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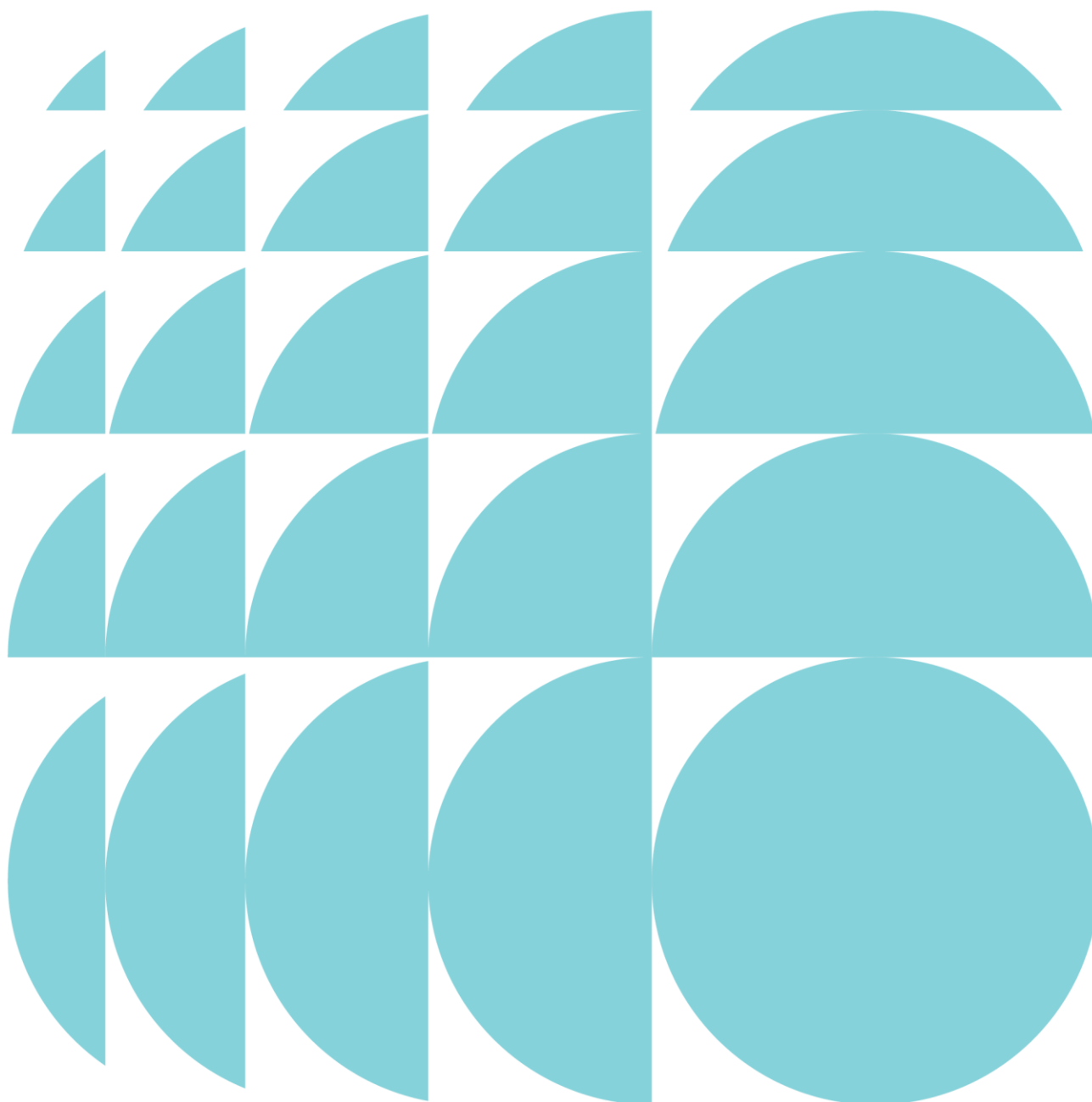
Crime Prevention Through Environmental Design Assessment

Stadium Australia Renewal (SSD 10342)
15 Edwin Flack Avenue, Sydney Olympic Park

Submitted to Department of Planning,
Infrastructure and Environment

On behalf of Infrastructure NSW

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1.0 Introduction

This Crime Prevention Through Environmental Design (CPTED) Assessment supports a State Significant Development Application (SSD DA) to be submitted to the Department of Planning, Industry and Environment pursuant to Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the proposed renewal of Stadium Australia at Sydney Olympic Park (SSD 10342). The Secretary's Environmental Assessment Requirements (SEARs) were issued on 17 July 2019 that required CPTED principles to be addressed.

The proposed refurbishment of Stadium Australia intends to reduce the capacity of the stadium to 70,000 seats by reconfiguring the lower and middle seating bowls by making them steeper in pitch and closer to the field. Also, the field will be reconfigured to a permanent rectangular configuration and the roof will be extended to ensure 100% drip line coverage to all permanent seats. Furthermore, new and refurbished entrances, facilities (amenities, corporate, press and team) and food and beverage concessions are proposed.

This Crime Prevention Through Environmental Design (CPTED) Assessment has been undertaken to assess the potential opportunities for crime and the perceived fear of crime that may be associated with the proposed renewal of Stadium Australia as envisaged in Environmental Impact Statement (EIS) to which this report is appended.

CPTED is a situational crime prevention strategy that focuses on the design, planning and structure of the environment. This assessment aims to identify the potential opportunities of crime created by the proposed development by assessing the development in accordance with design and place management principles of CPTED.

Ethos Urban has prepared this assessment in accordance with the methods and resources of the NSW Police Force *Safer by Design Course*. This assessment has been prepared and reviewed by experienced CPTED professionals, following their completion of the NSW Police Force *Safer by Design Course*. The assessment uses qualitative and quantitative measures to analyse the physical and social environment in which the proposed development is located and recommends actions to mitigate crime opportunity in accordance with the Australian and New Zealand Risk Management Standard AS/NZS 31000:2009.

In accordance with the NSW Department of Planning and Environment's guidelines (2001) 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 detection, challenge and capture;
- increasing the effort required to commit crime by increasing the time, energy or resources which need to be expended;
- reducing the potential rewards of crime by minimising, removing or concealing 'crime benefits'; and
- removing conditions that create confusion about required norms of behaviour.

The following tasks were undertaken in the preparation of this assessment:

- review of the *Safer By Design Manual* by the NSW Police Force and other relevant CPTED literature;
- review of the Crime Prevention Handbook for local government prepared by the Australian Institute of Criminology;
- collection and analysis of local and NSW State crime statistics from the Bureau of Crime Statistics and Research (BOCSAR); and
- a crime risk assessment, in accordance with the current NSW policy and practice, of the following regulation and assessment principles:
 1. Surveillance
 2. Lighting/technical supervision
 3. Territorial reinforcement

4. Environmental maintenance
5. Activity and Space Management
6. Access control
7. Design, Definition and Designation

A site inspection was undertaken on 17 July 2019 between 2:30pm and 4:30pm to assess the current site conditions, situational crime prevention measures and perceived safety of the existing environment.

1.1 Disclaimer

CPTED strategies must work in conjunction with other crime prevention strategies and police operations. By using the recommendations contained in this assessment, a person must acknowledge that:

- there is no definitive measure of 'safety'. Therefore, this assessment cannot be used as proof of a definitive measure of safety;
- this assessment does not ensure complete safety for the community, and public and private property;
- assessment and recommendations are informed by the information provided, with observations made at the time the document was prepared;
- this document does not guarantee that all risks have been identified, or that the area assessed will be free from criminal activity if recommendations are followed; and
- this assessment has been undertaken on behalf of the applicant and does not represent the opinions and expertise of the NSW Police Force.

