLEP 2012 and therefore outlines the provisions for design excellence. The finalised Waterloo SSP however, excludes the site from the award of design excellence bonus floor space under Clause 6.21(7) provisions.

Clause 6.21(3) requires that development consent must not be granted unless the proposed development exhibits design excellence. Considerations to determine if a development exhibits design excellence are defined by Clause 6.21(4). Clause 6.21(5) clarifies when a competitive design process is required.

The Applicant proposes a Design Excellence Strategy incorporating design review process in lieu of a competitive design process for the Sydney Metro Integrated Station Development sites within the City of Sydney, including the proposed over station development for the Waterloo Metro Quarter in respect to the provisions of Clauses 6.21(3) and (4) of the Sydney LEP 2012.

The application seeks to utilise Clause 6.21(5) of the Sydney LEP 2012 by demonstrating that the requirement to undertake a competitive design process is not reasonable or necessary for the project. The Applicant requested the consent authority should exercise its discretion available under Clause 6.21(6) of the SLEP and accept the proposed Design Excellence Strategy as an appropriate process to achieve Design Excellence and in delivering the highest standard of architectural, urban and landscape design.

The submitted Design Excellence Strategy sets out a framework for design review and competitive selection as summarised in **Table 8 and Appendix I of the EIS**.

Table 8 | Summary of key processes in Sydney Metro’s Design Excellence strategy.

Design Phases	Design Review	Key elements
1. Design Quality Expectations	Sydney Metro Design Review Panel (DRP)	<ul style="list-style-type: none"> • Capture project requirements including design objectives and guidelines to inform the development of the project, including the concept development application • Set project benchmarks • Chaired by GANSW • Also provide design advice to station design and associated public domain as required under infrastructure approval, CSSI 7400.
2. Competitive Selection	Design Excellence Evaluation Panel (DEEP)	<ul style="list-style-type: none"> • Inform a competitive selection process by producing a Design Excellence Report that identifies to the tender evaluation panel the elements of each tender scheme that contribute to design excellence and elements where further design refinement will be required • Draws on members of the Sydney Metro Design Review Panel • Chaired by GANSW • Include a nominee nominated by GANSW on behalf of the Department • Include a member nominated by Council.
3. Design Integrity	State Design Review Panel (SDRP) or endorsed alternative (Condition A15)	<ul style="list-style-type: none"> • Independent design review • Chaired by GANSW • Recommendation to draw on members of Sydney Metro DRP to ensure consistent design advice and sufficient technical expertise.

Council objected to the proposed Design Excellence Strategy, citing that it does not meet the intent of the Design Excellence provisions in SLEP 2012. The Council stated the proposed Strategy does not involve an architectural design competition as required by SLEP.

Council’s submission also notes both the submitted EIS and attached Visual Impact Assessment (VIA) rely heavily upon the achievement of design excellence to address the visual impacts of the proposed towers. As there is no competitive design process proposed, Council questioned whether the achievement of design excellence can be relied upon to address visual impact concerns.

The Applicant stated in its EIS and RtS submissions that a design competition is unreasonable and unnecessary because a competitive process would compromise the benefits of an integrated design approach for the approved station and proposed over station development. The Applicant claimed the design and constructability of public domain areas across the site are subject to requirements of both the infrastructure approval and the proposed concept. The Applicant also contended the competitive design process anticipated in the SLEP does not acknowledge the complexities of the metro infrastructure projects. The Applicant said a highly technical

solution is required to deliver the proposed basement adjacent to the metro box to address out of balance loads and constructability issues.

The Applicant's RtS did not include a revised Design Excellence Strategy, but accepted amendments to the Design Excellence Strategy would be made to ensure an independent design review panel, including the NSW Government Architect, would review the detailed design after the determination of the Concept application, consistent with requirements for Pitt Street Over Station Developments would be required (SSD 8875 and SSD 8876).

The Concept Approvals for the Pitt Street Over Station Developments approved the Sydney Metro Design Excellence Strategy subject to amendments specified by conditions of consent for the detailed design of the proposals to be reviewed by the State Design Review Panel or an alternative panel endorsed by the Government Architect.

Consideration

The statutory requirement for a competitive design process under the SLEP only applies to the proposed over station development. If the SLEP provisions were strictly applied, the Applicant would only be required to run a competitive design process for the over station development, but the design of the station will be subject to Design Review requirements under the infrastructure approval (CSSI 7400).

The Department has consulted with the Government Architect who supported Sydney Metro's proposed Design Excellence Strategy in lieu of a competitive design process required under the Sydney Local Environmental Plan 2012 (SLEP). The Government Architect accepted the benefits of the proposed integrated design process outweighs the risks to design excellence posed by a non-integrated competition held for the over station development only.

In supporting Sydney Metro's Design Excellence Strategy, the Government Architect acknowledged the complexity in the delivery of integrated station developments where development is located above the "station box". The complexities include engineering requirements associated with the construction works above the metro station and coordination with the delivery of critical infrastructure.

The Department agrees with the views of the Government Architect and supports the integrated design approach for the over station development. The Department notes the Concept for Waterloo Metro Quarter includes new open space such as the proposed Cope Street Plaza and other public domain upgrades that interact with both the design of the proposed over station development and the station structures. Further, the Department's assessment identifies the need to support pedestrian priority across the site which will be an important transport hub, servicing interchange between the new Metro station fronting Cope Street and bus stops along Botany Road and access from Waterloo Estate. These will require good site permeability and design integration between the over station development and the approved station (see **Section 6.2** – Open Space and public domain).

The Department therefore accepts Sydney Metro Design Excellence Strategy to support an integrated design approach subject to the State Design Review Panel or similar panel will provide independent advice to subsequent applications, which are proposed to be lodged by private developers rather than Sydney Metro (**Condition A15**).

To ensure consistency of advice and sufficient technical expertise due to the specialised nature of integrated station development, the Department recommends the State Design Review Panel or similar Design Review Panel (should SDRP cease to operate after current pilot program) for subsequent development applications shall include at least one member of the Sydney Metro Design Review Panel as endorsed by GANSW (**Condition A15**).

Conclusion

The Department concludes the integration of the design of the over station development and the approved Metro station is critical in delivering good public domain outcomes for the site. The Department supports Sydney Metro's Design Excellence Strategy in lieu of a competitive design process required under the Sydney Local Environmental Plan 2012 (SLEP) because of:

- the Strategy includes processes for competitive selection in lieu of a competitive design process
- the Strategy includes project benchmarks that are capable of delivering a high quality architectural and urban design outcome
- the design excellence benefits of integrated station development (integrating the design and construction of the approved station with the over station development) as supported by the Government Architect
- the need for consistent design advice to support both the approved station and the over station development, which have already been undergoing design review by the Sydney Metro DRP
- the complexity and technical expertise required for over station development are not conducive to design competition
- the positive impact on delivery of critical infrastructure coupled with reduction in construction impacts.

The Department's assessment has considered the proposal against the matters specified in Clause 6.21(4) of SLEP as detailed in **Appendix F**. The Department is satisfied that the proposal exhibits Design Excellence because:

- the proposed Design Excellence Strategy will support an integrated design approach for both approved station and the proposed over station development
- the proposal will meet the objectives of the Design Excellence provision in the SLEP in delivering the highest standard of architectural, urban and landscape design for the project and for the site having considered the specific site constraints and project complexities.

Accordingly, the Department recommends the Minister:

- is satisfied that the proposal exhibits design excellence under Clause 6.21(3) of Sydney LEP 2012 by adopting the reasons set out in this report; and
- exercise his discretion under Clause 6.21(6) of Sydney LEP 2012, that a competitive design process is not required because he can be satisfied that such a process would be unreasonable and unnecessary for this proposal and further that he accepts, as appropriate, the proposed Design Excellence Strategy subject to future detailed design applications to be reviewed by the SDRP or similar independent panel as it will deliver the highest standard of architectural, urban and landscape design as set out in Clause 6.21(1). (**Condition A15**).

The Department's recommendation is consistent with the Concept Approvals for the Pitt Street Over Station Developments.

6.7 Other Issues

The Department's consideration of other issues is summarised in **Table 9**. These are issues raised by the Waterloo PRP, Council, government agencies and/or public submissions which are not otherwise key issues addressed above.

Table 9 | Summary of other issues raised

Issue	Findings	Recommended Condition
Affordable and Social Housing	<ul style="list-style-type: none"> • Council and public submissions raised concerns with the amount of proposed affordable and social housing, as well as the proposed 10-year duration for affordable housing nominated in the EIS. • The Waterloo SSP (adopted Clause 6.45(2)(a) of SLEP) requires at least 5% of the GFA of residential accommodation be used for affordable housing. Those dwellings must also be at least 50m² (Clause 6.45(2)(b)). • The Applicant’s RtS clarified that affordable housing dwellings will be dedicated in perpetuity and 70 social housing dwellings will be delivered at the site, regardless of total residential floor space/dwellings. • The Department notes the indicative scheme includes up to 700 dwellings. This means the site can deliver approximately 15% affordable housing and social housing. • The Department is satisfied the proposal includes affordable housing as required by the Waterloo SSP process and suitable commitments for social housing. The Department accepts details to meet the affordable housing requirement will be subject to further assessment within subsequent applications. • The Applicant has provided a Public Benefit Offer in relation to commitments for affordable and social housing. The Department recommends that a Planning Agreement or other legal binding arrangement be made. 	<ul style="list-style-type: none"> • Condition A12
Community Facilities	<ul style="list-style-type: none"> • Council raised concern about the future operating model for community facilities and recommended the uses should be designed to support the needs of Waterloo Metro Quarter and Waterloo Estate. • The Department is satisfied the Concept includes a minimum of 2,000m² of community facilities as a required by the Waterloo SSP (Clause 6.45(1)(b) of SLEP). • The Department also notes the Design Guidelines provide the following directions for the community facilities at the detailed design phase: <ul style="list-style-type: none"> – the range and operating model of community facilities will be consistent with the Sydney LEP definition, comprising a building or place owned or controlled by a public authority or not-for-profit organisation and used for physical, social, cultural or intellectual development or welfare of the community – the community facilities can be located within the podium and should have an identity, connection and presence to Cope Street Plaza – the entrance to the community facilities should be easily identifiable and accessible from the plaza. 	<ul style="list-style-type: none"> • no conditions necessary

- The Department is satisfied the community facilities will be provided as per the Sydney LEP requirements. The Department also supports the proposed Design Guidelines, particularly with regards to providing a connection and presence to Cope Street Plaza which will benefit future community uses and activation of the precinct.

