



Planning &
Infrastructure

**MAJOR PROJECT ASSESSMENT:
Stages 2 and 3, Site 3 Mixed Use
Development
Australia Avenue, Sydney Olympic Park
(MP 10_0027)**



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

January 2012

ABBREVIATIONS

CIV	Capital Investment Value
Department	Department of Planning & Infrastructure
DGRs	Director-General's Requirements
Director-General	Director-General of the Department of Planning & Infrastructure
EA	Environmental Assessment
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
MD SEPP	State Environmental Planning Policy (Major Development) 2005
Minister	Minister for Planning and Infrastructure
PAC	Planning Assessment Commission
Part 3A	Part 3A of the <i>Environmental Planning and Assessment Act 1979</i>
PEA	Preliminary Environmental Assessment
PFM	Planning Focus Meeting
PPR	Preferred Project Report
Proponent	Site 3 Development Company Pty Ltd
RtS	Response to Submissions

Cover Photograph: Photo montage - view from the east (Source: *BatesSmart*)

© Crown copyright 2012
Published January 2012
NSW Department of Planning & Infrastructure
www.planning.nsw.gov.au

Disclaimer:

While every reasonable effort has been made to ensure that this document is correct at the time of publication, the State of New South Wales, its agents and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance upon the whole or any part of this document.

EXECUTIVE SUMMARY

This report is an assessment of an application by Site 3 Development Company Pty Ltd (the proponent), seeking approval for the construction of Stages 2 and 3 of the mixed use development at Site 3, Sydney Olympic Park, pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The development site (known as Stages 2 and 3, Site 3) is currently being utilised temporarily for car parking and storage associated with the construction of Stage 1 of Site 3. The site has a maximum area of 10,480 sqm and is located within the Parkview Precinct in Sydney Olympic Park, within the Auburn Local Government Area. The site is located on the eastern side of Australia Avenue and to the west of the railway line.

The project application seeks approval for the construction of a mixed use podium with retail, gymnasium and communal facilities; two residential towers to provide 587 residential units; 806 car parking spaces and 245 bicycle spaces in a basement and ground floor car park. The proposal also includes provision of open space areas, site preparation and excavation work and landscaping works.

The Capital Investment Value (CIV) for the project is \$174.36 million.

Site 3 is zoned B4 (Mixed Use), under State Environmental Planning Policy (Major Development) 2005 (MD SEPP). The project consists of residential, commercial and retail land uses, which are permissible under the MD SEPP.

The Environmental Assessment was exhibited between 6 July 2011 until 5 August 2011. The department received six submissions from public authorities, including the Sydney Olympic Park Authority, Roads and Maritime Services, RailCorp, Transport for NSW and Sydney Water, the Office of Environment and Heritage, and six submissions from the public. Matters raised within the submissions related to: the design; further clarification regarding non-compliance with development standards and staged development consent; consideration of existing RailCorp infrastructure; adequacy of public transport; number of car parking spaces; and vehicle access arrangements.

On 28 September 2011, the proponent submitted a Preferred Project Report (PPR) and final Statement of Commitments. The PPR was provided in response to the matters raised in submissions received during public exhibition of the proposal.

The department has assessed the merits of the proposal, and considers the key issues to be: consistency with the staged development consent; built form and urban design; residential and environmental amenity; transport and traffic impacts; and developer contributions. These issues have been addressed in detail and the department is satisfied they can be mitigated and managed.

The department is further satisfied that the subject site is suitable for the proposed development and that it will provide housing and further employment to support the future growth within Sydney Olympic Park, and is consistent with key strategic planning and other policy objectives. The department therefore considers the project to be in the public interest and recommends that the project application be approved, subject to conditions.

TABLE OF CONTENTS

1.	BACKGROUND	1
	1.1 Site Location and Description	1
	1.2 Surrounding Development	3
	1.3 Previous Approvals	5
2.	PROPOSED PROJECT	6
	2.1. Project Description	6
	2.2. Project Need and Justification	8
3.	STATUTORY CONTEXT	8
	3.1. Major Project	8
	3.2. Delegation	9
	3.3. Permissibility	9
	3.4. Environmental Planning Instruments	9
	3.5. Objects of the EP&A Act	10
	3.6. Ecologically Sustainable Development	10
	3.7. Statement of Compliance	11
4.	CONSULTATION AND SUBMISSIONS	11
	4.1. Exhibition	11
	4.2. Public Authority Submissions	12
	4.3. Public Submissions	15
	4.4. Proponent's Response to Submissions	15
5.	ASSESSMENT	16
	5.1. Consistency with the Staged Development Consent	16
	5.2. Built Form and Urban Design	18
	5.3. Environmental and Residential Amenity	27
	5.4. Transport and Traffic Impacts	34
	5.5. Development Contributions	37
6.	CONCLUSION	37
7.	RECOMMENDATION	38
APPENDIX A	ENVIRONMENTAL ASSESSMENT	39
APPENDIX B	PROPONENT'S RESPONSE TO SUBMISSIONS	40
APPENDIX C	SUBMISSIONS	41
APPENDIX D	CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS	42
APPENDIX E	DIRECTOR-GENERAL'S CERTIFICATE	52
APPENDIX F	RECOMMENDED CONDITIONS OF APPROVAL	54

1. BACKGROUND

Site 3 Development Company Pty Ltd (the proponent) proposes to construct Stages 2 and 3 of a mixed use development at Site 3, 1-7 Australia Avenue, Sydney Olympic Park. The project location is shown in Figure 1.

Figure 1: Project location

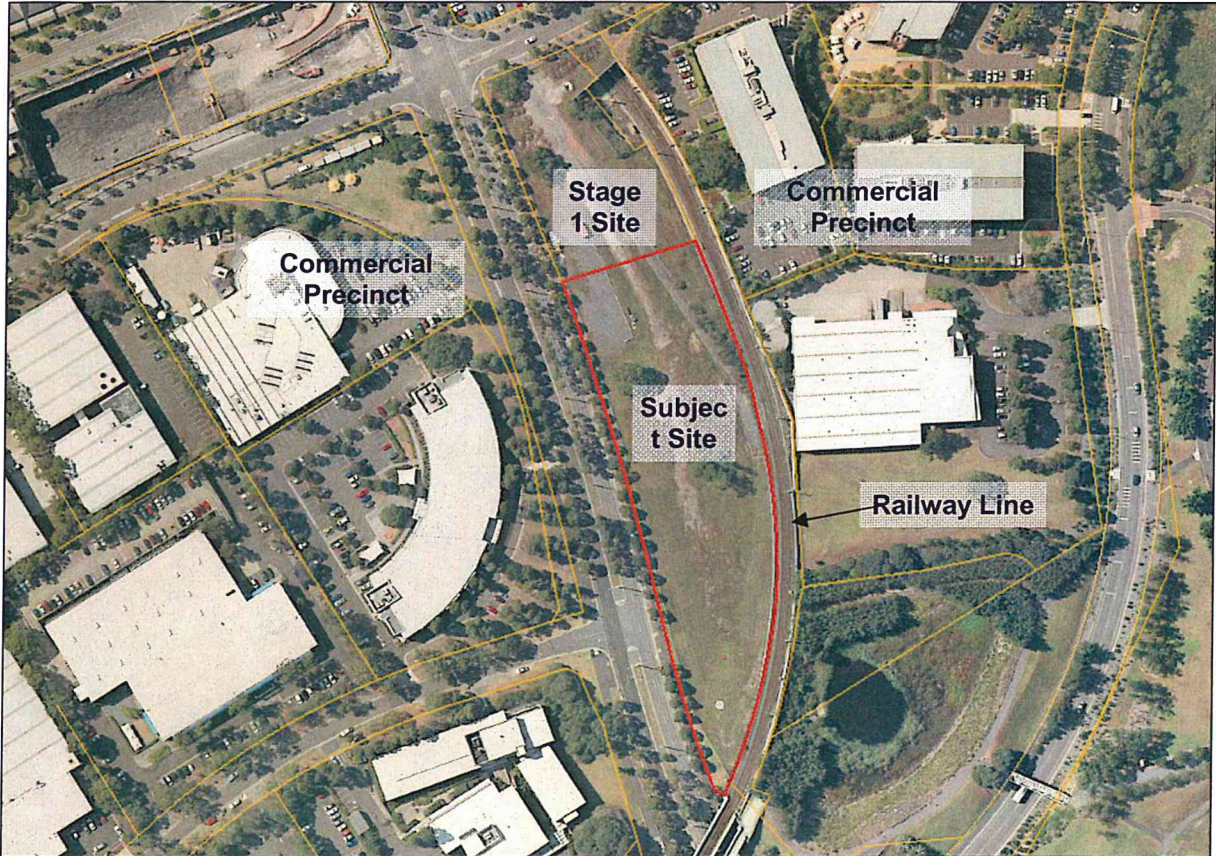


Stages 2 and 3 comprise construction of: a mixed use podium with retail, gymnasium and communal facilities; two residential towers to provide 587 residential units; 806 car parking spaces and 245 bicycle spaces in a basement and ground floor car park. The proposal also includes provision of open space areas; site preparation and excavation works; and landscaping works.

1.1 Site Location and Description

The site (Lot 2 DP 1134933) comprises the southern and central portions of Site 3, as identified in Sydney Olympic Park Master Plan 2030 (Master Plan 2030), at Sydney Olympic Park and is 1.048 hectares in size. The site is located within the local government area of Auburn and is owned by the Sydney Olympic Park Authority (SOPA). An aerial view of the existing site is shown in Figure 2. The lot adjoining the site immediately to the north forms part of Site 3 and Stage 1 of development for Site 3 is currently under construction on this lot.

Figure 2: Aerial view of existing site



Site 3 is bound by Australia Avenue to the west, Parkview Drive to the north and the Olympic Park railway line along the southern and eastern boundaries. The site falls significantly from the north-west to the south-east, and is currently vacant land, being temporarily used for car parking and storage associated with the construction of Stage 1 (see Figure 3).

Figure 3: Site currently being used for temporary storage and car parking



The site is located within the broader Sydney Olympic Park and is within walking distance of the Olympic Park Railway Station, sporting and recreational facilities and the emerging commercial district. The site is located within the Parkview Precinct of the Master Plan 2030 (see Figure 4).

Figure 4: Parkview precinct plan - Master Plan 2030



1.2 Surrounding Development

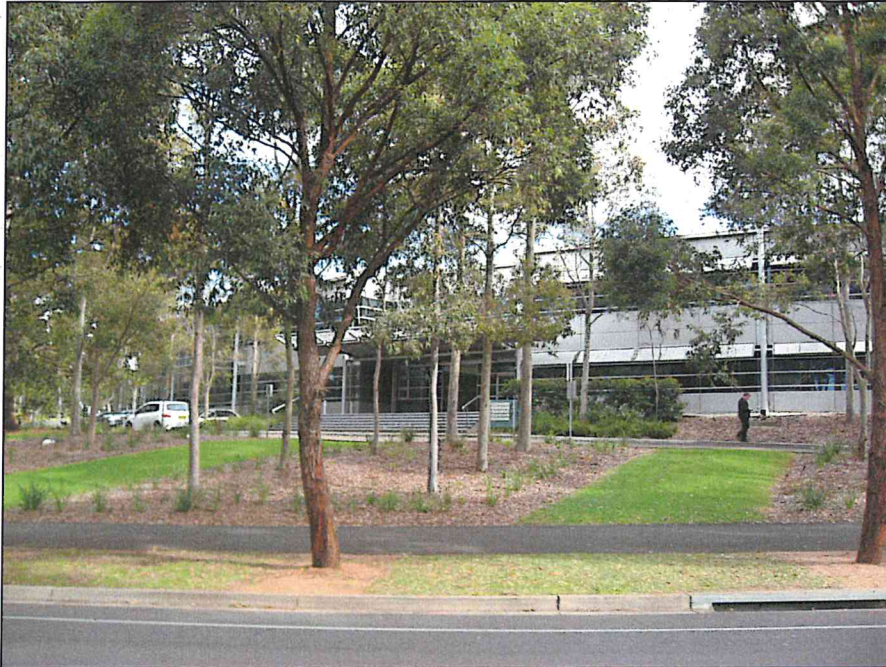
Located immediately to the north of the site is Stage 1 of the Site 3 development comprising retail/commercial, car parking and child care centre on the ground floor podium and two residential towers of 16 and 24 storeys; to the east and south is the Olympic Park railway line; and to the west is a two storey educational building and a warehouse building forming part of the commercial precinct (see Figures 5 to 7). The area to the west is identified as suitable for eight to 10 storey commercial buildings in Master Plan 2030.

