



Environmental Impact Statement

Site 53, 2 Fig Tree Drive, Sydney Olympic Park

September 2015

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Report Number	EIS Final September 2015

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TABLE OF CONTENTS

Executive Summary	ii
1 Introduction	1
1.1 Project Overview	1
1.2 Project Objectives	2
1.3 Structure of this Report	3
1.4 Secretary's Environmental Assessment Requirements (SEARS)	4
2 Site and Contextual Analysis	12
2.1 Site Description	12
2.2 Surrounding Land Uses	12
2.3 Local Context	13
2.4 Regional Context	13
2.5 Opportunities and Constraints	14
3 The Proposal	15
3.1 Summary of the Proposed Development	15
3.2 Reference Drawings	15
3.3 Numerical Overview	16
3.4 Built Form	17
3.5 Retail	17
3.6 Landscaping	18
3.7 Parking and Access	20
4 Justification and Assessment of Alternatives	21
5 Consultation	25
5.1 Sydney Olympic Park Authority - Design Review Panel	25
5.2 Sydney Olympic Park Authority – Planning Unit	27
5.3 NSW Department of Planning and Environment	29
5.4 Sydney Trains	29
5.5 Public Utility Service Providers	29
6 Statutory and Strategic Context	30
6.1 State Environmental Planning Policy (State and Regional Development) 2011	30
6.2 State Environmental Planning Policy (Major Development) 2005	30
6.2.1 Zoning and Permissibility	30
6.2.2 Height	32
6.2.3 Floor Space Ratio	32
6.2.4 Exception to Development Standard	32
6.2.5 Public Utility Infrastructure	35
6.2.6 Major Events Capability	35
6.2.7 Transport	36
6.2.8 Master Plan	36
6.2.9 Design Excellence	36
6.2.10 Summary	37
6.3 State Environmental Planning Policy (Infrastructure) 2007	37
6.4 State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development (Amendment No.3)	37
6.5 State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004	37
6.6 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005	38

6.7	State Environmental Planning Policy No. 55 – Remediation of Land.....	38
7	Policies	39
7.1	NSW 2021.....	39
7.2	A Plan for Growing Sydney.....	40
7.3	Apartment Design Guide	41
7.4	Sydney Olympic Park Master Plan 2030	42
7.4.1	Floor Space Ratio Controls.....	43
7.4.2	Land Use Controls	43
7.4.3	Building Height Controls	43
7.4.4	Building Zone And Setback Controls	44
7.5	Sydney Olympic Park Access Guidelines 2011.....	45
7.6	Sydney Olympic Park Major Event Impact Assessment Guidelines	45
7.7	Sydney Olympic Park Urban Elements Design Manual	46
7.8	Sydney Olympic Park Environmental Guidelines	46
7.9	Sydney Olympic Park Stormwater and Water Sensitive Urban Design Policy.....	47
7.10	Development near Rail Corridors & Busy Roads - Interim Guideline 2008.....	47
8	Environmental Assessment.....	48
8.1	Environmental Amenity	48
8.1.1	Ventilation	48
8.1.2	Wind.....	48
8.1.3	Solar Access.....	49
8.1.4	Overshadowing	50
8.1.5	Odour	51
8.2	Ecologically Sustainable Development (ESD).....	52
8.3	Noise and Vibration	52
8.4	Transport and Accessibility.....	53
8.5	Utilities	54
8.6	Contributions.....	54
8.7	Servicing and Waste.....	55
8.8	Tree Protection	55
8.9	Construction Management.....	57
8.10	Heritage Assessment.....	58
8.11	Archaeological Assessment.....	58
9	Section 79C Assessment	60
10	Conclusion	62
	Disclaimer.....	64

TABLE OF CONTENTS

Appendix A	Secretary's Environmental Assessment Requirements
Appendix B	CIV Report
Appendix C	Design Excellence Competition - Jury Report
Appendix D	Site Survey Plan
Appendix E	Draft Plan of Subdivision
Appendix F	Design Report & Architectural Drawings
Appendix G	Landscape Report & Drawings
Appendix H	BASIX Assessment & Certificate
Appendix I	Environmental Sustainable Development Report
Appendix J	Solar Access Report
Appendix K	Ventilation Study
Appendix L	Wind Assessment
Appendix M	Reflectivity Study
Appendix N	Odour Impact Assessment
Appendix O	Arborist Report and Tree Protection Plan
Appendix P	Access Impact Statement
Appendix Q	Traffic and Transport Impact Assessment
Appendix R	Noise and Vibration Assessment
Appendix S	Phase 1 and 2 Environmental Site Assessment & Hazardous Materials Assessment
Appendix T	Geotechnical and Structural Report
Appendix U	Heritage Impact & Archaeological Assessment
Appendix V	Stormwater Assessment
Appendix W	Civil Drawings
Appendix X	Waste Management Plan
Appendix Y	Utilities and Services Strategy
Appendix Z	Construction Management Plan

FIGURES:

Figure 1 – Perspective View – Corner Fig Tree Drive & Australia Avenue	2
Figure 2 – Site Plan	12
Figure 3 – Context Plan	13
Figure 4 – Proposed Site Plan	15
Figure 5 – Communal Open Space – Landscape Plan	19
Figure 6 – Linear Park & Retail Plaza – Landscape Plan	19
Figure 7 – Basement Plan – Level 1	20
Figure 8 – BVN Architecture – ‘Complying Scheme ‘and ‘Alternative Scheme’ – Design Competition	21
Figure 9 – Design Excellence Competition Images	23
Figure 10 – Eastern Elevation – Height of Buildings	33
Figure 11 – Western Elevation – Height of Buildings	34
Figure 12 – Greater Parramatta to Olympic Peninsular Growth Area	40
Figure 13 – Central Precinct – Illustrative Plan	42
Figure 14 – Central Precinct Building Zones and Setbacks Plan	44
Figure 15 – Views From Sun	49
Figure 16 – Shadow Studies	50
Figure 17 – Tree Location Plan	56

TABLES:

Table 1 – Secretary’s Environmental Assessment Requirements	4
Table 2 – Opportunities and Constraints	14
Table 3 – Numerical Overview	16
Table 4 – Design Competition Jury Recommendations & Responses	23
Table 5 – Design Review Panel Recommendations	26
Table 6 – SOPA Planning Unit Recommendations	28
Table 7 – B4 Mixed Use Zone Objectives	31
Table 8 – Height of Buildings	33
Table 9 – SOP Environmental Guidelines	46
Table 10 – Section 79C Assessment	60

Signed Declaration

SUBMISSION OF ENVIRONMENTAL IMPACT STATEMENT

This Environmental Impact Statement has been prepared in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*.

Environmental Assessment prepared by:

Names:	Stephen White (Director) <i>Master of Urban Development and Design, University of New South Wales</i> <i>BSc (Hons) Economic Geography, University of New South Wales</i>
	Samantha Wilson (Senior Consultant): <i>Graduate Diploma in Urban Planning and Environment,</i> <i>Royal Melbourne Institute of Technology</i> <i>Bachelor of Landscape Architecture, University of Canberra</i>
Address:	Urbis Pty Ltd Level 23, Darling Park Tower 2, 201 Sussex Street Sydney NSW 2000
In respect of:	Site 53, 2 Fig Tree Drive, Sydney Olympic Park

Applicant and Land Details:

Applicant:	Amar Prashant, representing Mirvac Projects Pty Ltd
Applicant Address:	Level 26, 60 Margaret Street Sydney NSW 2000 Australia
Land to be Redeveloped:	Site 53, 2 Fig Tree Drive, Sydney Olympic Park
Lot and DP:	Lot 22 in DP 787402 and part Lot 10 in DP 1185060
Project:	Site 53, 2 Fig Tree Drive, Sydney Olympic Park

Declaration:

I certify that the contents of the Environmental Impact Statement 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 Stephen White, Director

Samantha Wilson, Senior Consultant

Signature:



Date: 24 September 2015

24 September 2015

Executive Summary

This Environmental Impact Statement (EIS) has been prepared on behalf of *Mirvac Projects Pty Ltd* (the proponent). It accompanies a development application for State Significant Development comprising the construction of a mixed-use development at Site 53, 2 Fig Tree Drive, Sydney Olympic Park (hereafter referred to as the subject site).

The proposal comprises four residential flat buildings ranging in height from five to fifteen storeys, a small retail area of approximately 1,500m², a landscaped ground plane, basement parking, and a new access road. 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 *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 NSW Department of Planning and Environment, Sydney Olympic Park Authority (SOPA), and Sydney Trains, 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 53, 2 Figtree Drive, Sydney Olympic Park. It is legally described as Lot 22 in DP 787402 and part Lot 10 in DP 1185060, and has a total combined area of 12,697m². The site presently accommodates a low-rise commercial development with surface car parking. A group of mature fig trees are located on the north-eastern corner of the site, with another located across the western boundary.

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.

Immediately south of the site is the future '*Central Precinct Local Park*' which runs east-west, connecting Australia Avenue with Olympic Boulevard South. Beyond the future landscape corridor is the Olympic Park Railway Line.

Located to the north and west of the site are existing low-scale commercial and light industrial buildings, situated within a dense canopy of native trees and surrounded by surface car parking. The Olympic Park Town Centre and Railway Station are located approximately 500 metres to the north of the site. The emerging high-density mixed-use retail and residential precinct comprising Australia Towers (Site 3) and the future Opal Tower (Site 68) are located to the north-east of the site.

SECRETARY'S REQUIREMENTS

The Secretary's Environmental Assessment Requirements (SEARs) for the preparation of the Environmental Impact Statement (EIS) were issued on 20 May 2015. A copy of the SEARs is included at **Appendix A**. A summary of the SEARs is provided in Section 1.4 of this report. The requirements are identified and a response to each is provided in Table 1, including the relevant technical/specialist report submitted with the EIS.

PROJECT OVERVIEW

The SSD application seeks approval for the construction of a mixed-use development at Site 53, 2 Fig Tree Drive, Sydney Olympic Park, comprising:

- Four residential flat buildings, ranging in height from five to fifteen storeys, comprising 422 one, two and three bedroom apartments;
- A landscaped ground plane, comprising private communal open space, deep soil landscaping, an interpretive children's play area, and a 20 metre wide view corridor to the Bicentennial Marker;
- A small retail / commercial area of approximately 1,500m² gross floor area, potentially suitable for a small supermarket or convenience store, to be transferred to Sydney Olympic Park Authority on completion;
- Three levels of basement parking, comprising 44 visitor / retail car parking spaces and 456 residential car parking spaces; and
- Construction of a new access road located on the western boundary of the site, as identified within the *Sydney Olympic Park Master Plan 2030*.



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 No 65 - Design Quality of Residential Apartment Development (Amendment No.3)*;
- *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004*;
- *State Environmental Planning Policy No 55- Remediation of Land*;
- *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005*;

- *NSW 2021;*
- *A Plan for Growing Sydney;*
- *Apartment Design Guide;*
- *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;* and
- *Development near Rail Corridors & Busy Roads - Interim Guideline 2008.*

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 the supporting technical documentation appended to 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 proposal will result in positive economic impacts through the provision of direct and indirect employment, during both construction and operation.
- The proposal provides many and varied public benefits to the local Sydney Olympic Park community, future residents of the development, as well as broader stakeholders, including:
 - Increased housing supply and diversity in an area accessible to public transport, community facilities, open space, healthcare services, education and employment opportunities, that will contribute towards meeting the housing targets identified in *A Plan for Growing Sydney*.
 - A mix of housing types, with varying layouts and sizes, which will accommodate a variety of households and meet a range of needs, including one, two, and three-bedroom apartments, adaptable dwellings and affordable housing.

- A high quality urban development, with a significant level of residential amenity including solar access, natural ventilation, access to communal open space, children's play spaces and communal facilities, as well as efficient and well-considered apartment plans.
- An enhanced public domain, through the provision of improved streetscapes and footpaths, deep soil tree planting and landscaped setbacks, and retention and protection of mature vegetation.
- New public access in the form of the 'New Street', providing pedestrian and cycle connections from Fig Tree Drive through to the Central Precinct 'linear park' and beyond.
- Improved local amenity through the provision of a new retail lot, suitable for a small scale supermarket, to meet the needs of the local community. As well as an associated public plaza and visitor car and bicycle parking.
- An improved interface between the existing commercial uses to the west of the site and the recently approved and constructed high-density residential environment to the north-east and parkland environment to the south of the site.
- Increased patronage of existing public transport infrastructure and use of existing pedestrian and cycle routes, by locating residents and workers in an accessible area and encouraging the use of sustainable transport options.
- Best practice sustainability measures including double-glazing, efficient appliances and fixtures, use of low volatile organic compound materials, rainwater reuse tanks, and other water sensitive urban design 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 *New South Wales Department of Planning and Environment* in support of State Significant Development (SSD) 15_7033, which seeks approval for the construction of a mixed-use development at Site 53, 2 Fig Tree Drive, 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 SEPP SRD, 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 \$143,378,000 (excluding GST), 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 *Mirvac Projects Pty Ltd* (the proponent). The EIS relies on the Architectural Drawings prepared by BVN Architecture, 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 Secretary's Environmental Assessment Requirements issued for the project.

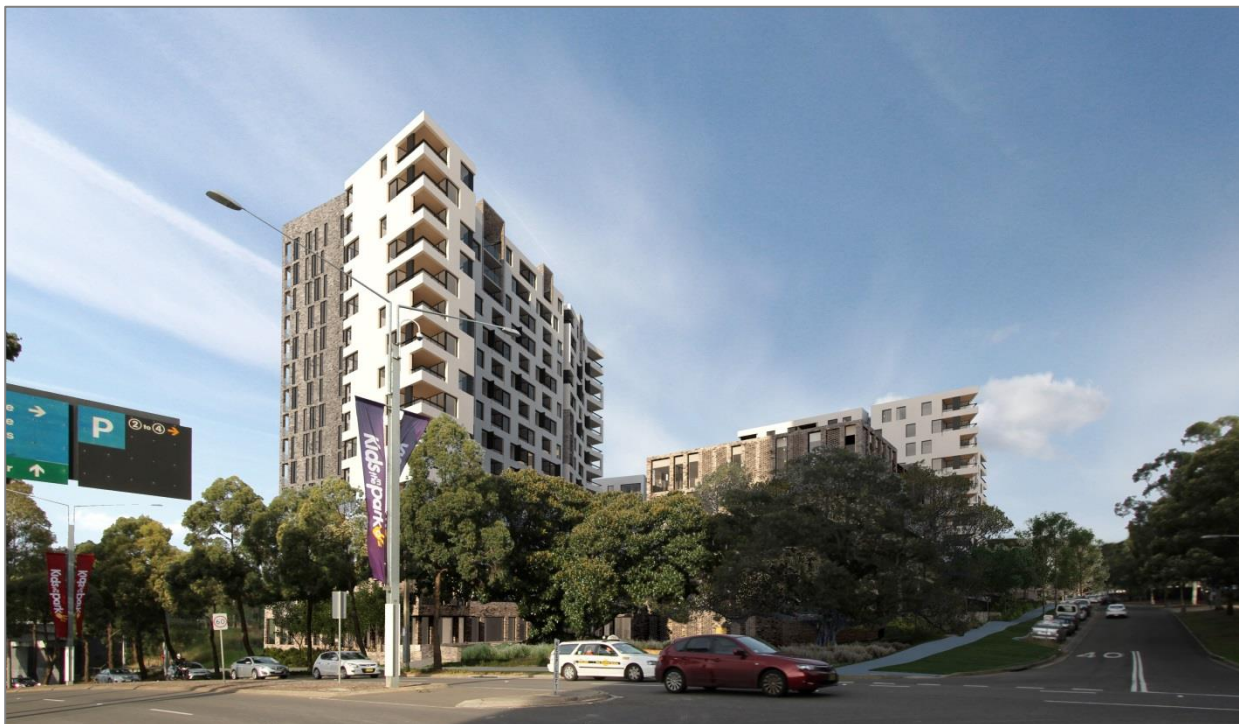
1.1 PROJECT OVERVIEW

The SSD application seeks approval for the construction of a mixed-use development at Site 53, 2 Fig Tree Drive, Sydney Olympic Park, comprising:

- Four residential flat buildings, ranging in height from five to fifteen storeys, comprising 422 one, two and three bedroom apartments;
- A landscaped ground plane, comprising private communal open space, deep soil landscaping, an interpretive children's play area, and a 20 metre wide view corridor to the Bicentennial Marker;
- A small retail / commercial area of approximately 1,500m² gross floor area, potentially suitable for a small supermarket or convenience store, to be transferred to Sydney Olympic Park Authority on completion;
- Three levels of basement parking, comprising 44 visitor / retail car parking spaces and 456 residential car parking spaces; and
- Construction of a new access road located on the western boundary of the site, as identified within the *Sydney Olympic Park Master Plan 2030*.

A detailed description of the proposal is provided in Section 3 of this report.

