

Block 4N Central Park SSD Application

Crime Prevention Through Environmental Design Report

Client:
Central Park JV No 2

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1 Introduction

1.1 Overview

This report has been prepared on behalf of the applicant, Central Park JV No 2, to accompany a State Significant Development Application (SSDA) for the redevelopment of Block 4N as a mixed use building, with associated non-residential/retail uses located on ground floor, at Central Park, Chippendale.

The purpose of this report is to carry out a Crime Prevention through Environmental Design (CPTED) analysis of the proposed development of Block 4N. This report addresses 'Safer by Design' principles for crime prevention and safety for Block 4N as required by Point 3 of the Secretary's Environmental Assessment Requirements. This report contains:

- » **Community Safety Strategy** – which outlines broad aims, objectives and strategies for CPTED that generally apply across the whole Central Park site against best practice 'Safer by Design' principles; and
- » **Community Safety Plan** – which provides commentary, assessment and recommendations relating to Block 4N's building design, parking structure design and other design considerations, against the stated aims, objectives and strategies in the Community Safety Strategy.

This report considers design (physical) and management / operational (non-physical) components of Block 4N that relate to crime prevention and community safety.

1.2 CPTED Principles

The assessment undertaken in the preparation of this report is based on an overarching strategy for safety and crime prevention at Central Park, as contained within the overarching CPTED Report for the modified Concept Plan (*Preliminary CPTED Report for Modified Concept Plan*, Elton Consulting, April 2008). The overarching report set out the CPTED framework for all development at Central Park and contained an analysis of the crime and safety issues in the neighbourhoods surrounding the Central Park site, including crime hot spots, incidents and trends.

The principles adopted in the overarching report are those of CPTED – a contextual approach to crime prevention. This involves using design to both intensify the difficulty to possible offenders and diminishing the rewards. The report is supported by five overlapping principles that have been applied to the modified Concept Plan. The principles are listed below and described in further detail at **Appendix A**.

- » Territoriality;
- » Natural Surveillance;
- » Access Control;
- » Maintenance (space management);
- » Activity Control.

The assessment of Block 4N is consistent with the overarching report for the Concept Plan and consequently, with principles and philosophy NSW Department of Urban Affairs and Planning's (now the Department of Planning and Environment), *Crime prevention and the assessment of development applications: Guidelines under section 79C of the Environmental Planning and Assessment Act 1979*.

The assessment of Block 4N investigates how the design embraces, or intends to embrace, principles of CPTED; natural surveillance, access control, ownership (territoriality) and space management (maintenance).

Development and implementation of ongoing security management systems for the proposed development are considered essential to responding to achieve the 'Safety by Design' principles.

This is referred to as CPTEM ('Crime Prevention Through Environmental Management'). It is therefore recommended that as an ongoing crime prevention strategy, the security management regularly link in with the security systems in place for other buildings in Central Park.

Refer to **Appendix A** for further details and explanation of CPTED terminology.

1.3 Statement of Commitments

This report has been prepared to satisfy the Statement of Commitments associated with the approved Concept Plan. Specifically, this report addresses commitments no. 30 – 32 contained within Schedule 4 of the Concept Plan Approval (MP06_0171) as modified. Commitments no. 30 – 32 relate to the undertaking of detailed CPTED assessment as part of the PA stage.

The relevant commitments are:

- 30.** *A Safety Management Strategy will be prepared and provide guidelines for the application of CPTED principles and 'Safer by Design' best practice models.*
- 31.** *A Safety Management Plan will be submitted which address issues relating to building design and parking structures design, vandal proof finishes and graffiti proof finishes, lighting, convenience location and other design considerations. The Safety Management Plans will also incorporate the performance criteria and compliance checklist addressing the guidelines outlined in the Department of Urban Affairs and Planning (now the Department of Planning and Infrastructure) Crime Prevention and Assessment of the Development Applications Guidelines under Section 79C of the Environmental Planning and Assessment Act 1979.*
- 32.** *The NSW Police will be consulted throughout the CPTED assessments for all applications for the CUB site.*

1.4 Methodology

Elton Consulting has relied on consultation with the project team, desktop research and review and analysis of design documents in the preparation of this report. The design drawings prepared by Fosters and Partners have been reviewed in the preparation of this report.

1.5 Disclaimer

Information within this report is based upon information provided to Elton Consulting in October 2014. In preparing this report, Elton Consulting does not offer any promise or guarantee of safety to persons or property. This report has been peer reviewed by a qualified CPTED professional, concluding that the report contains rigour in its detail and relevance and addresses the requirements of the Block 4N architecture and engineering design to intentionally consider, and adhere to, CPTED principles. This report is accurate in so much as it relies on information provided at the time of the review and reporting process. As additional information is provided it may be necessary to review and update this report.

2 Proposed Development

2.1 Central Park

The Central Park site is a 5.795 hectare rectangular parcel of land that occupies a significant proportion of the north eastern section of the suburb of Chippendale. Central Park is located on the southern edge of the Sydney CBD. The site is in close proximity to Central Station, Broadway Shopping Centre and the University of Technology, Sydney.

Following the purchase of the site in June 2007, Frasers undertook an extensive community consultation and design enquiry process. One of the major issues identified by the public during consultation was community health and safety. In response to this, Frasers has directed that safety and CPTED be a fundamental component of the design approach.

2.1.1 Approved Concept Plan

The Concept Plan approval for Central Park (MP 06_0171), as modified, permits the construction of a mixed use precinct comprising:

- » 11 development blocks;
- » A maximum GFA of 255,500m² of which a minimum of 30% must be commercial floor space;
- » combined basement car parks, providing car parking for Blocks 1, 4 and 8 and Blocks 2, 5, 9 and the Kensington Precinct;
- » A new public park;
- » Tri-generation and re-cycle water treatment plants;
- » Retention of heritage items;
- » Public domain works; and
- » Contributions.

2.2 Proposed Development of Block 4N

2.2.1 Location and context

Block 4N is located at the north-west boundary of the Central Park site, with dual street frontage to Broadway and Abercrombie Street. St Brendan's Catholic Church and Notre Dame University are located on Abercrombie Street immediately to the west and the University of Technology's new Engineering and IT Building is across Broadway to the north of the site. Refer to Figure 1.

Block 1 borders the site to the east and Block 4S is located to the south. A ground level pedestrianised link is located between each of the adjacent buildings.

Development outside Central Park site consists of a mix of commercial (office), educational (UTS and TAFE) and residential uses.

2.2.2 Block 4N proposal

The State Significant Development Application seeks approval for the redevelopment of Block 4N as a mixed use building, with associated non-residential/retail uses located on ground floor, consistent with the Concept Plan. Specifically, the proposal includes the following uses (as shown on the Architectural Drawing at Attachment B):

- » Residential – 3,518 m² located on levels 11 to 16 consisting of 48 permanent residential apartments;
- » Retail – 236 m² located on the ground level with frontage to Central Park Ave;
- » Hotel – 13,986 m² located from ground to level 18 – approximately 283 hotel rooms ;
- » Commercial – 6,146 m² located on levels 5 to 10;
- » Childcare Centre (shell space) – 1,080m² located on level 3 and 4; and
- » Existing Australia Hotel and Terraces (Heritage Pub and Terraces) – 789 m².

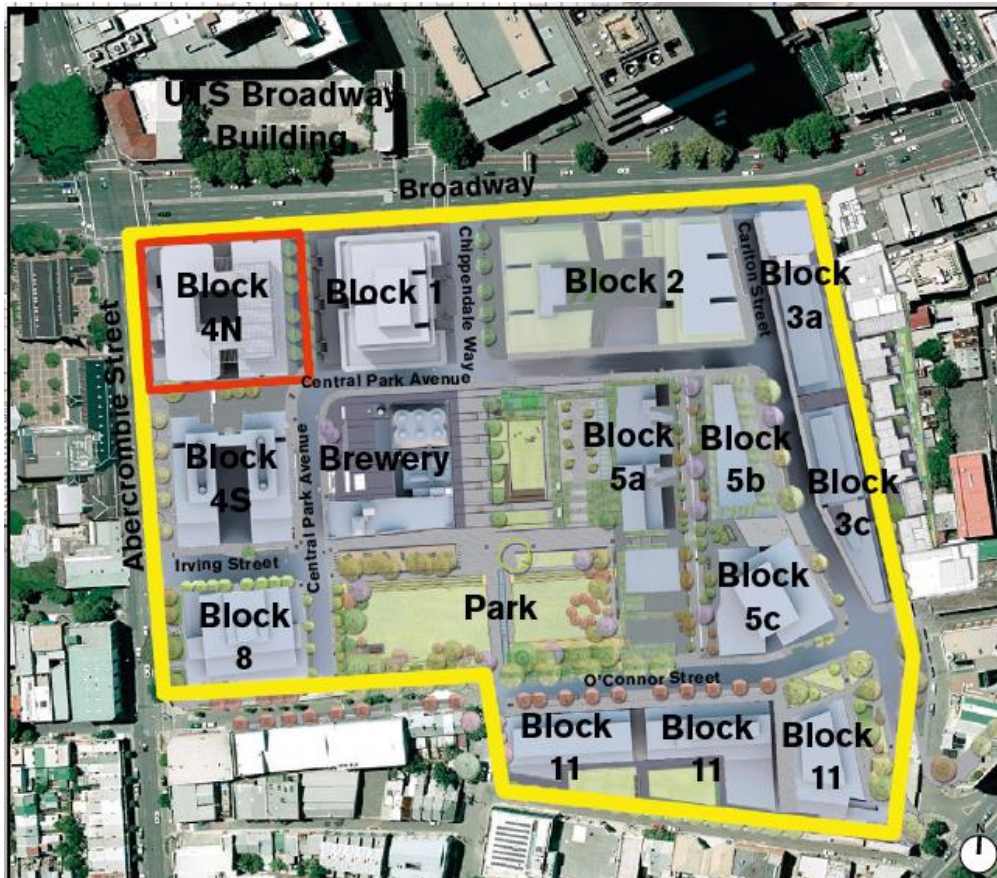
The proposal has a total GFA of 25,755 m² of which 22,237 m² is to be used for non-residential purposes 3,518 m² is to be used for residential purposes in accordance with the Concept Plan as recently modified (MP 06_0171 MOD9).