Figure 5: Stage 1 currently under construction



Figure 6: Railway corridor



Figure 7: Two storey commercial building to the west

1.3 Previous Approvals

On 21 December 2005, the then Minister for Planning, granted staged development consent for four mixed use residential towers (DA 246-10-2004) across Site 3. The staged development application was lodged prior to the commencement of Part 3A of the Act and therefore was determined under Part 4 of the Act pursuant to the savings and transitional provisions for pending applications.

The staged development consent comprised:

- (1) four towers identified as:
 - a) North buildings (A and B)
 - b) Centre buildings (C and D)
 - c) Centre building (E)
 - d) South building (F)
- (2) land uses of "residential", "live work", "community facility", "childcare centre" and "retail";
- (3) land uses totalling no more than 685 units (inclusive of 673 residential units, 6 "live/work units", 4 retail units (if all proposed retail uses are consistent with relevant provisions of the SOPA Master Plan), 1 childcare centre and 1 community facility) with;
- (4) a maximum number of 1360 bedrooms for residential development (including all "live/work" units);
- (5) a total Gross Floor Area of no more than 79 053 square metres and maximum floor plates; and
- (6) car parking with a total number of vehicles not exceeding 930 spaces.

A project approval for Stage 1 consisting of the North buildings (A and B) was approved by the Minister for Planning on 21 June 2007. This project is currently under construction and interim occupation certificates have recently been issued for the residential components of the North building.

The subject proposal seeks to develop the remainder of the site for residential, retail and commercial purposes. Whilst, the staged development consent provided the above parameters for redevelopment of the site, including indicative building envelopes (see Figure 8), Master Plan 2030 has since provided more recent controls as a result of strategic planning undertaken for the broader Sydney Olympic Park precinct. The proposal is not bound by the staged development consent as the proposal is considered to be a new project given the substantial departures from the staged development scheme.

Figure 8: Indicative building form under staged development consent



2. PROPOSED PROJECT

2.1. Project Description

The project application seeks approval for the construction of Stages 2 and 3 of Site 3, Sydney Olympic Park, comprising:

- construction of:
 - a two storey mixed use podium with commercial, retail, gymnasium and communal resident facilities with a total GFA of 2,090 sqm
 - a 24 storey tower and a 29 storey tower to provide a total 587 residential units with a total GFA of 54,176 sqm
 - 806 car parking spaces and 245 bicycle spaces in a basement car park
- provision of open space areas;
- site preparation and excavation works; and
- landscaping works.

The project layout is shown in Figures 9 to 11. The key components of the project are listed in Table 1.

Figure 9: Project layout (ground floor)

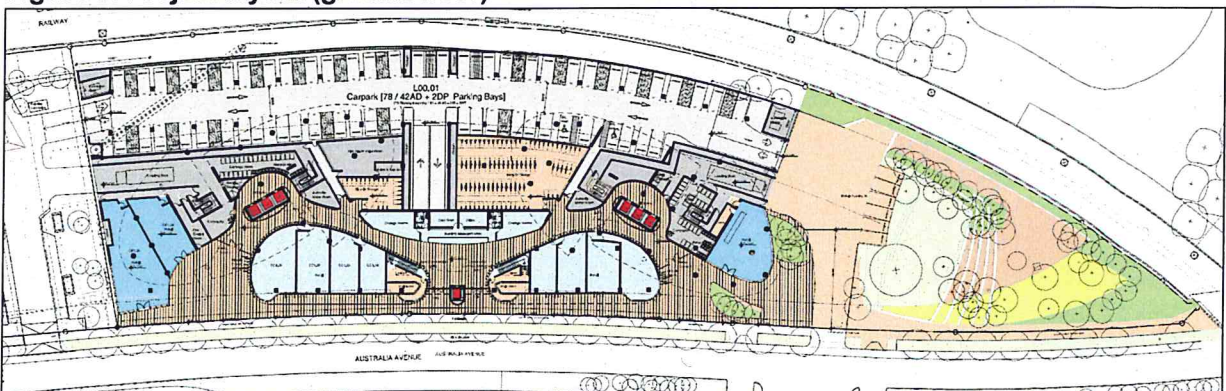


Figure 10: Project layout (podium level)

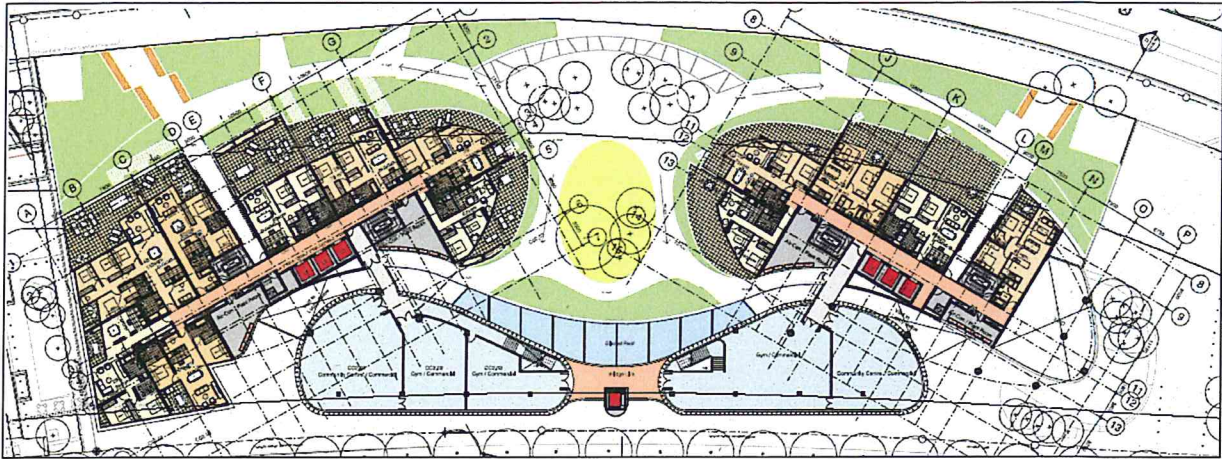


Figure 11: Project layout (typical residential tower level)

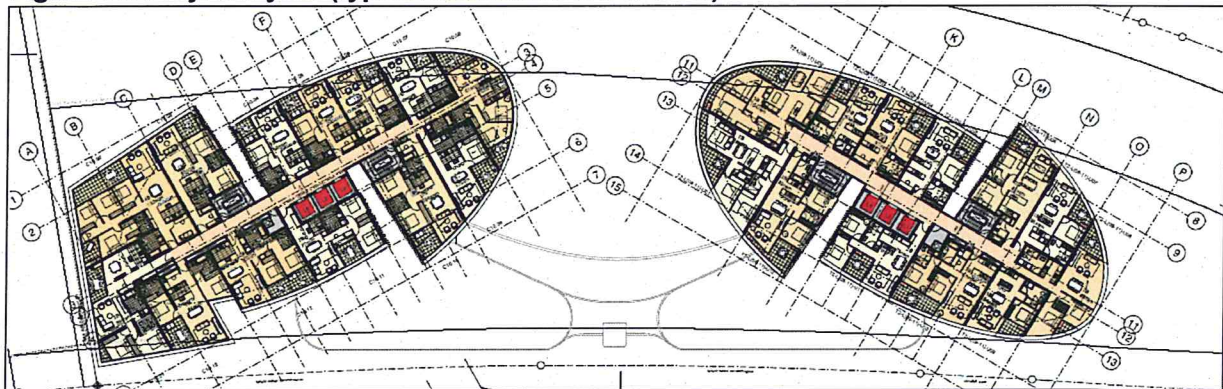


Table 1: Key Project Components

Aspect	Description		
Site 3 - Stages 2 and 3	Podium	Tower 1	Tower 2
Units	-	267	320
Unit / Tenancy Mix	Retail – 11 Gym/Commercial /Community – 5	1 Bed – 95 2 Bed – 132 3 Bed – 26 4 Bed – 14	1 Bed – 119 2 Bed – 163 3 Bed – 38
Building Height	RL 24.9	RL 98.5 (83.25 metres)	RL 114.5 (99.45 metres)
GFA	2,090 sqm (retail 1,118 sqm, commercial 807 sqm, residential facilities 165 sqm)	25,267 sqm	28,909 sqm
CIV	\$174.36 million		
Jobs	25 full time equivalent operation jobs and 300 full time equivalent construction jobs		
Site 3	Stage 1 (approved & constructed)	Stages 2 and 3 (subject application)	Site 3 Total (Stages 1, 2 and 3)
Units	218	587	805
GFA	23,012 sqm	56,266 sqm	79,278 sqm
Site Area	4,510 sqm	10,480 sqm	14,990 sqm
FSR	5.1	5.37	5.29:1
Car Parking Spaces	290	806	1,096
Bicycle Parking Spaces	70	245	315

2.2. Project Need and Justification

The proposed development is of importance to the local area, due to both the housing and employment opportunities created, as well as the project's overall contribution to the continued economic growth of both Sydney Olympic Park and the broader NSW economy.

The location of the site within Sydney Olympic park provides access to existing transport infrastructure, including major road and public transport connections (including train, bus and ferry). The development is located within 600 metres of the entrance to the Olympic Park Railway Station, and is also within close proximity to Concord West Railway Station to the east of the site. The development is also well serviced by major road infrastructure, including Parramatta Road, Silverwater Road, Homebush Bay Drive, the M4 and Centenary Drive.

The development fulfils the objectives within the Master Plan 2030, including those relating to environmental best practices, as well as contributing to broader state development objectives, such as those outlined in the Metropolitan Plan for Sydney 2036 and draft West Central Subregional Strategy. The proposal would also achieve NSW State plan objectives of providing additional affordable housing as the proponent has committed to providing three per cent of the units as affordable housing. The proposed development of Site 3 will contribute to the achievement of State growth targets including 17,000 new dwellings for the Auburn local government area and 12,000 jobs for Sydney Olympic Park, through the creation of new floor space for commercial use and retail use and providing new dwellings to accommodate the growing population. The proposal also addresses the Master Plan 2030's objectives of sustainable urban development, attracting major investment and the continued evolution of Sydney Olympic Park.

3. STATUTORY CONTEXT

3.1. Major Project

On 2 March 2010, the Director, Government Land and Social Projects, Major Projects Assessment, as delegate for the Minister for Planning, formed an opinion that the project is a major project under clause 13 (residential, commercial or retail projects) of Schedule 1 to the MD SEPP as it would be development for the purpose of residential, commercial or retail with a capital investment of more than \$100 million and clause 5, Part 23 of Schedule 3 of the MD SEPP as it has a CIV of more than \$10 million and is on land located within the Sydney Olympic Park site.

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

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

3.2. Delegation

The Minister has delegated his functions to determine Part 3A applications to the department where:

- the council has not made an objection, and
- there are less than 25 public submissions objecting to the proposal, and
- a political disclosure statement has not been made in relation to the application.

Six submissions were received from the public and council has not made an objection to the proposal. There has also been no political donation disclosure made for this application or for any previous related applications, and no disclosures made by any persons who have lodged an objection to this application.

Accordingly the application is able to be determined by the Deputy Director General, Development Assessment and Systems Performance under delegation.

The Director General has delegated his functions to the Deputy Director General, Development Assessment and Systems Performance to issue a Director General's Certificate to waive compliance with development standards, under clause 21, Part 23, Schedule 3 of the MD SEPP.

Accordingly, Director General's certificate waiving compliance with development standards can be issued by the Deputy Director General, Development Assessment and Systems Performance.

3.3. Permissibility

The project site is zoned B4 (Mixed Use), under State Environmental Planning Policy (Major Development) 2005. The project consists of commercial, retail and residential land uses, and is permissible under the SEPP.

3.4. Environmental Planning Instruments

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

The department's consideration of relevant SEPPs and EPIs is provided in Appendix D and include:

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

3.5. Objects of the EP&A Act

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

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

The department has considered the objects of the EP&A Act and considers that the application is consistent with the relevant objects. The assessment of the application in relation to these relevant objects is provided in Section 3.6 and Section 5 of this report.