The principles of CPTED aim to minimise the opportunity for crime, but it is recognised that environmental design cannot definitively eliminate opportunities for crime or prevent a determined perpetrator from committing such crimes.

It is noted that Ethos Urban are not licenced security consultants and as such it is recommended that a security consultant with a Class 2A licence under the Security Industry Act 1997 is engaged to provide specific advice on placement, installation, monitoring and maintenance of the CCTV network.

2.0 Background

2.1 Project Purpose

Stadium Australia was purposely designed and constructed for hosting the Sydney 2000 Olympic and Paralympic Games and was one of the largest Olympic stadiums ever constructed. The stadium was designed so that the significant 100,000+ capacity could be reduced down to 85,000 seats following the conclusion of the games, recognising that there was little demand for venues with such a capacity. The stadium was also designed so that it could host both oval and rectangular field sports, with the intent that this flexibility would assist with attracting events to the stadium. In reality however, the stadium hosts primarily rectangular field sports and entertainment events. AFL and T20 Cricket is hosted at other stadia recognising that the current oval pitch is unable to meet International Cricket Council standards or AFL standards for a Category 1 venue, meaning the stadium cannot capitalise on the intended 'flexibility' to offset its relatively poorer viewing and fan experience for rectangular sports.

Fan event experience is also a crucial determining factor in the success of events and, therefore, the ongoing demand for and viability of major venues. There is increasing competition in the market for venues and events as other stadia are modernised and redeveloped, but also for other forms of entertainment and leisure for how people choose to spend their time and money. This increasing competitive pressure contributes to lower attendances, placing further pressure on the delivery a positive fan experience to attract patrons to the stadium and therefore attract hirers and major events to NSW and Australia.

The current stadium is identified as having a poor stadium experience, which is only expected to compound as the stadium ages. In particular, sightlines, roof coverage, technology, food and beverage offerings, members and corporate facilities, and other amenities all play a significant role in the overall fan and hirer experience and the stadium's ability to attract and retain fans and events.

There is a strategic need to rectify these deficiencies and ensure the ongoing success and longevity of the stadium. In order to be competitive within Australia's stadia network and secure major events for the people of NSW, Stadium Australia needs to be enhanced to retain hirers and attract spectators to largescale sporting matches and events. This fits within the framework for NSW Government investment under the NSW Stadia Strategy that aims to achieve an optimal mix of venues (Western Sydney Stadium 30,000 seated capacity, Sydney Football Stadium up to 45,000 seats, and Stadium Australia up to 70,000 seats) to meet community needs and to ensure a vibrant sports and event environment in NSW.

3.0 The Site

3.1 Site Location and Context

Stadium Australia is located at 15 Edwin Flack Avenue within the City of Parramatta Local Government Area (LGA). It is located in the Town Centre of Sydney Olympic Park, approximately 9km east of Parramatta and 14km west of Sydney CBD in an area considered to be the geographic centre of Sydney.

In a broader context, the site forms part of the western edge of Sydney Olympic Park which is a sporting and economic centre in metropolitan Sydney that covers 680 hectares. Sydney Olympic Park comprises range of sports and entertainment venues, parklands, and commercial, retail and residential developments. This precinct was created for the Sydney 2000 Olympic and Paralympic Games, and has since undergone change and development to bring new life and investment to this precinct following the conclusion of the games. The site is located in the heart of this sports and entertainment precinct, which also includes the Qudos Bank Arena, Sydney Showground, Giants Stadium, Aquatic Centre, Athletics Centre, Warmup Arena, and the NSW Rugby League Centre of Excellence. The Carter Street Precinct is located to the west of the stadium, which is a former industrial area that is being planned and redeveloped for primarily residential uses with commercial and educational development.

Convenient access to the site is provided from Homebush Bay Drive, Parramatta Road and the M4 Western Motorway, as well as the Olympic Park Railway Station, and the site will benefit from potential future connections via Stage 2 of the Parramatta Light Rail and Sydney Metro West.

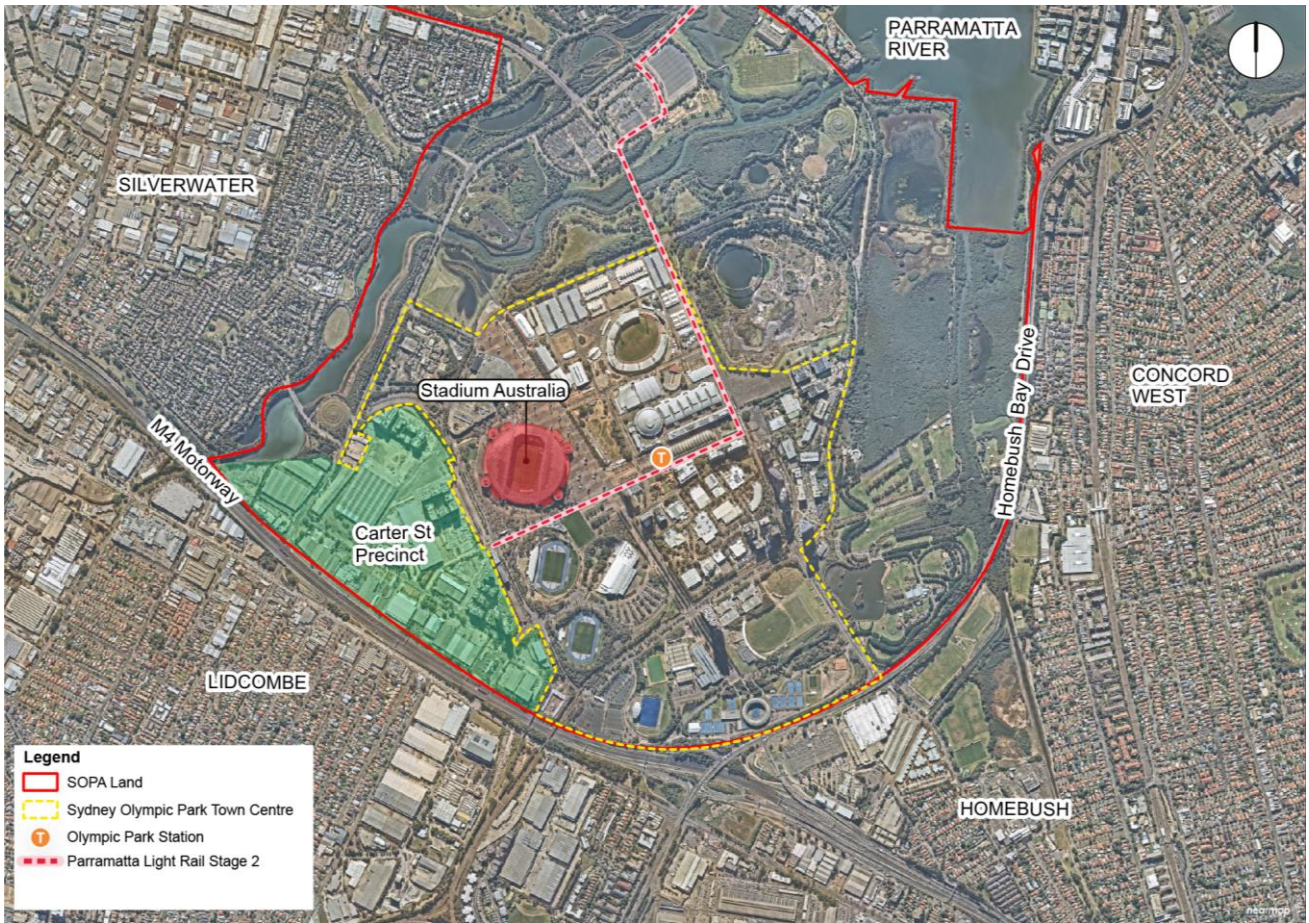


Figure 1 Context of the site

Source: Nearmap and Ethos Urban

3.2 Site Description

The site is legally described as Lot 4000 in DP 1004512 and part of Lot 4001 in DP 1004512. In 2017, the Minister for Sport assigned Venues NSW as the trustee of Stadium Australia under the *Sporting Venues Authorities Act 2008*, however, ultimately the site is owned and controlled by the Sydney Olympic Park Authority.