Hotel facilities, including concierge, storage, swimming pool, spa, gym, conference facilities, will be located within the building. The hotel swimming pool, spa and gym will also be made available to permanent residents. Separate entries and lobbies are proposed to the commercial office, childcare, hotel and permanent residential.

The existing Australia Hotel and adjoining Abercrombie Street terraces will be retained, with the design creating a publicly accessible courtyard behind the terraces, accessible from Broadway and Abercrombie Street.

A combined basement below Block 1 and 4N is proposed, that will accommodate all car parking, bicycle parking, residential and commercial storage, waste handling, back of house facilities, building plant and services. The basement will have a connection into Block 4S and Central Park's Central Thermal Plant. Service Vehicle loading is provided via the Abercrombie Street access ramp, and car park access for residents, hotel guests, office, retail and childcare drop off carspaces provided via Central Park Avenue. The basement will accommodate a total of 130 car parking spaces for the proposed Block 4N use. Additional spaces are provided within the basement that will service Block 1 and the Brewery Yard building as shown on the Architectural Plans.

Figure 1 Location of Block 4N



Source: Near Maps <http://maps.au.nearmap.com>

3 Consultation

Fraser's Broadway Pty Ltd has made a major commitment to engage with the community and other key stakeholders regarding Central Park. This includes consultation on issues pertaining to crime and safety for this project.

Extensive consultation has previously occurred as part of the CPTED Report for the Concept Plan (2006) and the modified Concept Plan (2008). This included consultation with:

- » City of Sydney Council Community Safety Officer;
- » NSW Police (Redfern Local Area Command and Parramatta Crime Prevention Office);
- » NSW Department of Planning and Environment (formerly NSW Department of Planning and Infrastructure);
- » UTS Security Service;
- » TAFE (Sydney Institute); and
- » State Transit Authority (STA).

These stakeholders provided information on crime hotspots, crime incidents and perceptions, and crime trends for the neighbourhoods and educational institutions surrounding the Fraser's Broadway site.

Some key points mentioned are detailed below.

- » Crime hotspots in the Chippendale area, while relatively common, were mostly transitory in nature and did not have a prolonged life.
- » The City of Sydney Council Community Safety Officer noted that there was a general perception among Chippendale residents that crime levels in the area were decreasing and that the area was becoming a safer place to live.
- » Other crime hot spots identified by the Redfern Local Area Command were Redfern Railway Station and Victoria Park.

In addition, consultation with the NSW Police (Redfern Local Area Command) has occurred in the preparation of detailed CPTED reports for individual blocks. For Block 4N, Elton Consulting contacted the Redfern Local Area Command on 26 September 2014 to discuss the proposal and seek feedback. Plans were issued to the Redfern Local Area Command on 26 September 2014.

At this point, no feedback has been received.

It is noted that an information session was held on 30 September 2014 with members of the community. Safety and crime prevention was not identified by the stakeholders who attended as a critical issue. Refer to Consultation Outcomes Reports for Block 4N as part of the EIS documentation.

4 Community Safety Management Strategy

4.1 Overview

This section contains a Community Safety Management Strategy to satisfy commitment no. 30 contained within the Concept Plan approval for Central Park (as modified).

According to the Statement of Commitments, the Community Safety Management Strategy provides guidelines for the application of CPTED principles and 'Safer by Design' best practice models. As such, the Strategy is broad and contains objectives and generic design features that, if implemented, could assist to achieve CPTED principles.

4.2 CPTED objectives

The following objectives underpin the Community Safety Management Strategy for Block 4N:

- » Create a secure public domain for all users at all times;
- » Create a secure and easily accessed pedestrian and transport network;
- » Create a secure environment during the construction process;
- » Address the crime prevention needs of special user groups;
- » Contribute to the creation of a secure community for residents around and on site;
- » Promote health and injury prevention;
- » Promote and support crime prevention through formal surveillance and appropriate signage; and
- » Create a secure and well-maintained built environment.

It is noted that these objectives refer to aspects of community safety that are outside of the scope of CPTED; however, are important elements to the creation of an environment that promotes community safety.

These objectives are consistent in principle and philosophy within the guidelines outlined in the NSW Department of Urban Affairs and Planning's (now Department of Planning and Environment) *Crime prevention and the assessment of development applications: Guidelines under section 79C of the Environmental Planning and Assessment Act 1979* and the City of Sydney's *Design Guide for a Safer Community: A Framework for Planning a Safer City* (John Maynard, June 2004).

4.3 CPTED design and management features

Objective 1: Create a secure public domain for all users at all times

Explanation of the objective

The public domain around Block 4N shall be legible, easy to navigate, promote social interaction and contain lively public spaces that are filled with activities compatible with surrounding uses.

In pursuit of this objective, the proposal shall include the following design and/or management elements:

- » A public domain that encourages visual and pedestrian permeability by connecting to the existing road and pedestrian pathways;
- » A public domain that maximises opportunities for natural surveillance and visibility, and created uninterrupted sightlines, through the use of lighting, appropriate landscaping and straight, wide and legible pathways;
- » Activated streets and public spaces that allow for a variety of compatible activities and user groups (e.g. shops, cafes, entrances to building lobbies, etc.) so to attract pedestrian activity and thereby maximise natural surveillance;
- » A mix of uses which are compatible with adjoining and co-located uses and are designed to support public safety and health; and
- » Avoidance of small corners or entrapment spaces in the public domain.

Design features to assist in achieving this objective

- » Use of glazing on the building facade at the ground floor to enclose private areas from the adjacent public areas, but also encourage sightlines and casual surveillance between public and private domain.
- » Position outdoor lighting at regular intervals, so to provide consistency of lighting and prevent shadows and glare.
- » Use landscaping that consists of low-lying plants or high-canopy trees that facilitate visual permeability and sightlines in the public domain and to prevent potential spaces for concealment.

Objective 2: Create a secure and easily accessed pedestrian and transport network

Explanation of the objective

Block 4N will be located within a safe, locatable and easily accessed pedestrian and public transport network.

In pursuit of this objective, the proposal shall include the following design and/or management elements:

- » A secure pedestrian network, made up of preferred routes and safe spots in public spaces, that increase security of all users during the day and at night;
- » Signage used throughout the pedestrian network that includes non-written forms of signage, such as maps, to assist non-English speaking people to navigate the site;
- » Co-locate pedestrian, cycle and vehicle routes that maximise activity and natural surveillance opportunities, whilst ensuring a safe interface between all modes of transport;
- » Footpaths, cycle-ways and pedestrian areas designed to ensure that pedestrians and cyclists have priority over vehicles;
- » Car parks that provide direct access routes which maximise natural surveillance and visibility
- » A pedestrian and cycle network which facilitates efficient connectivity with external facilities, including the Central public transport hub;
- » Activity generators (cafes, restaurant and entertainment areas) that have short logical connections to public transport and the safe pedestrian network.

Design features to assist in achieving this objective

- » Use appropriate lighting in the public domain, particularly on pedestrian and vehicle pathways and entry points to the building / lobby.
- » Discourage the location of blank walls along main roads or pedestrian routes.
- » Use temporary and permanent signage during construction to assist people to easily locate desired active and public transport services and facilities.

Objective 3: Create a secure environment during the construction process

Explanation of the objective

Development of Block 4N will be managed to provide a safe and amenable environment for surrounding business owners, visitors and residents throughout the construction process.

In pursuit of this objective, the proposal shall include the following design and/or management elements:

- » Proactively manage and stage development so that a safe environment is created for visitors, business owners and residents who pass the site at all times during the construction process (e.g. manage public access to areas under construction, undeveloped sites and roads);
- » Ensure prompt maintenance and repairs at all construction sites (e.g. remove graffiti promptly to maintain a 'cared for' image) and facilitate prompt reporting of any damage or repair needs (e.g. place signs indicating contact details for emergency maintenance in a prominent location);
- » Educate surrounding residents, visitors and business owners on safe areas and "no go zones" during the development process; and
- » Conduct site safety audit each day during construction to ensure safety standards are maintained by workers.

Design features to assist in achieving this objective

- » Provide security barriers and necessary fencing during the construction phase.
- » Ensure paving of pedestrian pathways and public domain areas is consistent and provide smooth transition along pathways during construction.

Objective 4: Address the crime prevention needs of special user groups

Explanation of the objective

The specific crime prevention needs of special user groups (e.g. children, younger people, older people and people living with a disability) are understood and addressed.

In pursuit of this objective, the proposal shall include the following design and/or management elements:

- » Ground level maximises pedestrian comfort, amenity and accessibility through wide openings and easy access to retail spaces;
- » Provision of lifts and ramps in publicly accessible areas;
- » Pedestrian walkways that accommodates users with mobility disabilities (e.g. use of ramps);
- » Create non-written means of legibility, such as the creation of visually and physically inviting places, through the use of lighting and wide, inviting pedestrian pathways;
- » Undertake discussions with relevant authorities and community organisations to manage homelessness and social issues positively;
- » Ensure the public domain provides stimulus for a wide diversity of user groups including young children, youth, physical as well as mentally impaired and the elderly; and
- » Provide a diversity of fittings and modifications to the public domain that facilitate accessibility and ease of movement for the physically handicapped and for children, such as lighting, handrails, ramps (where required).