3.6. Ecologically Sustainable Development

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

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

The proposal is located within an urban footprint on a previously developed and disturbed site and will not result in the loss of any threatened or vulnerable species, populations, communities or significant habitats. The site is also unlikely to be impacted by changes in sea level resulting from climate change.

The proposal sets out the following ESD initiatives that will be incorporated into the design of future buildings:

- provision of energy efficient lighting and other electrical fittings
- provision of energy efficient fixtures and appliances

- utilisation of the alternative water supply available at the Sydney Olympic Park Authority (WRAMS)
- provision of water efficient fixtures and appliances
- gas boosted solar hot water system
- use of low embodied energy and recycled/reused materials
- provision of bicycle parking facilities to promote sustainable transport options.

The proposed residential towers will achieve thermal performance, energy efficient and water efficient ratings in accordance with BASIX requirements as outlined in Table 2 provided appropriate glazing treatments are delivered in the construction of the residential units.

Table 2 – BASIX Performance Targets

BASIX Requirement	BASIX Target	Proposal
Thermal Performance	Satisfactory	Satisfactory
Water Rating	40%	57%
Energy Rating	20%	20%

The department is satisfied that the proposal adequately incorporates ESD principles into the development of the site and has recommended that treatments identified in the BASIX assessment to achieve satisfactory thermal performance and compliance shall be demonstrated prior to occupation of the building.

3.7. Statement of Compliance

In accordance with section 75I of the EP&A Act, the department is satisfied that the Director-General's environmental assessment requirements have been complied with.

4. CONSULTATION AND SUBMISSIONS

4.1. Exhibition

Under section 75H(3) of the EP&A Act, the Director-General is required to make the environmental assessment (EA) of an application publicly available for at least 30 days. After accepting the EA, the department publicly exhibited it from 6 July 2011 until 5 August 2011 (31 days) on the department's website, and at the department's Information Centre, Auburn Council's and Sydney Olympic Park Authority's offices. The department also advertised the public exhibition in the Sydney Morning Herald and The Daily Telegraph on 6 July 2011 and notified adjoining landholders, and relevant State and local government authorities in writing.

The department received 12 submissions during the exhibition of the EA - six submissions from public authorities and six submissions from the general public.

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

4.2. Public Authority Submissions

A total of six submissions were received from public authorities.

The **Sydney Olympic Park Authority (SOPA)** supports the project and provided the following comments:

- further justification is needed for the variance to the staged development application master plan controls including exceedance of number of units, bedrooms and car parking
- an EME report to assess potential electronic interference from AM radio towers shall be provided
- clarification regarding the development data including total number of units, site area and total GFA needs to be provided as anomalies occur within the EA
- further justification regarding height, GFA, building separation, solar access requirements and the non-compliance with the MD SEPP development standards and Master Plan 2030 controls is required or revisions to demonstrate compliance
- further details regarding building separation between Stage 1 and Stages 2/3 is required
- the rooftop services zone shall be revised to comply with Master Plan 2030 requirements
- the bicycle parking facilities shall be provided on ground floor and end of trip facilities shall be provided
- the configuration of the air conditioning units should be reconsidered or provide an alternative system to improve visual amenity and private open space amenity
- reconfiguration of the vertical slots to increase the separation to provide better amenity outcomes for the habitable rooms that are located along the slots
- a materials and samples board is required
- further details regarding sun shading and natural ventilation shall be provided where the façade of the upper units is a curtain glass wall
- Fig Tree Place should be redesigned to provide car parking for the retail tenancies as no car parking would be supported along Australia Avenue
- an Accessible Path of Travel Plan is required
- an Event Impact Statement shall be provided and shall identify and develop appropriate strategies to resolve any issues from major events
- the acoustic assessment should consider that major events within the Sydney Olympic Park Site can generate noise levels up to 85db(A) over 15 minute period for 10 per cent of the time
- greater consideration for the loading and access requirements of the commercial and retail tenancies is required
- affordable housing shall be provided in accordance with Master Plan 2030 requirements and no affordable housing is currently provided
- further justification regarding unit mix and justification for the provision of 3 bedroom units lower than that required in Master Plan 2030 shall be provided
- clarification on whether the proposed units are able to meet minimum unit size, minimum storage and minimum balcony dimension requirements in the Residential Flat Design Code (RFDC) is required
- all ground floor tenancies shall be retail uses and shall have appropriate access to service areas
- service areas shall have adequate clearances to ensure large vehicles are able to access the site

- an automated waste compactor carousel should be adopted to ensure efficient and practical management of waste and nominated areas for retail waste should be provided
- access to lobby areas from service areas should not traverse the garbage room
- accessible car parking spaces shall be identified
- clarification regarding whether the recommended measures regarding wind impact will be committed to.

RailCorp does not object to the project and recommended conditions to address the following issues:

- identify rail boundary and identify whether any rail infrastructure or services fall within the subject site and if so consult with RailCorp to determine whether relocation or incorporation into the development is appropriate
- preparation of dilapidation surveys to ensure that construction and installation activities do not affect RailCorp's facilities
- an acoustic assessment shall be provided to demonstrate how potential rail related noise and vibration from the adjacent rail corridor would comply with the department's Development near rail corridors and busy roads – Interim guidelines will be achieved
- preparation of a report that addresses electrolysis risk to the development from stray currents from the rail corridor
- preparation of a geotechnical engineering report that is to be submitted to RailCorp that demonstrates that the development will not impact on the rail corridor or the integrity of the infrastructure including, the potential impact of excavation and loadings imposed on RailCorp facilities by the development
- mitigation measures are required to prevent objects being thrown onto the rail corridor
- risk analysis to determine derailment protection requirements
- limit glare and reflectivity to minimise potential distractions to train drivers
- preparation of a risk assessment/management plan and detailed safe work methods statement to ensure that excavation and construction does not adversely impact on the integrity of RailCorp's facilities
- crane and overhead operations shall be operated in agreement with RailCorp
- stormwater runoff must be managed and shall not enter the rail corridor during construction or operation
- physical access maybe required during construction and shall only be undertaken if an agreement has been entered into with RailCorp
- anti-graffiti paint or other coating shall be used to minimise potential for graffiti and vandalism
- appropriate fencing shall be provided to RailCorp's satisfaction
- reduction in the number of visitor car parking spaces given the accessibility of public transport options and increasing bicycle parking spaces to support sustainable transport modes.

Transport for NSW does not object to the project and provided the following comments and recommended conditions:

- would support a further reduction in car parking spaces to encourage public transport
- manage the car parking for the different uses including incorporating car share spaces

- a workplace travel plan shall be prepared
- bicycle storage facilities should be provided at key locations within the site including on the ground level near the entrance for visitors
- a construction management plan shall identify measures to mitigate accessibility, amenity and safety impacts on cyclist during construction
- noted changes to bus routes identified in EA and appended documentation.

The **Roads and Maritime Services (RMS)** does not object to the project and provided the following comments and recommended conditions:

- the four leg signalised intersection at Australia Avenue/Fig Tree Drive has not been approved by the RMS and if it is not installed prior to occupation access shall be physically restricted to left in/out only. This would require the southern driveway to be relocated away from the Australia Avenue/Fig Tree Drive intersection to north or the south of the intersection
- Transport for NSW and State Transit Authority should be consulted to determine whether the 40 per cent mode share for public transport can be supported by existing services or whether they need to be rerouted or augmented to achieve the targeted modal split
- the number of car parking spaces shall be provided to the satisfaction of the department and Transport for NSW and should be minimised to achieve a mode shift to public transport
- bicycle parking facilities and end of trip facilities shall be provided to encourage bicycle travel
- off-street car parking provisions and loading areas shall be provided in accordance with the department's and council's requirements
- a construction traffic management plan is required prior to construction certification
- all loading and unloading shall be contained within the site
- all construction and demolition vehicles shall be contained within the site
- developer is responsible for any public utility adjustments/relocation works as required by public utility authorities
- all vehicles to enter and exit the site in a forward direction
- all vehicles shall have sufficient space on site prior to be required to stop
- sight lines shall not be obstructed and shall meet relevant Australian Standards
- gradients along access and driveway paths shall meet relevant Australian Standards
- all works/ signposting to be at no cost to the RMS.

Office of Environment and Heritage (OEH) does not object to the project and raised no issues.

Sydney Water does not object to the project and provided the following comments and recommended conditions:

- the drinking water system will require an extension to service the development and connection is available on the western side of Australia Avenue
- the wastewater system will require an extension to service the development and connection is available from the main traversing the site in the north-east
- the proponent is required to obtain a section 73 certificate and Sydney Water will further assess the impact of individual developments when the proponent applies for a section 73 certificate
- the proponent must fund any adjustments needed to Sydney Water infrastructure.

The department has considered the comments and issues raised in submissions in its assessment of the project.

4.3. Public Submissions

A total of six submissions were received from the public. Of the six public submissions, four supported the project, one objected to the project and one did not object but identified key issues. The key issues raised in public submissions were density, the need for a supermarket to be considered for the retail/commercial floor space, solar access and overshadowing impacts and view loss.

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

4.4. Proponent's Response to Submissions

The proponent provided a response to the issues raised in submissions (see Appendix B). The response included a Preferred Project Report which included the following changes:

- improvements to solar access to units within Tower 2 through the reconfiguration of a number of apartment layouts including consolidating or separating units
- provision of bicycle parking spaces for retail along the ground floor
- separating the garbage rooms for residential and retail components and
- providing improved rear access for the retail tenancies to services areas.

SOPA's comments

The department forwarded the PPR to SOPA for review. SOPA provided the following comments:

- provided support for the development
- further consideration of the potential increased major event noise impacts should be considered given the increase to the permissible noise emissions from major events
- demand for retail car parking has been evident for other retail premises within the general precinct and therefore the proposal should consider providing six car parking spaces to be consistent with Stage 1 and maximise the viability of the retail units
- the recommendations of the BASIX assessment need to be implemented
- the dual key apartments can be easily converted into separate self contained 1 and 2 bedroom units
- resident bicycle parking should be provided in the uppermost parking levels
- the design of the vertical slots in the towers need to be widened to offset adverse amenity impacts for the uppermost units due to the closed roof
- further information is required to demonstrate that the sun shading devices for the curtain wall being the vertical blades and fritted glass will be effective
- further details regarding the materials finishes for the eastern elevation are required and should be consistent with those used in Stage 1
- the parapet screening of Tower 2 shall be reduced by 1.5 metres as the plant would have no visible impacts above this point
- changes made to the plans some of the floor plans shall be reflected on the relevant site plan and elevation plans

- request that construction and operational management plans be reviewed by SOPA given the potential major event impacts.

The proponent provided a further response to the issues raised by SOPA. The response included the following changes:

- provision of retail car parking
- relocation of bicycle parking to the ground floor level
- reduced the height of the parapet by 1.05 metres.

The proponent also further argued that attenuating for increased noise impacts resulting from events is unreasonable and should be mitigated by event operators, that enlarging the vertical slots would not improve amenity outcomes and the roofed element only impacts on two floors per tower. Further details to demonstrate how the louvres and window system for the upper levels would work in different conditions and demonstrated consistency of the podium materials with Stage 1 materials was also provided.

The department is satisfied with the proponent's additional responses and further amendments to address SOPA's issues.

5. ASSESSMENT

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

- consistency with the staged development consent (DA 246-10-2004)
- built form and urban design
- environmental and residential amenity
- transport and traffic impacts
- development contributions.

5.1. Consistency with the Staged Development Consent

The department considers that while Master Plan 2030 provides more recent controls, the proposal has been designed with regard to the provisions of the staged development consent given its connection with the Stage 1 development which is being constructed in accordance with the staged development consent. The DGRs also required that the proposal demonstrate consistency with the staged master plan development consent or provide justification for any areas of inconsistency.

The proposal is generally consistent with the scope of development and the intent of the broad planning parameters, including overall density and overall height outlined in the staged development consent. However, the proposal varies significantly from the indicative building footprint and envelopes. The winning design in the design competition held for Stages 2 and 3 proposed major changes to the built form and differs from the approved building envelopes by reducing the total number of buildings, increasing the number of units, increasing the car parking numbers and redistributing the permissible heights across the site.