Wind Impacts

- Council recommended the proposed towers should be setback from the podiums to manage wind impacts upon the public domain.
- The Applicant's RtS is supported by additional wind modelling. The wind modeling demonstrated additional tower setbacks from the podiums are not necessary to ameliorate wind impacts (downwash) from the proposed indicative towers. The additional wind modelling identifies adverse wind impacts can be effectively mitigated by measures such as tree planting, awnings and screens.
- The Department accepts the findings of the additional Pedestrian Wind Environment Study provided with the RtS, based on the indicative scheme.
- In addition, the submitted Design Guidelines state the form of towers should respond to the wind conditions and could be either curvilinear or rectilinear, subject to appropriate mitigation of wind impacts on the public domain.
- The Design Guidelines also adopt the wind criteria from the additional Pedestrian Wind Environment Study and advice from the Waterloo SSP PRP.
- The Department is satisfied the Concept is capable of having acceptable wind impacts and that suitable wind mitigating measures are included within the criteria adopted and the Design Guidelines.

• **Conditions B13 and B14**

Heritage

- Council and public submissions raised concern about visual and streetscape impacts associated with built form on Waterloo Congregational Church (the Church) and the nearby Alexandria Park Conservation Area.
- To assess the potential heritage impacts of the proposal, the Applicant submitted a Heritage Impact Assessment which concluded the proposal would not have any detrimental impacts on nearby heritage items or conservation areas.
- The Applicant's RtS confirmed additional setbacks to the sides of the Church would be provided and wind mitigation structures were not required in the setback zones.
- The Department agrees the heritage impacts are acceptable as the proposal is compliant with the bulk, scale and density established for the site with the Waterloo SSP process and incorporates the recommendations of the Heritage Assessment.
- The Department has considered the impacts of the building envelopes on the Church in detail in **Section 6.1** and finds the proposal acceptable.

• **Condition B12**

**Solar Access
to 74-88
Botany Road**

- The Department recommends further consultation with the Church regarding the interface with the development and adopting additional design guidelines for the detailed design of structures and decluttering of setbacks near the Church.
- The shadow diagrams submitted with the proposal confirm the proposal results in a compliant outcome of more than 2 hours solar access in midwinter to surrounding residential uses, except for an approved but not yet built affordable housing development at 74-88 Botany Road (City of Sydney DA D/2016/563).
- The proposal overshadows living room windows and private open space facing Botany Road in the approved development. Currently 83% of the 63 apartments receive more than 2 hours solar access. The proposal would reduce solar access to 54% which is less than 70% as recommended in the Apartment Design Guide.
- The Applicant's RtS submitted the scale of Building A, from which the shadow is created, is appropriate and that any redistribution of the density of Building A to the other two towers would overshadow Alexandria Park which is less desirable than shadows cast on one adjoining development. The RtS argues the shadowing is a balanced outcome in the context of the SSP established character and function for the Waterloo Metro Quarter.
- The Applicant's RtS further submitted that there is a strong case for increased height and density at 74-88 Botany Road and other sites to the west of the proposal due to the transformative influence of the Metro station and network. The Applicant notes they are in consultation with the owners of 74-88 Botany Road in relation to re-orienting the approved apartments to the north and west and potentially increasing the scale of the development to raise apartments higher.
- The Department notes the following in relation to the overshadowing impact:
 - the SSP process established the height standards and FSR standard for the site and the concept proposal is fully compliant with these standards, therefore some expectation of overshadowing of adjoining properties is anticipated
 - the overshadowing occurs as a result of Tower A and to achieve a fully compliant solar access outcome, Tower A would have to be excised from the proposal entirely
 - the approved scheme for 74-88 Botany Road has not commenced and is not certain. The consent was issued in November 2016 and lapses after 5 years. The existing development on the land is a retail complex where overshadowing is not an issue
- no conditions necessary

- the Applicant will continue to consult with the adjoining owners on reorienting the approved scheme to gain solar access from other orientations..
- The Department is therefore satisfied the overshadowing impact of the proposal on the site is acceptable. The achievement of 54% solar access to the approved affordable housing development is considered acceptable, in the event that the approved configuration for 74-88 Botany Road proceeds.

<p>Traffic Generation</p>	<ul style="list-style-type: none"> • Council raised concern the traffic study lodged to support the proposal does not present sufficient traffic modelling to assess the potential traffic impacts associated with the proposal. Council also said traffic generation from retail and commercial uses has not been included in the traffic study. • Public submissions raised concern about the proposal increasing traffic in an already congested area. • The Department engaged a traffic consultant to undertake an independent peer review of the application which found the proposal to have satisfactory traffic and transport impacts. • The Department’s traffic consultant advised the Applicant’s traffic and transport assessments were adequate and the assessment has been carried out thoroughly and covers all issues required by the SEARs. • The Department’s traffic consultant noted the proposal would generate relatively low traffic volumes and would have a negligible impact on the performance of the surrounding road network. • The analysis confirms up to 145 trips in peak hour would be generated by the indicative land use mix, which the Department consultant confirms results in a very low impact on the network. The Department also notes the recommended reduction in car parking would further reduce traffic generation. • Further, the Department notes the surrounding local road network including key intersections will function at the same levels of service with or without the proposal. • The Department is therefore satisfied the proposal would not result in any significant traffic impacts. The Department also notes traffic generation would reduce as a result of the car parking approach discussed earlier in this report. 	<ul style="list-style-type: none"> • Conditions B15 and B16
<p>Environmentally Sustainable Development</p>	<ul style="list-style-type: none"> • Council raised concern about the ESD Report, the EIS and the Design Guidelines containing inconsistent intentions and less than best practice initiatives. Council recommended precinct-scale environmental infrastructure and clarification of commitments. • Public submissions also raised concern there were no requirements or commitments in the application to provide ESD initiatives such as solar power, water re-use, wind turbines or recycling. 	<ul style="list-style-type: none"> • Conditions B18 and B19

- The Department is satisfied the proposal is consistent with ESD principles and is satisfied the proposed sustainability initiatives will encourage ESD, in accordance with the objects of the EP&A Act. The ESD commitments include better than BASIX performance for energy and water, high NABERs ratings for commercial uses, and non-statutory targets of 6 star Green Star Communities rating and 5 star Green Star As Built rating for residential and office uses.
- The Department has also recommended a suite of conditions to ensure ESD measures including requirements for minimum Green Star ratings and better than BASIX compliance is achieved.

Flooding

- The concept application includes a Water Quality, Flooding and Stormwater Report providing recommendations for flood management, water quality targets and concept stormwater management.
- The site experiences flooding along Cope Street and Wellington Street and requires the Cope Street Plaza and the Wellington Street vehicle access to be raised above the adjacent footpath levels. Flood planning levels have also been provided for the concept proposal.
- The Department has reviewed and accepts the proposed flood planning levels adopted and notes the proposal can be designed to appropriately manage flood impacts.
- The Department notes flood management is a matter for resolution with the CSSI scope of the station works and recommends a further Flooding and Stormwater Assessment be prepared for any future Stage 2 SSD.

• **Condition B26**

Separation of assessment from Waterloo Estate

- Public submissions said Waterloo Metro Quarter should be assessed with Waterloo Estate to address cumulative impacts, such as density and overshadowing.
- The Department notes the timing of the SSP processes for the Waterloo Metro Quarter and Waterloo Estate was previously aligned. However, the Metro Quarter has proceeded ahead of the Estate to align the development more closely with the construction and opening of the Metro line.
- The Department notes the strategic planning framework for the Metro Quarter has been finalised and provides the necessary controls to assess the SSD. Strategic planning processes for the Waterloo Estate is ongoing and concepts for the redevelopment of the Estate are preliminary.
- The Department accepts the Metro Quarter is capable of assessment and development independent of the Estate and in line with the construction of the Metro station.

• no conditions necessary

Integration with Station works

- Council considered the SSD is premature as critical public domain matters have not been resolved as the CSSI Station Design Precinct Plan (SDPP) and Interchange Access Plan are yet to be prepared. Council says the SSD should be guided by the SDPP.

• no conditions necessary

- The Department considers the detailed design phase of future Stage 2 SSDs and the detailed design of the station works, can be carried out concurrently subject to the recommended conditions. This integrated design approach requires careful coordination between design teams.

Consultation with Waterloo Congregational Church

- The Department acknowledges consultation undertaken by the Applicant to date regarding the proposal and the issues raised by the Church. The Church owners did not raise concerns, but rather discussed their desires for operational needs and design of the surrounding public domain.
- The Applicant commits to consulting further with the owners of the Church during the detailed design phase.
- The Department recommends the Church be consulted during the detailed design phase on the relationship between the sites, including:
 - potential for Church gathering space
 - parking for wedding and funeral vehicles
 - waste and servicing and maintenance
 - the design of the public domain surrounding the Church.

• **Condition B11**

Local and regional infrastructure

- The Waterloo SSP process resulted in an SLEP clause which requires the Planning Secretary to certify that satisfactory arrangements have been made to contribute to State public infrastructure. The Clause requires the certification to be provided prior to granting consent.
- The Department's delegate on behalf of the Planning Secretary has certified that satisfactory arrangements for the proposal have been made.

- no conditions necessary



7. Evaluation

The Department has assessed the merits of the Concept proposal and all submitted documentation including the issues raised in submissions, as well as the Applicant's response to those issues.

The Concept proposal would create a new mixed-use precinct featuring residential, commercial and community uses as well as additional public open space in a location well served by existing and future public transport and services. In particular, the proposal would capitalise on the increased transport capacity being delivered by the new Metro Station.

The Department is satisfied the proposed development fully complies with the planning controls established through the Waterloo State Significant Precinct process and is compatible with existing development in Waterloo and Redfern including the existing 29 storey residential towers within the Waterloo Estate. Future Development Applications would also be guided by a set of Design Guidelines and a Design Excellence Strategy to ensure a high-quality architectural, landscape and urban design outcome is achieved on the site.

The Concept proposal would deliver public benefits including affordable and social housing dwellings in perpetuity, 2,000m² of community facilities and two new public plazas with a combined area of over 2,200m².

The Department is also satisfied that the RtS and subsequent changes to the proposal, with regards to increased tree planting, additional ESD commitments, reduced carparking together with the recommended conditions of approval, appropriately address the remaining concerns raised in submissions.

The Department's Assessment concludes the proposal is in the public interest and approvable, subject to the conditions outlined within this report.



