Environmental Impact Statement

Site 68 Sydney Olympic Park

November 2014

urbis

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Murray Donaldson
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Job Code	SA5384
Report Number	EIS Final

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SUBMISSION OF ENVIRONMENTAL IMPACT STATEMENT

Prepared in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulation 2000.*

Environmental Assessment prepared by:

Names:	Murray Donaldson (Director) *Bachelor of Town Planning (Hons), UNSW* *Master of Environmental Management, Macquarie University* Samantha Wilson (Senior Consultant): *Bachelor of Landscape Architecture, University of Canberra* *Master of Master of Urban Planning and Environment, RMIT (pending)*
Address:	Urbis Pty Ltd Level 23, Darling Park Tower 2, 201 Sussex Street Sydney NSW 2000
In respect of:	Site 68 Mixed Use Development – Sydney Olympic Park

Applicant and Land Details:

Applicant:	Michael Azar, representing Ecove Group Pty Ltd
Applicant Address:	Cnr Australia Avenue and Herb Elliott Avenue, Sydney Olympic Park NSW 2127
Land to be Redeveloped:	Site 68, Bennelong Parkway, Sydney Olympic Park
Lot and DP:	Part Lots 73 and 75 in DP 1134933
Project:	Site 68 Mixed Use Development – Sydney Olympic Park

Declaration:

I certify that the contents of the Environmental Impact Assessment to the best of my knowledge, has been prepared as follows:

- In accordance with the requirements of the Schedule 2 of *Environmental Planning and Assessment Regulation 2000*; and *State Environmental Planning Policy (State and Regional Development) 2011*.
- The information contained in this report is true in all material particulars and is not misleading.

Name	Murray Donaldson, Director	Samantha Wilson, Senior Consultant
Signature:		
Date:	29 September 2014	29 September 2014

Executive Summary

This Environmental Impact Statement (EIS) has been prepared on behalf of *Ecove Group Pty Ltd* (the proponent). It accompanies a development application for State Significant Development comprising the construction of a mixed residential and retail development at Site 68, Bennelong Parkway, Sydney Olympic Park (hereafter referred to as the subject site).

The proposal comprises a single residential tower, with ground floor commercial / retail uses, a child care centre, landscaped ground plane, stormwater detention tank, and basement car parking. The development has a capital investment value (CIV) of more than $10m and is located in Sydney Olympic Park. It is therefore a State Significant Development (SSD) for which the Minister is the consent authority, pursuant to Schedule 2 of the *State Environmental Planning Policy (State and Regional Development) 2011*.

The SSD application is supported by specialist technical studies provided in the appendices of this report. These technical studies were undertaken to inform the design of the proposed works in the context of the future land uses, urban structure and built form and to assess the potential environmental impacts.

Consultation has been undertaken with a number of authorities in respect to the proposal, including Sydney Olympic Park Authority (SOPA), Sydney Trains, and the Office of Environment and Heritage, whose comments have been incorporated into the design and supporting technical studies.

The proposal has been assessed against the planning controls and principles within the applicable environmental planning instruments and relevant policies and guidelines consistent with the Secretary's Requirements (SEARs) for the SSDA. The proposal has been designed to mitigate any potential impacts on the site and surrounding environment.

SITE AND CONTEXTUAL ANALYSIS

The subject site is known as Site 68 Bennelong Parkway, Sydney Olympic Park and is legally described as Part Lots 73 and 75 in DP 1134933. The site is located within Sydney Olympic Park, which includes 430 hectares of open space, recreation areas, sporting facilities, wetlands and waterways. Since the 2000 Olympic Games, Sydney Olympic Park has developed to become a vibrant and integral suburb in Sydney.

The site is located on the corner of Australia Avenue and Bennelong Parkway, adjacent to Bicentennial Park, and is approximately 500m from the Sydney Olympic Park Town Centre. The site currently contains a large water quality control pond and a series of pedestrian and cycle paths linking Australia Avenue to Bennelong Parkway and Bicentennial Park.

Development in the surrounding area is characterised predominantly by residential tower development, commercial, sporting, and entertainment uses. In particular, directly north of the site is the future mixed-use precinct known as Australia Towers or Site 3, which is currently under construction. Located directly north of the site is the future mixed-use precinct known as Australia Towers (or Site 3).

SECRETARY'S REQUIREMENTS

The Secretary's Environmental Assessment Requirements (SEARs) for the preparation of the Environmental Impact Statement (EIS) were issued on 31 July 2014. A copy of the SEARs is included at Appendix A. A summary of the SEARs is provided in Section 1.5 of this report. The requirements are identified and a response to each is provided in Table 1 in Section 1.5, including the relevant technical/specialist report submitted with the EIS.

PROJECT OVERVIEW

Staged development consent is sought, under Section 83(1) of the *Environmental Planning and Assessment Act 1979*, for the following:

- Section 83B(3)(b) Works comprising:
  - A single residential tower comprising 33 residential floors, with 369 apartments, and 120m² of ground floor retail / commercial uses;
  - A stormwater detention tank;
  - Three levels of basement car park, comprising 408 resident spaces, 42 visitor spaces, 2 retail spaces, and 20 child care centre spaces; and
  - Associated landscaping works, comprising mature plantings, bio-retention wetlands, and a cascading waterfall.
- A Concept Proposal for development of a child care centre on the northern portion of the site.

STATUTORY AND STRATEGIC FRAMEWORK

The following planning instruments and policy documents are relevant to the subject site and the proposed development:

- *State Environmental Planning Policy (State and Regional Development) 2011.*
- *State Environmental Planning Policy (Major Development) 2005.*
- *State Environmental Planning Policy (Infrastructure) 2007.*
- *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.*
- *State Environmental Planning Policy No. 55 - Remediation of Land.*
- *State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Development.*
- *Sydney Regional Planning Policy (Sydney Harbour Catchment) 2005.*
- *Auburn Local Environmental Plan 2010.*
- *Sydney Olympic Park Master Plan 2030.*
- *Sydney Olympic Park, Access Guidelines 2008.*
- *Sydney Olympic Park Major Event Impact Assessment Guidelines.*
- *NSW 2021.*
- *Draft Metropolitan Strategy for Sydney.*

The principle site specific controls are contained in Schedule 3, Part 23 of *State Environmental Planning Policy (Major Development) 2005* and the *Sydney Olympic Park Master Plan 2030*.

A detailed assessment of the proposed development against the relevant statutory requirements and policies is provided in Sections 6 and 7 of this report.

ENVIRONMENTAL PLANNING ASSESSMENT

The EIS addresses the key issues identified in the SEARs and other relevant considerations. The proposed development represents a positive development outcome for the site and surrounding area for the following reasons:

- The proposal demonstrates consistency with the relevant environmental planning instruments including strategic planning policy, State and local planning legislation, regulation and policies.
- The proposal fully addresses the issues identified in the SEARs and proposes appropriate mitigation measures for implementation during the pre and post construction stages.
- The proposal will result in minimal environmental impacts, all of which can be mitigated through the recommendations outlined in Section 10 of this report.
- The proposal is consistent with the principles of ESD as defined by Schedule 2, clause 7(4) of Schedule 2 of the EP&A Regulation.
- The proposed works will enable residential, retail / commercial, and community development at the site and will result in positive economic impacts through the provision of direct and indirect employment (during both construction and operation).
- The proposed works will enable construction of publically accessible through-site links, a neighbourhood park, child care centre, and community room and will result in positive social impacts and improved access networks.
- The site is considered to be suitable for the proposed works given its location within Sydney Olympic Park and will result in public benefit through the provision of the following:
  - Recreation and pedestrian or bicycle connectivity throughout the site which links with key transport and access nodes. These will provide significant pedestrian and cycleway upgrades and new links to improve connectivity to Olympic Park Station, Bicentennial Parklands and the wider Sydney Olympic Park Precinct.
  - Development of a large publically accessible landscape ground-plane, providing for both active and passive recreation opportunities for residents and visitors.
  - A future child care centre is accommodated which will respond to the needs of the area and the demographic profile of the current and future population.
  - Best practice sustainability measures including the use of vertical slots with automated louvers allowing for cross ventilation, double-glazing, efficient appliances and fixtures, use of low volatile organic compound materials, rainwater reuse tanks, bio-retention wetlands, and other WSUD measures.

In our opinion, for the reasons outlined above and in the remainder of this report, the proposal is appropriate for the site and Sydney Olympic Park.

CONCLUSION

In accordance with the matters for consideration listed in the Secretary's requirements:

- The proposal is appropriate for the site and positively contributes to the emerging character and built form of Sydney Olympic Park.
- The proposal is generally in accordance with the provisions of the State and Local planning policies applying to the site.
- The proposal will not give rise to any unreasonable environmental impacts in the locality.

Accordingly it is recommended that the Minister for Planning approve the proposed development.

1 Introduction

This Environmental Impact Statement (EIS) is submitted to the *Department of Planning and Infrastructure* in support of an application for State Significant Development (SSD) for a new residential development at Site 68, Sydney Olympic Park.

State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD) identifies development which is declared to be SSD. Under Clause 2 of Schedule 2 of SRD SEPP, development within Sydney Olympic Park with a capital investment value (CIV) of more than $10 million is identified as SSD. As the proposed development will have a CIV of approximately $130,241,000, it is SSD. A copy of the Quantity Surveyor's report is attached at Appendix B.

The EIS has been prepared by Urbis on behalf of *Ecove Group Pty Ltd* (the proponent). The EIS relies on the Architectural Drawings prepared by Bates Smart Architects, and other supporting technical information appended to the report (see Table of Contents).

This report describes the site, its environs, the proposed development, and provides an assessment of the proposal in accordance with the Director-General's Requirements (SEARs) issued for the proposal.

1.1 PROJECT OVERVIEW

The SSD application seeks approval for the construction of a mixed-use development comprising of a residential tower, a publically accessible landscaped ground plane, a child care centre, a stormwater detention tank, and basement and at grade car parking. A detailed description of the proposal is provided in Section 3 of this report.

1.2 PROJECT OBJECTIVES

The proposal is seeking to provide high quality housing in a higher density environment, consistent with the *Sydney Olympic Park Master Plan 2030*. The specific objectives of the proposed residential development include:

- Promote well-designed residential accommodation for future residents of Sydney Olympic Park and assist in meeting housing targets set by the State Government.
- Provide a variety of dwelling types, including one, two and three bedroom units, to encourage a diverse and sustainable community.
- Create a development that is an appropriate size and scale that fits within the context of the desired future character of the precinct and surrounding development.
- Protect and enhance the amenity of open spaces and key views into and from the site and ensure that the built form will have minimal or no impact on adjacent development and parklands.
- Promote ESD and WSUD principles through the use of thoughtful urban design, technologies and sustainable materials.
- Provide landscaping to enhance the environmental amenity of the site and precinct through thoughtful landscape design.
- Provide highly accessible accommodation close to public transport, facilities, services, recreation facilities and education establishments.

1.3 BACKGROUND

EXPRESSION OF INTEREST

Ecove Group Pty Ltd (the Proponent) was successful in being awarded preferred developer status for Site 68 in early 2014. Ecove provided a high quality detailed proposal to SOPA which included a residential tower, a publically accessible landscape ground plane, a railway underpass for pedestrians and bicycles, a child care centre, and the relocation of the existing water quality control pond. SOPA and Ecove have entered into a Project Delivery Agreement under which the delivery of the project is to be undertaken.

ACCESS IMPROVEMENTS

The detailed proposal presented to SOPA during the Expression of Interest phase was heavily focused on improving access between Site 3 and Site 68, as well as the broader Sydney Olympic Park area and Bicentennial Parklands. The strategy was also focused on increasing amenity for visitors and residents through the incorporation of community uses including a child care centre and publically accessible neighbourhood park.

To fulfil the objectives of this wider strategy to improve access and increase amenity, Ecove has prepared separate local development applications to be determined by SOPA for the following works (Figure 1):

- A landscaped pocket park and accessible pedestrian railway underpass, connecting Site 3 and the broader Sydney Olympic Park Town Centre with Site 68 (refer Figure 2) (reference number DA 07-08-2014).

- Upgrades to the existing pedestrian and cyclist land-bridge over Bennelong Parkway connecting Site 68 with Bicentennial Park (submitted to SOPA in draft form for review).

FIGURE 1 – EOI ACCESS IMPROVEMENT WORKS

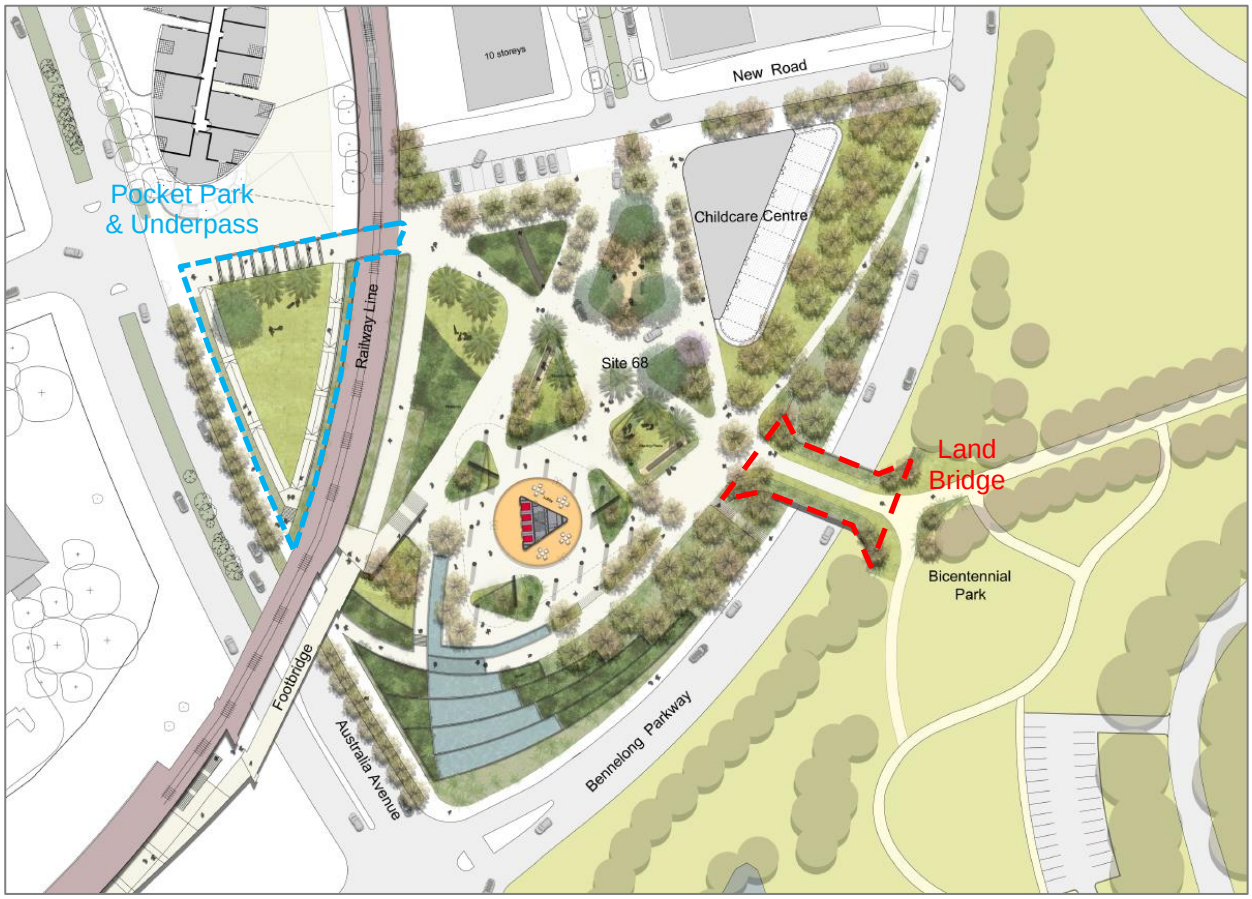


FIGURE 2 – SITE 3 POCKET PARK AND UNDERPASS

1.4 STRUCTURE OF THIS REPORT

The EIS provides the following sections:

- **Section 2 Site and Contextual Analysis:** Provides a description of the site, the regional and local context and an assessment of the opportunities and constraints presented by the site.
- **Section 3 The Proposal:** Provides the project objectives and a description of the proposed works.
- **Section 4 Justification and Assessment of Alternatives:** Details the justification for the proposed works and consideration of alternatives.
- **Section 5 Consultation:** Describes the consultation undertaken with the relevant agencies and service providers.
- **Section 6 Statutory and Strategic Context:** Provides a detailed review of the proposal against the State and local planning framework.
- **Section 7 Policies:** Provides a review of the proposal in light of the applicable strategic policy documents.
- **Section 8 Environmental Assessment:** Provides an in-depth assessment of the existing environment, the potential impacts, and the mitigation measures for each of the key criteria in the SEARs.
- **Section 9 Construction Management Plan:** Details the specific considerations for the development of a Construction Management Plan.
- **Section 10 Recommendations and Mitigation Measures:** Provides a consolidated list of recommendations and mitigation measures based on the technical studies undertaken as part of this application.
- **Section 11 Section 79C Assessment:** Provides an assessment of the proposal against the matters of consideration listed in Section 79C of *the Environmental Planning and Assessment Act 1979*.
- **Section 12 Conclusion.**

1.5 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)

A request was made to the Minister for the Secretary's Environmental Assessment Requirements (SEARs) under Section 75F of the *Environmental Planning and Assessment Act 1979*, for the preparation of an environmental assessment. The SEARs are addressed within this report and included in full at Appendix A. Table 1 below provides a summary of the Secretary's Requirements and outlines where in the body of the report, or specialist consultants' reports, the SEARs are addressed.

TABLE 1 – SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

REQUIREMENT	COMMENT
GENERAL REQUIREMENTS	
The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the *Environmental Planning and Assessment Regulation 2000.*	EIS has been prepared in accordance with the Secretary's Requirements and is structured accordingly.
Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development. Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include: ▪ adequate baseline data; ▪ consideration of potential cumulative impacts due to other development in the vicinity; and ▪ measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment.	EIS includes comprehensive assessment of environmental risks and impacts throughout the report.
The EIS must be accompanied by a report from a qualified quantity surveyor providing:	
▪ a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Environmental Planning and Assessment Regulation 2000) of the proposal, including details of all assumptions and components from which the CIV calculation is derived;	Refer Quantity Surveyor Report provided at Appendix B.
▪ an estimate of the jobs that will be created by the future development during the construction and operational phases of the development; and	Direct Construction: 538 Ongoing Retail: 12 Ongoing Childcare centre: 8
▪ certification that the information provided is accurate at the date of preparation.	Refer to Quantity Surveyor Report provided at Appendix B.
KEY ISSUES	
1. Statutory and Strategic Context: Address the relevant statutory provisions applying to the site contained in all relevant EPIs, including:	
▪ *State Environmental Planning Policy (State and Regional Development) 2011;*	Addressed in Section 6.1.

REQUIREMENT	COMMENT
▪ *State Environmental Planning Policy (Major Development) 2005;*	Addressed in Section 6.2.
▪ *State Environmental Planning Policy (Infrastructure) 2007;*	Addressed in Section 6.3.
▪ *State Environmental Planning Policy No 65 - Design Quality of Residential Flat Development;*	Addressed in Section 6.4.
▪ *State Environmental Planning· Policy (Building Sustainability Index: BASIX) 2004; and*	Addressed in Section 6.5.
▪ *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.*	Addressed in Section 6.7.
Permissibility - Detail the nature and extent of any prohibitions that apply to the development.	Addressed in Section 6.2.
Development Standards - Identify compliance with the development standards applying to the site.	Addressed in Section 6.2.
Contamination - Demonstrate that the site is suitable for the proposed use in accordance with State Environmental Planning Policy No.55 - Remediation of Land (SEPP 55). The EIS must include an assessment of contamination in accordance with relevant NSW Environment Protection Authority (EPA) guidelines made or approached under section 105 of the Contaminated Land Management Act 1997.	Refer to Phase 1 Contamination Assessment provided at Appendix T.
2. Policies: Address the relevant planning provisions, goals and strategic planning objectives in the following:	
▪ *NSW 2021;*	Addressed in Section 7.1.
▪ *Residential Flat Design Code;*	Refer to Design Report and Design Verification Statement provide at Appendix C.
▪ *Sydney Olympic Park Master Plan 2030;*	Addressed in Section 7.3.
▪ *Sydney Olympic Park Access Guidelines 2011;*	Addressed in Section 7.4 and within the Access Report provided at Appendix N.
▪ *Sydney Olympic Park Major Event Impact Assessment Guidelines;*	Addressed in Section 7.5 and within the Traffic and Transport Assessment provided at Appendix M.
▪ *Sydney Olympic Park Urban Elements Design Manual;*	Addressed in Section 7.6 and within the Landscape Report provided at Appendix G.
▪ *Sydney Olympic Park Environmental Guidelines; and*	Addressed in Section 7.7.
▪ *Sydney Olympic Park Stormwater and Water Sensitive Urban Design Policy.*	Addressed in Section 7.8 and within the Stormwater and Flooding Assessment provided at Appendix Q.

REQUIREMENT	COMMENT
3. Built Form and Urban Design	
▪ Address the height, bulk and scale of the proposed development within the context of the locality, including development adjacent at Site 3, Sydney Olympic Park and Bicentennial Park.	Addressed at Section 8.1 and within the Design Report provided at Appendix C.
▪ Demonstrate design quality, with specific consideration of the overall site layout, open spaces, interface with the public domain, facade, rooftop, massing, setbacks, building articulation, materials, choice of colours, signage or signage envelopes.	Addressed at Section 8.1 and within the Design Report provided at Appendix C.
▪ Detail how services, including but not limited to, waste management, loading zones, and mechanical plant are integrated into the design of the development.	Addressed at Section 8 and within the Design Report provided at Appendix C
▪ Demonstrate how the design responds to the comments and recommendations made by the Sydney Olympic Park Authority Design Review Panel.	Addressed at Section 5.1.
4. Public Domain	
▪ Identify proposed open space, public domain, and pedestrian linkages with and between other public domain spaces (i.e. Bicentennial Park and railway underpass).	Addressed at Section 8 and within the Landscape Report provided at Appendix G.
▪ Provide landscaping and public domain details, including details on the interface with the proposed development.	Refer to Landscape Report and Drawings provided at Appendix G and Appendix H.
5. Environmental Amenity	
▪ Provide information detailing the· provision of solar access to the building and any overshadowing impacts, acoustic impacts, privacy, view loss and wind impacts. A high level of environmental amenity must be demonstrated.	Addressed in Section 8.2 and within the Design Report at Appendix C, Wind Assessment at Appendix K, and Acoustic Assessment at Appendix L.
6. Flora and Fauna	
▪ Provide a detailed survey (using a variety of survey methods by a suitably qualified person) for threatened flora and fauna likely to be present on the site.	Addressed in Section 8.4 and within the Flora and Fauna Assessment provided at Appendix P.
▪ Identify and assess any impacts on flora and fauna, including potentially occurring threatened species and populations, including but not limited to migratory shorebirds, the Green and Golden Bell Frog, Wilsonia backhousei, and their habitats, in accordance with the relevant principles and policies of the NSW Office of Environment and Heritage (OEH) for assessing and offsetting biodiversity impacts.	Addressed in Section 8.4, within the Flora and Fauna Assessment and Biodiversity Offset Strategy provided at Appendix P.