The proponent has argued that the new design provides an improved response to the geometrical site constraints and better addresses risks resulting from the proximity to the railway line. It is further argued that the proposed design would: improve acoustic amenity for future residents; improve safety outcomes; address engineering

concerns; improve car parking efficiency across the site; increase commercial viability given the revised floor plates; and minimise the jagged skyline of the original design.

The proponent considers the revised envelopes provide an improved response to Master Plan 2030 objectives of developing more slender tower forms along the north-south corridors within the south-east quadrant of the Sydney Olympic Park precinct. The department considers the slender curvilinear forms and reduction in the number of tower elements reduces the bulk across the site and complements the larger iconic sporting venues. The department is satisfied that the proposed curvilinear towers provide a more appropriate relationship with the iconic venues than the rectangular forms of the staged development consent and improve transparency through the site.

The proposed development complies with the apartment mix requirement of the staged development consent as outlined in Table 3, however does not meet Master Plan 2030 requirements. The proponent argues that the proposed apartment mix would facilitate more affordable housing through provision of more units and more appropriately sized units which better address the demand in the housing market. Whilst SOPA raised concerns with the reduction in the larger units, the department considers the provision of a total of 13.3 per cent of 3 and 4 bedrooms units is acceptable as it is a relatively minor reduction and can be supported given the aim to provide more affordable housing types.

Table 3 – Apartment Mix

	Master Plan 2030	Staged Development Consent	Proposed
1 Bedroom Units	Minimum 15%	Minimum 10%	36.45%
2 Bedroom Units	-	Maximum 75%	50.25%
3 Bedroom Units or greater	Minimum 15%	Minimum 10%	13.3%

The proposal also results in a number of built form and urban design variations from the staged development consent given the transformation in the design from three building envelopes with four tower elements and two separate podiums to a single podium with two slender tower elements. The variations to the design controls are discussed further in Section 5.2 of the report and include:

- street edge definition
- approved building envelope floor plates
- building separation distances.

The proposal also seeks to increase the maximum number of car parking spaces permitted in the staged development consent to respond to the change in the unit mix and address the controls outlined in Master Plan 2030. The car parking provisions are discussed further in Section 5.4.2 of this report.

The staged development consent also required a number of plans and assessments to be prepared with future applications. These matters were reflected in the DGRs and were provided with the Environmental Assessment. The other requirements refer to constructional and operational requirements and the department is satisfied that these matters can be addressed through the recommended conditions of approval.

5.2. Built Form and Urban Design

5.2.1 Height

The maximum building height prescribed for the site in the MD SEPP is 90 metres (excluding plant). The site is also identified in Master Plan 2030 as suitable for development of tower elements of up to a maximum height of 30 storeys (see Figure 12 and 13). Stage 1 DA stipulated maximum heights between 16 and 30 storeys and a maximum RL of 114.80 metres.

Figure 12: Master Plan 2030 Planned Building Heights

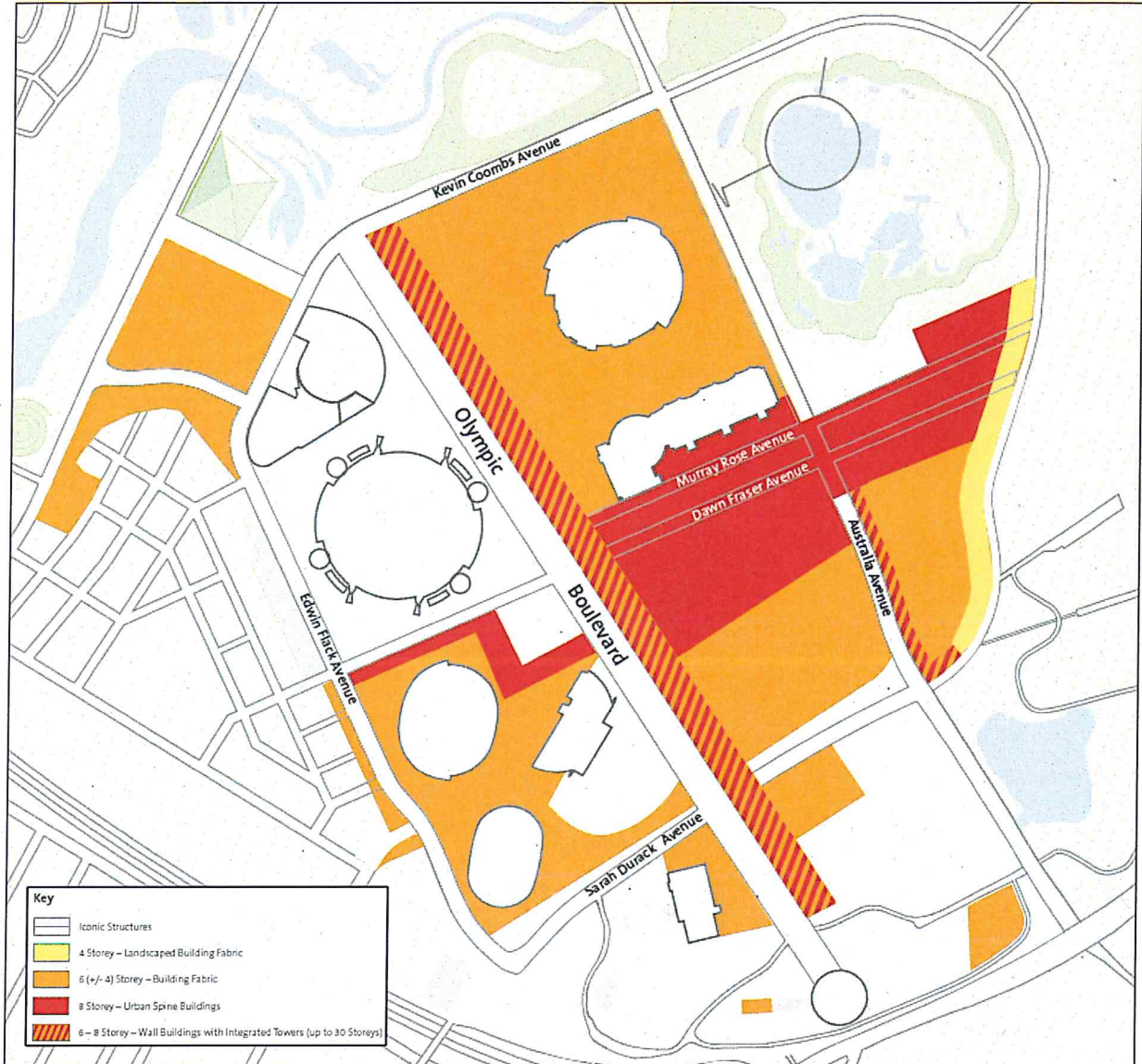
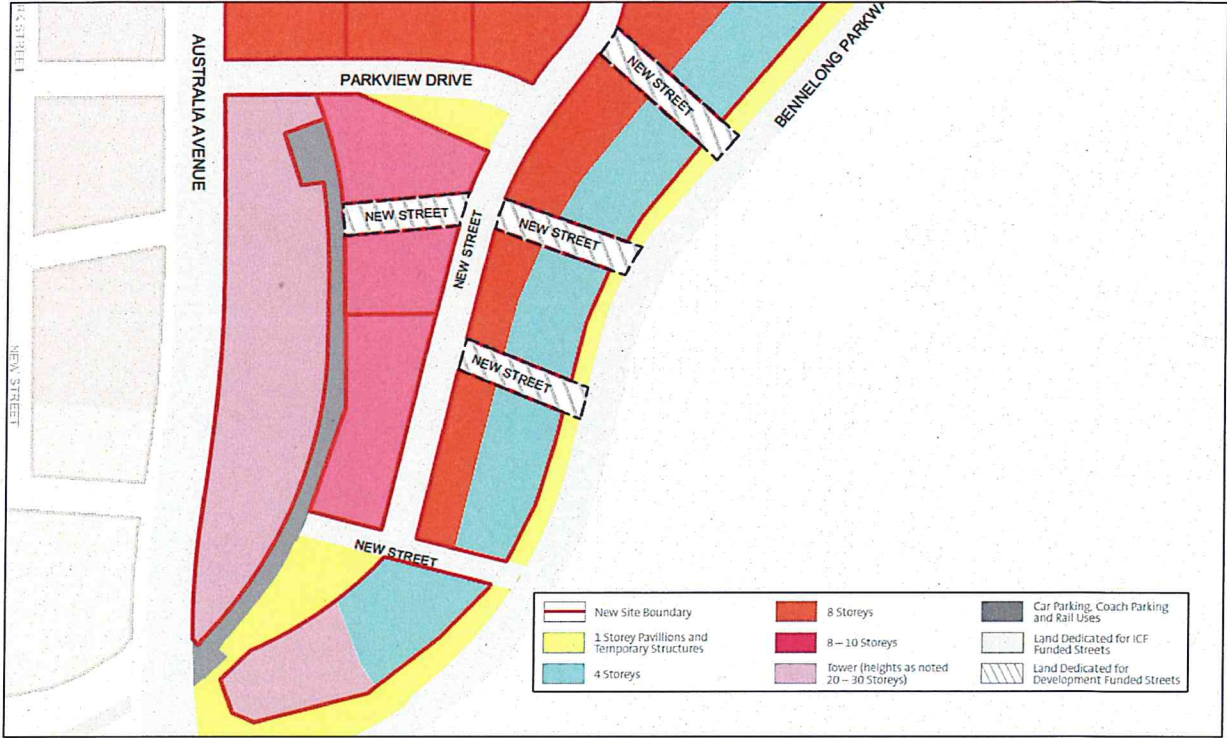


Figure 13: Master Plan 2030 Site Specific Height Controls



The proposed heights at 24 storeys (RL 98.5 or 83.25 m) and 30 storeys (RL 114.5 or 99.45 m) (see Figures 14 and 15) exceed the permissible height limits in the MD SEPP. However, the heights comply with the maximum height limit of 30 storeys in Master Plan 2030. The proposed heights are also generally consistent with the staged development consent which allowed heights between RL 76.4 metres and RL 114.8 metres for Stages 2 and 3 as Tower 2 has a 5.9 metre plant zone.

