

Bank Street Park
Blackwattle Bay / Tjerruing

SSD-53386706

Appendix W

Crime Prevention Through Environmental Design Report (Core42)



December 2023

Bank St Park

Crime Prevention through Environmental Design Report

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Introduction

The purpose of this report is to respond to the SEARS Item 3.5 and provide a Crime Prevention through Environmental Design assessment of the project, to support a State Significant Development Application (SSDA) for a new waterfront public park within Blackwattle Bay, to be known as Bank Street Park (SSD-53386706). Bank Street Park is located at 1A-19 Bank Street, Pyrmont on the shoreline of Tjerruing Blackwattle Bay and adjacent areas of Blackwattle Bay (Figure, right).

Blackwattle Bay Precinct

Bank Street Park forms part of the Blackwattle Bay Precinct, which is an area of predominantly government owned land located on the western edge of the Pyrmont Peninsula and adjoining the waters of Blackwattle Bay.

The precinct was rezoned in

December 2022 to facilitate a new mixed-use community, providing for around 2,000 new residents and 5,600 new jobs and creating a vibrant 24/7 economy. Updated planning and land use controls were incorporated into the Sydney Local Environmental Plan 2012, along with site specific design guidance in the Blackwattle Bay Design Guidelines.

A critical part of the Blackwattle Bay Precinct is the high quality public domain which includes a series of parks and open spaces connected by a foreshore promenade. Bank Street Park will bring new active and passive recreation uses into a unique park environment, catering for both existing and future communities in the vicinity.



Source, INSW

Site Description

Bank Street Park is located at 1A-19 Bank Street, Pyrmont NSW within the City of Sydney local government area (LGA) and includes harbour development in Blackwattle Bay. The site area is 1.1 hectares. The relevant lot and deposited plans and the respective ownership for the site are detailed in Table (below - Summary of land title details of the site) and shown in Figure (top) shows the indicative site location outlined in red.

Street address	Lot and Deposited Plan details	Ownership
1A Bank Street, Pyrmont NSW 2009	Lot 1 DP 85206 Lot 1 DP 188671	Transport for NSW
1-3 Bank Street, Pyrmont NSW 2009	Lots 1-2 DP 1089643 Lot 1 DP 439245	Infrastructure NSW
5 Bank Street, Pyrmont NSW 2009	Lot 20 DP 803159	Transport for NSW
7 Bank Street, Pyrmont NSW 2009	Lot 19 DP 803159	Transport for NSW
9 Bank Street, Pyrmont NSW 2009	Lot 21 DP 803159	Transport for NSW
11 Bank Street, Pyrmont NSW 2009	Lot 22 DP 803159	Transport for NSW
17-19 Bank Street, Pyrmont NSW 2009	Lots 5-6 DP 803160	Transport for NSW
Sydney Harbour	Lot 5 DP 1209992	Roads and Maritime Services (Transport for NSW)
Sydney Harbour	Lot 107 in DP 1076596	Transport for NSW
Part Bank Street road reserve	N/A	City of Sydney Council

Bank Street Park is located on Gadigal Land, one of the twenty-nine clans of the great Eora Nation. It adjoins the foreshores of Glebe to the west and Pyrmont Bridge Road and Wentworth Park to the south.

The Figure (bottom), shows the Bank Street Park site location within Blackwattle Bay State Significant Precinct.

The indicative site location is outlined in red.



Source, SixMaps with Architectus Edits 2023.



Source, Blackwattle Bay Design Guidelines with Architectus edits 2023

Proposed Development

Development consent is being sought for a recreation area for the primary purpose of a public park, comprising:

Site preparation works, including tree removal, earthworks and remediation to facilitate the proposed use;

- Demolition of three existing buildings at 1-3 Bank Street;
- New and adapted facilities for community use, including:
 - New single storey building to accommodate flexible community space, café, and marina office/store facilities, with green roof and photovoltaics;
 - Adaptive reuse of Building D for public amenities, bin and other storage;
 - Boat launching ramp
- Boat storage building with change facilities for dragon boat users with publicly accessible rooftop deck;
- Public domain works, including:
 - 'Interpretation Garden' in existing building 'ruins' at 1-3 Bank Street;
 - Split level foreshore promenade;
 - Multi-purpose court with edge seating and partial fence;
 - Nature-based inclusive playspace for ages 2-12;
 - Fitness equipment;

and pontoon for passive watercraft, including dragon boats and kayaks;

- Public plaza and grassed open space areas;
- New tree plantings and planter beds;
- Public art, wayfinding and interpretative signage, lighting, bike parking and seating;
- Harbour works including:
 - Overwater boardwalk;
 - Land/water interface works, including sandstone terracing into water and support structure, to improve marine habitat;
 - Demolition and construction of a new timber launching ramp for dragon boats;
 - Kayak/passive craft pontoon; and
- Restoration, repair and alterations to the existing seawall for new stormwater outlets.
- Works to Bank Street road reserve, including:
 - Road space reallocation to provide separated cycleway;
 - Cycleway transition to Bank Street to continue south as part of future works;
 - Reinstatement of existing on-street parallel parking;
 - Tree planting;
 - Accessible parking space; and
 - Loading zone adjacent 1-3 Bank Street.

Planning Secretary's Environmental Assessments Requirements

This report has been prepared in response to the relevant requirements outlined within the Planning Secretary's Environmental Assessments Requirements (SEARs) issued on 11 May 2023 for application SSD-53386706.

Blackwattle Bay Design Guidelines

This report further addresses the requirements outlined in the Blackwattle Bay Design Guidelines, which mirror the SEARs requirements. Specifically, the report addresses Section 3.5 - 4 (a), (b), (c) and (d).



Item	SEARs	Relevant Report Section
3.5	<p>3.5 - 4. Public open space is to be designed in accordance with the principles of Crime Prevention Through Environmental Design (CPTED). In particular, the design should provide for:</p> <ul style="list-style-type: none"> a. open sight-lines and landscaping that allows high levels of public surveillance. b. a clear distinction between private and public open space. c. lighting in accordance with the City of Sydney's Lighting Design Code and designs out any potential 'hiding spots.' d. legible entrances to encourage public use of the open space. 	Pages: 14-31

Methodology and Report Overview

Overview

Core42 has been engaged by Oculus to undertake a Crime Prevention through Environmental Design assessment of the Bank St Park project. Core42 have reviewed the local geographic, socio-economic, and demographic factors influencing the potential crime environment at Bank St Park, and undertaken a comprehensive site analysis of the project to identify CPTED recommendations for inclusion into the design concept. It is noted that the analysis is limited specifically to crime related activities, and a comprehensive security risk assessment, including detailed terrorism assessment has been excluded from the scope.

Methodology

The Crime Prevention through Environmental Design (CPTED) assessment has been undertaken in alignment with ISO 22341. This methodology is depicted in the diagram (right). Core42 have defined the context of the site within the broader local area of Pyrmont, identified the specific assets, threats, and vulnerabilities facing the project from crime related activities, and then determined appropriate control measures to manage these activities.

In undertaking the site analysis, Core42 have applied the foundational CPTED principles of natural surveillance, natural access control, territoriality, social cohesion, threshold capacity, community culture, and community connectivity. A description of these principles can be found in Appendix A.

Key steps within the CPTED process

Define the context of crime and security risk
Define the scope and the criteria
Organize oversight body, project team
Set performance target

Identify assets, threats and vulnerabilities
Identify the causes and sources of risk

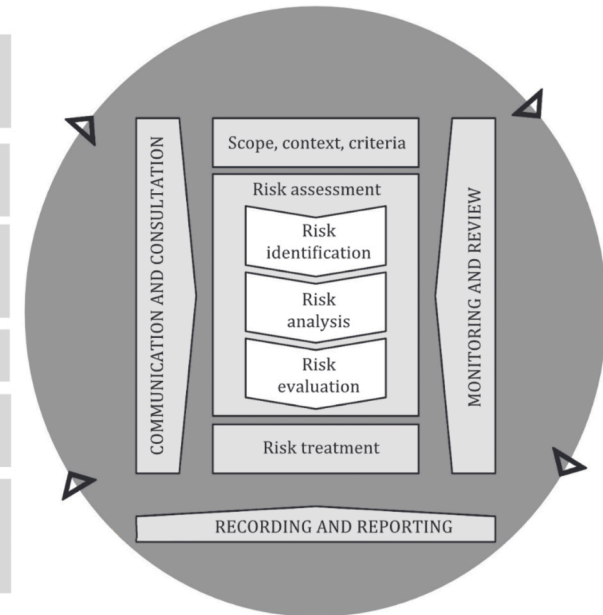
Identify existing controls
Determine likelihood
Determine consequences
Determine level of risk

Compare the risk criteria
Set the priorities of CPTED strategies

Have input to the monitoring and review by planning authorities, emergency services, business operators, etc.