The area to which the SSD DA relates is as follows:

- Stadium Australia, including all existing projections, additions and outbuildings.
- Certain areas surrounding the Stadium for use as a temporary construction compound, including vehicle access from Edwin Flack Avenue and Dawn Fraser Avenue.

Figure 2 illustrates the site boundary for the Development Application. A Site Survey Plan has been prepared by Rygate Surveyors and is located at **Appendix C**.



Figure 2 Aerial photo of the site and surrounds

Source: COX Architecture

3.3 Access

Pedestrian

Sydney Olympic Park benefits from a relatively flat terrain and extensive pedestrian circulation spaces that were designed and constructed to accommodate significant pedestrian movements associated with the Sydney 2000 Olympic and Paralympic Games. Pedestrian pathways are available on both sides of all streets in Sydney Olympic Park, including Olympic Boulevard, Edwin Flack Avenue, and Dawn Fraser Avenue at the edges of the site. The Stadium itself also benefits from a wide, 360°, pedestrian circulation zone surrounding the stadium.

During events, pedestrian access and circulation is prioritised through the closure of certain roads by the Sydney Olympic Park Authority to enable unimpeded and safe movements between venues and key transport nodes (as discussed above).

Vehicular Access and Parking

The stadium is surrounded by a number of local roads including Dawn Fraser Avenue (to the south), Olympic Boulevard (to the east) and Edwin Flack Avenue (to the west). A secure driveway off Edwin Flack Avenue provides vehicular access to the stadium basement which includes a 360° ring road, loading and servicing spaces, and up to 150 parking spaces (including areas for coaches) that are allocated to players, officials, VIPs and accredited staff and media personnel. The driveway is secured at the kerb via a boom gate and signage to prevent access from members of the general public.

Off-site vehicle parking is available on the surrounding local roads during outside of events, which provide approximately 700-800 spaces, and in dedicated parking stations with capacity for up to 9,500 vehicles dispersed within Sydney Olympic Park. These parking stations are shared with other venues in Sydney Olympic Park, including Qudos Bank Arena and the Sydney Showground, and are typically available both during and outside of events, with the exception of P6 which is sometimes converted to a rideshare pick-up location during major events. Shuttle buses transport patrons from the P3 and P4 Car Park to Edwin Flack Avenue and from the P5 Car Park to Olympic Boulevard. The P1 Car Park is located 200m south of the site and is the primary car park for the stadium.

3.4 Landscaping

Mature trees are located in the public domain in circular tree pits to the north, west and south of the stadium. These trees were planted in 1999 as part of the preparation of the precinct for the Olympic and Paralympic Games and are in the early stages of maturity. The trees include a mix of locally indigenous and native species, including Spotted Gum, Lemon Scented Gum, Tallowwood, Grey Ironbark, Mugga Ironbark, Narrow Leaved Iron Bark and Turpentine. The majority of trees are proposed to be retained, with four trees located adjacent to Edwin Clack Avenue required to be removed to provide construction vehicle access. Refer to the location plan at **Figure 3**.

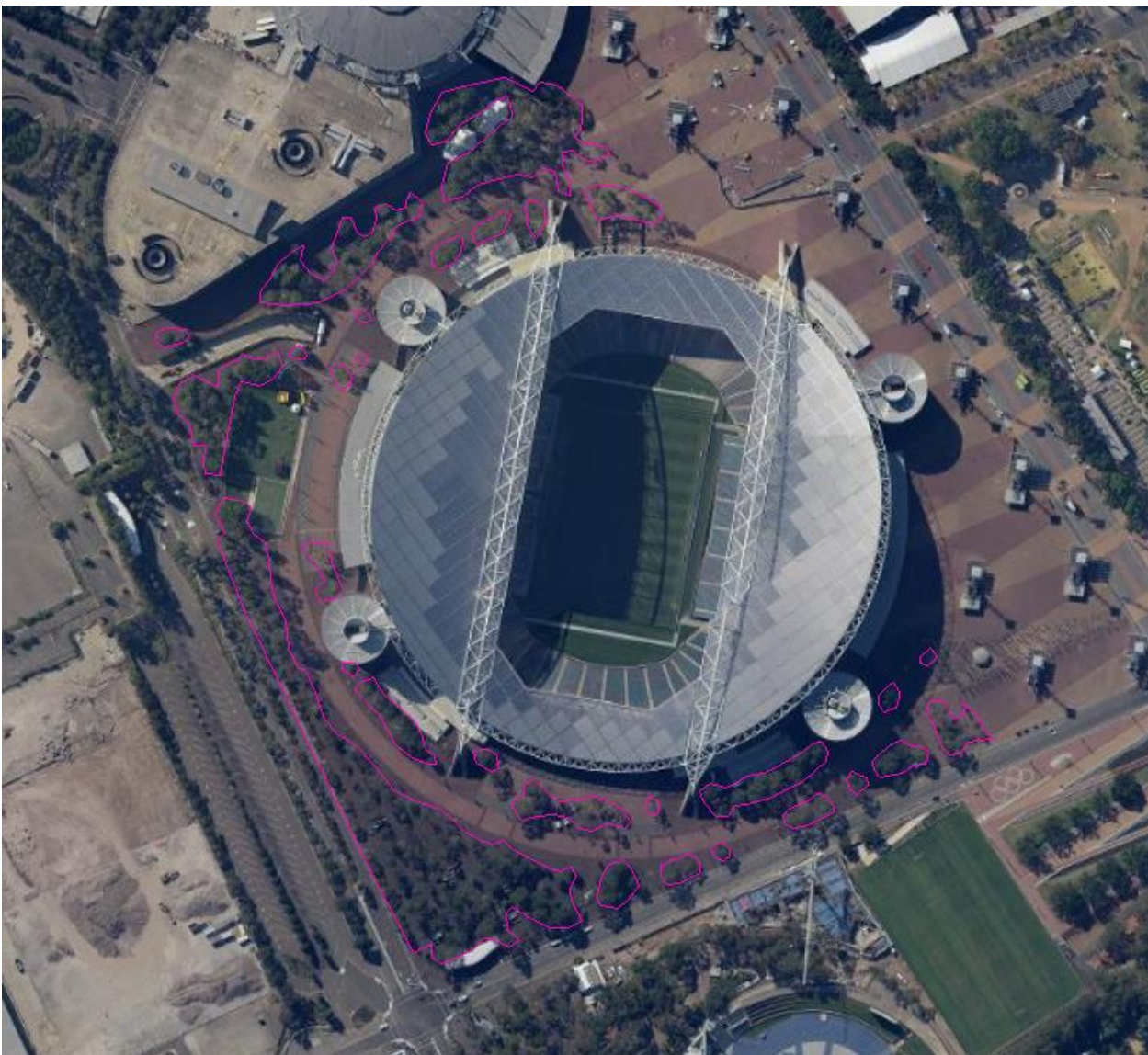


Figure 3 Location of trees surrounding Stadium Australia

Source: Jacobs

3.5 Surrounding Development

Stadium Australia is characterised by other significant venues in this sports and entertainment precinct, parklands, and commercial, retail and tourism uses within the remainder of Sydney Olympic Park. The site is also at the eastern edge of the developing Carter Street Precinct that will accommodate a mix of residential, commercial and educational uses. A description of this key surrounding development is provided below.