REQUIREMENT	COMMENT
7. Ecology	
▪ Where relevant, assess the potential on-site and off-site risks, issues and impacts on riparian and aquatic ecology, including watercourses, riparian land, wetlands and groundwater dependent ecosystems and a detailed description of measures to mitigate potential impacts.	Addressed at Section 8.15 and within the Stormwater and Flooding Report provided at Appendix Q.
8. Ecologically Sustainable Development (ESD)	
▪ Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000) will be incorporated in the design, construction and ongoing operation phases of the development.	Addressed at Section 8.5 and within the ESD Report at Appendix J.
▪ Include a description of the measures that would be implemented to minimise consumption of resources, water and energy, including an Integrated Water Management Plan which details any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.	Addressed at Section 8.5 and within the ESD Report at Appendix J.
9. Noise and Vibration	
▪ Identify the main noise and vibration generating sources and activities at all stages of construction, and any noise sources during operation. Outline measures to minimise and mitigate potential noise and vibration impacts on surrounding occupiers of land.	Addressed at Section 8.2.3 and within the Noise and Vibration Assessment provided at Appendix L.
▪ Assess the impacts on the proposed development from surrounding land uses, including noise from the Olympic Park Rail Line and Sydney Olympic Park events.	Addressed at Section 8.2.3 and within the Noise and Vibration Assessment provided at Appendix L.
10. Transport and Accessibility	
▪ Detail existing pedestrian and cycle movements within the vicinity of the site and determine the adequacy of the proposal to meet the likely future demand for increased public transport and pedestrian and cycle access.	Addressed at Section 8.7 and within the Traffic and Transport Assessment at Appendix M.
▪ Identify measures to promote travel choices that support the achievement of State Plan targets, such as implementing a location-specific sustainable travel plan.	Addressed at Section 8.7 and within the Traffic and Transport Assessment at Appendix M.
▪ Provide details of the total daily and peak hour trips generated by the proposed development, including accurate details of the current and future daily vehicle movements and assess the impacts of the traffic generated on the local road network, including intersection capacity and any potential need for upgrading or road works (if required).	Addressed at Section 8.7 and within the Traffic and Transport Assessment at Appendix M.

REQUIREMENT	COMMENT
▪ Detail the proposed access and parking provisions associated with the proposed development, including compliance with the requirements of the relevant parking codes and Australian Standards, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and cycle networks.	Addressed at Section 8.7 and within the Traffic and Transport Assessment at Appendix M.
▪ Demonstrate the provision of sufficient on-site car parking having regard to the availability of public transport and car parking controls of Master Plan 2030.	Addressed at Section 8.7 and within the Traffic and Transport Assessment at Appendix M.
▪ Detail the proposed service vehicle movements (including vehicle type and the likely arrival and departure times).	Addressed at Section 8.7 and within the Traffic and Transport Assessment at Appendix M.
▪ Detail access and car parking arrangements at all stages of construction and measures to mitigate any associated pedestrian, cycleway, public transport or traffic impacts.	Addressed at Section 8.7 and within the Traffic and Transport Assessment at Appendix M.
11. Major Events	
▪ Adequately address the impact of major events in the precinct as it relates to the proposed development within the Town Centre (SOP Major Event Impact Assessment Guidelines).	Addressed at Section 7.5 and within the Traffic and Transport Assessment at Appendix M.
▪ Demonstrate that the proposed development and future operation can work in major event mode.	Addressed at Section 7.5 and within the Traffic and Transport Assessment at Appendix M.
12. Utilities	
▪ Address the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure in consultation with relevant agencies.	Addressed at Section 8.9 and within the Utilities and Services Strategy documents at Appendix R.
13. Staging	
▪ Provide details regarding the staging of the proposed development (if proposed).	Addressed at Section 8.10.
14. Contributions	
▪ Address any Contributions Plan and/or details of any Voluntary Planning Agreement.	Addressed at Section 8.11.
15. Sediment, Erosion and Dust Controls	
▪ Identify measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles.	Addressed at Section 8.12 within the Sediment and Erosion Control Plan provided at Appendix S.

REQUIREMENT	COMMENT
▪ Assess the presence of acid sulphate soils and, where the possible presence of acid sulphate soils is confirmed, carry out an acid sulphate soils assessment in accordance with the Acid Sulphate Soils Manual (Stone et al. 1998).	Refer to Geotechnical Assessment provided at Appendix U.
16. Water Quality and Flooding	
▪ Identify if the proposal involves any discharges to waters or dewatering requirements from the construction site and any associated impacts, including an assessment of any water discharges against relevant guidelines and licencing requirements under the Water Act 1912 and Protection of the Environment Operations Act 1997.	Addressed at Section 8.15 and within the Stormwater and Flooding Assessment provided at Appendix Q.
▪ Identify the source, volume and quality of any construction water (i.e. groundwater and rainwater collected from excavations), the discharge procedures and the receiving water body, the treatment of any construction water and 'any impacts on water quality of the receiving body.	Addressed at Section 8.15 and within the Stormwater and Flooding Assessment provided at Appendix Q.
▪ As assessment of any flood risk on site and consideration of any relevant provisions of the NSW Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity.	Addressed at Section 8.15 and within the Stormwater and Flooding Assessment provided at Appendix Q.
17. Drainage	
▪ Detail drainage associated with the proposal, including stormwater and drainage infrastructure.	Addressed at Section 8.15 within the Stormwater and Flooding Assessment provided at Appendix Q.
18. Servicing and Waste	
▪ Identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. This should include the preparation of a construction waste management plan.	Addressed at Section 9.
▪ Identify the annual volume of material to be extracted, processed or stored on site during construction and how the extracted material will be disposed of or re-used, having regard to relevant EPA licencing guidelines and schedule 1 of the Protection of the Environment Operations Act 1997	Addressed at Section 9.
▪ Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.	Addressed at Section 8.16 and within the Waste Management Report provided at Appendix V.
PLANS AND DOCUMENTS	
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. Provide these as part of the EIS rather than as separate documents. In addition, the EIS must include the following:	All relevant drawings, diagrams and documentation under Schedule 1 have been provided and are attached to this submission in the Appendices.

REQUIREMENT	COMMENT
▪ Architectural drawings;	Appendix F
▪ Plan of subdivision;	Not relevant.
▪ Site survey plan, showing existing levels, location and height of existing and adjacent structures/buildings;	Appendix I
▪ Site analysis plan;	Appendix C
▪ Shadow diagrams;	Appendix F
▪ Access Impact Statement;	Appendix N
▪ View analysis/photomontage; ·	Appendix C
▪ Stormwater Concept Plan;	Appendix Q
▪ Sediment and Erosion Control Plan;	Appendix S
▪ Landscape Plan;	Appendix H
▪ Public Domain Interface Plan;	Appendix H
▪ Preliminary Construction Management Plan, inclusive of a Construction Traffic Management Plan;	Addressed at Section 9.
▪ Geotechnical and Structural Report; and	Appendix U
▪ Schedule of materials and finishes.	Appendix F
CONSULTATION	
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with the Sydney Olympic Park Authority, including the Sydney Olympic Park Authority Design Review Panel. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	Addressed at Section 5.
FURTHER CONSULTATION AFTER 2 YEARS	
If you do not lodge a development application and EIS for the development within 2 years of the issue date of these SEARs, you must consult further with the Secretary in relation to the preparation of the EIS.	N/A

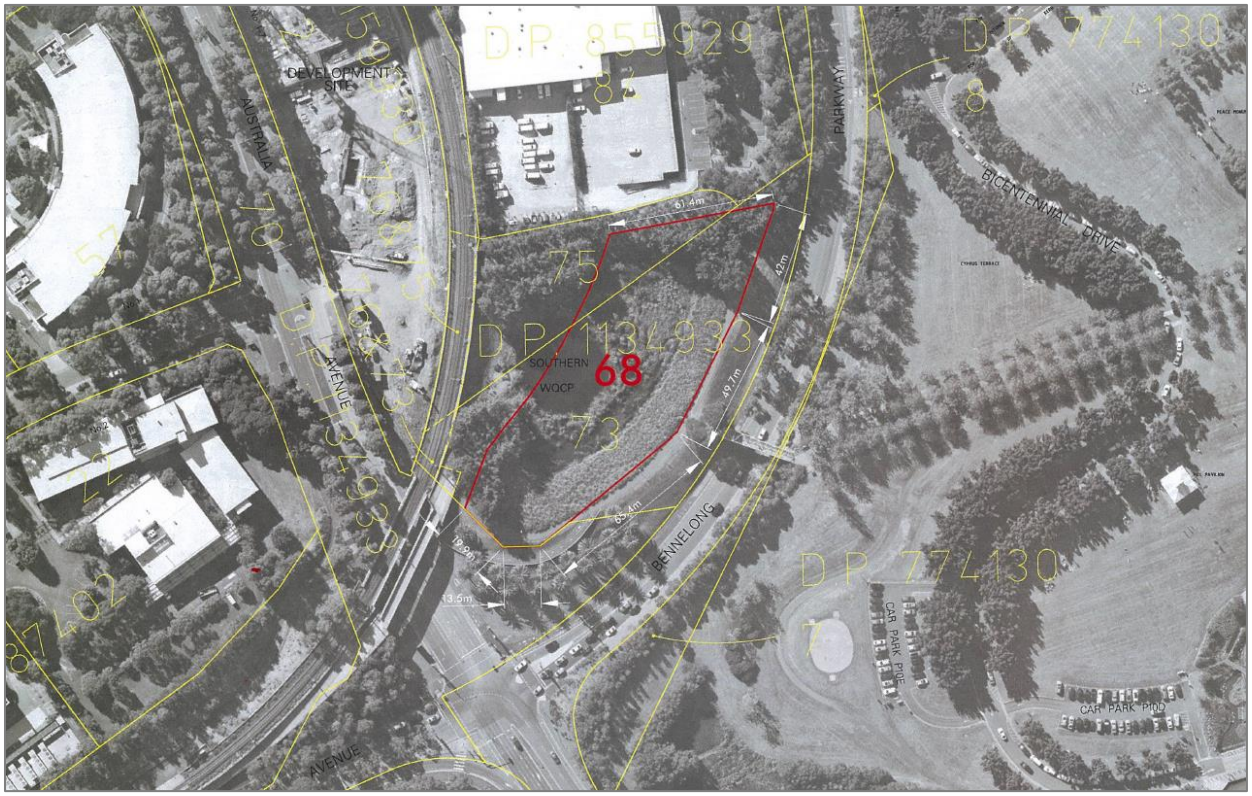
2 Site and Contextual Analysis

2.1 SITE DESCRIPTION

The subject site is known as Site 68 Sydney Olympic Park and is located within the Auburn Local Government Area. The site has an area of 13,998m² and is legally described a Part Lots 73 and 75 in DP 1134933 (refer Figure 3).

The site is located on the north-eastern corner of the intersection of Australia Avenue and Bennelong Parkway, approximately 500 metres from the Sydney Olympic Park Town Centre. The site currently contains a large water quality control pond and a series of pedestrian and cycle paths linking Australia Avenue to Bennelong Parkway and Bicentennial Park.

FIGURE 3 – SITE 68, SYDNEY OLYMPIC PARK



Source: Sydney Olympic Park Authority

2.2 SURROUNDING LAND USES

The site is bound by Bennelong Parkway to the east, Sydney Olympic Railway Line and Australia Avenue to the west, and the future mixed-use precinct known as Site 67 to the north. The surrounding context is described as:

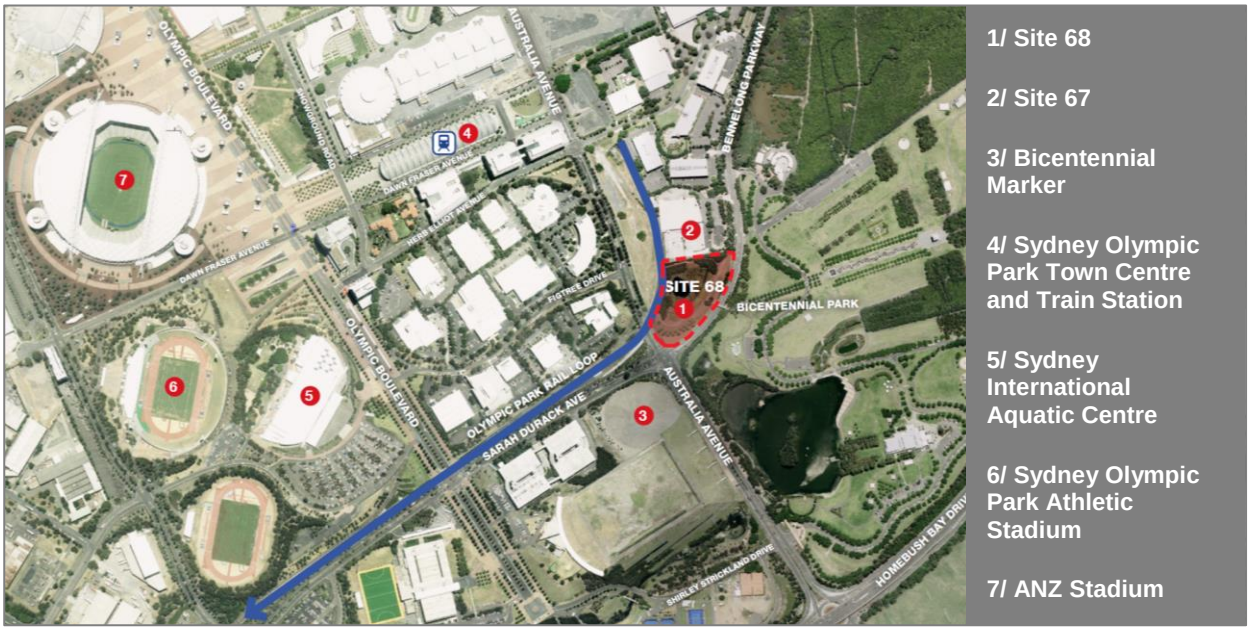
- To the **north**, a new access road is being constructed by SOPA along the northern boundary of the site to separate Site 68 from Site 67 and provide a primary entrance roadway to both sites from Bennelong Parkway. The adjacent Site 67 is the subject of a recent development application for a series of residential buildings up to ten storeys in height.

- To the **east**, beyond Bennelong Parkway is Bicentennial Park, a 40 hectare natural heritage site featuring an important wetland ecosystem with extensive public parklands, which provide a major ecological and environmentally focussed recreational facility for residents of inner-western Sydney.

- To the **west**, an elevated railway line runs the entire length of the site, approximately 5 metres above natural ground level. The railway line serves as the main outbound train route for trains departing Olympic Park Station, heading towards the City Centre.

  Beyond the Railway Line lies Sydney Olympic Park, comprising internationally renowned sporting facilities and a significant quantity of low rise, commercial and industrial buildings which are gradually being replaced by new residential and mixed use developments in accordance with the *Sydney Olympic Park Masterplan 2030*.

FIGURE 4 – SITE CONTEXT PLAN



2.3 LOCAL CONTEXT

The site is identified within SOPA's *Sydney Olympic Park Masterplan 2030* as the southernmost site of the Parkview Precinct, a proposed new mixed-use precinct on the eastern side of Sydney Olympic Park, which will transform the existing industrial and commercial buildings fronting Bennelong Parkway into a high quality residential community with extensive views over, and pedestrian links to, Bicentennial Park.

Under *Master Plan 2030*, the future Parkview Precinct will consist primarily of residential buildings which are between 4-10 storeys in height to the north of the site, and 20-30 storeys to west of the site on the opposite side of the railway line. Redevelopment to the north-west is well advanced with Australia Towers Stage 1 completed in 2012, and Australia Towers Stage 2 due for completion in 2015 (refer Figure 5).

FIGURE 5 – PERSPECTIVE VIEW – AUSTRALIA TOWERS STAGE 1 AND 2

2.4 REGIONAL CONTEXT

Sydney Olympic Park is approximately 14 kilometres west of the Sydney CBD and 8 kilometres east of the Parramatta CBD. Covering 640 hectares, Sydney Olympic Park includes 430 hectares of open space, recreation areas, sporting and recreational facilities, wetlands and waterways. The Park's green spaces and parklands are inhabited by threatened species, protected marine vegetation and endangered ecological communities.

The park has undergone extensive environmental remediation that has converted the previously industrial lands into a precinct of parklands, ecosystems and leading urban design. Since the 2000 Olympic Games, Sydney Olympic Park has developed to become a vibrant and integral suburb in Sydney with sustainability at the forefront of all decision-making affecting design, construction, and management of the built environments. Water recycling, solar energy and sustainable materials are key elements of existing and future design within the Precinct.

2.5 OPPORTUNITIES AND CONSTRAINTS

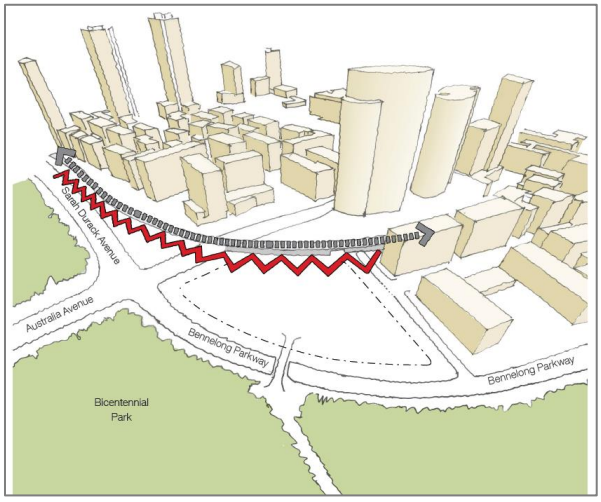
Extensive site analysis has been undertaken as part of the preparation of the design concept. The key opportunities and constraints are identified in Table 2. The proposed development has been designed to respond to these opportunities and constraints and the detailed specialist advice which has explored these factors further.

TABLE 2 – OPPORTUNITIES AND CONSTRAINTS

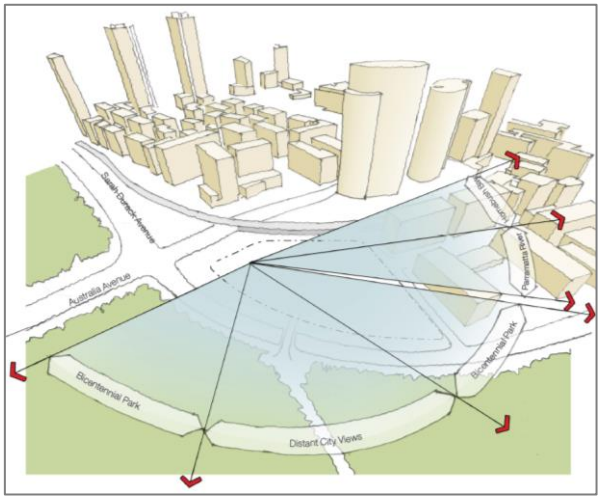
OPPORTUNITY / CONSTRAINT	DESCRIPTION
Context	Site 68 is situated on the southern edge of Sydney Olympic Park. As such, it has a 'pivotal' role as a marker between Sydney Olympic Park and the Bicentennial Parklands.
Gateway Location	Site 68 is considered the 'gateway' to Sydney Olympic Park when approaching from the South on Australia Avenue.
Surrounding Land Uses	Site 68 is situated at the southern end of a row of predominantly residential towers fronting Australia Avenue, known as Australia Towers Stage 1 and 2. As such, the tower on Site 68 will form the termination of this sequence of development.
Topography	The site sits on top of a steep raised embankment that curves from Australia Avenue around to Bennelong Parkway. The site levels determine that the landscaped embankment needs to be preserved, and is not conducive to a building location, limiting the footprint of the development to the upper portion of the site.
Views	The site offers magnificent views across Bicentennial Park to the CBD and Sydney Harbour from the south to the northeast; as well as views across the Brick pit to Homebush Bay and the Parramatta River from the northeast to the north.
Solar Orientation	The existing configuration of the site creates a north, west, and south-east orientation, allowing a high level of solar access to the north and west orientations, while the south-east orientation receives high quality views.

OPPORTUNITY / CONSTRAINT	DESCRIPTION
Rail Corridor	The rail corridor on the northwest flank of the site is above ground as it comes off the Australia Avenue Bridge adjacent to the site, and is a potential source of noise and visual privacy concerns. Furthermore, a minimum 20 metre rail easement must be provided as a 'no throw zone' to protect public safety in this area.
Access	The site is situated in a pivotal location in terms of movement around Sydney Olympic Park, with vehicular, bicycle and pedestrian access paths provided at the perimeter of the site on Australia Avenue, Sarah Durack Avenue and Bennelong Parkway, and numerous shared pathways connecting the existing site to Sydney Olympic Park and Bicentennial Parklands.

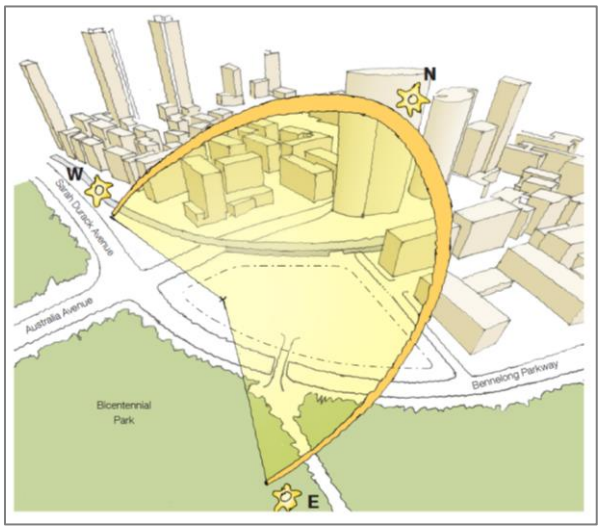
FIGURE 6 – SITE ANALYSIS DIAGRAM



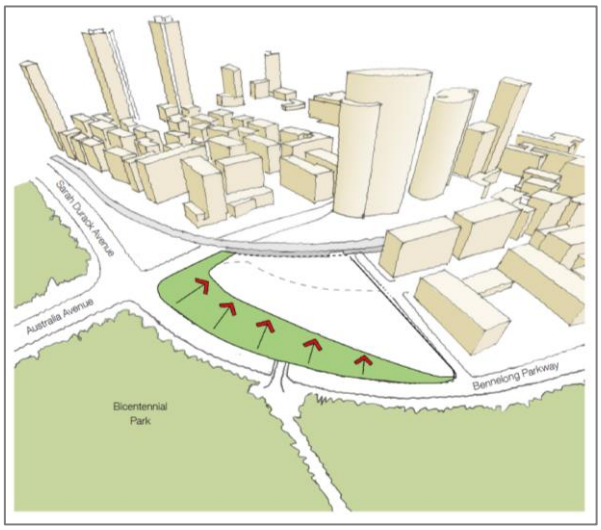
PICTURE 1 – RAIL CORRIDOR



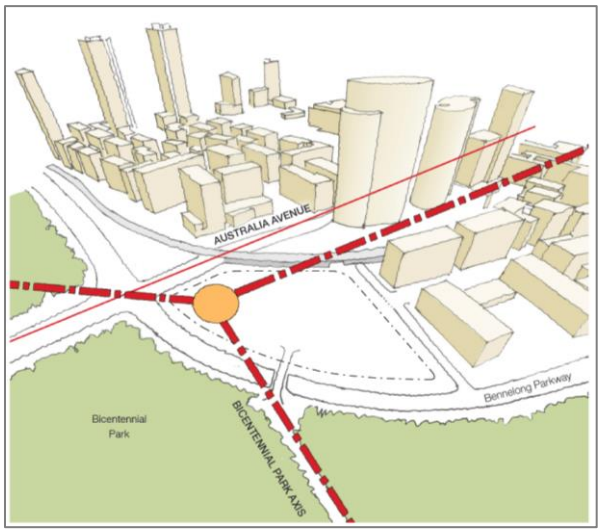
PICTURE 2 – VIEWS



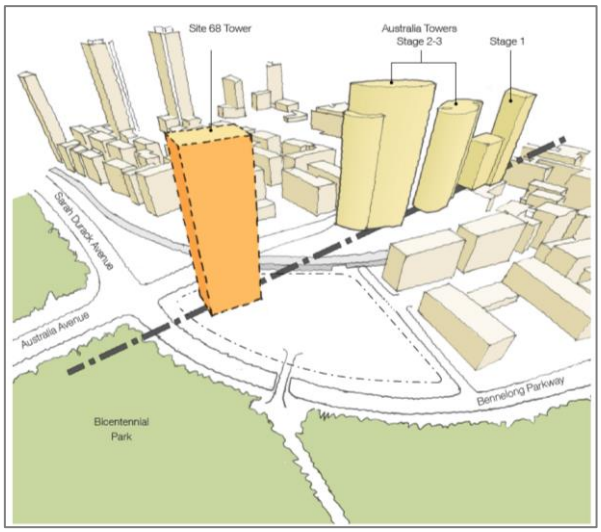
PICTURE 3 – SOLAR ACCESS



PICTURE 4 – TOPOGRAPHY



PICTURE 5 – GATEWAY / AXES



PICTURE 6 – CONTEXT

3 The Proposal

3.1 SUMMARY OF THE PROPOSED DEVELOPMENT

In summary, staged development consent is sought for:

- Section 83B(3)(b) Works as described in Section 3.1.1; and
- A Concept Proposal for development of a child care centre as described in Section 3.1.2.