FIGURE 1 – PERSPECTIVE VIEW – CORNER FIG TREE DRIVE & AUSTRALIA AVENUE



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 mixed-use development include:

- Promote well-designed residential accommodation for the future residents of Sydney Olympic Park and assist in meeting the 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.
- Create a development that responds to the urban design requirements of 'gateway site'.
- 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 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 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 10 Conclusion.**

1.4 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)

A request was made to the Minister for the Secretary's Environmental Assessment Requirements (SEARs), pursuant to Clause 3, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. 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
A. GENERAL REQUIREMENTS	
<p>The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.</p> <p>Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include:</p> <ul style="list-style-type: none"> 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. 	<p>The EIS has been prepared in accordance with the Secretary's Requirements and meets the minimum form and context requirements specified in Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>The EIS includes a comprehensive assessment of the environmental risks and impacts associated with the development.</p>
<p>The EIS must be accompanied by a report from a qualified quantity surveyor providing:</p> <ul style="list-style-type: none"> a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; an estimate of the jobs that will be created by the future development during the construction and operational phases of the development; and certification that the information provided is accurate at the date of preparation. 	<p>Refer to Quantity Surveyor Report provided at Appendix B.</p> <p>The number of jobs created by the future development is estimated as follows:</p> <ul style="list-style-type: none"> Construction: approximately 550 (FTE); and Operational: approximately 20 (FTE).
B. KEY ISSUES	
<p>The EIS must address the following specific matters:</p>	

REQUIREMENT	COMMENT
1. Statutory Context Address the relevant statutory provisions applying to the site contained in all relevant EPis, including:	
<ul style="list-style-type: none"> State Environmental Planning Policy (State and Regional Development) 2011; 	Addressed in Section 6.1.
<ul style="list-style-type: none"> State Environmental Planning Policy (Major Development) 2005; 	Addressed in Section 6.2.
<ul style="list-style-type: none"> State Environmental Planning Policy (Infrastructure) 2007; 	Addressed in Section 6.3.
<ul style="list-style-type: none"> State Environmental Planning Policy No 65 - Design Quality of Residential Flat Development; 	Addressed in Section 6.4. Detailed assessment provided within the Design Report at Appendix F .
<ul style="list-style-type: none"> State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004; 	Addressed in Section 6.5. BASIX Assessment and Certificate provided at Appendix H .
<ul style="list-style-type: none"> Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005; 	Addressed in Section 6.6.
<ul style="list-style-type: none"> Draft State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development (Amendment No.3); and 	Not applicable.
<ul style="list-style-type: none"> State Environmental Planning Policy No 55- Remediation of Land. 	Addressed in Section 6.7. Phase 1 and 2 Environmental Site Assessment provided at Appendix S .
<i>Permissibility:</i> Detail the nature and extent of any prohibitions that apply to the development.	Addressed in Section 6.2.
<i>Development Standards:</i> Identify compliance with the development standards applying to the site and justification for any variations proposed.	Addressed in Section 6.2.
2. Policies Address the relevant planning provisions, goals and strategic planning objectives in the following:	
<ul style="list-style-type: none"> NSW 2021; 	Addressed in Section 7.1.
<ul style="list-style-type: none"> A Plan for Growing Sydney; 	Addressed in Section 7.2.
<ul style="list-style-type: none"> Residential Flat Design Code; 	Not applicable.
<ul style="list-style-type: none"> Draft Apartment Design Guide; 	Addressed in Section 7.3. Detailed assessment provided within the Design Report at Appendix F .
<ul style="list-style-type: none"> Sydney Olympic Park Master Plan 2030; 	Addressed in Section 7.4.

REQUIREMENT	COMMENT
<ul style="list-style-type: none"> ▪ <i>Sydney Olympic Park Access Guidelines 2011;</i> 	Addressed in Section 7.5 and within the Access Impact Statement at Appendix P .
<ul style="list-style-type: none"> ▪ <i>Sydney Olympic Park Major Event Impact Assessment Guidelines;</i> 	Addressed in Section 7.6 and within the Traffic and Transport Assessment at Appendix Q .
<ul style="list-style-type: none"> ▪ <i>Sydney Olympic Park Urban Elements Design Manual;</i> 	Addressed in Section 7.7 and incorporated in the Landscape Report and Plans at Appendix G .
<ul style="list-style-type: none"> ▪ <i>Sydney Olympic Park Environmental Guidelines;</i> 	Addressed in Section 7.8.
<ul style="list-style-type: none"> ▪ <i>Sydney Olympic Park Stormwater and Water Sensitive Urban Design Policy; and</i> 	Addressed in Section 7.9 and within the Stormwater Assessment at Appendix V .
<ul style="list-style-type: none"> ▪ <i>Development near Rail Corridors & Busy Roads - Interim Guideline 2008.</i> 	Addressed in Section 7.10.
3. Built Form and Urban Design	
<ul style="list-style-type: none"> ▪ 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. 	Refer Design Report at Appendix F .
<ul style="list-style-type: none"> ▪ 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. 	Refer Design Report at Appendix F .
<ul style="list-style-type: none"> ▪ Detail how services, including but not limited to, waste management, loading zones, and mechanical plant are integrated into the design of the development. 	Refer Design Report at Appendix F .
<ul style="list-style-type: none"> ▪ Demonstrate how the design responds to the comments and recommendations made by the Sydney Olympic Park Authority Design Review Panel. 	Addressed in Section 5.1 and within the Design Report at Appendix F .
4. Public Domain	
<ul style="list-style-type: none"> ▪ Identify proposed open space, public domain, the new street and pedestrian linkages within the site, at the interface with adjoining sites and connection to the linear park to the south. 	Refer Landscape Report and Plans at Appendix G .
<ul style="list-style-type: none"> ▪ Provide landscaping and public domain details, including details on the interface with the proposed development. 	Refer Landscape Report and Plans at Appendix G .
<ul style="list-style-type: none"> ▪ Identify any interim or temporary road works to provide access to the development ahead of the future redevelopment of the adjoining Site 52 to the west. 	Refer to the Civil Drawings provided at Appendix W .

REQUIREMENT	COMMENT
5. Environmental Amenity	
<ul style="list-style-type: none"> 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 8.1 and within the Design Report at Appendix F , Acoustic Assessment at Appendix R , and Wind Assessment at Appendix L .
<ul style="list-style-type: none"> Address any wind impacts on the adjacent linear park including detailing mitigation measures to demonstrate an acceptable level of amenity. 	Addressed in Section 8.1 and within the Wind Assessment at Appendix L .
<ul style="list-style-type: none"> Prepare an Odour Impact Assessment detailing the likely impacts and any proposed management (including operational) and mitigation measures to protect the amenity of residents/visitors/employees from the nearby Homebush Liquid Waste Treatment Plant. 	Addressed in Section 8.1 and within the Odour Impact Assessment at Appendix N .
6. Ecologically Sustainable Development (ESD)	
<ul style="list-style-type: none"> Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>) will be incorporated in the design, construction and ongoing operation phases of the development. 	Addressed in Section 8.2 and within the ESD Report at Appendix I .
<ul style="list-style-type: none"> Include a description of the measures that would be implemented to minimise consumption of resources, water and energy, which details of any proposed alternative water supplies, proposed end uses of potable and non-potable water, demonstration of water sensitive urban design and any water conservation measures. 	Addressed in Section 8.2 and within the ESD Report at Appendix I .
7. Noise and Vibration	
<ul style="list-style-type: none"> 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 in Section 8.3 and within the Noise and Vibration Assessment at Appendix R .
<ul style="list-style-type: none"> 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 in Section 8.3 and within the Noise and Vibration Assessment at Appendix R .
8. Transport and Accessibility	
<ul style="list-style-type: none"> Detail existing pedestrian and cycle movements within the vicinity of the site and determine the adequacy of the proposal to meet the likely increase in public transport, pedestrian and cycle demands. 	Addressed in Section 8.4 and within the Traffic and Transport Assessment at Appendix Q .
<ul style="list-style-type: none"> Identify measures, for residents, employees and visitors, to promote travel choices that support the achievement of State Plan targets, such as implementing a location-specific sustainable travel plan and provision of end of trip facilities. 	Addressed in Section 8.4 and within the Traffic and Transport Assessment at Appendix Q .

REQUIREMENT	COMMENT
<ul style="list-style-type: none"> 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 in Section 8.4 and within the Traffic and Transport Assessment at Appendix Q .
<ul style="list-style-type: none"> Detail the proposed access, bicycle and car parking provisions associated with the proposed development, including compliance with the relevant parking codes and Australian Standards, and propose measures to mitigate any associated impacts on public transport, pedestrian, cycle and traffic networks. 	Addressed in Section 8.4 and within the Traffic and Transport Assessment at Appendix Q .
<ul style="list-style-type: none"> Demonstrate the provision and sufficient arrangement of on-site bicycle and car parking having regard to the availability of public transport and parking controls of Master Plan 2030. 	Addressed in Section 8.4 and within the Traffic and Transport Assessment at Appendix Q .
9. Major Events	
<ul style="list-style-type: none"> 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 in Section 8.4 and within the Traffic and Transport Assessment at Appendix Q .
<ul style="list-style-type: none"> Demonstrate that the proposed development and future operation can work (provide acceptable amenity) in major event mode. This will require clear understanding of the major event operating mode and implications (management and mitigation measures to address potential noise impacts associated with operation) for the development. 	Addressed in Section 8.4 and within the Traffic and Transport Assessment at Appendix Q .
10. Utilities	
<ul style="list-style-type: none"> 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 in Section 8.5 and within the Utilities and Services Strategy at Appendix Y .
11. Staging	
<ul style="list-style-type: none"> Provide details regarding the staging of the proposed development (if proposed). 	Not Applicable.
12. Contributions	
<ul style="list-style-type: none"> Address any Contributions Plan and/or details of any Voluntary Planning Agreement. 	Addressed in Section 8.6.
13. Sediment, Erosion and Dust Controls	
<ul style="list-style-type: none"> Identify measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. 	Refer to the Civil Drawings at Appendix W and Construction Management Plan at Appendix Z .

REQUIREMENT	COMMENT
14. Water Quality and Flooding	
<ul style="list-style-type: none"> Identify if the proposal involves any discharges to waters or dewatering requirements from the construction site and any associated impacts on water quality, 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. 	Refer to the Stormwater Assessment at Appendix V .
<ul style="list-style-type: none"> An 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, an increase in rainfall intensity. 	Refer to the Stormwater Assessment at Appendix V .
15. Drainage	
<ul style="list-style-type: none"> Detail drainage associated with the proposal, including stormwater, and drainage infrastructure. 	Refer to the Stormwater Assessment at Appendix V .
16. Servicing and Waste	
<ul style="list-style-type: none"> 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. 	Addressed in Section 8.7 and within the Waste Management Plan at Appendix X .
<ul style="list-style-type: none"> Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site. 	Addressed in Section 8.7 and within the Waste Management Plan at Appendix X .
17. Tree Protection	
<ul style="list-style-type: none"> Provide an Arborist Report identifying all trees within the site and those immediately adjacent where there is impact from the proposed development, including trees proposed to be removed and the means of protecting those that are to be retained and relocated (including the identified Fig Tree). 	Addressed in Section 8.8 and within the Arborist Report (including Tree Protection Plan) at Appendix O .
<ul style="list-style-type: none"> Provide details of finished levels for the new road, pedestrian link and coordination of new service easements integrated with the final position of the relocated Fig Tree and ground levels. 	Refer Architectural, Landscape, and Civil Drawings at Appendix F , Appendix G , and Appendix W .
18. Construction Impacts	
<ul style="list-style-type: none"> Assess traffic impacts during construction detailing management and mitigation measures. 	Addressed in Section 8.9 and within the Construction Traffic Management Plan at Appendix Q .
<ul style="list-style-type: none"> Address construction impacts on the adjacent rail corridor. 	Addressed in Section 8.9 and within the Construction Management Plan at Appendix Z .

REQUIREMENT	COMMENT
19. Heritage	
<ul style="list-style-type: none"> Prepare an Aboriginal and non-Aboriginal archaeological assessment detailing the likely impacts and outline the proposed management and mitigation measures to protect and preserve the archaeology. 	Addressed in Section 8.10 and within the Heritage Assessment at Appendix U .
<ul style="list-style-type: none"> Prepare a Heritage Impact Assessment addressing visual impact of the proposed high rise development on State Heritage Items in the vicinity, including the Newington Armament Depot and Nature Reserve. 	Addressed in Section 8.10 and within the Heritage Assessment at Appendix U .
C. PLANS AND DOCUMENTS	
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i> . Provide these as part of the EIS rather than as separate documents.	All relevant plans, drawings, diagrams and documentation have been provided as part of the EIS, in accordance with Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i> .
In addition, the EIS must include the following:	
<ul style="list-style-type: none"> Architectural drawings; 	Appendix F
<ul style="list-style-type: none"> Plan of subdivision; 	Appendix E
<ul style="list-style-type: none"> Site survey plan, showing existing levels, location and height of existing and adjacent structures/buildings and relationship to the rail corridor; 	Appendix C
<ul style="list-style-type: none"> Site analysis plan; 	Appendix F
<ul style="list-style-type: none"> Shadow diagrams; 	Appendix F
<ul style="list-style-type: none"> Access Impact Statement; 	Appendix P
<ul style="list-style-type: none"> View analysis/photomontages including a view taken from Australia Ave, near the roundabout at the intersection of Homebush Bay Drive, and a view taken from the elevated section of Homebush Bay Drive (above the M4 Motorway); 	Appendix F
<ul style="list-style-type: none"> Stormwater Concept Plan; 	Appendix V
<ul style="list-style-type: none"> Sediment and Erosion Control Plan; 	Appendix V
<ul style="list-style-type: none"> Landscape Plan; 	Appendix G
<ul style="list-style-type: none"> Public Domain Interface Plan prepared in accordance with the requirements set out in the Sydney Olympic Park Urban Elements Design Manual; 	Appendix G
<ul style="list-style-type: none"> Preliminary Construction Management Plan, inclusive of a Construction Traffic Management Plan; 	Appendix Z

REQUIREMENT	COMMENT
▪ Geotechnical and Structural Report;	Appendix T
▪ Schedule of materials and finishes; and	Appendix F
▪ Integrated Water Management Plan.	Appendix V
D. CONSULTATION	
<p>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.</p> <p>In particular you must consult with the Sydney Olympic Park Authority, including the Sydney Olympic Park Authority Design Review Panel and Sydney Trains.</p> <p>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.</p>	Addressed at Section 5.
E. FURTHER CONSULTATION	
If you do not lodge a development application and EIS for the development after 2 years 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.	Not Applicable.

2 Site and Contextual Analysis

2.1 SITE DESCRIPTION

The subject site is known as Site 53, 2 Figtree Drive, Sydney Olympic Park and is located within the Auburn Local Government Area. The site is legally described as Lot 22 in DP 787402 and has an area of 12,320m². In addition an 'adjacent land' parcel of 377m² (along the Australia Avenue boundary) is to be included as part of the site. The total site area for the SSD application is 12,697m² (refer Figure 2).

Site 53 presently accommodates a low-rise commercial development with surface car parking. A group of mature fig trees are located on the north-eastern corner of the site, with another located across the western boundary.

FIGURE 2 – SITE PLAN



2.2 SURROUNDING LAND USES

Site 53 is located on the corner of Australia Avenue and Figtree Drive. Immediately south of the site is the future 'Central Precinct Local Park' which runs east-west, connecting Australia Avenue with Olympic Boulevard South. Beyond the future landscape corridor is the Olympic Park Railway Line.

Located to the north and west of the site are existing low-scale commercial and light industrial buildings, situated within a dense canopy of native trees and surrounded by surface car parking. The Olympic Park Town Centre and Railway Station are located approximately 500 metres to the north of the site. The emerging high-density mixed-use retail and residential precinct comprising Australia Towers and the future Opal Tower are located to the north-east of the site.

2.3 LOCAL CONTEXT

The site is located within the “Central Precinct” under the *Sydney Olympic Park Master Plan 2030*. This precinct was initially developed as a business park consisting of commercial and light industrial uses. The character of the area is now beginning to evolve into a medium-high density mixed use precinct through the development of new residential and retail uses in accordance with the Master Plan.

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.

FIGURE 3 – CONTEXT PLAN



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 53 is situated on the southern edge of Sydney Olympic Park. As such, the site plays a pivotal role as a 'gateway' to Sydney Olympic Park when approaching from the south on Australia Avenue. Furthermore, the site forms the junction between the natural environment of Bicentennial Park and the Bicentennial Marker to the south and east, and the built environment of the mixed-use Central and Parkview Precincts to the north and west.
Surrounding Land Uses	Site 53 sits opposite the future 34-storey 'Opal Tower' and the 30+ storey Australia Towers, located on the eastern side of Australia Avenue. As such, the development on Site 53 needs to respond to the adjacent high density developments and must provide a transition in scale in order to anchor the south-eastern corner of the Sydney Olympic Park precinct.
Trees	Three mature Moreton Bay Fig trees are located on Site 53, two on the corner of Australia Avenue and Fig Tree Drive and one on the western boundary of the site. These trees are to be retained and protected.
Topography	Site 53 slopes from a high point on Fig Tree Drive down to the Olympic Park Railway Line.
Bicentennial Marker - View Corridor	Located to the south of the site is the Bicentennial Marker, one of five conical shaped earth mounds 10-20 metres high aligned to resemble the Southern Cross of the Australian flag. To maintain visual connection to the Marker, a 20 metre wide view corridor is to be provided through Site 53.
Linear Park	Site 53 shares a boundary with the Central Precinct – Landscape Corridor, which acts as a green edge to the precinct and allows off road cycle and pedestrian access.
Views	Site 53 offers magnificent views to the south, east and west of the Bicentennial Parklands and the Bicentennial Marker. Distant views are also provided to the CBD. At the upper levels views of the Olympic Stadium and facilities are provided to the north and west.
Solar Orientation and Overshadowing	The site is orientated east-west, creating an expansive north-south façade. Extensive overshadowing from the adjacent Australia Towers limits the amount of sunlight available.
Rail Corridor	The rail corridor on the southern boundary of the site is above ground 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.