Figure 14: West elevation

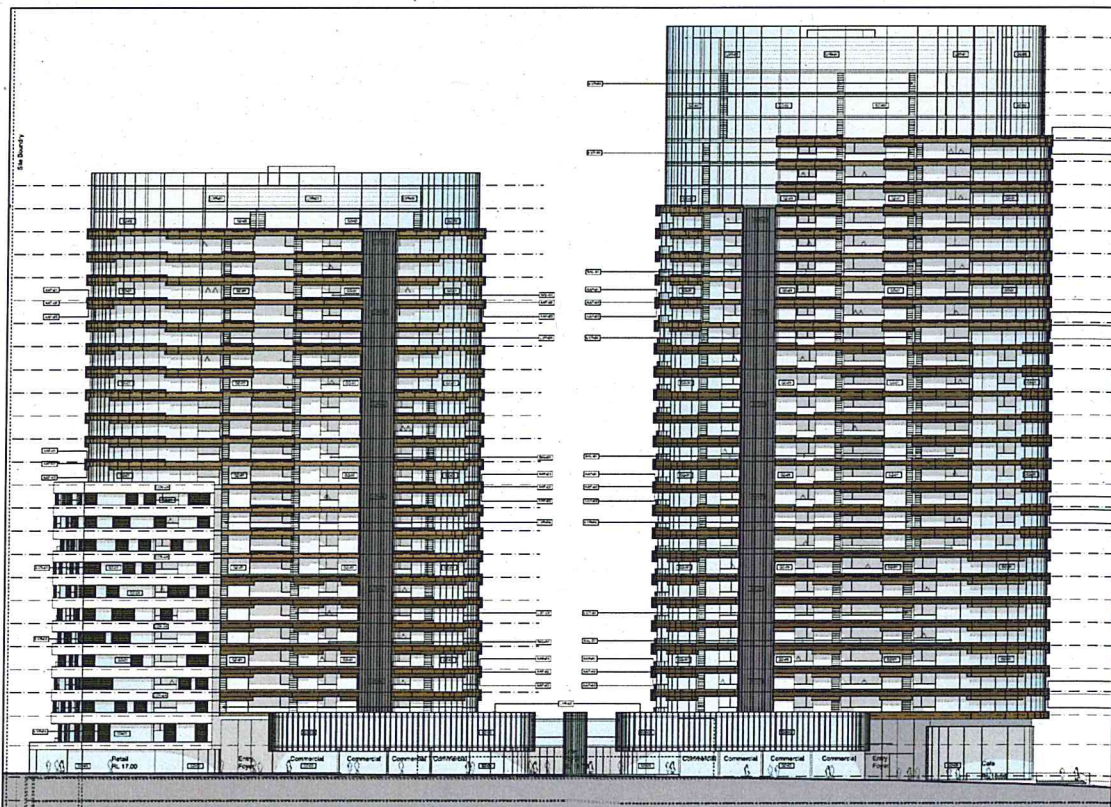
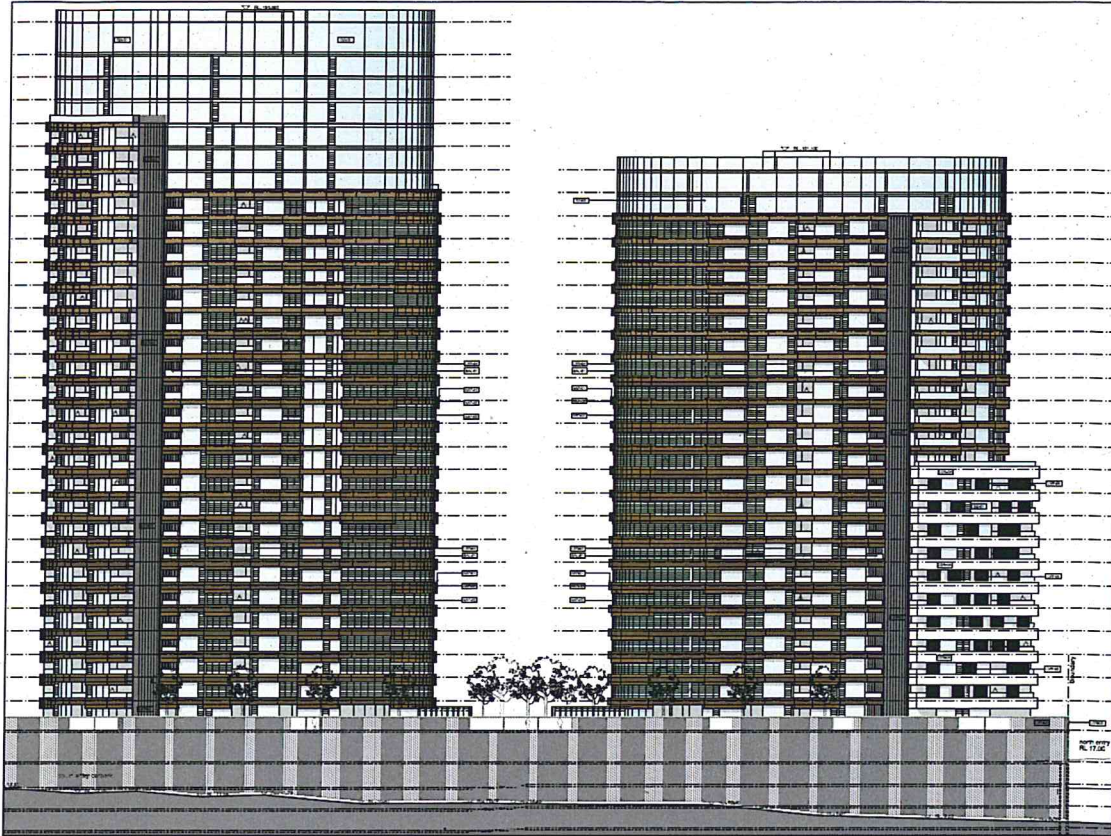


Figure 15: East elevation

The proponent has argued that the variation to the permissible heights is acceptable as the increased height would not result in any adverse amenity impacts, visual impacts or impacts on views.

The maximum building height development standard in the MD SEPP of 90 metres can be waived where there is a Director General's certificate issued under clause 21, Part 23, Schedule 3 of the MD SEPP in relation to Part 3A applications. The certificate must indicate that the Director General is satisfied that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and that there are sufficient environmental planning grounds to justify exempting the development from that development standard. In deciding whether to issue a certificate, 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.

The department recommends that compliance with this development standard not be required for this development for the following reasons:

- the variations of the development standard will not raise any matter of significance for State or regional environmental planning as it would be unlikely to set a precedent given the site specific nature of the height controls in the Sydney Olympic Park site
- the heights are generally consistent with Master Plan 2030 height requirements of up to 30 storeys for Site 3

- the proposal is considered appropriate for the site and is supported by the Sydney Olympic Park Authority and will provide a public benefit through supporting the growth of the Sydney Olympic Park Town Centre
- there would be minimal public benefit in maintaining the development standard as the proposed building height is consistent with the vision to establish tower elements along Australia Avenue in Master Plan 2030
- the proposed building height is generally consistent with the staged development consent for Site 3 redevelopment which allowed for buildings up to a maximum RL 114.8
- the proposed height will not result in detrimental amenity impacts (overshadowing, privacy) on any surrounding development compared to a complying design
- the proposal is comparable, with and compliments, the Stage 1 development of Site 3 immediately adjoining the site to the north, which has a maximum height of 83.25 metres and 24 storeys
- given the substantial changes in the natural ground level across the site, the maximum height of the non-complying Tower 2 varies from 94.9 metres to 99.45 metres.

Accordingly, a Director General's certificate has been prepared for the site so that the maximum building height development standard is waived in this instance.

Under the Master Plan 2030, plant and equipment is permitted to a maximum height of 5 metres above the maximum building height. The proposed development does not comply as the plant zone proposed for Tower 1 is approximately 5.8 metres in height and a maximum height of 5.5 metres for Tower 2. However, part of the plant zone is integrated with Level 23 in Tower 1 resulting in an upper level plant zone of a maximum 2.6 metres. The department considers the plant zones are acceptable as they are integrated into the design and also shielded from the public view by the glass wall. The glass wall forms part of the architectural roof feature permitted in the staged development consent and complies with the maximum permissible height of six metres for the roof feature.

5.2.2 Floor Space Ratio (FSR)

A maximum FSR of 5.25:1 applies to the site pursuant to clause 19, Part 23, Schedule 3 of the MD SEPP. Site 3 has a total site area of 14,990 sqm. The subject site has an area of 10,480 sqm, while the total gross floor area (GFA) proposed for Stages 2 and 3 is 56,266 sqm. The FSR for Stages 2 and 3 is therefore 5.36:1, which exceeds the development standard in the MD SEPP.

The proponent has argued that the FSR should be applied across the whole of Site 3 (Stage 1, 2 and 3), which would equate to an FSR of 5.29:1. This represents a non-compliance of approximately 580 sqm of floor space. However, the department considers that the calculation of the FSR control should be based on the site area where development occurs, in accordance with the definition of site area in the MD SEPP. Therefore, the FSR for the proposed development would be 5.36:1, which equates to an exceedance of 1,246 sqm.

The maximum FSR development standard in the MD SEPP is not applicable where there is a Director General's certificate issued under clause 21, Part 23, Schedule 3 of the MD SEPP in relation to Part 3A applications. The Director General would have

to take into consideration the same factors outlined above in waiving the height requirements. The department has assessed the issue and considers that the proposed FSR is acceptable given:

- the variation of the development standard will not raise any matter of significance for State or regional environmental planning
- the proposal is considered appropriate for the site and will provide public benefit through supporting the growth of the Sydney Olympic Park Town Centre
- there will be minimal public benefit in maintaining the development standard as the built form is consistent with the envisaged surrounding built form
- the 1,246 sqm exceedance is between approximately seven to 17 units
- if the FSR of 5.25:1 was calculated across the whole of Site 3, as envisaged under Master Plan 2030, the exceedance would be 580 sqm as Stage 1 does not reach the FSR of 5.25:1
- an exceedance of 580 sqm would be approximately three to eight units and would not be the equivalent of one floor and therefore a complying FSR would have minimal additional public benefit
- the maximum proposed GFA is only marginally higher by 225 sqm than that approved in the staged development consent
- neither SOPA nor Council raised concerns in regard to the proposed FSR
- the proponent has demonstrated that an appropriate scale and built form can still be achieved with the varied standard
- would not result in setting a precedent due to the varying site specific controls in the MD SEPP and Master Plan 2030
- consistency with the slender and tall forms of the near by hotel development
- the site is supported by highly accessible services and infrastructure
- the provision of the additional housing and jobs will ensure more jobs closer to home.

Accordingly, a Director General's certificate has been prepared for the site so that the maximum FSR is waived in this instance.

5.2.3 Urban design

A design competition was held to address requirements of the staged development consent and Master Plan 2030. The proposal generally reflects the preferred scheme, which was supported by SOPA's design review panel. The two residential towers at 24 and 30 storeys above a two level podium was selected as the preferred scheme. The following design outcomes were supported by the design competition jury and are reflected in the current design:

- the differentiation in tower heights provided a desirable skyline
- the provision of two towers allowed for greater separation and visual connections through the site
- the proposed towers provided the best reference to the staged development consent in terms of building height and massing
- the curvilinear shape provides an elegant form and can assist in mitigating adverse wind impacts
- the two vertical slots of each of the towers, which effectively separates the two towers into two wings, would contribute to the vertical proportions of the building as well as providing improved solar access and ventilation to the units along the vertical slot and the common corridor

- the podium design would provide a positive streetscape outcome for Australia Avenue as it would activate the street as well as assisting in breaking down the scale of the tower buildings
- flexibility and variety in floor planning and unit mix is supported
- the horizontal rings of solid materials along the tower facades accentuate the curved form and provide a unifying element between the tower forms.

The proposal seeks to deliver an equivalent amount of floor space as the staged development consent and comparable overall heights, whilst in a largely revised building form due to the alternative design solution supported by the jury in the design competition. The proposal still seeks to deliver large scale development for residential purposes within the towers and mixed retail and commercial uses on the podium levels. This is consistent with the scale of development envisaged within the staged development consent.

The proposal minimises bulk by providing slender forms in accordance with the design requirements in Master Plan 2030 for tower developments. The design ensures that the development of Site 3 does not result in a cluttered skyline, which is desirable in order to protect the prominence of the iconic sporting structures with Sydney Olympic Park. The slender forms would also provide improved amenity outcomes for future residents.

The scale of the proposed buildings and large building footprint is comparable with development within the broader precinct and consistent with the larger floor plates within Sydney Olympic Park.

The staged development consent established minimum building separation requirements, varying from 24 metres to 36 metres, to manage the bulk of the development. A minimum separation of 40 metres for tower elements is also prescribed in Master Plan 2030. The separation distances proposed between Stage 1 and Stages 2/3 and between Towers 1 and 2 is 26.8 metres and 23.64 metres, respectively. The proponent argues that the separation distances are acceptable as they are only marginally narrower than the minimum 24 metres required in the Residential Flat Design Code (RFDC) for buildings over 9 storeys (25 metres). The proponent also identified that the orientation of the towers means that the buildings are angled away from each other where there is a minor non-compliance with the RFDC requirements in the required separation distance, thereby reducing any privacy concerns. The department considers the 40 metre separation prescribed in Master Plan 2030 would not be appropriate for this site given that the relocation of the towers to a complying layout would obstruct view corridors along Fig Tree Drive, reduce the level of communal open space, increase engineering difficulties associated with the sloping site, and would have minimal benefits in terms of improving the bulk and scale impacts in the context of the site.

SOPA raised no concerns with the proposed separation distances and the department considers the minor non-compliance with the RFDC acceptable as:

- it would not result in any adverse privacy impacts given the orientation of the towers
- the 23.64 metre separation is adequate in ensuring that the development presents as two towers rather than one building mass

- the separation and skewing of the towers reduces the massing of the development along Australia Avenue as the length of the façade that directly presents to Australia Avenue is effectively reduced.

The staged development consent established maximum floor plates across Site 3, which reduced in size in the upper levels to ensure slender tower forms. The department considers the maximum floor plate controls in the staged development consent are no longer relevant to the design as the proposal has evolved from four towers (see Figure 16) to two towers (see Figure 17). The department is satisfied that the floor plates are appropriate as the more desirable views to the Sydney CBD along Fig Tree Drive are improved with the deletion of the southern building form compared to the staged development consent (see Figures 18 and 19).

