

State Significant Development Application Environmental Impact Statement



Site 18, Dawn Fraser Avenue, Sydney Olympic Park

NSW Rugby League Centre of Excellence

Submitted to NSW Department of Planning and Environment
On Behalf of NSW Rugby League Ltd

October 2016 ■ 16334

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21/10/2016

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21/10/2016

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Statement of Validity

Development Application Details

Applicant name	NSW Rugby League Ltd
Applicant address	6 Herb Elliot Avenue, Sydney Olympic Park, NSW 2127
Land to be developed	Site 18, Dawn Fraser Avenue, Sydney Olympic Park
Proposed development	Centre of Excellence for NSW Rugby League as described in Section 3.0 of this Environmental Impact Statement

Prepared by

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In respect of	State Significant Development - Development Application

Certification

I certify that I have prepared the content of
this EIS and to the best of my knowledge:

it is in accordance with Schedule 2 of the
Environmental Planning and Assessment
Regulation 2000;

all available information is relevant to the
environmental assessment of the
development to which the statement relates;
and

the information contained in the statement is
neither false nor misleading.

Signature



Name

Claire Burdett

Date

21/10/2016

Executive Summary

Purpose of this Report

This submission to the Department of Planning & Environmental (the Department) comprises an Environmental Impact Statement (EIS) for a Development Application under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It relates to the proposed development of a new Centre of Excellence for NSW Rugby League on Site 18, Dawn Fraser Avenue at Sydney Olympic Park.

Sydney Olympic Park is identified as a State Significant Development Site in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD 2011). Development with a capital investment value (CIV) of more than \$10 million within Sydney Olympic Park is identified as State Significant Development (SSD) for the purposes of the EP&A Act. Given the proposed development has a CIV of \$21,158,914 it is classified as SSD.

A request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was sought on 4 July 2016. The SEARs were issued on 1 August 2016.

This EIS is in accordance with the Department's guidelines for SSD applications lodged under Part 4 of the EP&A Act, and addresses the issues raised in the SEARs.

The Site

Site 18 is located on the southern side of Dawn Fraser Avenue, directly south of the ANZ Stadium and north of the Sydney Olympic Park Athletic Centre, midway between Olympic Boulevard and Edwin Flack Avenue in Sydney Olympic Park. The site is legally described as Lots 64 and 66 in DP1191648.

Overview of the Project

This EIS accompanies an SSD application for the development of Site 18 to provide a new Centre of Excellence for NSW Rugby League. The new building will provide 3,856m² of gross floor area (GFA) and will contain the following elements:

- publicly accessible reception area, which includes a retail component, café and museum area;
- sports facilities which include a gym, hydrotherapy pools, changing rooms and medical/ treatment rooms;
- press conference facilities;
- players dining facility;
- office and administration areas; and
- associated plant, loading and waste management areas.

In addition to the construction of the Centre of Excellence building, approval is also sought for:

- the construction of 11 car spaces and a loading bay; and
- refurbishment of the tunnel that provides access to ANZ Stadium.

Planning Context

Section 5.0 of the EIS considers all applicable legislation in detail. The proposal is consistent with the requirements of all relevant SEPPs.

The site is zoned B4 – Mixed Use under the provisions of Part 23, Schedule 3 of *State Environmental Planning Policy (State Significant Precincts) 2005*. The proposal is permissible with consent and meets the objectives of the zone.

Environmental Impacts and Mitigation Measures

This EIS provides an assessment of the environmental impacts of the project in accordance with the SEARs and sets out the undertakings made by the applicant to manage and minimise potential impacts arising from the development.

Conclusion

The EIS addresses the SEARs, and the proposal provides for the development of a Centre of Excellence for NSW Rugby League. The potential impacts of the development are minor and are able to be managed. Given the planning merits, the proposed development warrants approval by the Minister for Planning & Environment or his delegate.

1.0 Introduction

This Environmental Impact Statement (EIS) is submitted to the Department of Planning & Environment (DP&E) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) in support of an application for State Significant Development (SSD).

The site, known as Site 18 Dawn Fraser Avenue, is located within Sydney Olympic Park, which is identified as a State Significant Development Site in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD 2011). Development with a capital investment value (CIV) of more than \$10 million within Sydney Olympic Park is identified as SSD for the purposes of the EP&A Act.

This report has been prepared by JBA on behalf of NSW Rugby League Ltd, and is based on the Architectural Drawings provided by Populous (see **Appendix A**) and other supporting technical information appended to the report (see Table of Contents).

This EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), and the Requirements of the Secretary of the Department of Planning & Environment (DP&E) for the preparation of the EIS, which are included at **Appendix B**. This EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report.

1.1 Overview of Proposed Development

This application seeks approval for a new Centre of Excellence for NSW Rugby League. The new building will provide 3,856m² of gross floor area (GFA) and will contain the following elements:

- publicly accessible reception area, which includes a retail component, café and museum area;
- sports facilities which include a gym, hydrotherapy pools, changing rooms and medical/ treatment rooms;
- press conference facilities;
- players dining facility;
- office and administration areas; and
- associated plant, loading and waste management areas.

In addition to the construction of the Centre of Excellence building, approval is also sought for:

- the construction of 11 car spaces and a loading bay; and
- refurbishment of the tunnel that provides access to ANZ Stadium.

1.2 Objectives of the Development

NSW Rugby League Ltd (NSWRL) currently operate from a building at 6 Herb Elliot Avenue within Sydney Olympic Park. Whilst the existing building accommodates the administrative functions of NSWRL, the organisation does not currently have a combined training facility and as such, the different NSWRL departments operate different training programs at different locations across Sydney and NSW.

In 2015, NSWRL secured Site 18 at Sydney Olympic Park in a joint agreement with Sydney Olympic Park Authority (SOPA) for the purpose of developing the site for a

combined training and administrative centre for NSWRL to be known as the NSWRL Centre of Excellence.

In November 2015, the Minister for Sport, Stuart Ayres, announced the project in a media release and made the following statement, confirming its importance as a state project.

“The NSW Government is committed to providing the highest quality facilities to ensure the longevity and future success of Rugby League in this State”.

In conjunction with NSWRL, the key objectives of the development are to:

- Provide a facility that operates as the main NSWRL headquarters which will support the administrative requirements of the following departments:
 - senior football;
 - junior football;
 - Indigenous programs;
 - country program;
 - women’s rugby league; and
 - referees.
- Provide a training centre that will provide high performance training for players and targeted training programs as required by the different administrative departments.

Through the provision of a new training and administrative facility, NSWRL believes that the disconnect between the different departments within the organisation that is currently being experienced can be overcome and in turn this will improve on-field performance and sustain off-field success.

1.3 Analysis of Alternatives

Do Nothing

This option would see the proposed development of the site abandoned. If the site was abandoned permanently then the opportunity to provide additional employment floor space close to public transport would be lost, as well as the opportunity for the site to make a positive contribution to the urban form of Sydney Olympic Park.

Alternate Site Uses

Given the location of the site between ANZ Stadium and Athletics Centre, it is not suitable for residential development. The location, size and shape of the site mean that it is ideal for the proposed facility, which will be fully integrated with the approved Elite Training Field next door.

1.4 Capital Investment Value

In accordance with the definition provided within the *Environmental Planning & Assessment Regulation 2000*, the capital investment value (CIV), of the proposed development is \$21,158,914 in total (refer to **Appendix C**).

1.5 Secretary’s Requirements

A request for the Secretary’s Environmental Assessment Requirements (SEARs) for the preparation of an EIS was submitted to the DP&E on 4 July 2016. In accordance with section 89G of the EP&A Act and Schedule 2 of the *Environmental Planning and*

Assessment Regulations 2000, the Secretary issued the SEARs on 1 August 2016. A copy is included at **Appendix B**.

Table 1 provides a summary of the individual matters listed in the SEARs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 1 – Secretary’s Environmental Assessment Requirements

Requirement	Location in Environmental Assessment	
General		
The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 <i>Environmental Planning and Assessment Regulation 2000</i> .	This Report	
Environmental Risk Assessment	Section 5.21	
QS Report	Appendix C	
Key Issues	EIS	Technical Study
1. Statutory Context	Section 5.1	-
2. Policies	Section 5.2	-
3. Design Excellence and Built Form	Section 5.3	Appendix A
4. Public Domain	Section 3.3	Appendix E
5. Ecologically Sustainable Development (ESD)	Section 5.5	Appendix A
6. Major Events	Section 5.1.3	Appendices H & I
7. Noise and Vibration	Section 5.10	Appendix I
8. Transport and Accessibility	Section 5.11	Appendix H
9. Utilities	Section 5.12	-
10. Contributions	Section 5.13	-
11. Water Quality, Flooding and Drainage	Section 5.14	Appendix N
12. Tree Protection	Section 5.15	Appendix O and P
13. Construction Impacts	Section 5.20	-
14. Heritage	Section 5.16	-
15. Consultation	Section 4.0	-
Plans and Documents	Technical Study	
Architectural drawings	Appendix A	
Plan of subdivision	N/A	
Site survey plan	Appendix D	
Site analysis plan	Appendix A	
Shadow diagrams	Appendix A	
ESD report	Appendix A	
CPTED assessment	Section 5.19	
Access impact statement	Appendix L	
View analysis/ photomontages	Appendix A	
Traffic and transport impact assessment	Appendix H	
Noise impact assessment	Appendix I	
Stormwater management plan	Appendix N	
Soil and water management plan	Appendix N	
Landscape plan	Appendix E	
Heritage impact statement (if required)	N/A	
Public Domain Interface Plan	Appendix E	
Draft Construction Management Plan	Section 5.20 & Mitigation Measure	
Contamination report	Appendix G	
Geotechnical report	Appendix J	
Structural report	Appendix K	
Schedule of materials and finishes	Appendix A	
Integrated water cycle management plan	Appendix N	

2.0 Site Analysis

2.1 Site Location and Context

Sydney Olympic Park is an important economic and sporting centre in metropolitan Sydney. It is located eight kilometres from the Parramatta CBD and 15 kilometres from the Sydney CBD (refer to **Figure 1**), and is located in the south eastern portion of the City of Parramatta local government area.

Covering 680 hectares, the area includes a diverse range of sports and entertainment venues, parklands and riverside settings as well as commercial, retail and residential developments. The location benefits from convenient access to Homebush Bay Drive, Parramatta Road and the M4 Western Motorway, as well as Olympic Park railway station.

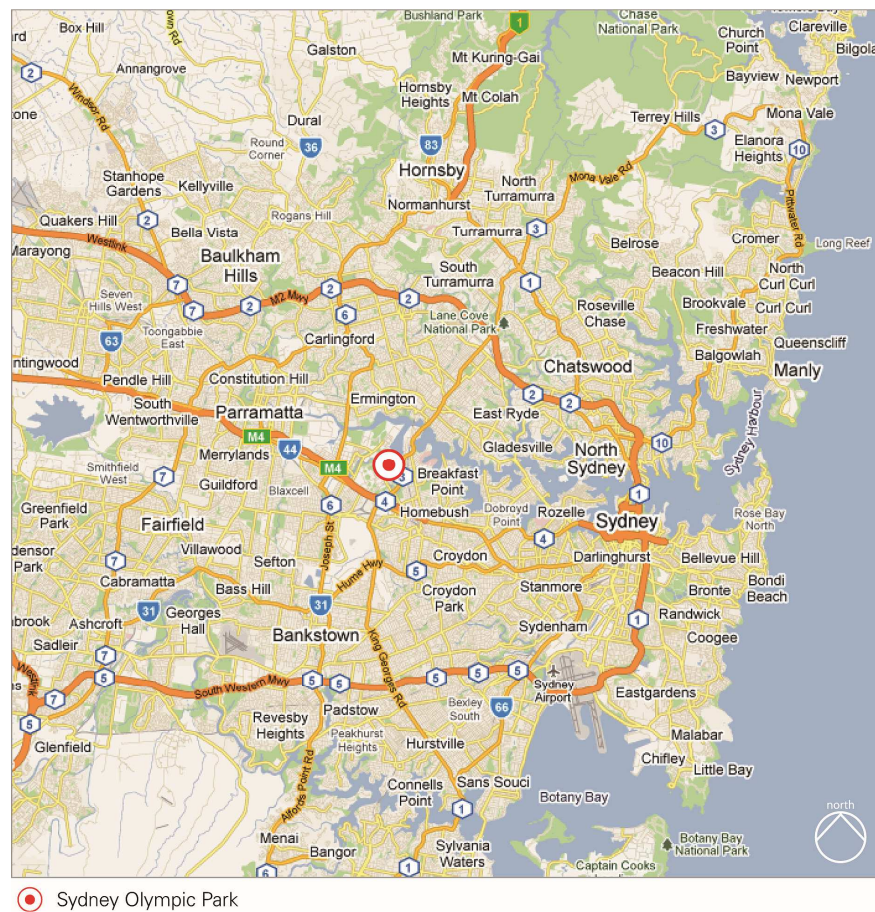


Figure 1 – Location Map
Source: Google Maps

As illustrated in **Figure 2**, Sydney Olympic Park is divided into ten¹ precincts:

- The main event areas:
 - Sports and Education Precinct;
 - Stadia Precinct;
 - Sydney Showground Precinct.