Design features to assist in achieving this objective

- » Provide consistent ground treatments (e.g. paving) and smooth transitions between public domain, semi-public and private areas.

Objective 5: Develop a secure community for residents around and on-site

Explanation of the objective

Residents, visitors, business owners and service providers (e.g. UTS, TAFE, City of Sydney Council, NSW Police, fire, ambulance, security, State Transit, taxi operators, etc.) will be supported as active partners in creating a safe environment.

In pursuit of this objective, the proposal shall include the following design and/or management elements:

- » On-going consultation with surrounding residents and communities on design and construction progress, to inform adjacent residents and other major stakeholders of key safety initiatives during construction;
- » Consult with government agencies, adjacent communities and residents and owners of commercial facilities during development; and
- » Technical surveillance provided for Central Park.

Objective 6: Promote health and injury prevention

Explanation of the objective

Encourage people to work and live a healthy lifestyle and take an active role in safety and injury prevention.

In pursuit of this objective, the proposal shall include the following design and/or management elements:

- » Encourage a variety of diverse and active uses linked to public open space; and
- » Proactively work with all stakeholders during the development phase, including clients, designers, contractors and the workforce, to create an incident and injury-free workplace.

Objective 7: Promote and support crime prevention through formal surveillance and appropriate signage

Explanation of the objective

Ensure publicly accessible areas will be safe for all user groups through the use of formal surveillance and signage.

In pursuit of the above objective, the proposal includes the following elements:

- » A comprehensive security management system that includes CCTV cameras in the public domain and semi-public areas of the building and on-site management to monitor Block 4N and its surrounds;
- » Install CCTV cameras in appropriate locations to enable surveillance of vulnerable areas;
- » Use signage to increase safety by improving people's ability to find their way about Block 4N at all hours; and
- » Use signage to provide clear information about access routes.

Design features to assist in achieving this objective

- » Ensure that signs that are essential for night-time use are lit.

Objective 8: Create a secure and well maintained built environment

Explanation of the objective

Block 4N will have a legible, durable and well maintained built environment that is secure, feels safe to users and deters crime.

In pursuit of the above objective, the proposal includes the following elements:

- » Buildings should be made to feel safe and deter crime by creating a legible hierarchy of spaces; providing safe egress and access at all building entrances; removing opportunities for illegitimate entry; clearly delineate boundaries between public, semi-public (or shared) and private spaces; locate lifts for maximum visibility and natural surveillance;
- » Maximise opportunities for passive surveillance, particularly of public open space areas;
- » Ensure ample and safe opportunities for maintenance of the public domain;
- » Provide a safe level of illumination at the ground level and public domain around the buildings with an emphasis given to preferred routes to encourage their usage by pedestrians, and supplementary lighting at lobby entry points;
- » Clearly delineate public and private spaces through the provision of glazing, doors and materials;
- » Ensure consistent ground surface and transition between public and private spaces;
- » Ensure prompt maintenance and repairs of the built environment (e.g. remove graffiti promptly to maintain a 'cared for' image) and facilitate prompt reporting of any damage or repair needs; and
- » Develop a building management or facilities maintenance plan on occupation to ensure maintenance is carried out regularly.

Design features to assist in achieving this objective

- » Use appropriate locking systems where access should be restricted.
- » Design lighting so that entrances, exits, service areas, pathways etc., are well lit after dark when they are likely to be used.
- » Provide wide pedestrian thoroughfares across the site.
- » Use glazing at the ground level where public and private spaces interface.
- » Use materials, finishes, equipment and fixtures that are attractive, robust, replaceable, reduce opportunities for graffiti and vandalism.

5 Community Safety Management Plan

5.1 Overview

This section contains the Community Safety Management Plan to satisfy commitment no. 31 of the Concept Plan approval for Central Park (as modified). The Community Safety Management Plan uses the broad objectives of the Community Safety Management Strategy as the basis to describe and assess the proposed SSDA plans for Block 4H.

The assessment contained in this section of the report is structured in accordance with the main design (physical) and management (non-physical) elements of Block 4H and addresses the public domain, semi-public domain and interface between public/semi-public and private areas.

The CPTED assessment of the Block 4N SSDA Plans addresses the following:

- » Building design (e.g. entry/exit points);
- » Building design – basement areas;
- » Building design – communal areas;
- » Building design – servicing areas (e.g. “Back of house” areas such as plant rooms and garbage rooms);
- » Public domain design;
- » Public domain design – lighting;
- » Public domain design – signage;
- » Landscaping;
- » Formal surveillance and security;
- » Building uses;
- » Transport; and
- » Construction management.

5.2 CPTED review of Block 4N

5.2.1 Building design

This section focuses on the proposed built form for Block 4N and considers whether the building design is secure, feels ‘safe’ to users and is designed to help deter crime.

Aspects of the built form that influence the feeling of safety include:

- » Design of the building to be legible, create a clear hierarchy of space, enable safe access/egress, and enable formal and passive surveillance;
- » Selection of appropriate materials, fixtures and lighting (which are durable and well maintained) to enhance community safety; and
- » Proposed use of the building to promote activity (detailed in Section 5.2.9).

The proposed restaurant on the north-eastern edge, hotel entrance along the eastern façade and creation of active retail/commercial edges along the western facade of the proposed building will be important in activation of the public domain. Therefore building features that encourage sightlines between active and public places are to be encouraged along these façades.

It is anticipated that Block 4N will attract a high volume of visitors, workers and nearby residents who will utilise the commercial and retail opportunities within the building, as well as the child care facilities. To

ensure the security of these people, a range of measures have been implemented in the building design, in terms of access and egress, building materials, lighting design and security/management systems.

Whilst these groups will generate activity and vibrancy around the site, thus enhancing opportunities for surveillance, the measures implemented in the design of the buildings together with the associated management systems, will also assist in crime prevention.

CPTED objective	Assessment / Commentary / Notation / Recommendation for Block 4N
Safe egress and access at entry points	<p><i>As a general rule, main building entries should:</i></p> <ul style="list-style-type: none"> » <i>Provide safe egress and access;</i> » <i>Remove opportunities for illegitimate entry;</i> » <i>Create clearly defined entry points;</i> » <i>Are designed so that they cannot hide intruders; and</i> » <i>Provide for maximum visibility.</i> <p>The majority of entry and exit points of Block 4N are located along street frontages to maximise visibility from the public realm, with the exception of the passageway which connects to the southern pedestrian link (between Block 4N and 4S).</p> <p>All entrances are to be clearly distinguishable from public walkways, through the use of appropriate lighting which should highlight the entrances, and the design of the doorways being setback from the building edge. Paving features should also distinguish the public domain from the internal spaces.</p> <p>A summary of each main access point for each proposes use is provided below.</p> <p>Office Lobby and Heritage Courtyard</p> <p>The main entrance to the office lobby and heritage courtyard is in a prominent position along Broadway (Parramatta Road) between the Australian Hotel (pub) and outdoor restaurant area. A waterfall is proposed along the wall beneath the outdoor section of the restaurant continuing along Broadway and around to the pedestrian link. This is an important feature that is not only visually appealing, stimulating activity but will also stop graffiti and vandalism of the wall.</p> <p>A secondary entrance is located at Abercrombie Street between the Australian Hotel and car park/loading bay entrance. Landscaping is proposed along part of the wall of the terrace along the ramp into the courtyard. It is recommended that landscaping in this section consist of a mixture of low lying plants or trees flush to the finish floor and along the wall (e.g. wall climbing plants). This will facilitate visual permeability and sight lines to the courtyard and minimise hiding places for offenders. In addition to the landscaping it is also recommended that the any part of the wall that is blank at this entrance is treated e.g. public art to prevent graffiti and vandalism.</p> <p>It is noted that the both entrances to the heritage courtyard are setback from the building line. There are also two columns at the main entrance and a column at the second entrance adjacent to the landscaping, which create an alcove. In order to enhance crime prevention at these entry points, lighting should be used to entry the entry ways are well lit, avoiding glare, particularly for the entry off Abercrombie Street.</p> <p>Both entrances are to be closed by gates (north and south) after hours; envisaged that this will be between 10pm – 7am. It is recommended that the gates be glazed (or a fixed treatment that enables visibility, such as a metal fence with permeable bars) to maximise visual surveillance into this area, be visually appealing and discourage vandalism.</p> <p>Access within this area after hours should be restricted entirely. This includes access from adjacent terraces and pub, external restaurant terrace, office lobby, and lift.</p>