3.5.1 North

Qudos Bank Arena

Qudos Bank Arena borders the stadium immediately to the north, with the main public entrance located on Olympic Boulevard and a smaller, secondary entrance located off Edwin Flack Avenue. The arena is the largest permanent indoor entertainment and sporting arena in Australia and was constructed in 1999 for the Olympics. The arena is typically used for netball and basketball, being the home venue for the Sydney Kings, Sydney Swifts and Giants Netball, as well as concerts, conferences, and other entertainment events. It has capacity for 17,500 seated patrons, and up to 21,000 patrons when operating for concerts and other entertainment events.

P1 Car Park

The multi-storey P1 carpark is located adjacent to the Qudos Bank Arena, and also forms the northern periphery of the site. This carpark is accessed off Edwin Flack Avenue and has capacity for approximately 3,200 vehicles. Given its proximity to Stadium Australia, the P1 Car Park is typically the primary carpark used during events.



Figure 4 Qudos Bank Arena

Source: Sydney Olympic Park Authority



Figure 5 P1 carpark, as viewed from Edwin Flack Avenue

3.5.2 South

Development to the south of the stadium comprises other sporting and entertainment venues and facilities including the NSW Rugby League Centre of Excellence, Sydney Olympic Park Athletic Centre and Aquatic Centre. The P2 multistorey carpark is also located further to the south, with capacity for 470 vehicles.

NSW Rugby League Centre of Excellence

The NSW Rugby League Centre of Excellence is located immediately to the south of the stadium. It is the headquarters of NSW Rugby League and accommodates both administrative services, a gymnasium, medical suites and recovery rooms, a sports science laboratory and education facilities, and a full-length playing and training field. It was delivered in partnership with the University of New England and was completed in December 2018. The Centre and training field is connected to Stadium Australia via a secure underground tunnel that is used by players and sporting staff on major event game days (i.e. State of Origin) to move between the warm-up field and the stadium.

Athletic Centre

The Sydney Olympic Park Athletic Centre is located to the south west of the Centre of Excellence. Opened in 1994 and currently operated by SOPA, the Athletic Centre is an international standard track and field facility. The Athletic Centre has a seating capacity of 5,000, but can accommodate an additional 10,000 on the grassed banks to the north, south and east of the athletics track. The Athletic Centre hosts athletic carnivals and major national and international sporting events, and provides recreational and fitness facilities for the community. The grassed area provides a full sized playing field capable of hosting soccer, rugby union, rugby league and other rectangular field events.

Aquatic Centre

Further to the south is the Sydney Olympic Park Aquatic Centre. The Aquatic Centre was constructed in 1994 and was the venue for the swimming, diving and water polo during the Olympics. The Aquatic Centre combines state of the art aquatic sports facilities (including a diving pool and a 50m competition pool) and a large aquatic leisure centre. It continues to host international, national, state and community competitions.



Figure 6 NSW Rugby League Centre of Excellence and training field

Source: NSW Rugby League



Figure 7 Sydney Olympic Park Athletic Centre

Source: NSW Athletics



Figure 8 Sydney Olympic Park Aquatic Centre

Source: COX Architecture

3.5.3 East

Cathy Freeman Park and the Sydney Showground

Cathy Freeman Park is located immediately to the east of the stadium at the corner of Olympic Boulevard and Grand Parade. The park comprises a playground, seating, landscaping, and public art including the Olympic Cauldron, which was relocated from Stadium Australia in 2001 and reinterpreted to operate as a fountain.

Sydney Showground and Stadium

The Sydney Showground is located beyond Cathy Freeman Park, to the north east of the stadium. The Showground hosts major events, including the annual Sydney Royal Easter Show, which attracts close to one million people annually. It encompasses a collection of entertainment and exhibition venues, including Charles Moses Stadium and The Dome and Exhibition Complex.

The Sydney Showground Stadium (also known as Giants Stadium) was constructed to host the baseball events for the Olympics, and is now primarily used as the home ground of the GWS Giants (AFL) and the Big Bash League's Sydney Thunder (cricket). The stadium was upgraded to include two new stands post-Olympics, with a total seating capacity for 25,000 patrons, and capacity for up to 45,000 patrons during concerts and other entertainment events.

Sydney Olympic Park Town Centre

To the south east, on the eastern side of Dawn Fraser Avenue, are a number of hotels and commercial office buildings that make up the Sydney Olympic Park Town Centre. This comprises a Novotel at the corner of Dawn Fraser Avenue and Olympic Boulevard, and a dozen commercial office buildings occupied by a diverse range of businesses across sectors including finance and insurance, communications, government and community. Further to the south east outside of the Town Centre, across Australia Avenue, are a number of residential apartment buildings with ground floor commercial uses.

The area also encompasses the State Abattoirs Heritage Conservation Area, which comprises a collection of five buildings within a landscaped garden setting. The remnant buildings were adapted for visitor services for the Olympics and are currently used as sporting administration offices and associated facilities, managed by SOPA.



Figure 9 The Novotel as viewed from Olympic Boulevard



Figure 10 Buildings above the tree line to the east of Olympic Boulevard

3.5.4 West

The Carter Street Precinct commences on the western side of Edwin Flack Avenue, and comprises 52 hectares of former industrial land that was rezoned in November 2015 to be redeveloped for up to 5,500 dwellings, a new village centre, primary school and public open space. The Precinct is bounded by Haslams Creek to the west, an existing bus parking area adjacent to Old Hill Link to the north, Edwin Flack Avenue to the north east, Birnie Avenue to the east and the M4 Motorway to the south.

Amendments to the Carter Street Precinct Master Plan were exhibited by the Department between September and October 2018 and are currently undergoing review prior to the finalisation of the revised Master Plan. The amendments accommodate a new westbound off-ramp from the M4 Motorway at Hill Road, the proposed Parramatta Light Rail (Stage 2) which proposes a stop in the Carter Street Precinct, and details contained in the revised Sydney Olympic Park Master Plan 2030.

Whilst this Master Plan is still being finalised, the Precinct is already in the process of being redeveloped as evidenced by construction activity and approved Development Applications for primarily residential mixed use developments within the precinct.

3.6 Crime Risk Assessment of the Existing Site

A Risk Assessment of the Site in its existing context has been undertaken. The guidelines prepared by the former NSW Department of Urban Affairs and Planning titled "Crime Prevention and the assessment of development applications" is a relevant resource document for the assessment of CPTED under section 4.15 of the *Environmental Planning and Assessment Act 1979*, together with other relevant publications such as the Crime Prevention Handbook for local government prepared by the Australian Institute of Criminology.

Accordingly, a Crime Risk Assessment against the principles of CPTED was physically undertaken on site in accordance with the NSW Police Force publication dated February 2016 that provides a criteria of questions against each CPTED principle (100 in total). This resulted in a score of 21 out of 100 placing Stadium Australia in the low risk category.