Figure 16: Indicative built form of the staged development consent

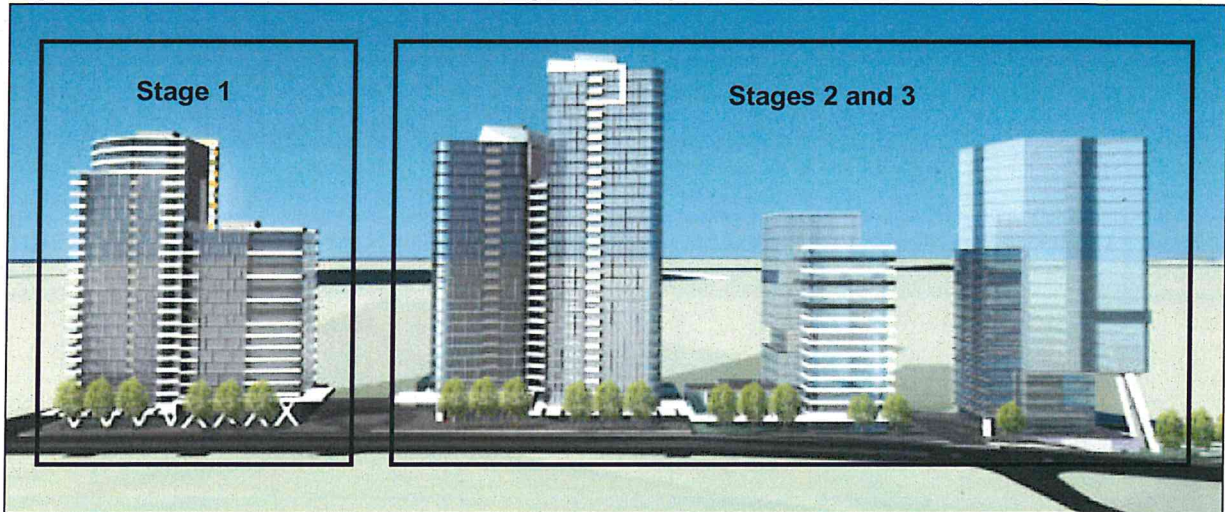
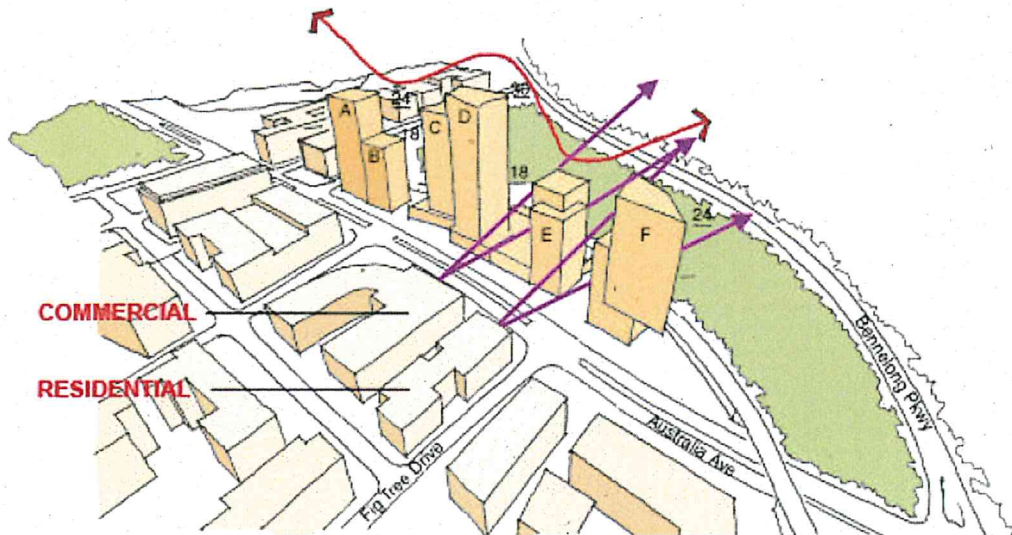
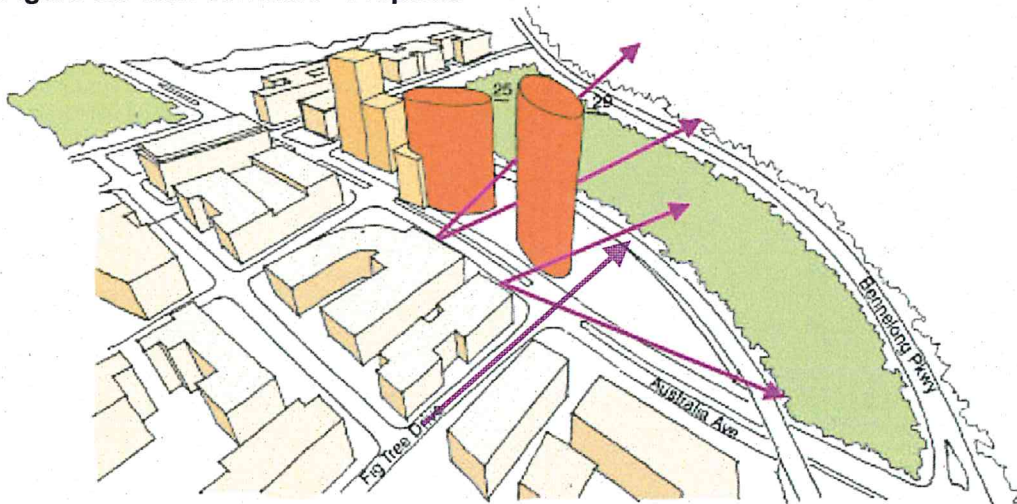


Figure 17: Photomontage of proposal – view from Fig Tree Drive



Figure 18: View corridors – Staged development consent**Figure 19: View corridors - Proposal**

The bulk and scale of the proposal is generally consistent with the Stage 1 development and with the other tower elements within the Sydney Olympic Park precinct. The proposal incorporates more straight edges and sharp corners along the northern edge of the development to provide an appropriate interface with Stage 1 and support a transition between the two schemes.

A number of architectural design features have also been incorporated into the design of the buildings to provide interest and relief from the solid and repetitive form in the tall towers. These features include modulation of the facades, recessed balconies, vertical slots, articulation into two wings and the use of varied materials to minimise the uniformity and solid appearance including a glazed feature which also gives the appearance of stepping the building. The lower levels of Tower 1 support a transition from the rectangular and regular forms of Stage 1 to the irregular and curvilinear forms of Stage 2 and 3 by providing a rectangular form that extends to the north-western boundary before stepping back from Level 12 to the curvilinear form of the two towers.

Site 3 benefits from the tallest permissible form and largest FSR for the Parkview precinct. The site should therefore provide a gateway building that reflects the residential use and nature whilst also provide an appropriate interface with the

commercial development in the adjoining precinct. Whilst a substantial level of glazing has been incorporated into the façade, the department considers the articulation, use of solid materials and recessed balconies ensure that the built form reflects the residential use whilst still providing a distinctive and iconic building for the site.

The staged development consent required a 10 metre street edge podium. The proposal provides a podium along the majority of the site frontage at a height of approximately 8.5 metres. The podium helps to define the site and provide a clear street edge (see Figure 20), which would distinguish between the public domain and private areas. The department is satisfied that whilst the proposed podium does not strictly comply with the design control in the staged development consent, it generally achieves the intent and provides an appropriate public domain interface.

Figure 20 – View along Australia Avenue



The proposal would result in a varied skyline that supports the growth and vision for the Sydney Olympic Park site. The department considers the scale of development would provide an appropriate interface with the existing commercial and future residential precinct. The proposal optimises the views to the surrounding parklands whilst also aiming to minimise the impact on views from future development. Accordingly, the department considers the bulk and scale and the design of the buildings generally acceptable as:

- a distinctive and appropriately scaled built form has been provided for the site
- the floor plates have been articulated into two separate wings around common core areas
- the slender and elliptical form reduces the bulk of the development from various view points
- architectural features have been incorporated into the design, including articulation and modulation through vertical slots to break up the solid form of the buildings
- the curvilinear forms would complement the shape and structure of the iconic sporting structures within Sydney Olympic Park
- the design and scale of the development is consistent with the general controls in Master Plan 2030.

5.3. Environmental and Residential Amenity

The design quality principles of SEPP 65 and the Residential Flat Design Code (RFDC) aim to ensure adequate environmental and residential amenity can be achieved in new residential flat buildings. The RFDC sets out a number of 'rules of thumb' which provide numerical guidelines for residential flat development to ensure the development complies with the intent of the SEPP 65. Provided in Table 4 is a summary of the proposal's compliance against the RFDC.

Table 4: Proposed buildings compliance with RFDC requirements

RFDC Requirements		Proposed	Compliance
Building depth	18 m	Max. approx. 28.5 m	No
Separation below 9 storeys	Between 12 m and 18 m between habitable rooms / balconies	23.6 m between the two towers 24 m between Stage 1 and Stages 2/3	Complies
Separation above 9 storeys (above 25 m)	24 m between habitable rooms / balconies	23.6 m between the two towers 24 m up to Level 11 and 26.8 m above Level 11 between Stage 1 and Stages 2/3	No
Floor to ceiling	2.7 m	Min. 2.7 metres (3.2 m floor to floor)	Complies
Units per core area	Max. 8	Tower 1 – Max. 14 units Tower 2 – Max. 12 units	No
Solar access	70% of units to achieve 2 hours in mid-winter	Tower 1 – 63 % Tower 2 – 80 %	Tower 1 - No Tower 2 - Complies
Cross-ventilated units	60%	66%	Complies
Communal open space	25%–30% of site	34.6% (5,194 sqm)	Complies
	25% deep soil planting	Min. 25%	Complies
Private open space	Courtyards – 25 sqm and 4m depth	Varies (see Section 5.2.3)	Complies
	Balconies – 2 m depth	Varies - primary balconies - generally min. 2 m	Complies
Unit size	1 bedroom – 50 sqm	Min. 55sqm	Complies
	2 bedroom – 70 sqm	Min. 78 sqm	Complies
	3 bedroom – 95 sqm	Min. 107 sqm	Complies
Storage	1 bedroom – 6 sqm	Min. 6 sqm	Complies
	2 bedroom – 8 sqm	Min. 8 sqm	Complies
	3 plus bedroom – 10 sqm	Min. 10 sqm	Complies
Single aspect units	Max. 8 m to window	Varies – Max approximately 8 m	Complies
	Max. 10% single aspect south facing	Tower 1 - 7.9 % Tower 2 – Nil*	Complies
Kitchen to window	Max. 8 m	Max. 8 m	Complies
15 m cross-through units	Min. 4 m width	N/A	N/A
Ground floor units	20 % barrier free access	100%	Complies
Vehicle access	Min. width 6 m	6 m	Complies

* The south facing units in Tower 2 are considered to be dual aspect apartments given the curved form of the unit

The design of the building does not comply with the building depth requirements of the RFDC due to the larger floor plates and curvilinear design, which results in an increased depth at the centre of the building. Whilst the maximum depth is approximately 28.5 metres, exceeding the maximum recommended in the RFDC, this would generally only occur for a relatively small portion in the centre of the towers, while the buildings become narrower at the ends due to their elliptical form. The lower levels of Tower 1 are also deeper as they extend to the site boundaries to create a more regular and complementary form to Stage 1. The department considers that due to the elliptical form, the maximum depth is acceptable as it does not extend to the full length of the towers and the single aspect units are generally a maximum eight metres in depth from a window or opening, which is the recommended distance in the RFDC. The increased depth on the lower levels of Tower 1 in the north is also considered acceptable within the context of the site to support a transition in building form from Stage 1 to Stages 2/3.

The towers are each comprised of two wings that share a common core, which results in a maximum total of 12 and 14 units per floor, which exceeds the recommended number of eight units per core for double loaded corridors. The proponent has argued that the vertical slots which separate the towers into two wings provide appropriate amenity to the adjoining units and provides additional lighting to the common corridor and core areas which would improve overall amenity outcomes. Whilst the maximum number of units is exceeded, the department considers that if adequate amenity can be achieved, then it would be acceptable to waive the requirement to comply in this instance. The amenity for future residents is generally acceptable and discussed further in the following sections, with consideration of the non-compliance with the solar access and building separation 'rules-of-thumb' in the RFDC.