CPTED objective	Assessment / Commentary / Notation / Recommendation for Block 4N
	<p>Hotel Lobby and Restaurant</p> <p>The hotel lobby and restaurant main entrances are located along the eastern boundary which forms a new pedestrian link between Broadway to the north and Central Park Avenue to the south.</p> <p>The following features contribute to safe entrance to the restaurant and hotel:</p> <ul style="list-style-type: none"> » Glazing at the entrance and façade of the hotel and restaurant maximise natural surveillance and visibility; » Water feature/fountain instead of landscaping along the façade is not only visually appealing but ensures that future visibility is not obstructed by maturing vegetation; » Outdoor seating areas, linkage to Broadway and Central Park and adjacent retail beneath Block 1, will attract pedestrians activating the street thereby maximising natural surveillance; and » The water feature (and recommended use of high canopy trees or planting that is less than 1m in height) minimise areas of concealment along the pedestrian link ensuring that sightlines to Central Park Avenue and Broadway are maintained. <p>It is recommended that the northern entrance to the hotel be closed after hours given that the hotel desk is located at the southern entrance.</p> <p>There is also another entrance to the hotel from the southern walkway that leads to the front desk of the hotel/concierge. This is located in a highly visible and prominent position.</p> <p>Australian Hotel and Terraces</p> <p>The main entrance and exit points to the hotel and terraces are located in a prominent and visible position along the street frontages of Broadway and Abercrombie Streets. Both the hotel and terraces have large windows facing the street frontages encouraging passive surveillance of the public domain. Where possible windows and doors should be glazed.</p> <p>Loading Bay/Car Park Entrance</p> <p>There is one entrance off Abercrombie Street into the car park and loading bay. It is particularly important that this area is well lit, monitored by CCTV and access controlled by security code/intercom/access passes to avoid illegitimate entry.</p> <p>Residential, Childcare and Office Lobbies and Retail</p> <p>There is a proposed passageway intersecting the southern pedestrian link (between Block 4N and 4S) providing access to the main lobbies for childcare and residential uses. Given that these uses make up a smaller proportion of the development, the location is considered suitable. This area also provides secondary access to the office lobby.</p> <p>Access to these lobbies is proposed to be restricted by a gate that will need to be restricted by security code/intercom. It is envisaged that the gate will be closed after hours, with restricted key card access for residents after hours. It is recommended that the gate be glazed (or a fixed treatment that enables visibility) to maximise visual surveillance into this area, be visually appealing and discourage vandalism.</p> <p>The passageway also provides the main entrance to two proposed retail components (at ground level and level 1) located on the south-east boundary of Tower 2. This is not restricted by a gate. The location of the retail use will assist in promoting it as main entrance and contribute to natural surveillance and activation of the space.</p>

CPTED objective	Assessment / Commentary / Notation / Recommendation for Block 4N
Surveillance glazing	<p>Opportunities for surveillance are maximised through the use of glazing on walls that define public from private space, is detailed below.</p> <p>Main entrances</p> <p>Glazing is provided at all the entrances for the different uses – Australian hotel and terraces; hotel, restaurant residential, office and childcare lobbies and retail components. This will ensure that the surrounding streets and passageways are highly visible to people entering and exiting the building making it easy to detect any offenders.</p> <p>Facades</p> <p>Tower 1 (East) – Glazing is provided around the entire façade of at ground level with the exception of the outdoor section of the restaurant which is open. This enables direct surveillance of Broadway and the eastern and southern pedestrian links.</p> <p>Tower 2 (West) – Glazing is provided at all facades of the office lobby located at ground level enabling direct surveillance of the courtyard and passageway. Glazing is also provided at the childcare, residential, secondary office lobby and hotel lift lobby enabling direct surveillance of the passageway.</p> <p>The façade of the retail components on the corner of the passageway and southern pedestrian link are glazed. The Australian Hotel and retail terraces located at ground level beneath Tower 2 both have large glazed windows facing the Broadway and Abercrombie Streets. The retail components provide casual surveillance to the street and footpath and encourage ground level pedestrian activity. In turn, this assists to deter crime by making any offenders’ behaviour more easily noticeable to passers-by.</p> <p>Restaurant and seating areas</p> <p>The following areas will maximise natural surveillance:</p> <ul style="list-style-type: none"> » Outdoor seating (eastern pedestrian link) will attract pedestrians activating the street thereby maximising; » Restaurant and outdoor terrace will overlook the passageway, Broadway and southern pedestrian link. <p>Glazing of the components above ground level detailed below will provide some surveillance of southern and eastern pedestrian link and passageway.</p> <ul style="list-style-type: none"> » Level 1 – Retail, hotel conference areas and hotel lift lobby; » Level 2 – Hotel lift lobby; » Level 3 – External terrace, hotel administration and hotel lift lobby <p>Recommendations</p> <ul style="list-style-type: none"> » Street lighting, under-awning lighting, light spill from retail tenancies and other forms of pathway lighting (i.e. pole-mounted lighting) should be designed to create consistent and even lighting spread so that there is no glare for pedestrians and thus no adverse impact to visual sightlines in the evenings; » Any back of house areas which provide access for staff, where not glazed, should be security/code locked.
Access control	<p>Access control shall be provided to all non-public areas of Block 4N.</p> <p>Security code/intercom/access passes shall be used to control illegitimate entry or access to the different components (particularly residential, childcare, offices after hours) of Block 4N to reduce opportunities for illegitimate entry.</p> <p>The entry/exits will be glazed to enable visibility for people entering/exiting the</p>

CPTED objective	Assessment / Commentary / Notation / Recommendation for Block 4N
	<p>building. Sightlines to entries should be enhanced by appropriate lighting design and clear, unimpeded sightlines to/from the outdoor areas. It is also recommended that these are monitored via CCTV.</p> <p>Deterrence of illegitimate entry shall also be encouraged at the “back of house” areas where doors provide risks for entry. In particular fire stairs doors located along the passageway should automatically close.</p> <p>The ground floor retail uses should be security lockable (with security key card or lock system) to deter illegitimate entry.</p> <p>Particular attention should be given to parking and loading bay given the range of different uses. It is recommended that this be controlled through security code/intercom/access passes and monitored via CCTV to avoid illegitimate entry.</p>
Defined spaces	<p>Clearly defined external/public versus private areas express a sense of ownership and reduce opportunities for illegitimate use or entry. Physical and/or psychological barriers can be used to define spaces to reinforce this sense of ownership.</p> <p>Internal spaces within Block 4N at the ground floor are distinguished from outdoor public areas through the use of walls and doors (to define ownership but are transparent maintaining sightlines). The extensive use of glazing along most of the building facades, and at entry points, will ensure public and private spaces are visible yet differentiated from one another. This also helps to maintain opportunities for surveillance, thereby deterring crime by making the offender’s behaviour more easily noticeable to passers-by and users of the outdoor spaces.</p> <p>Outdoor paving materials will be differentiated from indoor flooring materials to define the space.</p>
Avoidance of large blank walls	<p>The extensive use of glazing and a water feature at the ground level has been maximised as a means of deterring vandalism. There are however areas of concern including the passageway between the two towers, the entrance (Abercrombie St) to and the heritage courtyard; walls within the heritage courtyard and the wall along the southern boundary. These areas of concern are discussed below.</p> <p>Passageway</p> <p>This area is considered vulnerable, as the “back of house” areas are located along this façade. While there is passive surveillance from surrounding lobbies and outdoor dining area these will not be occupied later in the evening.</p> <p>Heritage Courtyard</p> <p>Landscaping is proposed along part of the wall of the terrace along the ramp into the courtyard which will prevent graffiti and vandalism. Landscaping is to consist of a mixture of low lying plants and high canopy trees. Landscaping is to consist of a mixture of low lying plants and high canopy trees or trees flush to the finish floor. However, there will be parts of the wall that are blank. There is also potential for walls within the heritage courtyard to be blank however given that this area will be activated, it is not considered to be a major issue.</p> <p>Southern boundary wall (Car parking and loading bay)</p> <p>There is a blank wall at the southern elevation at 5-6m this should be treated.</p> <p>Recommendations</p> <ul style="list-style-type: none"> » CCTV cameras to monitor these areas; and » Consider use design features such as of different materials for walls, public art or

CPTED objective	Assessment / Commentary / Notation / Recommendation for Block 4N
	<p>landscaping (living) walls.</p> <p>Installation of lighting at the perimeter of the site, and day and night activity generating uses, will also help to deter opportunities for graffiti in the first instance by encouraging surveillance.</p>
Entrapment spots	<p>Based on a review of the Ground Floor Plan, there are no observable entrapment spots that would provide a significant security risk. There are however potential areas of concern, these include:</p> <ul style="list-style-type: none"> » Entrances and area within heritage courtyard; » Passageway; » Stairs along the southern elevation; and » Stair and retail area located on Level 1 along the southern boundary. <p>It is recommended that there is good provision of lighting in these locations, CCTV and that the gates/doors are of a height that will prevent illegitimate entry.</p> <p>No details of ATMs are provided in the documentation. It is recommended that any facilities such as ATMs or public telephones in the public realm are provided in areas that are well-lit and not obstructed by walls so as to reduce entrapment risks.</p>
Lift entrances	<p>All of the lifts within the Block 4N are located in visible and accessible areas in the ground floor lobbies of the building, with the exception of the goods lift within the heritage courtyard and retail lift on the south west corner of Tower 2. The entrance to these lifts needs to be monitored by CCTV.</p> <p>All lifts are unobstructed by any walls and are directly visible from the entrances to the lobbies to encourage maximum visibility and surveillance.</p> <p>As an added security measure, glazing used for the lift doors could be considered to deter opportunities for graffiti and further encourage sightlines. However, the lobby in Block 4N does not present a vulnerable security risk and as such, this design feature is not considered essential.</p>
Materials and finishes	<p>The design of the building is largely comprised of glazing (with the exception of the heritage items to be retained). This will deter people from undertaking vandalism on the building. There are however a few blank walls recommendations for treatment of these areas have been made above.</p> <p>Specific materials and finishes that assist to deter vandalism include:</p> <ul style="list-style-type: none"> » Waterfall at the northern, eastern and southern elevations; and » Landscaping at the Abercrombie street entrance to the Heritage courtyard. <p>Full details of specific building materials and design details are unknown at this stage and will be confirmed at detailed design (CC) stage. However, the following features are recommended in the choice of detailed materials and finishes:</p> <ul style="list-style-type: none"> » Consider glazing for all proposed gates; » Avoid solid shutters on front windows and doors as this will create an impression that the area is uninhabited and inhibit natural surveillance; » Look at any other design features that could be implemented; » Robust, durable and high quality materials are used; and » Use strong, wear-resistant laminate, impervious glazed ceramics, treated masonry products, stainless steel materials, anti-graffiti paints and clear over sprays to reduce the opportunity for vandalism.