Identify treatment options
Assess options for tailored CPTED treatment
Prepare and implement treatment options
Analyse and evaluate remaining crime and security risk

CPTED process



Demographic Context

Socio-economic and demographic factors have a demonstrable link with crime and criminal behaviour. While no specific set of variables can predictively inform crime rates, factors such as age-sex distribution, community heterogeneity, level of education, income, and so on can provide insight into crime trends. Understanding the social structure of a location can inform the crime potential of the Bank St Park Project.

Age-Sex Distribution

Age-Sex distribution is an important indicator for use in crime analysis. Most crime is committed by young males (who are also generally the most victimised group). Women are also typically the most crime aware and express crime anxiety more readily than men. Larger populations of younger (<25 years old) individuals will likely result in higher crime rates.

Pymont demonstrates a median age of 37, with a near 50-50 split between men and women. This is consistent with the Greater Sydney average. The majority of Pymont's population rests within the 25 to 44 age range. This distribution and age-sex does not present significant indication of a high crime potential environment.

Birthplace / Ethnicity

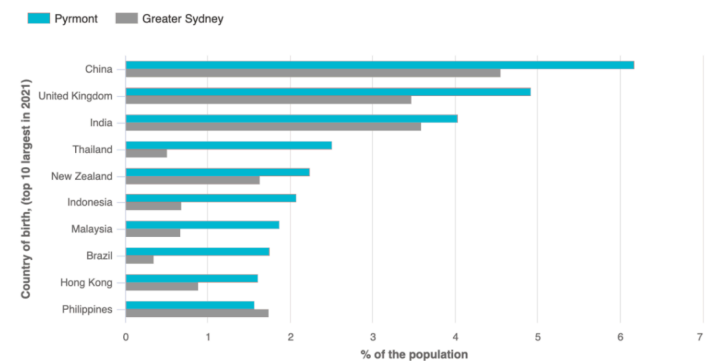
Population heterogeneity can influence criminal opportunities and stresses and strains in a population. Where different cultural groups interact, there is opportunity for conflict where social norms and acceptable behaviours are not understood and shared.

The Pymont distribution does not appear to be too dissimilar to the Greater Sydney region for the three most common cultural groups.

Age-sex pyramid, 2021



Birthplace, 2021



Notes
Cozens, P. (2016). Think Crime!: Using Evidence, Theory and Crime Prevention Through Environmental Design (CPTED) for Planning Safer Cities. Data and graphics collected from profile.id.com.au, sourced from the Australian Bureau of Statistics

Employment Status, Income, and Level of Education

Level of employment in a community can be related to the level of experienced crime. This metric is generally paired with income distribution and level of education to understand the relative productivity and affluence of a community.

More affluent and productive communities are less likely to be participants in criminal activity, but are more likely to be targeted by criminals. Furthermore, more affluent communities are less likely to be involved in violent crimes, but may undertake other criminal activities such as white collar crime. Higher levels of

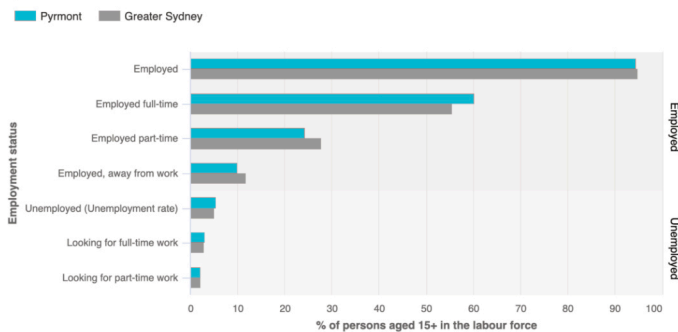
education also influence the potential for criminal activity, with higher education attainment being a positive indicator for reduced crime rate.

Pymont shows a high level of employment that is largely in line with the Greater Sydney distribution. The level of employment, paired with the significant distribution of high household income (generally above the Greater Sydney distribution) suggests a low crime environment from a population perspective, however it could indicate potential victimisation for break and enters, robbery, steal from motor vehicle, and other similar crimes.

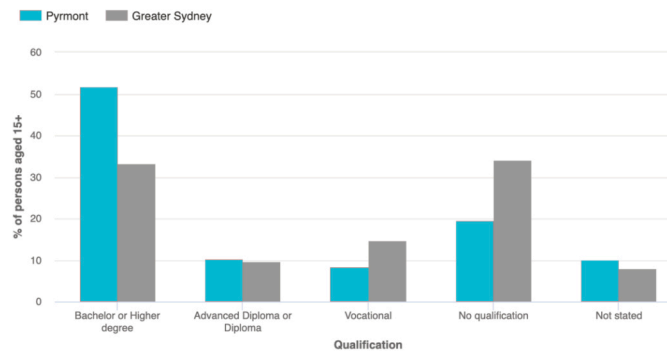
Paired with the significant difference between the Greater Sydney education level and the Pymont education level for Bachelor or Higher degree, the community profile suggests a low crime environment.

Employment status, 2021

Total persons in the labour force



Highest qualification achieved, 2021



Weekly household income, 2021



Notes

Cozens, P. (2016). Think Crime!: Using Evidence, Theory and Crime Prevention Through Environmental Design (CPTED) for Planning Safer Cities. Data and graphics collected from profile.id.com.au, sourced from the Australian Bureau of Statistics

Household and Family Structures

Household type can provide insight into the types of crimes that can occur in a location, for example single person households are more likely to be burgled than those with families. Student accommodation on the other hand can be crime generators.

Household type, when paired with dwelling structure provide a more complete picture, with higher density structures typically presenting increased crime risk.

Finally, housing tenure can influence the crime environment with dense populations of social housing presenting particular risks, and a higher distribution of owner-occupiers presenting a reduction in risk factors.

In the context of Pyrmont, the majority of the population appear to be couples without children and lone persons, which is significantly different from the Greater Sydney distribution.

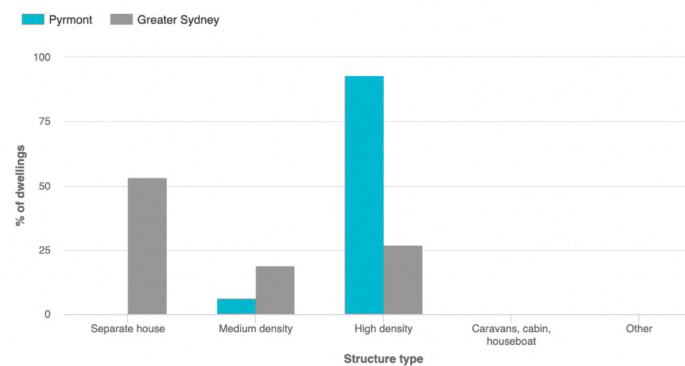
This household type profile aligns with the substantial amount of high density residential living arrangements in the suburb, as well as the higher than average renting population.

These factors in total suggest a relatively unstable population profile that could experience higher than average levels of suburb migration, resulting in less overall community cohesion.

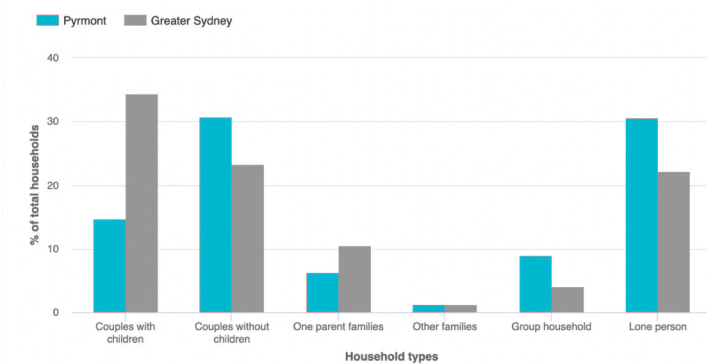
Housing tenure, 2021



Dwelling structure, 2021



Household type, 2021



Notes

Cozens, P. (2016). Think Crime!: Using Evidence, Theory and Crime Prevention Through Environmental Design (CPTED) for Planning Safer Cities. Data and graphics collected from profile.id.com.au, sourced from the Australian Bureau of Statistics

Geographic Context

Overview

The surrounding environment of the Bank St Park project provides significant insight into the criminogenic properties of the project and surrounding routine activities that occur in the suburb. The surrounding context is assessed to understand how crime trends may present themselves at Bank St Park.

High Risk Areas

Pymont is dominated by a number of specific premise types that drive criminal behaviour in the area. The Star Casino, local bars and pubs, and other licensed venues such as nightclubs appear to generate a significant proportion of criminal offences including assaults, thefts, offensive conduct, and malicious damage style offences.