3.1.1 SECTION 83B(3)(B) WORKS

Under Section 83B(3)(b) of the *Environmental Planning and Assessment Act 1979*, development consent is sought for the construction of a mixed-use development, without the need for further development consent, comprising:

- A single residential tower comprising 33 residential floors, with 369 apartments, and 120m² of ground floor retail / commercial uses;
- A stormwater detention tank;
- Three levels of basement car park, comprising 408 resident spaces, 42 visitor spaces, 2 retail spaces, and 20 child care centre spaces; and
- Associated landscaping works, comprising mature plantings, bio-retention wetlands, and a cascading waterfall.

3.1.2 CONCEPT PROPOSAL

The Concept Proposal seeks consent for the allocation of gross floor area of 500m² for a child care centre, to be located on the northern portion of the site, which is to be the subject of a subsequent development application for consent (refer Figure 7). It is proposed that, in accordance with Section 83B(3)(a) of *the Environmental Planning and Assessment Act 1979*, consent will be sought separately to erect and use the proposed child care centre.

3.2 REFERENCE DRAWINGS

The proposed architectural works are illustrated within the Design Report and Architectural Plans prepared by Bates Smart Architects and included at Appendix C and Appendix F.

The proposed landscaping works are illustrated within the Design Report and Landscape Plans prepared by Turf Design and included at Appendix G and Appendix H.

FIGURE 7 – SITE PLAN

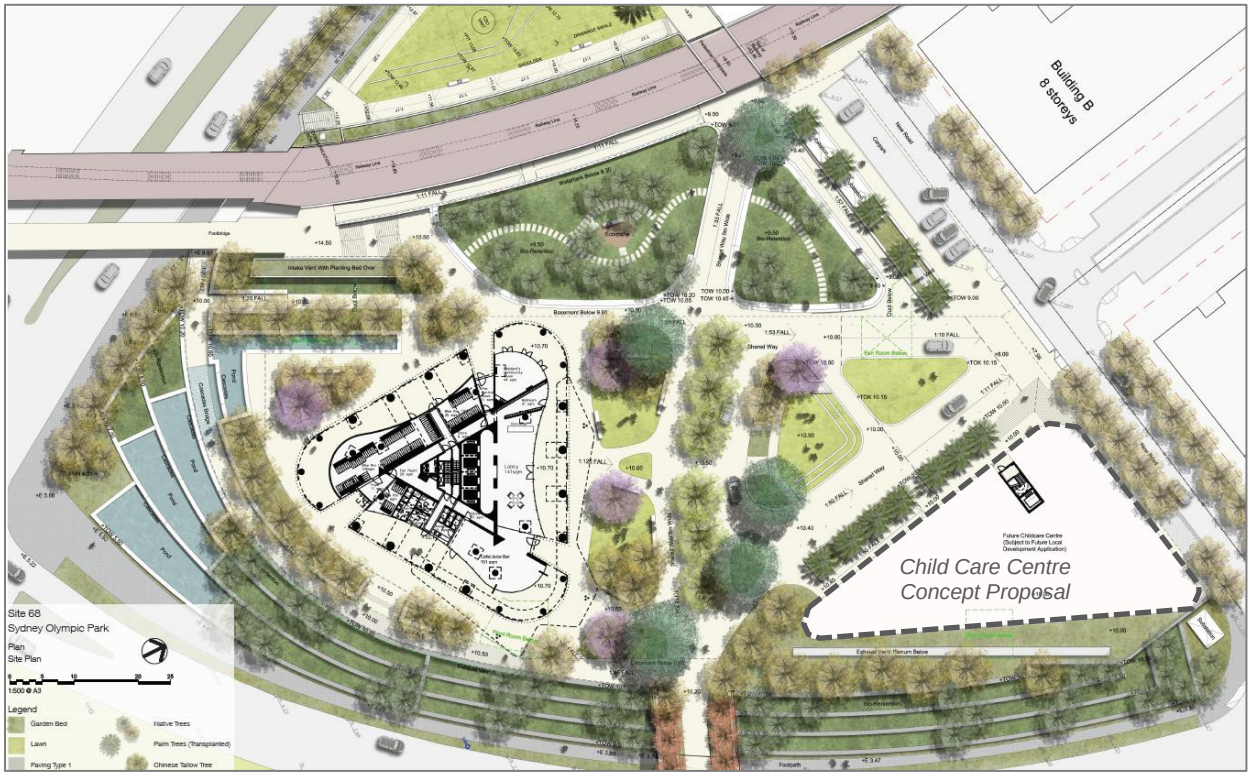


FIGURE 8 – PERSPECTIVE LOOKING WEST FROM BICENTENNIAL PARK

3.3 NUMERICAL OVERVIEW

A numerical overview of the proposal is provided at Table 3 below.

TABLE 3 – NUMERICAL OVERVIEW

DEVELOPMENT ELEMENT	PROPOSAL
Site Area	13,998m²
Gross Floor Area [Total]	32,974m²
Residential Tower	32,474m²
Child Care Centre	500m²
Floor Space Ratio	2.4:1
Building Height	116.7m (34-storeys)
Unit Mix [Total]	369
One Bedroom	171 (46%)
Two Bedroom	162 (44%)
Three Bed	27 (7.5%)
Four Bed	9 (2.5%)
Parking [Total]	482
Residential	408
Visitors	52
Childcare	20
Commercial	2
Bicycle	580
Landscaping [Total]	6,045m²
Bio-retention wetlands	2,458m²
Planting off-structure	2,014²m²
Planning on-structure	1,573m²

3.4 RESIDENTIAL TOWER

BUILT FORM

The built form of the proposed development has been driven by responses to site, context, residential amenity, provision of communal spaces, and articulation of building massing to create a legible scale at both urban and pedestrian levels.

The resultant 34-storey tower is triangular in shape, with curved corners and a height of 116.7 metres. The floor plate concept proposes three residential ‘leaves’ which wrap around the perimeter of the triangle. Each ‘leaf’ has a consistent depth and allows for highly efficient rectangular apartment plans, with the exception being the curved ends that maximise on the 180 degree views.

Adjacent to the corners on each side of the triangle a vertical slot has been introduced to bring light and ventilation into the tower and create accessible communal open spaces at various locations throughout the tower.

The form is divided horizontally into five stacked blocks of varying heights to create juxtaposition of scale on the building which is visible from the city scale. The heights relate directly to the changes in floor-plate planning types. One and two bedroom apartments are generally located up to level 24 with a variety of orientations. Two, three and four bedroom apartments are located from levels 25 to 33.

FIGURE 9 – PERSPECTIVE LOOKING NORTH FROM AUSTRALIA AVENUE

GROUND FLOOR USES

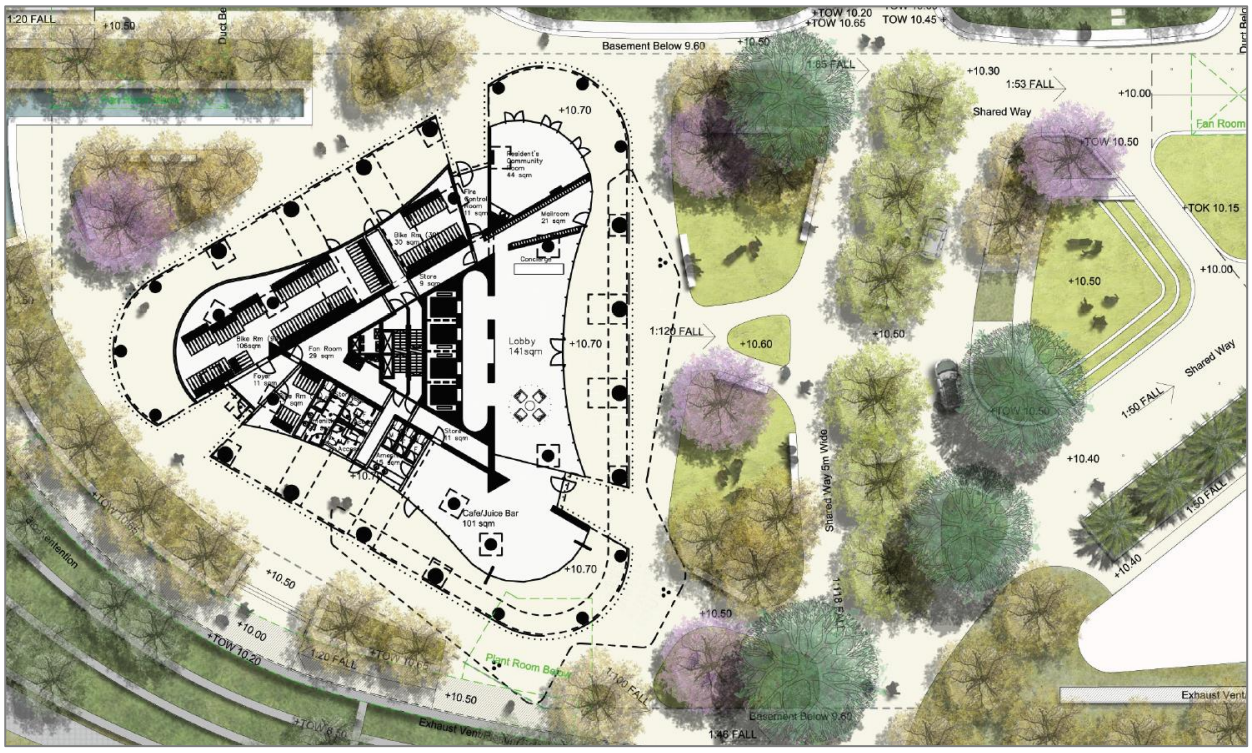
The proposed tower foyer is oriented north fronting a shared loop road, which links the tower entrance to the proposed new road located on the northern boundary of the site. This orientation allows for a direct line of sight from the new road to the tower foyer.

A small scale retail / commercial space is proposed on the north-east corner of the ground floor and is envisaged to operate as a café or juice bar. The space includes a 120m² internal area with associated outdoor seating that will capitalise on the morning and midday solar access and views over Bicentennial Park. A canopy is proposed above the tower entrance lobby and café to provide protection from wet weather and downdrafts during high wind conditions.

A large bicycle storage area for approximately 132 bicycles is located on the western side of the ground floor, to activate the ground floor and encourage the use of bicycles within the precinct, particularly given the extensive network of cycle routes directly connected to the site.

A small community room and management office is also provided on the north-west corner of the ground floor to activate the ground plane and provide a gathering space for Site 68 residents and visitors.

FIGURE 10 – GROUND FLOOR PLAN



3.5 CHILD CARE CENTRE

The proposed child care centre is located on the northern boundary of the site, fronting the new road which will separate Site 67 and Site 68. The location and footprint of the child care centre has been developed through discussions with Sydney Olympic Park Authority, who will be the ultimate recipient of the centre. The proposed footprint and building envelope allows for an 80 place centre, with a gross floor area of 500m² and associated outdoor play-space.

The placement of the child care centre adjacent to the new road reinforces the street edge alignment of the proposed new streetscape and ensures the centre will be highly visible on approach into the Parkview precinct. The child care centre and adjacent landscaped ground-plane is envisaged to create a strong community identity for the precinct.

Detailed design has not been undertaken for the fit-out and façade treatment of the child care centre. As such, this application seeks consent for the building envelope only. A future detailed development application will be prepared and lodged with Sydney Olympic Park Authority for assessment.

3.6 LANDSCAPING

The proposed landscaping approach seeks to establish an intimate and vibrant community park with a strong community, environmental and landscape focus. The proposal comprises:

- Pedestrian and bicycle through-site links, providing equitable access from Sydney Olympic Park railway station and town centre through to Bicentennial Park and the future Parkview Precinct.
- An integrated 'shared way' loop road, providing at-grade vehicle drop-off / pick-up for the proposed tower and child care centre.
- A new neighbourhood park, with a combination of Eucalypts, rainforest natives, Jacaranda and deciduous species, as well as the relocated palm trees from the corner of Australia Avenue and Bennelong Parkway.
- Evergreen trees, understory plantings, low-medium shrubs and ground covers strategically located around the base of the proposed tower, to minimise wind impacts and provide areas of interest.
- Perimeter plantings of predominantly native trees, including Eucalypts, Melaleuca and Casuarina.
- WSUD measures including integrated bio-retention wetlands, terraced ponds, and a cascading waterfall, all linked by an exploration walk for public interaction and educational interpretation, describing the environmental process taking place and the sustainability outcomes being achieved.

FIGURE 11 – PERSPECTIVE LOOKING SOUTH-WEST FROM THE LAND BRIDGE

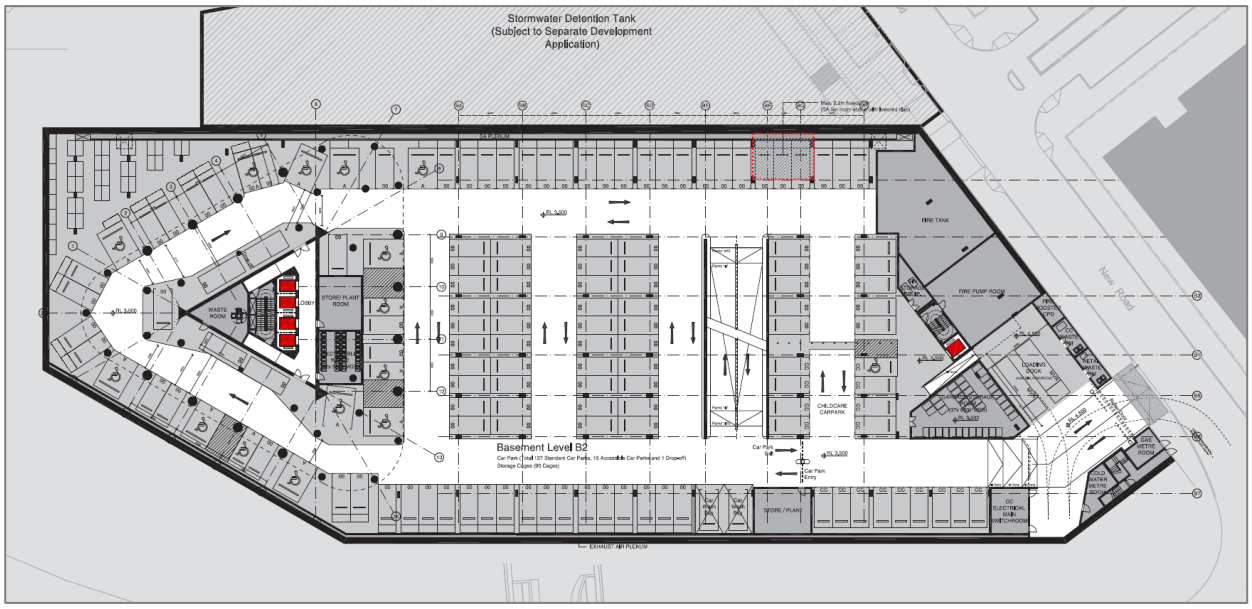
3.7 PARKING AND ACCESS

Vehicular access is provided to the basement car park via the proposed new road on the northern boundary of the site. The basement car park is split over three levels with entry and egress provided on level B2 due to the proposed gradient of the new road. All visitor and child care centre car parking is located on level B2, with a dedicated lift provided to enable direct connection from the basement to the child care centre lobby at ground level.

Internal ramps connect level B2 to levels B1 and B3 where additional resident parking is provided. The four main tower lifts serve all basement floors to provide direct vertical connection to residential floors. A residential drop-off / pick-up space is provided immediately adjacent the tower lift core on level B2 to enable weather protected pick-up and drop-off of residents or their visitors.

A loading dock is provided on level B2 at the entry / egress point. The loading dock has been designed to cater for two trucks and will be used for garbage collection and bulky residential deliveries. Whilst the loading dock will also be made available for non-residential uses such as the cafe and childcare centre, it is envisaged that the small footprint nature of non-residential uses will have little reliance on the loading dock.

FIGURE 12 – BASEMENT LEVEL B2



4 Justification and Assessment of Alternatives

The *Sydney Olympic Park Master Plan 2030* requires that prior to the issue of development consent for Site 68, an architectural design competition be undertaken. The Site 68 Design Excellence Competition was conducted in accordance with the endorsed Design Excellence Strategy and Design Competition Brief, which sought architectural schemes for one residential tower building and associated landscape / urban design works.

Consistent with the Design Excellence Strategy, the Design Competition was run as an invited two-stage process involving a Stage 1: Expression of Interest and Stage 2: Design Competition.

The four short listed Architectural practices presented to the Competition Jury on Friday 6 June 2014. Consistent with the Competition Brief, the Jury decided upon a winning proposal by unanimous agreement, being the scheme presented by Bates Smart. The Bates Smart scheme achieved the highest level of consistency with the Design Brief and demonstrated Design Excellence. A copy of the endorsed Design Competition Report is provided at Appendix C.

URBAN DESIGN OBJECTIVES

The urban design objectives for the site called for innovative, high quality architecture, which would create a visual landmark at the entry to Sydney Olympic Park. Emphasis was placed on developing a legible relationship between the residential tower building and the public domain on the site, the surrounding public open space, and the through site links.

The brief required that the schemes optimise residential amenity, incorporate the principles of Ecologically Sustainable Design, incorporate good passive design, maximise on views to central Sydney, Bicentennial Park, and Homebush Bay, and take due consideration of wind, reflectivity, visual and acoustic privacy, safety and security.

ARCHITECTUS SCHEME

The Architectus scheme proposed a sculptural circular tower of 38 levels, with a grand 3-4 storey foyer / lobby space. The proposed tower form was considered slender and elegant; however the small residential floor plate resulted in an overall height of 144.20RL. While the Competition Jury accepted the intended design outcome of the proposed non-compliant height, they were not convinced that the significant increase in height of 44.5m or 49.4% was justified in the context of Site 68. In addition, the proposed height represented a significant planning risk for the proponent and was unlikely to be supported by SOPA or the Consent Authority.

Furthermore, while the tower form appeared very elegant and sculptural when viewed from afar, the design concept was considered to have a significant impact on the internal apartment planning and layouts as it resulted in a high number of splayed internal walls. Overall, it was considered that in order to meet the objectives of the design brief, the scheme would have required a significant number of changes to be made which would fundamentally alter the design presented.

SILVESTER FULLER SCHEME

The Silvester Fuller scheme proposed a rectangular mixed-use tower of 32 levels, with a substantial floor plate of 1,000m² - 1,500m², and an average of 11-13 apartments per floor. This has resulted in a tower that was both slender and broad, when viewed from different angles. When viewed from the north and south, the tower appeared lean and well-articulated, while from the east and west, the tower appeared large and stocky in the context of the surrounding development.

The rectangular form resulted in a substantial number of east and west facing units. While units with an easterly orientation would enjoy good access to sunlight and views, units with a westerly orientation would be affected by noise (from the railway line at lower levels) and would require extensive shading during the summer months.

The Silvester Fuller scheme was commended for its clever use and activation of the ground plane, through the incorporation of small retail uses and a bicycle hub incorporating bicycle parking, hire, and workshop facilities. Furthermore, the scheme was commended for providing a sense of address for each apartment by recessing doorways and providing storage / seating areas for the use of residents.

TONY CARO ARCHITECTURE SCHEME

The Tony Caro Architecture (TCA) scheme proposed a curvilinear residential tower of 39 levels, with a grand porte-cochere basement entry, and integrated landscape design and stormwater treatment system. The TCA scheme proposed a highly efficient floor plate, with 29 levels of 11 apartments per floor (944m²) and 10 upper levels of 6 apartments per floor (774m²). The unique articulated tower form provided significant benefits in terms of views, natural ventilation, and sunlight access, ensuring that no two apartments on the same floor are the same shape, size, or layout.

The tower form is made up of two predominant heights at 29 (106.8RL) and 39 storeys (138.80RL). While the Jury accepted the intended design outcome of the proposed non-compliant height, they were not convinced that the significant increase in height of 39.3m or 43.6% was justified in the context of Site 68. In addition, the proposed height represented a significant planning risk for the proponent and was unlikely to be supported by SOPA or the Consent Authority.

Overall, the TCA submission was commended for the well-considered and highly efficient floor plates and apartment layouts proposed. However, in order to meet the objectives of the design brief (particularly a supportable increase in height); the scheme would have required a significant number of changes to be made which would fundamentally alter the design presented.

BATES SMART SCHEME

The Bates Smart scheme proposed a unique triangular shaped tower of 32 levels, with soft corners reflecting the elliptical towers further along Australia Avenue (Site 3). The design concept reflected "*residential leaves"* of consistent depths surrounding a central core, with vertical slots provided adjacent to the corners to bring light and ventilation into the building.

The triangular form was considered a strong, legible and iconic response to the axes of Australia Avenue, Bicentennial Park and the intersection with Bennelong Parkway. However, the lack of activation on the ground plane was considered to be a missed opportunity in which a junction between the Bicentennial Parklands and Sydney Olympic Park could have been created.

The tower was divided horizontally into five stacked blocks of varying heights to create an interesting juxtaposition of scale on the building. The heights related directly to the changes in the floor plate planning types. Each stacked volume incorporated three full height vertical slots which were positioned to capture air and light from multiple orientations throughout the building. All slots incorporated vertical gardens, with two out of three providing communal open space for the use of all residents and visitors.

The Bates Smart scheme was commended for the well-considered environmental design initiatives proposed including the clever use of vertical slots to provide natural light and ventilation to the lift lobby and common areas, rainwater collection for re-use within vertical gardens and landscaped ground plane, and roof top farming opportunities.

The Bates Smart scheme proposed a highly efficient floor plate with 9-14 apartments per floor. The positioning and layout of apartments were well-considered, with larger two and three bedroom apartments located at the curved ends maximizing the 180 degree views.

While the size of the residential floor plate was generally considered large, at 1,260m², the angled sides and rounded corners created a slender and iconic presence when viewed from any angle. In addition, the triangular form provided significant benefits in terms of views, natural ventilation, and sunlight access.

Overall, the Bates Smart scheme achieved the highest level of consistency with the Design Brief and demonstrated Design Excellence.

FIGURE 13 – DESIGN EXCELLENCE COMPETITION IMAGES

PICTURE 7 – ARCHITECTUS SCHEME

PICTURE 8 – BATES SMART SCHEME

PICTURE 9 – SILVESTER FULLER SCHEME

PICTURE 10 – TONY CARO ARCHITECTURE SCHEME

RECOMMENDATIONS OF THE JURY FOR FURTHER DEVELOPMENT OF THE BATES SMART SCHEME

In accordance with the Competition Brief and the intent of the Design Excellence requirements of the *Sydney Olympic Park Master Plan 2030*, the Jury recommended that Bates Smart be retained by the Proponent to prepare a Development Application, taking into account the recommendations identified below. These recommendations have been considered by the Proponent and Architect during the detailed documentation phase and the scheme has been updated as discussed in Table 4 below.

TABLE 4 – COMPETITION JURY RECOMMENDATIONS & RESPONSES

JULY RECOMMENDATION	RESPONSE
Vertical slots	
The design of the vertical slots is to be developed to improve the shape and width of each slot in order to provide a greater level of amenity and usability to residents and visitors.	The width of each slot has been increased by approximately 1m to improve amenity and usability of the sky gardens, and to improve natural daylight in the common corridors.
The third 'privatised' vertical slot is to be made 'public' similar to the other two by redistributing 'lost' residential floor space to the top of the building.	The third slot has been opened up to provide a third communal space with access for residents and visitors. The addition slot creates significantly improved cross-flow performance and increases natural light to the core. The lost floor space created by adding the additional slot, and widening all 3 slots, has been re-distributed to the top of the building in the form of two additional residential floors.
Ground plane / basement	
The design of the ground plane and lobby area is to be developed to activate the ground floor and create a junction between the Bicentennial Parklands and Sydney Olympic Park. It is recommended that a combination of small retail uses, bicycle parking, and other residential amenity opportunities are explored.	The ground floor has been developed to improve activation at the base of the tower. A 100m² retail tenancy is proposed in the north east corner with views over Bicentennial Park. Bicycle parking and a community room are also proposed.
Further consideration is to be given to the orientation of the lift core, with options explored to re-orientate the lift entrance to face the predominant street frontage to the north-east in order to create a greater sense of arrival for residents and visitors.	The core has been rotated 120 degrees clockwise so that the lift entrance and lobby now face north-east to engage with the landscaped plaza.