CPTED objective	Assessment / Commentary / Notation / Recommendation for Block 4N
Hardware and fixtures	<p>Details of security hardware are not known at this stage and will be confirmed at detailed design (CC) stage. However, it is recommended that robust and durable hardware and fixtures are used to prevent illegitimate entry and ensure security.</p> <p>The following recommendations are noted.</p> <ul style="list-style-type: none"> » Use sturdy, non-corrosive catches, bolts and locks (e.g. metallic bollards and bike racks); » Use flush-mounted meter boxes or service points within a secure building/enclosure for protection; » Use non-corrosive security locks and bolts; » Communal / street furniture should be made of hardwearing vandal resistant materials and secured by sturdy anchor points or removed after hours; » Specify appropriate heavy-duty hardware, such as dead-bolt locks for all storage areas adjacent to pedestrian routes; » Use transparent, unbreakable materials in parts of doors and walls at major entry points; » Provide monitored alarm systems; and » Security alarms and fixtures should be installed to best practice specifications.
Maintenance	<p>Maintenance and repairs of the built environment (e.g. remove graffiti promptly to maintain a 'cared for' image) and reporting of any damage or repair needs should be done promptly.</p> <p>It is understood that common activities and maintenance around Block 4N will be administered and managed by a Building Management Committee. Maintenance issues to be addressed after occupation should include:</p> <ul style="list-style-type: none"> » Ensure light fixtures are maintained in a clean condition and replaced if burnt out or broken; and » If graffiti/vandalism occurs, graffiti removal is to occur immediately by contracted specialist cleaners or coordinated by the Building Management Committee.

5.2.2 Building design – Basement (parking, loading bay and service areas)

This section focuses on specific crime prevention and community safety issues for the car parking, loading bay and service areas of Block 4N. Five basement levels (B0-B4) are proposed. Entry/exit to the basement is via a ramp at Abercrombie Street for service vehicle access into the loading dock. An entry/exit to the basement for all other users is located off Central Park Avenue (under Block 1).

The basement provides parking, loading bay and service areas for all the different uses within Block 4N and Block 1.

A summary of each level is provided below.

- » **Level B0:** the entrance to the basement off Central Park Avenue (beneath Block 1) is for residential parking, service and back house areas associated with commercial and hotel uses (including hotel building managers office, canteen, maintenance office, change rooms and baggage storage) and areas associated with the operation of the building including the main electrical switch room, water and gas meter rooms, sprinkler and rainwater tanks.
- » **Level B1:** hotel laundry and storage rooms, childcare storage room, bicycle and changes rooms for commercial components, garbage rooms and service truck areas, managers room, loading dock and amenities, car share and residential parking (cars) and areas associated with the operation of the building including lifts, substations, water feature plant room, exhaust fan room and rainwater tanks. A basement entry off Abercrombie Street provides service vehicle access into the B1 loading dock.

- » **Level B2:** childcare and hotel parking as well as residential parking (cars and motorcycles) and storage (separated by a boom gate) and areas associated with the operation of the building including lifts, rainwater tanks and supply/exhaust fan room.
- » **Level B3:** commercial and residential parking (cars) and storage (separated by a boom gate) and areas associated with the operation of the building including lifts, supply/exhaust fan room and sewerage pump out tank.
- » **Level B4:** residential parking (cars and motorcycles) and storage and areas associated with the operation of the building including lifts and cleaners room.

Design of the basement should ensure safe access and surveillance for these areas, during the day and night, and ensure blind spots, sharp angle corners, heavy columns and entrapment spots are minimised within the car park.

CPTED objective	Assessment / Commentary / Notation / Recommendation for Block 4N
Safe access and surveillance	<p>Based on a review of the basement and ground floor plans the design of the car park is considered to provide direct access routes that enable natural surveillance and visibility.</p> <p>Entry to car parking is via direct ramp downward located off Central Park Avenue.</p> <p>Review of the five basement levels indicates that it has been designed to ensure there are no concealed areas that may pose a risk to residents, hotel guests, workers and visitors of the development. The parking, storage and service areas are to be well lit and subject to security access to ensure maximum safety for all users.</p> <p>Ceiling heights in car park shall be at least 2.2m to allow for maximum visual surveillance within the basement levels, as well as to reduce vandalism of lighting fixtures.</p> <p>Pedestrian entry to the car park for the different uses is directly from the building lobbies via lifts. Boom gates are proposed to separate different uses.</p> <p>Access to/from the basement for all areas shall be access controlled to ensure no illegitimate entry to Block 4N basement levels. It is recommended that:</p> <ul style="list-style-type: none"> » All communal basement areas are lit at all times; and » CCTV installed at entry and exit points, in particular at lifts.
Safe access and surveillance for bicycle parking areas	<p>Access into the basement levels to residents and end-of-journey bicycle parking areas will be via security control/card access. CCTV cameras will be located at main access points such as lift lobbies.</p>
Technical surveillance	<p>Technical surveillance via security (CCTV) cameras is provided in the basement. Refer to basement plans and section 5.2.9 for further details.</p>

5.2.3 Building design – communal areas

This section provides commentary on the communal areas of the proposed Block 4N development. The main communal / semi-public areas of the proposal include:

- » A resident breakout space (located on Level 11)

Design of this area should be interesting and inviting to attract usage by legitimate users, and ensure the continuation of crime prevention and community safety design elements.

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Surveillance and legibility	<p>Resident breakout space</p> <p>The open terrace which connects to the breakout spaces is accessible via residential lift and by the residences located on Level 11. Access to this area should be restricted to residents (and their visitors, if supervised) only.</p> <p>A key card/security access should be used to deter illegitimate entry. The entrances to the breakout spaces are glazed to ensure people leaving or entering the space can clearly see if offenders are hiding.</p> <p>CCTV should also be implemented.</p>
Landscaping	Landscaping plans provided for the communal space on Level 11 do not indicate any major issues of concern. The planting selection should adhere to the recommendations in Section 5.2.8 of this report.

5.2.4 Building design – servicing areas

Servicing areas, such as garbage rooms, loading areas, etc, are generally considered to be vulnerable elements of a residential or mixed use development. These spaces are generally less active and therefore vulnerable to illegitimate entry, vandalism and crime.

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Entrances to non-pedestrian areas	<p>Illicit entry to Block 4N shall be restricted through security lockable doors including roller door at the entrance to the car park and loading bay.</p> <p>Entry to servicing or “back of house” areas is available primarily through the car park and loading bay entry via Abercrombie Street. There is also “back of house” areas associated with the Australian Hotel and heritage terraces. Access to back of house areas is also available through the primary basement entry off Central Park Avenue. Opportunities for illegitimate entry at the servicing / loading areas of the building should be minimised through the installation of key card/security access at each servicing entry.</p>
Surveillance	<p>As the servicing areas of the building are considered to be more vulnerable because of lower levels of activity and thus fewer opportunities for passive surveillance, CCTV cameras are proposed to be provided with coverage of the lift lobbies to back of house areas loading bay and entire basement. Refer to technical surveillance details in Section 5.2.9 of this report.</p> <p>Notwithstanding, it is acknowledged that some passive surveillance will be provided as detailed below.</p> <ul style="list-style-type: none"> » Loading Bay/ Car Park entrance at Abercrombie Street will attract vehicle movement and pedestrian activity with pedestrians travelling north/south; » Goods lift in Heritage Courtyard will attract a level of pedestrian activity when the courtyard is open. <p>It is noted that the goods lift in restaurant is located within the restaurant’s kitchen and preparation area and is not highly accessible.</p>

5.2.5 Public domain design

This section addresses aspects of the public domain design (and interface between the public, semi-public and private realms) to encourage crime prevention and community safety. Public domain areas of the site

shall be designed to be interesting and inviting to attract usage by legitimate users, as well as encourage visual and pedestrian permeability. This section also considers the use of materials, finishes, equipment and fixtures in the design of the public domain that are attractive, robust and replaceable, so as to reduce opportunities for graffiti and vandalism.

The public domain design shall also consider specific crime prevention needs of special user groups (e.g. children, younger people, older people and people living with a disability). For example, the need to escape during a crime should be made legible for the elderly, young and people in a wheelchair.

It is noted that this report does not consider BCA issues or Australian Standards and it is recommended that all relevant BCA matters and relevant Australian Standards are complied with.