¹ It is noted that Wentworth Point is not identified in Figure 2, as it is not currently identified on the MP2030 Precinct Map.

- The residential and commercial areas:
 - Central Precinct;
 - Parkview Precinct;
 - Haslams Precinct; and
 - Wentworth Point.
- The parks and recreation areas:
 - Boundary Creek;
 - Tennis Precinct; and
 - Southern Sports Precinct.



Figure 2 – MP 2030 Precincts
 Source: Sydney Olympic Park Master Plan 2030

The site, known as Site 18, is situated along the northern boundary of the Sports and Education Precinct as defined by the Sydney Olympic Park Master Plan 2030, as shown in **Figure 2** above.

As shown in **Figure 3**, the site is located on the southern side of Dawn Fraser Avenue, midway between Olympic Boulevard and Edwin Flack Avenue. ANZ Stadium is located to the north, Sydney Olympic Park Athletic Centre is located to the south, and Olympic Park Station is situated approximately 400m to the east.



Figure 3 – Aerial photograph of the site
Source: Nearmap and JBA

2.2 Site Description

Site 18 is legally described as Lots 64 and 66 in DP 1191648. It is irregular in shape and has an area of approximately 3,133m². Further, the site has an approximate crossfall of 2.5m which slopes down from the south towards the north and east. In addition, a small retaining wall, which supports the adjacent Athletics Centre runs along the southern site boundary as illustrated on the site survey plan at **Appendix D**.

Zoning

The site is zoned B4 Mixed Use under the *State Environmental Planning Policy (Significant Precincts) 2005* (refer to **Figure 4**). The proposed centre of excellence would be defined as commercial development under the Significant Precincts SEPP and the associated publicly accessible retail premises are all permissible with consent in the B4 zone. The proposed development is permissible.

Furthermore, the site is identified for Education use under the SOPA 203 Master Plan (MP 2030) (refer to **Figure 5**). The proposed Centre of Excellence is considered to be an appropriate use that will integrate well with other developments within the Sports and Education Precinct.

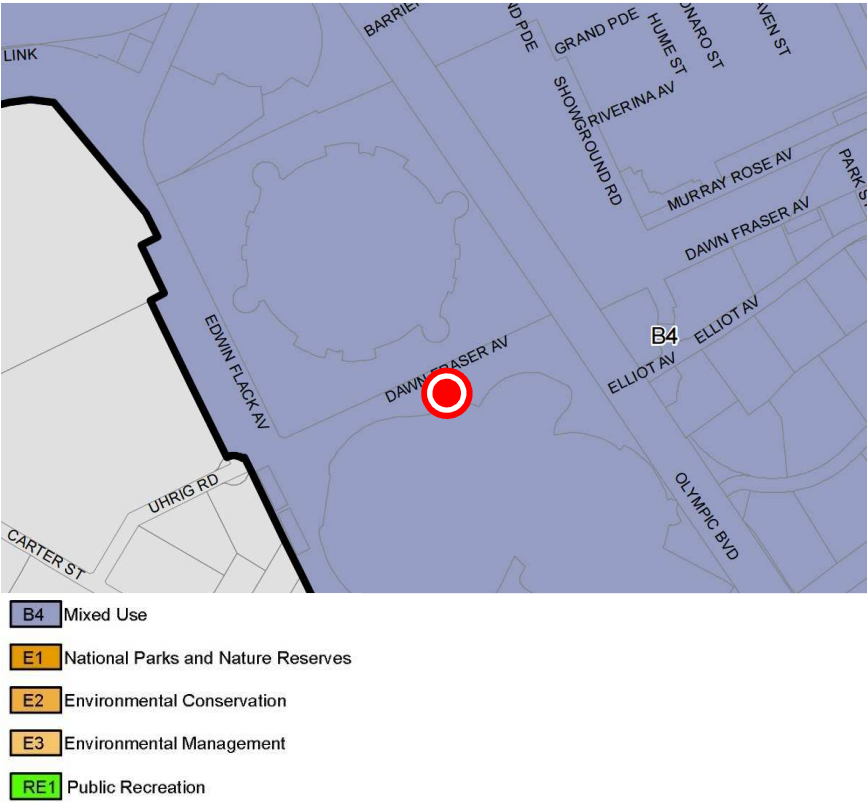


Figure 4 – Land Use Zoning Map extract
Source: SEPP Significant Precincts

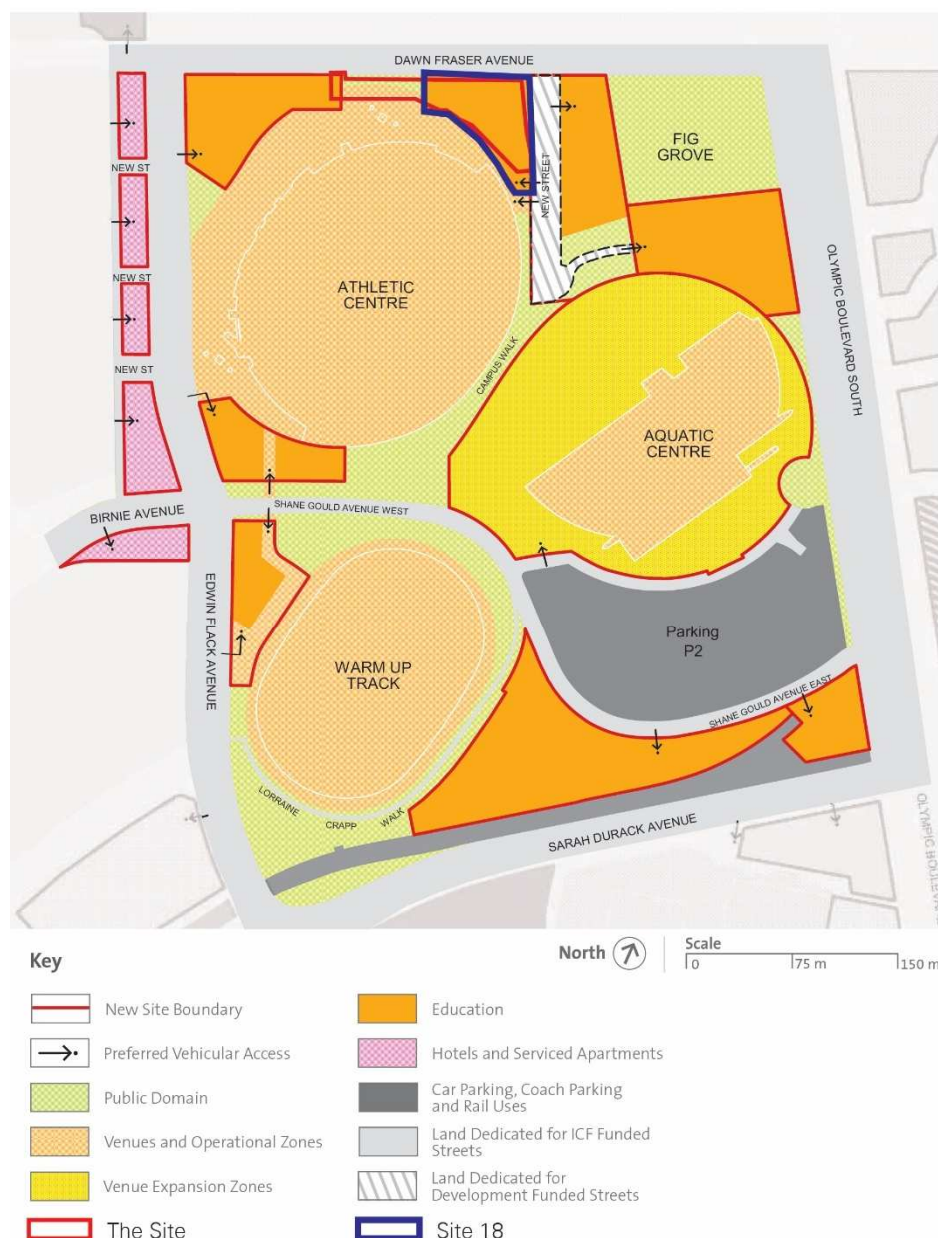


Figure 5 – Sports and Education Precinct Land Use Map

Source: MP 2030

Existing Development

The majority of the site is free of development and predominantly comprises a grassed public open area which includes a number of established trees with little or no understorey planting (refer to **Figures 6-8**). The northern corner of the site contains an existing tunnel that links the site with ANZ stadium (**Figure 9**). It is used by sports players to access the stadium on game days.

Access

The site does not have any formal existing vehicular access arrangements and pedestrians can openly access the site's landscaped areas directly from the pavement running along Dawn Fraser Avenue. The site has excellent access to the extensive pedestrian and street network of Olympic Park.

Notwithstanding this, pedestrian access to the tunnel is restricted and the access ramp is bound and secured by a metal fence and secure gate.

Public Transport Network

The site is serviced by both bus and rail public transport. Sydney Olympic Park railway station is approximately 400m from the site and provides regular services to Central and Lidcombe railway stations, which in turn provide access to the wider Sydney Train Network. Furthermore, Sydney Buses operate regular services from Dawn Fraser Avenue and Olympic Boulevard to Parramatta, Rhodes, Burwood, Strathfield and Chatswood.

Parking

No existing parking is provided on the site. Parking is provided within Olympic Park at a number of locations. A large, multi-storey car park with a capacity for 3,400 vehicles is located approximately 400m north of the site off Edwin Flack Avenue at the Qudos Bank Arena. Smaller at-grade parking is provided at a number of locations including the Sydney Aquatic Centre, 400m to the south and Hockey Centre 600m to the south.

Security

Street lighting is provided along Dawn Fraser Avenue at regular intervals and CCTV is also in place on the opposite side of Dawn Fraser Avenue at the public entrance to ANZ Stadium. The range of the CCTV coverage is unknown. In addition, fencing is provided along the southern site boundary, on top of the retaining wall. Formal security patrols were not present on the day of the site inspection, although SOPA does have its own rangers that undertake routine patrols of Sydney Olympic Park. Furthermore, it is understood that additional security staff are present on event days.



Figure 6 – Eastern portion of the site (tunnel shown to the left)

Source: JBA



Figure 7 – The site as viewed from the footpath
Source: JBA



Figure 8 – Rear of the site adjacent to the Athletics Centre
Source: JBA



Figure 9 – Underground tunnel to ANZ Stadium
Source: JBA

2.3 Surrounding Development

The site is bound by Dawn Fraser Avenue to the north, the Athletics Centre to the south, a landscaped area to the west and another landscaped area to the east – the site of a new elite training field, as illustrated on the Architectural Plans (refer to **Appendix A**), which will be used by the NSWRL players and coaches.

The surrounding land uses generally include sporting, entertainment, major tourism, retail, accommodation, light industrial and public open space. More specifically, to the north, opposite Dawn Fraser Avenue is ANZ Stadium which is a multi-purpose stadium with capacity for approximately 83,000 people. The stadium and surrounding hardstand occupies the block between Olympic Boulevard and Edwin Flack Avenue. Further north is Qudos Bank Arena which is a multipurpose arena with capacity for 21,000 people.

Immediately south of the site is the Sydney Olympic Park Athletics Centre. It has capacity for 5,000 people and is accessed from Edwin Flack Avenue. Further south is the Sydney Aquatic Centre.

To the east between the site and Olympic Boulevard is open space, water features and public plazas associated with Sydney Olympic Park. Further east are the Novotel, Ibis and Pullman hotels.

To the west of the site are the Ibis budget and Quest hotels, which are located on Edwin Flack Avenue. A number of large warehouse structures associated with logistics and distribution are located further to the west. Photographs of the surrounding developments are included at **Figures 10- 18**.