JULY RECOMMENDATION	RESPONSE
Further consideration is to be given to the existing resident and visitor vehicle arrival sequence, with options explored to create a more accessible pick-up / drop-off area within close proximity to the "front door". Opportunities to provide a visual connection between the ground plane and basement, as well as natural light and air should also be explored.	The drop-off / pick-up area has been extended 10 metres to the west, reducing the walking distance from the drop-off / pick-up area to the base of the tower by 10 metres. The accessible pedestrian only route is re-aligned to retain separation from vehicles. Weather proof pick-up / drop-off are achieved via dedicated short-term parking spaces located adjacent to the lift core within the basement. Opportunities to provide a visual connection as well as natural light and air have been explored but have been considered unfeasible as the car park entry and drop off is located on the middle level of the basement.
Façade	
Further consideration is to be given to how the coloured terracotta is used in the façade to give the scheme warmth and distinguish it appropriate to its landmark position and achieving design excellence.	Consideration has been given to how the coloured terracotta is used in the façade. A number of options were presented to the SOPA Design Review Panel for review and comment. This is discussed in further detail in Section 5.1 below.

5 Consultation

This section describes the consultation that has been undertaken by the project team during the preparation of this Environmental Assessment. Consultation has been carried out with Government agencies, including Sydney Olympic Park Authority (SOPA) and the Office of Environment and Heritage, as well as the relevant service providers, as required by the SEARs. As there are currently no residents in the immediate area, community consultation was not considered necessary.

5.1 SYDNEY OLYMPIC PARK AUTHORITY DESIGN REVIEW PANEL

In accordance with the Design Excellence provisions of the *Sydney Olympic Park Master Plan 2030* and the *Sydney Olympic Park Authority Design Competition Guidelines 2014* a Design Excellence Competition was conducted for Site 68 from April to June 2014.

The Site 68 Design Excellence Competition was conducted in accordance with the endorsed Design Excellence Strategy and Design Competition Brief, which sought architectural schemes for one residential tower building and associated landscape/urban design works.

The SOPA Design Review Panel was involved throughout the Design Excellence Competition process, in particular during the preparation of the Design Excellence Strategy and Design Competition Brief, ultimately providing their support for and endorsement of the competition process, design objectives, and recommended scheme. In addition, the Design Review Panel was represented by members Bill Tsakalos and Caroline Pidcock on the Competition July (refer Appendix C).

Following the award of the Design Excellence Competition to Bates Smart in June 2014, the project's consultant team met with the Design Review Panel to present the amended scheme having regard to the Competition Jury's comments and recommendations as outlined in Section 4 above.

The Design Review Panel indicated that they were generally very happy with the direction of the project and noted that the *"proponent should be commended for responding so positively to the recommendations of the Jury"*. In addition, the Panel noted support for the additional slot to each level and the increase in their usable size, as well as the increased activation of the ground floor including the addition of a re-oriented lobby/foyer, bicycle storage, meeting rooms and a Café (refer Appendix D).

The Design Review Panel provided the following recommendations for further consideration:

- Further refinement / treatment of the vertical slots should be undertaken. In particular the Panel questioned whether the use of vertical gardens was achievable / sustainable and suggested a large statement tree on the base of the slot may be worth of consideration.

- Continued resolution of the façade colour pallet and materiality should be undertaken.

Noting the tight timeframe for lodgement of the State Significant Development Application, the Panel agreed to resolve these outstanding matters through the submission of drawings to the Panel for comments out of session.

Out of Session Comments were received on 22 September 2014 (refer Appendix D). The comments primarily relate to the proposed façade treatment, in particular the use of terracotta and aluminium. The proposed façade treatment is discussed at Section 8.1 and has been developed with regard to the DRP's comments.

5.2 PUBLIC UTILITY SERVICE PROVIDERS

Consultation was undertaken by specialist consultants in the project team with government agencies and service providers. The consultation and service requirements are discussed in detail in Section 8.9 of this Report. Copies of the correspondence between the relevant consultants and service providers are attached at Appendix R.

5.3 OFFICE OF ENVIRONMENT AND HERITAGE

The Preliminary Flora and Fauna Assessment prepared by Applied Ecology (Appendix P) was provided to the Office of Environment and Heritage (OEH) on 17 September 2014. Following review of the Assessment, OEH provided comments on 15 October 2014 regarding the on-going assessment and reporting requirements under the Bio-banking Assessment Methodology. A subsequence Assessment has been undertaken using the *Framework for Biodiversity Assessment (FBA) for Major Projects* and is provided at Appendix P.

6 Statutory and Strategic Context

The following statutory planning policies and guidelines have been considered in the assessment of this proposal:

- *State Environmental Planning Policy (State and Regional Development) 2011.*
- *State Environmental Planning Policy (Major Development) 2005.*
- *State Environmental Planning Policy (Infrastructure) 2007.*
- *State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Development.*
- *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.*
- *State Environmental Planning Policy No. 55 - Remediation of Land.*
- *Sydney Regional Planning Policy (Sydney Harbour Catchment) 2005.*
- *Auburn Local Environmental Plan 2010.*

6.1 STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD) was gazetted on 1 October 2011, identifying various types of development and particular sites upon which certain development is defined as Stage Significant Development (SSD).

Schedule 2 of the SRD SEPP lists specific sites that where development has a capital investment value of more than $10 million; works on those sites are state significant. Clause 2 of Schedule 2 identifies Sydney Olympic Park as a specific site. As the proposal has a CIV of $128,851,700, it is assessed as a SDD.

6.2 STATE ENVIRONMENTAL PLANNING POLICY (MAJOR DEVELOPMENT) 2005

State Environmental Planning Policy (Major Development) 2005 (SEPP Major Development) was gazetted on 25 May 2005 and aims to facilitate the development or protection of important urban sites of economic, environmental or social significance to the State for a public purpose.

Sydney Olympic Park is identified as a 'State Significant Site' in Schedule 3, Part 23 of SEPP Major Development. This schedule provides specific development controls for sites within Sydney Olympic Park site.

6.2.1 ZONING AND PERMISIBILITY

The site is zoned B4 Mixed Use under Part 23 of SEPP Major Development. Clause 9 of Part 23 identifies the permissible and prohibited uses in the B4 zone. Clause 9(3) states that development for the purposes of roads and any other development not specified in subclause (2) or (4) are permissible with consent. As residential flat buildings, child care centres, and retail / commercial uses are not specified in (2) or (4), the proposal is permissible with development consent.

6.2.2 OBJECTIVES

Clause 9(1) of Part 23 contains the objectives of the B4 zone. The relevant objectives and response to each is provided below.

TABLE 5 – B4 MIXED USE ZONE OBJECTIVES

OBJECTIVE	RESPONSE
To protect and promote the major events capability of the Sydney Olympic Park site and to ensure that it becomes a premium destination for major events.	*Sydney Olympic Park Master Plan 2030* zones the site to permit a range of uses, including residential development, while other precincts will continue to develop as sport and entertainment precincts. This ensures that the major events capability of Sydney Olympic Park is not impacted on.
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.	The residential, retail / commercial and child care uses on the site are compatible and located in close proximity to public transport. The site is also well connected to roadways, walkways and cycle ways.
To ensure that the Sydney Olympic Park site becomes an active and vibrant town centre within metropolitan Sydney.	The increased residential accommodation will bring with it young professionals and families, which will contribute to the economic vitality of the centre.
To provide for a mixture of compatible land uses.	The residential, retail / commercial and child care centre uses are compliable lands uses and permitted within the zone. Residential development is specifically envisaged in the B4 Mixed Use zone.
To encourage diverse employment opportunities.	The small scale retail / commercial space and child care centre will employ approximately 20 full-time equivalent staff. Further, employment opportunities will be created during the construction and on-going maintenance phases. New residents in the area will also support businesses in the surrounding precincts, potentially creating opportunities for new jobs.
To promote ecologically sustainable development and minimise any adverse effect of land uses on the environment.	The proposal has been designed to have minimal environmental impact, as discussed in Section 8 of this report, and will employ ESD measures (Appendix J).
To encourage the provision and maintenance of affordable housing.	The proposal is not required to provide any affordable housing. However, it is noted that the increased supply of dwellings on the site will improve affordability in the area.

As detailed above, the proposed development is entirely consistent with objectives of the B4 Mixed Use zone.

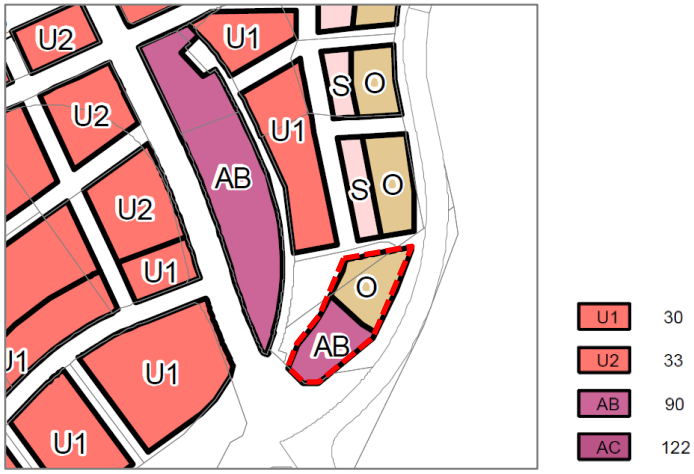
6.2.3 HEIGHT

Clause 19 of Part 23 prescribes two height limits for the subject site. The maximum height of buildings permitted on the northern portion of the site is 15 metres. The maximum height of buildings permitted on the southern portion of the site is 90 metres (refer Figure 14).

Under SEPP Major Development, **building height** (or height of building) means *"the vertical distance, measured in metres, between ground level (existing) at any point to the highest point of the highest habitable floor (including above ground car parking) of the building, excluding plant and lift overruns, communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like".*

The proposed residential tower is situated within the southern portion of the site and has a maximum height of 110.7 metres. This exception to the development standard is discussed in Section 6.2.5 below.

FIGURE 14 – SYDNEY OLYMPIC PARK HEIGHT OF BUILDINGS MAP



6.2.4 FLOOR SPACE RATIO

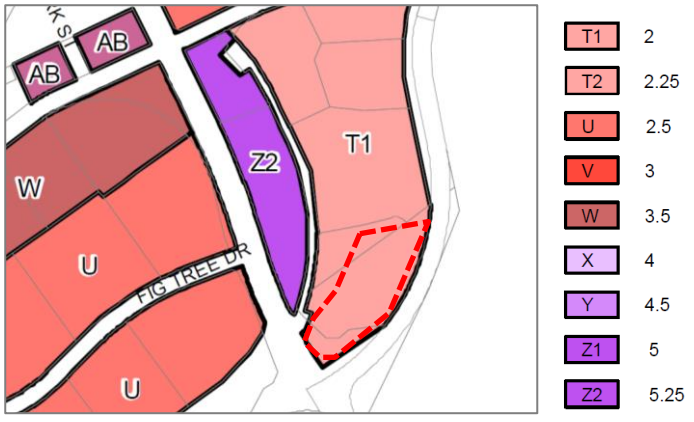
Clause 20 of Part 23 prescribes a single floor space ratio of 2:1 across the entire site (refer Figure 15). However, Section 4.6.10 of the *Sydney Olympic Park Master Plan 2030* states:

> *If the consent authority is satisfied that the proposed development exhibits design excellence and is based upon the preferred scheme resulting from a design competition, a bonus floor space allocation of up to 10 per cent may be permitted for buildings over 8 storeys in height.*

As such, the maximum floor space ratio for the site is 2.2:1 inclusive of the 10 per cent design excellence incentive. The maximum permissible gross floor area is 30,796m².

The proposal has a gross floor area of 32,974m², resulting in a floor space ratio of 2.4:1. This exception to the development standard is discussed in Section 6.2.5 below.

FIGURE 15 – SYDNEY OLYMPIC PARK FLOOR SPACE RATIO MAP



6.2.5 EXCEPTIONS TO DEVELOPMENT STANDARD

Clause 22 of Part 23 states:

> *(4) Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating:*
>
> > *(a) That compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and*
> >
> > *(b) That there are sufficient environmental planning grounds to justify contravening the development standard.*
>
> *(5) Development consent must not be granted for development that contravenes a development standard unless:*
>
> > *(a) The consent authority is satisfied that:*
> >
> > > *(i) the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (4), and*
> > >
> > > *(ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and*
> >
> > *(b) The concurrence of the Director-General has been obtained.*
>
> *(6) In deciding whether to grant concurrence, the Director-General must consider:*
>
> > *(a) Whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and*
> >
> > *(b) The public benefit of maintaining the development standard, and*
> >
> > *(c) Any other matters required to be taken into consideration by the Director-General before granting concurrence."*

The above considerations are addresses as follows.

HIEGHT OF BUILDING

Compliance with the development standard is unreasonable or unnecessary in the circumstances of the case and there are sufficient environmental planning grounds to justify contravening the development standard

The proposed residential tower has a height of 110.7 metres to the 'highest point of the highest habitable floor', resulting in a non-compliance of 20.7 metres. Such a variation is considered reasonable on the basis of:

- The proposal has been subject to on-going consultation with SOPA and the SOPA Design Review Panel, who have provided support for the proposed re-distribution of floor space, from the previously envisaged four-storey podium and thirty-storey tower building, to a slender tower with landscaped ground plane and separate child care centre (refer Figure 16).
- The proposal is the direct result of a Design Excellence Competition, in which recommendations were made by the Competition Jury and SOPA Design Review Panel to increase the size of the vertical slots and 'make public' the third 'privatised' vertical slot by redistributing the lost residential floor space to the top of the building (refer Figure 17).

- The proposed height allows for a natural transition from the Site 3 residential towers north of the site, to the Site 68 'gateway' position at the intersection of Bennelong Parkway and Australia Avenue.
- There is no tangible nexus between the height variation and the overall intensity of site use.
- The area of non-compliance will not result in any unreasonable solar access or privacy impacts as demonstrated in the shadow diagrams provided at Appendix F.
- The proposed built form and height is consistent with the desired future character of the Parkview Precinct and the Sydney Olympic Park Town Centre, as envisaged by the SEPP Major Development and the *Sydney Olympic Park Master Plan 2030.*

FIGURE 16 – DISTRIBUTION OF FLOOR SPACE - MASTER PLAN 2030 VS. PROPOSED ALTERNATIVE ARRANGEMENT

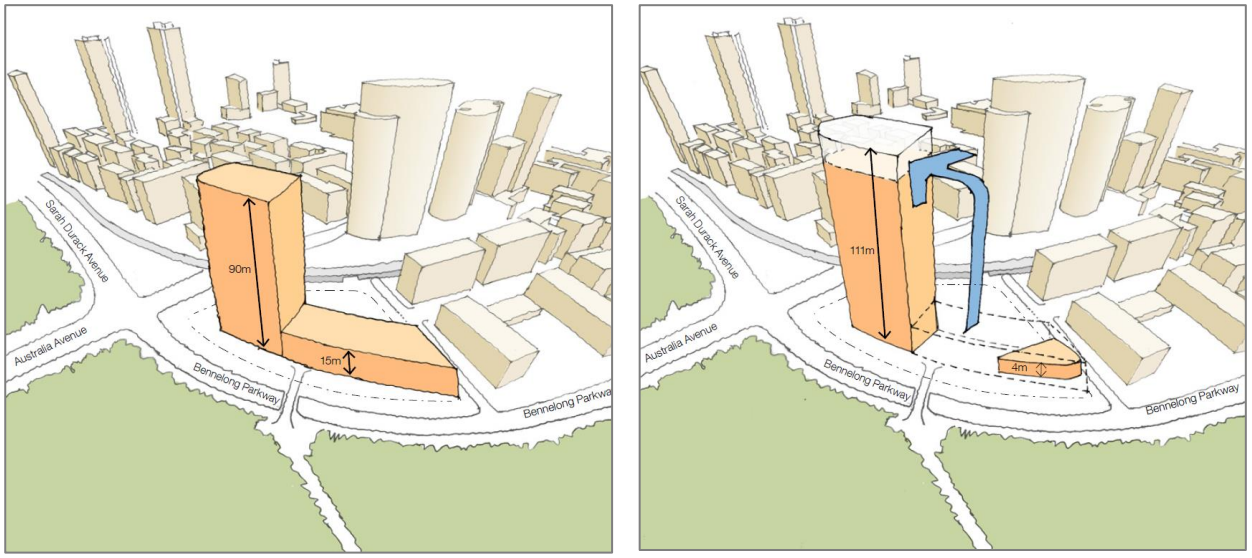


FIGURE 17 – DESIGN RESPONSE TO JURY RECOMMENDATIONS

The objectives of the particular standard and the objectives for development within the zone

There are no specific objectives for the height standard under SEPP Major Projects. The proposal has been designed having regard to the planning principles for Building Form and Height in the *Sydney Olympic Park Master Plan 2030*, which aims to:

- *Protect and enhance the amenity of open spaces and key views into and from the site.*
- *Ensure that new buildings have minimal or no impact on adjacent parklands, especially those with natural habitats.*
- *Locate the towers and tallest buildings along the eastern edge of Olympic Boulevard and Australia Avenue.*
- *Ensure building separation to allow privacy and solar access for residential development.*

The proposed residential tower has been positioned on the southern portion of the site, at least 74 metres from the nearest residential building, allowing for privacy and solar access to be maintained. The tower has a tall and slender form, allowing for existing and future key City and Bicentennial Parkland views from adjacent sites to be maintained.

The area of non-compliance will not result in any additional unreasonable shadow impacts on Bicentennial Park, Bennelong Pond or adjoining residential properties, as demonstrated in the Shadow Diagrams provided at Appendix F.

The proposal is consistent with the built form envisaged in the *Sydney Olympic Park Master Plan 2030*, and results in the culmination of a row of towers along the eastern edge of Australia Avenue.

The non-compliance will not hinder the development's ability to satisfy the objectives of the B4 Mixed Use Zone, as outlined in Section 6.2.2 of this report.

Whether contravention of the development standard raises any matter of significance for State or regional environmental planning

There are no matters of State or regional planning which would be affected by the variation.

The public benefit of maintaining the development standard

There is no public benefit in maintaining the development standard as there will not be any environmental or amenity impacts resulting from the area of non-compliance. Furthermore, the proposal is consistent with the built form envisaged in the *Sydney Olympic Park Master Plan 2030*.

For the reasons outlined above, strict compliance with the height standard is considered unnecessary and unreasonable in the circumstances.

FLOOR SPACE RATIO

Compliance with the development standard is unreasonable or unnecessary in the circumstances of the case and there are sufficient environmental planning grounds to justify contravening the development standard

The proposal has gross floor area of 32,974m², comprising 32,103m² of residential uses, 371m² of ground floor retail / commercial and community uses, and a 500m² child care centre. As such, the proposal has a floor space ratio of 2.4:1, resulting in a non-compliance of 0.2:1. Such a variation is considered reasonable on the basis of:

- The proposal has been subject to on-going consultation with SOPA and the SOPA Design Review Panel, who have provided support for the proposed re-distribution of floor space, from the previously envisaged four-storey podium and thirty-storey tower building, to a slender tower with landscaped ground plane and separate child care centre.

- The proposal is the direct result of a Design Excellence Competition, in which recommendations were made by the Competition Jury and SOPA Design Review Panel to increase the size of the vertical slots, 'make public' the third 'privatised' vertical slot by redistributing the lost residential floor space to the top of the building, incorporate ground floor retail / commercial uses, and create internal public seating areas overlooking the vertical slots. As such, the addition gross floor area can be classified as follows:

  - Extension of typical corridor area to provide seating areas overlooking the residential slots and achieve natural ventilation to lobby corridors – 40m² per floor, approximately 1,320m² in total (refer Figure 18).

  - Two floors of additional lobby corridor area to levels 32 and 33, as a direct result of 'making public' the third vertical slot without increasing the building floor plate - 80m² per floor, approximately 160m² in total (refer Figure 18).

  - Incorporation of ground floor retail / commercial and community uses to activate the ground plane – approximately 140m² in total.

- The area of additional floor space does not increase the intensity of use, in fact the additional floor space decreases the efficiency of the building in order to improve residential amenity.

FIGURE 18 – ADDITIONAL GROSS FLOOR AREA DIAGRAM

<u>The objectives of the particular standard and the objectives for development within the zone</u>

There are no specific objectives for the floor space ratio standard under SEPP Major Projects. The proposal has been designed having regard to the planning principles established in the *Sydney Olympic Park Master Plan 2030.* Furthermore, the non-compliance will not hinder the development's ability to satisfy the objectives of the B4 Mixed Use Zone, as outlined in Section 6.2.2 of this report.

<u>Whether contravention of the development standard raises any matter of significance for State or regional environmental planning</u>

There are no matters of State or regional planning which would be affected by the variation.

<u>The public benefit of maintaining the development standard</u>

There is no public benefit in maintaining the development standard as there will not be any environmental or amenity impacts resulting from the area of non-compliance. Furthermore, the proposal is consistent with the built form envisaged in the *Sydney Olympic Park Master Plan 2030*.

For the reasons outlined above, strict compliance with the height standard is considered unnecessary and unreasonable in the circumstances.

6.2.6 PUBLIC UTILITY INFRASTRUCTURE

Clause 23 of Part 23 relates to public utilities and states that the consent authority must be satisfied that any public utility infrastructure that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when required. As the site is in an established area, public utility infrastructure, including water, electricity, natural gas and sewage disposal, is readily available.

The Hydraulic and Fire Services Report (Appendix R), Electrical Services Report (Appendix R) and Stormwater and Flooding Report (Appendix Q) provide the necessary steps to be pursued to connect the proposed development to public utility infrastructures. These recommendations are summarised below:

- **Electricity**: Electrical services will be supplied via three new kiosk-type substations. An application is to be made to Ausgrid to further develop a scope of works.
- **Gas**: A natural gas main currently exists along the eastern boundary of Bennelong Parkway. Confirmation of a new connection to this main is currently being awaited from Jemena.
- **Telecommunications**: Telecommunications will be serviced by NBNCo 'Fibre-to-Home' solution and their cost.
- **Water and sewer**: A Section 73 application is to be lodged with Sydney Water after development consent has been granted. This application will facilitate connections to the water and sewer mains.
- **Stormwater**: Details of proposed stormwater infrastructure are provided in the Stormwater and Flooding Report (Appendix Q).

Accordingly, all the necessary services are readily available and able to be connected for the development.

6.2.7 MAJOR EVENTS CAPABILITY

Clause 24 of Part 23 aims to protect and promote the major events capability of the Sydney Olympic Park site and to ensure that it remains a premium destination for major events. Pursuant to Clause 24, consent must not be granted to development on land within the Sydney Olympic Park site, if the consent authority is satisfied that during major events held within the Sydney Olympic Park site:

- *Traffic generated by the development is likely to cause the local road network and connections to the regional road network to become saturated or otherwise fail, and*
- *The development is likely to prevent the effective management of crowd movement and transport services, and*
- *The development is likely to compromise the effective functioning of major event infrastructure, and*
- *The development conflicts with the emergency management plans of government agencies or the emergency evacuation plans of major event venues.*

The Traffic and Transport Assessment included at Appendix M confirms that the proposal is estimated to generate approximately 251 vehicle movements during the morning peak period and 211 vehicle movements during the afternoon peak period. The Assessment concludes that these traffic rates will have no detrimental impact on the intersection at Bennelong Parkway. Additionally, the surrounding roadways have been designed in accordance with the *Sydney Olympic Park Master Plan 2030* and will accommodate the traffic volumes generated by the proposed and surrounding development.