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Design public areas to be legible	<p>The design of the public domain within Block 4N is legible (i.e. easily understood and navigated).</p> <p>The areas outside the building footprint connect to the existing grid pattern of surrounding streets. The pedestrian pathways that make up the public domain should be clearly legible from the existing street grid, through the use of different paving types. It is recommended that pathway paving types are consistent with the paving selections in adjoining blocks to create continuity in the public domain.</p> <p>Public pathways around the proposed building are straight, wide and connect to existing or proposed public thoroughfares.</p> <p>All paving materials should be non-slip, in particular across the loading bay driveway.</p> <p>Other strategies to ensure the public domain is legible (i.e. easily understood and navigated) include the provision of signage to assist in way-finding.</p>
Activity-generating uses	<p>Activity generating uses have been located adjacent to public domain areas which will maximise natural surveillance of the adjacent public domain. This includes:</p> <ul style="list-style-type: none"> » Broadway/ Abercrombie Street – entrance to the Office lobby, Heritage Courtyard and Australian Hotel; » Abercrombie – entrances to terraces to be used for retail purposes including cafés or restaurants; » Eastern pedestrian link – entrance to hotel lobby and restaurant; » Southern Pedestrian link – entrance to 2 retail tenancies and passageway to residential, child care and secondary office lobby. <p>(refer to Section 5.2.1 for detail on building design features that will promote natural surveillance, and Section 5.2.9 for discussion about the proposed building uses).</p> <p>It is noted that the Public Domain plans allow for, and encourage, pedestrian use and activity in the passageway between Block 1 and Block 4N. Timber seating and a granite seating wall, are proposed around the water feature and planting areas. These seats will allow people to sit in and enjoy the space, providing respite of pedestrians and improving surveillance.</p>
Safe routes	<p>The proposal does not obstruct safe routes to nearby facilities, including public transport facilities at Broadway.</p> <p>Pedestrian routes will be made safe through the use of appropriate lighting within the public domain, in particular along streets, to encourage visibility at night.</p> <p>Paving materials selected for the public domain shall provide seamless public/private domain connectivity for pedestrians, thus not visually or physically prohibiting public access across the site.</p>

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Entrapment spots	<p>Multiple entries / exits to all public open space areas should be provided so to act as escape routes if people are being pursued.</p> <p>Block 4N is surrounded on all four frontages by public streets, thereby multiple escape routes are provided to ensure alternative ways of escaping dangerous situations.</p> <p>Based on a review of the ground floor plans, the following is noted:</p> <ul style="list-style-type: none"> » Passageway – a passageway is located between the two towers. The northern end of the passageway is provided with a set of stairs, which links the passageway with the lower ground floor (heritage courtyard) behind the Abercrombie hotel and terraces. This design feature means the passageway is not a “dead end” but rather provides opportunities for escape in emergency situations. CCTV coverage of this area is incorporated. » Heritage Courtyard <ul style="list-style-type: none"> > Both entrances to the heritage courtyard are setback from the building line. There are also two columns at the main entrance and a column at the second entrance (west gate) next to the landscaping that create an alcove. After hours is the key concern. Notwithstanding, it is acknowledged that some passive surveillance will be provided along Broadway and Abercrombie Streets that attract vehicle movement and pedestrian activity. > Both entrances are to be closed by gates (north and south) after hours (envisaged that this will be between 10pm – 7am). It is recommended that the gates be glazed (or of a fixed, permeable material such as metal gates) to maximise visual surveillance into this area, be visually appealing and discourage vandalism. > Once the gates are closed access within this area should be restricted entirely with the exception of security (those with security cards). This includes access from adjacent terraces and pub, external restaurant terrace, office lobby, and lift. » Entrance to the Loading Bay/Car park – this area is to be monitored by CCTV cameras given the multiple uses. <p>The remainder of the sites perimeter does not create opportunities for concealment or entrapment in the public domain.</p> <p>There are also multiple entry and exit routes in the public domain surrounding the proposed building with the exception of the passageway which provide sufficient opportunities for escape. The pedestrian network is based on a right angle grid pattern and does not showcase curves or bends that could impede sightlines. This allows for direct sight lines.</p>
Materials and finishes	<p>The selection of materials for pathways should be consistent with and complement the selection of pathway materials in surrounding blocks in Central Park (i.e. paving design will integrate with other public domain areas).</p> <p>Universal access to Australian Standards (AS) has been incorporated into the streetscape, connecting walkways and building entries without compromising design quality.</p> <p>It is understood that paving in public areas of the site shall comply with the relevant BCA requirements to ensure slip resistant pedestrian surface materials. Path edging shall be consistent and sturdy, ensuring that paving meets the surrounding ground at grade to avoid falls. All BCA requirements should be adhered to.</p>

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Surveillance – sight lines	<p>There will be ample opportunities for natural surveillance and visibility of the public domain (i.e. of the pedestrian pathways surrounding Block 4H) from pedestrian, cycle and vehicle movement systems around Block 4N.</p> <p>As shown in the Ground Floor Plan there will be clear sight lines between the streets and the pedestrian pathways. Opportunities for natural surveillance/visibility of the pathways from pedestrian, cycle and vehicular movements systems is improved through the use of consistent lighting, avoidance of low-lying plants and the activation of the ground floor uses, which will attract pedestrians to the area surrounding the site.</p> <p>The proposed design does create major obstructions to sightlines at the street level across the public domain.</p> <p>Landscaping is positioned along eastern and southern street frontages, restaurant terrace and second entrance to the heritage courtyard (west gate). The Landscaping section of this report (Section 5.2.7) details the recommended soft and hard landscaping selections that will ensure species and planting types do not create visual or physical barriers, particularly to sightlines.</p>
Escape routes	<p>The proposal provides a viable exit point (or escape route) in the public domain to enable a person to avoid a situation in which he or she might feel threatened. All major pedestrian routes have alternative access (escape route) via a connecting street.</p>
Maintenance	<p>Public domain areas containing landscaping shall be carefully maintained to avoid hazards. Refer to Section 5.2.7 for further details on maintenance of landscaping.</p>

5.2.6 Public domain design – lighting

This section addresses the design, location and selection of lighting in the public domain.

The design of lighting should ensure that entrances, exits, service areas, pathways, car parking etc., are well lit after dark. It should also provide a safe level of illumination across the site with an emphasis given to the following preferred routes and entrances, namely Broadway (Parramatta Road), Abercrombie Street, pedestrian links and passageway to encourage their usage.

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Surveillance – Lighting at entries/ exits/ streets	<p>Lighting details are unknown at this stage. However, a range of recommendations for the selection, location and maintenance of lighting are outlined below.</p> <ul style="list-style-type: none"> » All external public domain areas are required to be well lit through the installation of street lighting and/or external building lighting; » Building entry points shall be lit to a higher lux level than surrounding streets; » Broadway (Parramatta Road), Abercrombie Street, new pedestrian links and passageway shall be well lit to encourage pedestrians to use these thoroughfares; » All street lighting shall preferably be pole-mounted lights, and spaced at regular intervals along key thoroughfares to encourage pedestrian activity; » Adequate internal lighting (in the building entries and lobbies) as well as light-throw from street lights should ensure the pathways around Block 4N are well lit in the day and night; » All external lighting and lighting in semi-private areas shall be compliant with Australian Standards and Design Guides for Lux Levels.

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Surveillance – Positioning of lights	<p>Lighting details are unknown at this stage. However, a range of recommendations for the selection, location and maintenance of lighting are outlined below.</p> <ul style="list-style-type: none"> » As a guide, areas should be lit well enough to enable users to identify a person's face from 15m away; » In addition to street lighting, lighting shall be provided on the underside of awnings or within building entries (where glazed) to illuminate the building/lobby entry point; » Direct lights towards access/egress routes to illuminate potential offenders, rather than towards buildings or observation points; » Care should be taken to provide good lighting at the car park/loading bay, servicing areas and passageway; » Illuminate pre-identified "preferred pedestrian routes" so that these become the focus of legitimate pedestrian activity after dark and pedestrians are discouraged from using other routes after dark; » Provide adequate illumination for directional signage and maps; » Ensure lighting is out-of-reach so as to minimise opportunities to vandalise lighting fixtures.
Surveillance – Selection of lighting	<p>The following recommendations for the selection of lighting are noted.</p> <ul style="list-style-type: none"> » Use luminaires with a wide beam of illumination which reaches to the beam of the next light, or the perimeter of the site or area being traversed; » Wherever practical, use luminaires that have a Full Cut-Off (FCO) light distribution characteristic to keep discomfort and disability glare to a minimum; » Avoid time-switched lamps, as they can be inoperative for days if there is a long maintenance cycle; » Select light sources which provide good colour rendition — preferably equal to or better than Ra 85.
Lighting design	<p>It is recommended that a CPTED lighting expert is consulted throughout the detailed design phase to ensure that lighting provisions and requirements are in accordance to Australian Standards and/or building management practices.</p>

5.2.7 Public domain design – signage

This section addresses the design, location and selection of signage in the public domain.

Signage should be used to provide clear information about places of security, preferred routes, facilities/amenities and locations of entry/exit/escape routes.

Building signage should be located so as to be clear and visible to pedestrians in the public domain, and highlight preferred access routes. In particular, signage should be located for maximum visibility, during the day and night, along preferred routes and so that it cannot be obscured.

For Block 4N, there are multiple uses and specific entry points for certain uses. The signage strategy for Block 4N should ensure legible signage is provided to help visitors navigate their way to the correct entry.

It is understood that a Signage Strategy will be prepared for the Central Park site. As such, the table below contains a series of recommendations to be incorporated into the Signage Strategy.

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Ensure signage is easily legible	<p>Signage related to way-finding and the location of nearby blocks/ amenities should be located at the entrance to open space areas so as to provide clear information regarding access routes and designated special use open spaces. Given the multiple</p>

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
	<p>uses of Block 4N way- finding signage should be clear.</p> <p>It is recommended that the Signage Strategy detail measures to address ease of way-finding for pedestrians accessing services and public transport and for motorists.</p> <p>It is recommended that the following features be incorporated into the Signage Strategy for implementation:</p> <ul style="list-style-type: none"> » Use of LED electronic signage where appropriate, to ensure visibility of essential signs at night; » Information containing warnings/details about the emergency access/egress for Block 4N; » Building numbering and/ or naming so that buildings are clearly identifiable; and » Ensure that the size and siting of signs outside of building entries / exits do not create entrapment spaces.
Signage location	<p>It is recommended that the following features be incorporated into the Signage Strategy for implementation:</p> <ul style="list-style-type: none"> » Place signage in identified "safe routes" and preferred pedestrian paths indicating destinations, facilities, amenities and buildings en route; » Place signs at building entrances and near activity nodes; and » Where signs are placed close to vegetation, ensure the siting (and vegetation selection) of the sign cannot be obscured by growing vegetation as it matures.
Signage content	<p>It is recommended that the following content features be incorporated into the Signage Strategy:</p> <ul style="list-style-type: none"> » Directions for lobbies/entries to various uses in Block 4N; » Information about where to go for assistance in case of emergency; » The location of telephones, duress buttons, taxis, bus stops and the nearest "safe" place; » Closing hours at building entrances adjacent to public areas that are closed off at night; » Clear and regular signposting to main pedestrian routes; » Maps of the building at main entrances; and » Ensure information is in plain English for e.g. marked with "you are here".