3 The Proposal

3.1 SUMMARY OF THE PROPOSED DEVELOPMENT

The SSD application seeks approval for the construction of a mixed-use development at Site 53, 2 Fig Tree Drive, Sydney Olympic Park, comprising:

- Four residential flat buildings, ranging in height from five to fifteen storeys, comprising 422 one, two and three bedroom apartments;
- A landscaped ground plane, comprising private communal open space, deep soil landscaping, an interpretive children's play area, and a 20 metre wide view corridor to the Bicentennial Marker;
- A small retail / commercial area of approximately 1,500m² gross floor area, potentially suitable for a small supermarket or convenience store, to be transferred to Sydney Olympic Park Authority on completion;
- Three levels of basement parking, comprising 44 visitor / retail car parking spaces and 456 residential car parking spaces; and
- Construction of a new access road located on the western boundary of the site, as identified within the *Sydney Olympic Park Master Plan 2030*.

3.2 REFERENCE DRAWINGS

The proposed architectural works are illustrated within the Design Report and Architectural Drawings prepared by BVN Architecture and included at **Appendix F**. The proposed landscaping works are illustrated within the Design Report and Landscape Plans prepared by 360 Degrees Landscape Architecture and included at **Appendix G**.

FIGURE 4 – PROPOSED SITE PLAN



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	12,697m ²		
Gross Floor Area [Total]	34,886m ²		
<i>Residential</i>	33,386m ²		
<i>Retail</i>	1,500m ²		
Floor Space Ratio	2.75:1		
Building Height	<i>Storeys</i>	<i>Metres</i>	<i>RL</i>
<i>North Building</i>	5	15.25	33.45
<i>South Building</i>	10	30.50	48.70
<i>East Building</i>	15	45.75	63.95
<i>West Building</i>	10/11	33.55	51.75
Unit Mix [Total]	422		
<i>One Bedroom</i>	158 (37%)		
<i>Two Bedroom</i>	220 (52%)		
<i>Three Bed</i>	44 (10%)		
Car Parking [Total]	501		
<i>Residential</i>	457		
<i>Retail / Visitors</i>	44		
Bicycle Parking [Total]	604		
<i>Residential</i>	488		
<i>Retail / Visitors</i>	116		
Landscaping [Total]	4,824m ²		
<i>Planting off-structure</i>	2,265m ²		
<i>Planning on-structure</i>	2,559m ²		

3.4 BUILT FORM

The Design Report prepared by BVN Architecture (refer **Appendix F**) details the rationale behind the proposed design and provides detailed information about the site layout, building design, and architectural treatment of the façade. The proposed design is summarised below.

The proposed development consists of four residential buildings ranging in height from five to fifteen storeys, and is centred on a large landscaped communal courtyard. The proposal has been carefully designed to maximise solar access to residential apartments, private and communal open space. In that regard, the proposed massing places a smaller five-storey building towards the north-east, a taller fifteen-storey building behind it to the south-east, and orients the remaining buildings so as to maximise the northern elevation.

Each building incorporates generous entries into common lobbies, directly accessed either from Fig Tree Drive or 'New Street' or the communal open space. All corridors have access to natural light and air, and all lift cores open onto large lobbies with windows providing natural outlooks.

The ground floor of the development is comprised of a mix of single level apartment types that have either a street frontage or park frontage, providing a sense of individual entry and address. Each apartment's external terrace or private open space is directly accessible from the living area. The external terraces are elevated from the adjacent public spaces to provide privacy and passive surveillance.

The arrangement of the floor-plate has been designed to maximise the number of apartments with north, east or west facing orientation to ensure adequate access to daylight, while apartments on the upper floors of the South Building have dual orientation in order to capture the distant city skyline views to the south.

The apartment design locates bedrooms and living areas on the facade and these areas directly connect to balconies where possible. The floor-plate design is articulated to provide corner apartments for cross-ventilation where possible.

The proposed material palette provides a sense of diversity and character across the site. The North Building is proposed to be clad in precast brick panels, while the buildings to the south, east and west are proposed to be clad in a rough cast white render. The use of brick on the northern building creates visual interest and contrast and assists in defining the scale and architectural quality of the smaller building.

The taller white masonry buildings incorporate architectural elements in order to create diversity and articulation, including dark vertical clad framed elements on the south-east corners, dark metal window frames, key-stoning detail on the northern corners, and dark contrast vertical clad frames within the parapets.

3.5 RETAIL

A single retail tenancy is provided at the south-eastern corner of the site. The tenancy has an approximate gross floor area of 1,500m² and is suitable for a small scale local shop which is expected to serve residents and workers living in and around Site 53.

An urban public plaza is located on the corner of Australia Avenue and Fig Tree Drive, which utilises the existing mature Fig Trees to create a sense of address for the development. Public seating and bicycle parking is provided within the public plaza creating an area for social interaction with a northerly orientation.

Thirty car parking spaces are provided adjacent to the retail lot, within the first basement level for use by visitors and staff. The retail lot and its associated car parking spaces will be constructed by Mirvac and handed back to SOPA under a commercial agreement.

3.6 LANDSCAPING

Landscape Plans have been prepared by 360 Degrees Landscape Architects and are included at **Appendix G**. The landscape concept sets out to provide a stimulating environment responsive to the scale of the development and comprises the following key components:

- *New streetscape and entries:*

The development has two existing street frontages and a third which will be constructed as per Master Plan 2030. The primary development entry and address is positioned along Fig Tree Drive, a secondary entrance is provided off 'New Street' to the west, and retail activation occurs on Australia Avenue to the east. The primary Fig Tree Drive entry incorporates a secure portal with intercom, letter boxes and development address.

The Fig Tree Drive landscape will be upgraded and will incorporate a grass verge, asphalt path, and new street tree plantings. Within the site boundary the landscape setback will provide a generous transition between the public domain and built elements, incorporating ground floor private courtyards with gated street entries and a communal landscape zone.

The 'New Street' landscape has been designed to meet the SOPA Urban Design Elements Manual and comprises a turf verge, asphalt path and garden up to the property boundary. At the southern end of 'New Street' the pedestrian footpath connects to the linear park via a series of stairs.

The Australia Avenue landscape has also been designed to meet the SOPA Urban Design Elements Manual by retaining and protecting the existing pedestrian pathway, verge and street tree plantings, and incorporating a landscape setback of predominantly native species to provide a soft landscape buffer to the built form along this prominent streetscape.

- *Communal open space:*

Incorporating areas for passive and active recreation, with communal seating edges, pocketed lawn areas, informal children's play areas, and active open areas, connected via a circuit path. Children's play spaces are located on the southern edge of the podium landscape and provide a visual link to the adjacent linear park, while isolating any associated noise to the edge of the development. A secondary play space is incorporated in the landscape pocket of the western building which has a direct connection to the community room. A diverse mix of plant species have been incorporated with a balance of privacy, amenity and solar access in mind.

- *Private courtyards:*

Ground floor apartments have generous private open space comprised of a paved courtyard, lawn pocket and perimeter screen planting. Palisade fencing and hedging is also provided in order to create a privacy screen and buffer.

- *Public retail plaza:*

The new retail tenancy will be complemented by the retention and protection of two existing Fig Trees on the corner of Fig Tree Drive and Australia Avenue. The new plaza area is purposely restrained, incorporating fractured linear seating, a floating boardwalk, and public bicycle parking, ensuring that the existing trees are the centre piece of the design.

- *SOPA linear park treatment:*

In accordance with the *Sydney Olympic Park Master Plan 2030*, a design for the adjoining linear park has been proposed that integrates the new development with the existing parkland. The existing Fig Tree on the western property boundary will be relocated within the linear park and will form an integral part of the landscape design.

FIGURE 5 – COMMUNAL OPEN SPACE – LANDSCAPE PLAN



FIGURE 6 – LINEAR PARK & RETAIL PLAZA – LANDSCAPE PLAN



3.7 PARKING AND ACCESS

Vehicular access to the basement car park will be provided via a new access road on the western boundary of the subject site, in accordance with the *Sydney Olympic Park Master Plan 2030*. The northern end of the new access road will form a new T-intersection with Figtree Drive, while the southern end will terminate in a cul-de-sac, which provides access to the subject site as well as the adjacent (future development) site.

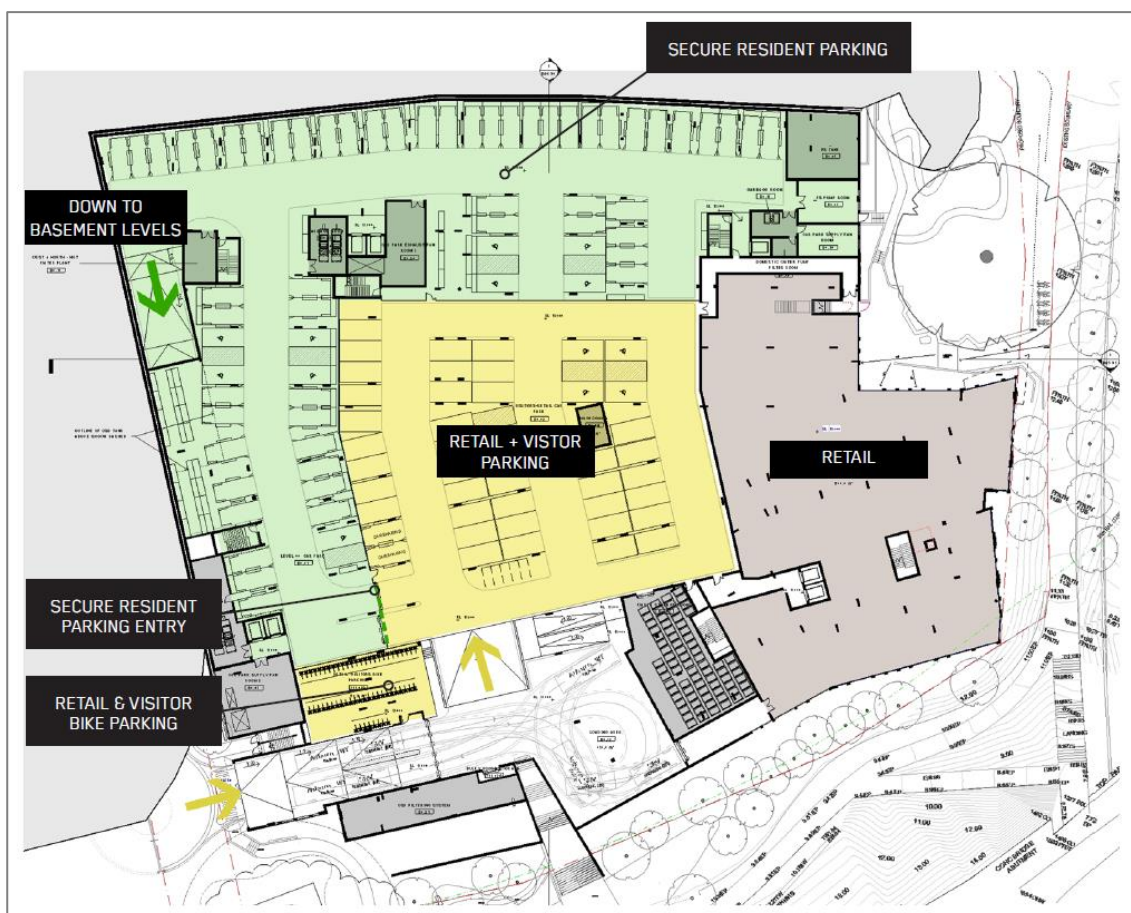
The proposed access road will ultimately be a four lane road with two traffic lanes and two parking lanes. The first two lanes will be constructed by Mirvac and will both be traffic lanes. When the adjacent developer constructs their half of the road, the final configuration of two traffic lanes and two parking lanes will be provided.

A combined three level basement car park is proposed beneath the buildings to serve the proposed residential and retail uses, and includes 501 car parking spaces (including 48 accessible car parking spaces), 25 motorcycle parking spaces, and 624 bicycle parking spaces (including 120 visitor bicycle parking spaces).

A single driveway is provided and will be shared between residential tenants, visitors, retail customers / staff, service vehicles, waste collection vehicles and removalist trucks. Once inside the site, car traffic is directed to the left, while service, waste and removalist vehicles continue along the internal roadway to gain access to the loading dock and garbage collection area.

The upper basement level occupies approximately three quarters of the site, while the proposed retail use and loading area occupies the remaining quarter of the site. Basement Level B1 occupies almost the entire site, while Basement Level B2 reduces in its footprint to exclude the north-eastern part of the site.

FIGURE 7 – BASEMENT PLAN – LEVEL 1



4 Justification and Assessment of Alternatives

The *Sydney Olympic Park Master Plan 2030* requires that prior to the issue of development consent for Site 53, an architectural design competition be undertaken. The Site 53 Design Excellence Competition was conducted in accordance with the endorsed Design Competition Brief, which sought architectural schemes for a mixed-use development comprising in excess of 400 dwellings, a supermarket, basement car parking, and a landscaped ground plane.

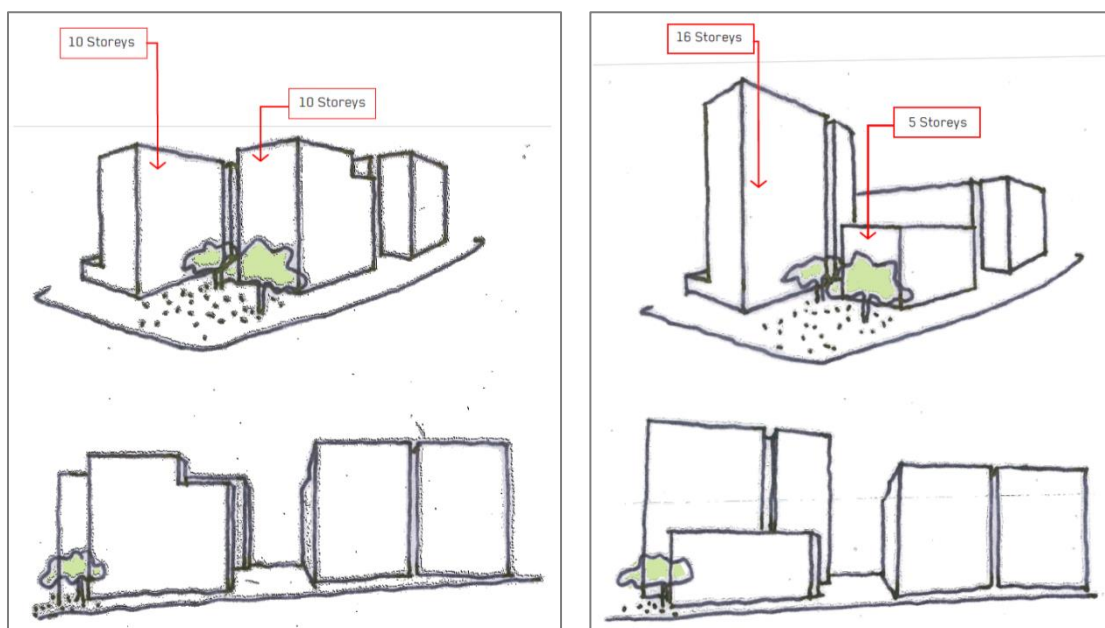
The Design Excellence Competition was run as an invited single-stage process. The four invited Architectural practices presented to the Jury on Friday 6 February 2015. Consistent with the Competition Brief, the Jury decided upon a winning proposal by unanimous agreement, being the scheme presented by BVN Architecture. The BVN 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**.

A description of each of the Design Excellence Competition schemes is provided below. Images of each of the schemes are provided at Figure 9.

BVN ARCHITECTURE

BVN Architecture presented two schemes which explored alternative approaches to height and massing. The first option, known as the '*complying scheme*' retained the statutory 10-storey height limit, while the second option, known as the '*alternative scheme*' proposed to reduce the height of the northern building to 5-storeys while increasing the height of the southern building to 16-storeys.

FIGURE 8 – BVN ARCHITECTURE – 'COMPLYING SCHEME' AND 'ALTERNATIVE SCHEME' – DESIGN COMPETITION



While the '*complying scheme*' met many aspects of the design brief, the massing was considered to be imposing and harsh, with the scale of the buildings and materials proposed resulting in a feeling of relentlessness. In addition, the internal amenity of apartments and communal open space was compromised due to the built form proposed.

The '*alternative scheme*' resulted in a significant improvement to the internal amenity of the residential apartments, in particular outlook and solar access, as well as the amenity and usability of the communal open space. In addition, the redistribution of floor space created a diversity of architecture not seen in any of the other schemes presented.

Overall, the Jury considered that the BVN '*alternative scheme*' performed the highest against the objectives of the Design Brief, and provided the greatest level of certainty that the design issues identified could be addressed and the scheme could be developed in order to achieve Design Excellence.