An Event Information Statement is to be prepared at Occupation Certificate stage with input from the construction contractor and building managers, which will be informed by construction traffic movement, the number of residents, car parking allocations, frequency of service vehicles, and construction documentation of public domain and hours of the child care. This will effectively assist in preventing conflict with event crowds and transport services.

Access to the proposed development during construction and operation, is proposed from roads that will remain open during major events. Access to the site will therefore be available at these times. Construction of the development will be coordinated with SOPA to ensure construction activities are appropriate during major events. Therefore, the proposal is not likely to impact on road infrastructure during major events. Peak times of travel on public transport will typically not coincide with major events, ensuring there is no disruption to services.

6.2.8 TRANSPORT

Clause 25 of Part 23 states that the consent authority must be satisfied that the development includes measures to promote public transport use, cycling and walking.

- The proposal provides 132 bicycle parking spaces (90 resident and 42 for commercial use) within the ground floor to encourage bike ownership and use.
- Upgrades to the existing access network in and around Site 68 have been proposed to improve access for pedestrians and bicycles and encourage active transport options.
- A new roadway on the northern boundary of Site 68, combined with a new pedestrian underpass and upgrades to the existing land bridge over Bennelong Parkway will provide greater pedestrian and bicycle connectivity for residents and visitors.
- The proposal strictly complies with the car parking rates and does not over supply to encourage other modes of transport.
- The site is close to Olympic Park Railway Station. Olympic Park connects to the Western Lines - Emu Plains/Richmond to North Sydney via the City. Services through Olympic Park are every 10 to 20 minutes. During special events, services are more frequent.
- Bus stops are located on both sides of Australia Avenue, as well as in Dawn Fraser Avenue, adjacent to the station.
- Route 401 provides connection between Sydney Olympic Park, Newington, Olympic Park station and Lidcombe Station. Services are every 30 minutes in each direction on weekdays and every 60 minutes in each direction on weekends.
- Route 450 connects Hurstville, Beverly Hills, Roselands, Lakemba, Belfield, Strathfield and Sydney Olympic Park. Services to and from Sydney Olympic Park operate during morning and afternoon peak periods on weekdays.
- Ferry services from Homebush Bay Wharf provide links to and from the city and Parramatta.
- Sydney Olympic Park has excellent pedestrian and cycle routes, including a bicycle lane along Australia Avenue. All roads in the vicinity of the site have footpaths and major intersections are signalised. The paths within SOPA connect to the pathways and cycle ways in Bicentennial Park.

The proposed bike parking and pathways, as well as the proximity of the site will encourage the use of other modes of transport.

6.2.9 MASTER PLAN

Clause 26 of Part 23 states that development consent must not be granted for development on land within Sydney Olympic Park unless the consent authority has considered the *Sydney Olympic Park Master Plan 2030*. *Sydney Olympic Master Plan 2030* and its provisions are considered in detail at Section 7.3 of this Report.

6.2.10 DESIGN EXCELLENCE

Clause 30 of Part 23 states that the consent authority must consider whether the proposed development exhibits design excellence, having regard to

- *Whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved,*
- *Whether the form and external appearance of the building will improve the quality and amenity of the public domain,*
- *Whether the building meets sustainable design principles in terms of sunlight, natural ventilation, wind, reflectivity, visual and acoustic privacy, safety and security and resource, energy and water efficiency,*
- *If a competition is held as referred to in subclause (3) in relation to the development, the results of the competition.*

As discussed in Section 4 above, a Design Excellence Competition was conducted in accordance with the endorsed Design Excellence Strategy and Design Competition Brief, which sought architectural schemes for one residential tower building and associated landscape / urban design works. Consistent with the Competition Brief, the Competition Jury decided upon a winning proposal by unanimous agreement, being the scheme presented by Bates Smart. The Bates Smart scheme achieved the highest level of consistency with the Design Brief and demonstrated Design Excellence.

Furthermore, the proposal incorporates sustainable design principles in terms of sunlight, natural ventilation, wind, reflectivity, visual and acoustic privacy, safety and security and resource, energy and water efficiency. This is outlined in detail in the ESD Report at Appendix J.

In our opinion, the proposal achieves design excellence by incorporating best practice urban design and sustainable principles.

6.2.11 SUMMARY

In summary, the proposal satisfies the objectives *SEPP Major Development* and is consistent with the provisions for transport, infrastructure, event capability and design excellence. Justification for the minor non-compliances with the height and FSR provisions are provided at Section 6.2.5.

6.3 STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

State Environmental Planning Policy (Infrastructure) 2007 came into force in December 2007 and aims to facilitate the effective delivery of infrastructure across the State. The SEPP identifies matters for consideration in the assessment of development adjacent particular types of infrastructure development, including all new development that generates large amounts of traffic in a local area.

The traffic generation of the existing and proposed developments has been assessed in the Traffic and Transport Assessment prepared by Cardno and included at Appendix M. The subject proposal is estimated to generate approximately 251 vehicle movements during the morning peak period and 211 vehicle movements during the afternoon peak period. The Traffic and Transport Assessment concludes that these traffic rates will have no detrimental impact on site access via the basement or the intersection at Bennelong Parkway. Additionally, the surrounding roadways have been designed in accordance with the *Sydney Olympic Park Master Plan 2030* and will accommodate the traffic volumes generated by the proposed and surrounding development.

Accordingly, the proposed development will not have any adverse traffic implications and satisfies matters for consideration in SEPP Infrastructure. Further, as the proposal is traffic generating development it will be referred to the RMS in accordance with Schedule 3 of SEPP Infrastructure.

6.4 STATE ENVIRONMENTAL PLANNING POLICY NO. 65 – DESIGN QUALITY OF RESIDENTIAL FLAT BUILDINGS

State Environmental Planning Policy 65 – Design Quality of Residential Flat Development (SEPP 65) was gazetted on 26 July 2002 and applies to all residential flat buildings. The SEPP aims to improve the design quality of residential flat development. Part 2 of SEPP 65 outlines Design Quality Principles for new residential flat buildings that seek to guide building design.

The proposal has been designed with building massing, separation, orientation and floor plate widths in accordance with SEPP 65 and the accompanying Residential Flat Design Code (RFDC). Reference should be made to the SEPP 65 Design Verification Report included in the Design Report prepared by Bates Smart Architects, which provides assurance that the subject proposal has been prepared in accordance with the design principles of SEPP 65 and the RFDC (refer to Appendix C).

6.5 SEPP (BUILDING SUSTAINABILITY INDEX: BASIX) 2004

The BASIX SEPP requires all future residential development facilitated by this proposal to achieve mandated levels of energy and water efficiency. The SEPP ensures consistency in the implementation of BASIX throughout the State.

The proposal has been designed to satisfy BASIX requirements and copies of the BASIX assessment and certificates are provided at Appendix J.

6.6 STATE ENVIRONMENTAL PLANNING POLICY NO. 55 – REMEDIATION OF LAND

This SEPP requires the consent authority to take into consideration contamination and remediation of land in determining development applications. The authority must be satisfied that land that is contaminated is suitable for the proposed use or will be suitable following remediation of the land.

Contamination is considered in the Preliminary Site Investigation prepared by Douglas Partners and included at Appendix T. The Assessment Update found, inter alia:

- *There are a number of potentially contaminating factors, including the placement of filling on the site, surrounding landfill sites, stormwater storage, maintenance chemicals such as herbicides and pesticides and naturally occurring elements such as heavy metals.*

- *Asbestos-containing material was also detected in the filling on the site, however as this will be removed during excavation it is considered somewhat irrelevant.*

- *Due to the known presence of poor quality groundwater elsewhere in Sydney Olympic Park and the nearby location of landfill cells, it is possible groundwater may be contaminated.*

Douglas Partners concluded that on the basis of a preliminary site investigation, Site 68 can be made suitable for the proposed high density residential land use.

6.7 SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005

This *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (deemed SEPP) provides planning principles for development within the Sydney Harbour catchment. Sydney Olympic Park falls within the Sydney Harbour Catchment area. Planning principles for land within the Sydney Harbour Catchment, of relevance to the proposed development of the site, include:

- Development is to improve the water quality of urban run-off, reduce the quantity and frequency of urban run-off, prevent the risk of increased flooding and conserve water.
- Development that is visible from the waterways or foreshores is to maintain, protect and enhance the unique visual qualities of Sydney Harbour.
- Decisions with respect to the development of land are to take account of the cumulative environmental impact of development within the catchment.

The proposal is consistent with the relevant Planning Principals of the *Sydney Harbour Catchment SEPP* and will not have any significant adverse impact on the Sydney Harbour Catchment, having incorporated the necessary stormwater quality and quantity control measures into the development.

7 Policies

The following strategic planning policies and guidelines have been considered in the assessment of this proposal:

- *NSW 2021.*
- *Draft Metropolitan Strategy for Sydney.*
- *Residential Flat Design Code.*
- *Sydney Olympic Park Master Plan 2030.*
- *Sydney Olympic Park, Access Guidelines 2011.*
- *Sydney Olympic Park Major Event Impact Assessment Guidelines.*
- *Sydney Olympic Park Urban Elements Design Manual.*
- *Sydney Olympic Park Environmental Guidelines.*
- *Sydney Olympic Park Stormwater and Water Sensitive Urban Design Policy.*

7.1 NSW 2021

NSW 2021 is a 10 year plan to rebuild the economy, return quality services, renovate infrastructure, restore accountability to government, and strengthen our local environment and communities. In summary, the key objectives of the Plan are to:

- *Increase use of walking and cycling.*
- *Increase the number of jobs closer to home and increase the percentage of the population living within 30 minutes by public transport of a city or major centre in Metropolitan Sydney.*
- *Grow cities and centres as functional and attractive places to live, work and visit.*

The proposed development will contribute to achieving the objectives of NSW 2021 as it will:

- Improve pathways and connections to walkways and cycle ways, particularly in Bicentennial Park and beyond.
- Provide 369 new dwellings in close proximity to rail and bus services, connecting residents to the Sydney CBD and Parramatta City Centre. This increases opportunities for people to live within 30 minutes by public transport of a city or major centre in metropolitan Sydney.
- Improve housing supply and choice in the central western Sydney area and assist in achieving housing target of 25,000 new dwellings in Sydney per year.
- Provide landscaping, communal facilities, childcare and food and beverage uses in close proximity to the facilities and services of Sydney Olympic Park making this a functional and attractive place to live.

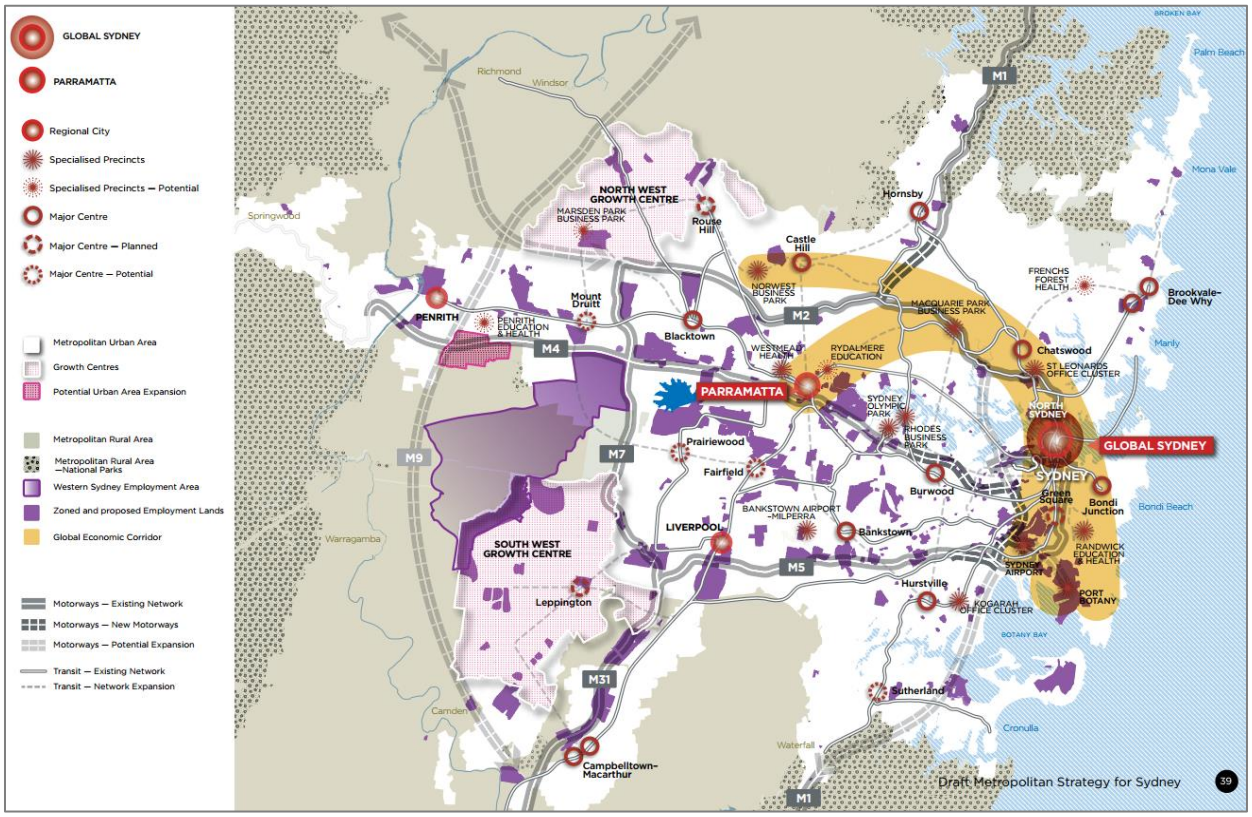
The proposal is consistent with the aims and objectives of NSW 2021 and will positively contribute to the growth of Sydney.

7.2 DRAFT METROPOLITAN STRATEGY FOR SYDNEY

The *Draft Metropolitan Plan for Sydney* expects Sydney will have around 1.3 million additional people by 2031. The Draft Strategy sets targets of 545,000 by 2031 and indicates new housing will be encouraged in areas close to existing and planned infrastructure.

Under the Draft Strategy, Auburn Council is within the West Central and North West Subregion. The Subregional Strategy identifies Sydney Olympic Park as a Specialised Centre, located close to the Global Economic Corridor, which extends to Parramatta (refer Figure 19).

FIGURE 19 – DRAFT METROPOLITAN PLAN 2031



Source: Draft Metropolitan Strategy for Sydney

Sydney Olympic Park as a Specialised Centre has the following priorities:

- *Strengthen the specialised functions of this precinct as a destination for sport, recreation and events with world-class facilities.*
- *Broaden the Precinct's role as a major employment, recreation and housing area.*
- *Investigate improved transit connectivity especially with Silverwater and Parramatta.*
- *Provide capacity for at least 14,000 more jobs to 2031.*

The proposal assists in meeting the objectives and targets of the Strategy:

- The proposal will contribute 369 new dwellings and a large number of jobs through both the construction and operational phases of the residential, child care and food and beverage facilities. Details of employment will be detailed through a separate development application for the childcare centre and the Construction Management Plan. These uses will support the precinct's role as an employment and housing area.
- The provision of residential, food and beverage and childcare uses meets the objectives of providing additional employment and housing in Sydney near jobs, transport and services.

- The area is already well served by public transport, including buses and trains.
- The area is undergoing uplift in employment generating uses with recent approvals for higher intensity commercial uses in precinct. This will provide residents with opportunities to work closer to home.
- There are existing retail uses in the town centre area and it is intended that the town centre will increase in size and intensity as Olympic Park is redeveloped.
- Importantly, the proposal contributes passive and active recreation areas to the precinct and there are many recreational activities within walking and cycling distance of the site.

7.3 SYDNEY OLYMPIC PARK MASTER PLAN 2030

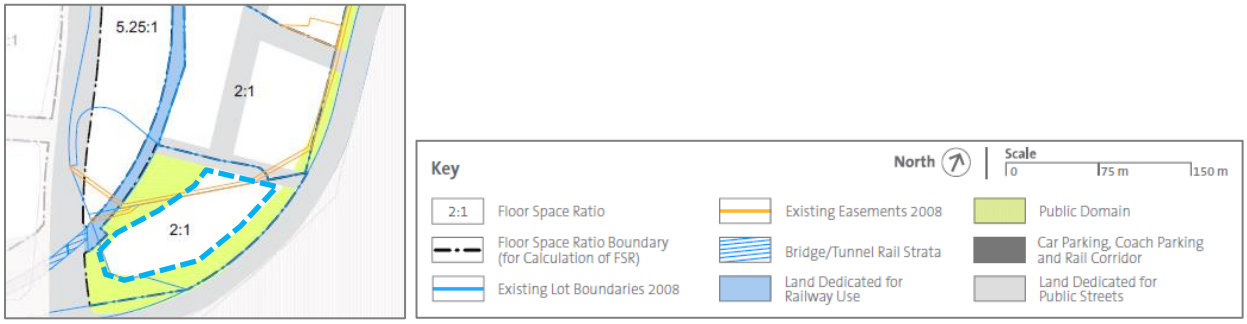
The *Sydney Olympic Park Master Plan 2030* provides a comprehensive approach to the long-term development of Sydney Olympic Park to ensure it continues to evolve into an active, vibrant town within metropolitan Sydney. The Master Plan 2030 also seeks to protect Sydney Olympic Park's role as the premier destination for cultural, entertainment, recreation and sporting events, protect and enhance the public domain and parklands and provide detailed planning/design principles and controls to ensure appropriate development that responds to its context and which contributes to the quality of the built environment.

The site is described as Site 68 and is identified as part of the *Parkview Precinct*, under the *Sydney Olympic Park Master Plan 2030* (as shown in Figure 20). Parkview is envisaged as a high density mixed use precinct incorporating community, educational, commercial and residential uses, to replace existing industrial and commercial uses. A network of streets will transform the precinct into a walkable neighbourhood with good connections to the Bicentennial Parklands. This landscaped corridor is an extension of the open space spine that links the town to the parklands.

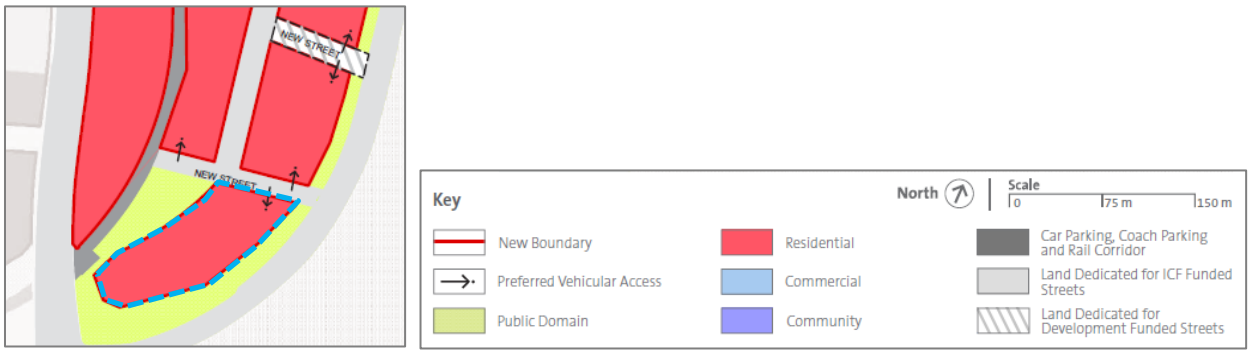
The precinct will be characterised by a transition in scale from larger tower building forms along Australia Avenue to the west, to lower scale buildings along Bennelong Road to the east. The Master Plan contains site specific controls for the Parkview Precinct as shown in Figure 21 below.

FIGURE 20 – PARKVIEW PRECINCT – ILLUSTRATIVE PLAN

FIGURE 21 – SOP MASTER PLAN 2030 – APPLICABLE CONTROLS

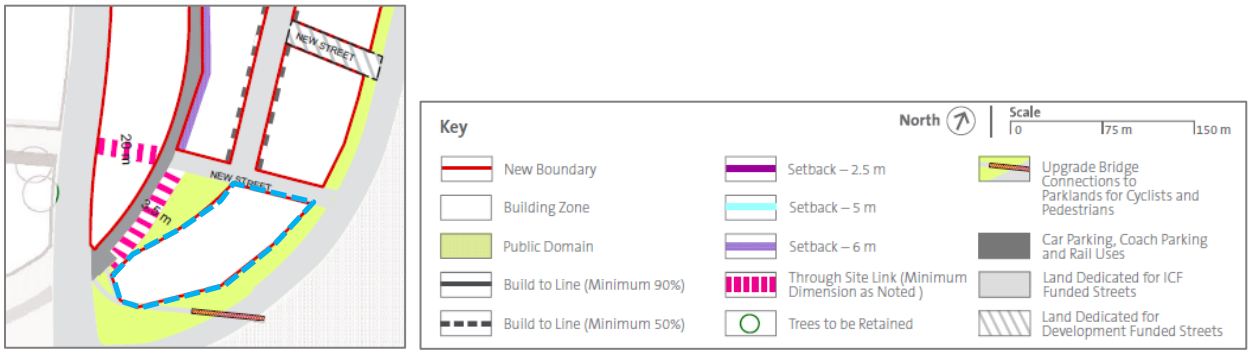


PICTURE 11 – PARKVIEW PRECINCT SITE FLOOR SPACE RATIOS PLAN



PICTURE 12 – PARKVIEW PRECINCT LAND USES PLAN

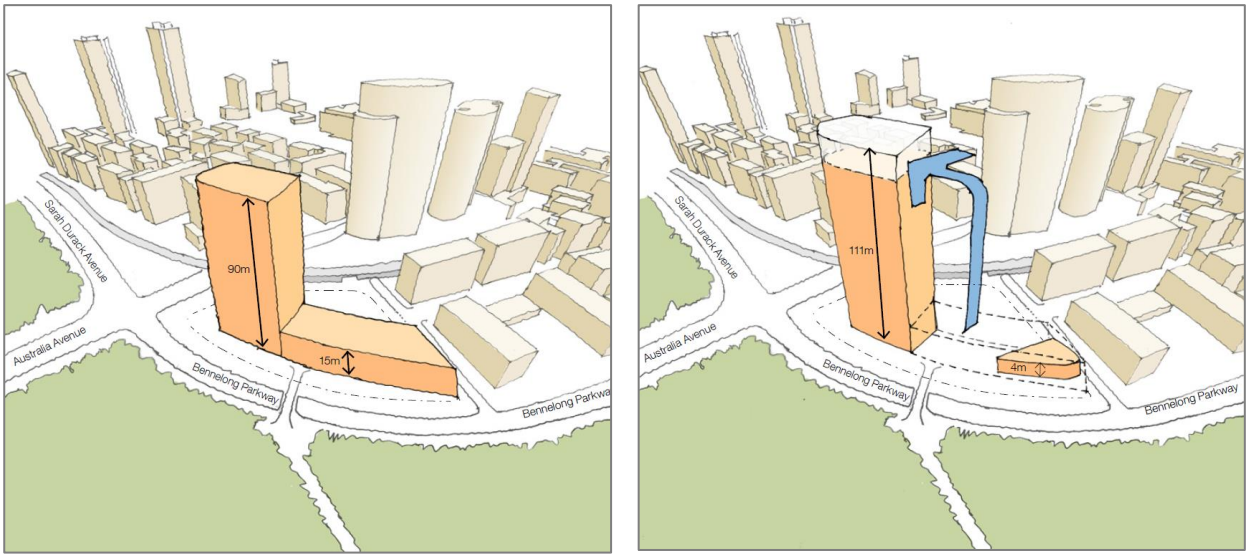
PICTURE 13 – PARKVIEW PRECINCT BUILDING HEIGHTS PLAN



PICTURE 14 – PARKVIEW PRECINCT BUILDING ZONES AND SETBACKS PLAN

As indicated in Figure 22 below the *Sydney Olympic Park Master Plan 2030* envisaged a four-storey or 15 metre podium on the northern portion of the site, with a thirty-storey or 90 metre tower on the southern portion of the site. During the SOPA's Expression of Interest process, Ecove proposed an alternative arrangement which saw the residential floor space within the 15 metre podium consolidated into the tower envelope. To justify this alternative arrangement, Ecove also proposed to include a new neighbourhood park, through site links, and a separate single storey child care centre within the northern portion of the site. This was further explored during the Design Excellence Competition, resulting in a tower height of 32 storeys or 111 metres.

