

Crime Prevention Through Environmental Design Report



Stage 1B Public Domain

Hickson Park, Watermans Quay, Barangaroo Avenue, Wulugul Walk, Watermans Cove and Public Pier

Submitted to Department of Planning and Environment
On Behalf of Lendlease (Millers Point) Pty Ltd

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1.0 Introduction

This Crime Prevention Through Environmental Design (CPTED) assessment has been undertaken to assess the elements of crime, and the fear of crime that may be associated with the proposed public domain area within the Barangaroo Stage 1B site and surrounding area.

CPTED is a situational crime prevention strategy that focuses on the design, planning and structure of the environment. It aims to reduce opportunities for crime by employing design and place management principles that minimise the likelihood of essential crime ingredients.

This assessment has been prepared and reviewed by a Certified NSW Police Risk Assessor, and uses qualitative and quantitative measures of the physical and social environment to analyse and suggest treatments 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.

Landscape Drawings prepared by Grant Associates and Lighting Drawings prepared by Speirs+ Major have been reviewed as part of this assessment.

In addition, the following tasks were undertaken in the preparation of this assessment:

- review of key literature on CPTED by the Department of Attorney General and Justice 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:
 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 would usually be undertaken to assess the current site conditions and situational crime prevention measures and safety impacts. However, given the proposed public domain area is a construction site no site risk assessment and inspection has been completed as the site will be evolving and currently has limited public access.

Disclaimer:

CPTED strategies must work in conjunction with other crime prevention strategies and police operations. By using recommendations contained within this document, any person who does so must acknowledge that:

- it is not possible to make areas assessed completely safe for the community and their property;*
- recommendations are based upon information provided to, and observations made at the time the document was prepared; and*
- this document does not guarantee that all risks have been identified, or that the area evaluated will be free from criminal activity if its recommendations are followed.*

2.0 The Site

2.1 Site Description

Barangaroo is located on the north-western edge of the Sydney Central Business District, bounded by Sydney Harbour to the west and north, the historic precinct of Millers Point (for the northern half), The Rocks and the Sydney Harbour Bridge approach to the east and a range of new development dominated by large CBD commercial tenants to the south. The site is within the City of Sydney Local Government Area (LGA).

The 22 ha Barangaroo site is generally rectangular and has a 1.4km harbour foreshore frontage, with an eastern street frontage to Hickson Road. The locational context of the site is shown in **Figure 1**.