MIRVAC DESIGN

The Mirvac Design scheme proposed a series of four residential buildings, generally rectangular in shape, positioned at each corner of the site. The buildings range in height from 10 to 13 storeys and work with the levels of the site to provide a transition of scale. The proposed building layouts create a large internal courtyard and through site links which run east-west and north-south. The courtyard space is grand and has the ability to provide a high amount of amenity for the residents of the development.

While the scheme met the commercial brief in most aspects, the internal amenity of many apartments appeared to be compromised. In particular the scheme achieved a poor level of solar access, building depths ranged from 22 to 32 metres, resulting in depths of up to 12 metres for some single orientated one bedroom apartments, and the provision of private open space was inadequate.

Overall, Mirvac Design was commended for their considered approach to the usability and amenity of the internal communal open space. However, in order to achieve design excellence the scheme would require significant changes to the material palette, building layout, and apartment planning, and as such presented too greater risk to the developer and the Jury.

PTW ARCHITECTS

The PTW Architects scheme proposed two residential buildings, orientated to maximise solar penetration and southern views. Each building has a maximum height of 10-storeys and each works with the levels of the site to provide a transition of scale.

The proposed building envelope was developed using sun angles, with each building positioned and orientated to maximise solar access to residential apartments. Despite this approach, the scheme achieved a poor level of solar access in comparison to the other schemes presented, with only 49% of apartments receiving three hours of solar access between 9am and 3pm.

While the scheme met the commercial brief in many aspects, the floor plate and apartment planning appeared to be compromised by the overall built form arrangement. In particular building depths were in excess of 18 metres and up to 24 metres at certain points, each corridor contained a high number of units, and the provision of private open space was inadequate.

Overall, PTW was commended for avoiding the typical urban typology and providing an innovative and unique architectural concept. However, the built form appeared to compromise the internal amenity of the residential apartments, in particular solar access, ventilation, and privacy, and consequently was not supported by the Jury.

TONY CARO ARCHITECTURE

Tony Caro Architecture (TCA) presented two schemes which explored alternative approaches to height and massing. The first option, known as the '*complying scheme*' retained the statutory 10-storey height limit across two perimeter buildings, while the second option, known as the '*alternative scheme*' proposed to reduce the two perimeter buildings to 7-storeys and add a 32-storey tower to the south-east corner of the site. While TCA provided justification for the additional height proposed in the '*alternate scheme*', the level of non-compliance with the statutory controls presented a significant risk to the developer and the Competition Jury, and consequently was not supported.

The TCA scheme proposed an elegant façade system of vertical blades and discreet glass balustrades. By creating a nominal 1.1m external floor zone around the perimeter of the building, the proposed treatment ensures there are no solid wall surfaces on the building perimeters, while also providing weather protection. While the Jury commended TCA for this approach, the additional gross building area, glazing, slab edge detailing, and vertical fins was costed at approximately \$11 million, and brought the overall estimated cost of development to \$158 million, some \$30 million over the construction budget.

Overall, TCA were commended for their considered approach to apartment planning, in particular the sizes, dimensions and layouts of smaller units, as well as their use of roof tops to provide communal open space for all residents. However, it was considered that in order to meet the objectives of the design brief, particularly relating to commercial and planning compliance matters, the scheme would have required a significant number of changes to be made which would fundamentally alter the design presented.

FIGURE 9 – DESIGN EXCELLENCE COMPETITION IMAGES



PICTURE 1 – BVN ARCHITECTURE



PICTURE 2 – MIRVAC DESIGN



PICTURE 3 – PTW ARCHITECTS



PICTURE 4 – TONY CARO ARCHITECTURE

RECOMMENDATIONS

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 BVN Architecture 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 – DESIGN COMPETITION JURY RECOMMENDATIONS & RESPONSES

JURY RECOMMENDATION	RESPONSE
<p>Ground plane: Consideration should be given to the design of the ground plane and communal open space. In particular, careful consideration should be given to the size and proportions of the space, the form and definition of the open space, the separation of public and private spaces, the level of solar access achieved, privacy and weather protection, and the usability of the spaces. If necessary, alternative building layouts and arrangements could be explored to improve on these aspects of the ground plane.</p>	<p>In order to create a more generous ground plane and communal open space area the western building was spilt and realigned (thus creating the southern building) and the eastern building was moved further south. This has increased the area available and allowed greater solar access. Furthermore, Landscape Plans have been prepared which clearly delineate the public from the private spaces, while allowing for passive surveillance and adequate security.</p>

JURY RECOMMENDATION	RESPONSE
<p>Communal facilities: Consideration should be given to the inclusion of a community space within the development. The space should be in an accessible location and ideally have direct access to open space. The space should be designed for a range of user groups.</p>	<p>A communal room has been provided within the Western Building on the ground floor, adjacent to the communal open space area, providing internal and external areas for residents' functions and gatherings.</p>
<p>Height: The Jury supports the intention and urban design merit associated with the redistribution of floor space from the northern building to the southern building in the 'alternative scheme'. The reduction in height on the northern building results in improved amenity and urban design outcomes and is therefore supported. The increase in height on the southern building creates a more successful transition between the 30-storey residential towers on Australia Avenue and the future desired 10-storey character of the Central Precinct, and is therefore supported.</p> <p>However, the Jury considers the scale of the proposed 16-storey southern building to be too imposing in the context of the surrounding environment. As such, consideration should be given to the height and massing of each building in order to achieve a successful balance. The internal amenity and usability of the communal open space and residential apartments should be key considerations when exploring the redistribution of floor space. In addition, consideration should be given to the materiality and articulation of each building to assist in defining the scale of the buildings.</p>	<p>The northern building remained at 5 storeys and the southern building was reduced to 15 storeys. In reducing the height to 15 storeys, the building was also moved further south toward the rail line, which had a significant impact on the central garden courtyard by increasing the sunlight in the middle of winter substantially. The 10 storey building which bordered the western side of the view corridor through the site was separated into 2 forms, which broke down the scale and provided visual and physical access to the garden at the west, thereby significantly increasing the size of connected landscaped space.</p>
<p>Material pallet: Consideration should be given to the treatment of the façade on the buildings to the south and west. The sole use of rough cast white render is considered severe, particularly on the taller southern building, and the lack of articulation results in a flat and imposing structure. Consideration should be given to the diversity of materials and articulation across the site.</p>	<p>The proposed façade treatment has undergone extensive design development in consultation with Mirvac and Sydney Olympic Park Authority.</p> <p>A large degree of detail and resolution was added to the white masonry buildings to provide a greater degree of diversity and articulation, without losing the strength and simplicity of form. An additional material and building form was added to the south eastern corners, which is a dark vertical clad framed element that provides a striking visual marker at the corners. In addition, the window frames are dark metal, northern corners are articulated with a key-stoning detail, and the parapets are livened in parts with dark contrast vertical clad frames that provide height adjustment and relief whilst connecting back to the south eastern corners.</p>

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 the NSW Department of Planning and Environment, Sydney Olympic Park Authority, and Sydney Trains, 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 at this stage.

5.1 SYDNEY OLYMPIC PARK AUTHORITY - DESIGN REVIEW PANEL

As described in Section 4 above, a Design Excellence Competition was conducted for Site 53 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*.

The Sydney Olympic Park Authority (SOPA) Design Review Panel was involved throughout the Design Excellence Competition process, ultimately providing their support for and endorsement of the competition process. In addition, the Design Review Panel was represented by members Caroline Pidcock and Peter Poulet on the Competition Jury.

Following the award of the Design Excellence Competition to BVN Architecture in February 2015, the project's consultant team met with the Design Review Panel in March 2015 to present the competition design and subsequent amended scheme, having regard to the Competition Jury's comments and recommendations.

Following the presentation, the Design Review Panel provided formal advice which commended the progress that had been made in design development and noted support for:

- *"The use of natural materials for external finishes, particularly the finely textured and delicate brick detailing, the rhythm of the grid, the 'castellated' parapets and depth of masonry are strong features of the design that should be preserved.*
- *Functional and well resolved separation of the supermarket and retail forecourt from the main residential levels.*
- *The proposed changes to building height and alignment.*
- *The building articulation to frame views and mark key corners (i.e. the Australia Avenue and Sarah Durack 'gateway').*
- *Private gardens for ground level units improve opportunities for residential diversity."*

The Design Review Panel expressed concerns with the preliminary design of the public domain and private open space, in particular the extent of private open space and the remoteness of building access points from street fronts. These concerns were communicated via recommendations which have been addressed in the Landscape Report and Plans prepared by 360 Degrees Landscape Architecture and included at **Appendix G**.

The Design Review Panel recommended that a wind consultant assess the proposal and provide strategies for mitigating any impacts from downdrafts for open balconies and the internal courtyard. Accordingly, a Wind Assessment has been prepared by Cermak Peterka Petersen and is included at **Appendix L**.

A further presentation to the Design Review Panel was made in August 2015, having regard to the recommendations made in March 2015. Following the presentation, the Design Review Panel provided formal advice which identified a number of items to be considered prior to lodgement of the application. These are addressed in Table 5 on the next page.

TABLE 5 – DESIGN REVIEW PANEL RECOMMENDATIONS

RECOMMENDATION	RESPONSE
<p><i>The design of the internal private open space be reviewed to:</i></p> <ul style="list-style-type: none"> ▪ <i>Provide a more direct and legible route from the street to building entries.</i> ▪ <i>Provide a public through site link along the view corridor (as previously requested).</i> 	<p>The Landscape Plans, provided at Appendix G, have been prepared with regard to the anticipated access ‘desire lines’ with direct routes provided to building entries, as well as meandering pathways provided for recreation purposes.</p> <p>The role of the view corridor as a ‘publically accessible’ link was discussed with SOPA and the Jury at the Design Competition Stage. During these conversations it was confirmed that there was no requirement to provide public access through Site 53 and the Design Competition Jury Report reflects this (refer Appendix C).</p> <p>There are many other sites within Sydney Olympic Park that are required to provide public access. These sites are identified in the <i>Sydney Olympic Park Master Plan 2030</i> as site specific requirements. These publically accessible through site links are strategically placed to provide access through Precincts, to and from clear points of interest. The publically accessible through site links in the Central Precinct line up directly with the ‘new street’ to provide access between the southern sites and the Town Centre. The benefit of providing an additional through site link within Site 53 is not clear, as access is already provided along ‘new street’ and Australia Avenue.</p> <p>It is our opinion that a publically accessible through site link would remove the amenity provided for the 800+ residents through the provision of a private landscaped courtyard. Further, there is ample public open space in the surrounding area within the Linear Park, Bicentennial Park, Bicentennial Marker, and future public domain within Site 68. In addition, the proposed development provides a publically accessible forecourt on the corner of Australia Avenue and Fig Tree Drive.</p>
<p><i>Residential lobbies should also connect directly to the street.</i></p>	<p>The proposed development provides a main point of address to Fig Tree Drive and a level (step free) landscaped podium which provides equitable access to all buildings. This approach was presented to and supported by SOPA’s Access Committee in June 2015.</p> <p>Due to the level changes in the surrounding area it is not possible to provide equitable access to all buildings directly from the streets.</p> <p>Direct access is provided between the street and ground floor apartments, where the levels permit, providing activation and passive surveillance of the surrounding streets and public domain.</p>

RECOMMENDATION	RESPONSE
<i>The western street be more activated e.g. by connecting ground level balconies directly to the footpath.</i>	Direct access between the ground level balconies and the footpath has been provided for two of the three apartments fronting 'new street'. Due to the levels at the southern end of 'new street' direct access cannot be provided for the third apartment.
<i>The entry portal to Figtree Drive be removed.</i>	<p>The entry portal to Fig Tree Drive is a key component of the proposed design and approach to the redevelopment of the site. The entry portal was proposed at the Design Competition stage and was supported by the Competition Jury. The entry portal provides a sense of address, as well as weather protection for visitors and residents.</p> <p>Analysis has been provided within the Design Report at Appendix F which demonstrates that the entry portal will not impact on the Bicentennial Marker view corridor.</p>
<p><i>Materials and finishes be modified to:</i></p> <ul style="list-style-type: none"> ▪ <i>Reinstate brickwork to express the SE corner entry.</i> ▪ <i>Adopt a more subtle palette of warmer, textured whites to enhance brickwork. Avoid metallic glassy finishes.</i> 	As per the Design Review Panel's recommendations, the brickwork at the south-east corner entry has been reinstated and the metal cladding has been removed.
<p><i>The following elements be reinstated:</i></p> <ul style="list-style-type: none"> ▪ <i>The castellated parapets as well as the resulting 'negative' spaces that articulate the skyline of the buildings.</i> ▪ <i>The 'kick-out' corner on the SE block.</i> ▪ <i>The expressed brick 'tower element' at the SE corner entry.</i> 	As per the Design Review Panel's recommendations, the expressed brick 'tower element' at the south-east corner entry has been reinstated. However, the 'kick-out' corner on the south-east block has not been reinstated due to the compromised layout and amenity of the apartments and the encroachment on the tree protection zone at the lower levels.
<i>Additional uses to activate the linear park frontages be considered e.g. relocate Community room adjacent to the OSD filter room.</i>	The community room could not be relocated adjacent to the linear park due to accessibility issues. The location of the community room, adjacent to the children's under-croft play space and ping pong tables is considered an appropriate location and will provide passive surveillance and activation within 'new street'.

5.2 SYDNEY OLYMPIC PARK AUTHORITY – PLANNING UNIT

Sydney Olympic Park Authority (SOPA) granted Land Owner's consent for the proposed application on 3 September 2015. Prior to granting Land Owner's consent, SOPA's Planning Unit reviewed the proposed application and provided a series of recommendations for consideration. These are addressed in Table 6 on the next page.

TABLE 6 – SOPA PLANNING UNIT RECOMMENDATIONS

RECOMMENDATION	RESPONSE
<i>Extending the retail/commercial building to the Master Plan boundary on Australia Ave to provide a better presence.</i>	<p>An extension of the retail / commercial tenancy to the Master Plan boundary is not considered appropriate as the levels along Australia Avenue would create a blank wall, rather than the sloped landscape transition zone currently proposed. Further, the inclusion of a landscape area at the corner of Australia Avenue and the Linear Park aids in minimising the impacts of wind in this zone.</p> <p>The internal configuration of the retail / commercial tenancy has been amended to create a more suitable arrangement.</p>
<p><i>Improving the public access around the fig tree's (T2 & T3) in the NE corner. Consideration should be given to:</i></p> <ul style="list-style-type: none"> ▪ <i>Aligning the shop fronts with service rooms.</i> ▪ <i>Setback entries to service rooms and egress corridor.</i> ▪ <i>Widen & straighten the stair from Figtree Drive.</i> ▪ <i>Decking (that does not damage the root system) under the fig tree's (T2 & T3) to activate the area under the canopy.</i> 	Addressed within the Landscape Report and Drawings at Appendix G.
<i>Straightening of the pathway adjacent to the relocated fig tree on new street to provide a more direct link to the Linear Park. Steps, seating elements, paving elements and level changes at the junction with the Linear Park to be compliant with SOPA's Urban Elements Design Manual 2009.</i>	Addressed within the Landscape Report and Drawings at Appendix G.
<i>Soft landscape interface between Body Corporate landscape zones and SOPA land to be no steeper than 1:3 to reduce the risk of vegetative, mulch & soil spilling onto paths and creating slip/skid risks.</i>	Addressed within the Landscape Report and Drawings at Appendix G.
<i>Planting on podium - all landscape areas shown over structure are to provide root-able soil volumes to support long term vigorous growth of trees and other plantings.</i>	Addressed within the Landscape Report and Drawings at Appendix G.
<i>Protection of fig trees (T2 & T3) - arborist report to recommend extent of fenced enclosure for Tree Protection Zone during construction.</i>	Addressed within the Arborist Report and Tree Protection Plan at Appendix O.

RECOMMENDATION	RESPONSE
<p><i>Demonstration of compliance with SOPA's Stormwater Management – Water Sensitive Urban Design.</i></p> <ul style="list-style-type: none"> ▪ <i>An integrated water cycle management plan demonstrating how all stormwater generated on the site will be managed.</i> ▪ <i>Outline of each element of the water sensitive urban design strategy.</i> ▪ <i>Design assumptions regarding the proposed infrastructure.</i> ▪ <i>A site layout plan and design details of each element.</i> ▪ <i>Monitoring & maintenance plan for all stormwater devices and other water sensitive urban design elements.</i> 	<p>An Integrated Water Cycle Management Plan has been prepared by BG&E and is included at Appendix V. A letter has also been prepared by BG&E which addresses each of the items raised by SOPA's planning unit.</p>

5.3 NSW DEPARTMENT OF PLANNING AND ENVIRONMENT

Two pre-lodgement meetings were held with the NSW Department of Planning and Environment, Metropolitan Projects Team on 2 July 2015 and 25 August 2015. Each meeting was attended by representatives of Mirvac Projects Pty Ltd and Sydney Olympic Park Authority, as well as BVN Architecture and Urbis. The purpose of each meeting was to discuss the project, with particular emphasis on how the concept design has developed from the Design Excellence Competition stage through to detailed design. No formal minutes were issued by the Department of Planning and Environment.