The Pymont 'entertainment precinct' shown nominally in the purple backdrop on the Figure is expected to be the primary crime hotspot within the suburb, generating and experiencing the majority of alcohol fuelled criminal behaviours. The dispersion of these incidents is likely to be away from Bank St Park, as transport options are not immediately adjacent to the site, but closer to the entertainment precinct area.



Notes
Coding of building functionality based on desktop review only and is indicative only to support crime analysis.
Identified venues are for illustrative purposes only, crime statistics for these venues was not requested or analysed.



Immediate Locality

The immediate locality of the Bank St Park site provides a variety of mixed use cases that will attract different groups of individuals across the day, night, and week. The immediate adjacency to high rise residential developments will provide a good distribution of use throughout the week, most likely in the mornings and evenings due to the limited number of couples with children in the suburb (individuals are most likely commuting for work outside of the Pyrmont area).

The proximity to office buildings will increase patronage during the working week when the residents are most likely to be away from home, and the fish market will potentially attract more individuals to this part of Pyrmont on the weekend. Subsequently, the immediate locality provides a good mix of uses in support of a positive crime reduction outcome.

Furthermore, the Marina provides activity throughout the week operating throughout the day and night.

Green Spaces

There are a number of green spaces, including parks, pedestrian walks, and other activity areas such as basketball courts throughout the immediate vicinity of the Bank St Park project area.

These provide a number of benefits in terms of diffusion of activity and individuals such that overcrowding and competition for amenities is less likely to occur.

Emergency Services

There are limited emergency services in the immediate Pyrmont locality. FRNSW do have a local station within the area, however NSW Police and Ambulance do not have stations within the immediate area. This arrangement may reduce response times in case of a serious incident at Bank St Park, and also reduce patrol frequency and police presence in the area throughout the day and week.



Notes
Coding of building functionality based on desktop review only and is indicative only to support crime analysis.
Identified venues are for illustrative purposes only, crime statistics for these venues was not requested or analysed.

Future Development

The future development context for the site, including the activation of Blackwattle bay in its entirety will introduce a significant new mix of uses and user groups. The activation of this precinct and introduction of these new locations including mixed use towers will continue to support the assessment made on the locality as-is.

Notwithstanding the potential introduction of new alcohol and nightlife activities in this precinct, the overall suggested use cases appear to be in line with the as-is state, though notably more active.

Blackwattle Bay Development Period

The Blackwattle Bay Construction Period will introduce changes in use over the eight to 10 year construction period. It is expected that Bank St Park will be delivered and operational first prior to the majority of construction for the broader precinct. Subsequently, the site will be relatively isolated and this will introduce some crime risk, and vulnerability for users. These considerations have been embedded in the analysis and recommendations.



Crime Analysis

Crime analysis has been undertaken for the Sydney LGA as a broad starting point to understand the top level trends and indicators. While the LGA data does not provide a clear picture of the crime environment specifically at Bank St Park, it does provide some supporting evidence for the typical crimes occurring across the LGA and supporting insight into when crimes are likely to occur in these locations due to movement of people throughout the day and week.

Further analysis is undertaken on Pymont specific datasets to further narrow down the potential crime experience at Bank St Park. It is noted that crime analysis is based on historic data and is not predictive of future events. Crime data however does provide the opportunity to understand the socio-economic variables in context of recorded crime.

Sydney LGA Trends

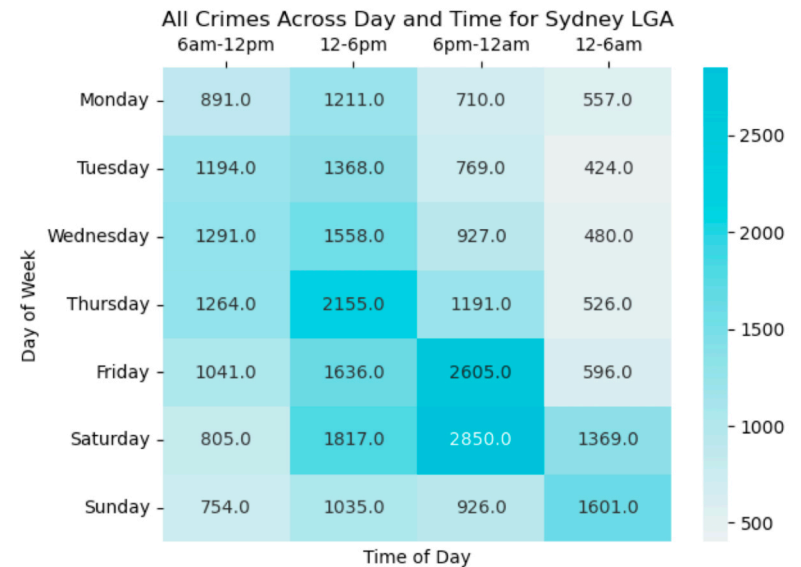
As can be seen in the summarised table, the majority of serious and major offences in the Sydney LGA

are trending down over a 60 month period. Domestic violence related assault is trending up at 4.4%, however this may be partially explained by the current government and societal focus on this issue, resulting in more active reporting and recording of the offence to police. Notably, sexual assault is also found to be stable over the period, however all other violent crimes are trending down significantly.

Offence Data Over Time

To provide further understanding of how the local entertainment area may influence experienced crime, the graph provided shows a significant increase in experienced crime during afternoon and evening hours for Thursday, Friday, and Saturday nights across the Sydney LGA. This pattern is typically related to nightlife activities particularly where significant alcohol outlets are present. It is expected that this Sydney LGA trend would map to Pymont specifically, however that data is not readily available from BOCSAR.

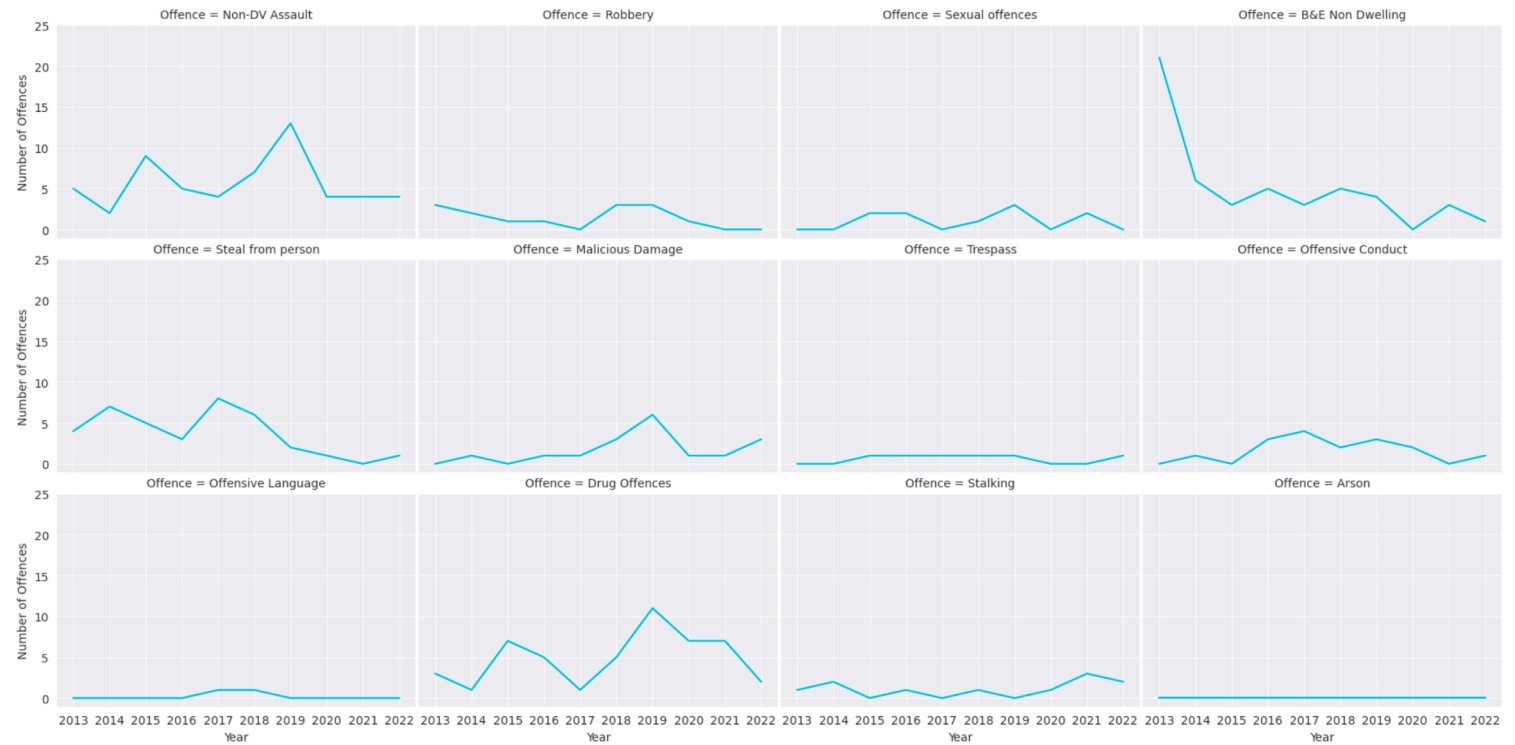
Offence	60 Month
Domestic violence related assault	4.4%
Non-domestic violence related assault	-5.2%
Sexual assault	Stable
Other sexual offences	-0.8%
Robbery	-16.7%
Break and enter dwelling	-9.0%
Break and enter non-dwelling	-11.0%
Motor vehicle theft	-10.9%
Steal from motor vehicle	-11.8%
Steal from retail store	-4.3%
Other stealing offences	-10.9%
Malicious damage to property	-6.1%