5.3.1 Solar access and overshadowing

The RFDC recommends that in dense urban areas a minimum of two hours of solar access should be provided between 9 am and 3 pm during mid-winter to the living rooms and private open space areas for 70 per cent of all apartments. A total of 63 per cent and 80 per cent of units will receive two hours of solar access during mid-winter to living areas and private open space areas for Towers 1 and 2, respectively.

The proponent has argued that whilst the number of units that receive solar access does not strictly comply with the numerical requirements of the RFDC, a total of 72 per cent of units would comply and therefore the intent of the solar access performance requirement has been achieved. The proponent also believes that the percentage of the units achieving solar access is appropriate given the constrained width of the site, railway corridor setback requirements, and the orientation of the towers that aim to reduce the wall effect along Australia Avenue.

The department is satisfied that the SEPP 65 intent to optimise solar access has been achieved for Tower 2 as it complies with the RFDC requirements. At 63 per cent of units receiving solar access between 9 am and 3 pm during mid-winter, Tower 1 does not comply with the recommendations in the RFDC.

The department considers that whilst Tower 1 does not achieve the minimum level of solar access to units prescribed in the RFDC, an acceptable percentage of units

within Tower 1 are still able to achieve a satisfactory level of amenity. To improve the outcomes for Tower 1, the tower would need to be re-orientated. The department considers that this is unnecessary as only approximately 8 per cent of the units in Tower 1 are single aspect south facing (southwest to southeast) units which do not receive solar access within the acceptable limits of the RFDC. Whilst an additional 12.7 per cent of units also do not receive solar access in accordance with the RFDC, this is as a result of the orientation of the building and subsequent skewing of these units slightly towards the south. The orientation of the towers provides appropriate streetscape outcomes and amenity outcomes for south facing units in Tower 1 by reducing potential privacy impacts. The angling of the two towers away from each other limits direct views from, and into, the northern units of Tower 2. The department considers that within the overall context of amenity for these units, the level of direct solar access is adequate and the orientation of the building should not be changed to require strict compliance with the RFDC.

The proposal would also overshadow the proposed communal open areas, however, the level of solar access provided is considered acceptable as over fifty per cent of these areas will receive partial sunlight throughout the day and would only be completely overshadowed for a small period between 9 am and 3 pm during mid-winter. The communal open space areas would still receive a minimum two hours of solar access required during mid-winter.

The proposal would have minimal adverse overshadowing impacts on the surrounding area as the shadows generally fall onto roads and commercial areas (see Figures 21 to 23). The proposal would also result in minor overshadowing of the public open space areas of Bicentennial Park after midday.

Figure 21 – Overshadowing mid-winter 9 am



Figure 22 – Overshadowing mid-winter 12 midday**Figure 23 – Overshadowing mid-winter 3 pm**

The overshadowing would fall partially on the commercial precinct and the impacts would vary through out the day as the shadows move across the precinct. However, these areas would still receive adequate solar access through the day and do not require the same level of solar access as residential dwellings. Whilst an education building is located within the commercial precinct, immediately to the east of the site, the education building is expected to still receive a minimum two hours of solar access during the day in mid winter. The overshadowing of Bicentennial Park only impacts a small portion of the park in the west. The department considers the minor overshadowing of the public open space area acceptable given the majority of the park is unaffected by overshadowing from the proposal and would continue to receive adequate levels of solar access during mid-winter.

The department is satisfied that adequate solar access to surrounding areas is maintained.

5.3.2 Noise and vibration impacts

The proposal is located adjoining the railway line which would have acoustic and vibration impacts. The proposal is also located in a major sporting and entertainment precinct which would generate increased noise levels while events are being held. The proponent has provided a noise and vibration assessment that indicates that attenuation measures, including a minimum 6.38 mm thick glazing and acoustic seals, are required to mitigate railway noise impacts of up to 60dB(A) at the proposed façade during peak periods to ensure adequate internal residential amenity of 40 dB(A) during the day in living areas and 35 dB(A) during the night for sleeping areas. The proposed measures were also considered appropriate to mitigate potential event noises of up to 70 dB(A) and ensure adequate internal amenity of 45 dB(A) during the day in living areas and 40 dB(A) during the night in sleeping areas.

The proponent has committed to incorporating these treatments in the construction of the new buildings. SOPA identified the potential increased noise impacts from events as an issue given the permissible noise levels at Sydney Olympic Park have increased to 85dB(A). The proponent has indicated that to attenuate the residential units to mitigate levels up to 85dB(A) at the façade is not reasonable as it would require building envelope construction that would not be feasible. The department considers that it is appropriate that increased or louder event noise impacts be mitigated by future event operators where practicable, whilst acknowledging that the development will be located in a major sporting precinct. Accordingly, the department is satisfied that internal residential acoustic amenity will be acceptable for future residents.

The construction would potentially have noise impacts on the educational buildings to the west and future residents and the child care centre within the Stage 1 development (still currently under construction). The department considers that the construction impacts can be readily managed and mitigated as they have been for Stage 1 and these measures should be adopted to protect the amenity of the educational establishment and potentially future residents. The department recommends that noise management and mitigation be addressed in the required construction management plan.

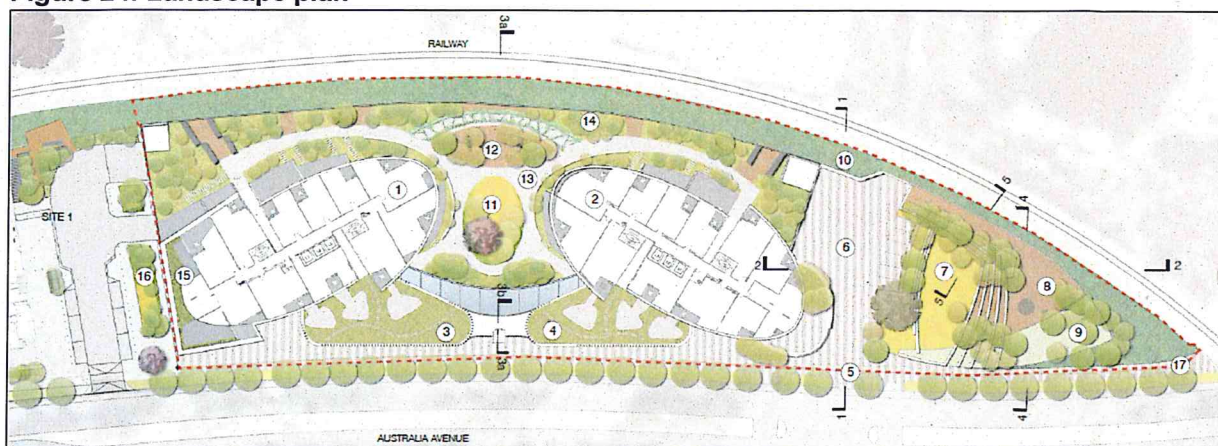
The proponent has concluded that the predicted vibration dose values of 0.08 during the day and 0.07 during the night are within acceptable OEH levels of 0.2 and 0.13, respectively. The tactile vibration levels (human annoyance criteria) are also generally consistent with Australian Standards. Therefore, the proponent has concluded that the proposal would not require any mitigation measures. As the vibration levels are below OEH recommended levels and adhere to Australian Standards, the department considers the proposal is satisfactory.

5.3.3 Landscaping and public domain

The open space and landscaping provisions (see Figure 24) are generally consistent with the requirements of the RFDC, Master Plan 2030 and the staged development consent. The proposal will provide public domain improvements along the frontage of the site and provide new through-site links in accordance with the precinct specific controls. These areas will be supported by retail activity along the ground floor, which will activate these areas and provide greater access to the site as well as maintaining view corridors. The new communal open space area proposed in the south of the site

will also support the relocation of a significant fig tree currently located within the centre of the site where the proposed building is to be located.

Figure 24: Landscape plan



The RFDC recommends 25-30 per cent of the area of development sites be provided as communal open space. The proposed communal open space is approximately 5,194 sqm and is equivalent to 49.6 per cent of the site area. Therefore, the proposal complies with the minimum recommended in the RFDC. The proponent has provided appropriate communal and private open space areas for future residents and these will be complemented by the dedicated active and passive recreation facilities in the Sydney Olympic Park precinct within walking distance from the site. These passive and active recreation spaces, including Bicentennial Park, would indirectly benefit from increased patronage and passive surveillance from the development.

The private open space areas for the majority of units generally comply with the 'rules of thumb' in the RFDC which require a minimum 25 sqm for courtyards with a minimum length of four metres and minimum primary balcony depths of two metres. A minor non-compliance occurs for a single unit on Level 1 which would technically need to meet the size requirements for a courtyard, however, does not as it replicates the balcony layout in the units in the column above. The department considers this minor non-compliance acceptable as it provides a defined edge to the southern edge of the Tower 2. All the balconies generally meet the minimum depth requirement of two metres.

The private open space areas do not meet the minimum size requirements in Master Plan 2030, which requires a minimum 9 sqm for 1 bedroom units, 12 sqm for 2 bedroom units and 15 sqm for 3 bedroom units. The minimum size of private open spaces are 6 sqm for 1 bedroom units, 9 sqm for 2 bedroom units and 13 sqm for 3 plus bedroom units. The department does not consider the minimum 1.5 m dimension requirement in Master Plan 2030 appropriate in this instance due to the irregular design of the units and the balconies which taper due to the elliptical form of the buildings. The department considers the private open space provisions acceptable given the generous provisions of communal open space and the parks and recreational facilities in the vicinity of the site. Also, whilst a portion of the units do not comply with the minimum requirements, approximately 90 per cent comply with Master Plan 2030 requirements.

5.3.4 Privacy

Visual and acoustic privacy for surrounding properties is not considered to be unreasonably affected due to the orientation of the buildings, building separation, separations provided by the road network and landscaping treatments. The closest residential flat building will be the Stage 1 building, located approximately 24 metres to the north which meets the minimum building separation requirements in Master Plan 2030.

The potential for overlooking occurs along the vertical slots proposed for the two towers which separate the floor plates into two wings (see Figure 25) with a common core area. The proponent has staggered the windows along the vertical slots and incorporated vertical louvers (see Figure 26) to mitigate any potential overlooking impacts and has positioned living areas away from the vertical slots. The louvres and distance is adequate to minimise acoustic privacy impacts. The department is satisfied that visual and acoustic privacy can be maintained as appropriate mitigation measures have been adopted, and the level of glazing and seals provided to mitigate rail and event noise would be sufficient to provide acoustic attenuation along the vertical slots to bedrooms.