5.4 SYDNEY TRAINS

A pre-lodgement meeting was held with Sydney Trains on 23 June 2015. The meeting was attended by representatives of Mirvac Projects Pty Ltd and BG&E structural engineering consultants. The purpose of the meeting was to introduce Sydney Trains to the project and seek comments on general matters relating to the proposed design, as well as matters for consideration during the construction phase.

5.5 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 addressed in Section 8.5 of this Report. Relevant copies of the correspondence between the consultants and service providers are attached at **Appendix Y**.

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 Apartment Development (Amendment No.3);*
- *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004;*
- *State Environmental Planning Policy No 55- Remediation of Land; and*
- *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.*

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 \$143,378,000 (excluding GST) 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, these are addressed below.

6.2.1 ZONING AND PERMISSIBILITY

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 Mixed Use 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' and 'retail uses' are not specified in subclause (2) or (4), the proposal is permissible with development consent.

Clause 9(1) of Part 23 contains the objectives of the B4 Mixed Use zone. Table 7 below addresses the proposed development's level of compliance against each of these objectives.

TABLE 7 – B4 MIXED USE ZONE OBJECTIVES

OBJECTIVE	RESPONSE
<i>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.</i>	The 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.
<i>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.</i>	The residential and retail 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.
<i>To ensure that the Sydney Olympic Park site becomes an active and vibrant town centre within metropolitan Sydney.</i>	The increased residential accommodation will bring with it young professionals and families, which will contribute to the economic vitality of the centre.
<i>To provide for a mixture of compatible land uses.</i>	The residential and retail uses are compliant land uses and are permitted within the zone. Residential development is specifically envisaged in the B4 Mixed Use zone.
<i>To encourage diverse employment opportunities.</i>	The 1,500m ² retail space will employ approximately 20 full-time equivalent staff. Further, employment opportunities will be created during the construction and operational phases. New residents in the area will also support businesses in the surrounding precincts, potentially creating opportunities for new jobs.
<i>To promote ecologically sustainable development and minimise any adverse effect of land uses on the environment.</i>	The proposal has been designed to have minimal environmental impact, as discussed in Section 8 of this report, and will employ a range of ESD measures (refer Appendix I).
<i>To encourage the provision and maintenance of affordable housing.</i>	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.

6.2.2 HEIGHT

Pursuant to Clause 18 of Part 23, the maximum height of buildings permitted on the subject site is 30 metres.

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 development comprises four residential-flat buildings, ranging in height from five to fifteen storeys. Three of the four residential-flat buildings exceed the maximum height of buildings permitted under SEPP Major Development. This exception to the development standard is discussed in Section 6.2.4 below.

6.2.3 FLOOR SPACE RATIO

Pursuant to Clause 19 of Part 23, the maximum floor space ratio permitted on the subject site is 2.5:1. 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 2.75:1 inclusive of the 10 per cent design excellence incentive. This translates into a maximum gross floor area (including the bonus floor space) of 34,917m².

The proposed development has a total gross floor area of 34,886m², including 33,386m² of residential uses and 1,500m² of retail uses, and is therefore compliant with the floor space ratio development standard.

6.2.4 EXCEPTION 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.

The proposed development comprises four residential-flat buildings, ranging in height from five to fifteen storeys. Three of the four residential-flat buildings exceed the maximum height of buildings permitted under SEPP Major Development (refer Table 8). The exceedance varies from 0.5m on the Southern Building to 15.75m on the Eastern Building.

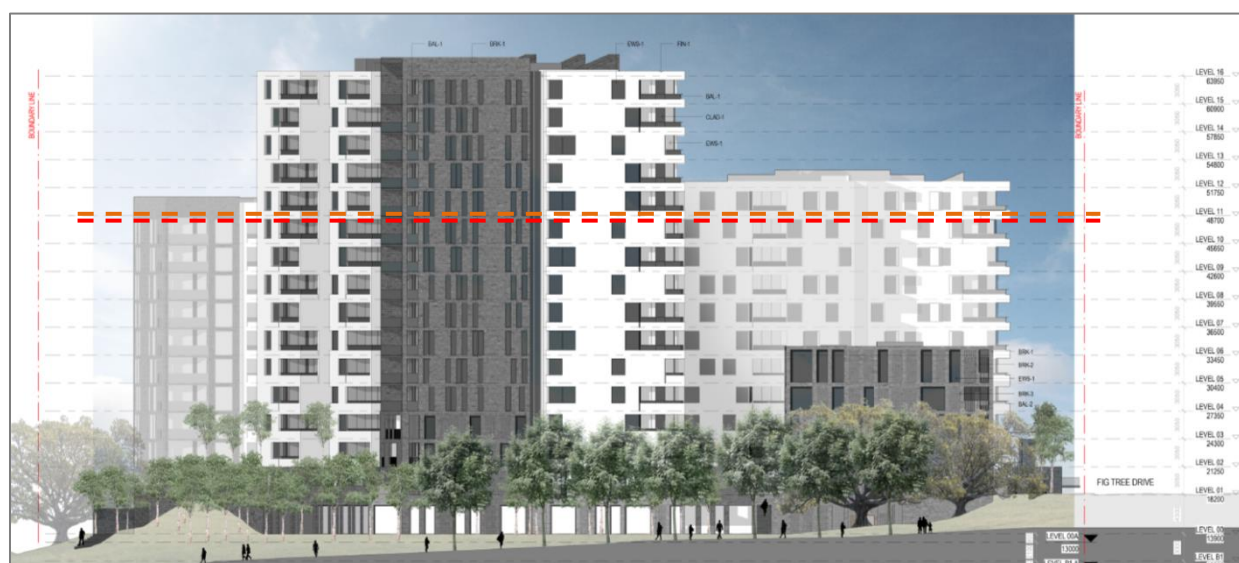
TABLE 8 – HEIGHT OF BUILDINGS

BUILDING HEIGHT	STOREYS	METRES	RL
Northern Building	5	15.25	33.45
Southern Building	10	30.50	48.70
Eastern Building	15	45.75	63.95
Western Building	Part 10, Part 11	33.55	51.75

The extent of the variation is illustrated in Figure 10 and Figure 11. The rooftop plant is excluded from the building height in accordance with the ‘building height’ definition under SEPP Major Development.

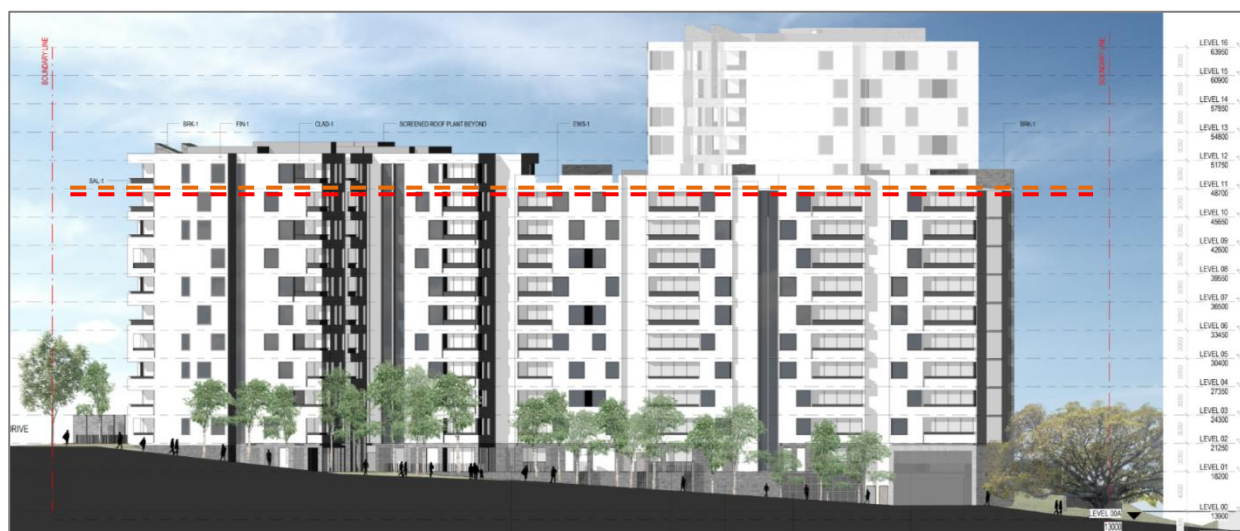
We note there is a discrepancy between the ‘maximum height of buildings’ in metres stated in SEPP Major Development and the ‘maximum height of buildings’ in storeys stated in Master Plan 2030. While Master Plan 2030 allows for 10-storey development on the site, SEPP Major Development only allows for 30 metres. This does not allow for the standard minimum residential floor to floor heights of 3.05 metres.

FIGURE 10 – EASTERN ELEVATION – HEIGHT OF BUILDINGS



- SEPP Major Development - 30 metre ‘height of building’ control
- SOP Master Plan 2030 – 10-storey ‘height of building’ control

FIGURE 11 – WESTERN ELEVATION – HEIGHT OF BUILDINGS



- — — SEPP Major Development - 30 metre 'height of building' control
- — — SOP Master Plan 2030 – 10-storey 'height of building' control

The proposed variation to the 'maximum height of building' development standard is considered reasonable on the basis of:

- As described in Section 4 of this Report, the proposal is the direct result of a Design Excellence Competition, in which the Competition Jury provided support for the non-compliant building heights proposed in the 'alternative scheme', noting:
 - "...The 'alternative scheme' resulted in a significant improvement to the internal amenity of the residential apartments, in particular outlook and solar access, as well as the amenity and usability of the communal open space. In addition, the redistribution of floor space created a diversity of architecture not seen in any of the other schemes presented.
 - The 'alternate scheme' creates a more successful transition between the 30-storey residential towers on Australia Avenue to the future desired lower scale character of the Central Precinct to the west.
 - The variety in height enriches the 'alternative scheme' and should be explored further in order to achieve the correct balance and transition of scale..."
- 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 10-storey built form envisaged in Master Plan 2030, to more slender and varied building forms which provide a more successful urban response and a greater level of amenity.
- The location and orientation of the proposed built form relates directly to the site opportunities and constraints, maximising the amount of solar access to residential apartments, private and communal open space, by placing a lower scale building to the north-east of the site, and the tallest building behind it to the south-east.
- The additional height, located in the south-east corner of the site, responds to the need to create an 'entry gateway' to Sydney Olympic Park for those approaching the precinct from the south on Australia Avenue. Furthermore, the variation in height allows for a natural transition from the approved 35-storey 'Opal Tower' (Site 68) and 30-storey 'Australia Towers' (Site 3) on the eastern side of Australia Avenue, to the future desired lower scale character of the Central Precinct to the west.
- There is no tangible nexus between the height variation and the overall intensity of site use. Specifically, the proposed development does not exceed the floor space allocation under SEPP Major Development.

- The additional height will not result in any detrimental amenity impacts (overshadowing, views or privacy) to surrounding development or parklands compared to a complying design. Nor will the extent of the non-compliance result in any adverse visual impact on the locality in the context of existing and future development at Sydney Olympic Park.
- The proposed built form and height is consistent with the desired future character of the Central Precinct and the Sydney Olympic Park Town Centre, as envisaged by the SEPP Major Development and the *Sydney Olympic Park Master Plan 2030*.
- The non-compliance will not hinder the development's ability to satisfy the objectives of the B4 Mixed Use Zone, as outlined in Section 6.2.1 of this report. Specifically, the proposed development will contribute to Sydney Olympic Park being a vibrant town centre by providing medium to high-density residential accommodation with good access to public transport, employment, community and recreational facilities.
- There are no matters of State or regional planning which would be affected by the variation.
- 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.

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

6.2.5 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 Utilities and Services Strategy provided at **Appendix Y** details the necessary steps to be pursued to connect the proposed development to public utility infrastructures. These recommendations are summarised at Section 8.5 of this Report and confirm all the necessary services are readily available and able to be connected for the development.

6.2.6 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."*

A Traffic and Transport Impact Assessment has been prepared by GTA Consultants and is included at **Appendix Q**. The Assessment confirms that the proposed development is not expected to create any adverse traffic and transport issues with the Sydney Olympic Park town centre operating in major event mode. Further discussion is provided at Section 7.6 of this Report.

6.2.7 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. In accordance with Clause 25, the proposed development will encourage sustainable transport use by providing bicycle parking spaces in an accessible location, upgrading the existing pedestrian and cycle routes on the periphery of the subject site, and providing car parking in accordance with the maximum rates so as not to oversupply and encourage other modes of transport.

Further discussion regarding sustainable transport initiatives is provided at Section 8.4 and within the Traffic and Transport Assessment at **Appendix Q**.

6.2.8 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 7.4 of this Report.

6.2.9 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 Competition Brief, which sought architectural schemes for a mixed-use development comprising in excess of 400 dwellings, a supermarket, basement car parking, and a landscaped ground plane.

Consistent with the Competition Brief, the Jury decided upon a winning proposal by unanimous agreement, being the scheme presented by BVN Architecture. The BVN 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 I**.

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

6.2.10 SUMMARY

In summary, the proposal satisfies the objectives of *SEPP Major Development* and achieves a high level of consistency with the relevant development standards and the provisions for transport, infrastructure, event capability and design excellence.

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 development has been assessed in the Traffic and Transport Impact Assessment prepared by GTA Consultants, included at **Appendix Q**. The Assessment confirms the level of additional traffic generated by the proposed development is considered to be relatively moderate. It is expected that future upgrade works identified in the *SOP Master Plan 2030* would be developed to accommodate traffic demand arising from the subject site and other nearby future developments maintaining existing intersection level of service or better.

As the proposal is considered 'traffic generating development' it will be referred to NSW Roads and Maritime Services for comment in accordance with Schedule 3 of SEPP Infrastructure.

6.4 STATE ENVIRONMENTAL PLANNING POLICY NO. 65 – DESIGN QUALITY OF RESIDENTIAL APARTMENT DEVELOPMENT (AMENDMENT NO.3)

State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development (SEPP 65) was introduced in 2002 to improve the design quality of residential apartment development in NSW. A comprehensive review of SEPP 65 has recently been completed, which resulted in amendments to the SEPP and a new Apartment Design Guide. These amendments were published on the NSW legislation website on 19 June 2015 with a commencement date of 17 July 2015.

The proposed development has been designed with regard to SEPP 65 and the accompanying Apartment Design Guide. A SEPP 65 Design Verification Report has been prepared by BVN Architecture and is included at **Appendix F**. The Report provides assurance that the proposed development has been prepared in accordance with the design principles of SEPP 65 and achieves a high level of compliance with the Apartment Design Guide.

6.5 STATE ENVIRONMENTAL PLANNING POLICY (BUILDING SUSTAINABILITY INDEX: BASIX) 2004

State Environmental Planning Policy (Building Sustainability Index: Basix) 2004 came into force in July 2004 and aims to ensure consistency in the implementation of the BASIX scheme throughout the State. SEPP BASIX requires that proposals for residential development are accompanied by a list of commitments by the applicant in relation to suitability, energy and water efficiency.

The proposed development has been designed to satisfy the BASIX requirements and copies of the BASIX assessment and certificates are provided at **Appendix H**.

6.6 SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005

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.

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

State Environmental Planning Policy No. 55 – Remediation of Land is the primary environmental planning instrument guiding the remediation of contaminated land in NSW. SEPP 55 requires a consent authority to consider whether the land is contaminated, and if so, whether the land will be remediated before the land is used for the intended purpose.

A Phase 1 and 2 Environmental Site Assessment was carried out by JBS&G Australia Pty Ltd in July 2014 (refer **Appendix S**). The Assessment comprised a review of geological and hydrogeological data, council documentation, aerial photographs, NSW EPA records and Heritage records, a detailed site inspection to identify potential areas of environmental concern (AECs) and contaminants of potential concern (COPCs) identified in the historical review, soil sampling and analysis at twelve locations, and groundwater sampling and analysis at two locations.

The Assessment confirms the presence of fill across the entire site, with depths ranging from approximately 0.2m to 2.6m below ground surface. The concentrations of all contaminants of potential concern were reported below the adopted *NEPC (2013)* health based criteria for residential land use, with the exception of asbestos at one location (BH10) beneath a path between Buildings 1 and 2. Suspected asbestos eaves were also observed around the outside of the main buildings.

A Hazardous Materials Survey was prepared by JBS&G Australia Pty Ltd in September 2014 (refer **Appendix S**). The Survey concluded that no asbestos containing material was positively identified on the site. Sampling of the eaves was not conducted for building 1 and 2 based on the inaccessibility of these areas. Given the age of the buildings it is unlikely that the material in the eaves contains asbestos, however, as a conservative measure the eaves are assumed to contain asbestos until further assessment proves otherwise.

Based on the findings of the Phase 1 and 2 Environmental Site Assessment and the Hazardous Materials Survey, it is considered that the subject site can be made suitable for the proposed use.

7 Policies

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

- NSW 2021;
- A Plan for Growing Sydney;
- Apartment Design Guide;
- 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; and
- Development near Rail Corridors & Busy Roads - Interim Guideline 2008.