Figure 10 – ANZ Stadium (north)
Source: JBA



Figure 11 – Qudos Bank Arena (north)
Source: JBA



Figure 12 – Qudos Bank Arena Car Park (north)
Source: JBA



Figure 13 – Sydney Olympic Park Athletics Centre (south)
Source: JBA



Figure 14 – Athletics Centre viewed from the south (south)
Source: JBA



Figure 15 – Sydney Aquatic Centre (south)
Source: JBA



Figure 16 – Novotel, Ibis and Pullman Hotels on Olympic Boulevard (east)
Source: JBA



Figure 17 – Quest Hotel on Edwin Flack Avenue (west)
Source: JBA



Figure 18 – Toll Logistics development (west)
Source: JBA

3.0 Description of the Development

This chapter of the report provides a detailed description of the proposed development. Architectural Drawings prepared by Populous are included at **Appendix A**.

The application seeks approval for the development of the site as a Centre of Excellence for the New South Wales Rugby League. The new building will provide 3,856m² of gross floor area (GFA) and will contain the following elements:

- publicly accessible reception area, which includes a retail component, café and museum area;
- sports facilities which include a gym, hydrotherapy pools, changing rooms and medical/ treatment rooms;
- press conference facilities;
- players dining facility;
- office and administration areas; and
- associated plant, loading and waste management areas.

In addition to the construction of the Centre of Excellence building, approval is also sought for:

- the construction of 11 car spaces and a loading bay; and
- refurbishment of the tunnel that provides access to ANZ Stadium.

The Centre of Excellence will be a combined administrative headquarters and training facility for NSW Rugby League Ltd (NSWRL). The developments key functions will be to:

- provide a facility that operates as the main NSWRL headquarters which will support the administrative requirements of the various organisation departments; and
- provide a training centre that will provide high performance training for players and other targeted training programs as required by the administrative departments.

A photomontage of the proposed development is provided at **Figure 19**.

3.1 Numerical Overview

The key numeric development information is summarised in **Table 2**.

Table 2 – Key development information

Component	Proposal
Site area	3,133m ²
Height	
▪ Metres	14.44 metres
▪ Storeys	Three
GFA	3,856m ²
FSR	1.23:1
Car Parking Spaces	11



Figure 19 – Photomontage of the proposed development
Source: *Populous*

3.2 Architectural Design

The design has been the subject of extensive consultation with the Sydney Olympic Park Authority (SOPA), and the architectural form and character of the building has evolved in response to feedback and direction from NSWRL representatives and comments received from SOPA's Design Review Panel (DRP). Architectural Drawings and an Architectural Design Excellence and Built Form Report prepared by Populous are included at **Appendix A**.

3.3 Landscaping and Public Domain

The proposed landscaping design is simple and robust and is well integrated with the surrounding public domain (refer Landscape Drawings at **Appendix E**). The existing scattered trees at the rear of the proposed car park will be retained where possible, and new street trees in accordance with SOPA requirements will be provided along the street frontage. The proposed paving and planting treatments are consistent with SOPA's Urban Elements Design Manual.

Furthermore, the relationship between the proposed development and the new training field, as well as the proposed interface treatments are illustrated on the Landscape detail plan (included at **Appendix E**). The NSWRL Centre for Excellence project has employed the same Landscape Architect as the training field project, which is being managed by SOPA to ensure that both developments provide a consistent landscape approach.

3.4 Vehicular Access and Parking

Two vehicle crossovers for the site are proposed via Dawn Fraser Avenue. A 6m wide crossover is proposed to provide access and egress to the loading area and access to the car park. The car park runs adjacent to Dawn Fraser Avenue with a separate exit-only 5m wide crossover at the western boundary of the site.

The proposed development will provide a total of 11 car parking spaces for staff/VIPs and one accessible parking space. No general visitor parking will be provided as part of the development.

In addition, 10 bicycle spaces will also be provided within a bicycle storage area on the ground floor. Given changing rooms are provided within the proposed building, these are intended to be used as end of trip facilities as well as changing rooms for the gym and physical training rooms.

3.5 Signage

As annotated on the Architectural Drawings at **Appendix A**, a signage screen is proposed on the northern elevation and glazing with applied signage is proposed on the eastern elevation. Signage is also proposed within the access tunnel to ANZ Stadium. Approval for the detailed design of the proposed signage will be sought via a separate Development Application in the future.

4.0 Consultation

The proposed development is required to be placed on public exhibition for 30 days in accordance with Clause 83 of the *Environmental Planning and Assessment Regulation 2000*. During the public exhibition period, Council, State agencies and the public will have an opportunity to make submissions on the project Environmental Assessment.

SOPA Design Review Panel

A formal Design Review Panel (DRP) presentation was held on 21 July 2016. The DRP was generally supportive of the design, with comments provided on the DRP's advice sheet (refer **Appendix F**). The issues raised by the DRP were considered by the architects and incorporated into a revised design.

This revised design was formally presented to the DRP on 25 August 2016. Issues raised by the DRP at this second presentation (refer to advice sheet at **Appendix F**) have again been considered by the architects and further design revisions made.

A more informal design workshop was held with SOPA and the design team on 8 September 2016 to refine the design in light of the DRP's comments. The outcomes of this workshop informed the final design of the development, which was presented to the DRP for final endorsement on 22 September 2016.

Services Authorities

Consultation has been undertaken as required by the services consultants with the various relevant services authorities, including Ausgrid and Sydney Water, to inform the design of the project. This consultation will continue as required throughout the detailed design and construction phases of the project.

5.0 Environmental Assessment

This section contains the assessment of the environmental impacts of the proposed development as described in the preceding chapters of this report. It addresses the matters for consideration set out in the SEARs (refer to Section 1.4).

The Mitigation Measures at Section 6.0 complement the findings of this section.

5.1 Consistency with Relevant Strategic and Statutory Plans and Policies

The SEARs require the following legislation, strategies, planning instruments and policies to be addressed:

- State Environmental Planning Policy (State and Regional Development) 2011;
- State Environmental Planning Policy (State Significant Precincts) 2005;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy No. 55 – Remediation of Land;
- State Regional Environmental Plan (Sydney Harbour Catchment) 2005;
- NSW State Priorities;
- NSW Long Term Transport Master Plan 2012;
- A Plan for Growing Sydney;
- Sydney Olympic Park Master Plan 2030 (and subsequent reviews);
- Sydney Olympic Park Access Guidelines;
- 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;
- Sydney's Light Rail Future 2012/ Sydney's Rail Future 2012;
- Sydney's Cycling Future 2013/ Sydney's Walking Future 2013;
- Development near Rail Corridors & Busy Roads – Interim Guideline 2008; and
- NSW Water Objectives.

The Development Application's consistency with the relevant strategic and statutory plans and policies are summarised in the following sections.

5.1.1 Environmental Planning and Assessment Act 1979

The SEARs require that the consistency of the project with the objects of the EP&A Act be considered. Clause 5 sets out the Objects of the Act as follows:

(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 Objects of the Act relevant to the proposal are (a)(i),(ii), (vi) and (vii). The SSD Application is consistent with the Objects of the EP&A Act, for the following reasons:

- The proposal delivers a NSW RL Centre of Excellence development within the Sports and Education precinct of Sydney Olympic Park, which is consistent with the State Significant Precincts SEPP and MP 2030. It therefore contributes to the proper development of Sydney Olympic Park.
- It provides for the orderly and co-ordinated use of the land by revitalising a vacant site with a high quality development which is in keeping with surrounding developments and will provide a better quality environment.
- It provides an ecologically sustainable development with excellent water and energy saving performance.
- There will be few or no environmental impacts arising from the construction and operation of the development, and none that cannot be managed.

5.1.2 State Environmental Planning Policy (State and Regional Development) 2011

Sydney Olympic Park is identified as a State Significant Development Site in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD 2011). Development with a capital investment value (CIV) of more than \$10 million within Sydney Olympic Park is identified as State Significant Development (SSD) for the purposes of the EP&A Act. Given the proposed development has a CIV of \$21,158,914 it is classified as SSD.

5.1.3 State Environmental Planning Policy (State Significant Precincts) 2005

Sydney Olympic Park is listed as a State Significant Site in Schedule 3 of the State Significant Precincts SEPP. Part 23 refers to Sydney Olympic Park and sets out the planning provisions which apply to development within the site. The relevant planning provisions are addressed below.

The site is zoned B4 Mixed Use. The objectives of B4 Mixed Use zone and the proposed development's consistency with the objectives are addressed in **Table 3**. The proposed development is also consistent with the development control provisions as detailed in **Table 4**.

Table 3 – Consistency with the objectives of the B4 Mixed Use zone

Objective	Response
a) 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	The proposed development has been designed to ensure it does not significantly impact upon the capability of Sydney Olympic Park to host major events.
b) to integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling	The proposed development is accessible to public transport and attractive to cyclists and pedestrians. Refer to Section 5.11 .
c) to ensure that the Sydney Olympic Park site becomes an active and vibrant town centre within metropolitan Sydney	The proposed development will encourage the growth of Sydney Olympic Park's town centre by providing a quality development set within an attractive environment.
d) to provide for a mixture of compatible land uses	The proposed development is located within a broader precinct which incorporates a mix of land uses, including stadia and sporting development.
e) to encourage diverse employment opportunities	The internal layout of the proposed building has been designed to ensure it is suitable for a variety of employment uses.
f) to promote ecologically sustainable development and minimise any adverse effect of land uses on the environment	ESD principles have guided the detailed design of the proposed development, ensuring that it will minimise its impacts on the environment. Refer to Section 5.5 .
g) to encourage the provision and maintenance of affordable housing	Not applicable.

Table 4 – The proposed development's consistency with the provisions of Part 23 of Schedule 3 of the State Significant Precincts SEPP

Clause	Control	Proposal
18. Height of Buildings ²	26 metres	14.44 metres
19. Floor Space Ratio	4:1	1.23:1
20A Demolition requires consent	The demolition of a building work may be carried out only with consent.	Approval for the demolition any existing structures on the site is sought as part of this DA.
23. Public utility infrastructure	The development must have public utility infrastructure available or adequate arrangements in place to make that infrastructure available when required.	SOPA will provide all relevant service utility infrastructure connections.
24. Major event capability	Protect and promote the major events capability for the Sydney Olympic park site and ensure it remains a premium destination for major events.	<ul style="list-style-type: none"> ▪ Traffic generated by the development will not cause the local road network and connections to the regional road network to become saturated. ▪ The development will not prevent the effective management of crowd movement and transport services. ▪ The development will not compromise the effective functioning of major event infrastructure. ▪ The development will not conflict with the emergency management plans of government agencies or the emergency evacuation plans of major events venues.
25. Transport	The development must include measures to promote public transport use, cycling and walking.	The measures incorporated into the development to encourage the use of public transport, cycling and walking are detailed in Section 5.11 .
26. Master plan	The development must consider MP 2030.	Consistency of the proposed development with MP 2030 is addressed in Section 5.2.1 .
30. Design excellence	Development consent must not be granted for the erection of a new building unless the consent authority has considered whether the proposed development exhibits design excellence.	To demonstrate design excellence, the proposed development has been rigorously reviewed by SOPA's Design Review Panel, with the panel's comments incorporated into the final design of the development.

5.1.4 State Environmental Planning Policy (Infrastructure) 2007

Under clause 104 and Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007 (ISEPP), development including parking for 200 or more motor vehicles must be referred to NSW Roads and Maritime Services (RMS).

Given the proposed development provides 11 car spaces, this application is not required to be referred to the RMS for comment.

² The SEPP defines height of building as: *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.*

5.1.5 State Environmental Planning Policy No.55 - Remediation of Land

State Environmental Planning Policy No.55 - Remediation of Land provides controls and guidelines for the remediation of contaminated land. In particular the policy aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. As discussed in **Section 5.6** and **Appendix G**, the site can be made suitable for the development.

5.1.6 State Environmental Planning Policy No.64 – Advertising and Signage

Proposed signage zones are included on the Architectural Drawings at **Appendix A** and approval for signage will be sought within a separate DA. Notwithstanding this, the future signage will be designed to ensure that it is generally consistent with the matters for consideration identified in clause 13 and schedule 1 of the SEPP and will:

- will not give rise to any road or pedestrian safety impacts;
- contribute positively to wayfinding in the vicinity of the site;
- be integrated into the building design;
- not impact on any significant views; and
- be separated from sensitive residential uses.

5.1.7 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The site is not located in the Foreshore & Waterways area and is not 'zoned' under the SREP, where the majority of the plans aims and provisions apply.

However, the proposal is consistent with these aims in that the development will:

- create a high quality and ecologically sustainable urban development on the site;
- ensure a healthy, sustainable environment by effectively managing all environmental impacts associated with the development (erosion, sediment control, stormwater, etc.);
- contribute to the vibrancy of the precinct through high quality commercial space with an active public domain at ground level.
- will not impede public access to foreshore; and
- maintain a high quality urban environment through urban design, and will not detract from long distance views and vistas that may be available from the surrounding public domain to and from the harbour (with the proposal not directly visible from the harbour).