FIGURE 22 – DISTRIBUTION OF FLOOR SPACE - MASTER PLAN 2030 VS. PROPOSED ALTERNATIVE ARRANGEMENT



In response to comments received by the Competition Jury and SOPA Design Review Panel, specifically the request to increase the size of the vertical slots and make 'public' the third vertical slot by redistributing the 'lost' residential floor space to the top of the building, the tower has been further increased another two-storeys to 34-storeys or 116.7 metres (refer Figure 23). This non-compliance with the *Sydney Olympic Park Master Plan 2030* has been endorsed by SOPA's Design Review Panel as discussed in Section 5.1.

FIGURE 23 – DESIGN RESPONSE TO JURY RECOMMENDATIONS

7.4 SYDNEY OLYMPIC PARK ACCESS GUIDELINES 2011

The purpose of these Guidelines is to provide information concerning the requirements for an accessible built environment that enables independent, equitable and inclusive access for people with disabilities. These Guidelines apply to all building works, infrastructure within Sydney Olympic Park, temporary events, and parklands within Sydney Olympic Park.

These Guidelines are intended to provide guidance to Government agencies, architects, venue operators, event operators, designers and others who are involved in the design, construction, fit-out, planning and operations of facilities and venues within Sydney Olympic Park.

An Access Report has been prepared by Morris Goding Accessibility Consulting and is provided at Appendix N. The development has been reviewed to ensure that ingress and egress, paths of travel, circulation areas, communal facilities, residential accommodation, sanitary facilities and car parking comply with relevant statutory guidelines.

The Report states, inter alia:

> *In general, the development has accessible paths of travel that are continuous throughout. In line with the report recommendations, the proposed development has demonstrated an appropriate degree of accessibility. The Development Application drawings indicate that compliance with statutory requirements, pertaining to site access, common area access, accessible parking, adaptable units and accessible sanitary facilities, can be readily achieved.*

In addition to accessible paths of travel, the proposal provides 37 adaptable units, compliant with Sydney Olympic Park Authority Guidelines and AS1428.1-2009 and AS4299.

The Access Report considers the compliance of the proposal with the relevant Australian Standards, the SOPA Access Guidelines and the Disability Discrimination Act (DDA). The main recommendation arising from these considerations is that the design of the external domain and the accessible paths of travel throughout the site to main entrances of the building will need to be reviewed to ensure compliance with the BCA and DDA Premises Standards.

7.5 SYDNEY OLYMPIC PARK MAJOR EVENT IMPACT ASSESSMENT GUIDELINES

The *Major Event Impact Assessment Guidelines* apply to all Developments within Sydney Olympic Park. In accordance with Section 20 of the Act, the Authority must consider whether proposed development is consistent with the guidelines.

The Traffic and Parking Report has assessed the extent and nature of the impact on the local road traffic network and connections with the regional road network (Appendix M).

The Parkview Precinct will be affected by major ANZ Stadium events, the Royal Easter Show and other smaller events. The development can accommodate the changes to access required as described in Event Access Plan in the Master Plan 2030. The roadways surrounding the site are not subject to closures and access can be achieved along Australia Avenue and Bennelong Parkway (refer Figure 24). The proposal will therefore be able to accommodate the public domain closures.

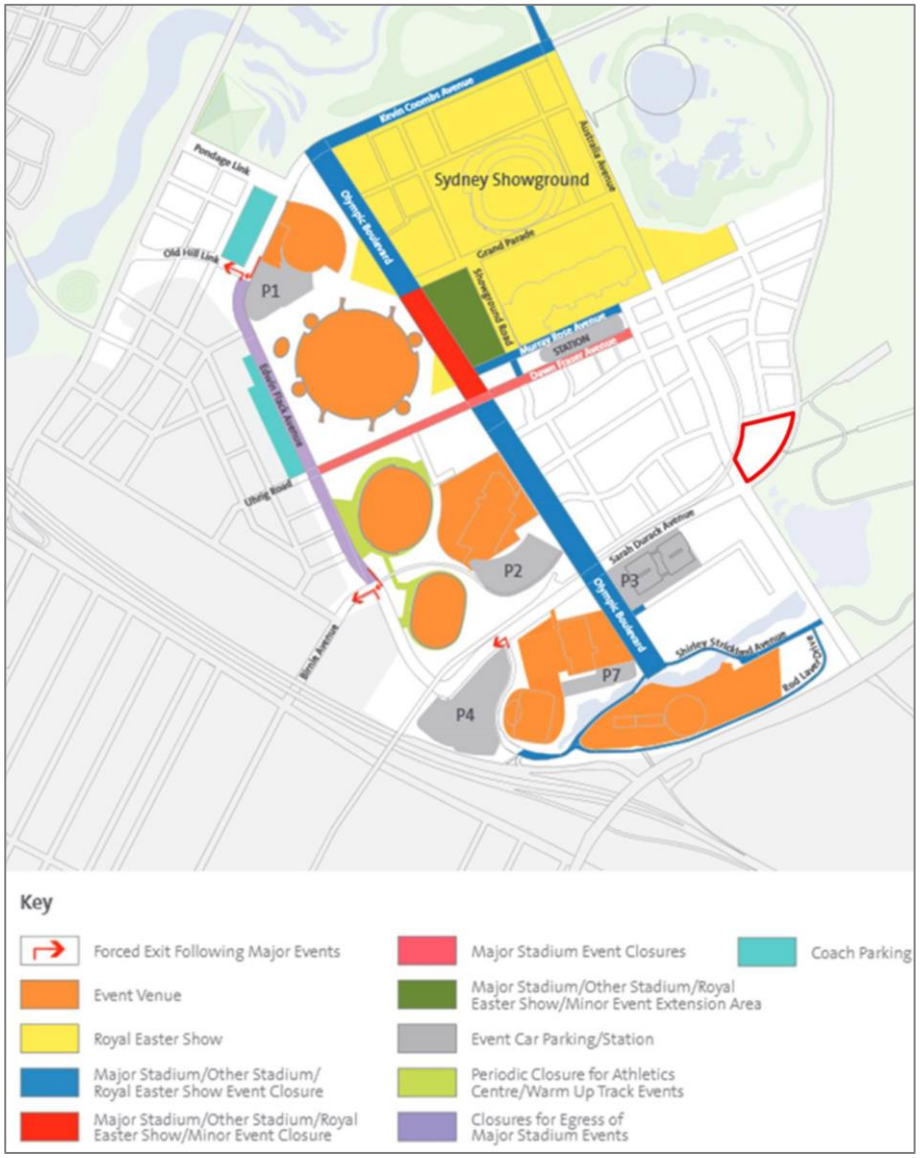
In order to best manage transport and parking related issues and in the interests of minimising negative Major Event Capability impacts:

- The proposal locates vehicle access points generally in accordance with the Parkview Precinct Land Uses Plan in the Master Plan 2030.

- The proposal complies with the car parking requirement in order to provide sufficient parking is provided for residents, staff and visitors. This should ensure that parking required during events remains available.

- The site and the proposed development are located well away from major event venues; major event support infrastructure such as car parks and bus terminals; event transport routes and major event car-parking routes. This ensures there is no conflict during major events.

FIGURE 24 – EVENT ACCESS PLAN



Prior to the construction phase, a Construction Management Plan including a Construction Traffic Management Plan will be prepared. The Construction Traffic Management Plan will identify potential traffic impacts arising from the construction and provide mitigation strategies to ensure peak days of construction will be managed around major events.

A Plan of Management is likely to be prepared prior to the occupation of the building with input from building managers, who will have the benefit of information related to the number of residents, car parking allocations, frequency of service vehicles and construction documentation of public domain. This will ensure there are no conflicts around major events at Sydney Olympic Park.

7.6 SYDNEY OLYMPIC PARK URBAN ELEMENTS DESIGN MANUAL

The *Sydney Olympic Park Urban Elements Design Manual (UEDM)* sets out clear quality and performance standards for the public domain to ensure that Sydney Olympic Park continues to be an exemplar of high quality, sustainable urban development.

The UEDM sets standards for placement and coordination of streets and pathways, as well as street lighting, trees, street furniture and paving. The details of these urban elements will be finalised prior to the issue of a construction certificate and will be consistent with the UEDM.

7.7 SYDNEY OLYMPIC PARK ENVIRONMENTAL GUIDELINES

The Environmental Guidelines for Sydney Olympic Park (2008) set out a general scheme of environmental issues and commitments with regards to the care, control, management, and development of Sydney Olympic Park. The Environmental Guidelines address the key issues of significance for Sydney Olympic Park. The key issues in the Guidelines have been addressed in this Report and the appended supporting documents as follows:

TABLE 6 – SOP ENVIRONMENTAL GUIDELINES

KEY ISSUE	COMMENT
Water Conservation	Maximise opportunities to incorporate water collection and recycling systems and avoid adverse impacts on water quality or quantity.
Energy Conservation	Proposed development meets the minimum requirements of BASIX
Material Selection	Materials and plant species have been carefully selected in accordance with the materials schedule and Landscape Plan.
Waste Management	Waste for demolition, construction and operation will be managed in accordance with Waste Management Plan.
Transport	The proposal reduces the traffic generation when compared to the existing and promotes walking and cycling with bike storage provision and new pathways to connect to the surrounding networks.
Pollution	Noise pollution impacts are addressed in the Acoustic Impact Statement
Biodiversity	A number of existing trees are to be retained and new planting is proposed throughout the site, which will encourage new ecosystems. Refer to Landscape Plan.
Public Open space	The proposal provides new pathways and roadways that connect to Sydney Olympic Park open space areas. The proposal also provides significant communal open spaces for the residents.

The proposal has addressed the key environmental issues contained in the Environmental Guidelines for Sydney Olympic Park (2008).

7.8 SYDNEY OLYMPIC PARK STORMWATER AND WATER SENSITIVE URBAN DESIGN POLICY

Stormwater Management and Water Sensitive Urban Design Policy sets Sydney Olympic Park Authority's requirements for stormwater management associated with development design, planning and construction. To properly meet the requirements of this Policy, development within Sydney Olympic Park must satisfy requirements under the following headings:

- *Maximise harvest and reuse of roof-water*

The Design Report (Appendix C) shows that the rainwater collected from the rooftop is to be used for irrigation, landscaping and car wash bays.

- *Minimise volume and frequency of stormwater discharge from hardstand areas such as paving, driveways and car parks, and maximise quality of any stormwater discharge.*

A number of stormwater infrastructure strategies have been proposed. Details of these strategies are outlined in the Stormwater and Flooding Assessment (Appendix Q).

- *Water conservation*

The Design Report (Appendix C) and ESD Report (Appendix J) outline water efficiency and conservation measures included in the proposed development. The project will connect to the Water Reclamation and Management Scheme (WRAMS) available within the Sydney Olympic Park precinct and will feature water efficient fixtures and appliances throughout. As a result of these strategies the proposed development has also achieved a 20% improvement on the minimum BASIX water score by achieving 47%.

- *Riparian protection*

Riparian protection has not been a necessary consideration of this development.

7.9 SUMMARY

The assessment of development against the planning controls concludes that the scheme is permissible under *SEPP (Major Development) 2005*, Schedule 3, Part 23 Sydney Olympic Park and is generally consistent with the *Sydney Olympic Park Master Plan 2030*.

8 Environmental Assessment

This section contains an assessment of the key issues identified in the SEARs.

8.1 BUILT FORM AND URBAN DESIGN

As described in the Design Report prepared by Bates Smart and included at Appendix E, the built form of the proposed development has been driven by responses to site, context, residential amenity, provision of communal spaces, and articulation of building massing to create a legible scale at both urban and pedestrian levels.

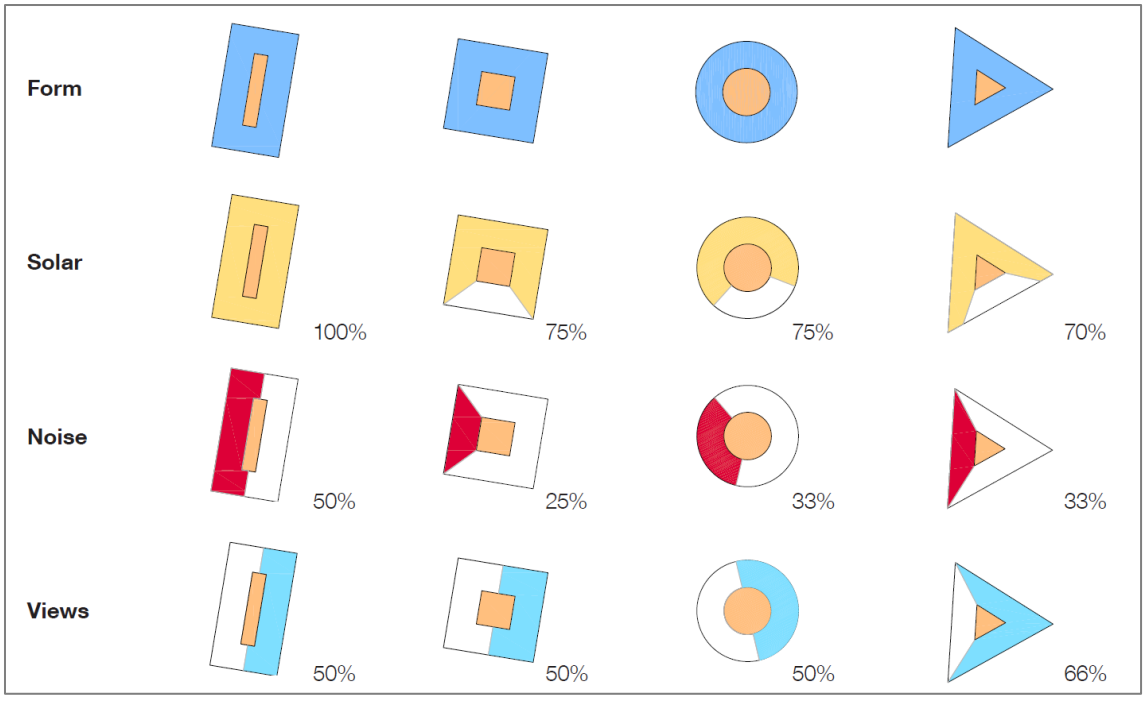
- **Gateway Location:**

  Site 68 is the gateway to Sydney Olympic Park from Australia Avenue and sits at an important junction between Sydney Olympic Park and the Bicentennial Parklands. It also sits at the southern end of a number of towers along Australia Avenue which have all been designed with consideration for the surrounding environment. The proposed development responds positively to this gateway location by providing an iconic triangular form with curved corners, which address the intersection of roads and land uses and reflect the curved geometry of the Site 3 towers adjacent.

- **Floor Plate Geometry**:

  A number of floor plate geometries were analysed in determining the preferred outcome, with competing urban design objectives and site constraints analysed, including views, solar access, noise, gateway form, and axial alignment. The triangular shape is considered to respond well to the urban design criteria, relating to the triangular site geometry and axial alignments, while having a slender iconic form. In addition, the triangular form balances the competing demands of solar, noise and views, while providing a flexible floor plate.

FIGURE 25 – FLOOR PLATE ANALYSIS MATRIX



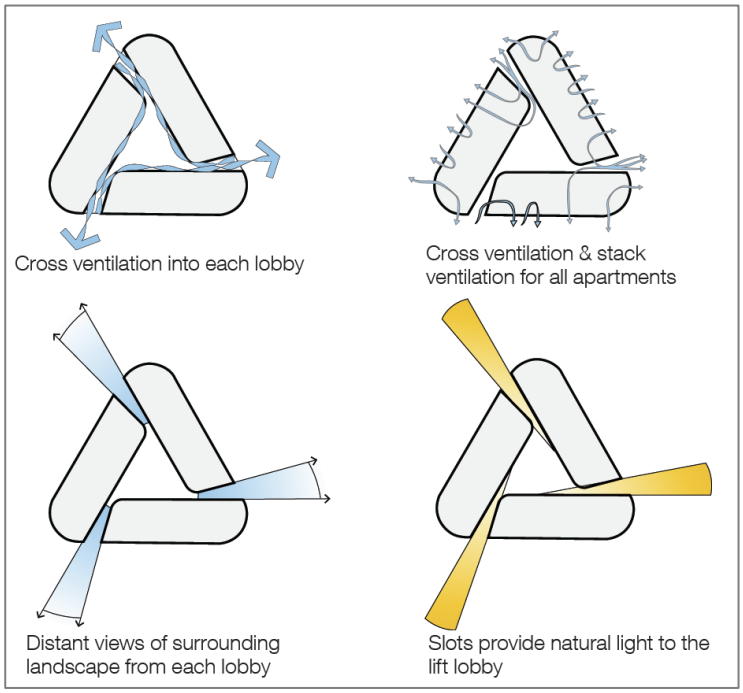
- **Vertical Slots / Sky Gardens:**

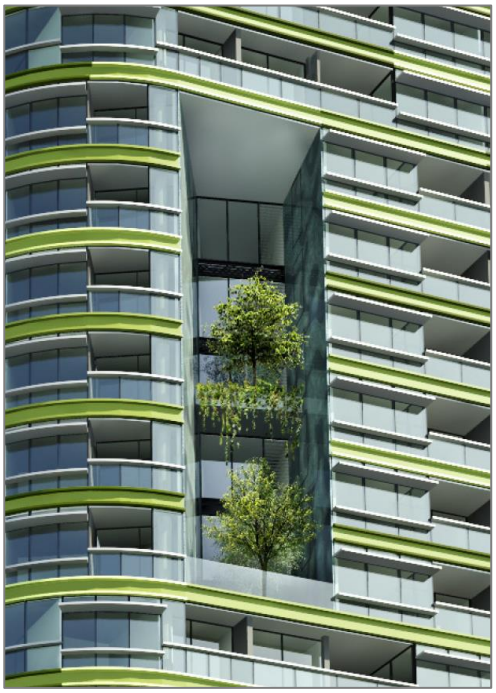
  The vertical slots or ‘sky gardens’ respond positively to Bicentennial Parklands and facilitate integration with the natural environment. The gardens extend the landscape of Bicentennial Park into the building, and provide clean and cool air into apartments and common areas. The gardens also provide communal spaces with excellent amenity achieved through solar access and views.

  At the base of each slot are landscaped communal courtyard gardens for use by residents. These spaces are intended to provide additional outdoor space for all residents to enjoy and allow every resident to benefit from the best views and sunlight, regardless of the orientation of their own apartment.

  The walls of the slots are clad in a printed glass with a pattern by a recognised artist. The smooth surface of the glass helps to reflect light deep into the slots to the common corridors and lift lobbies. Viewed from common corridors, the glass reflects the sky and the vegetation within the slots creating a closer connection with the landscape and the elements.

FIGURE 26 – PROPOSED VERTICAL SLOTS / SKY GARDENS





- **Wintergardens**:

  Wintergardens are typically located on the corner apartments in lieu of traditional balconies, in response to increased wind speeds detected by wind modelling. The wintergardens consist of a vertically sliding window system which allows the facade to be opened from balustrade height up to a level of 2200mm above floor level, maintaining the natural ventilation and sensation of an outdoor space similar to a balcony. In high wind conditions, when closed, the wintergarden benefits from protection from the wind while allowing views and access to sunlight to be maintained.

- **Materials**:

  The palette of materials has been kept to a minimum to maintain a universal style and consistent architectural language. A restrained palette of natural materials and hues, inspired by the site context, are proposed including three shades of terracotta, glass, aluminium and off form concrete.

  The terracotta is used as a series of horizontal spandrels which express the single storey residential scale. Horizontal anodised aluminium fins provide shade and rain protection to the façade. Off form concrete columns complement the natural materials at the base of the tower, and relate to the materiality of other structures in Sydney Olympic Park.

The main components of the facade have been designed in direct response to the environmental conditions, whilst ensuring the excellent views are maximised. The horizontal shading fins vary in depth according to the internal room type, helping to create a subtle degree of articulation up the building and giving a high level of texture and depth to the facade.

At the base of the tower, the ground floor is recessed to provide shelter to the full perimeter of the building and to give the impression of the tower 'floating' above the ground plane. At the top of the building a white coloured crown appears to float above the building providing a simple, elegant termination of the tower form.

- **Façade Treatment:**

Conceptually the façade has been designed to capture the sense of the sites edge condition between Sydney Olympic Park and Bicentennial Park, being where the city meets nature. The tower facade has been designed as a curtain wall system allowing for an efficient construction sequence. The curtain wall facade is double glazed to reduce heat loss in the winter, and minimise heat gain in the summer, as well as reducing the amount of ambient noise entering the apartments.

The design is characterised by horizontal terracotta banding around each slab edge, which has a subtle eucalyptus colour pattern.

All living spaces are located at the facade to maximise views and natural daylight throughout the year, whilst bedrooms are generally set back behind a balcony to maintain privacy. Where living rooms meet the outer façade there is an upper and lower aluminium horizontal fin which provides shading to the window and defines an upper and lower level awning window that provides natural ventilation (refer Figure 27).

FIGURE 27 – PROPOSED TOWER FAÇADE TREATMENT

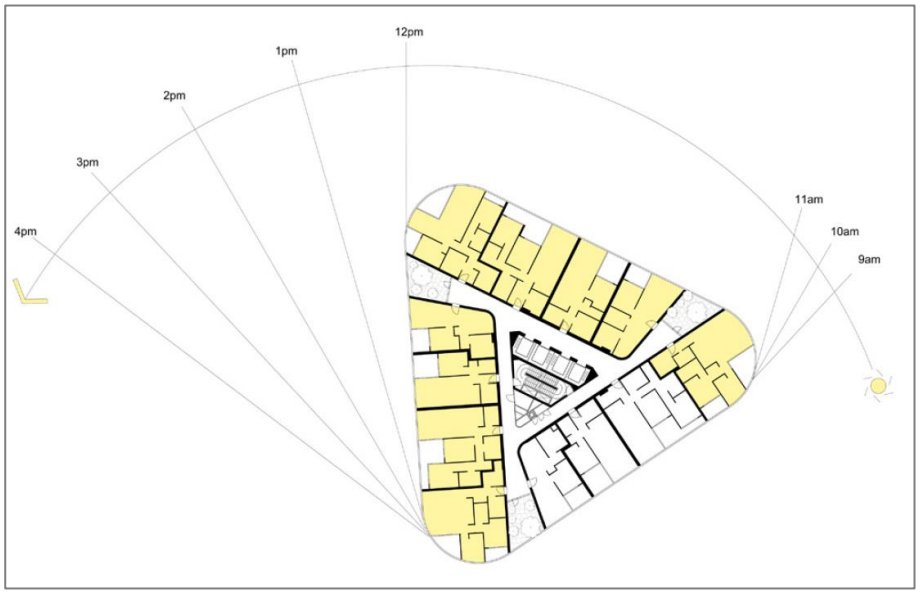
8.2 ENVIRONMENTAL AMENITY

The proposed development has been designed with consideration of the NSW Residential Flat Design Code (RFDC) and as such achieves a high level of environmental amenity. This is in part assisted by the vertical slots incorporated into the building design which provide ventilation, daylight access and views throughout the building.

8.2.1 SOLAR ACCESS

Consistent with the principles set out the RFDC, the design seeks to maximise the number of apartments receiving direct sunlight in midwinter to living rooms and balconies. These spaces are given priority and are located at the building's façade to ensure solar access to both spaces. The plan geometry is such that the north and west oriented apartments receive 3 hours of solar access between 9am and 4pm, while the remaining apartments receive the highest quality views (refer Figure 28).