7.1 NSW 2021

NSW 2021 is the NSW Government's key strategic planning document, providing a ten year plan to guide policy and budget decisions to assist with the rebuilding of NSW. Key targets of the Plan applicable to the proposal include: increasing walking and cycling; increasing the percentage of the population living within 30 minutes by public transport of a city or major centre in metropolitan Sydney; facilitating the delivery of 25,000 new dwellings in Sydney per year; and growing cities and centres as functional and attractive places to live, work and visit.

The proposed development is consistent with the aims and objectives of NSW 2021 and will positively contribute to the growth of Sydney by:

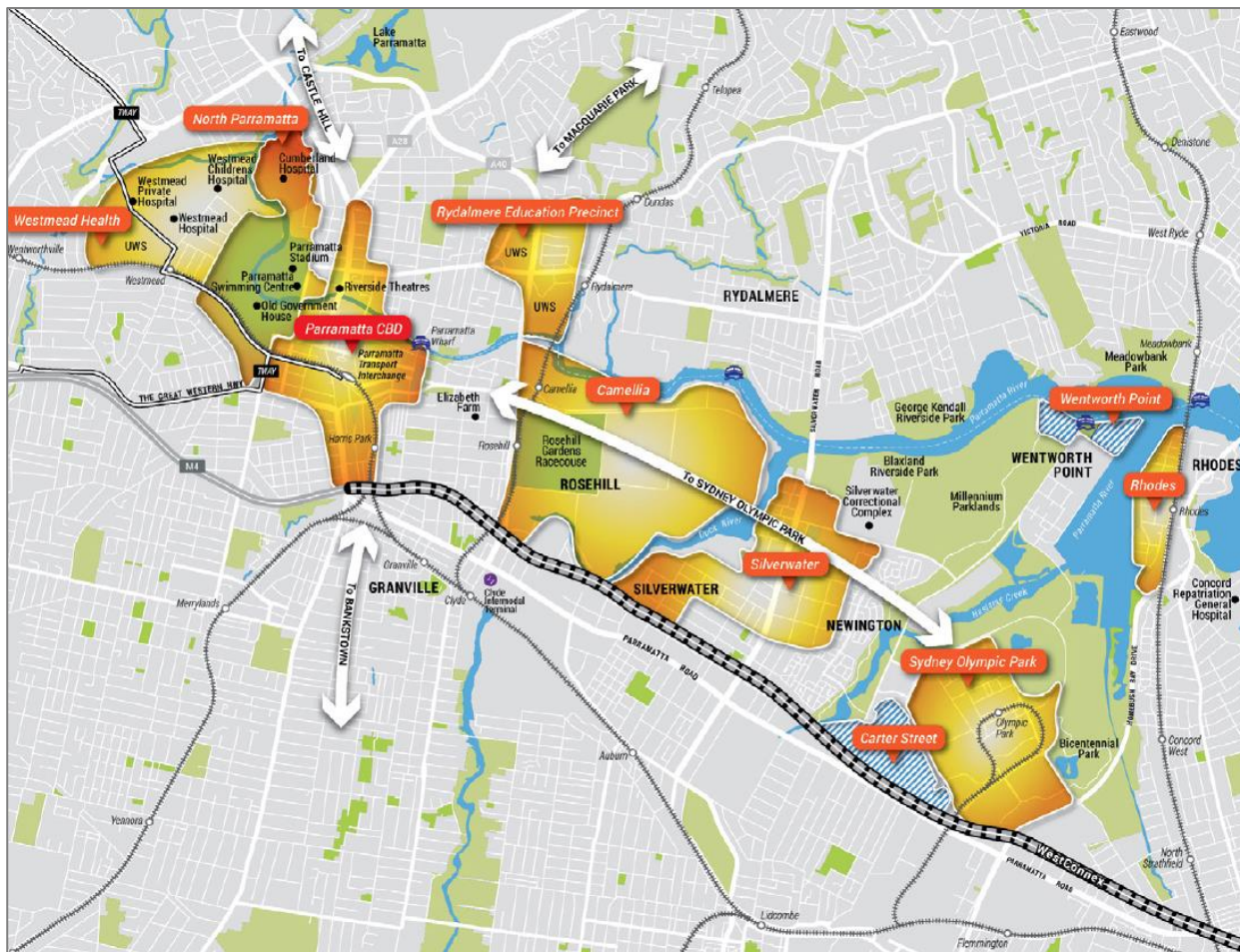
- Providing 422 new dwellings in close proximity to rail and bus services, connecting residents to the Sydney CBD and Parramatta City Centre.
- Providing a positive contribution towards the delivery of 25,000 new dwellings within Sydney, by improving housing supply and choice in the central western Sydney area.
- Improving pathways and connections to walkways and cycle ways in the vicinity of the site, providing greater connectivity to the wider Sydney Olympic Park area.
- Provide landscaping, communal facilities, and retail uses in close proximity to the facilities and services of Sydney Olympic Park making this a functional and attractive place to live.

7.2 A PLAN FOR GROWING SYDNEY

A Plan for Growing Sydney provides guidance for land use planning over the next 20 years and a clear strategy for accommodating and supporting Sydney's future population, as well as framework to strengthen its global competitiveness and delivery of investment and job growth.

A Plan for Growing Sydney identifies Sydney Olympic Park as a 'Major Precinct' in the new 'Priority Growth Area - Greater Parramatta to the Olympic Peninsula', earmarked for urban renewal given its proximity to existing and future facilities and services (Figure 12). Sydney Olympic Park is also identified as a 'Strategic Centre' within the Global Economic Corridor further reinforcing the area's opportunity for continued growth.

FIGURE 12 – GREATER PARRAMATTA TO OLYMPIC PENINSULAR GROWTH AREA



The proposed development represents the continued transformation and growth of Sydney Olympic Park and will positively contribute to the precinct's role as a strategic centre, and its relationship with the development of Parramatta as Sydney's second CBD, as part of the Greater Parramatta to Olympic Peninsula Growth Area.

The provision of 422 new dwellings within the proposed development supports the accelerated provision of new housing supply within an established urban area, which is also supported by local infrastructure and services. The proposal would also provide a range of apartment types, with one, two and three bedroom options available, but also capable of being adapted for accessible needs.

In addition, the proposed development will support employment growth in Sydney Olympic Park through the provision of direct and in-direct job creation, during both the construction and operation phases of the development.

7.3 APARTMENT DESIGN GUIDE

The Apartment Design Guide is a resource to improve the planning and design of residential apartment development in NSW. It updates and replaces the Residential Flat Design Code introduced in 2002. The Apartment Design Guide sets out objectives, design criteria and design guidance for the siting, design and amenity of residential apartment development.

The proposed development achieves a high level of compliance with the relevant provisions of the Apartment Design Guide, as detailed in the Design Verification Statement included at **Appendix F**, and summarised as follows:

- Living rooms and private open spaces of 70% of apartments receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid- winter.
- A maximum of 9% of apartments receive no direct sunlight between 9 am and 3 pm at mid-winter.
- 68% of apartments are naturally cross ventilated.
- Ceiling heights are provided in accordance with the minimum floor to floor levels.
- Apartment layouts maximise useability and functionality and a majority of apartments meet the minimum internal and external areas specified.
- All common circulation spaces have generous corridors and lobby spaces, with access to daylight, natural ventilation, and outlook.
- Storage is provided for each apartment in accordance with the minimum volumes. At least 50% of the required storage is located in the apartment, with the remaining area provided in the basement.
- Acoustic and visual privacy has been maximised with adequate building separation provided, and windows / door openings oriented away from noise sources or adjacent habitable areas.
- A wide variety of apartment types are provided, including one, two and three bedroom units, as well as 43 adaptable dwellings.
- Ground floor apartments are provided with large landscaped terraces and direct access to the street (where levels permit), maximising street activation and passive surveillance of adjacent public spaces.
- A large communal landscaped ground plane is provided with opportunities for active and passive recreation. In addition, a children's play area and community room is also provided on the ground level. The communal landscaped ground plane enjoys approximately 4-5 hours of solar access between 9am and 3pm at mid-winter.
- Expansive deep soil zones are provided at the north-east and south-west corners of the site to accommodate the retention of the existing mature Fig Trees.

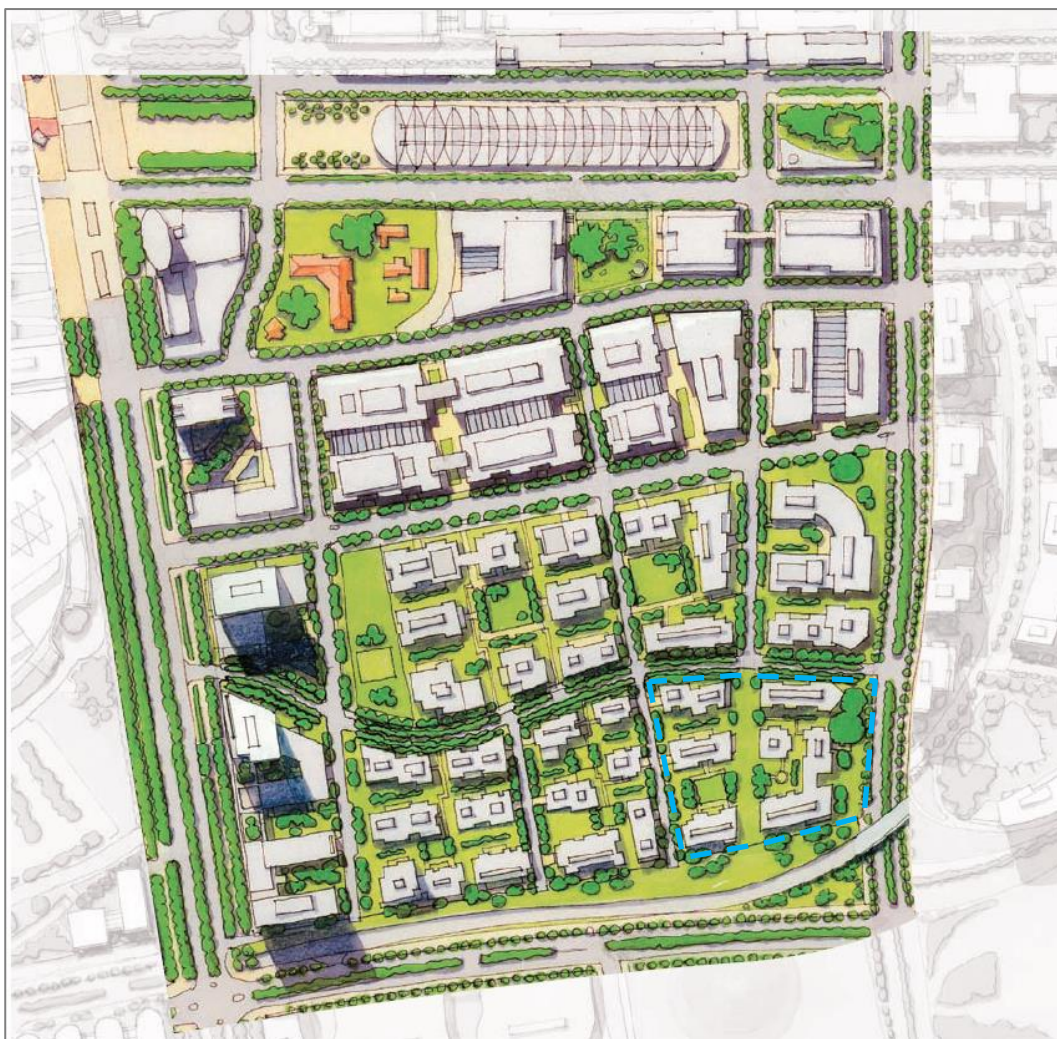
7.4 SYDNEY OLYMPIC PARK MASTER PLAN 2030

The *Sydney Olympic Park Master Plan 2030* provides a comprehensive approach to the long-term development of Sydney Olympic Park. Master Plan 2030 provides detailed planning and design principles and controls which provide for appropriate development that responds to its context and which contributes to the quality of the built environment.

Under Master Plan 2030, the site is identified as Site 53 and is located within the Central Precinct. The Central Precinct is bounded by Dawn Fraser Avenue, Olympic Boulevard, Sarah Durack Avenue and Australia Avenue, and is characterised by low density industrial and commercial uses.

The Central Precinct will be progressively transformed into a high density, mixed use neighbourhood with commercial offices, retail and residential uses (refer Figure 13). New tree lined streets and through-site links will transform the precinct into a lively and walkable neighbourhood. New residential buildings are up to 10 storeys high and will be concentrated along Figtree Drive.

FIGURE 13 – CENTRAL PRECINCT – ILLUSTRATIVE PLAN



Section 4 of Master Plan 2030 sets out general controls and guidelines for development and for the public domain within the town. Section 5 of the Master Plan 2030 provides specific controls and guidelines for each of the nine precincts to ensure the planned future character of each is achieved. The relevant Central Precinct controls are addressed below.

7.4.1 FLOOR SPACE RATIO CONTROLS

Section 5.2.3 of Master Plan 2030 specifies a maximum floor space ratio for Site 53 of 2.5:1. However, Section 4.6.10 of 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 2.75:1 inclusive of the 10 per cent design excellence incentive. This translates into a maximum gross floor area (including the bonus floor space) of 34,917m².

The proposed development has a total gross floor area of 34,886m², including 33,386m² of residential uses and 1,500m² of retail uses, and is therefore consistent with the floor space ratio control.

7.4.2 LAND USE CONTROLS

Section 5.4.2 of Master Plan 2030 identifies Site 53 for ‘residential’ land uses, including: *“Multi-Unit Housing; Residential Accommodation; Seniors Housing; Ancillary Home Business Uses (maximum 20% of total dwelling); Retail Uses (maximum 10% of total GFA); Childcare”*. The proposed development involves ‘multi-unit housing’ and ‘retail’ uses and is therefore consistent with the land use control.

7.4.3 BUILDING HEIGHT CONTROLS

Section 5.2.5 of Master Plan 2030 specifies a maximum building height of 10-storeys across Site 53. As described in Section 6.2.4 of this Report, the proposed development exceeds the maximum building height controls specified in Master Plan 2030, by one-storey on the West Building and five-storeys on the East Building.

Section 4.6.4 of Master Plan 2030 allows some minor flexibility in the application of the ‘building height controls’ where:

- *“...special site conditions make strict compliance with the controls unworkable;*
- *there are demonstrable improvements to urban form and height transition;*
- *resident amenity in terms of privacy and solar access is not adversely affected;*
- *there is no impact on public open space and parklands”.*

In that regard, the proposed increase in building height is considered reasonable in this instance for the following reasons:

- The location and orientation of the proposed built form relates directly to the site conditions, maximising the amount of solar access to residential apartments, private and communal open space, by placing a lower scale building to the north-east of the site, and the tallest building behind it to the south-east.
- The proposed built form results in a significant improvement to the internal amenity of the residential apartments, in particular outlook and solar access, as well as the amenity and usability of the communal open space.
- The proposal provides more slender and varied building forms, when compared to those envisaged in Master Plan 2030, which provide a successful urban response and greater level of amenity.
- The variation in height allows for a natural transition from the approved 35-storey ‘Opal Tower’ (Site 68) and 30-storey ‘Australia Towers’ (Site 3) on the eastern side of Australia Avenue, to the future desired lower scale character of the Central Precinct to the west.

- The additional height will not result in any detrimental amenity impacts (overshadowing, views or privacy) to surrounding development or parklands compared to a complying design. Nor will the extent of the non-compliance result in any adverse visual impact on the locality in the context of existing and future development at Sydney Olympic Park.

7.4.4 BUILDING ZONE AND SETBACK CONTROLS

Section 5.2.6 of Master Plan 2030 outlines the permissible building zone for Site 53, dictated by the minimum setbacks, existing easements, view corridor, trees for retention, and public land for dedication (refer Figure 14).

FIGURE 14 – CENTRAL PRECINCT BUILDING ZONES AND SETBACKS PLAN



As required by Master Plan 2030, the proposed development incorporates a 20 metre wide view corridor, 8 metre front setback, retention of the three existing mature Fig Trees, and part of the new development funded street on the western boundary of the site.

7.5 SYDNEY OLYMPIC PARK ACCESS GUIDELINES 2011

The purpose of the *Sydney Olympic Park Access Guidelines 2011* 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, temporary events, and parklands within Sydney Olympic Park.

The Guidelines are intended to provide assistance 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 Impact Statement has been prepared by Morris Goding Accessibility Consulting and is provided at **Appendix P**. 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.

7.6 SYDNEY OLYMPIC PARK MAJOR EVENT IMPACT ASSESSMENT GUIDELINES

The *Sydney Olympic Park Major Event Impact Assessment Guidelines* apply to all developments within Sydney Olympic Park and aim to mitigate the impacts from development on the capacity of Sydney Olympic Park to successfully host major events.

In accordance with the Major Event Impact Assessment Guidelines, the Traffic and Transport Impact Assessment included at **Appendix Q** has considered the proposed development's impact on Sydney Olympic Park during major event mode and confirms the development is not expected to create any adverse traffic and transport issues.

The Central Precinct will primarily be affected by major ANZ Stadium and Royal Easter Show closures for regional buses. The proposed development can accommodate the changes to access required as described in Section 4.4 Event Access and Closures, and shown in Figure 4.3 Event Access Plan in Master Plan 2030. The roadways surrounding the site are not subject to closures and access can be achieved along Fig Tree Drive using Australia Avenue, Bennelong Parkway, Sarah Durack Avenue, and Homebush Bay Drive. 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 proposed development locates the vehicular access point away from the affected streets, in accordance with Master Plan 2030.
- The proposal complies with the car parking rates, ensuring that sufficient parking is provided for residents, staff and visitors, so that public parking required during major events remain 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 event mode.