The key characteristics of the site are:

- natural surveillance from and into the site is limited due to the enclosed nature of the existing stadium, the distance of the surrounding buildings from the site and the open parkland setting that surrounds the site;
- little activity during the night on non-event days and the existing activity during the day (on non-event days) is also relatively low. This is a product of the original site planning of Sydney Olympic Park where Stadium Australia was set apart from other uses and facilities with expansive forecourt areas to comfortably accommodate hundreds of thousands of people visiting Sydney Olympic Park simultaneously (**Figure 2**). Indeed the railway station and Central Precinct (ie retail, hotels and restaurants) are located approximately 250m from the main entrance to the Stadium, with little to no activation in between.
- there appears to be only modest technical supervision across the site.

The key positive elements of the site are:

- the existing buildings are constructed with robust materials and have well defined uses;
- lighting appears sufficient for its intended purpose;
- high level of maintenance with little to no graffiti, litter or vandalism evident; and
- the main entrances to the stadium are clearly defined.



Figure 11 Existing main entrance and forecourt

4.0 Consultation

On 17 July 2019 the NSW Department of Planning, Industry and Environment issued the Secretary's Environmental Assessment Requirements (SEARs) for renewal of Stadium Australia (SSD 10342). Key Issue 2 requires that CPTED principles are considered in the design. Accordingly, this CPTED report responds to key issue 2.

Furthermore, the SEARs require consultation with NSW Police. In this regard the project team contacted the NSW Terrorism Protection Unit to discuss public safety and security regarding the renewal of Stadium Australia. Key points raised by NSW Police were:

- The redevelopment should future-proof the venue to enable it to be responsive to changing security circumstances, such the immediacy and nature of threats posed to the venue and the surrounding public domain. This includes considering options to:
 - Enhance existing technical security systems to provide extensive CCTV coverage of the public domain, and providing the capability to utilise video analytics to support monitoring.
 - Where it doesn't already exist, the provision of electrical services external to ticket gates to implement a robust searching and screening regime using advanced screening equipment when required.
 - Ensure vehicle access controls at the service road ramp are resilient to hostile vehicles.
- The venue's public domain, particularly external to the ticket gates, should provide 'islands of protection' by separating pedestrians from vehicles through use of hostile vehicle mitigation. Related to this, the site should seek to balance the need for large open spaces in the public domain with sufficient protections from hostile vehicles.
- The venue design should consider the influence of the proposed Light Rail on pedestrian and vehicle movements to/from the Stadium and what security controls may be required to ensure that pedestrian desire lines are adequately protected.

A Security Statement has also been prepared by Intelligent Risk. The following is noted:

- CCTV has been considered in the mitigation measures.
- HVM will be considered in consultation with SOPA who are undertaking a precinct wide review of security measures.
- The interface of the future light rail with the stadium will be considered at the appropriate future stage, noting that this transport connection is still in the preliminary planning phase.

5.0 Proposed Development

This SSD DA seeks approval for the refurbishment of Stadium Australia at 15 Edwin Flack Avenue, Sydney Olympic Park, and is not staged development in the meaning of Section 4.22 of the EP&A Act. The application seeks approval for the following development:

- Reconfiguring the field of play to a permanent rectangular configuration.
- Redeveloping the lower and middle seating bowl to locate seating closer to the field and increase the pitch (steepness) of the seating bowl, which has the effect of reducing the capacity to approximately 70,000 seats (plus an additional 20,000 persons on the field during concerts).
- Providing 100% drip-line roof coverage to all permanent seats by replacing the northern and southern sections of the roof and extending the existing eastern and western sections of the roof.
- Providing a new northern and southern public stadium entrance, including a new stadium facade and double-height concourse
- Renewing the food and beverage concessions, bathrooms, team facilities including new gender neutral changerooms, members and corporate facilities, press and broadcast facilities, and back of house areas.

- Providing new signage, high-definition video replay screens, LED lighting, and other functional improvements.

Part of the existing stadium forecourt will be used as a construction compound during the construction phase and reinstated following the completion of works and prior to commencement of stadium operations. No changes to the external landscaping is proposed.



Figure 12 Aerial photomontage of the refurbished stadium

Source: COX Architecture

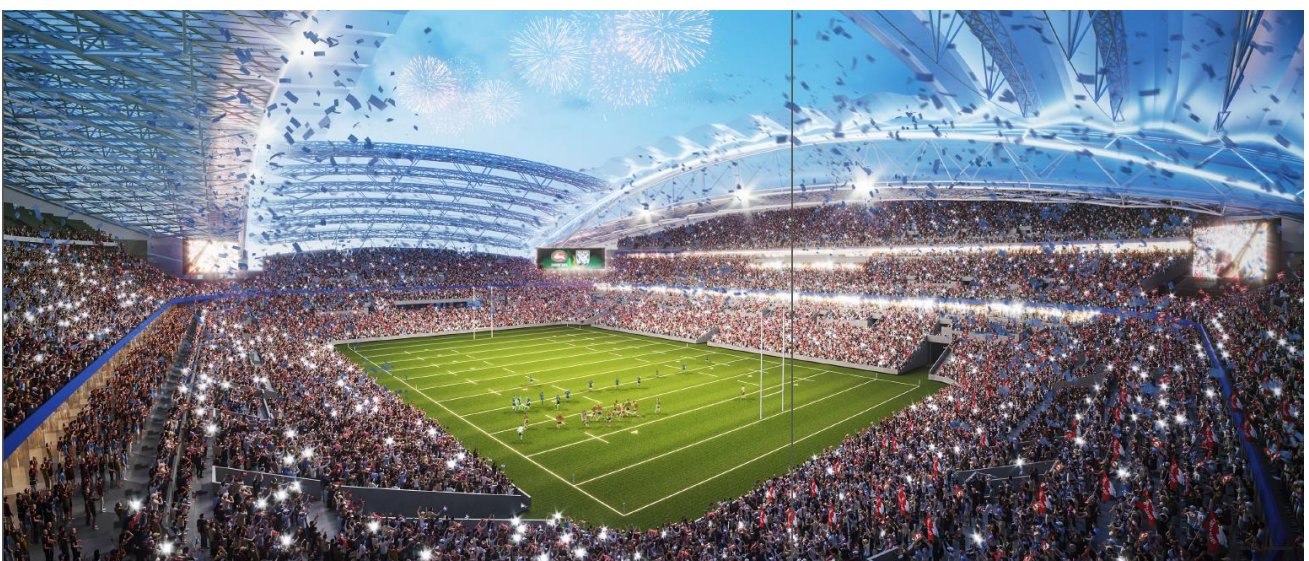


Figure 13 Photomontage of the new stadium seating bowl

Source: COX Architecture

6.0 Nature of Recorded Crime

Crime statistics obtained from the NSW Bureau of Crime Statistics and Research (BOCSAR) represents criminal incidents recorded by NSW Police. A review of the local statistics from April 2018 to March 2019 found that the most commonly occurring crimes relevant to CPTED within Sydney Olympic Park were:

- Assault – non-domestic violence related
- Sexual assault
- Break and enter dwelling
- Steal from person
- Drug offences

Frequency of the above crimes in Sydney Olympic Park between April 2015 and March 2019 is detailed below.