5.1.8 Other Approvals

As required by Clause 7(1)(d)(v) of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*, **Table 5** demonstrates that no other approvals will be required in order for the proposed development to be approved.

Table 5 – Additional approval requirements

Act	Approval Required
Legislation that does not apply to State Significant Development	
Coastal Protection Act 1979	N/A
Fisheries Management Act 1994	N/A
Heritage Act 1977	N/A
National Parks and Wildlife Act 1974	N/A
Native Vegetation Act 2003	N/A
Rural Fires Act 1997	N/A
Water Management Act 2000	N/A
Legislation that must be applied consistently	
Fisheries Management Act 1994	No
Mine Subsidence Compensation Act 1961	No
Mining Act 1992	No
Petroleum (Onshore) Act 1991	No
Protection of the Environment Operations Act 1997	No
Roads Act 1993	No
Pipelines Act 1967	No

5.2 Policies

5.2.1 Sydney Olympic Park Master Plan 2030

MP 2030 was prepared in accordance with the requirements of the *Sydney Olympic Park Authority Act 2001* and the State Significant Precincts SEPP. The purpose of MP 2030 is to:

- provide a comprehensive approach to the development of Sydney Olympic Park;
- ensure Sydney Olympic Park becomes an attractive and vibrant town within Metropolitan Sydney;
- protect the role of Sydney Olympic Park as the premier destination for cultural, entertainment, recreation and sporting events;
- protect and enhance the public domain;
- protect and enhance the Sydney Olympic Park parklands; and
- provide detailed planning and design principles and controls to encourage development that responds to its context and contributes to the quality of the built environment and the future character and cultural significance of the site.

The proposed development is generally consistent with the general and precinct specific controls as set out below.

General Controls

- Sustainability (Clause 4.2):
 - the project architect is a Green Star Associate;
 - the development will be connected to SOP's recycled water system;
 - materials have been selected on the basis of their sustainability; and
 - the development will meet the relevant minimum environmental ratings.

Further details are provided in **Section 5.5**.

- Public Domain (Clause 4.3):
 - weather protection will be provided at the entrances of the building;
 - opportunities for casual surveillance over the public areas will be provided via the high level of glazing incorporated into the development's design and the NSWRL reception staff;
 - multiple entrances into the building will be provided; and
 - the facades of the proposed building are modulated through design features, materials, and balconies to provide interest for passers-by.
- Event Access and Closures (Clause 4.4):
 - as outlined in **Section 5.1.3** access to the site will not be significantly compromised by road closures for minor or major events.
- Land Use and Density (Clause 4.5):
 - the proposed use is permitted on the site, and the development is within the maximum permitted height and FSR controls;
 - the existing and proposed road networks will have adequate capacity to support the development, as outlined in **Section 5.9**.
- Building Form and Amenity
 - the proposed building incorporates appropriate solar access, access to natural light and ventilation and access to views;
 - an accessibility review report has been prepared by Morris Goding as required by the controls (refer to **Appendix L**);
 - the proposed built form is appropriately expressed as detailed in **Section 5.3**;
 - appropriate consideration has been given to the safety and security of the proposed development throughout the design process as demonstrated in **Section 5.19**;
 - acoustic impacts have been considered as required by the controls, refer to **Section 5.10**; and
 - an operational waste management plan has been prepared that demonstrates how the principles of waste avoidance, reduction, re-use and recycling will be implemented into the operation of the proposed development (refer to **Appendix R**).
- Access and Parking (Clause 4.7 and Clause 4.8)
 - the proposal's consistency with regard to the access, parking and transport controls is discussed in detail in **Section 5.11**.
- Landscape and Site (Clause 4.9)
 - the proposed landscaping responds to the existing features of the site (refer to **Appendix E**).

Precinct Controls

The Sports and Education Precinct controls relevant to the site are all embodied in the MP 2030 general controls. However, it is noted that the proposed development is consistent with the land use plan for the precinct, including the vehicle access points.

5.2.2 Draft Sydney Olympic Park Masterplan 2030 (2016 Review)

On 10 October 2016, the Draft Sydney Olympic Park Masterplan 2030 (2016 Review) (the Draft Masterplan) was released for public comment. The Draft Masterplan reviews targets and strategies set out in Masterplan 2030 with consideration to development occurring on the wider Olympic Peninsular and Western Sydney to set an updated strategic plan for Sydney Olympic Park.

The proposed development is generally consistent the built form envisioned for the site under the Draft Masterplan as set out below.

- The proposed use is permitted on the site, being identified for commercial uses.
- The proposal complies with the site FSR controls of 4:1.
- The proposal complies with the site height control of 6 storeys.
- Double height active uses including café, reception and museum are provided to Dawn Fraser Avenue that will ensure the activation of the streetscape.
- The proposal includes a 2 storey colonnade to Dawn Fraser Avenue providing shelter to pedestrians.
- The proposal is consistent with the identified vehicle access point for the site.

5.2.3 State Policies

Table 6 – Summary of consistency with relevant Strategies, EPIs, Policies and Guidelines

Instrument/Strategy	Comments
Strategic Plans	
NSW State Priorities	The NSW State Priorities are a series of reforms designed to grow the economy, deliver infrastructure and improve health, education and other services across NSW. Whilst not directly related to the proposed development, the project will facilitate the delivery of a new centre of excellence for NSW Rugby League and therefore encourages business investment.
A Plan for Growing Sydney	A Plan for Growing Sydney aims to ensure Sydney remains a competitive economy with world-class services and transport. The proposed development accords with a number of Directions provided by the Plan, including: Direction 1.3: Prioritise the growth area from Greater Parramatta to the Olympic Peninsula Direction 1.4: Transform Western Sydney through growth and investment Direction 1.6: Expand the Global Economic Corridor to support jobs' growth Direction 1.7: Grow centres that provide more jobs closer to homes Direction 3.3: Create healthy built environments Direction 4.3: Manage the impact of development on the environment
NSW Long Term Transport Master Plan	The project is consistent with the Masterplan in that it will: <ul style="list-style-type: none"> ▪ support the expansion of the Light Rail System, by providing employment in direct proximity to existing rail stations; ▪ encourage public transport use by providing employment and retail uses in close proximity to rail and bus services; and ▪ support a reduced reliance on private vehicles, assisting in improving the modal split between cars and public transport.
Sydney's Cycling Future	Sydney Cycling Future was released in December 2013 to outline the intent to create a safer and easier bicycle riding experience for the people of Sydney. Given the site is well connected to the existing extensive cycle networks

Instrument/Strategy	Comments
	surrounding and within Sydney Olympic Park and a bicycle store and end of trip facilities are included within the proposed design along with a minimal amount of car parking, the proposed development supports the objectives of the policy.
Sydney's Walking Future	Sydney's Walking Future was released in December 2013 and seeks to make walking the transport of choice for quick trips under two kilometres and help people access public transport. The minimal amount of car parking proposed and the site's location within 400m of the Olympic Park rail station, along with the upgrade to the Dawn Fraser Avenue pavement adjacent to the site supports the objective of improving the walking experience of people working or visiting the NSWRL Centre of Excellence.
Sydney's Light Rail Future	Sydney's Light Rail Future was released in December 2013. Whilst Sydney Olympic Park is not currently proposed to be connected directly to the Light Rail system, it is connected indirectly through the Olympic Park railway station. The minimal amount of car parking provided within the development and the NSWRL commitment to encouraging the use of public transport by staff and visitors supports the objective of cutting traffic congestion and encouraging the use of public transport.
Sydney's Rail Future	Sydney's Rail Future was released in June 2012. Olympic Park railway station is located approximately 400m from the site and the proposed development provides only 11 car spaces, therefore the proposed development supports the use of public transport options available to the site.
Development near Rail Corridors	An assessment of noise and vibration has been prepared by SLR (Refer to Section 5.10 and Appendix I). The assessment concludes the construction and operation of the development would achieve compliance with policies and guidelines.
NSW Water Objectives	The NSW Water Quality Objectives set out the community's values and uses for rivers, creeks, estuaries and lakes and a range of water quality indicators to help assess whether the current condition of our waterways support those values and uses. Section 5.14 and Appendix N addresses water cycle management and the treatment measures set out within the proposed stormwater system to ensure that the proposed development does not give rise to any unacceptable impacts and complies with SOPA's Stormwater Management and Water Sensitive Urban Design Policy.

5.2.4 SOPA Policies

The objectives and guidelines contained within the following policies have been considered and incorporated into the design of the project:

- Sydney Olympic Park Access Guidelines 2015;
- 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;
- Sydney Olympic Park Remediated Land & Contaminated Development Policy.

5.3 Design Excellence and Built Form

The site is not nominated as a 'Design Competition Site' in Master Plan 2030 and therefore a formal design competition is not required. However, the design was prepared with specific reference to the relevant controls and guidelines within Master Plan 2030 to ensure that design excellence is achieved. In particular:

- the proposed facades are well modulated and appropriately scaled to reflect the uses of the building and respond to the streetscape;
- visual interest is provided through the appropriate use of wall thickness, blade walls, fenestration and sun shading elements; and

- the building is integrated into the existing topography, with the main building entrance providing level access from the footpath.

The maximum building height and floor space ratio are both well below the maximums permitted on the site by Master Plan 2030.

The Architectural Design Excellence and Built Form Report prepared by Populous (refer **Appendix A**) provides specific details in relation to the following elements of the design:

- SOPA Master Plan 2030;
- Design Review Panel;
- Height, bulk and scale;
- Design excellence;
- Materials and finishes;
- Services integration; and
- Ecologically sustainable development.

5.4 Environmental Amenity

5.4.1 View Loss and Privacy

Due to the context of the site and its separation from any residential and commercial buildings, the proposed development will not result in any significant negative impacts on existing views or result in significant privacy impacts.

5.4.2 Overshadowing

Shadow diagrams have been prepared that detail the overshadowing resulting from the proposed development at the solstices and equinoxes (refer **Appendix A**). These clearly demonstrate that no significant shading will fall on any sensitive land uses such as areas of residential open space.

5.5 Ecologically Sustainable Development

The NSWRL Centre of Excellence is required to achieve Green Building Council of Australia four star green star equivalency. This will be achieved through utilising the site's north south orientation, adopting logical mechanical systems and through careful fixture and fittings selections.

As the site is orientated with a desirable north south aspect, the arrangement of spaces has been designed to maximise this, with public and recreation spaces located to the north in order to maximise winter solar access and summer breezes. Extensive use of sun shading devices to the north and north east facades of the building reduce thermal load in summer. Limited glazing on the western façade limits heat gain. Sun shading has also been applied to the activated public colonnade fronting Dawn Fraser Avenue, which also aligns with Masterplan 2030.

From a services viewpoint, water efficient fittings and fixtures will be adopted across the site and mixed mode HVAC systems will be in use for large volume spaces such as the gym and entry lobby.

Finally, the number of car parking spaces has been significantly reduced from the original requirement of 50 down to the proposed 12. Provisions for bike storage and end of trip facilities have also been included to encourage and enable active transport options over private car use.

5.6 Contamination

A detailed Contamination Assessment Report has been prepared by Douglas Partners (refer **Appendix J**) to:

- assess the previous land uses to determine the potential for soil and groundwater contamination on the site;
- provide a preliminary assessment of the suitability of the site for the proposed development; and
- provide recommendations for additional investigation, if required.

The scope of work comprised a review of available historical information, site inspection, drilling of boreholes, collection of soil samples, laboratory analysis and interpretation of the results.

The results of the investigation are summarised as follows.

5.6.1 Historical Use Assessment

A review of the site history including title deeds, aerial photographs, the EPA Contaminated Lands register and groundwater bore licences have identified the following:

- the land was owned from 1929 to 1993 by the Metropolitan Meat Industry Board which operated part of an abattoir facility on the site;
- the site was owned by the Olympic Co-Ordination Authority from 1993 when the site was redeveloped for the Sydney 2000 Olympic Games;
- historical aerial photographs indicate the site has operated as part of a large complex of buildings associated with the abattoir between 1951 a to 1970 when some structures at the east side of the facility were demolished. The site remained unchanged in photographs until 1998 when the site was redeveloped for the Olympic Games;
- the 149 Certificate states that the land is not significantly contaminated land, is not the subject of a management order, is not the subject of an approved voluntary management proposal, is not subject to an ongoing maintenance order and is not subject to a site audit statement;
- the site is not listed on the *List of NSW Contaminated Sites Notified to EPA*; and
- no licenced groundwater wells are located within the site.