FIGURE 28 – SOLAR ACCESS DIAGRAM



In relation to Solar Access provisions, the RFDC provides the following 'Rule of Thumb':

> *Living rooms and private open spaces for at least 70 percent of apartments in a development should receive a minimum of three hours direct sunlight between 9 am and 3 pm in mid-winter. In dense urban areas a minimum of two hours may be acceptable.*

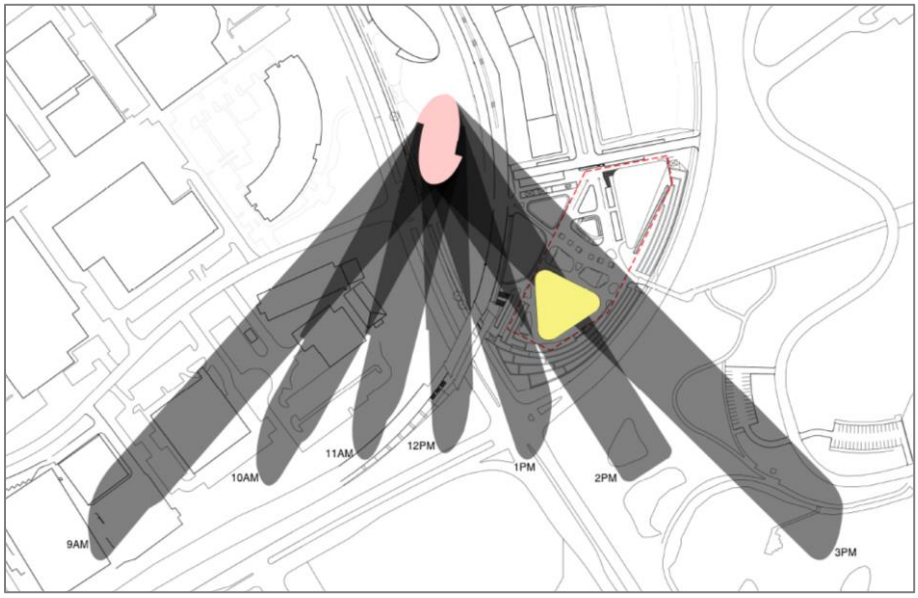
The Design Report prepared by Bates Smart Architects (Appendix C) analyses the provision of solar access. The report concludes that 78% of residential apartments achieve 2 hours of solar access between 9am and 4pm on 22 June. Furthermore, 68% of residential apartments achieve 3 hours of solar access between 9am and 4pm on 22 June.

It is argued that Site 68 is situated within a dense urban area and as such the two hour provision, as described in the RFDC is acceptable. This is emphasised by the proposed future use of the Parkview Precinct as described within the *Sydney Olympic Park Master Plan 2030,* which states:

> *Its existing industrial and commercial uses will progressively give way to a higher density, mixed use precinct incorporating community, educational, commercial and residential uses to create a compact urban neighbourhood with a vibrant and leafy street character.*

Furthermore, as indicated on the shadow diagram at Figure 29, the adjacent residential tower on Site 3 overshadows the proposed development for one hour between 2pm and 3pm on 22 June. This further emphasises that the site is located in a precinct with a developing character of high density urban form and as such it is considered that the area constitutes a dense urban form and the lower standard of solar access should be applied.

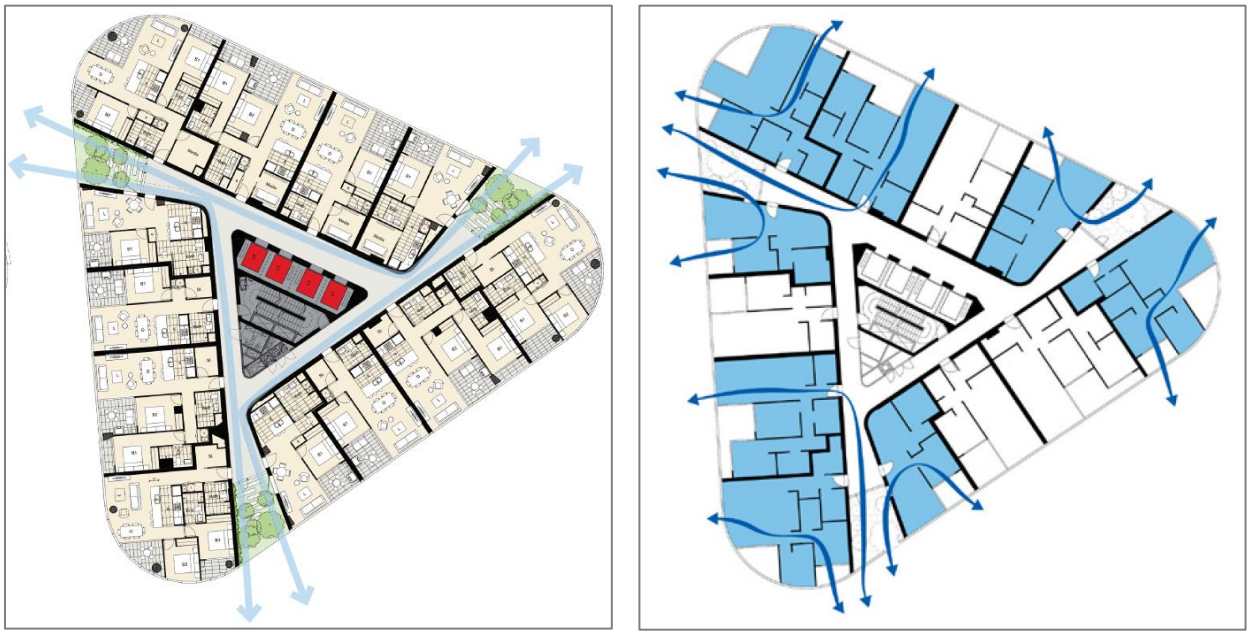
FIGURE 29 – SHADOW DIAGRAM



8.2.2 NATURAL VENTILATION

The Design Report prepared by Bates Smart Architects (Appendix C) analyses the provision of natural ventilation within the proposed development. In summary, the proposed development achieves the 60% cross ventilation as required by the RFDC. The floor plate has been designed in accordance with this principle. The development utilises the vertical gardens to achieve dual ventilations. Six apartments per floor achieve cross ventilation through connection with the vertical gardens and an additional two apartments are connected via a plenum in the ceiling of the common corridor (refer Figure 30). Cross ventilation ensures the comfort and amenity of residents and reduces reliance on cooling systems such as air conditioning.

FIGURE 30 – NATURAL VENTILATION STRATEGY DIAGRAM



8.2.3 VISUAL AND ACOUSTIC PRIVACY

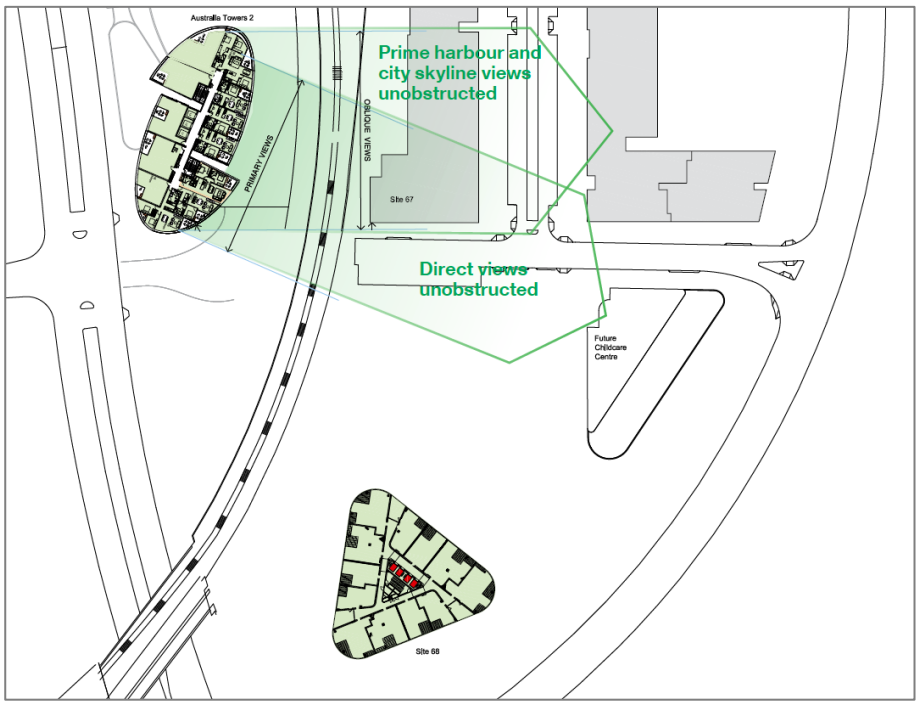
The Design Report prepared by Bates Smart Architects (Appendix C) describes a number of strategies which enhance visual and acoustic privacy, including:

- Balconies are recessed to limit surveillance from the public domain and surrounding uses.
- Glazed balustrades and horizontal fins on balconies allow passive surveillance of the surrounding public domain while maintaining visual privacy when viewed from below.
- Bedrooms are generally setback which is of particular significance for units on lower floors of the building. The setting back of bedrooms reduces disturbances such as surveillance by pedestrians or noise impacts from surrounding land uses.

VIEW LOSS

The Design Report prepared by Bates Smart Architects (Appendix C) analyses the potential impact of view loss to the adjacent Australia Towers development. The potential impact has been assessed by defining two key view corridors from the residential apartments within. The apartments are oriented east-south-east with direct views and general outlook over Bicentennial Park. Higher quality city skyline and harbour views are slightly oblique to floor-plate planning, in a due easterly direction. The proposed development has no impact to either direct or prime views as indicated in Figure 31 below.

FIGURE 31 – VISUAL PRIVACY DIAGRAM



8.3 STORAGE

Storage is provided for all units in accordance with the minimum requirements outlined in the RFDC, through the provision of internal storage rooms and basement storage cages. The Design Report, provided at Appendix C, includes a detailed storage schedule, outlining the proposed storage arrangement per apartment type.

8.3.1 WIND ASSESSMENT

The Environmental Wind Study (Appendix K) identifies the significant considerations in regards to wind impacts on the proposed development. The surrounding landscape is relatively flat and there are no significant topographical features to impact on wind flows. Site 68 is offered little wind protection aside from other residential flat buildings located to the north. Initial studies of the proposed works assessed the building as having poor performance at the ground plane, prompting a number of mitigation strategies to be adopted by the project team. The following significant findings have been drawn from the Study:

- *Adopted amelioration measures (canopy of entrance and café and extensive plantings at all sides of the building) assist in improving the conditions experienced across the site significantly*
- *Installation of canopies over outdoor café seating and entrance lobby assist greatly in reducing the impact of down drafts during prevailing wind conditions.*
- *Amelioration measures already included assist in providing a safe environment.*
- *Outdoor seating may possibly be impacted from both southerly and northerly winds for a small portion of the year.*
- *Conditions in the slot balconies have been investigated and generally they show favourable conditions.*
- *Impacts to resident comfort may be impacted at higher levels in the balconies but it is unlikely to impact the occupied levels.*
- *Conditions at the roof/plant level are not suitable for prolonged occupation.*

As the above finding show, the initial amelioration techniques have been assessed as effective. Additional strategies are provided in the study. These include the incorporation of trees with large and dense crowns, the enclosing of the wintergardens and potential additional screening to increase amenity of apartment balconies.

8.4 FLORA AND FAUNA

The proposed development is to occur on the site of a constructed wetland used as a stormwater basin. The Preliminary Flora and Fauna Assessment Report prepared by Applied Ecology (Appendix P) found that the major modifications to form the stormwater basin have resulted in the subject site bearing no resemblance to a natural environment.

A number of flora and fauna species were located on the site through existing records and field surveys. A number of affected threatened and migratory species were identified on site. The report recommends locating and improving nearby habitats for threatened and migratory fauna. The report also recommends conducting additional surveys to ensure threatened flora is not present on the site.

The Preliminary Flora and Fauna Assessment was provided to the Office of Environment and Heritage (OEH) on 17 September 2014. Following review of the Assessment, OEH provided comments on 15 October 2014 regarding the on-going assessment and reporting requirements under the Bio-banking Assessment Methodology. A subsequence Assessment has been undertaken using the *Framework for Biodiversity Assessment (FBA) for Major Projects* and is provided at Appendix P.

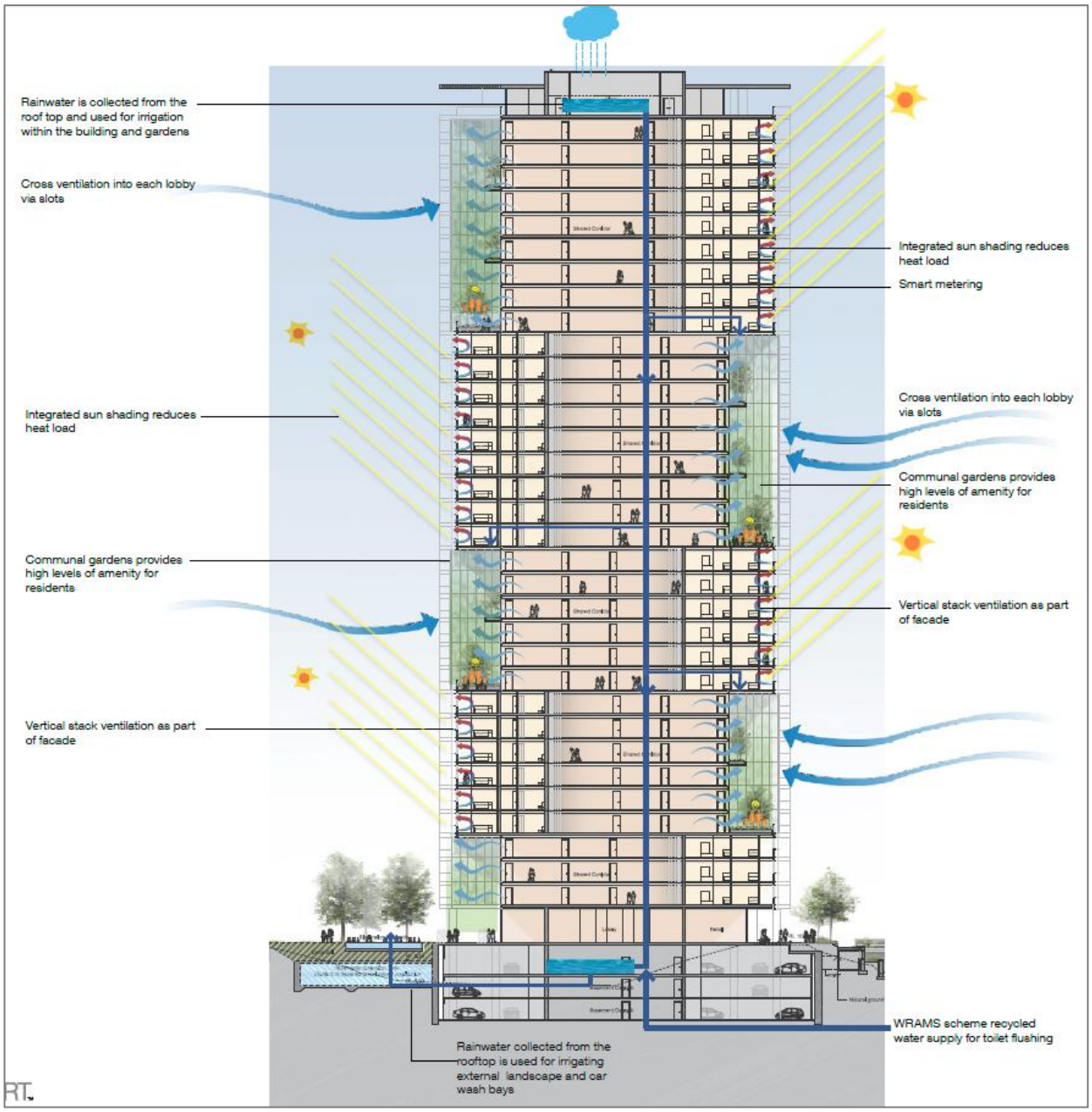
8.5 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

The proposed development has delivered sustainability strategies and outcomes far in excess of those typical in residential flat buildings. The key sustainability strategy included in the proposed development is the vertical gardens through the building which provide ventilation, solar access and views throughout the building. Weather stations control openings in the corridor to ensure comfort and amenity for all residents. The vertical gardens also provide an alternative performance fire strategy by providing relief air in the event of a fire situation. The ESD Report (Appendix J) states the following about this innovation:

> *This is a remarkable achievement that has rarely been delivered globally in residential towers and has set a very high standard for the other sustainability strategies proposed for the project.*

The vertical gardens and other sustainability strategies have achieved a proposed development with strong ESD outcomes. A summary of key sustainability strategies incorporated into the building design is shown in Figure 32.

FIGURE 32 – ENVIRONMENTALLY SUSTAINABLE DESIGN DIAGRAM



The proposed development has achieved the minimum BASIX compliance of a 20% reduction for energy systems, which is difficult to achieve in residential towers. Strategies which achieve energy efficiency in the proposed development include:

- The orientation of the proposed development provides solar access to dwellings provide passive heating and reduce reliance on heating systems.
- The vertical gardens and automated louvres allow for cross ventilation to all lobby areas and vertical stack ventilation is achieved through façade design.
- All dwellings have a high level of cross ventilation which maintains resident comfort with a reduced reliance on air conditioning.
- Efficient appliances and fixtures have been provided throughout, including dishwashers, dryers and light fixtures.
- Double glazing which will result in the use of 55% less energy to cool and 19% less energy to heat the building than the BASIX caps.
- Large windows will circulate daylight and reduce lighting needs.

The proposed development has also achieved a 20% improvement on the minimum BASIX water score by achieving 47%. Strategies which achieve water efficiency in the proposed development include:

- The project will connect to the Water Reclamation and Management Scheme available within the Sydney Olympic Park precinct.
- Water efficient appliances and fixtures will be provided throughout, including shower heads, toilets, taps and dishwashers.
- Rainwater reuse tanks are to be installed for use in irrigation and car wash bays.

Other strategies which will improve the ecological sustainability of the development include:

- Use of low volatile organic compound materials used throughout which improve potential impacts on internal air quality.
- Separation of waste into general waste, recycling and green waste.
- Use of post-consumer recycled content materials in construction where appropriate.

8.6 NOISE AND VIBRATION

An Acoustic Assessment of road traffic noise, rail noise, and vibration impacts on the proposed development at Site 68 was undertaken by Renzo Tonin and is included at Appendix L. The assessment of airborne road and rail noise intrusion into the subject development has found that appropriate noise control measures can be incorporated into the building design such as acoustic glazing to achieve compliance with the acoustic requirements stipulated in State Environment Planning Policy ISEPP 2007 and Australian Standard AS/NZS 2107.

Operational noise arising from the development once constructed must be compliant with the *Sydney Olympic Park Major Event Impact Assessment Guidelines* and the *Office of Environment and Heritage Industrial Noise Policy*. Compliance will need to be ascertained during the detailed design phase.

The Acoustic Assessment establishes strategies which may control operational noise including the procurement of a ‘quiet plant’ and positioning roof and balcony plant equipment away from sensitive neighbouring premises. It is currently considered likely that intervening building structures between Site 68 and the Major Events Venue protected under the SOPA Guidelines will act as noise barriers.

Noise and vibration emissions during construction will be compliant with the NSW Interim Construction Noise Guideline. Additional measures are provided in the Acoustic Report including switching off equipment not in use for an extended period, ensure 'silencing kits' are performing as intended and the drafting of a management procedure to deal with noise complaints.

8.7 TRANSPORT AND ACCESSIBILITY

A Traffic and Transport Assessment has been undertaken by Cardno and is included at Appendix M. The findings of the Assessment are summarised below and discussed in further detail in the proceeding chapters of this Report:

- Vehicular access to the site is proposed via a new roadway to be constructed from Bennelong Parkway along the northern boundary of the site as per the *Sydney Olympic Park Master Plan 2030*.
- An on-site parking provision of 482 spaces is proposed, comprising 472 spaces within the basement parking levels and 10 spaces indented along the carriageway of the new roadway.
- The proposed on-site parking provision is within the maximum number of car parking spaces permitted on the site under the car parking limitation policy outlined at Section 4.7 of the *Sydney Olympic Park Master Plan 2030*.
- The allowance of parking spaces to each of the proposed uses on the site is within the maximum number spaces permitted for that use under the car parking limitation policy.
- An appropriate number of bicycle parking spaces have been provided on the site to accommodate the anticipated bicycle parking demands of residents, staff and resident visitors.
- The on-site parking areas and vehicular circulation arrangements have generally been designed in accordance with the *Australian Standard for Off-Street Car Parking* (AS28901:2004) and can function appropriately.
- The siting of the vehicular access point to the basement parking levels accords with the preferred location for site access outlined within the *Sydney Olympic Park Master Plan 2030*.
- The SIDRA analysis indicates that queueing along the new roadway at the Bennelong Parkway intersection will not impede on vehicular access to and from the basement parking levels.
- The SIDRA analysis indicates that traffic generated by the subject proposal, in consideration of the traffic generated by development of the land in the immediate vicinity of the site, will have no detrimental impacts on capacity, road safety or amenity at the intersection.
- The surrounding roads and intersections have been designed to accommodate the anticipated traffic volumes generated by development of the subject site and wider Sydney Olympic Park area as proposed under the *Master Plan 2030*.

8.7.1 SITE ACCESS

A new roadway is to be constructed from Bennelong Parkway along the northern boundary of the site which will provide vehicular access as per the *Sydney Olympic Park Master Plan 2030*. The roadway will intersect Bennelong Parkway to the east of the site at an un-signalised T-intersection where left-in and left-out vehicle movements will be permitted.

Vehicular access from the roadway to the subject site is proposed via the construction of an 8 metre wide two-way crossover located 30 metres from the Bennelong Parkway intersection. At 8 metres wide, the crossover will be of adequate width to accommodate the swept paths of opposing vehicles should concurrent opposing movements occur at the site access. The location of the site access point is generally in line with the preferred location outlined in the *Sydney Olympic Park Master Plan 2030*.

8.7.2 TRAFFIC GENERATION

The subject proposal is estimated to generate approximately 251 vehicle movements during the morning peak period and 211 vehicle movements during the afternoon peak period. Analysis of proposed traffic generation in the Traffic and Transport Assessment shows that queuing along the new roadway at the Bennelong Parkway will not impede upon site access via basement levels. Traffic generated by the proposed development and surrounding developments will have no detrimental impacts on the intersection at Bennelong Parkway.

Additionally, the surrounding roadways have been designed in accordance with the *Sydney Olympic Park Master Plan 2030* and will accommodate anticipated traffic volumes generated by the proposed and surrounding development.

8.7.3 PUBLIC TRANSPORT

The Site is well serviced by public transport, as follows:

Rail: SOP rail services operate on a dedicated branch line off the Main Western Line with a rail loop to Olympic Park Station. Shuttle services to/from Lidcombe Station run every 20 minute on a regular basis. Infrequent direct services operate from Central Station via Strathfield for events at ANZ Stadium. Rail services are also available at Concord West Station (15 minute walk) and Strathfield Station (10 minute walk).

Bus: Sydney Buses operate a number of services through Sydney Olympic Park:

- Route 525 – Burwood to Parramatta via Sydney Olympic Park every ten minutes in the morning and afternoon peak.
- Route 401 – Lidcombe to Sydney Olympic Park Ferry Wharf every 20-40 mins in the morning and afternoon peak.
- Route 450 - Hurstville to Strathfield via Sydney Olympic Park every 15 minutes in the morning and afternoon peak.
- Route 534 – Chatswood to West Ryde via Sydney Olympic Park every 15 minutes in the morning and afternoon peak.

Ferry: Sydney Ferries operate to the Sydney Olympic Park Ferry Wharf at the end of Hill Road, which connects Rydalmere to Milsons Point and Circular Quay. Three services operate in the afternoon and morning peak and a 60 minute frequency at other times.

8.7.4 CAR PARKING

Car parking has been provided in accordance with the maximum parking rates established in the *Sydney Olympic Park Master Plan 2030*. It is proposed that 482 parking spaces be constructed on the site, comprising

- 472 spaces located across the 3 basement levels; and
- 10 at-grade parking spaces that will be constructed as indented on-street parking spaces along the northern site boundary.

Of the 472 spaces within the basement parking levels, 456 are located behind an access controlled boom gate. These spaces will be allocated to residents, resident visitors and café staff. The 16 spaces located in front of the boom gate will be allocated to the Childcare Centre. The 10 at-grade spaces at the northern boundary of the site will be for the shared use of resident visitors and the Childcare Centre.