8. Recommendation

It is recommended that the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report; and
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application;
- **agrees** with the key reasons for approval listed in the notice of decision (**Appendix G**);
- **grants consent** for the application in respect of Waterloo Metro Quarter Concept (SSD 9393), subject to the conditions in the attached development consent; and
- **signs** the attached development consent and recommended conditions of consent (see **Appendix H**).

Recommended by:

Anthony Witherdin
Director
Key Sites Assessments

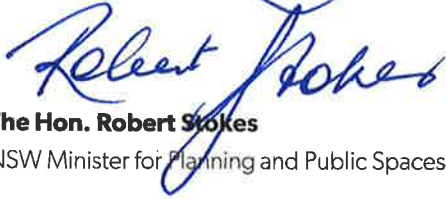
Recommended by:

Anthea Sargeant 20/11/19
Executive Director
Key Sites Assessments and Compliance



9. Determination

The recommendation is: **Adopted** / ~~Not adopted~~ by:



The Hon. Robert Stokes

NSW Minister for Planning and Public Spaces



Appendices

Appendix A – List of Documents

The following supporting documents and supporting information can be found on the Department of Planning, Industry and Environment’s website as follows.

- 1. Environmental Impact Statement

<https://www.planningportal.nsw.gov.au/major-projects/project/11551>

- 2. Submissions

<https://www.planningportal.nsw.gov.au/major-projects/project/11551>

- 3. Applicant’s Response to Submissions

<https://www.planningportal.nsw.gov.au/major-projects/project/11551>

- 4. Peer Review of Traffic, Transport and Parking Assessment, Samsa Consulting for the Department

<https://www.planningportal.nsw.gov.au/major-projects/project/11551>

Appendix B – Environmental Impact Statement

See the Department’s website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/11551>

Appendix C – Submissions

See the Department’s website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/11551>

Appendix D – Response to Submissions Report

See the Department’s website at: <https://www.planningportal.nsw.gov.au/major-projects/project/11551>

Appendix E – Consideration of Design Guideline amendments recommended by SSP Project Review Panel

A copy of the final Waterloo SSP PRP report is available here: <https://www.planningportal.nsw.gov.au/major-projects/project/11551>

The following provides the Department’s consideration of the recommendations of the Waterloo SSP PRP on the Design Guidelines:

Table 10 | Consideration of Design Guideline amendments from PRP

Page	PRP comments	Department’s views
Overall:	Throughout the document there are several instances where there’s some confusion around what are Objectives, Design	Changes have been made through-out the document about the order of

Page	PRP comments	Department's views
	<p>Guidelines or Design Criteria. This needs to be further reviewed and adjusted. These areas are identified in sections below.</p> <p>Delete all renders from the SSP scheme. These are for a scheme that may not be relevant for future applications, and their incorporation into the guidelines may be misleading. Use diagrams to describe the objectives, criteria or guidance in the document. If necessary, use photos of built works to show a range of acceptable approaches.</p> <p>Consistently use public space for publicly owned space and publicly accessible private space for private space.</p>	<p>objectives, criteria and guidelines as identified in the comments.</p> <p>Renders are artist's impressions of the indicative scheme lodged with the Concept and the of the Metro Station. Recommend they stay in the document. They do not affect the content of the Design Guidelines.</p> <p>The future use of space within the site is well understood by stakeholders.</p>
Cover	Delete illustration	This artist's impression does not affect the content of the Design Guidelines.
Inside cover	Delete illustration	This artist's impression does not affect the content of the Design Guidelines.
1	<p>Forward</p> <p>Change first sentence to read: The Waterloo Metro Quarter Design and Amenity Guideline ['the Guideline'] guide the delivery of a high quality...</p> <p>First para. Second sentence: DELETE public domain and REPLACE with: publicly accessible private space</p>	<p>Addressed in the subsequent section "How to use this guideline".</p> <p>The future use of space within the site is well understood by stakeholders.</p>
4	<p>Who is the Design Guideline for?</p> <p>First dot point: DELETE apartments and REPLACE with the waterloo metro quarter</p> <p>Third dot point ADD at the end of the sentence at the Waterloo metro quarter.</p>	<p>Adopted</p> <p>Adopted</p>
7	<p>Statutory Planning Controls</p> <p>Final point, right column: DELETE quality and REPLACE with amenity.</p>	Adopted
8	<p>Opportunities and Constraints</p> <p>RENAME this section to Surrounding Context Point 5.</p> <p>ADD There are existing and planned separated regional cycle paths on Wellington and George streets. Delete point 10.</p>	<p>Adopted</p> <p>Adopted</p>

Page	PRP comments	Department's views
	ADD new point: Waterloo Estate is planned to undergo significant renewal.	Adopted
12	Delete illustration	This artist's impression does not affect the content of the Design Guidelines
13	Design Objectives: RENAME this section to 'Desired Outcomes'	Adopted
15	<p>Public Domain:</p> <p><u>Objectives</u> ADD 5. Balance all forms of movement through creating a public domain which facilitates transport interchange</p> <p><u>Design Criteria</u> ADD Publicly accessible areas are to be designed to allow for access and use for people of all abilities. ADD Design of the buildings which overhang Cope Street Plaza are to include treatment to the soffit to reduce visual bulk. 3. DELETE should have regard to and REPLACE with meet the requirements of 4. DELETE and between plaza and Raglan and ADD after Raglan Street, and through site links 7. RELOCATE to Objective and AMEND to: Public domain is to be in accordance with Crime Prevention Through Environmental Design principles</p> <p><u>Design Guidance</u> Figure 6:</p> <ul style="list-style-type: none"> • Delete the small building in the Cope Street plaza • Nominate and define the Cope Street Plaza and the Raglan Street Plaza • Indicate the extent of awnings • Relocate the through site link to align with the north western corner of Cope Street Plaza as per the revised SSD. • Include north point • Include a Key and change light blue to: publicly accessible footpath on private land, change green change to: publicly accessible open space on private land 	<p>Adopted</p> <p>Adopted, with references to the Disability Discrimination Act Adopted</p> <p>Adopted</p> <p>Adopted</p> <p>Existing text is "public footpath on private land" and signals the intent.</p> <p>All adopted</p>
19 - 22	<p>Streets, lanes and footpaths</p> <p><u>Objectives</u> ADD Material selection is to include consideration of the mass and/or sound insulation or absorption properties" 3. Is not an objective, it is a criteria [see below]</p>	<p>Adopted</p> <p>Adopted</p>

Page	PRP comments	Department's views
	<p>ADD: Consider increased setbacks of podium to Botany road to achieve 50%.</p> <p>ADD Tree type, planting and location is to include consideration of proximity to Botany Road and ensure longevity of trees.</p> <p>ADD Awnings and Canopies are to be located and designed to maximise tree canopy.</p>	<p>Adopted</p> <p>Adopted</p> <p>Adopted</p>
25	<p>Tree Planting Specifications</p> <p><u>Design Criteria</u></p> <p>5. ADD '... are to be provided to ensure maximisation of tree canopy spread and height.'</p> <p>ADD Concurrence of City of Sydney is to be sought for any tree planting within public domain. Any tree planting within public domain are to be Design Guidance</p> <p>Relocate this text to Design Criteria</p>	<p>Adopted</p> <p>Adopted, subject to consultation with Council to be consistent with CSSI Approval.</p> <p>Adopted</p>
26	<p>Wind</p> <p><u>Design Criteria</u></p> <p>1. AMEND first dot point to: 50% of Raglan Street Plaza and Cope Street Plaza are to achieve sitting criteria. These areas are to correspond to locations of outdoor dining, sitting and gathering.</p> <p><u>Image:</u></p> <ul style="list-style-type: none"> • include key for red outline areas. • Indicate where awnings should be provided and areas where they should not be provided so heritage impacts can be managed • Show the location of existing and future pedestrian crossings and ensure that the standing criteria zones extend to match the full width of the crossings. Include the waiting areas for crossings on the opposite side of the streets ie on the four corners of each intersection. 	<p>Wind Assessment with SSD is considered acceptable. All of Cope Street Plaza is sitting criteria and a portion of Raglan Street is sitting criteria, corresponding with active frontage</p> <p>Adopted</p> <p>Not adopted. Continuous awnings are required in Design Guidelines.</p> <p>Adopted</p>
27	<p>Building Uses</p> <p><u>Design Criteria</u></p> <p>ADD as point 6 – A Noise Management Plan is required to ensure compatibility of late night entertainment uses and residential uses. The plan must provide a framework for setting noise limits for each noise-generating tenancy within the relevant precinct to</p>	<p>Adopted</p>

Page	PRP comments	Department's views
	ensure that sensitive receivers can maintain their amenity	
28	<p>Street Activation</p> <p><u>Objectives</u> ADD Activation of pedestrian through site links and laneway</p> <p><u>Design Criteria</u> ADD Building and ground floor entries are to be located and spaced to maximise street level activation.</p> <p><u>Design Guidance</u> 2. INCLUDE at end of sentence: '... with design response to manage the potential impacts of flooding on level activation. ' – i.e, staggered and stepped shop fronts, internal level change instead of external level changes. etc.</p>	<p>Adopted</p> <p>Adopted</p> <p>Adopted</p>
29	<p>Podium and Street Wall</p> <p><u>Design Criteria:</u> 3. AMEND first point to: Setbacks along Botany Road street alignment are to ensure podiums are setback equally to the Church (indicatively 10m).</p> <p><u>Design Guidance</u> ADD Built form, massing and setbacks are to be informed through detailed heritage focused consideration of relationship of built form to church. Potential for activation / treatment of podiums around the Church will need to be supported and confirmed by consultation with the Church. Increase setback to Botany Road to allow for improved street tree canopy</p>	<p>Not adopted. 10 m setback control from the kerb is sufficient and achieves the intent.</p> <p>Adopted</p> <p>Adopted</p> <p>Not adopted. Tree canopy cover of 50% can be achieved without this increase.</p>
31	<p>Built form above the podium</p> <p><u>Design Criteria</u> 4. AMEND to 'Design of residential towers will need to be in accordance with Apartment Design Guide''</p> <p><u>Design Guidance</u> 5. AMEND to: Wind Mitigation is to first be achieved through building massing, which reliance on devices such as impermeable canopies, awnings, pergolas and trees secondary measures.</p>	<p>Adopted</p> <p>Adopted</p>