7.7 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 proposed Landscape Plan, prepared by 360 Degrees and included at **Appendix G**, has been designed and set out in accordance with the UEDM. The proposed 'New Street' layout and design, detailed in the Civil Drawings prepared by BG&E (Civil) consulting engineers (refer Appendix W), has also been prepared in accordance with the UEDM. Further details of these urban elements will be finalised prior to the issue of a construction certificate and will be consistent with the UEDM.

7.8 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 9 – SOP ENVIRONMENTAL GUIDELINES

KEY ISSUE	COMMENT
Water Conservation	The proposed development has been designed to maximise opportunities to incorporate water collection and recycling systems and avoid adverse impacts on water quality or quantity (refer Appendix V).
Energy Conservation	The proposed development meets the minimum requirements of <i>State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004</i> (refer Appendix H).
Material Selection	The proposed materials have been carefully selected in accordance with the Materials Selection Objectives outlined in the Guidelines (refer Appendix F).
Waste Management	Waste for demolition, construction and operation will be managed in accordance with the Waste Management Plan included at Appendix X .
Transport	The proposed development promotes sustainable transport alternatives by encouraging cycling and walking, and increasing patronage of existing public transport services. Furthermore, a new access road is provided in accordance with the SOP Master Plan 2030 connecting Fig Tree Drive with the Linear Park.
Pollution	Noise pollution impacts have been adequately addressed in the Noise and Vibration Assessment at Appendix R .
Biodiversity	A number of existing mature trees are to be retained and new planting is proposed throughout the site, which will encourage new ecosystems (refer Appendix G).
Public Open space	The proposed development provides a significant area of communal open space, as well as an embellished public plaza area on the corner of Australia Avenue and Fig Tree Drive and integration with the existing Linear Park adjacent to the rail corridor (refer Appendix G).

7.9 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.*
- *Minimise volume and frequency of stormwater discharge from hardstand areas such as paving, driveways and car parks, and maximise quality of any stormwater discharge.*
- *Water conservation.*
- *Riparian protection.*

A Stormwater Management Strategy has been prepared by BG&E (Civil) engineering consultants and is included at **Appendix V**. The Report considers the stormwater and water sensitive urban design initiatives employed by the proposed development to maximise water conservation, including the use of rainwater tanks, harvested roof areas, extent of native planting, flow rates of taps, showers, and the number of car washing bays provided.

7.10 DEVELOPMENT NEAR RAIL CORRIDORS & BUSY ROADS - INTERIM GUIDELINE 2008

The *Development near Rail Corridors and Busy Roads - Interim Guideline (2008)* was prepared to support specific rail and road provisions of *State Environmental Planning Policy (Infrastructure) 2007*. The Guideline outlines matters for consideration for developments in, or adjacent to, rail corridors and busy roads. The objective of the Guideline is to protect the safety and integrity of key transport infrastructure from adjacent development.

The proposed development has been designed with careful consideration of the potential impacts on the adjacent Olympic Park Rail Corridor. The following technical documentation has been prepared, in accordance with the Guideline, to demonstrate the proposed development will have no impact on the ongoing operation or use of the Olympic Park Railway during the construction or operation phases:

- Reflectivity Assessment, Cermak Peterka Petersen and included at **Appendix M**;
- Noise and Vibration Assessment, prepared by Renzo Tonin and Associates and included at **Appendix R**;
- Geotechnical Investigation, prepared by Douglas Partners and included at **Appendix T**; and
- Construction Management Plan, prepared by Mirvac Construction and included at **Appendix Z**.

8 Environmental Assessment

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

8.1 ENVIRONMENTAL AMENITY

As described in the following sections, the proposed development achieves a high level of environmental amenity, whilst minimising impacts on adjacent properties.

8.1.1 VENTILATION

A Natural Ventilation Study has been prepared by Cermak Peterka Petersen (CPP) and is included at **Appendix I**. In accordance with the Apartment Design Guide (ADG), analysis has shown that a total of 68% of the 320 apartment units in the first nine storeys of the proposed development are fundamentally structured to allow for natural ventilation.

Of the total compliant apartments, 25% include operable windows at building indentations with a minimum opening area of 0.4 m², which allow for provision of suitable flow circulation in the apartment volume. Ten percent of the compliant apartments have external vertical fins at effective locations. One percent of the compliant apartments include those with operable skylights or roof ventilators integrated at effective locations.

8.1.2 WIND

A Wind Assessment has been prepared by Cermak Peterka Petersen (CPP) and is included at **Appendix L**. The assessment provides an opinion of the impact of the proposed development on the pedestrian level local wind environment in and around Site 53, and concludes that from a comfort perspective, wind conditions around the site are expected to be suitable for use as a public access-way without any additional wind mitigation measures.

In summary, the wind climate around Sydney Olympic Park is relatively mild and all the areas around the proposed development are expected to be classified as suitable for use as a main public access-way from a comfort perspective. The wind flow patterns in and around the development are complex and will be highly sensitive to wind direction.

Due to the lack of shielding from upstream buildings to the south-east, wind from this direction east will stagnate on the exposed façades and accelerate down and around the windward corners creating local windier conditions from downwash. The downwash flow is not expected to be an issue for the south side where the articulation and podium roof will redirect the flow thereby protecting pedestrians.

Wind conditions along Australia Avenue, close to the south-east corner of the southeast tower, are likely to experience strong wind conditions during strong winds from the south. These are expected to be accentuated with the local topography rising to the north, and the presence of the tall towers to the north-east impacting on the local wind flow pattern. Wind conditions here are expected to be suitable for pedestrian walking from a comfort perspective and approach the acceptable limit from a safety perspective. The setback of the building from the existing pavement and the established landscaping in this area will offer some protection to pedestrians in this area.

Winds from the west are directed more to the corner of the building thereby reducing downwash flow. Pressure driven flow will create a steady local jet of air between the western buildings. This type of pressure driven flow induces strong winds between any closely spaced buildings with the windiest conditions where the towers are closest together. The spacing is such that the flow between the towers will be constant rather than turbulent.

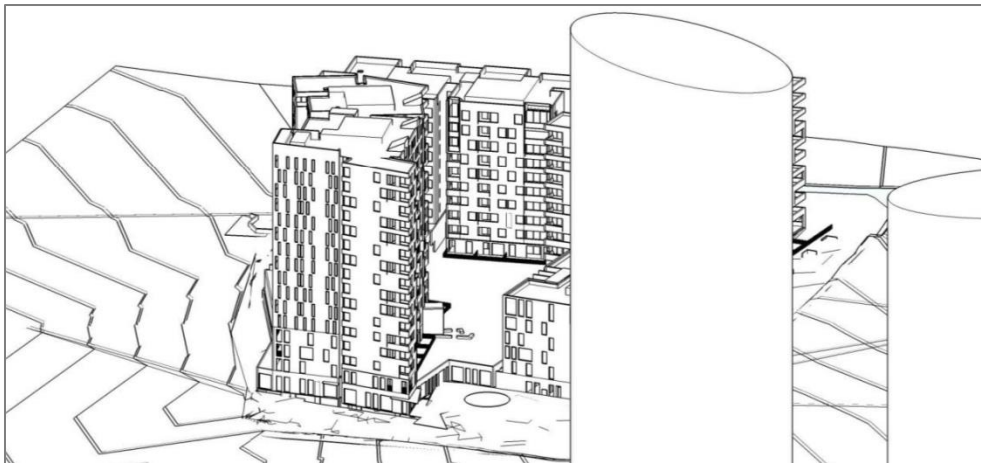
8.1.3 SOLAR ACCESS

An expert opinion regarding Solar Access has been prepared by Steve King and is included at **Appendix I**. The expert opinion was prepared to verify the analysis of solar access amenity compliance with the *Sydney Olympic Park Master Plan 2030* controls and the Apartment Design Guide.

The expert opinion confirms the proposed development has been carefully designed to maximise solar access to residential apartments, private and communal open space. The site massing responds to the solar access opportunity from the north by placing a smaller, lower building towards the north-east corner of the site, and the tallest building behind it to the south-east. An L-shaped block nearest Fig Tree Drive presents the maximum face to the north and east, while a remaining building in the south-west corner of the site presents its longest elevation with a northerly bias, to the gap between the two other tall buildings.

To verify the solar access amenity compliance a 3D digital model and computer generated projections known as 'views from the sun' taken at half hour intervals were prepared (refer Figure 15). The analysis confirms the proposed development achieves 298 (70.6%) out of 422 apartments with a minimum 2 hours of effective sun access to living areas, despite extensive overshadowing caused by the existing residential tower on Australia Avenue (Site 3).

FIGURE 15 – VIEWS FROM SUN



PICTURE 5 – 9AM

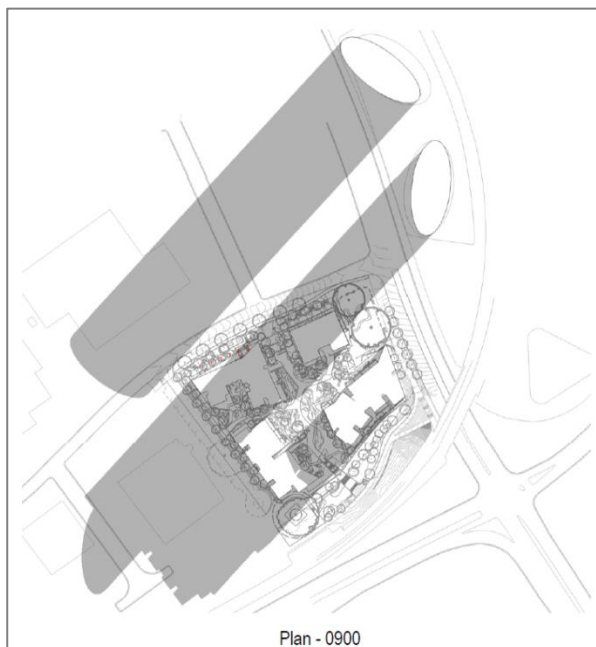


PICTURE 6 – 12PM

8.1.4 OVERSHADOWING

Shadow studies have been prepared by BVN and are included at **Appendix F**. The studies demonstrate that the shadowing caused by the proposed development will primarily fall on the adjacent Olympic Park Railway corridor, Sarah Durak Avenue and Australia Avenue. The studies also demonstrate that, despite the significant overshadowing from the existing residential towers on Australia Avenue (Site 3), the proposed residential buildings and communal open space receive a significant amount of solar access between 9am and 3pm.

FIGURE 16 – SHADOW STUDIES



PICTURE 7 – 9AM



PICTURE 8 – 12PM



PICTURE 9 – 3PM

8.1.5 ODOUR

An Odour Assessment has been prepared by Pacific Environment Limited and is included at **Appendix N**. The Assessment details the likely impacts on the amenity of future residents, visitors, and employees at Site 53 from the nearby Homebush Liquid Waste Treatment Plant (LWTP) operated by *Transpacific Industries Pty Ltd*.

Pacific Environment Limited previously prepared an Odour Assessment relating to the proposed Carter Street Urban Activation Precinct, located adjacent to the existing LWTP. The '*Carter Street Odour Assessment*' characterised the LWTP's potential odour impacts across the extent of the Sydney Olympic Park region and its results have been further analysed by Pacific Environment Limited to assess the likely impacts on Site 53.

The Homebush Bay LWTP operates under Environment Protection Licence (EPL) 4560. Odorous emissions are controlled by the odour control furnace (OCF) and main thermal oil heater (MTOH). When the OCF is not operational, the carbon bed filter (S851) is used as backup control to treat odorous emissions along with the MTOH.

To characterise the odour emissions from the LWTP when it is operating as normal and during worst case emissions, four scenarios were modelled, namely:

- Scenario 1 – Normal operations with the OCF operating (S851 not operating)
- Scenario 2 – Worst case operations with OCF operating (S851 not operating)
- Scenario 3 – Normal operations with S851 operating (OCF not operating)
- Scenario 4 – Worst case operations with S851 operating (OCF not operating)

Under Scenarios 1-3 described above, odour dispersion modelling predicts that the odour performance criterion of 2 OU does not extend to Site 53. Under Scenario 4 modelling, the 2 OU odour performance criterion is predicted to be experienced (however not exceeded) in the vicinity of Site 53.

It is important to note that Scenario 4 represents the 'worst-worst-case' scenario where odour emission rates from the LWTP combine with worst case meteorology in terms of odour dispersion. The likelihood of all these variables aligning as an operational reality is considered to be extremely low.

Further, it is noted that the EPA has required the LWTP to complete additional odour mitigation measures since the production of the '*Carter Street Odour Assessment*', including:

- Sealing identified leaks from Degrit Building and Process Tanks/Equipment to reduce fugitive emissions;
- Repairing corroded tank covers;
- Reinstating negative air condition in the Degrit Building which was found not to be operating effectively;
- Residue conveyor replacement for better air extraction;
- Deodorising misting system install above bins; and
- Air ducting added to receival tanks.

While the status of these improvements is not known, it is considered that any additional measures would reduce the 'worst-worst case' predictions (along with all other Scenario impacts). On this basis, it is considered that the risk of odour impacts on Site 53 from the LWTP under normal, and even upset, conditions is extremely low.

8.2 ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)

An Environmental Sustainability Development (ESD) Report has been prepared by Efficient Living and is included at **Appendix I**. The Report describes the proponent's approach to integrating energy efficient technologies and sustainable practices in the design, construction and ongoing operation phases of the development. The Report utilises the four areas of focus identified Mirvac's *'This Changes Everything'* sustainability plan, as follows:

- *Re-imagining Resources – to be net positive by 2030;*
- *Shaping the Future of Place – to create a framework for the future of place by 2015;*
- *Smarter Thinking – to create the first smart portfolio by 2020; and*
- *Enriching Communities – to demonstrate community investment within and beyond our boundaries by 2018.*

In addition to achieving the minimum BASIX energy efficient requirements, the proposed development incorporates the following ESD initiatives:

- Building orientation which maximises solar access to apartments, providing passive heating and reducing the reliance on mechanical heating systems.
- Building design which maximises natural ventilation to apartments, reducing reliance on mechanical ventilation and cooling systems;
- Provision of efficient fixtures to improve the heating and cooling efficiencies of apartments;
- The use of water efficient fixtures, rainwater re-use tanks, and connection to Sydney Olympic Park's Water Reclamation and Management Scheme (WRAM) to improve water efficiency;
- Provision for communal room, children's play spaces, and integrated communal open space to encourage community interaction and active recreation; and
- Provision for ample bicycle parking and car share spaces to encourage sustainable transport methods.

8.3 NOISE AND VIBRATION

An Acoustic Assessment has been prepared by Renzo Tonin and Associates and is included at **Appendix R**. Noise surveys were conducted between 5 August and 13 August 2014 at the development site to determine the existing levels of rail noise and vibration affecting the site. These levels were used to predict noise levels within the residential dwellings, and then assessed against the recommended internal noise and vibration criteria for the project.

The Assessment found the following potential acoustic and vibration issues associated with the subject site and proposed development:

- Rail Noise and Vibration associated with the CityRail Olympic Park Line;
- Traffic Noise associated with Australia Avenue and Sarah Durack Drive; and
- Existing mechanical plant located on neighbouring apartment buildings.

The study of external noise and vibration intrusion into the subject development found that appropriate controls could be incorporated into the building design to achieve a satisfactory accommodation environment consistent with the intended quality of the building and relevant standards. In order to control airborne train noise intrusion and comply with the nominated criteria, glazing recommendations have been made.

In addition, in-principle design recommendations have been made in relation to noise emission from mechanical plant and equipment to assist with the design of acoustic treatment in accordance with the relevant acoustic criteria determined in this report.

8.4 TRANSPORT AND ACCESSIBILITY

A Traffic and Transport Impact Assessment has been prepared by GTA Consultants and is included at **Appendix Q**. The assessment details the existing transport and accessibility conditions, the development proposal, and provides a traffic impact, parking and transport assessment. A summary of the key considerations and findings is provided below and discussed in further detail in the preceding chapters of this Report.

- The subject site is located within walking distances to existing public transport services and other amenities and services.
- The site is well serviced by public transport.
- The existing use on the site has been estimated to generate at least 74 vehicles per hour (vph).
- The proposed development is expected to generate approximately 111 vph using traffic generation rates provided by RMS. As such, the net additional traffic is 37 vph.
- A new access road is proposed to be located on the western side of the site and would connect to Figtree Drive consistent with the *SOP Master Plan 2030*.
- Vehicle access to the proposed development would be located on this new access road.
- Intersections in the vicinity of the subject site would be upgraded, by others, to accommodate future traffic arising from the redevelopment of the wider Sydney Olympic Park area, including Site 53, as envisaged in *SOP Master Plan 2030*.
- From a traffic perspective, the proposed development is not expected to create any adverse traffic and transport issues with the Sydney Olympic Park town centre operating in major event mode.
- Under the *SOP Master Plan 2030*, the proposed development is permitted to provide a maximum of 654 car parking spaces. It is proposed to provide 501 car parking spaces. The proposed parking is therefore satisfactory.
- It is noted that the proposed parking provision also complies with the Apartment Design Guide parking requirements.
- The proposed development is required to provide 604 bicycle parking spaces. It is proposed to comply with this requirement.
- The design of car and bicycle parking spaces and loading bays are proposed to comply with design requirements set out in the relevant Australian Standard.
- The proposed development would generate approximately 92 train trips per peak hour, approximately 20 bus trips per peak hour and 86 pedestrian trips per hour. These would be accommodated by existing infrastructures.
- A green travel plan would be prepared and implemented before the occupation of the development. The green travel plan would include site specific measures to achieve mode share splits aspired in *SOP Master Plan 2030*.