Table 7 below provides an assessment of car parking rates against the maximum rates established in the *Sydney Olympic Park Master Plan 2030*.

TABLE 7 – ASSESSMENT OF CAR PARKING RATES

USE	MAX. NO. OF SPACES PERMITTED	NO. SPACES ALLOCATED
Resident	424	408
Resident Visitor	92	52
Commercial (Café)	2	2
Child Care Centre	27	20
Total	**545**	**482**

The Traffic and Transport Assessment (Appendix M) concludes that car parking rates accord with all relevant car parking policies including the *Sydney Olympic Park Master Plan 2030* and RMS Guidelines.

8.7.5 BICYCLE PARKING

It is proposed that 246 bicycle parking spaces be provided on the site, comprising 156 spaces within basement level 1 for residential use and 90 spaces at ground level for the use of staff and visitors. Further space for an additional 42 bicycles is provided at ground level to enable the cafe to offer bicycle rental facilities to the general public if desired. Further provision for bicycle storage is provided within the storage rooms of some residential apartments.

8.7.6 LOADING

The proposed development includes a loading dock, to be primarily used for garbage collection and bulky residential deliveries. The loading dock will cater for two trucks and will be located within the basements, adjacent to the car park entry / egress on level B2. The loading docks have been provided at-grade to satisfy Australian Standards.

The loading dock and service vehicle area has been designed away from residential areas and primary outlooks to maintain the amenity and views of habitable areas of the building.

8.8 MAJOR EVENTS

As addressed in Section 7.5 above, the Traffic and Transport Assessment has reviewed the extent and nature of the impact on the local road traffic network and connections within the regional road network (Appendix M).

The Parkview Precinct will be affected by major ANZ Stadium events, the Royal Easter Show and other smaller events. The development can accommodate the changes to access required as described in Event Access Plan in the Master Plan 2030. The roadways surrounding the site are not subject to closures and access can be achieved along Australia Avenue and Bennelong Parkway. The proposal will therefore be able to accommodate the public domain closures.

In order to best manage transport and parking related issues and in the interests of minimising negative Major Event Capability impacts:

- The proposal locates vehicle access points generally in accordance with the Parkview Precinct Land Uses Plan in the Master Plan 2030.
- The proposal complies with the car parking requirement in order to provide sufficient parking is provided for residents, staff and visitors. This should ensure that parking required during events remains available.
- The site and the proposed development are located well away from major event venues; major event support infrastructure such as car parks and bus terminals; event transport routes and major event car-parking routes. This ensures there is no conflict during major events.

8.9 UTILITIES

As the site is in an established area, public utility infrastructure, including water, electricity, natural gas and sewage disposal, is readily available. The Hydraulic and Fire Services Report (Appendix R), Electrical Services Report (Appendix R) and Stormwater and Flooding Report (Appendix Q) provide the necessary steps to be pursued to connect the proposed development to public utility infrastructures. These recommendations are summarised below:

8.9.1 ELECTRICAL SERVICES

Electricity will be supplied to the propose development via three new kiosk-type substations. An Application for Connection is to be submitted to Ausgrid to further develop a scope of works.

8.9.2 GAS

Confirmation with Jemena is currently being awaited with regard to a new connection to the natural gas main located along the eastern boundary of Bennelong Parkway. All gas main works will be designed by Jemena.

8.9.3 TELECOMMUNICATIONS

Telecommunications will be serviced by a 'Fibre to Home' solution and will be provided for by the National Broadband Network Company (NBNCo) Fibre Optic Network Cabling. This will be provided by NBNCo at their cost. The installation of this infrastructure will be accommodated in the design of telecommunications rooms throughout the development.

8.9.4 WATER

The Hydraulic and Fire Services Infrastructure Requirements (Appendix R) summarises the process to be undertaken with Sydney Water. A Section 73 Application is to be lodged with Sydney Water after development consent is issued with regard to the following:

- *Bennelong Parkway – two new water main connections will be required across the kerb of Bennelong Parkway into the existing 150mm DICL water main. One being a 150mm potable cold water service and the other being a 150mm combined fire hydrant /fire sprinkler service connection.*

- *Australia Avenue – an existing 375mm DICL non-potable cold water main is located along the western boundary of Australia Avenue. The main is not directly accessible from the proposed development site.*

8.9.5 SEWER

The Hydraulic and Fire Services Infrastructure Requirements (Appendix R) summarises the process to be undertaken with Sydney Water. A Section 73 Application is to be lodged with Sydney Water after development consent is issued with regard to the following:

- *Sewer Main Diversion – the existing 900mm GRP Sydney Water sewer main will be required to be diverted to facilitate construction of the proposed development. Currently a design is being prepared for the diversion by an accredited Water Servicing Coordinator.*

- *Site Connection – the existing 900mm GRP sewer main within the site boundary has adequate capacity to service the proposed development via a new 225mm sewer connection.*

8.9.6 STORMWATER

Details of the proposed stormwater infrastructure have been provided in the Stormwater and Flooding Assessment prepared by Alluvium and included at Appendix Q.

8.10 STAGING

As described in Section 3.1, staged development consent is sought, under Section 83(1) of the *Environmental Planning and Assessment Act 1979*, for the following:

- Section 83B(3)(b) Works comprising:
  - A single residential tower comprising 33 residential floors, with 369 apartments, and 100m² of ground floor retail / commercial uses;
  - Three levels of basement car park, comprising 408 resident spaces, 42 visitor spaces, 2 retail spaces, and 20 child care centre spaces; and
  - Associated landscaping works, comprising mature plantings, bio-retention wetlands, and a cascading waterfall.
- A Concept Proposal for development of a child care centre on the northern portion of the site.

8.11 CONTRIBUTIONS

Sydney Olympic Park Authority, as the owner of the Project Land has entered into a Planning Agreement with Ecove Group Pty Ltd, as per Section 93F of the *Environmental Planning and Assessment Act 1979.*

The planning agreement provides that the Developer (Ecove Group Pty Ltd) will be required to make a monetary contribution to Sydney Olympic Park Authority, calculated in accordance with the following formula:

Contribution Amount = Site Area x $286

Where: Site Area = the area of the Site expressed in square metres

This contribution is subject to indexation and payable following Substantial Commencement.

The objectives of the planning agreement are to secure public benefits in connection with the development. The nature and effect of the planning agreement is to secure payment of the monetary contribution to SOPA.

8.12 SEDIMENT, EROSION AND DUST CONTROLS

A Soil and Water Management Plan has been developed by Bonacci Group (Appendix S). This plan identifies measures and procedures to manage sediment, erosion and dust particles. These include:

- Installation of sediment fences to contain and relocate coarse sediment fractions where further pollution cannot occur.
- Installation of a 480m^3 sediment basin in accordance with the Landcom Managing Urban Stormwater "Blue Book". All site ground water and run off will drain through this basin, sediment should be allowed to settle and then the water quality is checked before being discharged.
- The site manager will construct additional erosion or sediment control works as necessary to protect downslope land and waterways.
- Weekly inspections by the site manager to maintain erosion and sediment control measures.

The Geotechnical Report (Appendix U) shows that there is no known occurrence of acid sulphate souls on the site according to the *Prospect/Parramatta River 1:25000 Acid Sulphate Soil Risk Map*.

8.13 EXCAVATION

Excavation for the basement will utilise a variety of techniques dependent of the strength of material to be excavated. The excavation will involve the removal of the existing embankment and therefore batter or shoring support will be used to support Bennelong Parkway. A variety of other techniques, such as soldier piles with shotcrete panel infills will support against local spillages in residual clays and shale.

The Geotechnical Report (Appendix U) also recommends that lateral pressures created from surcharge loads caused by the railway corridor, adjacent buildings, sloping ground surfaces, road corridors and construction machinery be considered in the design of the shoring system. It is especially significant to consider the impacts of the railway corridor. Temporary and permanent shoring techniques will be included in the design to ensure excavation and construction will have no detrimental impact on the nearby railway infrastructure.

8.14 CONTAMINATION

A Phase 1 Preliminary Contamination Assessment was prepared by Douglas Partners and is included at Appendix T. The Assessment concluded that on the basis of the preliminary investigation Site 68 can be made suitable for the proposed high density residential land use. There were a number of potentially contaminating factors, including the placement of filling on the site, surrounding landfill sites, stormwater storage, maintenance chemicals such as herbicides and pesticides and naturally occurring elements such as heavy metals. Asbestos-containing material was also detected in the filling on the site, however as this will be removed during excavation it is considered somewhat irrelevant.

Due to the known presence of poor quality groundwater elsewhere in Sydney Olympic Park and the nearby location of landfill cells, it is possible groundwater may be contaminated. An assessment of the groundwater is currently being undertaken and necessary drainage measures will be considered in the detailed design phase of the project.

The Assessment provides a list of required additional works which involve further assessment of contaminant levels in material that will remain on the site, the further assessment of groundwater as discussed above and waste classification of all materials removed from the site to ensure their appropriate disposal.

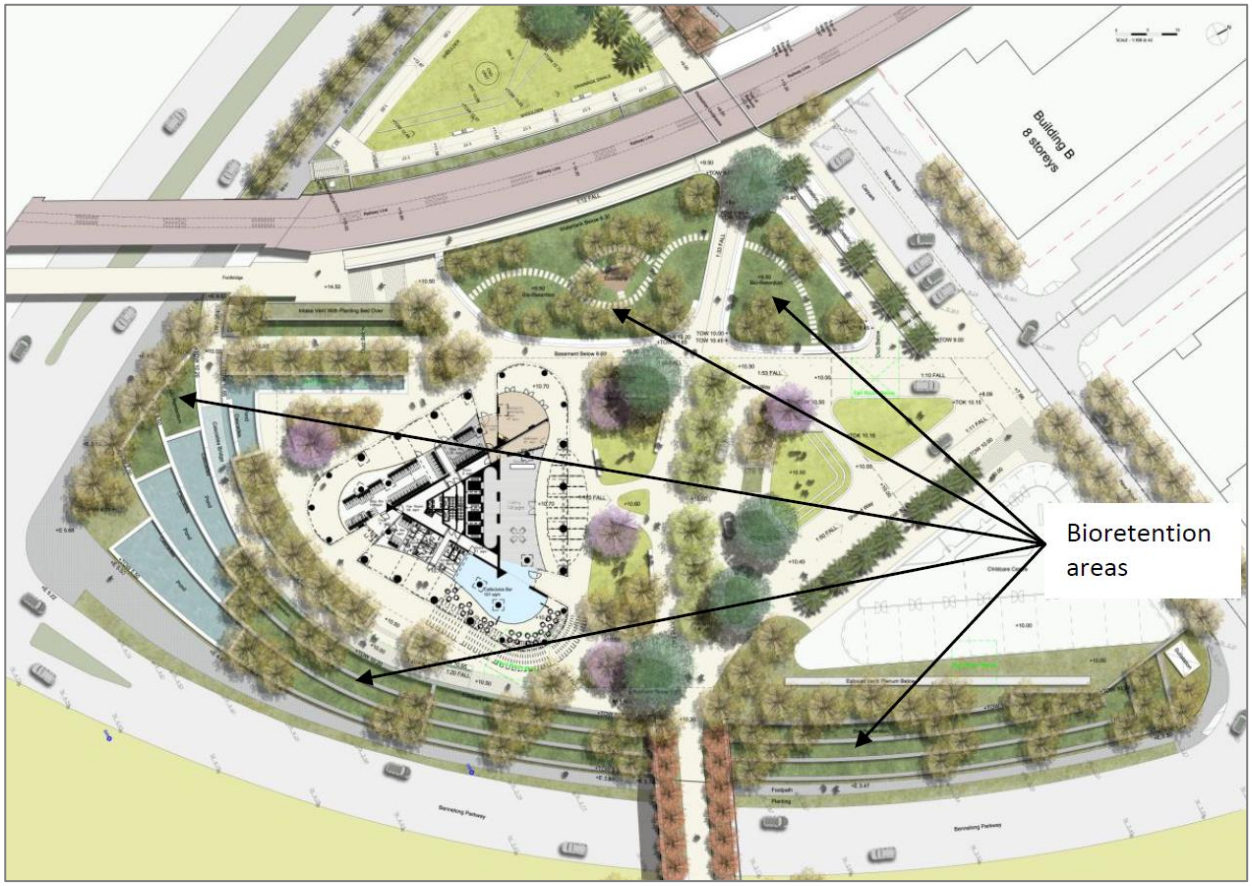
8.15 WATER QUALITY, FLOODING AND DRAINAGE

The existing *'Southern Water Quality Control Pond'* (SWQCP), located on Site 68, was installed to reduce peak flows to the downstream environment and improve the quality of stormwater discharged. An objective of the Site 68 redevelopment is to ensure that the stormwater objectives are still achieved with the removal of the existing SWQCP and replacement by appropriate stormwater management systems. A number of the proposed stormwater management systems to replace the SWQCP are included within the separate Early Works DA (submitted to SOPA in August 2014) but are outlined in the Stormwater and Flooding Assessment at Appendix Q, to provide information about the overall site stormwater management strategy.

In summary, the stormwater quality treatment requirements for the site are to be met by a treatment train approach. This application seeks consent for the plaza level bio-retention systems only, which play an integral role in the overall stormwater treatment train. The bio-retention systems are proposed to be installed within the new plaza open space area and along the embankment adjacent to Bennelong Parkway. The treatment system will be integrated into the plaza forecourt to create a unique and interesting design of the plaza which provides both a well-designed plaza space and park for passive recreation, but also a functioning treatment system which also provides education about water management at Sydney Olympic Park.

Further detail regarding the proposed stormwater and drainage infrastructure works is provided within the Stormwater and Flooding Assessment at Appendix Q.

FIGURE 33 – PROPOSED BIO-RETENTION AREA LOCATIONS



8.16 SERVICING AND WASTE

The Waste Management Plan (Appendix V) identifies the total waste to be generated by all residential, child care and retail uses included in the development.

Residential waste has been calculated at 660L per 5 units of waste and 240L per 4 units of comingled recycling. Residential waste management will occur as follows:

- Waste 74 x 660L bins collected weekly or 37 x 660L collected twice per week.
- Collections may occur on Monday and Friday each week – collection days flexible (to be confirmed with Council)
- Recycling 93 x 240L bins generated and transported to recycling bin store (collected Thursday/Friday).

There is a single garbage chute servicing the development which connects directly into 660L bins in the waste room. Residents will have waste collection area in each unit to deposit waste and recyclable materials. Recyclable materials will be sorted by residents before being deposited into collection bins on each residential level. Caretakers will empty recycle bins and transfer recyclable materials to the main bin storage room.

Child care centre waste has been calculated at 275L of garbage and 275L of recycling. Child care waste management will occur as follows:

- 1 x 360L waste mobile garbage bin collected weekly
- 1 x 360L recycling mobile garbage bin collected weekly

Contract cleaners for the child care centre will remove waste and separate recycling from the collection points. Dedicated waste bins are to be provided for sorting and storing general waste and disposal nappies. The child care centre may also utilise a service which disposes of soiled nappies. All amenities, work stations, kitchen facilities and washrooms will be equipped with appropriate waste collection areas.

Retail waste has been calculated at 350L of waste and 350L of recycling. Retail waste management will occur as follows:

- 1 x 360L waste mobile garbage bin collected weekly
- 1 x 360L recycling mobile garbage bin collected weekly
- Nominated staff or cleaners will transfer waste and recycling from the retail area to the waste room on basement level 2

9 Construction Management Plan

A Construction Management Plan (CMP) will be prepared in respect of the proposed works to identify detailed mitigation and management measures to be implemented during construction. The CMP will involve the following components:

- Construction Traffic Management Plan;
- Construction Waste Management Plan;
- Air Quality/Dust Management Plan;
- Water Quality Management Plan; and
- Erosion and Sediment Control Management Plan.

The mitigation measures and environmental management to be incorporated into the above documents include:

- Traffic management procedures for large construction vehicles to enter and exit the site,
- Parking procedures for construction vehicles so as to avoid impacts on surrounding residents and visitors.
- Signage and traffic control procedures to occur throughout the duration of the project.
- Removal of all construction-related waste off site in a manner compliant with the relevant authority requirements.
- Excavation and construction procedures to reduce the impact on surrounding rail infrastructure.
- Ongoing monitoring of excavation, sediment and erosion to ensure safe practice.
- Stormwater management techniques.
- Air quality and dust management procedures.

10 Recommendations and Mitigation Measures

As a result of the EIS process and based on the technical studies completed, a range of mitigation measures are proposed to reduce any potential environmental and social impact of the proposal. Table 8 below provides a summary of the environmental management measures proposed.

TABLE 8 – DETAILED DESIGN ENVIRONMENTAL MANAGEMENT MEASURES

ITEM	ENVIRONMENTAL MANAGEMENT MEASURE
Access	Access measures to be included as per the recommendations of the Access Report prepared by MGAC (Appendix N).
Acoustic	Acoustic measures to be included as per the recommendations of the Acoustic Assessment (Appendix L).
Flora and Fauna	Flora and fauna management measures to be adopted as per the recommendations of the Flora and Fauna Assessment (Appendix P).
Water Management	▪ An operation and maintenance plan for the bio-retention systems will be developed during the detailed design stage outlining regular and long term maintenance requirements for the bio-retention systems. ▪ Additional water management measures to be included as per the recommendations of the Stormwater and Flooding Assessment (Appendix Q).
Compliance with the Building Code of Australia	Compliance with the Building Code of Australia is addressed in the BCA Report (Appendix O) and will be considered prior to the issuing of a Construction Certificate.
Utilities	The provision of and connection to electrical services, gas, telecommunications, water, sewer and stormwater to be provided in accordance with the Utilities and Services Strategy Documentation (Appendix R).
Ecologically Sustainable Development	ESD measures to be included as per the recommendations of the ESD Report (Appendix J).
Contamination	The following additional works, as described within the Preliminary Site Investigation (Appendix T), will be required once the development scheme has been approved (i.e. post-DA approval): ▪ Further assessment of contaminant levels in any existing filling and soil that will remain on the site (i.e. areas outside the proposed basement excavation) if applicable; ▪ Assessment of groundwater quality on the site to determine appropriate control and disposal options that will need to be incorporated into the building (if required); and ▪ Waste classification of all materials requiring removal from the site to ensure they are disposed of in an appropriate manner.

ITEM	ENVIRONMENTAL MANAGEMENT MEASURE
Mechanical Services	Design, sizing, installation and materials for Mechanical Services to be provided in accordance with the Concept Design Report (Appendix R).
Waste	Waste management measures to be included as per the recommendations of the Waste Management Plan (Appendix V).
Traffic and Parking	Construction Traffic Management Plan to be prepared post-approval and to include measures identified within the Traffic and Transport Assessment (Appendix M).
Acoustic	Construction Noise Management Plan to be prepared post-approval and to include measures identified within the Acoustic Assessment (Appendix L).
Sediment and Erosion	Mitigation measures to be provided in accordance with the Sediment and Erosion Control Plan (Appendix S).
Waste	Waste management measures to be included as per the recommendations of the Waste Management Plan (Appendix V).

11 Section 79C Assessment

The proposed development has been assessed in accordance with the matters of consideration listed in Section 79C of the *Environmental Planning and Assessment Act 1979* as outlined below:

TABLE 9 – SECTION 79C ASSESSMENT

CONSIDERATION	COMMENT
Environmental Planning Instrument	State and Local Environmental Planning Instruments have been assessed in Section 6.
Draft Environmental Planning Instruments	There are no relevant Draft Environmental Planning Instruments applicable to the site.
Development Control Plans	The proposed development has been assessed against the Sydney Olympic Park Master Plan 2030 in Section 7.3.
Any Matters Prescribed by the Regulations	There are no matters prescribed by the regulations which relate to this proposal.
Likely Impacts of the Development	An impact assessment has been provided in Section 8 of this report.
Suitability of the Site	The suitability of the site is assessed in the site analysis provided in Section 2.
Any Submission made in accordance with this Act or the Regulations	Submissions will be considered following exhibition of the application.
The Public Interest	▪ Future mix of residential, retail, commercial and community uses and associated facilities on a vacant site in Sydney Olympic Park. ▪ High quality publicly accessible spaces which are within 500 metres of the transit station. ▪ Encourages reduced rates of private car parking to ease traffic congestion through increased accessibility to Olympic Park Station. ▪ Liveable and active public domain spaces will be created for the community that integrate with proposed land uses. ▪ Enables communities to have a high degree of amenity including open space and solar access. ▪ Provides a diversity of housing choice near employment lands and public transport. ▪ Provides a high level of pedestrian and bicycle connectivity to nearby employment and community uses. ▪ The development is compliant with the relevant planning instruments and controls. ▪ The proposal will not create permanent or significant social or amenity impacts.

12 Conclusion

This EIS has been prepared to assess the proposed mixed-use development of Site 68 Sydney Olympic Park, having regard to the Secretary's Environmental Assessment Requirements and the relevant State and Local planning policies. The EIS accords with:

- Part 4.1 of the *Environmental Planning and Assessment Act 1979*.
- Schedule 2, Part 3 of the *Environmental Planning and Assessment Regulation 2000*.
- Schedule 3, Part 23 of the *State Environmental Planning Policy (Major Development) 2005*.
- The Secretary's Environmental Assessment Requirements issued pursuant to Section 75E of the *Environmental Planning and Assessment Act 1979*.

There are compelling reasons why a positive assessment and determination of the project should prevail, as outlined below:

- The proposal demonstrates consistency with the relevant environmental planning instruments including strategic planning policy, State and local planning legislation, regulation and policies.
- The proposal fully addresses the issues identified in the SEARs and proposes appropriate mitigation measures for implementation during the pre and post construction stages.
- The proposal will result in minimal environmental impacts, all of which can be mitigated through the recommendations outlined in Section 10 of this report.
- The proposal is consistent with the principles of ESD as defined by Schedule 2, clause 7(4) of Schedule 2 of the EP&A Regulation.
- The proposed works will enable residential, retail / commercial, and community development at the site and will result in positive economic impacts through the provision of direct and indirect employment (during both construction and operation).
- The proposed works will enable construction of publically accessible through-site links, a neighbourhood park, child care centre, and community room and will result in positive social impacts and improved access networks.
- The site is considered to be suitable for the proposed works given its location within Sydney Olympic Park and will result in public benefit through the provision of the following:
  - Recreation and pedestrian or bicycle connectivity throughout the site which links with key transport and access nodes. These will provide significant pedestrian and cycleway upgrades and new links to improve connectivity to Olympic Park Station, Bicentennial Parklands and the wider Sydney Olympic Park Precinct.
  - Development of a large publically accessible landscape ground-plane, providing for both active and passive recreation opportunities for residents and visitors.
  - A future child care centre is accommodated which will respond to the needs of the area and the demographic profile of the current and future population.
  - Best practice sustainability measures including the use of vertical slots with automated louvers allowing for cross ventilation, double-glazing, efficient appliances and fixtures, use of low volatile organic compound materials, rainwater reuse tanks, bio-retention wetlands, and other WSUD measures.

Given the merits of the proposal, it is requested that the Minister approve the proposal subject to the mitigation measures outlined in this report.

Disclaimer

This report is dated September 2014 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd's (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Ecove Group Pty Ltd (**Instructing Party**) for the purpose of EIS (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

Appendix A Secretary's Environmental Assessment Requirements

Appendix B Capital Investment Value Report

Appendix C Design Competition Jury Report

Appendix D SOPA Design Review Panel Advice

Appendix E Design Report & Design Verification Statement

Appendix F Architectural Drawings

Appendix G Landscape Report

Appendix H Landscape Drawings

Appendix I Survey Plan

Appendix J ESD Report (incl. BASIX Assessment / Certificate)

Appendix K Wind Assessment

Appendix L Noise and Vibration Assessment

Appendix M Traffic and Parking Assessment

Appendix N Access Report

Appendix O BCA Report

Appendix P

Flora & Fauna Impact Assessment and Biodiversity Offset Strategy

Appendix Q Stormwater and Flooding Assessment

Appendix R Utilities and Services Strategy

Appendix S Sediment and Erosion Control Plan

Appendix T Phase 1 Contamination Assessment

Appendix U Geotechnical Report

Appendix V Waste Management Plan

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