Notes
Data collected from the Bureau of Crime Statistics and Research (BOCSAR)

Relevant Suburb Level Data for Pymont

Data has been collected for Parks and Outdoor Places in the suburb of Pymont over a 10 year time period to analyse the long term trends and experienced criminal activities in this context. This data is depicted below, with analysis on the following page.



Notes
Data collected from the Bureau of Crime Statistics and Research (BOCSAR)

Data Analysis

Typically, non-violent, people focussed crimes such as offensive conduct, offensive language, and drug offences have minimum occurrence across the 10 year period, with offensive conduct appearing to peak in 2017 with four incidents, with an ongoing downward trend. Drug use appears to have peaked in 2019 with 11 incidents, and a decreasing trend.

Criminal activities targeting infrastructure such as break and enter, malicious damage, and trespass occur more often across the 10 year period. Break and enter has a significant downward trend, with experience of this crime typically occurring less than five times per year. Malicious damage offences do not have a discernible trend, however it did peak in 2019 pre-covid at six experienced incidents. As the Blackwattle bay area is redeveloped, this quantum of event is expected to rise due to the increase in activity and population. Typically opportunistic crimes follow the overall population trend.

Finally, violent and people focussed crimes also do not occur regularly in this context of parks and outdoor areas, however non-domestic violence related assaults had a clear upward trend prior to the COVID lockdowns. It is possible this trend will re-appear. Sexual offences and robbery occurrences are very limited in number in Pymont, as are stalking and intimidation offences. Steal from person does occur more frequently, however these numbers are also very low contextually.

Overall, the experience of crime in public parks and outdoor spaces in Pymont is very low. While there are micro trends as discussed, these need to be considered in the context of the actual numbers. All offence types analysed occur less than 21 times a year, resulting in a very safe and relatively crime free environment. For Bank St Park, it is likely that the level of experienced crime will be minimal.

Longer term trends in the context of the Blackwattle Bay redevelopment are difficult to forecast, however overall crime frequency is likely to increase in line with population growth in the area.

Threat Assessment

Terrorist Threat

Australia's current National Terrorism Threat Level is **POSSIBLE**. This is because there are a small number of people in Australia and overseas who want to cause Australia harm. While Australia remains a potential terrorist target, there are few violent extremists with the intention to conduct an attack onshore. Within this Context, Bank St Park is not considered a crowded place, however it does provide access to State Critical Infrastructure (namely the ANZAC Bridge Pylon). Terrorist targeting in Australia is primarily focussed on crowded places, with a lesser focus on critical infrastructure elements.

Criminal Threats

As has been demonstrated through the crime analysis, there is limited criminal activity in public parks and outdoor areas in Pyrmont. While this may change quite significantly as the broader Blackwattle Bay precinct is activated, the criminal activities at Bank St Park are not expected to dramatically exceed typical crime prevention strategies that will be implemented in the design (see recommendations section), and in operations.

Malicious Threat

Finally, specific threat actors such as environmental and other protest groups, as well as urban explorers may find some attractiveness at Bank St Park due to the access to the ANZAC Bridge Pylon and views over the harbour.

Nevertheless, it is considered that there are other attractive locations for protest activities with more of a reputation impact.



TERRORIST

Including lone actors or groups who align to extremist views and have the intent to carry out malicious and violent acts against the public.



CRIMINAL

Including individuals or groups who conduct crimes against people and property, as well as engage in anti-social behaviour; and



MALICIOUS

Including issue motivated groups, trespassers / urban explorers, trusted insiders, and other acts of nuisance.

Routine Activity Analysis

Routine activities of user groups and offenders throughout the day, week, month, and year can provide opportunities for crime to occur. Typically, crime is expected to occur where there is a motivated or opportunistic offender, an absence of capable guardians (such as security, police, place managers, security measures), and a suitable target (such as a person, or object). In understanding the expected user profile of Bank St Park, a view on their expected routine activities at the site will provide insight into potential vulnerabilities that may arise that could be exploited by opportunistic and motivated offenders.

Identified User Groups

The following user groups have been identified with a brief description of their expected use of the Bank St Park.

- **General Public:** The public will have access to the park 24/7. Typical activities include exercise (running, walking, cycling, etc.), use of the multipurpose court, picnicking, attending the cafe, attending community events and so on.

The expected mix of public users will be in line with the local demographic mix.

- **Dragon Boats NSW:** Dragon Boats NSW are expected to use the park primarily on weekends. They will have access to dragon boat storage areas.
- **Marina:** The Marina operator will be using and maintaining the offices and storage area, typically during working hours throughout the week in association with the waterside marina. Boats are stored and managed here but taken to another area of the harbour for public boarding for cruises.
- **Transport for New South Wales:** TfNSW will from time to time require vehicle access to the pylon, and maintenance access across the park to the underside of the bridge.
- **Placemaking NSW:** Will maintain and operate the non-marina component of 1-3 Bank St and the park.



Notes

Cozens, P. (2016). Think Crime!: Using Evidence, Theory and Crime Prevention Through Environmental Design (CPTED) for Planning Safer Cities.

Target Identification

The identified threat groups will have a variety of preferred targets and methodologies, and this will vary based on the routine activities of the site, accessibility to specific vulnerabilities, and knowledge of the identified targets. A summary of the key attractive targets is provided, alongside specific vulnerabilities present at Bank St Park. These areas will be of specific focus in determining the overall CPTED strategy for the site.

Identified Targets and Potential Vulnerabilities

The following attractive targets have been identified as a part of the CPTED analysis:

- **Cafe:** The Cafe may be an attractive target for robbery, break and enter, and other similar offences due to the potential for cash handling.
- **Storage Areas:** Storage areas may be an attractive target for break and enter and theft offences.
- **Office Space:** Office spaces may attract break and enter, vandalism, and graffiti style offences.

- **Toilets:** Public toilets will attract assault, sexual assault, and anti-social behaviour style activities, particularly during low use time periods and at night.
- **ANZAC Bridge Pylon:** The ANZAC Bridge pylon is considered critical infrastructure and is a potential target for terrorism offences. The pylon will also potentially attract urban explorers, protest groups, and graffiti offences.
- **Viewing Platform:** The viewing platform may be attractive to protest groups and graffiti artists due to the visibility of the location, and ability to hang banners and prominently display their messaging.
- **Multi-purpose space use:** The multipurpose space may be a centralising point for anti-social behaviours, particularly if dominated by school aged males. Park management will need to ensure a diverse mix of uses for this area is encouraged.



Risk Analysis

Within the context of the threat assessment, the following assessment has been undertaken on the more prominent risk events.

It is noted that only terrorism offences carry a high risk rating, which is manageable within the context of the design. All other risks are medium-low, resulting in a generally safe environment for park operations. The risk rating criteria can be found in Appendix B.