Page	PRP comments	Department's views
	<p>ADD</p> <p>Distribute the building of towers bulk to Minimise overshadowing of Alexandria Park in mid-winter between 9am and 3pm through distribution of the building bulk.</p>	<p>Adopted</p>
32	<p>Residential Amenity</p> <p><u>Design Criteria</u></p> <p>& 2. – to be confirmed against documents rather than pulling individual sections. For noise criteria refer to the relevant part clause 3.6 of the Development Near Rail Corridors and Busy Roads – Interim Guideline for Noise Criteria for all uses including windows closed for residential uses and Sydney DCP 2012 clause 4.2.3.11 for windows and doors open.</p> <p>Refer to the Apartment Design Guide part 4] and the Development Near Rail Corridors and Busy Roads – Interim Guideline clause 3.8 for general guidance on how reduce the impact of noise noting that these measures may not be sufficient to meet the required noise criteria. [DELETE these 2 from the Design Guidance]</p> <p>3 / 5 / 6 COMBINE to: Apartments are to fully comply with the requirements of the Apartment Design Guide. Design Guidance</p> <p>4. DELETE entire reference.</p>	<p>Adopted</p> <p>Adopted</p> <p>Adopted</p>
35	<p>Parking and Access</p> <p><u>Design Criteria</u></p> <p>1. Delete</p> <p>3. AMEND to: 'Car share parking spaces are to be provided in accordance with the requirements of the SDCP 2012'</p> <p>ADD</p> <p>4. Do not construct basement car parking under the publicly accessible privately owned footpath. [in order to encourage tree growth]</p> <p>5. If the total car parking spaces exceeds 65 spaces then the area occupied by the additional spaces is to: Be one title held separately to other titles within the development Designed to accommodate conversion to a late night entertainment venue and include following design requirements:</p>	<p>Adopted</p> <p>Adopted</p> <p>Not adopted. Applicant has since amended the Concept to reduce car parking, as addressed in Section 6.5 of the Assessment Report.</p>

Page	PRP comments	Department's views
	<p>Ceiling height to allow for the use including future servicing requirements</p> <p>Vertical ducts to provide for future servicing requirements</p> <p>Exits to the street to provide for future entry and egress requirements</p> <p>Include drawings that describe how the future use can be provided without structural adjustments and without interfering with other titled areas</p> <p>The development as a whole is to meet the requirements of Sydney DCP 2012 clause 3.15 Late Night Trading Management.</p>	
36	<p>Service Vehicles and Waste Collection</p> <p><u>Objectives</u></p> <p>2. AMEND to 'Locate servicing and loading within buildings where access is immediately adjacent to the street to minimise potential conflicts with pedestrians and cyclists'</p> <p><u>Design Criteria</u></p> <p>4. DELETE third point.</p> <p><u>Design Guidance</u></p> <p>2. INCLUDE: Ramps are to respond to flooding constraints where relevant, noting that basement egress is to be located above PMF.</p>	<p>Adopted</p> <p>Adopted</p> <p>Adopted</p>
38	<p>Sustainability</p> <p><u>Objectives</u></p> <p>ADD objectives:</p> <p>Support precinct-scale, low energy, highly-efficient approaches that support net-zero emissions by 2050</p> <p>Reduce urban heat island effect and improve air quality and the absorption of carbon</p> <p><u>Design criteria:</u></p> <p>DELETE all and replace with:</p> <p>Energy and water consumption is minimised, efficient, and affordable for all in the community</p> <p><u>Design Guidance</u></p> <p>DELETE all and replace with:</p> <ul style="list-style-type: none"> • Commit to beyond the compliance targets for BASIX Energy and BASIX Water • be capable of achieving a 5.5 star NABERS Energy Commitment Agreement or equivalent...for commercial areas • Water rating of 4.5 stars for the commercial areas • Generate at least 5% of its forecast annual energy demand from on-site renewable energy. Where this is not deemed possible then a cash in lieu 	<p>These recommendations have since been superseded by Applicant's proposed ESD targets and further amendments to the Design Guidelines, which are acceptable to the Department. Refer to Section 6.7 and recommended Condition B19.</p> <p>Many of the recommendations from the PWG are also beyond the Stage 2 detailed design phase and replicate the Apartment Design Guide.</p>

Page	PRP comments	Department's views
	<p>contribution must be set to secure delivery of renewable energy supplies of the equivalent elsewhere in the LGA.</p> <ul style="list-style-type: none"> • Commit to engaging a micro-grid operator to manage peak demand and carbon emissions. An additional step may be to consider an 'energy services company' (ESCO) instead of a 'traditional' electricity retailer. • Demonstrate that the design either enable, or not preclude, future energy technologies and initiatives. • Permit residents to air dry laundry on balcony. Include design measures such as screened outdoor areas on balconies to facilitate. • Enable future retrofitting of new technologies such as building integrated PV • Commit to 100% electric for the buildings (i.e. no gas) • Identify on the drawings potential future sites for solar installations • Demonstrate how the risers capacity and accessibility enable future additions of thermal and water networks. • Consider heat pumps to achieve the required hot water demand • For thermal comfort within the development: <ul style="list-style-type: none"> - Design residential units to achieve optimal thermal comfort conditions in such a way that minimises the need for active systems - Prioritise passive design measures in the buildings such as optimised orientation, western shading devices, minimised glazing and using high thermal performance glazing to reduce overall energy consumption. • Provide mixed mode HVAC for commercial and retail with maximised COP ratios to drive energy efficiency • For residential units, do not install split system fan coil units on balconies so as to avoid formation of heat drafts and undesirable outdoor balcony conditions. The following solutions are potential technical solutions available: • Design residential units for potential retrofitting of mechanical cooling systems comprising of indoor direct expansion fan coil unit with pipe reticulation to an outdoor air cooled condenser unit located in a designated plant room, as opposed to on the unit balcony. Consider locating a plant room every 10 floors to house the condenser unit. • Centralised chilled and heating water systems with fan coil units servicing residential units. The thermal energy (chilled and hot water) metered to allow allocation of central energy plant energy and operating cost. Provide heating by electrically driven heat pumps to negate the need for gas. • Exceed the BASIX Water compliance by: <ul style="list-style-type: none"> - Going beyond the water efficiency requirements of fixtures and fittings - Use drought-tolerant, low water use vegetation in gardens & green roofs to reduce irrigation water use - Design in high efficiency water fixtures rated at 4, 5 or 6 star WELS, to the highest of these ratings depending on the fixture type 	

Page	PRP comments	Department's views
	<ul style="list-style-type: none"> - Include high water efficiency appliances such as dishwashers and laundry machines in the apartment. • Connect with the nearby Green Square Town Centre recycled water scheme and extend this system to the site and/or the water recycling facility at Australian Technology Park (ATP). • Include stormwater harvesting with on-site water detention tanks and reuse. • Install dual plumbing of buildings to enable potential connection to a precinct scale recycled water system (e.g. at the Waterloo Estate) • WSUD measures could include gross pollutant traps, passive irrigation measures, bio-retention areas and rainwater harvesting • Water sensitive urban design measures are incorporated to improve stormwater quality flowing into waterways 	
40	<p>Waste Management</p> <p><u>Design Criteria</u></p> <p>ADD</p> <ul style="list-style-type: none"> • Facilitate and prioritise waste management practices in line with the waste hierarchy • Encourage reduction of waste generation rates, through reduced waste levies and fees • Commit to NABERS Waste rating for the commercial and waste rates • Include a 'Return and Earn' container collection point to allow the community to access a new income stream and promote recycling rates • Meet the provisions of the NSW EPA Better Practice Guide for Waste Management in Multi-unit Dwellings • Include in-sink food waste disposers to reduce organic waste and encourage use of waste as a fertiliser. Would need to be discussed with Sydney Water • Include waste and recycling bins in the public domain to reduce littering and promote recycling • Include smaller residential waste bins into the residential apartment to disincentivise waste generation • Separate residential and commercial/retail waste disposal rooms to avoid overloading issues • Provide for residents storerooms separate from apartments for storage of unwanted bulky items <p><u>Design Guidance</u></p> <p>ADD:</p> <ul style="list-style-type: none"> • Future consideration of a vacuum waste solution should be considered for its merits within the Metro Quarter. Due to the ground level space constraints there may be potential for a vacuum waste system that would separate and centrally transfer and store waste, ready for collection either on site or off site. This will reduce the need for multiple waste collections and reduce storage / separation facilities within buildings and reduce loading docks size. It may also have amenity improvements within the streets with reduced loading docks and waste 	<p>These recommendations have since been superseded by Applicant's proposed ESD targets and further amendments to the Design Guidelines, which are acceptable to the Department. Refer to Section 6.7</p> <p>Other recommendations from the PWG extend beyond the Stage 2 detailed design phase and/or replicate of the Apartment Design Guide.</p>

Page	PRP comments	Department's views
	vehicle movements. It may also allow for a change in street geometry.	

Appendix F – Statutory Considerations

Objects of the Environmental Planning and Assessment Act

Decisions made under the EP&A Act must have regard to the objects set out in Section 1.3 of the Act. A response to the objects is below in **Table 11**.

Table 11 | Response to the Objects of Section 1.3 of the EP&A Act

Objects of Section 1.3 of the EP&A Act	Consideration
(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources	<ul style="list-style-type: none"> the proposal promotes the social and economic welfare of the community by providing employment and housing within a highly accessible site for transport and urban services, and, in doing so, contributing to the achievement of State and regional planning objectives. the proposal comprises development above and adjacent to the approved station infrastructure and would not result in any impacts on the State's natural or other resources.
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment	<ul style="list-style-type: none"> The proposal has integrated ESD principles as discussed in Sections 4.3.3 and 6.7.
(c) to promote the orderly and economic use and development of land	<ul style="list-style-type: none"> the proposal represents the orderly and economic use of land primarily as it will increase employment opportunities and housing supply in close proximity to services and public transport. The proposed land uses are permissible, and the form of the development has regard to the planning controls that apply and the character of the locality.
(d) to promote the delivery and maintenance of affordable housing	<ul style="list-style-type: none"> the concept proposal promotes the delivery of affordable housing with a minimum 5% of the residential gross floor area nominated for affordable housing and 70 dwellings provided as social housing.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats	<ul style="list-style-type: none"> the proposal, comprising mixed use development above and adjacent to the Metro station, will have negligible impacts on the conservation of threatened and other species of native animals and plants, ecological communities and their habitats
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)	<ul style="list-style-type: none"> the Department considers that the heritage impacts of the development are acceptable, as set out in Section 6.7.