Table 1 Statistics of recorded crime in Sydney Olympic Park (suburb) between 2015 and 2019

Crime	April 2015- March 2016	April 2016- March 2017	April 2017- March 2018	April 2018- March 2019	2016-2019 Trend	Rate per 100,000 Population (April 2018- March 2019)	Rating Category
Assault – non-domestic violence related	60	36	56	68	Stable	3024	Medium
Sexual assault	15	15	21	20	Stable	889	Medium
Break and enter dwelling	10	7	12	13	Stable	578	Medium
Steal from person	48	17	31	26	Stable	1156	Very high
Drug offences	342	209	311	386	Stable	17163	Moderate

During the 2017/18 financial year Sydney Olympic Park hosted approximately 10.5 million visitors¹ with a resident population of just 1,736². From a crime statistics perspective, Sydney Olympic Park's current low resident population and very high visitor numbers is atypical for a Sydney postcode and thus skews crime data. Therefore, using the standard crime rating statistical tool of incident rate per 100,000 population is not considered an accurate or appropriate tool to use when attempting to understand victimisation or offending rates in Sydney Olympic Park.

When analysing crime statistics, Sydney Olympic Park should be placed in its context as a large scale predominately sporting, recreation and entertainment precinct that attracts very high numbers of local, interstate and international visitors annually. When comparing this context to the relatively low number of incidents reported each year for the crime categories above (rather than just the currently low resident population) suggests that the victimisation and offending rates in Sydney Olympic Park are actually low relative to the number of people that use the area annually.

Notwithstanding this, the refurbishment of Stadium Australia should still be mindful of crime statistics relevant to major sporting and entertainment venues.

As illustrated in **Figures 13 to 20**, the BOCSAR database indicates that the Site is located within 'hotspots' for the following crimes relevant to CPTED.