Threat Group	Risk	Likelihood	Consequence	Rating
Opportunistic	Assault	Possible - could happen	Minor - Injury requiring medical attention	Medium
Opportunistic	Theft from Person	Possible - could happen	Minimal - Less than \$2,000	Low
Opportunistic	Robbery	Unlikely - occurs once per year across all green space in Pymont	Minor - \$2,000-\$50,000 impact per occurrence	Low
Opportunistic	Offensive Conduct/ Language	Possible - expected to be concentrated toward entertainment precinct	Minimal - Uncomfortable experience	Low
Opportunistic	Drug Offences	Likely - occurs several times a year	Minimal - Uncomfortable experience	Medium
Opportunistic	Sexual offences	Unlikely - limited occurrence over 10 year period	Moderate - Injury requiring medical attention, negative media coverage	Medium
Motivated	Stalking/Harassment	Possible - could happen	Minimal - Uncomfortable experience	Low
Motivated	Malicious Damage	Possible - could happen	Minor - \$2,000-\$50,000 impact per occurrence	Medium
Motivated	Break and Enter	Possible - could happen	Minor - \$2,000-\$50,000 impact per occurrence	Medium
Malicious	Trespass - Bridge Pylon	Unlikely - has not happened yet, but could	Minor - potential for injuries requiring medical attention, negative media coverage	Low
Malicious	Protest Action	Possible - could happen	Moderate - negative media coverage lasting several days	Medium
Terrorist	Vehicle Attack	Rare - conceivable by exceptionally unlikely	Major - multiple severe injuries, single fatality.	Medium
Terrorist	Vehicle Borne IED - Bridge Pylon	Rare - conceivable by exceptionally unlikely	Catastrophic - multiple severe injuries and fatalities	High
Terrorist	Placed IED - Bridge Pylon	Rare - conceivable by exceptionally unlikely	Catastrophic - multiple severe injuries and fatalities	High

Site Analysis

Overview

The Site analysis considers the primary CPTED features of natural surveillance, access control, territoriality, image maintenance, activity support, and target hardening within the context of the socio-economic and crime analysis. A detailed description of these elements can be found in Appendix A.

The Bank St Park project introduces a number of expected use cases as identified in the preceding sections, an overview of the Bank St Park layout is depicted (right).

Specific features of the park layout and design will be highlighted from a CPTED perspective, with recommendations made to improve the security outcome at the end of the report.



Natural Surveillance

1. Residential Overlook

There are residential apartments immediately adjacent to the Bank St Park site, however they will have limited natural surveillance and overlook opportunities due to the ANZAC Bridge interfering with their sight lines into the park.

2. Plaza Area

The plaza area, while an attractive location due to the community centre, cafe, and marina facilities does not support natural surveillance from the street or park proper. This may introduce vulnerabilities particularly at night that support vandalism and break and enter style offences.

3. Seating Areas

The seating areas are well positioned in the park to encourage visitors to stay and provide natural surveillance during use.

4. Street Edge Plantings

The street edge plantings may have some impact on the natural surveillance elements from the street and bike path into the park. Consider trunk width and vegetation height in this location.

5. Viewing Deck

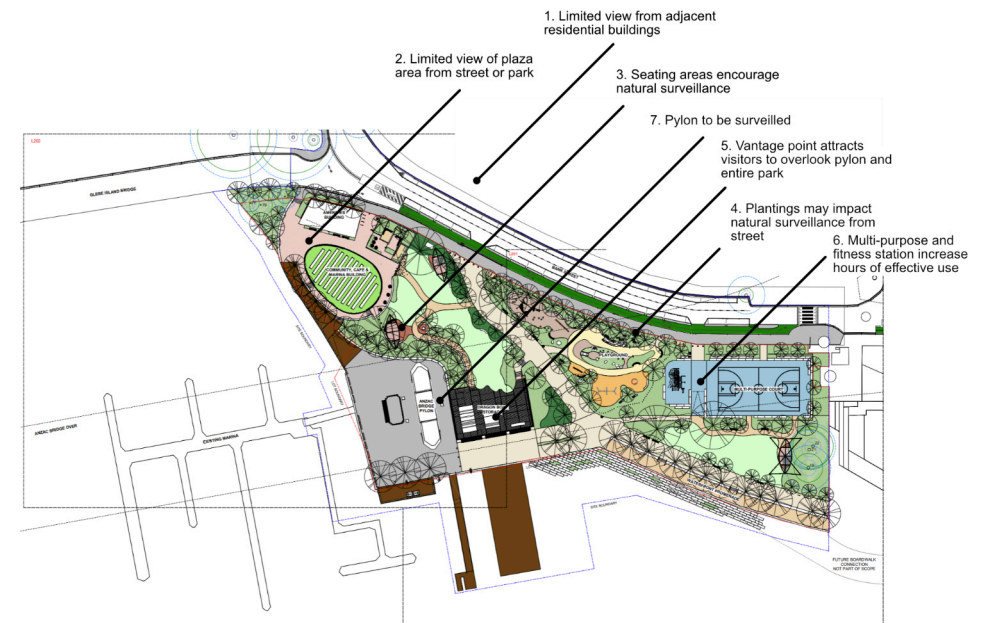
The viewing deck provides a natural attraction and supports significant surveillance opportunities across the park.

6. Multipurpose and fitness

The multipurpose and fitness areas support ongoing use of the park and natural surveillance both day and night.

7. Pylon

The Pylon area, specifically the area between the Pylon and the plantings has limited natural surveillance and will need to be treated.



Access Control

1. Vehicle Access (Pylon)

The Pylon requires a high level of vehicle protection to meet TfNSW's requirements. Stand-off and vehicle exclusion is required. PAS/IWA 14-1* Rated bollards should be provided to the main vehicle entry pathways, including operable bollards to allow vehicles to pass through with appropriate credentials.

The natural landscaping barriers (drop in gradient) will provide a significant deterrent to a malicious actor, however this can be reinforced with a low height wall or similar barrier along the top edge of the landscaping.

2. Vehicle Access (General)

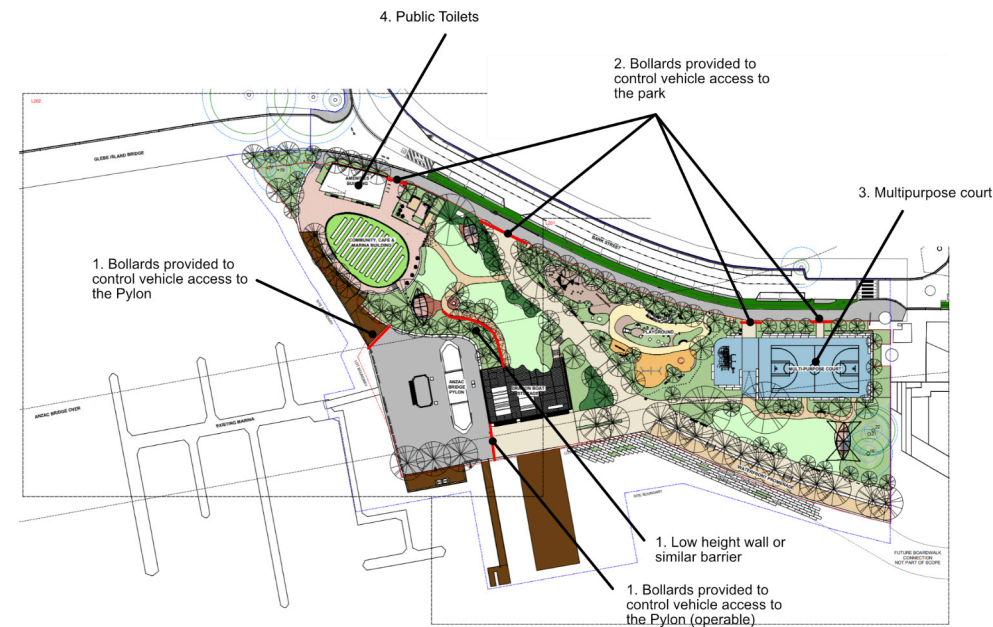
Bank St Park is not considered a crowded place or an attractive target for a terrorist act. Nominal vehicle barriers such as non-rated or parking deterrent bollards should be provided to the main park entry points to limit accidental or malicious access.

3. Multipurpose Court

The multipurpose court should not be fully enclosed to encourage use by a diverse crowd. Enclosing courts can result in exclusionary behaviour by young males and a feeling of not being safe, particularly for young women. A fence or similar barrier to prevent balls and other objects entering the roadway should be provided.

4. Public Toilets

Public Toilets should be secured outside of main activity hours, with sufficient lighting, CCTV surveillance, and signage. Park management should encourage regular Ranger patrols to this location. Separation of amenities between male/female presenting individuals should be explored.



Notes
*IWA 14-1:2013 Vehicle Security Barriers - Part 1: Performance Requirement, Vehicle Impact Test Method And Performance Rating

Territorial Reinforcement & Image Maintenance

1. Waste Management

Due to the provision of a cafe, and the opportunity for picnicking and other social activities, sufficient waste management strategies must be in place to maintain the cleanliness of the park. Bins should be provided throughout sitting areas and major thoroughfares.