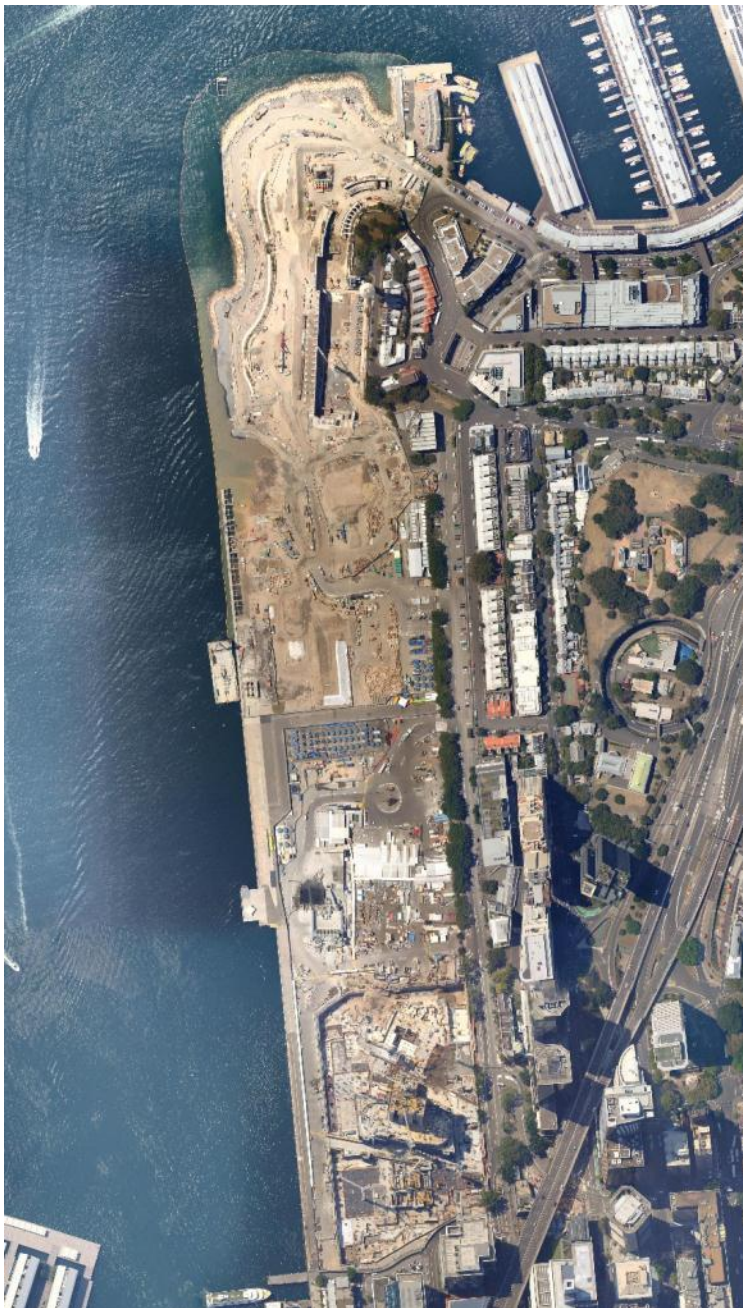


Figure 1 – Locality plan

Presently the site is under construction.

For the purposes of construction staging, Lendlease has divided Barangaroo South into two areas, referred to as Stage 1A and Stage 1B. The area of land within which development is proposed under this Development Application, being Stage 1A, comprises land within Barangaroo South generally known and identified in Concept Plan (Mod 7) as Blocks 1, 2, 3 and X and the area of the foreshore between Block X and Darling Harbour.

The site is currently surrounded by construction hoarding and is patrolled by formal security.

2.2 Surrounding Development

The area immediately to the south of the Stage 1B Site is Stage 1A of Barangaroo South. Further to the north is Barangaroo Central and the new Headland Park. To the south of the Stage 1A site are the existing buildings at King Street Wharf, including KPMG and Macquarie Bank.

To the east of the site is Hickson Road, the northerly continuation of Sussex Street. On the eastern side of Hickson Road is the Sussex Hotel and Western Distributor. To the west of the site is Darling Harbour.

The development site is surrounded by the following existing development:

To the north: Block 5 of the Barangaroo site (as defined in Concept Plan (Mod 8)) is currently used as a construction compound for development at Stage 1A of Barangaroo South. Part of this area is also being used as a remediation compound under SSD 5897.

To the south: Stage 1A of Barangaroo South. This area is currently a development site which features the following buildings:

- Commercial Building C2;
- Commercial Building C3;
- Commercial Building C4;
- Commercial Building C5;
- Retail Building R1;
- Mixed Use Building R7;
- Residential Building R8;
- Residential Building R9;
- Stage 1A Basement Car Park; and
- Stage 1A Public Domain.

The closest of these buildings to the proposed public domain works is Commercial Building C3 and Residential Building R8. Under the approved Concept Plan (Mod 8), a future building, known currently as Building C1, is contemplated on land to the east of Building C3, fronting Hickson Road. A Development Application is yet to be submitted for this building. Full details regarding the current status of each of the buildings is provided in Section 1.1.3.

To the west: Darling Harbour.

To the east: Millers Point and the Central Sydney.

3.0 The Proposed Development

The proposed development comprises landscaping and public domain works associated with the Stage 1B area of the wider Barangaroo site. Specifically, the proposed development seeks consent for:

- Site preparation and remediation (if required);
- Construction of the public domain, comprising:
 - Watermans Cove;
 - the Public Pier in Darling Harbour, south of Watermans Cove;
 - Hickson Park, including a public amenities building;
 - Watermans Quay;
 - the remaining section of Barangaroo Avenue within the site; and
 - Wulugul Walk (including the expanded boardwalk required by condition of Concept Plan Mod 8).

The design has been divided into five key areas – Watermans Quay, Barangaroo Avenue, Hickson Park, Wulugul Walk and Boardwalk, and Waterman’s Cove.