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

¹ SOPA Annual Report 2017-18

² ABS 2016 Census

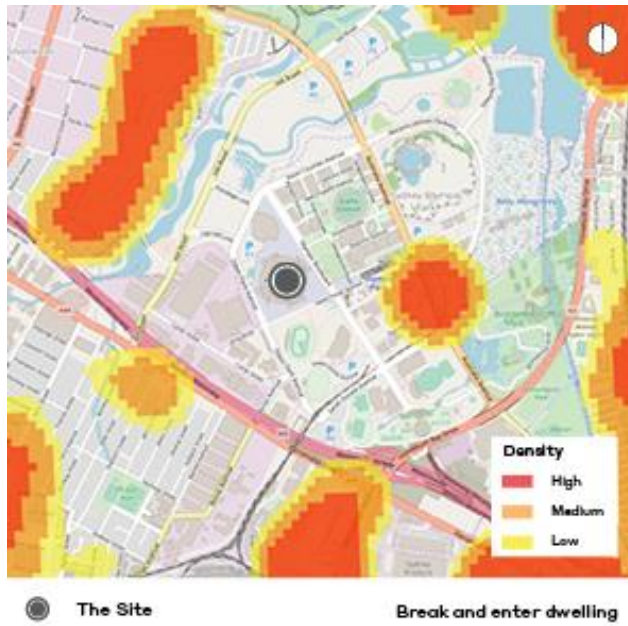


Figure 14 Break and enter dwelling
Source: BOCSAR



Figure 15 Break and enter non-dwelling
Source: BOCSAR

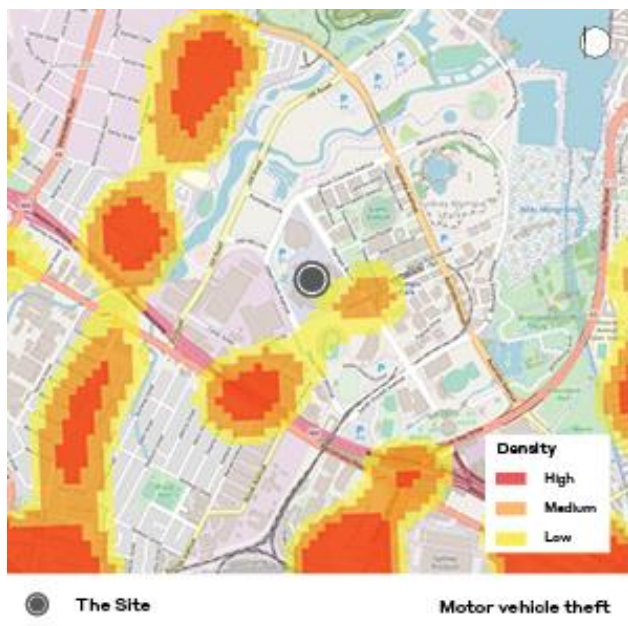


Figure 16 Motor Vehicle Theft
Source: BOCSAR



Figure 17 Robbery
Source: BOCSAR

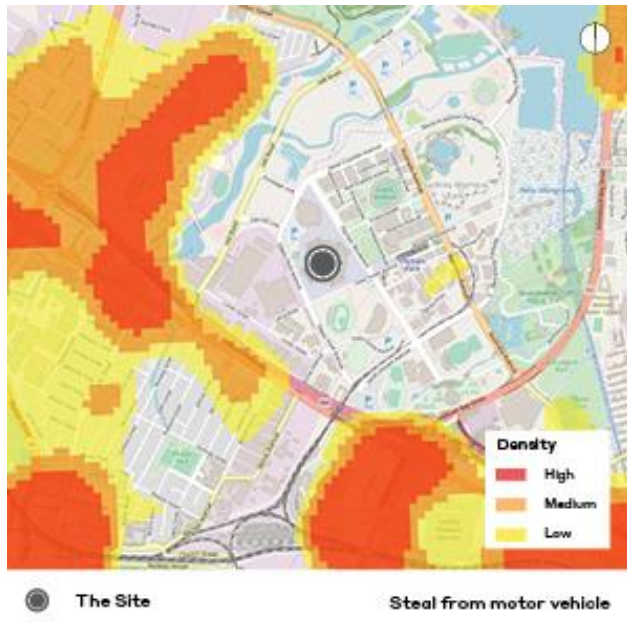


Figure 18 Steal from motor vehicle
Source: BOCSAR

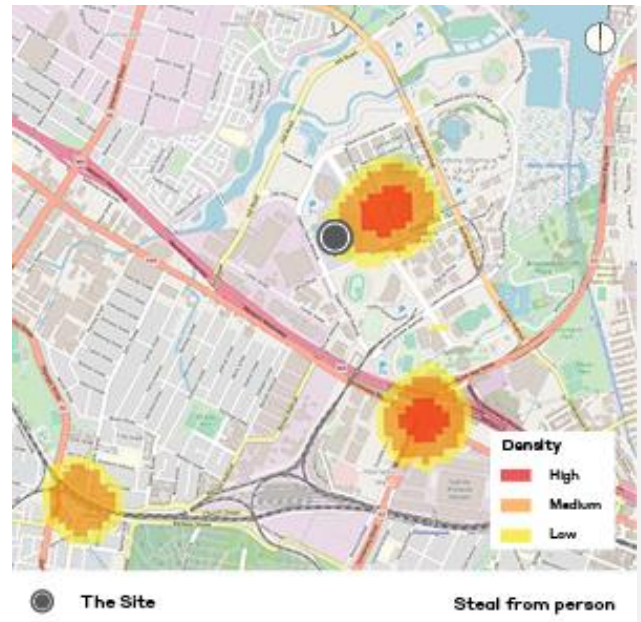


Figure 19 Steal from person
Source: BOCSAR



Figure 20 Steal from dwelling
Source: BOCSAR

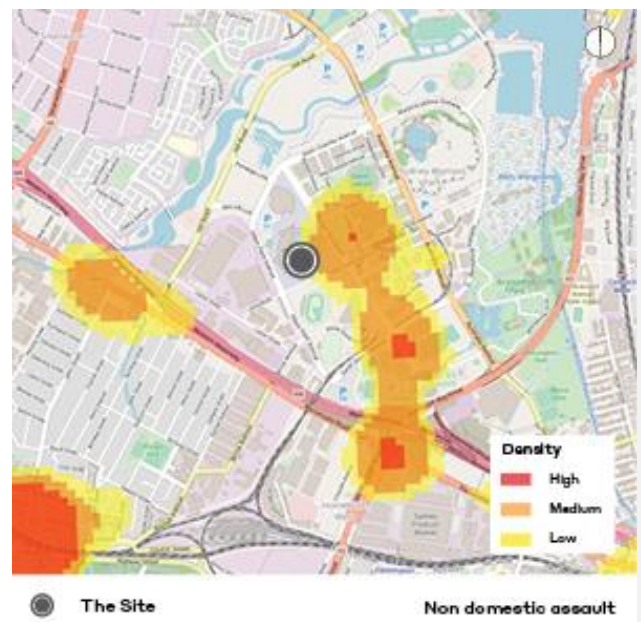


Figure 21 Non domestic assault
Source: BOCSAR

7.0 Matters for Consideration

A potential perpetrator can take advantage of the environment, with access and the opportunity for concealment significantly affecting the safety and perceived safety of an environment. Given that assault, theft, steal from person and drug offences are likely to be the main criminal offences affecting the users of the proposed development, the following has taken these matters into consideration in the potential of the renewal of Stadium Australia to create opportunities for such crimes.

The proposed development is for the renewal of an existing large stadium to reduce overall capacity but ensure it is fit for purpose for future events. This context underpins an assessment of the proposed development in accordance with the CPTED principles.

7.1 Surveillance

Effective natural and incidental surveillance can reduce the opportunities for crime. The principle indicates that offenders are often deterred from committing a crime in areas with high levels of natural surveillance.

The following design interventions benefit optimal natural surveillance:

- clear sight lines between public and private places and maximising natural surveillance;
- appropriate lighting and effective guardianship of communal and/or public areas; and
- minimal opportunity for offenders to conceal themselves or entrap victims.

Given the nature, orientation and separation distances of the surrounding development, there are limited natural surveillance opportunities afforded from adjoining development of the stadium forecourt and surrounds. However, it is noted that the Novotel Hotel located on the corner of Olympic Boulevard and Dawn Fraser Avenue does directly overlook the forecourt and main entrance to the stadium affording this area with a level of continual natural surveillance. Also, the multilevel carpark P1 located on the northern side of the stadium and immediately adjacent to the Qudos Bank Arena overlooks the northern and western surrounds of the stadium and the western side entrance.

Externally the stadium has clear sightlines with little opportunity for offenders to conceal themselves without being noticed. Furthermore, the existing lighting of the forecourt and the stadium itself is considered satisfactory to create a perception of relative safety and not promote concealment opportunities. Effective guardianship in the form of formal stadium and Sydney Olympic Park security personnel is provided, which is further bolstered during events and stadium use, and includes NSW Police Officers. 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 proposed development is classified as an activity generator in that the uses proposed will encourage and intensify the number of visitors to the site. The improvements to the quality of the stadium will also ensure that the frequency and diversity of users to the site will be significantly improved. As such, the increased activity within and around the stadium will result in a greater level of natural surveillance.

Notwithstanding this, wayfinding in large environments can be confusing. Knowing where and how to enter, exit and find assistance within large public areas can impact upon the perception of safety. The celebration of the stadium entrances through the proposed signage zones and the public domain design will enable visitors to clearly understand the urban environment. Way-finding signs should also be incorporated into the detailed design, both externally and internally. Upgrading to the surrounding landscaping is not proposed as part of the stadium renewal, however regular maintenance and pruning is recommended to ensure sightlines are maintained and concealment opportunities minimised.

Furthermore, internally the proposed renewal of the stadium generally provides clear sightlines and overlooking from higher levels resulting in minimal areas for concealment. Indeed, the redesign of the Level 00 (non-public area) has less corridor dead ends and unambiguous and semi concealed spaces, thereby improving natural surveillance. There are however some blind corners both externally and internally adjoining the main circulation paths providing potential hiding places.

Recommendations relating to surveillance are provided in Section 8.1.

7.2 Lighting and Technical Supervision

Effective lighting and discrete technical supervision can reduce fear, increase community activity, improve visibility and increase the likelihood of offenders being detected. Lighting and technical supervision are integral in increasing safety and perceived safety. All lighting provided within and around the stadium should ideally exceed the minimum Australian Lighting Standard AS/NZ 1158 for public streets, car parks and pedestrian areas, specifically addressing the objectives for crime and fear reduction.

High quality lighting throughout all publicly accessible areas should be adequate to permit facial recognition and reduce the threat of predatory crime. Furthermore, the proposed renewal of the stadium provides the opportunity for a new or upgraded CCTV system (using discrete style cameras) to be installed within all publicly and non-publicly accessible areas to increase the technical supervision of the stadium both externally and internally. Particular attention should be provided to main access points and areas of modest/low natural surveillance.

Any new or upgraded CCTV strategy is to be designed in consultation with a suitably qualified security consultant with a Class 2A licence under the *Security Industry Act 1997* who can provide specific advice on the placement, installation, monitoring and maintenance of the CCTV network. This should also be coupled with a lighting strategy designed by a suitably qualified lighting consultant with experience in large sporting facilities and/or public buildings and spaces.

Recommendations relating to lighting and technical supervision are provided in Section 8.1.

7.3 Territorial Reinforcement

Territorial reinforcement involves the perceived ownership of public spaces. Users will be more inclined to visit areas that are maintained and to which they feel they have a vested interest in. A well-used and dynamic public space is made safer by natural surveillance. Designing with clear transition between public and private spaces, and clear design cues indicating the intended use of space is critical. A well maintained public domain is critical in encouraging occupancy of space, both in the interior and exterior of the development.

The *NSW Police Safer by Design Guidelines* note that 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. In particular, ownership cues are heightened and fear can be reduced through the personalisation, marking, maintenance, and decoration of a building and/or public domain. The clear definition of public and private territory, and the introduction of a greater number of people on the site generally, given the anticipated improved spectator experience regularly attracting higher attendance figures, will increase the risk to an offender and promote territorial reinforcement, as criminals do not want to be detected, challenged or apprehended.

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 existing public domain and forecourt area is currently well maintained and cared for and there is nothing to suggest the renewal of the stadium will change this.

As noted in section 5.1, the on-going maintenance of the site and surrounding public domain areas, including lighting, CCTV cameras, the building exterior and urban environment 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 and are made safer by the natural community supervision that occurs. In this respect, the renewal of the stadium coupled with the continued revitalisation and redevelopment of the Central and Parkview precincts of Sydney Olympic Park for mixed use development over the next 5-10 years is expected to naturally enhance the vibrancy of the area and public perception that Sydney Olympic Park is a safe place. Indeed by 2030 Sydney Olympic Park is projected to have a daily population of 31,500 workers, 20,000 visitors, 14,000 residents and 5,000 students to ensure activity 24 hours a day, seven days a week³.

Recommendations relating to territorial reinforcement are provided in Section 8.1.

³ Sydney Olympic Park Master Plan 2030 (2018 Review)

7.4 Environmental Maintenance

There is a strong association between environmental maintenance and the fear or perceived fear of crime. General image can greatly affect the individual's desire to enter and engage with a space. Environmental maintenance and territorial reinforcement are co-dependent in achieving a safer space and are integral in achieving optimal natural surveillance. The maintenance of the built form, landscaping and lighting assist in communicating care and the presence of effective guardianship. Routine maintenance is a strong indicator of area management and safety.