5.6.2 Soil and Groundwater Assessment

The results from seven soil samples which were analysed found that soil samples were within the adopted health-based investigation/screening levels for commercial sites as well as the adopted ecological-based investigation/screening levels. Asbestos was not observed in the samples analysed in the laboratory.

Excavation of the site is not required and the quality of ground water would not be impacted by the proposed development.

Overall, Douglas Partners consider the likelihood of encountering contaminants at concentrations that would impact on the proposal to be low. On this basis, the site can be made suitable for the proposed development.

5.7 Geotechnical Investigations

A Desktop Summary Report has been prepared by Douglas Partners in relation to the geotechnical conditions of the site (refer **Appendix J**). The report identifies:

- the site is underlain by Ashfield shale;
- there is no known occurrence of acid sulphate soils; and
- the site is not underlain by landfill material.

The report also identifies expected subsurface conditions, requirements for site preparation and excavation, groundwater foundation design and pavement requirements. There are no geotechnical conditions that prevent the construction of the development. Structural Suitability

Taylor Thomson Whitting (TTW) has reviewed the site and the architectural drawings and consider that the proposed development is suitable from a structural perspective and will meet the relevant provisions of the BCA (refer **Appendix K**).

5.8 Accessibility

An Accessibility Review has been prepared by Morris Goding Accessibility Consulting (Morris Goding) in relation to the proposed development (refer **Appendix L**). The review was undertaken to ensure that ingress and egress, paths of travel, circulation areas, lifts, toilets and car parking comply with relevant statutory guidelines, including SOPA's Access Guidelines.

The review demonstrates that the proposed development provides an appropriate degree of accessibility. The architectural drawings indicate compliance with statutory requirements pertaining to site access, common area access, accessible parking and accessible sanitary facilities can be readily achieved.

Morris Goding has made a number of recommendations in its report to ensure that the development meets the relevant statutory requirements and standards. The recommendations will be incorporated into the detailed design of the development and submitted with the construction certificate documentation.

5.9 Acoustic

SLR were engaged to conduct a noise and vibration impact assessment of the proposed development (refer **Appendix I**). The following potential acoustic issues were identified:

- local road traffic noise associated with Dawn Fraser Avenue and Olympic Boulevard;
- construction noise;
- major sporting and entertainment events at Sydney Olympic Park; and
- operational noise emission from mechanical plant rooms.

External noise and vibration intrusion into the development was assessed in accordance with the relevant guidelines and standards:

- State Environmental Planning Policy (Infrastructure) 2007;
- Development Near Rail Corridors and Busy Roads - Interim Guideline 2008;
- Australian Standard AS2107:2000 'Recommended Design Sound Levels and Reverberation Times for Building Interiors'; and
- Sydney Olympic Park Master Plan 2030.

The assessment of airborne noise intrusion into the proposed development found that appropriate noise control measures can be incorporated into the building design (such as acoustic glazing) to achieve compliance with the acoustic requirements stipulated in the relevant guidelines and standards. The assessment concluded that the proposed construction and operation of the development would achieve the objectives of the current acoustic policies and guidelines.

5.10 Transport and Accessibility

GTA Consultants has reviewed the proposed development in terms of traffic impacts. Their assessment is included at **Appendix H** and is summarised below.

Car and Bicycle Parking

The proposed development will provide a total of 11 car parking spaces for staff and VIPs and one accessible parking space. No general visitor parking will be provided.

Under the SOP Masterplan 2030 the maximum parking under the proposed development scenario is 82 spaces. The provision of 11 spaces is less than the maximum permitted and is consistent with various State Government policies which seek to limit onsite car parking provision in order to encourage the use of more sustainable forms of transport.

GTA also note that restricting the number of parking spaces for staff and visitors will also encourage greater patronage of existing public car parks located within Sydney Olympic Park which are not typically in demand during non-event periods.

In terms of bicycle parking, a storage area for approximately 10 bicycles is to be provided within the western part of the building at the ground floor. The SOP Masterplan 2030 requires a minimum of 20 parking spaces, given there is a shortfall of 10 spaces the applicant is looking into providing additional high level racking within the storage area or alternatively providing 10 bicycle loops on the public footpath along Dawn Fraser Avenue.

Traffic Generation

As the proposal provides 11 parking spaces, GTA have conservatively assumed that each car space will generate one traffic movement in both the AM and PM peak periods. Consequently, the traffic generation from the on-site parking provided in each of the peak hours is 11 vehicle movements.

The proposal will however generate additional traffic to the precinct, albeit they will not park on the application site. GTA have estimated that the traffic generated would be the following:

- Retail use: 5 trips (293m² at 1.6 trips per hour per 100m²)
- Sports/ training/ education facility: 43 trips (1 trip per staff member and 1 trip for every 2 athletes)
- Total: 48 vehicles per hour during the busiest peak period/ 480 vehicles per day.

Traffic Impacts

GTA note that the proposed development will generate up to an additional 48 vehicles per hour in a peak hour to the precinct and an additional 11 vehicle movements to the subject site. The level of additional traffic is considered to be minor and GTA does not expect it to have a detrimental impact on the surrounding network.

The only exception to the above is when a State of Origin Game is being played at the neighbouring ANZ Stadium. During these events it is expected that the facility would be at maximum capacity and up to 512 people could be accommodated on

the site. However, GTA note that these people would have already been within the Sydney Olympic Park complex regardless of the proposed development as they would have either been at ANZ Stadium or at the existing Rugby League NSW headquarters.

5.11 Utilities and Services

The proposed development will be connected to the available services to the site, in accordance with the requirements of the relevant service providers. The services consultant team has commenced consultation with the service providers to confirm existing supply details and to specify any required augmentation requirements. This consultation will continue throughout the detailed design process and through to construction.

In particular, Ausgrid has confirmed that the proposal will connect to an existing substation situated to the south of the site. A SOPA electrical services plan that locates the subject substation is shown at **Appendix M**. Sydney Water has provided relevant pressure and flow details for hydraulic connections.

5.12 Contributions

No section 94 Contribution Plan applies to Sydney Olympic Park. Contributions under the Infrastructure Contributions Framework 2030 will be a commercial discussion between the proponent and SOPA and will address all commercial matters relevant to the project.

5.13 Water Cycle Management

An assessment of the capacity and treatment measures of the proposed stormwater system has been undertaken by Taylor Thomson Whitting (TTW) (**Appendix N**). This report addresses civil aspects relevant to the site and including requirements specified in SOPA's Stormwater Management and Water Sensitive Urban Design Policy.

5.13.1 Erosion and Sediment Control

During construction and while the site is disturbed, erosion prevention and sediment control measures will be introduced. An Erosion and Sediment Control Plan is provided in the Civil Design Report at **Appendix N**.

5.13.2 Stormwater

The drainage system will reticulate to the north of the site via On Site Detention (OSD) to attenuate stormwater flows. A 70m³ OSD is required to reduce post development flows to the pre-development flow rate.

OSD is provided in accordance with SOPA's Stormwater Management and Water Sensitive Urban Design policy.

5.13.3 Water Sensitive Urban Design

Prior to discharge, stormwater is required to be cleaned to meet SOPA requirements. Due to site constraints natural systems cannot be utilised. However, pollutant removal devices are proposed that remove gross pollutants, suspended solids, reduce nutrient runoff including nitrogen and phosphorous.

Stormwater pollutant removal will be provided as per the requirements specified in SOPA's Stormwater Management and Water Sensitive Urban Design Policy.

5.13.4 Flooding

The Civil Report prepared by TTW (refer **Appendix N**) details that no flooding constraints were identified for this site. The site is positioned well away from any creek and overland flow paths so will not experience any impact from sea level rise. Adequate provision for overland flow paths within the site will cater for any future increases in rainfall intensities.

5.14 Tree Removal

Place Design Group, the project's landscape architect, has reviewed the significance of the existing trees on site that require removal to accommodate the proposed development (refer **Appendix O**). Further, an Arboricultural Impact Assessment has been prepared by New Leaf Arboriculture (New Leaf) (**Appendix P**) to assess the likely impact of the proposal on retained trees and an assessment of the significance of trees to be removed.

New Leaf found the site contained a mixture of native species that were planted as part of the wider landscape works for the Sydney 2000 Olympic Games. The trees are not part of a remnant vegetation community and are considered to have a medium or medium to high significance due to their health and size. The visual inspection undertaken by New Leaf has identified some additional trees that were not identified on the survey in their assessment. The tree plan at **Appendix P** identifies all trees to be removed or retained and identifies the approximate location of trees not identified by the survey. Overall the assessment found:

- 35 trees within the development footprint should be removed:
- five trees are close to the excavation footprint and will require removal;
- six trees above the retaining wall are recommended to be retained, subject to Arborist inspection; and
- four trees above the retaining wall are not affected by the proposal and should be retained;

New Leaf recommend that trees proposed to be removed should be replaced with advanced size locally native species and provided recommendations within their report in regard to tree protection measures.

In addition, New Leaf have identified 16 street trees that are proposed to be removed. While six of the street trees will need to be removed to accommodate the proposal, the remaining ten may be retained. It is proposed that these trees be removed and replanted with a more structured street tree design in order to provide an improved streetscape amenity and presentation of the building to the public domain. New Leaf conclude that if these trees are to be replaced, the replacement trees should be provided with improved conditions to support long term development.

To mitigate impacts of the proposal on local vegetation, New Leaf make the following recommendations:

- confirm the location of trees not shown on the survey to inform decision making on these trees, in coordination with an AQ5 Arborist;
- tree protection for all retained trees;
- engage a project arborist to advise on works near trees;
- consider retention of verge trees or provide best practice replacement for large tree planting to ensure amenity and other values of removed trees are replaced in a reasonable timeframe;

- minimise excavation of tree protection zones areas as shown on the tree protection plan; and
- an Arborist should be in attendance during deconstruction of the rock wall to advise on methods to avoid damage to trees and advice on tree removal.

5.15 Heritage

The proposal will not physically impact any heritage items or impinge on the curtilage of any heritage item.

The proposal will not impact any heritage significant views of any State-significant heritage items. Given that the proposal is not visible from these State-significant items due to its height, it would not impact any heritage significant vistas. In particular, views from Millennium Park (Newington Armament Depot and Nature Reserve) would not be impacted.

Therefore, no heritage impact mitigation measures are required for the proposed development.

5.16 Archaeology

5.16.1 Historical Background

Aboriginal History

Aboriginal occupation of the Homebush Bay area is likely to date back to before 15,000 years ago (before sea levels had stabilised at modern levels during the ice age). By about 6,000 years ago, waters had completely flooded over the old coastal plain, and the current Sydney environment was largely stabilised. The vast majority of sites in the wider area date to within the last 5,000 years, well after the sea had reached its present level.

Land Grants and Subdivision 1788-1906

After the European settlement of Sydney Cove in 1788, the Homebush Bay area came to be known as 'The Flats' after the extensive mangroves and mud flats in the region. The first land grant in the area was allotted to Thomas Laycock in 1794, which he called 'Liberty Plains'. In 1810 this farm was sold to D'Arcy Wentworth who named the site 'Home Bush'. A homestead and later a horse racing track was built on the land in 1825.

In 1881, a proposal was made for subdividing the southeast portion of Wentworth's estate for residential development. This subdivision was called the Homebush Park Estate. By 1883, some of the land had been subdivided, but it was another three years before the first lot was sold.

Twentieth Century Industries 1907-1988

An area of Homebush was resumed for the State Abattoir in 1907 and was built on the site in 1910 after the Glebe Island Abattoir was deemed as publically unsafe following the plague. This saw development of servicing roads for the abattoir and associated buildings. A branch railway line through the abattoir site was constructed by 1908, which included the levelling of the site. This railway line was further developed in 1910, with site levelling, excavating, and roadways and platforms being constructed. The abattoir closed in 1988.

A State Brick Works was located at the northern side of Homebush from 1911. Access roads were constructed and a railway line was developed to provide access to the Brick Works. The Brick Works was used until its closure in 1940, when it was

taken over by the Naval Armament Depot as a munitions store. It was later reopened following the end of World War Two until the use ceased in 1988.