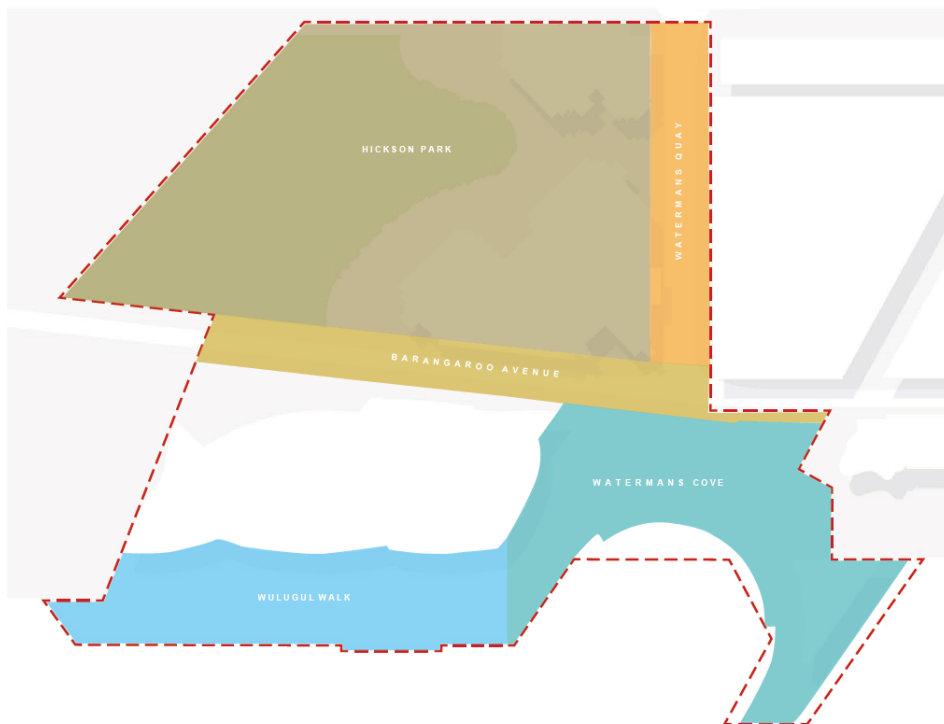


Figure 2 – Key Spaces and Destinations with the Barangaroo Public Domain

3.1.1 Access

Future pedestrian entry into the site will be provided from Hickson Road in the east, Barangaroo Avenue through the centre and along the boardwalk fronting Darling Harbour to the west.

3.1.2 Landscaping

It is proposed to provide a unified landscaping palette across the site to ensure consistency with the existing landscaping of Barangaroo to the south. This involves the use of tree species which have high canopies, and the location of feature trees at key locations throughout the public domain area. Four main planting character zones follow the division of the site as per above. Hickson Park itself will generally be turfed with vegetation providing shade around the southern and eastern perimeter of the park area.

A planting strategy has been prepared for each of the destinations within the Stage 1B Public Domain to respond to their unique characteristics, including specifically selected species and aims for contributing to the wider goal of providing a world class public domain for Stage 1B of the Barangaroo site.

The proposed tree planting palette has been selected to include a suitable mix of native and exotic species that represent distinct individual special qualities and diversity of colour, tone, form and texture. From a pragmatic perspective tree species will be required to respond, and thrive, under the sites specific microclimate conditions.

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The proposed shrub planting palette will include a mixture of low ground cover, and medium sized shrub planting to ensure that the understory planting areas are enriched with diversity of suitable plant types, flowering colour and texture.

Shrub planting defines two main areas of the proposal. These include the raised planter/seating areas and the understorey planting at the base of the Hickson Park tree belt. For Hickson Park the tree belt planting understory is proposed to be composed of a variety of different native ferns in response to the shade patterns that are proposed by the adjacent building forms and mature tree canopies.



Figure 3 – The proposed landscaping continues from the developed part of the wider site
Source: Lendlease, Grant Associates, Spiers + Major

3.1.3 Lighting

Proposed lighting seeks to ensure suitable levels of light outside of daylight hours, with lighting generally focused around the main thoroughfares of the proposal. The lighting strategy seeks to ensure clear pathways of travel are identified through using suitable downlighting, with lighting provided in vegetation and tree canopies, and street lighting along main vehicular thoroughfares.

3.1.4 Security

It is expected that a formal roaming security presence will be prevalent throughout the public domain on an ongoing basis once the public domain is accessible to members of the general public.

4.0 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 for 2015¹ found that the most commonly occurring major offence crimes within the City of Sydney LGA (rates per 100,000 persons) were:

- fraud;
- assault - non-domestic violence related;
- malicious damage to property;
- stealing from a retail store;
- stealing from a motor vehicle;
- stealing from a person;
- stealing from a dwelling; and
- assault - domestic violence related.

As shown in **Figures 4-10**, the BOSCAR database indicates that the site is located within or on the periphery of a hotspot for the following crimes:

- assault – non-domestic violence related;
- assault – domestic violence related;
- breaking and entering non-dwelling;
- stealing from dwelling;
- steal from person;
- stealing from motor vehicle; and
- malicious damage to property.

Notwithstanding the above, 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. It is noted that the BOSCAR statistics indicate that the majority of the Sydney CBD is included within these hotspot areas.

¹ The most recent crime data available in relation to all crimes affecting the site/Sydney LGA is 2015