5.2.8 Landscaping

Landscaping has a significant impact on creating an attractive public domain, however should be carefully designed so as to avoid the creation of obstructions that facilitate crime.

As a general rule of thumb, the design and location of landscaping should allow for, and not inhibit, natural surveillance. In relation to soft landscaping in particular (i.e. plantings and the like), the type and location of species, noting their size and form at maturity, should be taken into account to minimise the creation of possible hiding places for intruders both at the time of construction and in the future.

This section should be read in conjunction with the following plan:

- » Ground Floor and Public Domain Plan – Block 4N (prepared by Jepe Aagaard Andersen & Turf Design Studio).

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Surveillance	Landscaping in the public domain should be selected so as to protect and maintain natural surveillance of the site and its surrounds. This includes no use of shrubs or low-lying plants in public domain areas and maintenance of wide, paved pedestrian

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
	<p>pathways that are well lit. Trees are proposed to be planted:</p> <ul style="list-style-type: none"> » In the public domain/pathways on the northern, eastern and southern frontages of Block 4N; » Within the passageway between Block 1 and 4N; » Within the restaurant terrace; and » Within the second entrance to the heritage courtyard. The selection of trees/planting types, and their location in the public domain, has the potential to impede sightlines for pedestrians. <p>Based on a review of the plans provided, the trees proposed should not obstruct building entries (subject to the selection of tree types being in accordance with the recommendations below).</p> <p>Although tall trees will be planted along the street frontages, it is envisaged that there should be sufficient footpath width to avoid unnecessary obstruction of building entries. Any proposed tree planting along the pathways should take into account their shape and size as they mature (refer to planting types below).</p>
Planting types	<p>A planting schedule has not been confirmed at this time. However, it is envisaged that the selection of plants for use in Block4N public domain should follow the selection of plants elsewhere in Central Park. To that end, the following is recommended when selecting plant types for use as street trees, in garden beds and within water feature planting:</p> <ul style="list-style-type: none"> » Select trees for planting in the public domain that do not have branches below 1.5m; » Select trees in the vicinity of the built form which will not overhand balconies or lighting fixtures; » Avoid medium-height vegetation with concentrated top-to-bottom foliage, especially within the pedestrian passageway between Blocks 1 and 4N (so that CCTV cameras and lighting are not impeded) » Ensure that planting within, or within 5m of, the pedestrian passageway is lower than 600mm OR thin-trunked with a high canopy; » Use low planting (maximum height 600mm) and high-branching trees (2m) to open sightlines; these are particularly recommended within a distance of 15m from bicycle stop signs or road junctions; » Rather than planting saplings, consider planting heavy standard (120-140mm girth), extra heavy standard (140-160mm girth) or even semi-mature trees (200-720mm) to make it physically more difficult to snap main growing stems. <p>In particular, the planting selections for the trees in garden beds in the passageway should ensure sightlines are maintained for guests and staff entering/existing the hotel and adjacent uses.</p>
Future sightline impediments	<p>The planting selections should ensure that, <u>when mature</u>, the plants will not serve as screens or barriers to unimpeded views of pathways etc. This is particularly important for trees planed within the passageway.</p>
Pathways	<p>Pathways in the public domain should create a solid, non-slip surface. According to the Public Domain plan, the treatment of surfaces in the public domain includes:</p> <ul style="list-style-type: none"> » Concrete unit paving; » Granite paving; » Granite plank paving; » Granite setts; » Granite slab paving.

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
	<p>It is recommended that all surfaces have stable and seamless paving, or provide appropriate transitions where paving materials differ. Paving used in the public domain should be non-slip and provide stable transitions between pathways and streets, and pathways and private areas.</p> <p>Appropriate measures should be taken to ensure any spillage from the water features can be appropriately drained, so as to avoid excessive areas of wetness.</p>

5.2.9 Formal surveillance and security

This section focuses on promoting community safety and crime prevention through the implementation of formal surveillance and security measures to help create a safe environment and ensure vulnerable areas are monitored. It is understood that a centralised security management plan is to be developed for the whole Central Park site.

The Plan should provide for centralised technical surveillance and monitoring systems. The security management shall be confirmed prior to occupation of the site.

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Security management	<p>It is understood that a permanent security presence shall be provided on site via a 24-hour on-site security and facilities control centre. The control centre will be responsible for the provision of the following services:</p> <ul style="list-style-type: none"> » Operation and management of the CCTV system; » Response co-ordination to help-points and other enquires; » Operation and administration of electronic access control systems; » Co-ordination and management of property maintenance; and » Security patrols (including licensed uniformed security officers). <p>The security presence shall also be operational at the Central Park site upon occupation.</p>
Security cameras	<p>Installation of security cameras – real-time video surveillance (CCTV) – shall be positioned to monitor all high-activity areas, such as the lobby entry points, outside the building along the major pedestrian routes along all four frontages of the building, at the passageway between the two towers, at the entry to the loading bay and car park, and all areas in the basement level given the multiple uses of the building. CCTV cameras should be recessed if possible (under eaves in the perimeter of the building).</p> <p>Plans showing the location of CCTV cameras throughout Block 4N are provided with the EIS, and a review of these plans indicates an appropriate distribution and coverage of areas. In particular, cameras at all lift points will ensure coverage of all visitors/people entering and exiting the premises.</p>
Security controlled access	<p>The entry doors to the building should be controlled by security card/key access. All “back of house” areas including loading bay and fire stairs should also be controlled by security card/key access. It is recommended that the residents’ break out areas also be restricted for access and use by residents (and their visitors) only. It is recommended that a consistent electronic security system that provides intruder detection and electronic access control is provided for all entries to Block 4N, which accords with that used in other central Park developments. Access control should use a common platform across all buildings yet provide flexibility in credential card types and formats.</p>

5.2.10 Building uses

This section addresses the details related to the proposed building uses and the implications for crime prevention and community safety. Building uses shall ensure that adjoining and co-located uses are compatible and do not create a dangerous situation.

Uses and activities with afterhours use along the edges of the pedestrian network should be encouraged.

Entertainment night zones, and centres of activity such as restaurants, should be planned and managed so that they do not disrupt residents and have short logical connections to public transport and car parks.

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Active ground floor uses	<p>The hotel lobby and retail uses at the ground level in Block 4N are adjacent to, and accessible from, public areas along Broadway, Abercrombie Street, and via the southern and eastern pedestrian links attracting people to the area, thereby maximising natural surveillance. Building design features, such as extensive glazing on the ground floor, will also help to encourage passive surveillance.</p> <p>The commercial uses on the ground floor will have the potential for extended hours for uses including the hotel restaurant and bar, Australian Hotel and other restaurants/cafes in order to encourage night time use and activity. This will maximise natural surveillance and encourage activity after working hours. These uses can potentially be used by workers, residents and general visitors to Central Park. These uses will encourage activity and provide natural surveillance to the site.</p> <p>The hotel will also attract visitors and workers throughout day and night. Security associated with the use of the Australian Hotel (as a bar/use where alcohol is served) should ensure coordination with the security detail across the Central Park site.</p> <p>There will be opportunities for pedestrian activity/social gathering in and around the retail uses and hotel with outdoor seating located along the eastern pedestrian link. Security monitoring of this area should occur at night to ensure visitors to the nearby licensed premises do not loiter at the site.</p>
Surveillance	<p>Surveillance of the public domain at the ground level has been maximised along the perimeter of the site through extensive glazing provide at:</p> <ul style="list-style-type: none"> » Hotel lobby and restaurant (Broadway and Eastern and Southern Pedestrian link); » Office lobby which looks out to the heritage courtyard and passageway; » Retail on the south-east corner of Block 4N passageway; and » Residential, childcare and hotel lift lobbies within the passageway; <p>The retail uses (terraces) along Abercrombie Street and the Australian Hotel also have glazed windows that face the street that will also provide a level of surveillance to the surrounding area.</p> <p>It is recommended that the doors of the terraces are also glazed and the gates (north, south and west) are also glazed (or of a fixed material that is visually permeable).</p> <p>The hotel's restaurant terrace also provides surveillance to the passageway.</p> <p>Opportunities of surveillance of the public domain are afforded through the location of the following:</p> <ul style="list-style-type: none"> » Tower 1 (East) – hotel conference hall (level 2), gym and external swimming pool (level 3) and glazing of all hotel rooms windows; » Tower 2 (West) – glazing of the offices and balconies and terraces for the residential components. <p>Overlooking of the public domain from private space is considered a contributing</p>