Objects of Section 1.3 of the EP&A Act

Consideration

- | | |
|--|--|
| (g) to promote good design and amenity of the built environment | <ul style="list-style-type: none">the proposal demonstrates a suitable design approach to the relevant planning controls and local character. Amenity impacts are managed by either the form of the development or by the recommended conditions of consent for mitigation measures during the detailed design applications including compliance with the Design Guidelines and Design Excellence Strategy. |
| (h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants | <ul style="list-style-type: none">the application is for Concept approval and does not include construction, however, relevant construction impacts of the concept have been taken into consideration in the assessment and are considered acceptable.future development applications will include detailed reports confirming the development is capable of meeting relevant construction and amenity standards. |
| (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State | <ul style="list-style-type: none">the Department publicly exhibited the proposed development as outlined in Section 5, which included consultation with Council and other public authorities, and consideration of their responses. |
| (j) to provide increased opportunity for community participation in environmental planning and assessment. | <ul style="list-style-type: none">the Department publicly exhibited the DA which included notifying adjoining landowners, placing a notice in the local papers and displaying the application on the Department's website, Council's office and Service NSW Offices. The Department also provided the RtS to Council and agencies for further review and placed the RtS on its website.all engagement carried out by the Department is detailed in Section 5 of this assessment. |

Environmental Planning Instruments

To satisfy the requirements of section 4.15 of the EP&A Act, this report includes references to the provisions of the EPIs that govern the carrying out of the project and have been taken into consideration in the Department's environmental assessment. The EPIs that have been considered as part of the assessment of the proposal are:

- State Environmental Planning Policy (State & Regional Development) 2011
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy (Urban Renewal) 2010
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
- State Environmental Planning Policy No. 55 – Remediation of Land
- Draft State Environmental Planning Policy (Remediation of Land)
- State Environmental Planning Policy No. 64 – Advertising and Signage
- State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development
- Sydney Local Environmental Plan 2012 (SLEP 2012).

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)

The development is SSD under clause 19 of schedule 2 of SEPP. The Minister for Planning and Public Spaces is the consent authority for the application. **Table 12** below considers clauses of the SEPP relevant to this application.

Table 12 | Response to SRD SEPP

Relevant Section	Department's Consideration
<p>3 Aims of Policy</p> <p>The aims of this Policy are:</p> <p>(a) to identify development that is State significant development,</p> <p>(b) to identify development that is State significant infrastructure and critical State significant infrastructure,</p> <p>(c) to identify development that is regionally significant development.</p>	<ul style="list-style-type: none"> the proposed development is identified as State significant development.
<p>8 Declaration of State significant development: Section 4.36</p> <p>(1) Development is declared to be State significant development for the purposes of the Act if:</p> <p>(a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and</p> <p>(b) the development is specified in Schedule 1 or 2.</p>	<ul style="list-style-type: none"> the proposed development is permissible with consent and is specified in schedule 2 of the SRD SEPP.
<p>Schedule 1 State significant development —general (Clause 19 (2))</p> <p>19 Rail and related transport facilities</p> <p>Development within a rail corridor or associated with railway infrastructure that has a capital investment value of more than \$30 million for any of the following purposes:</p> <p>(a) commercial premises or residential accommodation</p>	<ul style="list-style-type: none"> the proposal is development associated with railway infrastructure development with a CIV of more than \$30 million.

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)

The ISEPP aims to facilitate the effective delivery of infrastructure across the State by improving regulatory certainty and efficiency, identifying matters to be considered in the assessment of development adjacent to particular types of infrastructure development, and providing for consultation with relevant public authorities for certain development during the assessment process.

The ISEPP is applicable as the concept proposal involves development in or adjacent to a rail corridor (Division 15 Railways), being the Sydney Metro City and Southwest corridor and is classified as traffic generating development (Division 17 Roads and traffic).

The proposal was referred to Transport for NSW (TfNSW), Sydney Metro Corridor Protection Team and Roads and Maritime Services, who raised no objection to the proposal (see **Section 5**).

State Environmental Planning Policy (Urban Renewal) 2010

Sydney Regional Environmental Plan (Urban Renewal) 2010 establishes a process for identifying potential precincts and facilitate the orderly and economic development of these precincts. The site is located within the Redfern-Waterloo Precinct and has a CIV greater than \$5 million. Therefore, the proposal is assessed against clause 10 - Development in Potential Precincts in **Table 13** below:

Table 13 | Response to Urban Renewal SEPP

Clause 10 - Development in potential precincts	Department’s Consideration
<p>the consent authority is to take into account whether or not the proposed development is likely to restrict or prevent the following:</p> <ul style="list-style-type: none"> a) development of the potential precinct for higher density housing or commercial or mixed development b) the future amalgamation of sites for the purpose of any such development within the potential precinct c) access to, or development of, infrastructure, other facilities and public domain areas associated with existing and future public transport in the potential precinct. 	<ul style="list-style-type: none"> • the proposal is consistent with the objectives of the SEPP in that it proposes a mixed-use precinct with high density residential, and commercial, retail and community uses. • the precinct is intended to connect to the new transport infrastructure of the Sydney Metro and will include public domain works including a public open space and pedestrian and cycling links.

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

BASIX encourages sustainable residential development across NSW by setting targets that measure the efficiency of buildings in relation to water, energy and thermal comfort. BASIX requires all new dwellings to meet sustainable targets of a 20 per cent reduction in energy use (building size dependent) and 40 per cent reduction in potable water.

The application is for a concept proposal and numeric compliance with BASIX targets is subject to the detailed design phase and certification process. However, the Applicant has committed to achieving better than minimum compliance, comprising BASIX energy 30% target and BASIX water 40%+ target. The Department has recommended conditions of consent accordingly.

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)

SEPP 55 aims to ensure that potential contamination issues are considered in the determination of a development application. The proposal was accompanied by a Geotechnical and Contamination Study that identifies potential contamination risks and makes recommendations to inform a Stage 2 contamination assessment to be undertaken as part of detailed SSD application(s). On this basis, the Department is satisfied the site can be made suitable for the proposed land uses.

Draft State Environmental Planning Policy (Remediation of Land)

The Department is reviewing all State Environmental Planning Policies to ensure they remain effective and relevant and SEPP 55 has been reviewed as part of that program. The Department has published the draft Remediation of Land State Environmental Planning Policy (Remediation SEPP), which was exhibited until April 2018.

Once adopted, the Remediation SEPP will retain elements of SEPP 55, and add the following provisions to establish a modern approach to the management of contaminated land:

- require all remediation work that is to be carried out without development consent, to be reviewed and certified by a certified contaminated land consultant
- categorise remediation work based on the scale, risk and complexity of the work
- require environmental management plans relating to post-remediation management or ongoing management of on-site to be provided to Council.

The new SEPP will not include any strategic planning objectives or provisions. Strategic planning matters will instead be dealt with through a direction under section 117 of the EP&A Act.

The Department considers the development is consistent with the draft SEPP for the same reasons as discussed above under SEPP 55.

State Environmental Planning Policy No. 64 – Advertising and Signage

The application includes the concept of future signage associated with the residential, retail and commercial components of the Metro Quarter. The Applicant states the type, location and size of the future signage will be informed by a comprehensive signage strategy, which will form part of the future detailed development applications. The Department accepts that signage can form part of, and is not inconsistent with, the Concept proposal. However, the design of signage is subject to the future detailed development application(s).

State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development (SEPP 65)

SEPP 65 seeks to improve the design quality of residential developments and encourage innovative design. The Apartment Design Guide (ADG) is closely linked to the principles of SEPP 65 and sets out best practice design principles for residential developments. As the proposal is concept only the assessment of design principles is focused on whether the proposal demonstrates the potential to satisfy the design quality principles (**Table 14**). An assessment of the indicative residential scheme is provided against the broader ADG criteria in **Table 15**.

Table 14 | Consideration of Design Quality Principles of SEPP 65

Principle	Department's Response
1: Context and neighbourhood character	The SSP process established intensification of development around the future Waterloo Station. The Department considers the proposal is compatible with the desired context and character of Waterloo.
2: Built form and scale	The proposal demonstrates the built form and scale of the envelopes are consistent with the desired future character of the site. The Department considers the proposal is acceptable, having regard to its location and exemplifying the principles of transit-oriented development.
3: Density	The proposal will result in a density which is envisaged by planning controls.
4: Sustainability	The proposal will be designed to be sustainable and to contribute positively to the environmental, social and economic aspects of the area. The proposed ESD principles and sustainability measures are detailed in Section 6.7 of this report.

5: Landscape	<p>The proposal incorporates a range of landscaped and open space areas including Cope Street Plaza, Raglan Street Plaza, a laneway, and private and communal open space areas. The proposed public and private open spaces within the Concept will be established through the design objectives, criteria and guidance of the Design Guidelines.</p> <p>The proposal introduces on-site tree canopy coverage of 23% where no tree canopy existed on the site and increases street tree canopy coverage from 6% to 50%.</p> <p>The proposal will also have good access to a range of local and regional open spaces.</p>
6: Amenity	<p>The proposed envelopes have been designed to maximise views and access to daylight while minimising wind and noise impacts.</p>
7: Safety	<p>The proposal promotes the principles of Crime Prevention Through Environmental Design through appropriate design which provides a mixed-use precinct which encourages the activation of spaces by residents, workers and visitors to the site and through accessible and legible links to the Metro station.</p>
8: Housing diversity and social interaction	<p>The proposed development supports the objective of greater housing supply through indicative plans which support a variety of different dwelling sizes to cater for the diverse requirements of future residents.</p> <p>The proposal also promotes the delivery of affordable housing with a minimum 5% of the residential gross floor area nominated for affordable housing and 70 dwellings provided as social housing.</p>
9: Aesthetics	<p>The concept proposal is designed to provide a range of urban forms and scales at a masterplan scale. The Application includes Design Guidelines providing objectives, criteria and guidance for the detailed design phase. The application is also accompanied by a Design Excellence Strategy providing design review processes aimed at delivering a high standard of architectural, landscape and urban design. The Design Excellence Strategy will set the framework to deliver design excellence throughout the project and the detailed design application(s).</p>

Table 15 | Consideration of the relevant provisions of the Apartment Design Guide under SEPP 65

ADG – Relevant Criteria	Proposal
<p>3A Site Analysis</p> <ul style="list-style-type: none"> Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context 	<ul style="list-style-type: none"> The proposal is accompanied by context plans and an urban design and public domain report which identify opportunities and challenges on the site and surrounding context.
<p>3B Orientation</p> <ul style="list-style-type: none"> Building type/layouts respond to streetscape, optimising solar access. Overshadowing of neighbouring properties is minimised during mid-winter. Ensure solar access to existing buildings which don't achieve ADG sun access criteria is not reduced by more than 20% 	<ul style="list-style-type: none"> The proposal provides building forms with a defined street edge, with opportunities for direct access from the street. The proposal has been developed with consideration to the amenity of the surrounding context. The solar access of surrounding residential development has been studied at the Winter Solstice to outline compliance with the objectives of the Sydney Development Control Plan 2012 and the ADG. The envelopes allow for appropriate solar access to the proposed residential dwellings, open spaces, public domain areas and adjoining sites. An approved, but not yet commenced, adjacent affordable housing proposal at 74-88 Botany Road would have solar access reduced

to below ADG compliance. This impact is discussed in **Section 6.7**.