As industrial development in Sydney expanded in the mid-twentieth century, locations to discard industrial waste were required. Homebush, at that time relatively undeveloped, was chosen as a dumping location for toxic waste, including waste from factories such as Timbrol and Union Carbide that were located nearby in Rhodes. Wentworth Bay was filled in with industrial waste and the natural ecology of the area was severely damaged. The area nearest Homebush Bay became a shipbreaking yard in 1966, with many of the wrecks still visible today. By 1988 there was an estimated 9 million cubic metres of waste and contaminated soils spread over 400 hectares within the 760-hectare site

Sydney Olympic Park Redevelopment 1990s

The southern portion of Homebush was developed as Sydney Olympic Park following the 1993 successful bid for Sydney to host the 2000 Olympic and Paralympic Games. Part of this development was the construction of sports facilities, competitor housing, roads, and rejuvenation of parklands and streetscapes. Rehabilitation and stabilisation of the area was conducted due to the contamination from prior industrial use.

5.16.2 Archaeological Assessment

Aboriginal

Given the location of the site within proximity to fresh water sources as well as the shore of Homebush Bay, it is likely that Aboriginal people would have employed a range of subsistence activities to take advantage of their local environment. Coastal resources such as saltwater fish and shellfish would have been available to groups as well as small animals, plants, freshwater fish and eels. Banksia flowers, wild honey, varieties of wild yam and Burrawong nut have been recorded as important food source. Small animals such as bandicoots and wallabies were hunted with traps and snares.

European land use has severely disturbed the ground surface of the site. Early European forest clearing activities for agriculture is likely to have caused minor disturbance of potential Aboriginal archaeological deposits. The use of the Homebush Bay region as an industrial waste dumping site has caused the near-total removal of intact archaeological deposits throughout the study area.

An Aboriginal Heritage Information Management System (AHIMS) Database search has been undertaken in relation to the site (refer **Appendix Q**). The results of this search indicate that the site contains no recorded Aboriginal objects or declared Aboriginal places.

Historical

The archaeological potential of historical phases of the site is assessed as follows:

- Early grants and land subdivision: Potential archaeological remains typically associated with nineteenth century agricultural use are ephemeral in nature. Activities such as tree clearance, fence construction, the development of unsealed roads and agricultural planting leave little material evidence and are not likely to be located. The horse racing track and its associated wooden buildings would have low potential to be in the study area. There is nil-low potential for archaeological relics associated with this phase of development.
- Twentieth century industries: Potential archaeological remains typically associated with twentieth century uses are difficult to locate or identify. Activities such as fence construction, the development of unsealed roads and planting

leave little material evidence and are not likely to be located. There is nil-low potential for archaeological relics associated with this phase of development.

- Industrial waste depository: The wider area was utilised as a landfill for toxic and non-toxic waste from nearby industrial areas (Rhodes, Concord, Silverwater and Parramatta). However, no industrial facilities were constructed in the study area. There is nil-low potential for archaeological relics associated with this phase of development.
- Sydney Olympic Park development: The site is a grassed area with scattered mature trees. Although there are a number of Olympic facilities in the immediate vicinity of the site, there are no facilities actually located on the site. There is nil potential for archaeological relics associated with this phase of development.

Owing to the land-use history and the high level of previous impacts, there is nil-low potential for significant archaeological remains within the site. As such, the potential archaeological resource is unlikely to contribute to a greater understanding or appreciation of the past and does not meet any of the significance assessment criteria identified by the Heritage Division of the Office of Environment and Heritage (*Assessing Significance for Historical Archaeological Sites and 'Relics'*).

5.17 Waste Management

A Waste Management Plan (WMP) has been prepared by SLR (**Appendix R**) that details proposed waste during construction and operation of the development.

Key features of the WMP include:

- measures to minimise waste generation and to ensure on-going management of waste during construction;
- identification of volume and type of waste generated;
- storage, treatment and disposal of waste on site; and
- operational procedures for waste management.

The report recommends that approximately 14.5m³ of waste storage be provided in the building for all uses. It is estimated that the site will utilise up to 1 x 240L Mobile Garbage Bins (MGB) and 10 x 660L MGBs. The proposed development includes the provision of a waste storage facility with an area of 5m², while the loading area provides 15m² of storage of waste. The combined storage will adequately address the proposed waste generation.

Furthermore, the chosen placement of the waste facility has taken a variety of factors into account including; being located away from cars and people in order to minimise odour and visual impact and being located with easy access for the waste contractor.

5.18 Crime Prevention Through Environmental Design (CPTED)

Crime Prevention Through Environmental Design (CPTED) is a situational crime prevention strategy that focuses on the design, planning and structure of the environment. It aims to reduce opportunities from crime by employing design and place management principles that minimise the likelihood of essential crime ingredients.

Furthermore, the aim of the CPTED strategy is to influence the design of buildings and places by:

- increasing the perception of risk to criminals by increasing the possibility of detections, challenge and capture;
- increasing the effort required to commit crime by increasing the time, energy or resources which need to be expended; and
- reducing the potential rewards of crime by minimising, removing or concealing 'crime benefits'.

Accordingly, JBA has undertaken the following tasks in the preparation of a CPTED assessment of the proposed development:

- review of key literature on CPTED including the Department of Justice and Attorney General Crime Prevention;
- collection and analysis of local and NSW State crime statistics from the Bureau of Crime Statistics and Research (BOSCAR); and
- a crime risk assessment in accordance with the current NSW policy and practice of the following regulation and assessment principles:
 - Surveillance
 - Lighting/technical supervision
 - Territorial reinforcement
 - Environmental maintenance
 - Activity and Space Management
 - Access Control
 - Design, definition and designation

(It is noted that this CPTED assessment has been prepared by a Certified NSW Police Risk Assessor, Claire Burdett and uses qualitative and quantitative measures of the physical and social environment to analyse and suggest treatments from crime opportunity in accordance with the Australian and New Zealand Risk Management Standard AS/NZS 31000:2009).

A site inspection was undertaken on 26 August 2016 in order to assess the current site conditions and situational crime prevention measures and safety impacts. Overall, the Crime Risk is considered to be 'low'. The key reasons are:

- whilst there are no real surveillance opportunities available from the surrounding buildings, natural and casual surveillance opportunities are available from motorists and pedestrians along Dawn Fraser Avenue;
- generally good quality way finding signage across Sydney Olympic park is evident;
- the urban environment is well maintained and there are no signs of graffiti, litter or vandalism;
- there is clear demarcation of private and public areas throughout Sydney Olympic Park; and
- a positive image of the area is portrayed.

5.18.1 Nature of Recorded Crime

Crime statistics obtained from the NSW Bureau of Crime Statistics and Research (BOSCAR) represents criminal incidents recorded by NSW Police. A review of the local statistics between July 2015 and July 2016 found that parts of Sydney Olympic Park are identified within four crime hotspots:

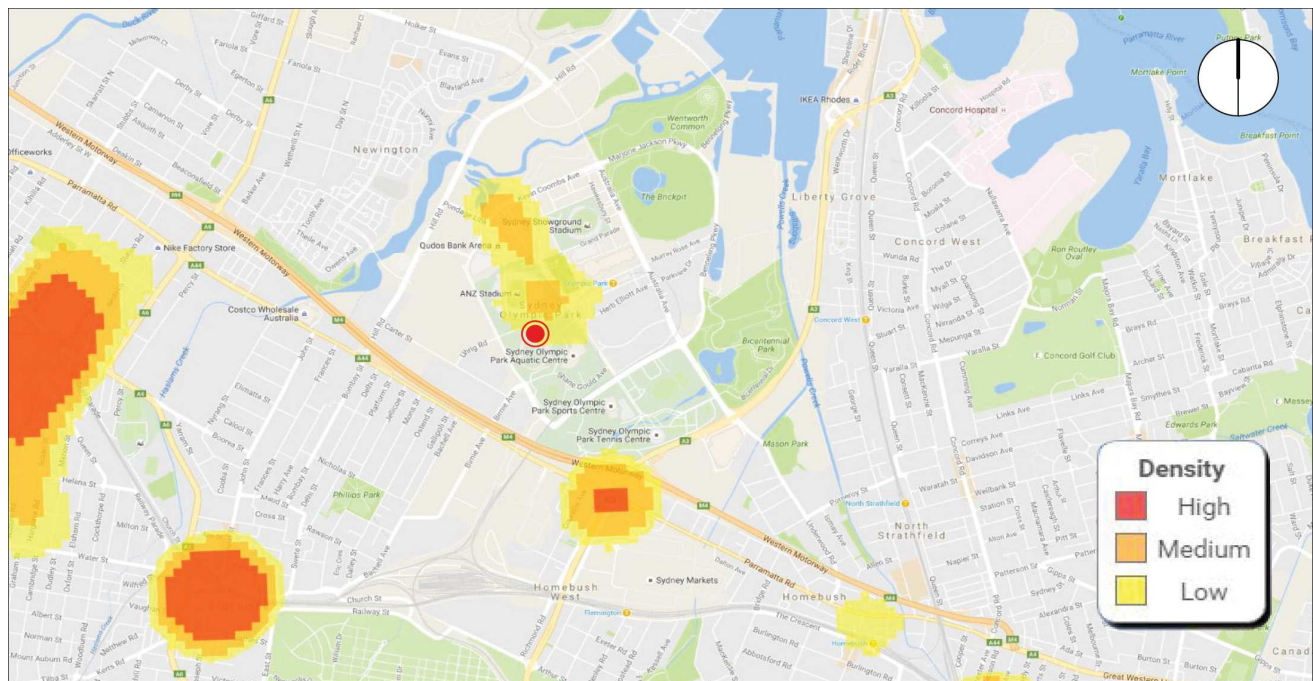
- assault – non domestic related;
- break and enter – non dwelling;

- steal from person; and
- malicious damage to property.

As illustrated in **Figures 20-23**, the parts of Sydney Olympic Park which are identified within a hotspot are generally within the medium to low density zone. Furthermore, the site itself only falls within the hotspot area for 'assault – non domestic related' and 'malicious damage to property'.

Hotspots indicate areas of high crime density (number of incidents per 50m by 50m) relative to crime concentrations across NSW. Hotspots are not adjusted for the number of residents and visitors in the area and thus may not reflect areas where people have a higher than average risk of victimisation.

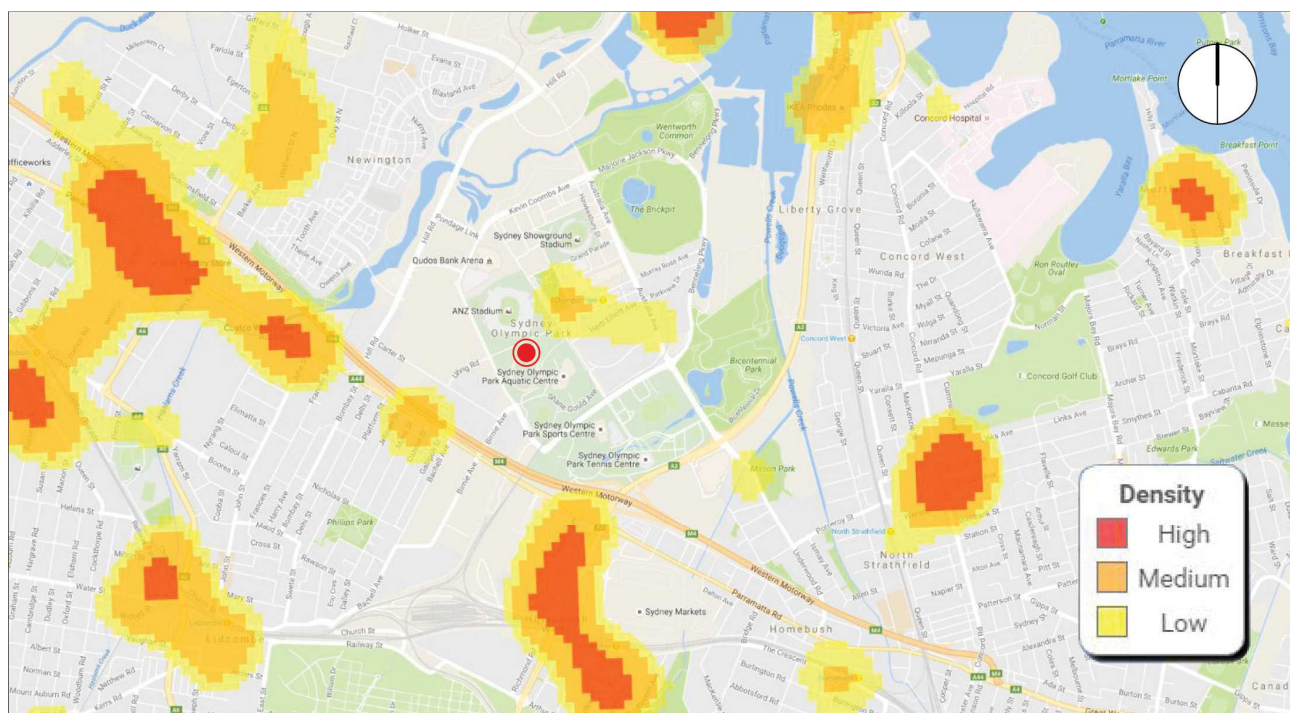
With this in mind, we note that the BOSCAR statistics indicate that the majority of Sydney Olympic Park is not within any identified hotspot areas.