Figure 25: Vertical slots provided which separates each of the towers into two wings

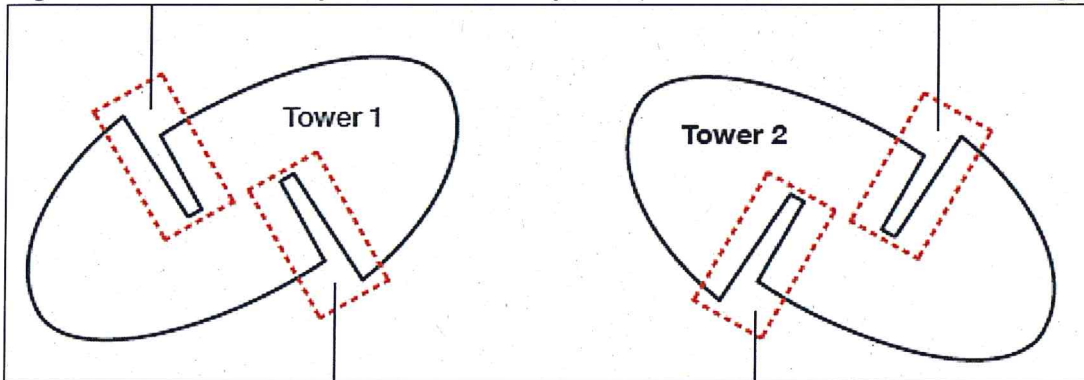
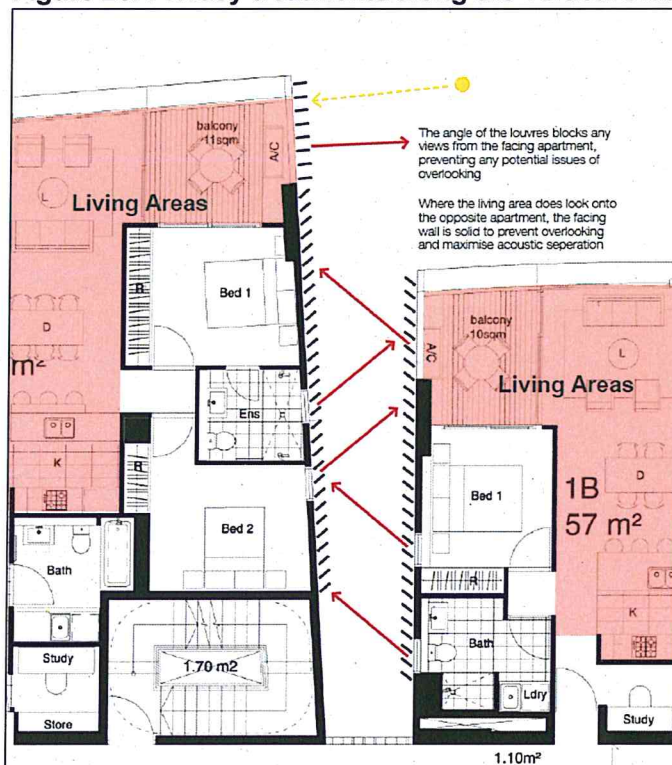


Figure 26: Privacy treatments along the vertical slots



5.4. Transport and Traffic Impacts

5.4.1 Traffic impacts

The road network in the vicinity of the site includes Australia Avenue, Figtree Drive, Bennelong Road, Parkview Drive, Herb Elliot Avenue, Sarah Durack Avenue, Murray Rose Avenue and Dawn Fraser Avenue. Sarah Durack Avenue and Bennelong Road linking with Edwin Flack Avenue, Marjorie Jackson Parkway and Kevin Coombs Avenue form part of the loop road around Sydney Olympic Park. Australia Avenue provides two traffic lanes in each direction and forms one of the key axis through the Town Centre.

Vehicles accessing the site will enter via Australia Avenue at the northern and southern parts of the site where new through site connections are being constructed. The northern through site connection will also be providing vehicular access for Stage 1. The southern access will be located directly opposite Fig Tree Drive.

The proponent's traffic assessment concluded that the proposal would generate 180 to 230 additional vehicle trips two way per hour during the peak periods. The proposal is expected to have an impact on the Australia Avenue/Herb Elliott Avenue/Parkview Drive, Australia Avenue/Fig Tree Drive, and Australia Avenue/Sarah Durack Avenue/Bennelong Parkway intersections. The traffic assessment concluded that the intersections impacted by the development are expected to continue to operate at 'good' to 'satisfactory' levels of service (Level of Service B/C).

Master Plan 2030 envisages that the Australia Avenue/Fig Tree Drive intersection will become a signalised intersection. These works are identified as part of the infrastructure works to be undertaken by SOPA and identified as works in the Sydney Olympic Park Authority Infrastructure Contribution Framework (ICF). The proponent will contribute towards these upgrades and other necessary infrastructure through payment of development contributions as discussed in Section 5.5.

As the additional traffic will not adversely impact traffic efficiency, the Australia Avenue/Fig Tree Drive intersection upgrade would not be required at this stage. Furthermore, SOPA has indicated to the proponent that the intersection works will not be constructed at this stage. As the intersection will not be upgraded at this stage, the RMS identified the need to limit vehicle movement from the new southern through-site connection to left-in and left-out only. The proponent has indicated that signage will be installed to reflect this requirement.

Accordingly, the department is satisfied that the traffic impacts would be acceptable as the level of service would continue to operate at good and satisfactory levels and the road network has the capacity to accommodate the traffic generated by the proposal. The department also acknowledges that the proponent will be contributing to the future upgrades through development contributions and that SOPA is the most appropriate authority to determine when the intersection upgrades are required given SOPA's knowledge of the overall staging of development within the precinct. The department has recommended that a condition be included that requires all traffic entering and exiting the site from the southern vehicle access point be restricted to left in and left out until any signalised intersection is installed, and adequate measures including signage be installed to the satisfaction of the RMS.

5.4.2 Parking

The proposal provides for 806 car parking spaces and 245 bicycle spaces in a ground floor and basement car park. The staged development consent allowed for a maximum 647 car parking spaces for Stages 2 and 3 and a maximum of 930 car parking spaces across the whole of Site 3. The proposed 806 car parking spaces exceeds the permitted amount for Stages 2 and 3 by 159 car parking spaces and consequently results in a total of 1,096 which exceeds the maximum permitted for Site 3 by 166 car parking spaces.

The proponent has argued that the additional spaces are appropriate as they are in accordance with Master Plan 2030 controls. Transport for NSW and RMS have both raised car parking as an issue given the state priority to achieve a modal shift to sustainable and active transport modes. Master Plan 2030 allows a maximum of 871 car parking spaces based on the proposed uses (see Table 5), whilst RMS's Guide to Traffic Generating Development recommends a minimum of approximately 699 car parking spaces.

Table 5: Master Plan 2030 car parking requirements

Proposal		Master Plan 2030 Max. Rates	RMS Min. Car Parking Rates	Master Plan 2030 Max. Spaces	RMS Min. Spaces
Commercial	807 sqm	1 space / 80 sqm	1 space / 40 sqm	10	20
Retail	1,118 sqm	1 space / 50 sqm	5 spaces / 100 sqm*	22	56
1 Bedroom	214 units	1 space / unit	0.6 spaces / unit	214	129
2 Bedroom	295 units	1.2 spaces / unit	0.9 spaces / unit	354	266
3 Bedroom	64 units	1.5 spaces / unit	1.4 spaces / unit	96	90
4 Bedroom	14 units	2 spaces / unit	-	28	20**
Visitors	587 units	0.25 spaces / unit	1 space / 5 units	147	118
Total				871	699

* RMS rate based on the Guide to Traffic Generating Development does not provide a generic rate for retail and provides various rates for the varying types of retail. As the retail fit-outs do not form a part of this proposal, no rate can be applied. However, based on the likely uses ranging from convenience stores, refreshment rooms, restaurants and general retail, the minimum rate would be five spaces per 100 sqm.

** As no rate for four bedroom units is identified in RMS's Guide to Traffic Generating Development, the same rate as three bedroom units has been applied.

The department considers the proposed number of car parking spaces acceptable as the total is below the maximum allowed by Master Plan 2030, meets the minimum required in RMS's Guide to Traffic Generating Development and is comparable with the rate approved in the staged development consent. That is, based on an average rate of 1.36 car spaces per unit (930 permitted car spaces/685 permitted units = 1.36 car spaces per unit) an additional 162 car parking spaces would be required for the additional 120 units for the whole of Site 3. Furthermore, if you calculated the minimum number of spaces required for the additional 120 units at the lowest rate in Master Plan 2030 of 1 space per 1 bedroom apartment, 120 additional car parking spaces would be required and 150 car parking spaces would be required if including visitor parking. Therefore, the 159 car parking spaces provided above the staged development consent requirements is reasonable.

The majority of the car parking spaces will be located below ground level as basement car parking, with a relatively small portion located at the rear of the ground level and away from public view. This is generally consistent with the intent of Master Plan 2030 which allows for above ground car parking where it is integrated with the overall façade of the building. The above ground components are integrated and are not visible along the main frontage of the site.

Accordingly, the department considers the proposal would provide adequate car parking for future residents and visitors and would not result in a visual intrusion as it is appropriately integrated with the design of the proposal and positioned along the rear of the site along the railway line.

5.4.3 Public transport

The area is well served by public transport as the site is within walking distance of Olympic Park Railway Station, which provides shuttle services every 10 minutes during peak periods from Lidcombe Station and connects the site to the Sydney CBD and Parramatta. The services also run every 10 to 20 minutes during off-peak periods and for the weekend. The site is also supported by a regional bus network that provides adequate bus services to the Sydney Olympic park area, with buses stopping along Australia Avenue and Dawn Fraser Avenue connecting the site to Lidcombe Station, Parramatta, Chatswood, Strathfield, Burwood, North Ryde, Ryde, Rhodes, Hurstville, Roselands and Homebush Bay Wharf.

RMS raised concerns about the ability of the public transport network to support the 40 per cent modal split for this development. The Master Plan 2030 was developed on the assumption of a 40 per cent modal share target for non-car work trips. The strategic and infrastructure planning for the broader precinct would need to cater for this target, including developing the strategic bus corridor from Parramatta to Strathfield via the Sydney Olympic Park Town Centre, improving local and regional bus networks and more shuttle services. Transport for NSW and SOPA raised no issue with the adequacy of the public transport network to support the proposed development or any problems with servicing the proposed population. SOPA identifies public transport upgrades and support services as one of the initiatives of the ICF and the timing and on-going delivery of these will be facilitated by SOPA in response to the increased workforce and residential population. The department considers the proposed population would support the existing services as well as supporting the long term vision to establish these new bus networks and corridor by providing a residential population that would provide return journeys for services where previous journeys would have only been trips into the Town Centre.

The site is also supported by an extensive bicycle network which runs along Australia Avenue and connects with the Metropolitan cycleways. The proponent has committed to preparing a Green Travel Plan to encourage sustainable transport use by future residents.

Accordingly, the department considers the site is well serviced by public transport and can support active transport modes.

5.5. Development Contributions

A private contributions agreement was entered into between the proponent and SOPA based on the contributions required under SOPA's previous contributions strategy, *Development Contributions Strategy - Briefing Note for Developers, Sydney Olympic Park Master Plan Development (November 2002)*. The contributions agreement established a nominal figure which was partially offset by works-in-kind in the form of a child care centre in Stage 1.

Subsequently, SOPA's Infrastructure Contribution Framework that currently applies to development in Sydney Olympic Park does not identify any contribution requirements for Site 3. SOPA did not raise any concerns regarding development contributions and has indicated to the department that commercial arrangements ensure that appropriate contributions would be paid. Accordingly, no development contributions are required for this development.

6. CONCLUSION

The department has reviewed the environmental assessment and duly considered advice from public authorities in accordance with section 75I(2) of the EP&A Act. All the relevant environmental issues associated with the proposal have been assessed. The key issues included consistency with the staged development consent, built form and urban design, environmental and residential amenity including solar access, transport and traffic impacts and development contributions.

The project is generally consistent with the scope of the staged development consent, and Master Plan 2030 and will facilitate growth in the Sydney Olympic Park Specialised Centre. The redevelopment of the site will support the orderly and economic development of the site for private housing and affordable housing.

The site is suitable for the project given the high level of access to infrastructure and services. The proposal is consistent with the strategic objectives for the area, being consistent with the NSW 2021, Metropolitan Plan for Sydney 2036 and the draft West Central Subregional Strategy, and would provide significant public benefits to the broader community through the growth of the Sydney Olympic Park site.

The proponent has adequately addressed the Director General's Environmental Assessment Requirements and satisfactorily mitigated the potential environmental impacts associated with the proposal. The recommended conditions and implementation of the measures detailed in the proponent's EA and appendices, PPR and appendices and Statement of Commitments seek to maintain the amenity of the local area, and adequately mitigate the environmental impacts of the proposal.

The department considers the site is suitable for the proposed development and that the application is in the public interest. Consequently, the department recommends that the project be approved, subject to conditions.

7. RECOMMENDATION

It is recommended that the Deputy Director-General, Development Assessment and Systems Performance, as delegate of the Director General and delegate of the Minister for Planning and Infrastructure:

- a) **Consider** the findings and recommendations of this report;
- b) **Sign** the attached Director General's certificate, pursuant to clause 21 of Part 23, Schedule 3 of the MD SEPP (Appendix E);
- c) **Approve** the Major Project Application (MP 10_0027), subject to conditions, under section 75J(1) of the EP&A Act, having considered all relevant matters in accordance with (a) above; and
- d) **Sign** the attached Instrument of Approval (Appendix F).

Director

23/12/11

Executive Director

Major Projects Assessment

13.1.12

Deputy Director-General

Development Assessment & Systems Performance

24/1/12