2. Signage

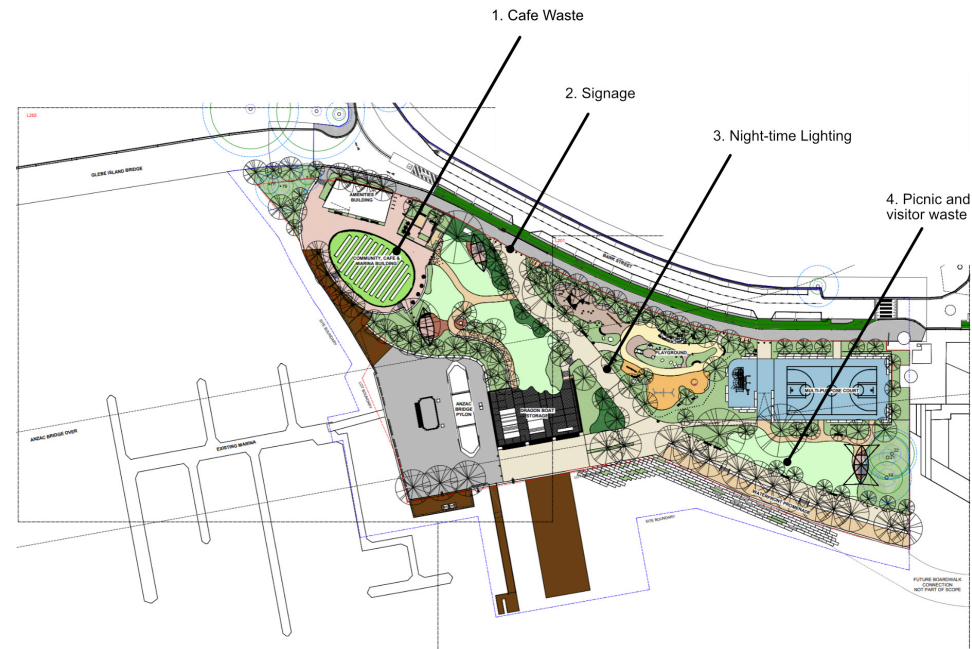
To support legibility and territoriality, signage should be prominently displayed throughout the park and at park entrances that includes security messaging such as 'CCTV in Use' and other behavioural guidelines. The signage should also clearly point to public amenities and adjacent connection points.

3. Night-Time Lighting

Night time lighting to encourage safe after-dark use should focus on maximising accurate colour rendition, and colour temperature uniformity - with a preference towards warmer lighting colours. Lighting should avoid floodlights or similar with significant vertical and horizontal illuminance that results in glare for users, and the lighting strategy should seek to minimise the contrast ratios and vertical plan ratios across the site.

To support the lighting strategy, surface finishes should be selected to be brighter, and lighting elements should be provided at ground level as well as on poles to provide a more dynamic lighting environment.

Lighting should be operational throughout the night within the limits of the environmental and community requirements, and targetted on pedestrian walkways, the Pylon, and 1-3 Bank St structures.



Activity Support

1. Cafe Kiosk and Community Centre

The Cafe and Community centre will provide significant activity support throughout the week and on weekends, encouraging people to stay and to visit Bank St Park, supporting natural surveillance and other passive security outcomes.

2. Marina and Marina Offices

The Marina offices will encourage use throughout the working hours of the week, with some weekend use typically expected of the marina itself. The Marina operates throughout the day and night Monday to Friday, with active management of late night drop offs from party boats and similar activities. The influx of inebriated individuals at this times does increase the risk of alcohol fuelled violence occurring during these periods.

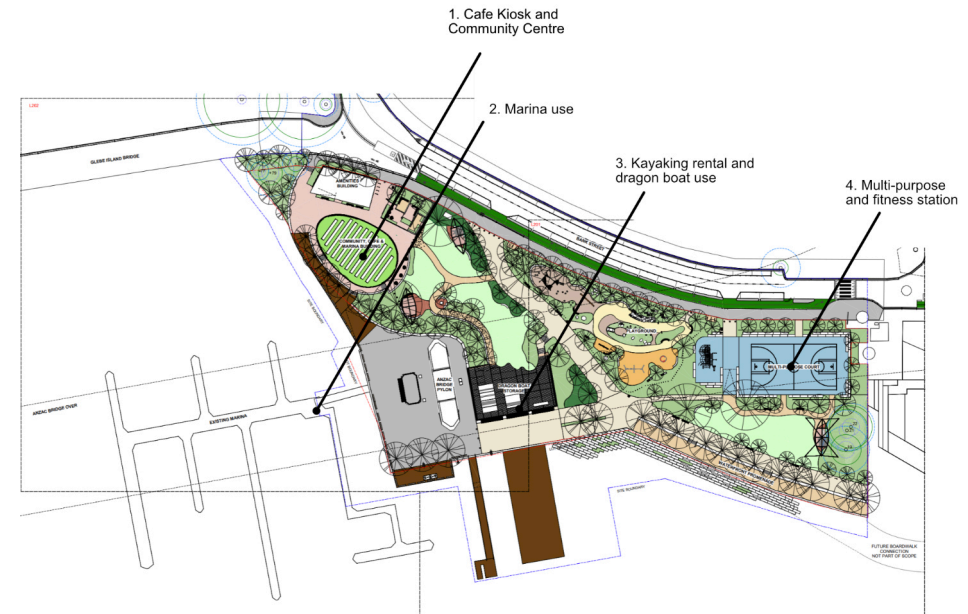
3. Kayaking and Dragon Boats

Typical use on the weekends, with some potential activity through the week.

4. Multipurpose Court

The multipurpose court will encourage activities on weekends, and after school hours on weekdays.

Overall, Bank St Park is expected to provide a good mix of uses and activities throughout the week and weekends, with critical hours of vulnerability likely being in the later evening where limited activities are supported beyond the fitness station and multipurpose courts.



Target Hardening

1. Plaza and Buildings

The Plaza area, as noted, does not have significant natural surveillance properties. This should be reinforced with technical surveillance measures (CCTV).

The buildings, particularly the cafe, may be an attractive target for break and enter type offences. Building security measures should include security locks, and intruder resistant glazing.

2. Fixed Equipment

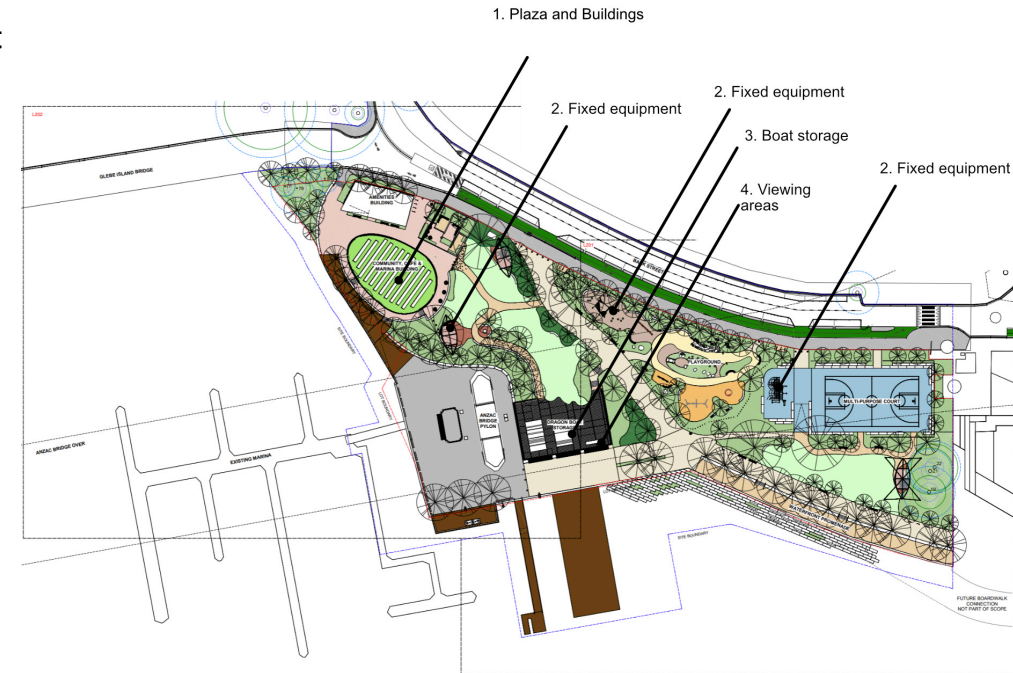
Fixed equipment (seating, playground equipment) is likely to attract vandalism and graffiti. These should be designed with anti-vandal fixtures and fittings, and of non-porous materials.

3. Boat Storage

The boat storage area may attract break and enter type offences. This area should be surveilled by CCTV, and roller shutters and other access points should be suitably secured with intruder-resistant ratings.

4. Viewing Areas

Balustrades should be of a height to discourage climbing.