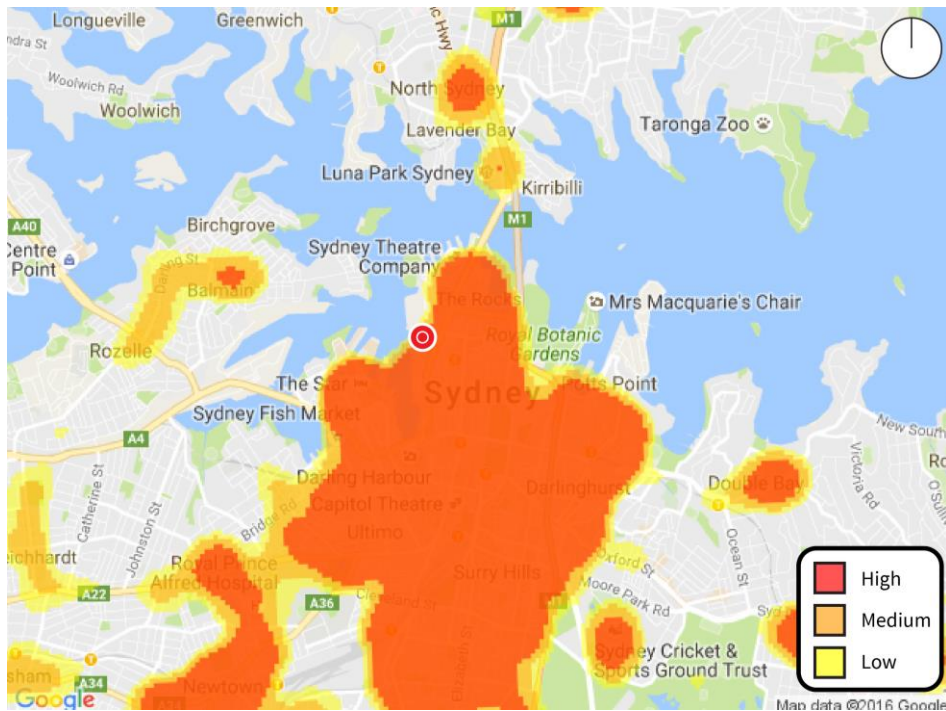


Figure 4 – Hotspot map – assault – non-domestic violence related
Source: BOSCAR

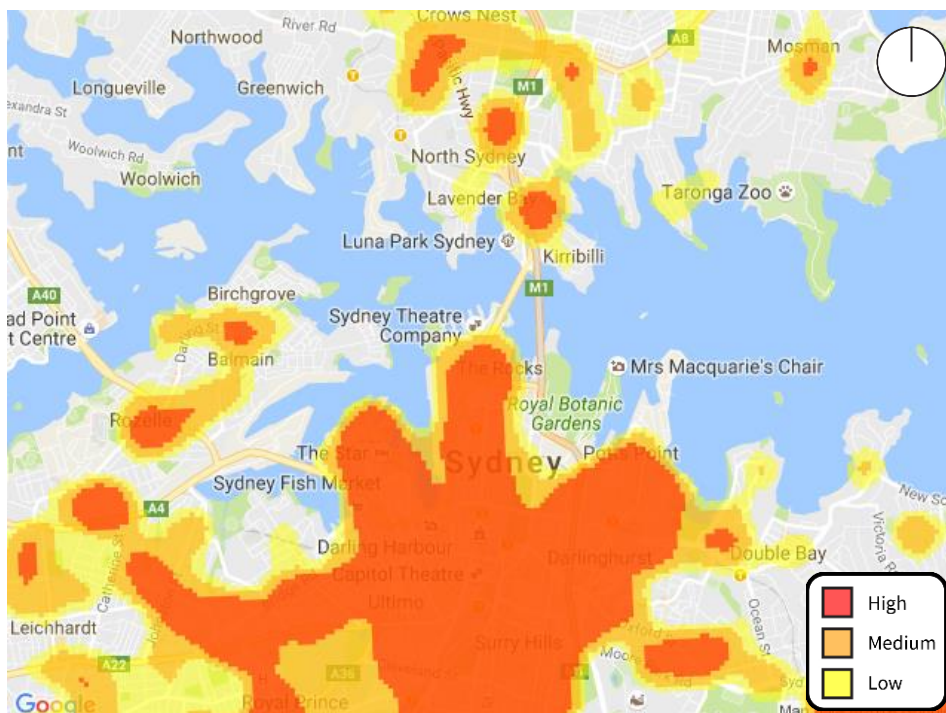


Figure 5 – Hotspot map – assault –domestic violence related
Source: BOSCAR

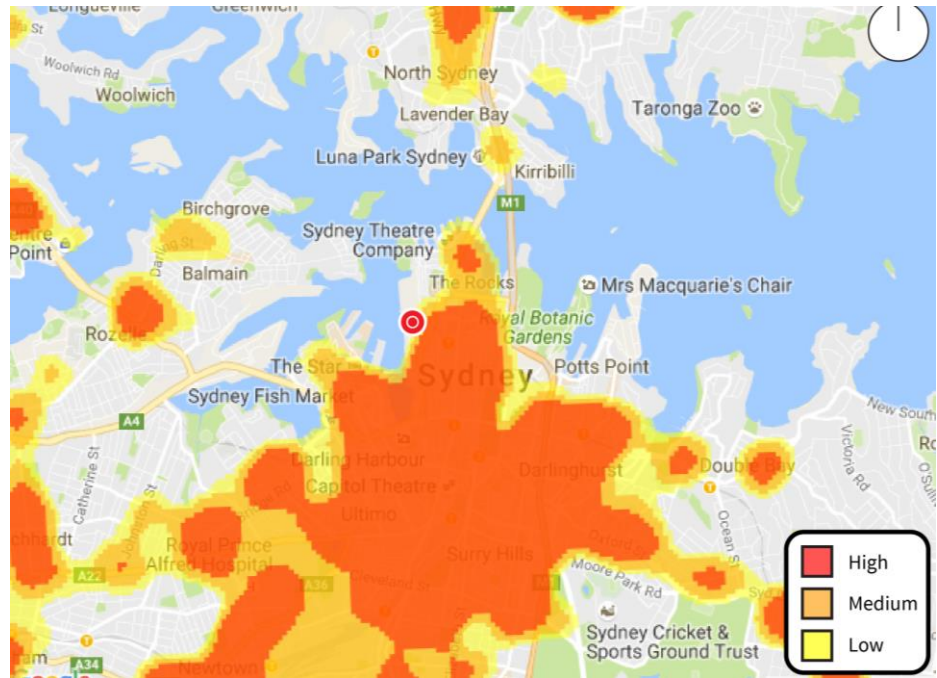


Figure 6 – Hotspot map – breaking and entering non-dwelling
Source: BOSCAR

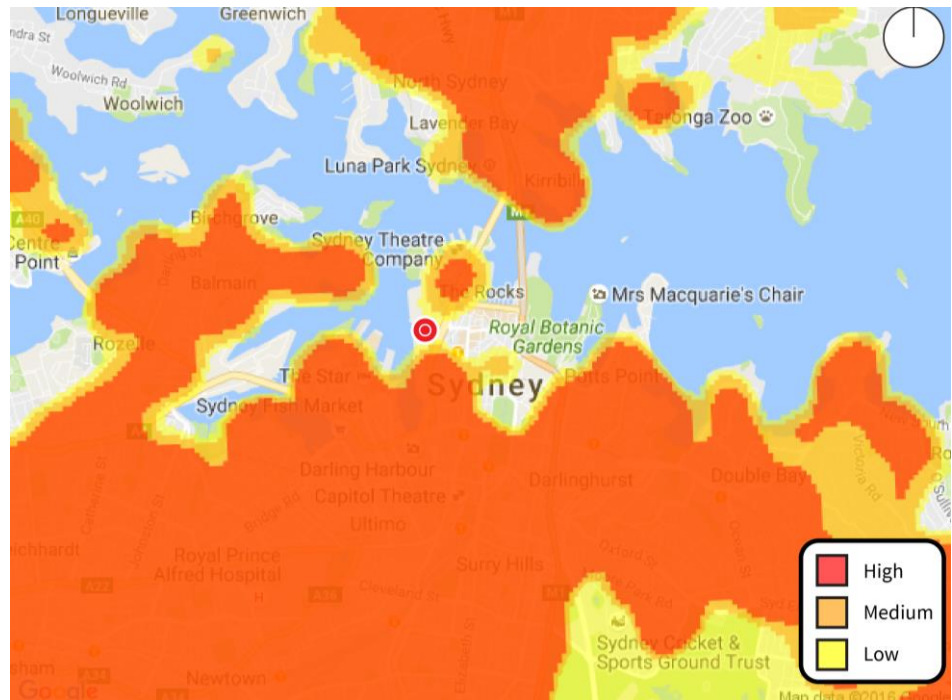


Figure 7 – Hotspot map – stealing from dwelling
Source: BOSCAR

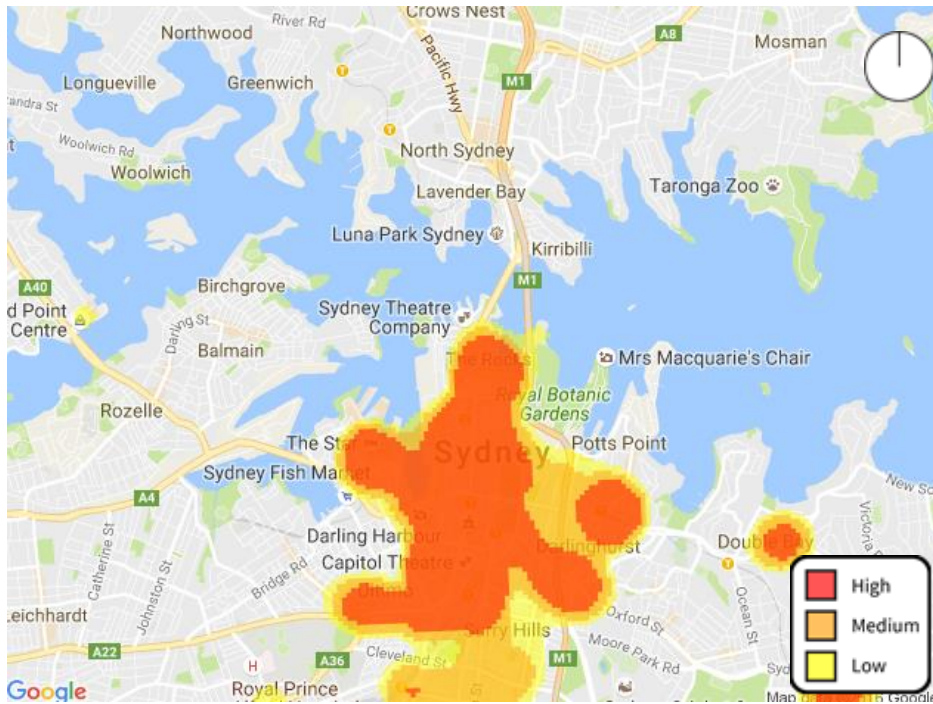


Figure 8 – Hotspot map – stealing from person
Source: BOSCAR

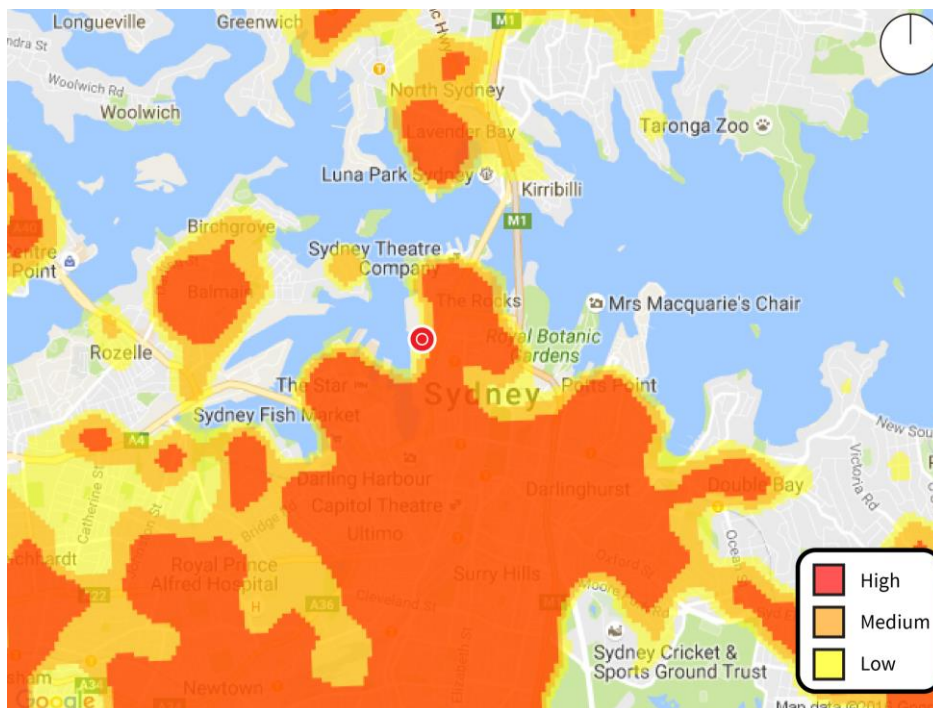


Figure 9 – Hotspot map – stealing from motor vehicle
Source: BOSCAR

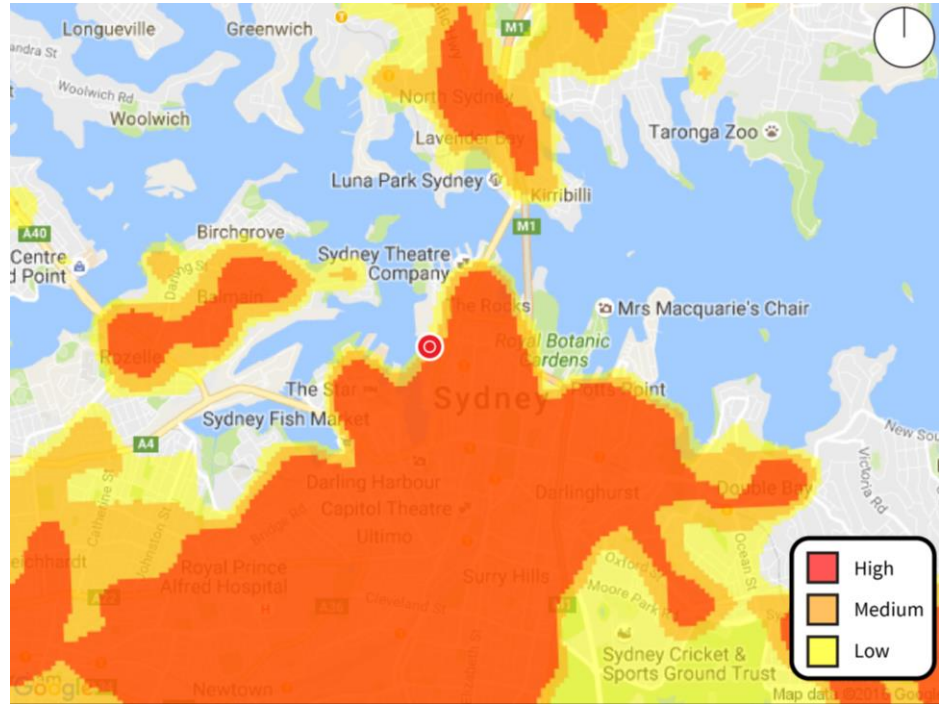


Figure 10 – Hotspot map – malicious damage to property
Source: BOSCAR

5.0 Matters for Consideration

5.1 Surveillance

There are currently minimal surveillance opportunities from the existing buildings surrounding the site. However, there is the potential for new surveillance opportunities arising from future surrounding development including the One Sydney Harbour development (three residential towers), the Crown Sydney Hotel Resort and the Wulugul Walk along the foreshore. A future building is proposed within Block 5 of Barangaroo Central to the north of the site which will assist in additional surveillance opportunities from that direction.

The proposed development extends across several publicly accessible spaces, including Hickson Park, Watermans Cover and the Wulugul Walk and boardwalk. With the proposed ongoing development of Barangaroo South and the removal of construction hoarding, the site will be opened and more visible from surrounding buildings and pedestrian users of the area.