8.5 UTILITIES

As the site is located within an established area, public utility infrastructure, including water, electricity, natural gas and sewage disposal, is readily available. The Utilities and Services Strategy included at **Appendix Y** details the necessary steps to be pursued in order to connect the proposed development to public utility infrastructures. These are summarised as follows:

- *Sydney Water* - Mirvac and its Water Services co-ordinator (RMA Infrastructure) met with Sydney Water on 14 May 2015 to introduce the project and ascertain authority requirements in advance of a formal lodgement of a 'Feasibility request' and 'section 73 certificate'. Sydney Water has issued a feasibility letter (Case number 145002) dated 24 July 2015 in relation to the project.
- *Sydney Olympic Park Authority (SOPA)* - Mirvac has had a number of meetings with SOPA to ascertain the capacity of its assets and SOPA's 'Stormwater management and water sensitive urban design' policy which has guided the concept designs of the rainwater management system and stormwater management system by JHA (Hydraulic) consulting engineers and BG&E (Civil) consulting engineers respectively.
- *Ausgrid* - Mirvac has engaged Power Solution (Level 3 Accredited Services Provider (ASP)) to design and document three electrical sub-projects, including disconnection of existing chamber sub-station, connection of temporary builder's supply (for construction), and connection of two kiosk substations.
- *Jemena* - Jemena has confirmed on 15 June 2015 the availability of natural gas adjacent to the project. There are gas mains along Figtree drive and Australia Avenue and connection to these will be considered during detailed design.
- *National Broadband Network (NBN)* - NBN has confirmed availability of infrastructure to service the project and a Master Development Agreement (AYCA 2124MQ) was agreed to on 10 July 2015 between Mirvac and NBN.
- *Foxtel* - Foxtel has confirmed that the site, at this point in time, will need to be serviced by a satellite dish.

8.6 CONTRIBUTIONS

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

The planning agreement provides that the Developer (Mircvac Projects Pty Ltd) will be required to make monetary and 'works-in-kind' contributions to Sydney Olympic Park Authority as part of the development proposal. These include:

- Construction and dedication of half of 'New Street', located on the western boundary of the site;
- Construction and dedication of a retail lot with a minimum gross floor area of approximately 1,500m²;
- Construction and dedication of 3% of dwellings, for the purposes of affordable housing, in accordance with SOPA's 'Affordable Housing Guidelines';
- Relocation of a mature Fig Tree within the site surrounds; and
- Payment of infrastructure contributions in line with the *SOP Infrastructure Contributions Framework (ICF)* (updated March 2012).

8.7 SERVICING AND WASTE

A Waste Management Plan has been prepared by Elephant's Foot and is included at **Appendix X**. The Waste Management Strategy is summarised as follows:

- *Residential Waste:* Each building is supplied with an eDiverter system which comprises of a single waste chute fitted with a recycling diversion. Garbage discharges into 660L Mobile Garbage Bins (MGB) which are not compacted, and recycling (comingle) into 660L MGBs which are also not compacted. The discharge is located in the waste rooms for each building.

All residential waste and recycling bins from each of the four waste chute discharge rooms will be transferred to the waste storage room on Level 00 situated beneath the Eastern Building. The waste storage room connects directly to the loading bay where it will be collected by Council.

- *Bulky Goods:* Provision has been made for a bulky goods storage room within close proximity to the loading area on Level 00. The room meets council requirements for an allocated minimum space of 4m³ per 100 units. The storage area is readily accessible to all residents for use via coordination with the building caretaker/ management.
- *Retail Waste:* All retail waste and recycling will be stored in the retail waste room. Bins may be transferred to the loading area via the rear corridor, car park and ramps. Collections will be completed by a private contractor. Subject to negotiations with the contractor and relevant safety assessments the bins will either be transferred to the loading area by the caretaker before or on the day of collection.

8.8 TREE PROTECTION

An Arboricultural Impact Assessment has been prepared by Arboreport and is included at **Appendix O**. The Report provides an assessment of the impacts of the proposed development on the 126 trees located within the site boundaries and wider construction zone. Of the 126 existing trees, 7 will be unaffected by the development, 5 are located adjacent to the proposed development and the proposed construction will provide a major encroachment within the Tree Protection Zone, and 114 are located within the proposed building footprint (refer Figure 17).

The Report provides recommendations for the removal or retention of trees including specific tree protection measures required to reduce the anticipated impacts from the proposed construction on those trees proposed to be retained. Recommendations for replacement planting of locally native or deciduous canopy trees to offset the loss of trees have also been provided and accommodated for within the Landscape Design.

A Tree Transplanting Plan of Management has been prepared by Tree Transplanters Australia and is also included at **Appendix O**. The Plan of Management describes the transplantation and relocation of the mature Moreton Bay Fig located on the western boundary of the site.

The Plan of Management has been submitted for consideration; however a separate local development application will be lodged with *Sydney Olympic Park Authority* for approval for the transplant works, including the preparation, excavation, horizontal drilling, installation and construction of lifting structure, support structure, lifting, relocation, re-planting and establishment maintenance of the nominated tree.

8.9 CONSTRUCTION MANAGEMENT

A Construction and Environmental Management Plan (CEMP) has been developed by *Mirvac Constructions Pty Ltd* and is included at **Appendix Z**. The CEMP outlines the actions and staging of construction deemed necessary to address the concerns of neighbouring properties and authorities, whilst maintaining a safe and productive construction site.

The construction works required can be broadly divided into the following phases:

1. Site establishment / enabling works;
2. Demolition;
3. Excavation and basement construction;
4. Building structure works;
5. Façade works;
6. Internal finishing works and services; and
7. Road, infrastructure, landscaping and public domain works.

The CEMP details procedures and actions to be adhered to throughout the construction period relating to stormwater management, construction waste management, noise and vibration management, erosion and sediment control, air quality, hazardous materials, sustainability, workplace risk management, community consultation and dispute resolution.

A Construction Traffic Management Plan (CTMP) has been prepared by GTA Consultants and is included at **Appendix Z**. The CTMP has been prepared to document the proposed construction activities and associated construction traffic management measures necessary to facilitate the proposed development. The key findings are summarised as follows:

- Construction vehicle movements to and from the site can be satisfactorily accommodated by the surrounding road network.
- Once the development is approved, Mirvac will apply to the relevant authorities for a works zone on Figtree Drive. The provision of this works zone would involve the removal of seven car parking spaces along Figtree Drive abutting the site. The works zone would not result in any road safety issues or traffic capacity reductions.
- Traffic control plans have been provided which will not only assist vehicles entering the works zone but would also alert other drivers that construction traffic movements are taking place.
- Most vehicles associated with the construction of the mixed use development at 2 Figtree Drive would access the site via Homebush Bay Drive and Australia Avenue.
- A number of driver protocols would be established as part of the site induction procedure for drivers to ensure the safety of motorists, pedestrians and cyclists.
- Sydney Olympic Park is an event centre and frequently hosts conference, exhibition, sporting and music events. These larger events are however typically held on weekends or weekday evenings and would occur outside the permitted work hours for the site.
- The site is located in close proximity to Olympic Park Station which is served by high frequency public trains between the site and Lidcombe. Some car parking could be provided on-site, whilst parking stations are provided in the vicinity of the site. Subsequently, the traffic impact of construction staff would be low (i.e. anticipated to be less than the current site and the proposed use).

Overall, the proposed traffic management measures will adequately address potential traffic related implications associated with the proposed construction activities.

8.10 HERITAGE ASSESSMENT

A Heritage Impact Statement has been prepared by Urbis and is included at **Appendix U**. The Heritage Impact Statement was prepared to address the potential visual impact of the proposed high rise development on heritage items in the vicinity of the site, including the Newington Armament Depot and Nature Reserve.

The subject site is not a listed heritage item, and does not contain any listed heritage items. There are no listed heritage items located within the immediate vicinity of the subject site.

The closest state significant item, being the *State Abattoirs Heritage Conservation Area (HCA)* is located approximately 280 metres to the northwest of the subject site. An assessment of potential sight lines between the subject site and the HCA shows that the proposed redevelopment of the subject site will have only a minor degree of visibility from the south east corner of the HCA. This visibility is considered to have a negligible impact due to the HCA already being surrounded by multi-storey development, as well as the substantial distance between the HCA and the subject site.

The proposed redevelopment of the subject site will therefore have no greater visual impact on the HCA than the current surrounding development does. The HCA is located in an area that has already been, and will continue to be, subject to a high degree of development, and this has already compromised the site's immediate setting to some degree.

The closest State Heritage Register (SHR) listed heritage item to the subject site is the Newington Armament Depot and Nature Reserve, which is located approximately 1.8 kilometres to the north of the subject site, at its closest point. An assessment of potential sight lines between the subject site and the Depot and Reserve shows that the proposed building will not be visible from within the SHR curtilage. This is due primarily to the distance between the site and the item, but is also a result of the sloping topography and dense vegetation of the Newington Depot site.

Additionally, the Depot and Reserve is surrounded on its eastern and southern sides by extensive development. As discussed above with regard to the State Abattoirs HCA, the proposed works are considered to have no greater potential visual impact on the Reserve and Depot than the current surrounding development does.

Due to their distance from the subject site, there will be no visual impacts to any other state or locally listed heritage items in the general vicinity.

8.11 ARCHAEOLOGICAL ASSESSMENT

An Archaeological Assessment has been prepared by Urbis and is included at **Appendix U**. The assessment considers both Historic and Aboriginal archaeology, and advises on whether further archaeological investigation may be required at later stages of the project.

The subject site is located on land originally granted to Darcy Wentworth in 1811. He established a homestead, a horse stud and race track on his 920 acre property which remained in the Wentworth family until the early decades of the 20th century. The area has since been used by the State Abattoirs and brick works. During the 1980s-90s the subject site was developed and promoted as part of a 'technology park' called the Australia Centre. The site currently contains two buildings consisting of office/commercial and warehouse space, driveway, parking areas, paths and gardens. The buildings are located in the northern and eastern portions of the site with on-grade parking areas in the western and southern areas. The double storey, rendered concrete and glass offices were constructed in 1998 as the Corporate Headquarters for Homebush Bay and the NSW Lotteries Office.

Several archaeological surveys of the subject site have been undertaken. No evidence of Aboriginal occupation was located in the current or previous surveys of the site. Previous excavation of the site in 1997 revealed that the general topography had remained unimpaired, however the existing ground surface was largely an introduced, or reformed top soil. The implication from these excavations is that natural soil profiles were partially or completely eroded after European settlement, and were reformed or replaced in the 19th or early 20th centuries. It is therefore unlikely that evidence of aboriginal occupation would have survived on the site.

According to documentary and photographic evidence, it is unlikely that any development was undertaken on the subject site prior to the construction of the current 1998 buildings, apart from the addition of levelling material. Carney and Steele undertook a survey and test excavation on the site in 1997 and found that there was no evidence of previous structures or land use. It is unlikely that Wentworth's house was located on or in the vicinity of the subject site. The 1986 Fox survey suggests that the homestead was located where the current administration buildings are now constructed.

The subject site has been heavily modified as a result of construction of roads and footpaths on the site boundary and the construction of the current buildings and car parking on the site. The site has been benched to accommodate the slope. The landscaped areas of the site contain below ground irrigation and there are also a number of pits, electricity, communications, gas and water services present on the site. There is no evidence of previous structures, roads or topographic features. While evidence of Aboriginal or early European occupation of the site would be highly significant we have concluded that the site is considered to have no archaeological potential or significance.

No further approvals concerning Aboriginal or Historic archaeology are required.

9 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 10 – SECTION 79C ASSESSMENT

CONSIDERATION	COMMENT
Environmental Planning Instrument	As described in Section 6 and 7 of this Report, the proposed development demonstrates consistency with the relevant environmental planning instruments including strategic planning policy, State and local planning legislation, regulation and policies.
Draft Environmental Planning Instruments	There are no relevant Draft Environmental Planning Instruments applicable to the site.
Development Control Plans	As described in Section 7.4 of this Report, the proposed development achieves a high level of compliance against the relevant provisions of the Sydney Olympic Park Master Plan 2030.
Any Matters Prescribed by the Regulations	There are no matters prescribed by the regulations which relate to this proposal.
Likely Impacts of the Development	A detailed environmental assessment has been provided in Section 8 of this report. The proposed development will result in minimal environmental impacts, all of which can be mitigated through the recommendations outlined in the supporting technical documentation appended to this Report.
Suitability of the Site	The suitability of the site has been addressed in Section 2 of this Report. The site is ideally located in respect to public transport, open space and recreation, retail facilities, local services, healthcare services, and education and employment opportunities.
Any Submission made in accordance with this Act or the Regulations	All submissions will be considered following exhibition of the application.
The Public Interest	<p>The proposal provides many and varied public benefits to the local Sydney Olympic Park community, future residents of the development, as well as broader stakeholders, including:</p> <ul style="list-style-type: none"> ▪ Increased housing supply and diversity in an area accessible to public transport, community facilities, open space, healthcare services, and education and employment opportunities. ▪ A mix of housing types, with varying layouts and sizes, which will accommodate a variety of households and meet a range of needs. ▪ A high quality urban development, with a significant level of residential amenity including solar access, natural ventilation, access to communal open space, children's play spaces and communal facilities, as well as efficient and well-considered apartment plans.

CONSIDERATION	COMMENT
	<ul style="list-style-type: none"> ▪ An enhanced public domain, through the provision of improved streetscapes and footpaths, deep soil tree planting and landscaped setbacks, and retention and protection of mature vegetation. ▪ New public access in the form of the 'New Street', providing pedestrian and cycle connections from Fig Tree Drive through to the Central Precinct 'linear park' and beyond. ▪ Improved local amenity through the provision of a new retail lot, suitable for a small scale supermarket, to meet the needs of the local community. As well as an associated public plaza and visitor car and bicycle parking. ▪ An improved interface between the existing commercial uses to the west of the site and the recently approved and constructed high-density residential environment to the north-east and parkland environment to the south of the site. ▪ Increased patronage of existing public transport infrastructure and use of existing pedestrian and cycle routes, by locating residents and workers in an accessible area and encouraging the use of sustainable transport options. ▪ Best practice sustainability measures including double-glazing, efficient appliances and fixtures, use of low volatile organic compound materials, rainwater reuse tanks, and other water sensitive urban design measures.

10 Conclusion

This EIS has been prepared to assess the proposed mixed-use development of Site 53, 2 Fig Tree Drive, 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 of the *Environmental Planning and Assessment Act 1979*.
- Schedule 2 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 Clause 3, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*.

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 the supporting technical documentation appended to 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 proposal will result in positive economic impacts through the provision of direct and indirect employment, during both construction and operation.
- The proposal provides many and varied public benefits to the local Sydney Olympic Park community, future residents of the development, as well as broader stakeholders, including:
 - Increased housing supply and diversity in an area accessible to public transport, community facilities, open space, healthcare services, education and employment opportunities, that will contribute towards meeting the housing targets identified in *A Plan for Growing Sydney*.
 - A mix of housing types, with varying layouts and sizes, which will accommodate a variety of households and meet a range of needs, including one, two, and three-bedroom apartments, adaptable dwellings and affordable housing.
 - A high quality urban development, with a significant level of residential amenity including solar access, natural ventilation, access to communal open space, children's play spaces and communal facilities, as well as efficient and well-considered apartment plans.
 - An enhanced public domain, through the provision of improved streetscapes and footpaths, deep soil tree planting and landscaped setbacks, and retention and protection of mature vegetation.
 - New public access in the form of the 'New Street', providing pedestrian and cycle connections from Fig Tree Drive through to the Central Precinct 'linear park' and beyond.
 - Improved local amenity through the provision of a new retail lot, suitable for a small scale supermarket, to meet the needs of the local community. As well as an associated public plaza and visitor car and bicycle parking.

- An improved interface between the existing commercial uses to the west of the site and the recently approved and constructed high-density residential environment to the north-east and parkland environment to the south of the site.
- Increased patronage of existing public transport infrastructure and use of existing pedestrian and cycle routes, by locating residents and workers in an accessible area and encouraging the use of sustainable transport options.
- Best practice sustainability measures including double-glazing, efficient appliances and fixtures, use of low volatile organic compound materials, rainwater reuse tanks, and other water sensitive urban design measures.

Given the merits of the proposal, it is requested that the Minister (or his delegate) approve the proposal, subject to the mitigation measures outlined in the supporting technical documentation appended to this Report.

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Disclaimer

This report is dated September 2015 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 Mirvac Projects Pty Ltd (**Instructing Party**) for the purpose of SSD Application (**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.

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