1-3 Bank Street

1. Place-Making Storage and Bin Store

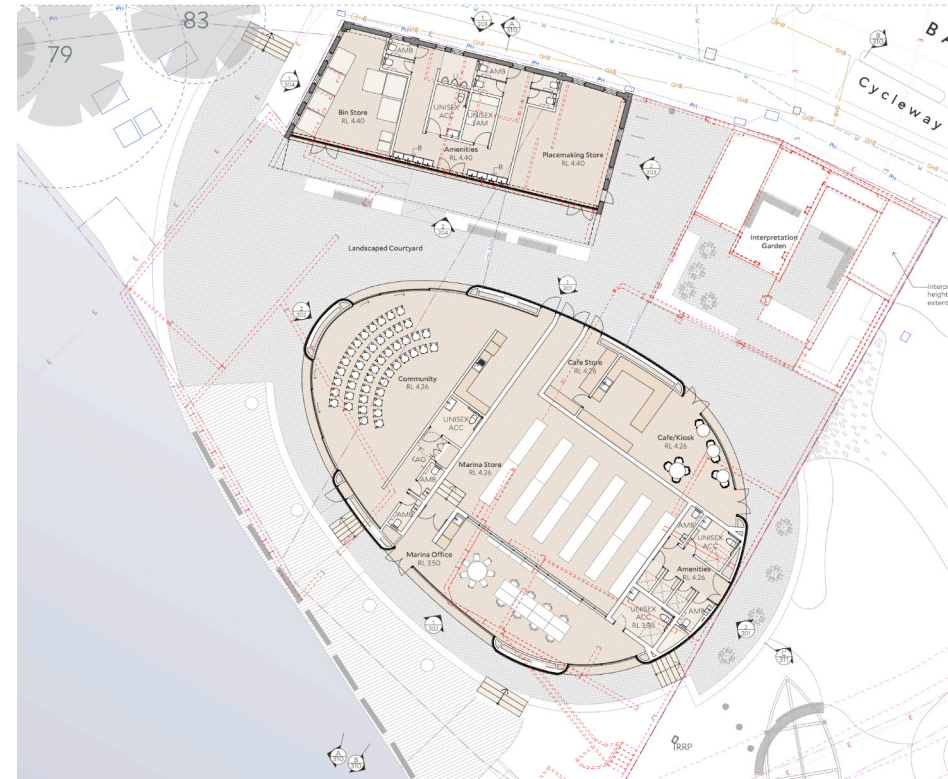
The place-making storage and bin store areas are likely to attract potential break and enter offences. These locations should be locked at all times, and have a high security lock type fitted to the doors. Further, the doors should be intruder resistant and constructed of solid core materials.

2. Tenancy Toilets

Tenancy toilets should not be accessible from the exterior of the building as this introduces a potential target. All tenancy toilets should open up into the secure side of the tenancy.

3. External Doors and Glazing

The external doors and glazing to 1-3 Bank St are the most likely areas to be targeted for intrusion. Both should be constructed with intruder resistance in mind. Glazing should have a PVB interlayer to provide this resistance, and doors should be of solid core construction either timber or steel. There should be no glazing provided to the exterior doors. Where glazing is required (e.g. for the cafe/kiosk), door glazing should be treated with a vandal resistant/intruder resistant film.



Outcome of the Assessment and Recommendations

Natural Surveillance Recommendations

Street Edge

The street edge plantings may have some impact on the natural surveillance elements from the street and bike path into the park. Vegetation height should be kept below 150mm in this location, and trunk width and in-between distances should be of sufficient distance to enable surveillance from the street.

Pylon

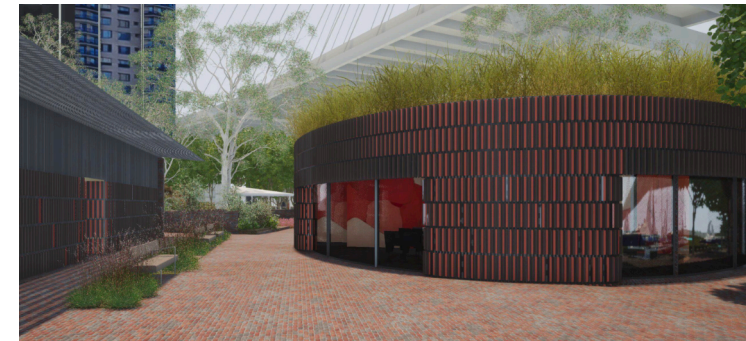
The ANZAC Bridge Pylon requires CCTV surveillance as it has limited natural surveillance opportunities, particularly between the Pylon and the viewing platform side. This area should also be supported with lighting.

Multipurpose Court

The multipurpose court fencing should be constructed of a chain link mesh type to support natural surveillance from the street, and from within the court out to the exit and street.

Plaza

The Plaza area and public toilets do not provide good natural surveillance opportunities. Therefore, CCTV should be provided to the plaza to surveil the public toilet entries, plaza, and cafe.



Access Control Recommendations

Street Edge Vehicle Access

Vehicle access to the park should be restricted through retractable bollards at the street entry, and at the second line of defence at the Pylon. The bollards provided to the street entry do not have to be impact rated. It is proposed that city of Sydney catalogue bollards or similar parking bollards are provided to these entry points.

Pylon Vehicle Access

The ANZAC Bridge pylon vehicle perimeter must provide a vehicle impact rating. While a detailed terrorism risk assessment and vehicle dynamics analysis has not been conducted, it is proposed that the vehicle security barriers at this location are designed for a N1G 4WD style vehicle travelling at 20km/h as defined under IWA14. A minimum rating of V/2500[N1G]/20/90:N/A is recommended.

The low height wall at the top of the landscaped area leading to the ANZAC Bridge Pylon should be designed to provide a visual deterrent to a vehicle attacker. The wall should be of a minimum height of 510mm to ensure the N1G vehicle chassis will be engaged on impact.

Multipurpose Court

The multi-purpose court should not be fully enclosed to enable free movement and ensure user groups do not feel trapped when entering. This will also reduce opportunity for particular user groups to dominate and claim exclusive use of the court.

Public Toilet

The Public Toilet block should be locked for use after operational hours. Either padlock with a chain or high security physical lock Complying with AS 4145 Durability D3, Physical Security S3 and Keying K6 as a minimum.



Territoriality, Activity Support and Image Maintenance Recommendations

Signage

Signage should be provided throughout the park displaying the following information: CCTV in Use, Security Contact Information, and Navigational aids to ensure users can easily navigate the site. Signage should be placed strategically throughout the Park.

Night Time Lighting

Night time lighting should focus on maximising accurate colour rendition, and colour temperature uniformity - with a preference towards warmer lighting colours. Lighting should avoid floodlights or similar with significant vertical and horizontal illuminance that results in glare for users, and the lighting strategy should seek to minimise the contrast ratios and vertical plan ratios across the site. Lighting to the plaza, pylon, and multi-purpose court areas should comply with AS1158 P7, and the main pathways of travel should comply with AS1158 P2. Lighting should also comply with City of Sydney Lighting Design Code.

Park Management

Park management should consider running community events at Bank St Park on a semi-regular basis to encourage diversity of use and build community territoriality around the site. Events should be run both on weekends and after hours to encourage a diversity of users.

Waste Management

Waste management should be considered throughout the park, with waste bins provided at regular intervals along paths of travel, and at dwelling points such as seats, the multi-purpose court, and the fitness areas.

Graffiti Management

Park management should clean up and repair graffiti and vandalism as quickly as possible to reduce the rewards for undertaking the behaviour.



Target Hardening Recommendations

CCTV

CCTV should be provided strategically throughout Bank St park to support post incident investigation and provide some deterrence to opportunistic offenders. An indicative CCTV layout is presented in Appendix C, however this is subject to detailed design. It is estimated that between 10-15 cameras will be required to provide appropriate coverage of Bank St Park, however this number is likely to be reduced in detailed design through rationalisation of camera technology and field of view objectives.

Dragon Boat Storage

Boat storage areas should have an intruder resistant construction, specifically the entrance and roller shutters provided. These shutters should be constructed from interlocking galvanised steel slats, be automated, and be fitted with an anti-lift device.