The proposed water level pontoon at the northern end of the public domain area may introduce obscuring of some oblique sightlines due to the height difference between that jetty and the boardwalk, with this exaggerated during low tides (**Figure 11**). It is therefore recommended that sufficient lighting, as identified in the Public Realm Lighting Plan, be provided in the space to reduce the opportunity for concealment as well as reducing fear and increasing visibility. The use of technical supervision, such as CCTV cameras, should be considered to provide an additional layer of comfort for users of the space. Generally though, the tiered nature of Watermans Cove and the boardwalk area allows for sightlines from the shore towards the waterfront.

The future community centre located on the pier at the southern end of Wulugul Walk will be subject to future assessment when details of the design have been developed.



Figure 11 – The pontoon area contains some oblique sightlines due to height differences (tide dependent)

Considering amenity considerations, the proposed landscaping has been designed to distribute sightlines along key pedestrian corridors. If not designed properly or maintained appropriately, however, it can offer concealment opportunities and reduce the opportunity for surveillance. The selected tree species are all generally high canopy species, with minimal mid-storey tree species being selected. Low storey and ground shrubs are proposed in parts, namely towards the western side of Hickson Park and along road and pedestrian corridors. Maintenance of these will need to be rigorous to ensure they remain at a level that does not intrude on sightlines.