3C Public Domain Interface

- Transition between public/private without compromising security.
- Amenity of public domain is retained and enhanced.

- Access points have been appropriately located for legibility, which will be designed to be secured to control access and to appropriately separate circulation routes.
- The public domain will provide a new community heart, creating a place that is activated, vibrant, pedestrian and cycle focused, consistent with the design objectives and key principles of the City of Sydney Streets Design Code and Australian Standards.
- Subsequent detailed development applications will demonstrate compliance with this design guidance.

3D Communal and Public Open Space

- minimum 25% of the site.
- minimum 50% direct sunlight to principal usable part of the communal open space for a minimum of 2 hours in mid-winter.
- Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting.
- Communal open space is designed to maximise safety.
- Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood.

- The proposal provides 25% of site area as communal open space, which will achieve a minimum of 50% direct sunlight to the principal usable parts of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter).
- The communal spaces will have sufficient space to allow for recreation areas and facilities.
- An active frontage will be provided adjacent the public plazas. Fine grain retail tenancies are fronting the public plaza, including café tenancies located within the Metro box that engage and activate the plaza.
- Subsequent detailed development applications will demonstrate compliance with this design guidance.

3E Deep soil zones

- For sites greater than 1500 m², a minimum of 7% of the site with a minimum dimension of 6 m should provide for deep soil zone(s)

- The proposal includes 3.5% of the site for deep soil zones, with an additional 11.5% provided on structure. The future detailed application will demonstrate how much of the site is capable of containing deep soil area.

3F Visual privacy

- Separation distances from building to boundary:

Height	Habitable rooms	Non-habitable rooms
Up to 12m (4 storeys)	6 m	3 m
Up to 25m (5-8 storeys)	9 m	4.5 m
Over 25m (9+ storeys)	12 m	6 m

- Separation distances between buildings on the same site should combine required building separations depending on the type of room. A minimum 18 m separation is therefore required between the proposed towers up to eight storeys and a minimum 24 m separation is required above nine storeys.
- Site and building design elements increase privacy without compromising access to light and air and

- The proposed envelopes have been designed to provide appropriate building separation. Where full separation is not achieved suitable design elements will be proposed to ensure visual privacy is achieved including:
 - Operable screens
 - Louvres
 - Planting
 - Integrated landscape design.
- Outlook and privacy will be managed by building articulation, dividing walls and privacy screens.

balance outlook and views from habitable rooms and private open space.

3G Pedestrian Access to Entries

- Building entries and pedestrian access connects to and addresses the public domain.
- Access, entries and pathways are accessible and easy to identify.
- Large sites provide pedestrian links for access to streets and connection to destinations.
- Separate residential lobbies for each core will be provided at ground level and in the basement.
- Residential lobbies will be signposted and have a distinct architectural typology for legibility and amenity across the whole development.
- Where required, ramps and stairs will be integrated with the overall landscape and building design concept for accessible and legible entries.
- Residential lobbies and amenity building entries will be provided with a distinct architectural character and articulated awning structure over for increased legibility.

3H Vehicle access

- Vehicle access points are to be designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes.
- Servicing and loading are located at the site edges with access off the vehicular priority streets Botany Road and Wellington Street.
- **Clear sight lines** will be provided at the carpark entry/exit point and vehicle crossings.

3J Bicycle and Car Parking

- Minimum parking requirement as set out in the Guide to Traffic Generating Developments or local Council requirement, whichever is the less.
- Parking and facilities are provided for other modes of transport.
- Car park design and access is safe and secure.
- Visual and environmental impacts of underground car parking are minimised.
- The application has less than the maximum permissible car parking spaces under the SLEP and less than the RMS Guide to Traffic Generation.
- Vehicular access to, and circulation through the site, has been minimised to reduce any potential conflict with the highly pedestrian public domain.
- Car park access will be secured at appropriate levels for amenity and residential uses.

4A Solar and Daylight Access

- To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.
- Minimum of 70% of apartments' living rooms and private open spaces receive 2hrs direct sunlight between 9 am -3 pm in mid-winter in the Sydney Metropolitan Area.
- Maximum of 15% of apartments have no direct sunlight between 9 am - 3 pm in mid-winter.
- Daylight access is maximised where sunlight is limited.
- Design incorporates shading and glare control, particularly for warmer months.
- The envelopes have been designed to maximise views and access to daylight while minimising wind and noise impacts. Apartment amenity is consistent with the objectives of the ADG.
- The proposal is capable of achieving a minimum of 70% of apartments receiving solar access in accordance with design guideline.
- Illustrative plans demonstrate a maximum of 15% of apartments receive no-direct sunlight between 9am and 3pm mid-winter across the development.
- Subsequent detailed development applications will demonstrate compliance with this design guidance.

4B Natural Ventilation

- At least 60% of apartments are cross ventilated in the first nine storeys (apartments 10 storeys or greater are deemed to be cross ventilated).
- Overall depth of a cross-over or cross-through apartment does not exceed 18m.
- The envelopes have been designed to maximise natural cross ventilation while minimising wind and noise impacts.
- The proposal is capable of achieving a minimum of 60% cross ventilation. However, apartments along Botany Road will require acoustically attenuated openings to comply

with noise criteria and natural ventilation requirements.

- Subsequent detailed development applications will demonstrate compliance with this design guidance.

4C Ceiling Heights

Measured from finished floor level to finished ceiling level, minimum ceiling heights are:

- Habitable rooms 2.7 m
- Non-habitable rooms 2.4 m.

For two-storey apartments:

- 2.7 m for main living area floor
- 2.4 m for second floor, where its area does not exceed 50% of the apartment area.

- A minimum floor-to-floor height of 3.1m is used to allow the ADG recommendation of 2.7m ceiling height to be achieved in living, dining and bedroom areas.
- Subsequent detailed development applications will demonstrate compliance with this design guidance.

4D Apartment Size and Layout

- Minimum apartment sizes
 - Studio 35 m²
 - 1 bedroom 50 m²
 - 2 bedroom 70 m²
 - 3 bedroom 90 m².
- Every habitable room must have a window in an external wall with a total glass area of not less than 10% of the floor area. Daylight and air may not be borrowed from other rooms.
- Habitable room depths are limited to 2.5 x the ceiling height.
- In open plan layouts the maximum habitable room depth is 8m from a window.
- Master bedroom have a minimum area of 10 m² and other bedrooms have 9 m².
- Bedrooms have a minimum dimension of 3m (excluding wardrobes).
- Living rooms have a minimum width of:
 - 3.6 m for studio and one bed
 - 4 m for 2 and 3 bed.
- The width of cross-over or cross-through apartments are at least 4m internally.

- Subsequent detailed development applications will demonstrate compliance with this design guidance.

4E Private Open Space and Balconies

- Primary balconies are provided to all apartments providing for:
 - Studios apartments min area 4 m²
 - 1-bedroom min area 8 m² min depth 2m
 - 2-bedroom min area 10 m² min depth 2m
 - 3-bedroom min area 12 m² min depth 2.5m.

- The proposed envelopes have been designed to accommodate balconies to meet the minimum requirements of the ADG.
- Subsequent detailed development applications will demonstrate compliance with this design guidance.

- For apartments at ground floor level or similar, private open space must have a minimum area of 15 m² and depth of 3 m.
- Private open space and primary balconies are integrated into and contribute to the architectural form and detail of the building.
- Primary open space and balconies maximises safety.

4F Common circulation and spaces

- Maximum number of apartments off a circulation core is eight (or no more than 12 apartments).
- For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.
- Natural ventilation is provided to all common circulation spaces where possible.
- Common circulation spaces promote safety and provide for social interaction between residents.
- Longer corridors are articulated.
- Subsequent detailed development applications will demonstrate compliance with this design guidance.
- All lobbies achieve a high level of amenity as they are connected to the facade to facilitate access to daylight and natural ventilation.
- Common circulation spaces will be designed to provide safe, legible spaces to foster interaction and harmony between residents.

4G Storage

- The following storage is required (with at least 50% located within the apartment):
 - Studio apartments 4 m³
 - 1-bedroom apartments 6 m³
 - 2-bedroom apartments 8 m³
 - 3-bedroom apartments 10 m³
- Additional storage is conveniently located, accessible and nominated for individual apartments.
- Apartments that may not accommodate the entire storage volume within the unit locate a minimum of 50% of the required storage within the apartment with the remainder located in secure and accessible locations within the basement.
- A variety of storage types will be provided, accessed off living rooms and circulation corridors within the apartments.
- Subsequent detailed development applications will demonstrate compliance with this design guidance.

4H Acoustic Privacy and 4J Noise Pollution

- Noise transfer is minimised through the siting of buildings and building layout and minimises external noise and pollution.
- Noise impacts are mitigated through internal apartment layout and acoustic treatments.
- Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses.
- Noisy areas within the proposed development including building entries and corridors will be generally located above each other and quieter areas above quieter areas.
- Typically, bedrooms of adjacent apartments will be located next to each other and likewise with living area.
- Storage, circulation areas and non-habitable rooms will be located to buffer noise from external sources.
- Subsequent detailed development applications will demonstrate compliance with this design guidance.

4K Apartment Mix

- Provision of a range of apartment types and sizes.
- Apartment mix is distributed to suitable locations within the building.
- Subsequent detailed development applications will demonstrate compliance with this design guidance, taking into consideration the distance to public transport, employment and education centres, as well as the current market demands and projected future demographic trends within the area.