● The Site

Assault – non domestic related

Figure 20 – Assault – non domestic related hotspot map
Source: BOSCAR



● The Site

Break and enter – non dwelling

Figure 21 – Break and enter – non dwelling hotspot map
Source: BOSCAR

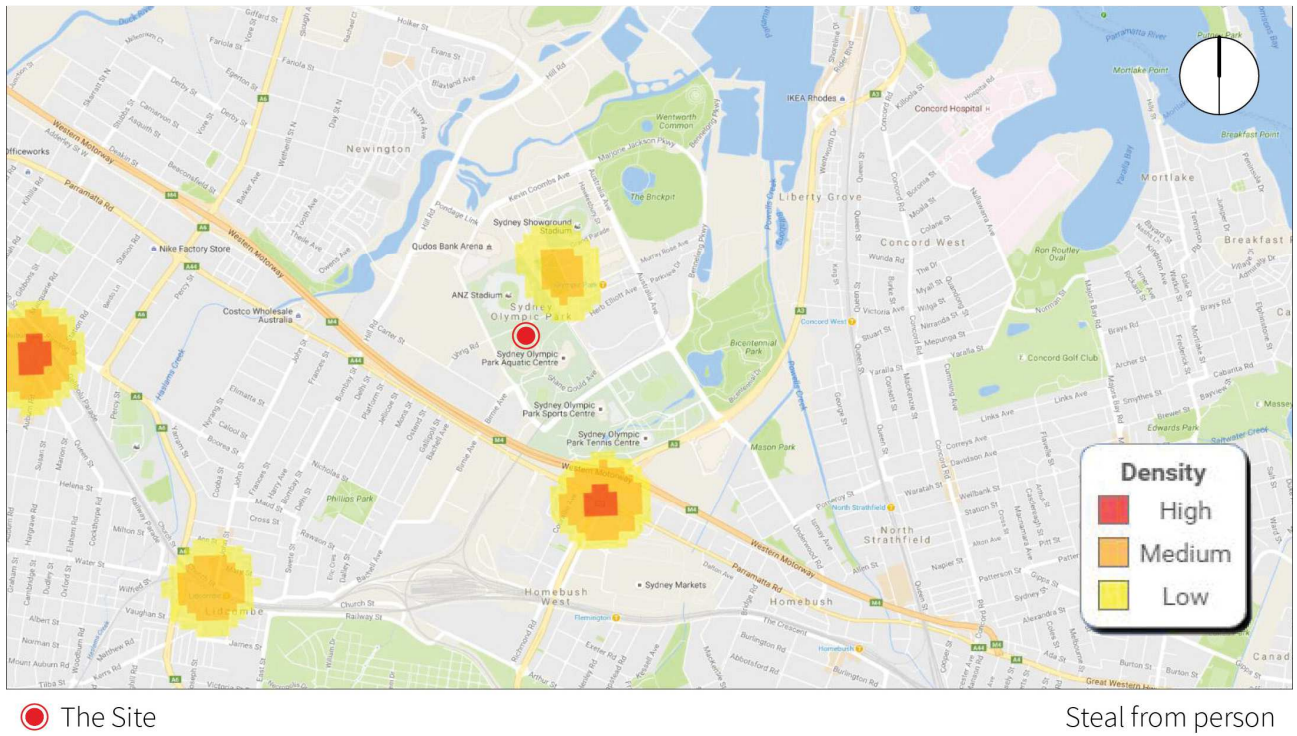


Figure 22 – Steal from person hotspot map
Source: BOSCAR

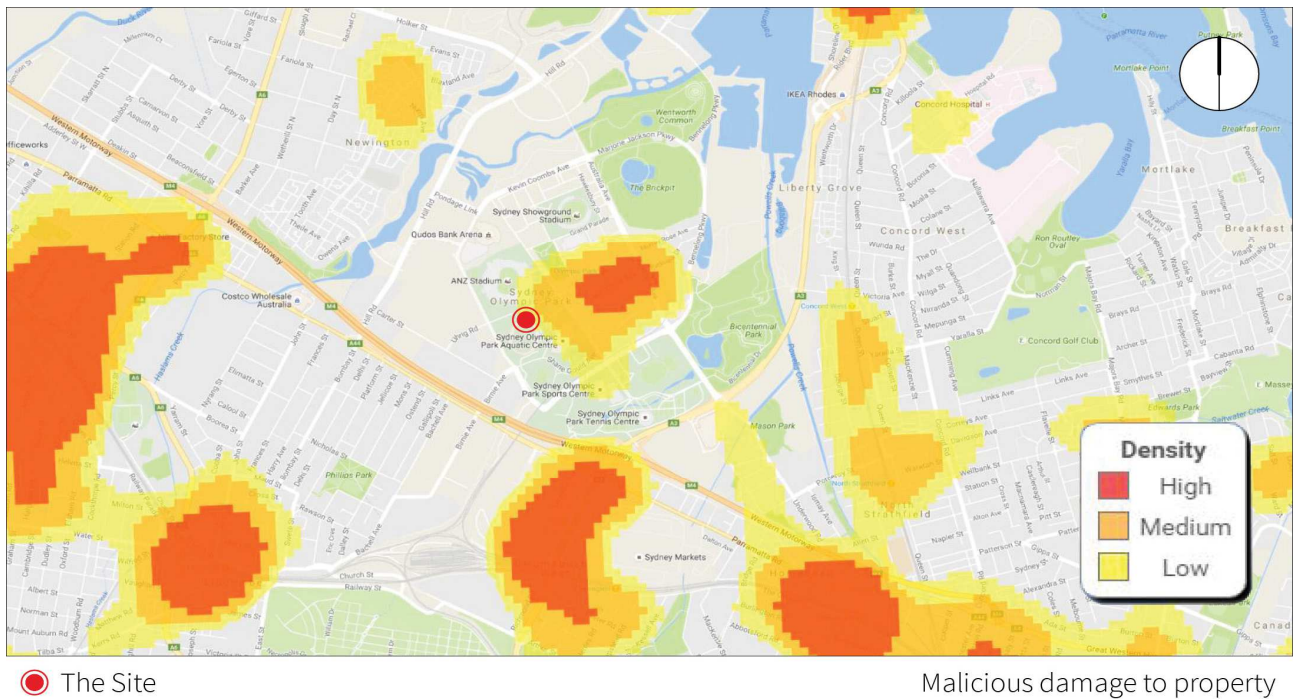


Figure 23 – Malicious damage to property hotspot map
Source: BOSCAR

5.18.2 Matters for Consideration

Surveillance

Given the nature and orientation of the surround developments, there are limited surveillance opportunities afforded from these developments over the site.

Notwithstanding this, the site does benefit from some casual surveillance opportunities from motorists and pedestrian using Dawn Fraser Avenue and on event days, patrons of the surrounding facilities.

As set out in the 'NSW Safer by Design Guidelines', buildings that address the street help to facilitate natural connections between the occupants and visitors and windows, doors and terraces that face semi-public and public areas maximise 'natural' surveillance and in doing so increase the risk to potential offenders.

The proposed building design principally addresses Dawn Fraser Avenue and provides a prominent north-eastern corner. The design therefore provides views over and surveillance opportunities of the ANZ site and its forecourt, the new training field and the public domain area along Dawn Fraser Avenue. Natural surveillance opportunities from the street level reception, retail and café areas will also be provided through the placement of employees and members of the public who will act as 'capable guardians'.

Whilst limited surveillance opportunities will be provided from the proposed development towards the south and west and over the proposed car parking and loading dock area, high level windows from the upper office elements are provided within the development.

Given the ANZ tunnel is separated from routine public activity, this area does have the potential to create safety risks. However access is restricted by the security fences and gates. It is not a publicly accessible facility. Accordingly, it is considered that the correct treatments are in place to mitigate any potential safety and crime risks.

Way finding in large environments can be confusing. Knowing where and how to enter, exit and find assistance within large public areas can impact upon perceptions of safety. The celebration of the proposed buildings entrance and the fact that Sydney Olympic Park already provides high quality way finding signage will enable visitors and employees to understand the urban environment. However it is recommended that new signage be provided to integrate the new development into the wider Sydney Olympic Park precinct.

Furthermore, whilst landscaping can provide shade, shelter and add to the attraction of an environment, if it is not designed properly or maintained appropriately, it can offer concealment opportunities and reduce the opportunity for surveillance. The proposed landscape design concept has been carefully designed with CPTED principles in mind and will ensure surveillance opportunities are maximised and sightlines are preserved.

Lighting/ Technical Supervision

Effective lighting can reduce fear, increase activity, improve visibility and increase the likelihood of offenders being detected. Good quality lighting along Dawn Fraser Avenue currently exists. All lighting provided within and around the new development should meet the minimum Australian and New Zealand Standards and objectives for crime and fear reduction, as outlined in Australian Lighting Standard AS/NZ 1158 for public streets, car parks and pedestrian areas.

In keeping within the existing lighting throughout the Sydney Olympic Park precinct, high quality lighting throughout all publicly accessible areas should be provided. In particular the lighting along replacement pavement along Dawn Fraser Avenue, new

car parking area and the loading dock should be bright and even enough to permit facial recognition. This will also allow for informal surveillance opportunities to be maximised and the threat of predatory crime and any opportunity for concealment/ entrapment reduced.

For development of this nature, CCTV is not considered necessary. If it is to be provided, it should cover the main entrances, car park and the loading dock and be vandal resistant.

Territorial Reinforcement

The strategic location of employees and building supervisors increases risk to offenders and crime effort. It is commonly thought that supervision provided by employees is more effective as a crime deterrent than surveillance provided by passers-by.

The café and retail areas as well as the street level reception area will enable employees and patrons of the facilities to undertake surveillance over the streetscape. The proposed development will also increase the number of people on site, which in turn increases the number of community guardians and naturally increase the risk to the offender and promote territorial reinforcement of the site, as criminals do not want to be detected, challenged or apprehended.

SOPA has on-site rangers that routinely patrol the Sydney Olympic Park precinct and security officers are present on event days. The combination of these two forms of security presence is a strong crime deterrent and should continue to be provided. The balance of increased employee and community guardianship alongside the formal security presence will ensure that feelings of safety and security are enhanced.

Furthermore, people generally recognise areas that are well cared for and areas that display strong ownership cues are less likely to be improperly used than those that do not possess these cues. The proposed landscape design suggests that a co-ordinated and cared for aesthetic will be provided that will continue south along the southern side of Dawn Fraser Avenue.

On-going maintenance of the site and surrounding public domain areas will be a key crime prevention mechanism.

In addition, the NSW Safer by Design Guidelines note that people are commonly attracted to vibrant public areas and places that are well used are made safer by the natural community supervision that occurs. In this respect, the utilisation of the site and revitalisation of the public domain will naturally reinforce the feeling that this part of Sydney Olympic Park is a safe place.

Environmental Maintenance

Sydney Olympic Park currently exhibits a high level of environmental maintenance and no litter, graffiti, vandalism or building disrepair was encountered during the site visit.

The proposed development will further improve this position and make positive use of Site 18 to provide a greater clarity of ownership, area image and high quality environment. This is important, as the image of an area can greatly impact on feelings of safety and danger, as well as influencing local confidence and individual decision to either withdraw or engage in life. The provision of new, high quality building, in the Sports & Education Precinct within Sydney Olympic Park will contribute to the built form of the area, minimising spatial gaps and encouraging a sense of ownership.

The maintenance of the new building and public domain is important to balance the safety and aesthetics of the precinct as a whole. Well maintained spaces encourage regular use, which in turn creates natural supervision of public areas. The use of high quality material for construction should be used to lessen the likelihood of damage and help to reduce maintenance costs.

Activity and Space Management

The introduction of new forms of activity, such as the proposed development, as well as a greater number of patrons and employees on site will increase the activity of the area. This is expected to be predominantly throughout the day and early evening, but has the potential to increase levels during the night as well, given the provision of the players dining area and media centre. A significant increase in activity levels will increase surveillance and natural community policing, providing a clarity of land use and increasing the risk to offenders.