Given the alignments of the pedestrian and vehicular corridors, it is considered that connections along these roadways will be enhanced and 'natural surveillance' opportunities maximised from the future adjacent residential and commercial development. This will result in an increased risk to potential offenders. All landscaping provided in the development should be the subject of a maintenance regime to ensure sightlines and natural surveillance opportunities are promoted.

The low scale kiosk proposed at the eastern boundary of Hickson Park will introduce general opportunities for surveillance across the wider expanse of the park area. The park itself is proposed to be a wide turfed space allowing for clear sightlines across its expanse. Seating in and around this area, and also along Wulugul Walk, will encourage use of the public domain space and therefore improve natural policing.

Way finding in large environments can be confusing. Knowing where and how to traverse through the site can impact perceptions of safety. The general layout of the public domain will sufficiently provide a legible environment; however, adequate signage should be provided to reinforce wayfinding. This signage may be in the form of building identification signs, such as building name or address signs, or directional signage to key features such as retail outlets and lobbies of residential and commercial towers or other key elements of the development.

It is expected that the use of sufficient lighting, high quality finishes and appropriate signage will ensure that surveillance opportunities throughout the public domain are maximised and the public nature of the space is clear. It is understood that communication measures such as a public address system and an intercom system are to be installed throughout the public domain. The public address system will provide an opportunity for announcements to be communicated audibly within the public domain. An intercom system will be installed in key locations for users to call for assistance in an emergency or when feeling unsafe. Intercom systems are simple and easy to use measures to ensure that users can call security if they feel unsafe or are in trouble.

It is recommended that CCTV cameras be used to provide formal surveillance on site to increase the perceived risk of capture to potential offenders. CCTV cameras should be placed at key entries and exits and in other strategic areas of congregation to provide maximum surveillance.

5.2 Lighting/ Technical Supervision

Effective lighting can reduce fear, increase community activity, improve visibility and increase the likelihood of offenders being detected. It is recommended that lighting be provided in and throughout the public domain area, particularly along the movement corridors and areas of congregation to facilitate surveillance opportunities and reduce the opportunity for predatory crimes, malicious damage and other offences, especially given the nature of crime prevalent in the City of Sydney LGA.

All lighting proposed within the public domain should meet the minimum Australian and New Zealand Standards and objectives for crime and fear reduction as outlined in Australian Lighting Standard AS/NZ1158 for public streets, car parks and pedestrian areas. Lighting should be adequate to permit facial recognition, informal surveillance and reduce the threat of predatory crime, including lighting in and around the mature trees of Hickson Park.