<p>4L Ground floor apartments</p> <ul style="list-style-type: none"> • Street frontage activity is maximised where ground floor apartments are located. • Design of ground floor apartments delivers amenity and safety for residents. 	<ul style="list-style-type: none"> • There are no ground floor apartments.
<p>4M Facades</p> <ul style="list-style-type: none"> • Building facades provide visual interest along the street while respecting the character of the local area. • Building functions are expressed by the façade. 	<ul style="list-style-type: none"> • The proposed building envelopes have been developed to accommodate future design opportunities for differing façade expressions to achieve a high level of visual interest and aesthetics, in response to the existing and local context. • Subsequent detailed development applications will demonstrate compliance with this design guidance.
<p>4N Roof design</p> <ul style="list-style-type: none"> • Roof treatments are integrated into the building design and positively respond to the street. • Opportunities to use roof space for accommodation and open space is maximised. • Roof design includes sustainability features. 	<ul style="list-style-type: none"> • Subsequent detailed development applications will demonstrate compliance with this design guidance.
<p>4O Landscape design</p> <ul style="list-style-type: none"> • Landscape design is viable and sustainable. • Landscape design contributes to the streetscape and amenity. • Appropriate soil profiles are provided and plant growth is maximised (selection/maintenance). • Plant growth is optimised with appropriate selection and maintenance. • Building design includes opportunity for planting on structure. 	<ul style="list-style-type: none"> • The tree palette for the Metro Quarter aims to augment local character and species diversity (both native and exotic), maintaining biodiversity and support local wildlife. • Species will support local native bee species and foraging wildlife whilst providing canopies that will create shade minimising urban heat island effect and cooling the public domain during summer months. • Low growing, flood tolerant understorey species have been selected to further define the public domain, provide habitat and assist with WSUD, avoiding obstruction of sight lines across the site and streets creating a safe and healthy environment. • Subsequent detailed development applications will demonstrate compliance with this design guidance.
<p>4P Planting on structures</p> <ul style="list-style-type: none"> • Appropriate soil profiles are provided. • Plant growth is optimised with appropriate selection and maintenance. • Planting on structures contributes to the quality and amenity of communal and public open spaces. 	<ul style="list-style-type: none"> • Subsequent detailed development applications will demonstrate compliance with this design guidance.
<p>4Q Universal design</p> <ul style="list-style-type: none"> • Universal design features are included in apartment design to promote flexible housing for all community members (Developments achieve a benchmark of 20% of the total apartments incorporating the Liveable Housing Guidelines silver level universal design features). 	<ul style="list-style-type: none"> • Future development will achieve a benchmark of 20% of the total apartments incorporating the Liveable Housing Guideline's silver level universal design Features Adaptable apartments will be provided at a rate of 15% in accordance with the City of Sydney 2004 Access Development Control Plan.

<ul style="list-style-type: none"> • A variety of apartments with adaptable designs are provided. • Apartment layouts are flexible and accommodate a range of lifestyle needs. 	<ul style="list-style-type: none"> • Subsequent detailed development applications will demonstrate compliance with this design guidance.
<p>4S Mixed use</p> <ul style="list-style-type: none"> • Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement. • Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents. 	<ul style="list-style-type: none"> • The proposal is an integrated station development. • The proposal delivers a highly active streetscape, both to the existing streets and new public plazas. • The design of the Metro boxes has been developed to maintain visual and physical permeability, allowing clear movement paths and engaging with the open spaces at each entry.
<p>4T Awning and Signage</p> <ul style="list-style-type: none"> • Awnings are well located and complement and integrate with the building. • Signage responds to the context and design streetscape character. 	<ul style="list-style-type: none"> • Awnings and covered areas will be provided over building entries for building address and public domain amenity. • Awnings will continue the existing awning line of the adjacent streetscape. • Signage will be subject to future and separate Development Applications.
<p>4U Energy Efficiency</p> <ul style="list-style-type: none"> • Development incorporates passive environmental and solar design. • Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer. • Adequate natural ventilation minimises the need for mechanical ventilation. 	<ul style="list-style-type: none"> • The design development will allow for future incorporation of passive solar design measures including overhangs and shading devices, insulated walls, roofs and floors, and seals on window and external door openings. • Natural ventilation will be provided to all habitable rooms and typically, to all common areas and circulation spaces.
<p>4V Water management and conservation</p> <ul style="list-style-type: none"> • Potable water use is minimised. • Urban stormwater is treated on site before being discharged to receiving waters. • Flood management systems are integrated into site design. 	<ul style="list-style-type: none"> • The development will incorporate water efficient fittings and appliances. • Incorporation of water sensitive urban design features within Waterloo will contribute to a green and resilient urban environment. The suggested strategy for the Metro Quarter includes stormwater filter cartridges in on-site detention tanks to assist with pollution reduction and water quality. • Bio-retention tree pits have been incorporated to assist with treating runoff through filtration and reduce stormwater runoff volumes along pedestrian pathways in rainfall events. • Subsequent detailed development applications will demonstrate compliance with this design guidance.
<p>4W Waste Management</p> <ul style="list-style-type: none"> • Waste storage facilities are designed to minimise impacts on streetscape, building entry and residential amenity. • Domestic waste is minimised by providing safe and convenient source separation and recycling. 	<ul style="list-style-type: none"> • Garbage collection will be located in each loading area and is separated from public and residential areas. • Bulky waste areas will be provided internally and will be managed by the building manager

4X Building maintenance

- Building design detail provides protection from weathering.
- Systems and access enable ease of maintenance.
- Material selection reduces ongoing maintenance costs.
- Communal waste chutes will be provided for residents in convenient and accessible locations related to each vertical core.
- Waste and recycling storage areas will be well ventilated and have durable and washable finishes in line with the DCP requirements.
- All dwellings will be designed to have sufficient internal space for holding waste and recycling.
- Building materials will be selected to withstand the demands of the environment and to weather gracefully.
- Suitable access for cleaning will be provided from the public domain or appropriately controlled roof access.
- Subsequent detailed development applications will demonstrate compliance with this design guidance.

Sydney Local Environmental Plan 2012 (SLEP 2012)

An assessment of the proposal against the aims, objectives, standards and relevant provisions of Sydney LEP 2012 is set out in the **Table 16** below:

Table 16 | Response to SLEP 2012

Clause	Consideration and Comments	
Part 1 – Preliminary		
1.2 – Aims of Plan	<p>The aims of the plan are as follows:</p> <ul style="list-style-type: none"> a) to reinforce the role of the City of Sydney as the primary centre for Metropolitan Sydney, b) to support the City of Sydney as an important location for business, educational and cultural activities and tourism, c) to promote ecologically sustainable development, d) to encourage the economic growth of the City of Sydney by: <ul style="list-style-type: none"> (i) providing for development at densities that permit employment to increase, and (ii) retaining and enhancing land used for employment purposes that are significant for the Sydney region, e) to encourage the growth and diversity of the residential population of the City of Sydney by providing for a range of appropriately located housing, including affordable housing, f) to enable a range of services and infrastructure that meets the needs of residents, workers and visitors, 	<p>The proposal provides for a high quality residential, retail, commercial and community mixed use precinct at the Waterloo Station, which reinforces the role of the City of Sydney as the primary centre for Metropolitan Sydney.</p> <p>The proposal promotes ESD, and a condition is recommended to commit the detailed design phase to the sustainability measures nominated in the concept application.</p> <p>The proposal benefits from being above and adjacent to the new Metro station, providing access between homes and jobs, reflecting current and future transport capacity within the city and benefiting from existing walking and cycling networks.</p> <p>The proposal fits within the desired character of the area and heritage impacts are considered reasonable and mitigated.</p>

- g) to ensure that the pattern of land use and density in the City of Sydney reflects the existing and future capacity of the transport network and facilitates walking, cycling and the use of public transport,
- h) to enhance the amenity and quality of life of local communities,
- i) to provide for a range of existing and future mixed-use centres and to promote the economic strength of those centres,
- j) to achieve a high quality urban form by ensuring that new development exhibits design excellence and reflects the existing or desired future character of particular localities,
- k) to conserve the environmental heritage of the City of Sydney,
- l) to protect, and to enhance the enjoyment of, the natural environment of the City of Sydney, its harbour setting and its recreation areas.

Part 2 – Permitted or prohibited development

2.3 – Land Use Table – Zone B4 Mixed Use	<p>The site is within the B4 Mixed Use zone. The objectives of the B4 zone are as follows:</p> <ul style="list-style-type: none"> a) to provide a mixture of compatible land uses. b) to integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling. c) to ensure uses support the viability of centres. 	<p>The proposal makes provision for additional retail, commercial and community facility floor space and new public spaces, whilst also providing for additional residential accommodation in an appropriate location to maximise public transport patronage and encourage walking and cycling.</p>
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Part 4 – Principal development standards

4.3 – Height of buildings	<p>The relevant objectives of this clause are as follows:</p> <ul style="list-style-type: none"> a) to ensure the height of development is appropriate to the condition of the site and its context, b) to ensure appropriate height transitions between new development and heritage items and buildings in heritage conservation areas or special character areas, c) to promote the sharing of views, d) to ensure appropriate height transitions from Central Sydney and Green Square Town Centre to adjoining areas <p>The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.</p>	<p>The SSD was lodged and exhibited concurrently with a State Significant Precinct (SSP) Study seeking amendments to planning controls and particularly an increase in the building height development standard. The new planning controls were made on 12 September 2019. The concept planning is consistent with the new planning controls.</p>
4.4 – Floor space ratio	<p>The objectives of this clause are as follows:</p>	<p>The SSD was lodged and exhibited concurrently with a State Significant Precinct (SSP) Study seeking amendments to planning</p>

	<ul style="list-style-type: none"> a) to provide sufficient floor space to meet anticipated development needs for the foreseeable future, b) to regulate the density of development, built form and land use intensity and to control the generation of vehicle and pedestrian traffic, c) to provide for an intensity of development that is commensurate with the capacity of existing and planned infrastructure, d) to ensure that new development reflects the desired character of the locality in which it is located and minimises adverse impacts on the amenity of that locality. <p>The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.</p>	<p>controls and particularly an increase in the floor space ratio development standard. The new planning controls were made on 12 September 2019. The concept planning is consistent with the new planning controls.</p>
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Part 5 – Miscellaneous provisions

5.10 – Heritage conservation	<p>The objectives of this clause are as follows:</p> <ul style="list-style-type: none"> (1) to conserve the environmental heritage of the City of Sydney, (2) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views, (3) to conserve archaeological sites, (4) to conserve Aboriginal objects and Aboriginal places of heritage significance. 	<p>The Department concluded the proposal has acceptable impacts to adjoining and surrounding heritage items subject to appropriate conditions (Section 6.7).</p>
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Part 6 – Local provisions – height and floor space