Access Control

Access control strategies restrict, channel and encourage the movement of people and vehicles into and around designated areas. Physical barriers increase the effort required to commit crime. The proposed development provides good access control in that public access into the building will be via the reception area and the building has the potential for a range of security devices to be implemented to achieve the required balance of public exposure to the players and patrons of the facility.

The proposed design of the building is sufficient to enable access to be generally restricted and controlled and territorial barriers to be put in place. It is recommended that secure electronic access (card/ key controlled entries/ lifts) is provided to prevent unauthorised access into non-public areas of the new building and a boom gate (if considered necessary) is provided at the entrance of the car park to further prevent unauthorised use.

Design, Definition and Designation

The design of the development reflects its purpose, which makes it difficult for potential offenders to make excuses about their presence and actions.

5.18.3 Crime Risk Recommendations

Combining the area context and the site opportunity rating of the issues discussed in Sections 5.19.1 and 5.19.2, the Crime Risk Assessment of the proposed development is 'low'. Despite this low rating, the individual 'good' and 'bad' ratings within the assessment of the proposed development indicate that the proposal will provide a safer and more secure environment than the current situation.

Notwithstanding this, recommendations to improve the safety and security of the development even further include:

- Provide way finding signage to reinforce visitors and employees/ patrons perception of safety and legibility.
- Consult a qualified electrical lighting engineer to ensure the correct lighting is provided to meet minimum Australia and New Zealand Lighting Standards and enable sufficient surveillance of the site and its surrounding areas (as relevant to the proposed development).
- Provide a secure electronic access system (card/ key controlled entries/ lifts etc) to relevant parts of the building to prevent unauthorised access.
- Ensure the landscaping design does not give rise to concealment opportunities and does not restrict sightlines from the development overlooking public spaces.

- Ensure mechanisms are in place for the on-going maintenance of landscaping and the buildings, including:
 - rapid removal policy for graffiti and vandalism repair;
 - maintenance of all surrounding public spaces; and
 - provision of rubbish bins.
- Use high quality materials for construction to lessen the likelihood of damage and help reduce maintenance costs.

5.19 Construction Management

The proposed construction works for the development are not expected to give rise to any unacceptable detrimental impacts. A comprehensive Demolition, Construction and Waste Management Plan will be prepared in relation to the proposed development prior to the commencement of works on site. This plan will set out the environmental management requirements for the following aspects of the project:

- access, egress and compound management;
- civil structures;
- demolition;
- dust management;
- emergency response;
- excavation works;
- flood contingency;
- sewer and water management;
- hazardous material management;
- noise management;
- occupational health and safety;
- soil management; and
- waste management.

The comprehensive Demolition, Construction and Waste Management Plan would include a construction Traffic Management Plan, which would outline the following measures:

- Details of construction traffic volumes and, if required, any marshalling areas;
- A detailed description and route map of the proposed truck/construction vehicle access routes, utilising primary routes where ever possible;
- The locations of any proposed Construction Works Zones along the site frontage of Dawn Fraser Avenue;
- Details of the construction staging;
- Identification of specific locations for construction staff parking to minimise the impact on the existing infrastructure and promote alternative modes of transport;
- Provision of relevant Traffic Control Plans (certified by an RTA accredited person);
- Provision of relevant Pedestrian Management Plans;
- Provision of mitigation measures (if required) for traffic, public transport, cyclists and pedestrian access around the site;

- A site plan which indicates site entrances and exits, turning areas within the site for construction and spoil removal vehicles allowing a forward ingress and egress for all construction vehicles on the site (superimposed truck swept path diagrams); and
- Details of the impact of major events during the construction program.

Erosion and Sedimentation Control Plans have been prepared in relation to the proposed development (refer to **Appendix N**).

5.20 Environmental Risk Assessment

An Environmental Risk Assessment (ERA), prepared by JBA establishes residual risk by reviewing the significance of environmental impacts and the ability to manage those impacts. The ERA for the project has been adapted from Australian Standard AS4369.1999 Risk Management and Environmental Risk Tools with the methodology described below.

The Risk Assessment Matrix at **Figure 24** illustrates how the residual environmental impacts of a proposal are assigned. The sum of the values assigned provides an indicative ranking of potential residual impacts after the mitigation measures are implemented as follows:

- the significance of impact is assigned a value between 1 and 5 based on:
 - the receiving environment
 - the level of understanding of the type and extent of impacts
 - the likely community response to the environmental consequence of the project; and
- the manageability of environmental impact is assigned a value between 1 and 5 based on:
 - the complexity of mitigation measures
 - the known level of performance of the safeguards proposed
 - the opportunity for adaptive management.

Significance of impact	Manageability of impact				
	5 Complex	4 Substantial	3 Elementary	2 Standard	1 Simple
1 – Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 – Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 – Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 – High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 – Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

Figure 24 – Risk assessment matrix

The ERA addresses, as appropriate:

- the adequacy of baseline data;
- the potential cumulative impacts arising from other developments in the vicinity of the site; and
- measures to avoid, minimise, offset the predicted impacts where necessary involving the preparation of detailed contingency plans for managing any significant risk to the environment.

Table 7 presents the environmental risk assessment for this project.

Table 7 – Environmental risk assessment

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and/or Comment	Significance of Impact	Manageability of Impact	Residual Impact
Key: C - Construction O - Operation						
Biodiversity	C	<ul style="list-style-type: none"> Loss of vegetation within the development site 	<ul style="list-style-type: none"> Vegetation to be removed during construction will be replaced with new planting in landscape areas. 	2	1	3 Low
Aboriginal Heritage	C	<ul style="list-style-type: none"> Potential to encounter unanticipated Aboriginal cultural material during construction 	<ul style="list-style-type: none"> The potential to encounter Aboriginal cultural material on the site has been assessed as low. Should unanticipated Aboriginal cultural material be encountered then it is proposed that all works cease, the OEH be contacted immediately, a management strategy be developed, and the find be recorded to mitigate any potential impacts. 	2	2	4 Low / medium
Hazards	C	<ul style="list-style-type: none"> Potential to encounter asbestos Potential to encounter contaminated materials 	<ul style="list-style-type: none"> Should asbestos be encountered then it should be removed by a licenced contractor. Should any contaminated material be found then an 'Unexpected Finds Protocol' should be implemented. 	4	2	6 Medium
Noise and Vibration	C + O	<ul style="list-style-type: none"> Increase in noise and vibration levels during construction activities 	<ul style="list-style-type: none"> The Acoustic Assessment details that adequate control of construction noise can be achieved through the development of a Construction/ Demolition Noise Management Plan. Subject to finalisation of equipment specifications, appropriate sound minimisation measures are to be incorporated within the proposed development. 	C – 2 O – 2	C – 2 O – 1	4 Low / medium 3 Low

5.21 The Public Interest

The proposed development will revitalise the site and provide a quality facility that will support the operation of NSW Rugby League. As detailed in the proceeding sections of this report, the proposal is well integrated into the precinct and responds to the desired future character of the area.

Furthermore, the amenity of the adjoining properties will not be detrimentally impacted upon by the proposed development, through various design measures to mitigate overshadowing, overlooking and noise impacts. For these reasons the development is considered consistent with the public interest.

6.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 8** below. These measures have been derived from the previous assessment in Section 5.0 and those detailed in appended consultants' reports.

Table 8 – Mitigation Measures

Mitigation Measures
Construction Management and Construction Traffic Management <ul style="list-style-type: none"> A Construction Environmental Management Plan, incorporating a Construction Traffic Management Plan, is to be prepared after the appointment of a head contractor but prior to the commencement of works on the site
Traffic and Access <ul style="list-style-type: none"> Prior to the issue of an Occupation Certificate, a Travel Plans and Travel Access Guides will be prepared for distribution to new staff and visitors to the site.
Acoustic Impacts <ul style="list-style-type: none"> The recommended noise control measures within the Noise and Vibration Impact Assessment prepared by SLR Consulting will be incorporated into the detailed design of the proposed development.
Waste Management <ul style="list-style-type: none"> Waste facilities will be provided in accordance with the Waste Management Plan prepared by SLR Consulting.
Tree Removal <ul style="list-style-type: none"> The recommendations within the Arboricultural Impact Assessment prepared by New Leaf Arboriculture will be incorporated into the detailed design of the proposed development.

7.0 Justification of the Proposal

In general, investment in major projects can only be justified if the benefits of doing so exceed the costs. Such an assessment must consider all costs and benefits, and not simply those that can be easily quantified. As a result, the EP&A Act specifies that such a justification must be made having regard to biophysical, economic and social considerations and the principles of ecologically sustainable development.

This means that the decision on whether a project can proceed or not needs to be made in the full knowledge of its effects, both positive and negative, whether those impacts can be quantified or not.

The proposed development involves the construction of a Centre of Excellence for NSW Rugby League on a currently underutilised site. The assessment must therefore focus on the identification and appraisal of the effects of the proposed change over the site's existing condition.

Various components of the biophysical, social and economic environments have been examined in this EIS and are summarised below.

7.1 Social and Economic

The proposed development will provide a number of positive social and economic benefits as it:

- Provides non-residential uses which will provide significant employment opportunities;
- Provides construction employment opportunities;
- Allows for greater natural surveillance of spaces surrounding the site, promoting safety;
- Promotes State government initiatives in relation to urban consolidation by increasing the density of employment in close proximity to required services and facilities, in particular public transport; and
- Integrates well with the existing and future community in the locality.

It is estimated that the following number of jobs will be created by the future development during the construction and operational phases:

- | | |
|------------------------|-----|
| ■ Direct construction: | 200 |
| ■ Ongoing operation: | 105 |

Overall, the proposed development will have a very positive social impact on the existing and future Olympic Park community and will provide a high quality environment for its residents and workers.

7.2 Biophysical

The environmental impact assessment of the proposed development has demonstrated that:

- the proposal does not give rise to any impacts on the local road or transport network;
- noise from the operation of the proposed development will not give rise to any impacts on nearby sensitive receivers;
- future occupants of the building will not be subject to adverse noise impacts;
- there is not expected to be any impacts on Indigenous or European heritage values associated with the site;
- water and energy consumption will be reduced in accordance with contemporary standards;
- any potential contamination of the site can be addressed and the site made suitable for the proposed use;
- waste will be managed in an efficient and coordinated manner to avoid potential wastage, odour impacts or pollution;
- the site will be managed during construction to avoid amenity or physical environmental impacts; and
- the proposed development is able to be adequately serviced by existing utilities and stormwater management infrastructure.

7.3 Ecologically Sustainable Development

The EP&A Regulation lists four principles of ecologically sustainable development to be considered in assessing a project. They are:

- The precautionary principle;
- Intergenerational equity;
- Conservation of biological diversity and ecological integrity; and
- Improved valuation and pricing of environmental resources.

An analysis of these principles follows.

Precautionary Principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

This EIS has not identified any serious threat of irreversible damage to the environment and therefore the precautionary principle is not relevant to the proposal.

Intergenerational Equity

Inter-generational equity is concerned with ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. The proposal has been designed to benefit both the existing and future generations by:

- implementing safeguards and management measures to protect environmental values.
- facilitating job creation in close proximity to public transport; and
- Improving the public domain and amenity in the precinct.

The proposal has integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long term implications such as waste disposal would be avoided and/or minimised through construction planning and the application of safeguards and management measures described in this EIS and the appended technical reports.

Conservation of Biological Diversity and Ecological Integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

The proposal would not have any significant effect on the biological diversity and ecological integrity of the study area.

Improved Valuation, Pricing and Incentive Mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. Mitigation measures for avoiding, reusing, recycling and managing waste during construction and operation will be implemented to ensure resources are used responsibly in the first instance.

Additional measures will be implemented to ensure no environmental resources in the locality are adversely impacted during the construction or operational phases.

8.0 Conclusion

The Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of the proposed NSW Ruby League Centre of Excellence at Dawn Fraser Avenue, Sydney Olympic Park. The EIS has addressed the issues outlined in the Secretary's Environmental Assessment Requirements (**Appendix B**) and accords with Schedule 2 of the EP&A Regulation 2000 with regards to consideration of the proposed development's social, economic and biophysical impacts.

The proposed development will make a valuable contribution to the urban fabric of Sydney Olympic Park, as well as delivering benefits by providing employment and by injecting new activity into the precinct. Provision of a well-designed and appropriate building will deliver improved social and economic outcomes for NSW. Furthermore, the proposed development does not give rise to any significant environmental effects that cannot be effectively managed through the normal conditions of consent and the implementation of the mitigation measures identified in **Section 6.0** of this EIS.

Given the merits described above it is requested that the application be approved.