As discussed above, the lower jetty level along the waterfront has the potential to create possible concealment opportunities due to oblique sightlines being obscured. It is therefore recommended that bright and even lighting be provided in the space to reduce the opportunity for concealment as well as reducing fear and increasing visibility. The use of technical supervision, such as CCTV cameras, should be considered to discourage loitering in the space.

If CCTV cameras are to be used, these should cover the most important components of the development, such as pedestrian and vehicle entries. The cameras should be vandal resistant and clearly identify and record faces, shapes and colours.

5.3 Territorial Reinforcement

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. Ownership cues are heightened and fear can be reduced amongst residents through the personalisation, marking, maintenance and decoration of a building.

The clear definition of the public and private territory and the introduction of a greater number of people on the site will naturally increase the risk to an offender and promote territorial reinforcement of the site, as criminals do not want to be detected, challenged or apprehended.

The landscaping proposed will reinforce this principle and provide a clear indication of the distinction between private and public domain, eliminating 'excuses' for people to loiter in the clearly defined private spaces. The public spaces are plainly identified using garden beds and pedestrian pathway finishes. The quality of the landscaping to be installed onsite, and the change in landscape and paving treatments to identify the Barangaroo precinct clearly delineate the boundary of the public domain space.

Suitable wayfinding signage at the perimeter of the development is recommended to help reduce the opportunities for people to find excuses to gain unauthorised access and/or to loiter in areas of the development or immediately adjacent to entries. All access points to the public domain and park spaces appear to be legible and inviting and signage will enhance this perception.

5.4 Environmental Maintenance

The proposed development will provide a high quality urban environment which will display a clarity of ownership and land use, as well as increase levels of activity during the day and night through more people being located on the site. The image of an area can impact upon feelings of safety and danger; influence local confidence; and affect individual decisions to withdraw or engage in community life. Given the quality and design of the proposed development and the comprehensive landscaping to be provided, it will enhance and redefine the image of the area.

The ongoing maintenance of the proposed public domain spaces and associated landscaping is important to balance safety and aesthetics of the development. Well maintained spaces encourage regular use and activity, which in turn creates natural supervision of public areas and enhances feelings of safety. The use of high quality materials for construction and established planting should be used to lessen the likelihood of damage and to help reduce maintenance costs. A consistent and rigorous maintenance regime is recommended.

5.5 Activity and Space Management

The introduction of a greater number of people on site will increase activity of the area during both the day and night, subject to the completion of the remaining Barangaroo South developments. The waterfront and other public domain features will naturally attract people to use the space, resulting in people staying in the area for longer periods of time, rather than travelling directly through.

This in turn is likely to increase surveillance and natural community policing. As image can impact upon feelings of safety and danger, influence local confidence and individual decisions to either withdrawn or engage in community life the proposed One Sydney Harbour and Crown Sydney Hotel Resort developments, and the recently completed commercial buildings to the south will greatly enhance the image of the site and in doing so provide a vibrant and regularly used area.

5.6 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 identifies several bollards and edging treatments to direct pedestrian and vehicular movement through the public domain area in appropriate travel patterns. Additionally, it is envisaged that the future buildings within the site footprint will be provided with appropriate access control devices including security gates and locks on windows and doors. These bollards and access control devices are less about restriction but more about guidance and way-finding. The public nature of the proposal and the use of these techniques will assist in guiding pedestrians through the public domain space.

5.7 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. 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 area as public domain and suitable for public use, therefore it is considered consistent with this principle.

6.0 Crime Risk Rating and Recommendations

Combining the area context and an understanding of the future development of the surrounding area in conjunction with an assessment of the issues discussed in previous sections of this report, the Crime Risk Assessment of the proposed development is 'low'.

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

- Use tree species with high canopies to provide for clear sightlines at eye level. A strict regime of maintenance of species with low and mid canopies is to be implemented if these species are provided within the final landscaping scheme.
- Provide way finding signage and building identification signage where appropriate to reinforce perceptions of safety and legibility in the development.
- Install CCTV cameras, especially in areas which could potentially be used for loitering/concealment. If CCTV cameras are to be provided, they should be used in conjunction with adequate illumination to ensure clear CCTV footage can be captured.
- Provide sufficient lighting which is bright and evenly distributed, high quality finishes to ensure that surveillance opportunities are maximised and ownership over the space is clear.
- Provide appropriate lighting in and around the development and consult a qualified lighting engineer to ensure the correct lighting is provided to meet minimum Australia and New Zealand Lighting Standards, and ensure lighting is sufficient and bright enough to enable surveillance.
- Ensure mechanisms are in place for on-going maintenance of landscaping and the building, which includes:
 - rapid removal policy for vandalism repair and the removal of graffiti;
 - maintenance of perimeter landscaping; and
 - maintenance of public furniture and access pathways.
- Use high quality materials for construction to lessen the likelihood of damage and help to reduce maintenance costs.