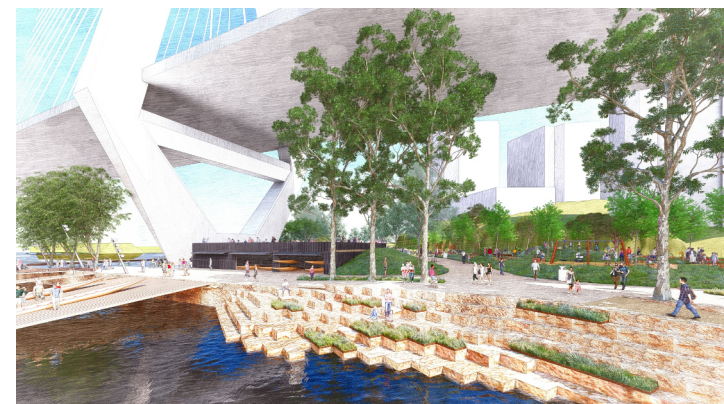
Furniture and Fixed Equipment

Construction should be of a robust standard; joints, screws and other fixings should be hardened and concealed where possible. Public seating should be designed to resist scratching and shattering, and porous construction materials should be fully sealed and easily cleanable to remove graffiti.

1-3 Bank St

Storage areas should be locked and appropriate secured when not in use. All building locks should meet Comply with AS 4145 Durability D3, Physical Security S3 and Keying K6 as a minimum. The private tenancy toilets should only be accessible from within the tenancy. Doors should be constructed of solid core (45mm for timber, 15mm for steel). Glazing should not be used on external doors.

Glazing should be protected with vandal resistant or anti-shatter film to minimise the impact of etching and scratching. It is recommended that external windows and glazing to the 1-3 Bank St buildings are laminated with a Polyvinyl Butyral (PVB) interlayer to improve intruder resistance.



Appendix A

Crime Prevention through Environmental Design Elements

Natural Surveillance	Natural surveillance increases the perceived risk of attempting criminal or antisocial actions by improving visibility of potential offenders to the public. Natural surveillance occurs by designing the placement of physical features, activities and people in such a way as to maximise visibility of the space and its users and fostering positive social interaction among legitimate users of private and public space. Potential offenders feel increased scrutiny, and thus inherently perceive an increase in risk.
Natural Access Control	Natural access control limits the opportunity for crime by taking steps to clearly differentiate between public space and private space. By selectively placing entrances and exits, fencing, lighting and landscape to limit access or control flow, natural access control occurs.
Territorial Reinforcement	Territorial reinforcement promotes social control through increased definition of space and developing a sense of ownership amongst legitimate users.
Image Maintenance	Image maintenance seeks to promote a positive image and routine maintenance of the built environment. It includes rapid clean up of graffiti, management of landscaping, and so on to demonstrate that a location is cared for and actively monitored. Image maintenance increases the perception of a safe place, and discourages criminal behaviour.
Activity Support	Using design and signage to encourage acceptable behaviour and maximise 'safe' activities in 'unsafe' locations. Encouraging a diversity of activities attracts more legitimate users which reinforces other CPTED elements.
Target Hardening	Target hardening relates to the specific security interventions and fortification measures used to design out specific criminal activities. It is specifically focussed on protecting the targets of criminal behaviour.
Social Cohesion	Creating neighbourhood cohesion through participation and responsibility of residents, decision making within the community and restorative justice.
Community Connectivity	Extensive outside connections that create community partnerships and coordination with other government agencies.
Community Culture	Community culture as it relates to sense of place, shared history and the commemoration of significant neighbourhood events or people.
Threshold Capacity	Neighbourhood threshold capacity relating to scale / size and density, extensive common facilities, and pedestrian oriented environments. This includes consideration of crime generators and facilitators. Overuse of space is of particular concern.

Appendix B Risk Criteria and Matrices

Consequence Rating	Financial Consequence	Reputation Consequence	Business / Personnel Impact
Catastrophic	>\$100,000,000	Extreme negative media coverage, over weeks	Multiple severe injuries and fatalities
Major	\$5,000,000-\$100,000,000	Significant negative media coverage, over weeks	Multiple severe injuries, single fatality
Moderate	\$50,000-\$5,000,000	Negative media coverage, over days	Multiple casualties requiring hospital attention
Minor	\$2,000-\$50,000	Minor negative media coverage, limited to one day	Minor injuries requiring medical attention
Minimal	<\$2,000	Isolated brief coverage, one media outlet	Minor injury requiring first aid

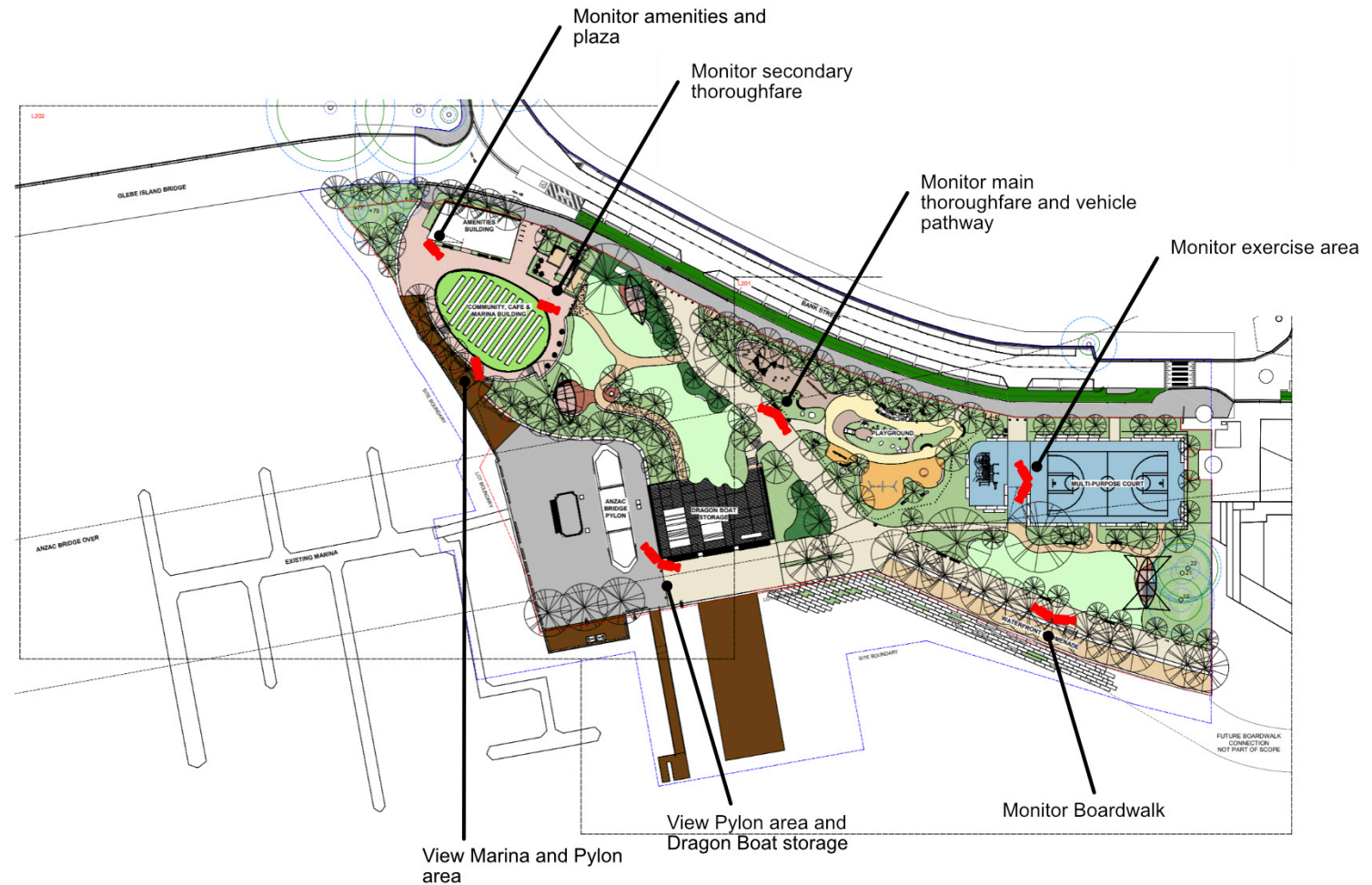
Likelihood	Criteria
Almost Certain	Over 99% probability Happens often Could occur within days to weeks
Likely	>50% probability Could easily happen Could occur within weeks to months
Possible	>10% probability Could happen, has occurred before Could occur within a week or so
Unlikely	>1% probability Has not happened yet, but could Could occur after several years
Rare	<1% probability Conceivable but only in extreme circumstances Exceptionally unlikely

Likelihood	Consequence				
	Minimal	Minor	Moderate	Major	Catastrophic
Almost Certain	Medium	Medium	High	Extreme	Extreme
Likely	Medium	Medium	Medium	High	Extreme
Possible	Low	Medium	Medium	High	High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

Appendix C

Indicative CCTV Camera Locations

Camera locations have been determined based on initial CPTED analysis only, and are not intended to be final locations. Field of view objectives and coverage patterns have not been determined for this sketch.



Notes
Subject to further detailed design.