6.21 – Design Excellence	<p>The consent authority must not grant development consent unless in the opinion of the consent authority the proposed development exhibits design excellence. A competitive design process is required for large developments that trigger the thresholds in the Clause unless the consent authority is satisfied that such a process would be unreasonable or unnecessary in the circumstances.</p>	<p>The proposal is supported by a Design Excellence Strategy that has been prepared to be applied across Sydney Metro OSD projects, including Pitt Street, Crows Nest and Victoria Cross, with minor variations to reflect the local circumstances of each station.</p> <p>The Design Excellence Strategy provides an alternative design excellence process to that under SLEP 2012 proposed to be undertaken to ensure design excellence is achieved through the detailed design stage (see Section 6.6)</p>
6.45 – Waterloo Metro Quarter - general	<ul style="list-style-type: none"> (1) The consent authority must not consent to development on land at the Waterloo Metro Quarter unless it is satisfied that the development is consistent with the following objectives - <ul style="list-style-type: none"> a) there must be at least 12,000 square metres of gross floor area at or below the podium level of buildings on land at the Waterloo Metro Quarter used for land uses other than residential 	<p>The proposed envelopes have been designed to satisfy the requirement for at least 12,000sqm of non-residential uses (other than passenger transport facilities) within the podium, 2,000sqm of community facilities and 2,200sqm of publicly accessible open space</p> <p>The concept promotes the delivery of affordable housing with a minimum 5% of the residential gross floor area nominated for affordable housing and 70 dwellings provided as social housing.</p>

	<p>accommodation or passenger transport facilities,</p> <p>b) at least 2,000 square metres of gross floor area of buildings on land at the Waterloo Metro Quarter must be used for the purposes of community facilities,</p> <p>c) at least 2,200 square metres of land at the Waterloo Metro Quarter must be used for publicly accessible open space.</p> <p>(2) The consent authority must not consent to development involving the construction of one or more dwellings on land at the Waterloo Metro Quarter unless -</p> <p>a) it is satisfied that at least 5% of the gross floor area used for the purposes of residential accommodation on land at the Waterloo Metro Quarter will be used for the purposes of affordable housing, and</p> <p>b) it is satisfied that no dwelling used for the purposes of affordable housing on land at the Waterloo Metro Quarter will have a gross floor area of less than 50 square metres, and</p> <p>c) it is satisfied that land uses other than residential accommodation or passenger transport facilities will be evenly distributed throughout the Waterloo Metro Quarter, and</p> <p>d) it has taken into consideration any guidelines made by the Planning Secretary relating to the design and amenity of the Waterloo Metro Quarter.</p> <p>(3) Clause 6.21(7) does not apply to development on land at the Waterloo Metro Quarter.</p> <p>(4) A provision of this clause or clause 6.46 prevails over any other provision of this Plan to the extent of any inconsistency.</p>	<p>Subsequent development applications will demonstrate compliance with these development standards.</p>
<p>6.46 – Waterloo Metro Quarter – State public infrastructure</p>	<p>(1) The objective of this clause is to require satisfactory arrangements to be made for the provision of designated State public infrastructure before the development of land wholly or partly for residential purposes, to satisfy needs that arise from development on the land, but only if the land is developed intensively for urban purposes.</p> <p>(2) Despite all other provisions of this Plan, development consent must not be granted for development for the purposes of residential accommodation (whether as part of a mixed use development or otherwise) on land at the Waterloo Metro Quarter that results in an increase in the number of dwellings on that land, unless the Planning</p>	<p>The Waterloo SSP process resulted in an SLEP clause which requires the Planning Secretary to certify that satisfactory arrangements have been made to contribute to State public infrastructure. The Department’s delegate on behalf of the Planning Secretary has certified that satisfactory arrangements have been made.</p>

Secretary has certified in writing to the consent authority that satisfactory arrangements have been made to contribute to the provision of designated State public infrastructure in relation to the land.

- (3) This clause does not apply to a development application to carry out development on land at the Waterloo Metro Quarter if all or any part of the land to which the application applies is a special contributions area (as defined by section 7.1 of the Act).
- (4) In this clause—
- designated State public infrastructure means public facilities or services that are provided or financed by the State (or if provided or financed by the private sector, to the extent of any financial or in-kind contribution by the State) of the following kinds -
- a) State and regional roads,
 - b) bus interchanges and bus lanes,
 - c) land required for regional open space,
 - d) embellishments or connections to regional open space,
 - e) social infrastructure and facilities.

Part 7 – Local provisions – General

7.15 – Flood planning

- (1) The objectives of this clause are as follows:
- a) to minimise the flood risk to life and property associated with the use of land,
 - b) to allow development on land that is compatible with the land’s flood hazard, taking into consideration projected changes as a result of climate change,
 - c) to avoid significant adverse impacts on flood behaviour and the environment.
- (2) This clause applies to land at or below the flood planning level.
- (3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development:
- a) is compatible with the flood hazard of the land, and
 - b) is not likely to significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties, and

A Stormwater Management and Flooding Report was provided as part of the EIS. This shows that flood risk to the site is generally isolated to Hunter Street and provides mitigation measures. The pedestrian and vehicle accesses to the OSD are subject to flood planning levels compliant with the City of Sydney Interim Floodplain Management Policy. The Stormwater and Flooding Report confirms that these entries have compliant levels.

	<ul style="list-style-type: none"> c) incorporates appropriate measures to manage risk to life from flood, and d) is not likely to significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, and e) is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding. 	
7.16 – Airspace operations	<p>(1) The objectives of this clause are as follows:</p> <ul style="list-style-type: none"> a) to provide for the effective and on-going operation of the Sydney (Kingsford-Smith) Airport by ensuring that such operation is not compromised by proposed development that penetrates the Limitation or Operations Surface for that airport, b) to protect the community from undue risk from such operation. <p>(2) If a development application is received and the consent authority is satisfied that the proposed development will penetrate the Limitation or Operations Surface, the consent authority must not grant development consent unless it has consulted with the relevant Commonwealth body about the application.</p> <p>(3) The consent authority may grant development consent for the development, if the relevant Commonwealth body advises that:</p> <ul style="list-style-type: none"> a) the development will penetrate the Limitation or Operations Surface but it has no objection to its construction, or b) the development will not penetrate the Limitation or Operations Surface. 	The Commonwealth Department of Infrastructure and Regional Development (DIRD) and Sydney Airport (as delegate of the CDIRD) have approved the proposed penetrations into the prescribed airspace for Sydney Airport.
7.20 – Development requiring or authorising preparation of a development control plan	Development consent must not be granted to development in Central Sydney for a site of more than 1,500m ² or height greater than 55 metres unless a development control plan has been prepared for the land.	The proposal is in accordance with Sections 4.22 and 4.23 of the EP&A Act which allows for the lodgement of a staged development application in lieu of a site-specific DCP.

Consideration of SLEP Clause 6.21(4) – Design Excellence

The Department has assessed the proposal against the matters for consideration in Clause 6.21(4) of SLEP 2012 in the **Table 17** below. The Department considers the proposal exhibits design excellence as it addresses the requirements of the Clause and is subject to the Design Excellence Strategy including processes for detailed advice from a Design Review Panel.

Table 17 | Response to Design Excellence clause in SLEP 2012

Clause 6.21 (4)	Consideration /Recommendations
(a) whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved	<p>The Concept, together with the recommended Design Guidelines and Design Excellence Strategy, is capable of delivering detailed design with a high standard of architectural design, materials and detailing appropriate to the building types proposed and location.</p> <p>The Department acknowledges the proposed Design Excellence Strategy in lieu of a competitive design process required under the Sydney Local Environmental Plan 2012 (SLEP).</p> <p>The Department accepts the benefits of the proposed integrated design process outweighs the risks to design excellence posed by a non-integrated competition held for the over station development only</p>
(b) whether the form and external appearance of the proposed development will improve the quality and amenity of the public domain	<p>The Concept allows for the establishment of an integrated public domain including public plazas, a laneway, a through-site link and connections to public and active transport. The building envelopes allow for suitable frontage to public space and activation of the streetscapes and plazas.</p> <p>The public domain is also subject to the Station Design Precinct Plan (Condition E101) of the infrastructure approval for the Metro Station (CSSI 7400).</p>
(c) whether the proposed development detrimentally impacts on view corridors	<p>The proposal does not impact on any significant view corridors. The Department carefully considered views from adjoining properties during site inspections and noted no view corridors are present.</p>
(d) how the proposed development addresses the following matters: (i) the suitability of the land for development, (ii) the existing and proposed uses and use mix (iii) any heritage issues and streetscape constraints, (iv) the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form (v) the bulk, massing and modulation of buildings (vi) street frontage heights (vii) environmental impacts, such as	<p>Previous developments at the site have since been demolished as part of approved works for the new Metro Station (CSSI 7400).</p> <p>The site is located in the B4 Mixed Use Zone, where the proposed uses are permissible with development consent.</p> <p>The proposed uses of the site are suitable for the site. The proposal is directly above and adjacent to the new Metro station and in the heart of the southern mixed use area of the Sydney LGA.</p> <p>The Department’s assessment concludes the proposal has acceptable impacts to adjoining and surrounding heritage items (see Section 6.7).</p> <p>The Department’s assessment concludes the proposal has an acceptable form and relationship within its context as discussed in Section 6.1.</p> <p>The bulk and scale of the proposed building envelope is compatible with surrounding developments (See Section 6.1).</p> <p>The Department is satisfied that the proposal has been designed to minimise environmental impacts within the site and surroundings. The Department’s</p>

- sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity
- (viii) the achievement of the principles of ecologically sustainable development
- (ix) pedestrian, cycle, vehicular and service access and circulation requirements, including the permeability of any pedestrian network
- (x) the impact on, and any proposed improvements to, the public domain
- (xi) the impact on any special character area
- (xii) achieving appropriate interfaces at ground level between the building and the public domain
- (xiii) excellence and integration of landscape design
- assessment has carefully considered sustainability, overshadowing, visual and acoustic privacy, noise, wind and reflectivity.
- The Department is satisfied the proposal is consistent with the principles of ecological sustainable development as discussed under **Section 4.3.3**.
- The Department is satisfied the proposal has suitable arrangement for pedestrian, cycle, vehicular and service access and circulation (see **Sections 6.4 and 6.7**).
- The design of public domain and pedestrian access for the site is subject to the Station Design Precinct Plan (**Condition E101 of CSSI 7400**) and Interchange Access Plan (**Condition E92 of CSSI 7400**) of the separate infrastructure approval (**CSSI 7400**) for the Metro Station.
- The submitted application includes details on how the proposed over station development integrates with the approved station and streetscapes to ensure an overall good urban design and public domain outcome.

Appendix G – Community Views for Draft Notice of Decision

Appendix H – Recommended Instrument of Consent

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/11551>