The site is currently well maintained with no litter, graffiti or vandalism encountered during the site visit. However the proposed development will significantly improve the appearance and modernisation of the stadium, providing a greater clarity of ownership, area image and high quality environment. The image of the 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. Whilst the image of the area is relatively positive, the provision of a renewed high quality stadium will contribute to the built form of area and reinforce Sydney Olympic Park as the premier destination for sporting and entertainment events in NSW.

The maintenance of the new stadium and public domain areas 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.

Recommendations relating to environmental maintenance are provided in Section 8.1.

7.5 Activity and Space Management

Similar to environmental maintenance, there is a strong association between activity and space management, and the fear or perceived fear of crime. Unlike environmental maintenance, this principle endeavours to manage the more dynamic activity and use of space.

Activity and Space Management strategies include:

- Signage that identifies the intended uses of space as well as prohibited uses
- Planning of events and uses to avoid conflicting activities
- Regular cleaning and maintenance of public realm
- Encouraging occupation through public amenity and attractive environments

A key deterrent to crime is the presence of other people. Places and spaces that are well supervised and cared for, and that are effectively and clearly designed for their intended use tend to be more inviting, perceived to be safe and therefore more regularly used. The integration of appropriate public amenity ensures that spaces remain activated and invite people to gather and stay longer. Places that are not maintained and/or that lack amenity tend to detract users and limit activation, making them more susceptible places for crime to occur.

The planned increase in resident population and commercial activity in Sydney Olympic Park over the next 5-10 years coupled with more frequently higher attended events (as a consequence of an improved spectator experience), is expected to increase activity of the area during both the day and night on event days and also non-event days. Furthermore, the construction of Stage 2 of the Parramatta Light Rail project that will directly link Sydney Olympic Park with Parramatta CBD will significantly improve public transport accessibility and therefore increase activity once operational. A significant increase in activity levels will increase surveillance and effective guardianship, increasing the risk to offenders.

Recommendations relating to the management of activity and space are provided in Section 8.1.

7.6 Access Control

Access control strategies restrict, channel and encourage the movement of people and vehicles into and through designated areas. Unauthorised entry is reduced by physical and technical barriers, as they increase the effort required to commit crime. Given that the proposed development is the renewal of NSW largest stadium, access control strategies and management are well considered and clearly evident.

In terms of perimeter security and other access control measures, the Security Statement prepared by Intelligent Risks recommends the following should be considered:

- *Access control, intrusion barriers, passive and active Hostile Vehicle Mitigation (HVM) options for the protection of crowded areas at ticket gates and other vulnerable points so that venue users are provided with 'islands' of protection.*

The EIS references an Event Management Statement that outlines operational procedures in relation to access and security on event and non-event days. This Event Management Statement will inform an updated Event Management Plan where the implementation of this detailed Plan and its operational procedures will ensure that access is suitably controlled.

An important component of access control is ensuring the non-public areas of the stadium cannot be easily accessed by the general public. This is particularly important for Level 00 which is the key back of house area for the stadium and where the change rooms and other amenities are located for sporting teams and performers. This area requires a combination of physical access control, security and technical surveillance measures.

Recommendations relating to access control are provided in Section 8.1.

7.7 Design, Definition and Designation

The design of the development reflects its purpose and it would be difficult for potential offenders to make excuses for their presence and potential actions. Opportunistic criminals will often exploit areas with unclear spatial definition, borders and boundaries. The proposed development is clear in defining spaces and in the designation of the building as a recreational facility (major) use, therefore it is considered consistent with this principle.

8.0 Crime Risk Rating and Recommendation

The Crime Risk Rating considers the development as proposed in architectural drawings prepared Cox Architecture. An assessment of the proposal and context using the Crime Prevention through Environmental Design (CPTED) principles discussed in Sections 2, 4 and 5 has found that provided the measures recommended below are implemented the opportunities for crime can be minimised to reasonable levels and the rating would be within the “low” category. Therefore, this will provide a safe environment for future visitors and staff.

In informing the Conditions of Consent, recommendations to further improve the safety and security of the proposed development are detailed below.

8.1 Recommendations

Surveillance

- Ensure opportunities for natural and incidental surveillance are maintained through effective lighting, access control and environmental maintenance.
- In the design of the interior, ensure opportunities for concealment are minimised by reducing alcoves and recesses. Convex mirrors should be used on blind corners (where appropriate).
- Ensure interior pedestrian pathways (both in publicly and non-publicly accessible areas) do not lead to concealed spaces.
- As a general principle, existing landscaping and vegetation (where appropriate) should either be less than 1m in height or have a canopy above 2m in height. This is in order to improve sightlines and minimise concealment opportunities on approaches to the stadium and within its surrounds. Regular pruning should occur to ensure vegetation does not encroach upon sightlines.
- Prepare a wayfinding signage strategy to reinforce visitors, employees and patrons perception of safety and legibility within Stadium Australia. Consider whether an upgrade to the wayfinding signage is required externally to the stadium.

Lighting and Technical Supervision

- Consult a relevantly qualified and experienced lighting engineer to ensure the correct lighting is provided to meet (or preferably exceed) minimum Australian and New Zealand Lighting Standards and enable sufficient surveillance of the site including all publicly and non-publicly accessible areas.
- Any new or upgraded CCTV strategy is to be designed in consultation with a suitably qualified security consultant with a Class 2A licence under the *Security Industry Act 1997* who can provide specific advice on the placement, installation, monitoring and maintenance of the CCTV network.
- The CCTV network should endeavour to ensure blackspots of coverage are not created.
- The CCTV network strategy should be partnered with the internal and external lighting strategy to ensure facial recognition is achieved in all lighting conditions and a minimum colour rendering index of 60 is achieved.
- Discrete CCTV systems such as small dome cameras are recommended.

Territorial Reinforcement

- Display CCTV security notice signs to convey that the site is under constant surveillance.
- Ensure that all corridors are unobstructed to avoid blind spots.
- Entry identification signage for the public and also loading back of house areas should be clear to reinforce perceptions of safety and legibility and clearly define entrances.
- Maintain the site to a high standard that indicates care and ownership of the site.
- Ensure internal signage clearly delineates non-public areas.

Environmental Maintenance

- Ensure a prompt response is incorporated into environmental maintenance procedures.

- Ensure mechanisms are in place for on-going maintenance of landscaping and the stadium, including:
 - rapid removal policy for vandalism repair and the removal of graffiti;
 - maintenance of all surrounding public spaces; and
 - provision of rubbish bins.
- Utilise graffiti resistant materials or coatings to ensure ease of ongoing management and maintenance. Use of high-quality surface materials to lessen the likelihood of damage and decay.
- Ensure all areas within the development are maintained to a high standard and kept clean and tidy.

Activity and Space Management

- Ensure the effective management of the proposed stadium is clearly articulated through an updated Event Management Plan. The Event Management Plan should consider when planning events to avoid conflicting activities.
- Signage should identify intended uses of spaces as well as identifying prohibited uses.

Access Control

- Provide secure electronic access (card/ key controlled entries/ lifts and intercom systems) or secure access control strategies to prevent unauthorised access into the stadium building.
- Provide secure vehicular and pedestrian access to Level 00, to restrict and control access into the back of house areas and 360° basement ring road.
- Ensure all back of house and non-public areas within the stadium are access controlled by either electronic access, security personnel, or both.
- Ensure the public can only gain access to the stadium via the main entry points.
- Ensure the mitigation measures of the Security Statement prepared by Intelligent Risks are implemented.