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
	form of overarching surveillance of the site and surrounding areas.
Compatible adjoining uses	<p>Areas adjoining Block 4N include:</p> <ul style="list-style-type: none"> » Block 1 to the east (retail ground floor and residential above); » Block 4S to the north (retail ground floor with student accommodation above); » Brewery Yard to the south-east; » Open space (park) to the east; and » Surrounding development (not within the Central Park precinct) to the north UTS, and University of Notre Dame and St Brendan's Catholic Church to the West. <p>As outlined in the lighting section of this report (Section 5.2.6), given the location of the site at the edge of the Central Park precinct, continuous lighting is recommended to the pathways that adjoin Block 4N.</p> <p>The street/pathway lighting should be complementary to the existing City of Sydney Council street lighting. Care should be taken in the selection of street lights to avoid creating glare or shadow. This will ensure users of adjoining buildings have secure and legible paths of travel.</p>
Night zones	<p>There are a number of uses within Block 4N that have potential to convert to night-time uses or trade with extended trading hours. These include hotel restaurant and bar, Australian Hotel and other retail tenancies such as restaurants/cafes. It is envisaged that the ground floor tenancies will operating between 7am to 10pm (subject to future approvals).</p> <p>These uses have the potential to increase pedestrian activity, and therefore passive and active surveillance, of the surrounding public domain in Block 4N at night.</p> <p>These 'night zones' are closely situated to public transport services along Broadway and the proposed basement car parking in Block 4.</p> <p>Additionally the hotel will potentially attract visitors during the night.</p> <p>A series of measures are proposed that will ensure the pedestrian route to Broadway is safe, including the installation of consistent and regular streetlights along Abercrombie Street and pedestrian links, as well as under-awning lighting.</p> <p>It is envisaged that appropriate management of spill over noise from commercial spaces shall be required with future DA's for the proposed use, to minimise any disruption to future residents and hotel guests in Block 4N and surrounding buildings.</p>
Cross-demographic user groups	<p>The proposal provides for a range of possible uses within the ground floor retail tenancies, uses, with the potential for night use.</p> <p>The proposed uses will be subject to future DA's.</p> <p>The Australian Hotel, hotel and likely future uses such as shops and/or cafes have the potential to attract a wide range of users groups including workers, hotel guests, residents (existing and future), students from nearby universities (UTS and TAFE) and general visitors during different times and days of the week.</p>

5.2.11 Transport

This section describes the CPTED implications for transport and travel behaviour as a result of the Block 4N proposal. In particular, the development shall ensure that natural surveillance is provided to public transport nodes and key pedestrian routes. Opportunities for alternative transport should be optimised, by designing the Public Domain and proposed development so that pedestrians and cyclists have priority over vehicles (where possible).

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Natural surveillance	The existing bus stops along Broadway and at Central are well located to service the site. The proposal for Block 4N does not detract from the natural surveillance afforded to these stops. Natural surveillance of these public transport nodes will be provided by hotel restaurant and Australian hotel as well as the retail uses located along Broadway and somewhat by operation of the hotel lobby along the eastern pedestrian link.
Alternative transport	<p>As shown in the Ground Floor Plan prepared by Fosters and Partners, cyclists and pedestrians have multiple options to travel to/from Block 4N.</p> <p>Block 4N is located on the major thoroughfares of Broadway and Abercrombie Street which connect to pedestrian links on the eastern and southern boundary and to Central Park Avenue a major access route through the Central Park Precinct.</p> <p>Safe bicycle parking facilities are located within the basement levels of Block 4N to encourage cycling as a preferred form of transport.</p>
Emergency vehicle access	Emergency vehicle access must be made available via all streets within the street network in Central Park.

5.2.12 Construction management

This section addresses crime prevention and community safety for the construction phase of the development. Work Health and Safety matters are not within the scope of this report. However, it is important to ensure the site, during construction, will be secure and planned in such a way so as to encourage crime prevention and community safety.

It is envisaged that further detail will be provided in a Construction Safety Management Plan at the next stage of the development process. Construction Safety Management Plans should include information relating to safety of workers and the public during construction, construction signage and site access. The Plan should outline necessary maintenance procedures to ensure safety during the construction phase.

CPTED Item	Assessment / Commentary / Notation / Recommendation for Block 4N
Construction Management Plan	<p>On-site security of the site is recommended in order to limit opportunities for vandalism. Where vandalism or graffiti occurs, it should be removed or repaired promptly to maintain a "cared for" image. Signs indicating contact details for emergency maintenance should be located in prominent locations. Signage should also be used to assist in informing surrounding residents/visitors/business owners on safe areas and "no go zones" during the construction phase.</p> <p>These aspects should be incorporated into a Construction Management Plan for the site.</p>

6 CPTED provisions (Sydney DCP 2012)

Section 3.13.1 of the Sydney DCP 2013 addresses crime prevention through environmental design. The objective of this section of the DCP is to:

"Provide a safe environment and minimise opportunities for criminal and anti-social behaviour."

As outlined in this report, the proposal for Block 4N has been designed to incorporate and satisfy all CPTED principles, thus achieves this objective. The following table provides an overview of how this report, and the Block 4N proposal, addresses the relevant provisions of Section 3.13.1.

Table 1 Sydney DCP 2012 compliance

DCP provision	Block 4N compliance	Comments
(1) Active spaces and windows of habitable rooms within buildings are to be located to maximise casual surveillance of streets, laneways, parking areas, public spaces and communal courtyard space.	✓	As shown in the Architectural Plans, active spaces are provided across the ground floor to generate pedestrian activity at the site.
(2) In commercial, retail or public buildings, facilities such as toilets and parents rooms are to be conveniently located and designed to maximise casual surveillance to facility entries.	✓	The retail and commercial premises will provide amenities as required (details to be provided in building use DA's). It is noted that entries to back of house areas are to be fitted with security locking devices to restrict access.
(3) Minimise blind-corners, recesses and other external areas that have the potential for concealment or entrapment.	✓	The design of Block 4N minimises blind-corners, recesses and other entrapment spaces, and there is to be adequate lighting and CCTV cameras across the ground floor plane to minimise opportunities for concealment.
(4) Building entries are to be clearly visible, unobstructed and easily identifiable from the street, other public areas and other development. Where practicable lift lobbies, stairwells, hallways and corridors should be visible from the public domain.	✓	Section 5.2.1 of this report provides a detailed overview of the location and treatment of all lobbies and entry points.
(5) Ground floors of non-residential buildings, the non-residential component of mixed use developments, and the foyers of residential buildings, are to be designed to enable surveillance from the public domain to the inside of the building at night.	✓	The entire ground floor, with the exception of the driveway entry points and fire egress, and the heritage item to be retained, is generally glazed, or gates provided which are visually permeable.

DCP provision	Block 4N compliance	Comments
(6) Pedestrian routes from car parking spaces to lift lobbies are to be as direct as possible with clear lines of sight along the route.	✓	The basement levels plans have been reviewed, and it is considered that the basement levels provide good sightlines to lifts and stairs. Appropriate lighting to ensure no dark areas of excessive shadow is provided in the basement levels, and CCTV cameras are positioned within key areas of the basement given the multiple uses of the building.
(7) Where dwelling units have individual main entries directly from a public space, the entry is to include a clearly defined transitional space between public and private areas.	N/A	
(8) Building details such as fencing, drainpipes and landscaping are to be designed so that illegitimate access is not facilitated by the opportunity for foot or hand-holds, concealment and the like.	✓	Opportunities for illegitimate entry have been minimised through the use of glazing along the majority of the building façades. CCTV cameras monitor all public domain areas.

7 Conclusion and implementation

7.1 General

This Safety Management Strategy and Plan details how the design of Block 4N meets the 'safer by design' principles of CPTED.

Future purchasers/tenants of Block 4N will need to comply with all safety management requirements during the construction phase of the project and beyond. Additional information on specific materials, fittings and location of building and public domain elements will be provided in the detailed design stages.

Based upon this assessment, the proposal for Block 4N is considered worthy of support from a safety and crime prevention perspective, subject to the recommendation contained within this report.

7.2 Compliance

This report sets out a variety of CPTED matters that concern physical aspects of the building design, as well as non-physical aspects such as on-going management. Compliance assessment of the proposal in future stages of development (e.g. Construction Certificate or Occupation Certificate) should be carried out against the observations and recommendations made in respect to the physical building design aspects only.

Appendices

A

Appendix A: What is CPTED

A Appendix A: What is CPTED

What is Crime Prevention Through Environmental Design (CPTED)

General CPTED concepts

Crime Prevention through Environmental Design (CPTED) is the design and effective use of the built environment so as to lead to a reduction in the fear and incidence of crime and an improvement in the quality of life. CPTED involves the design of a physical space so that it enhances the needs of legitimate users of the space. This emphasis on design and use deviates from the traditional 'target-hardening' approach to crime prevention.

For CPTED to be successful, it must be understandable and practicable for the normal users of the space. The normal users know more about what is going on in the environment and they have a vested interest (their own well-being) in ensuring that their immediate environment operates properly.

The Three D's: designation, definition and design

The 'Three D's' approach to space assessment provides a simple guide for the normal users in determining the appropriateness of how their space is designed and used. The Three-D concept is based on the three functions or dimensions of human space:

- » All human space has some designated purpose;
- » All human space has social, cultural, legal or physical definitions that prescribe the desired and acceptable behaviours; and
- » All human space is designed to support and encourage the desired behaviours.

CPTED involves the design of the physical space in the context of the legitimate user of the space, the normal and expected use of that space, and the predictable behaviour of the bona fide users and offenders. CPTED emphasises the connection between the functional objective of space utilisation and behaviour management. We must differentiate between designation of the purpose of space, its definition in terms of management and identity and its design as it relates to function and behaviour management.

By using the 'Three D's' as a guide, space may be evaluated by asking the following types of questions:

Designation

- » What is the designated purpose of this space?
- » For what purpose was it originally intended?
- » How well does the space support its current use or its intended use?
- » Is there conflict?

Definition

- » How is space defined?
- » Is it clear who owns it?
- » Where are its borders?
- » Are there social or cultural definitions that affect how space is used?
- » Are the legal or administrative rules clearly set out and reinforced in policy?
- » Are there signs?

- » Is there conflict or confusion between purpose and definition?

Design

- » How well does the physical design support the intended function?
- » How well does the physical design support the desired or accepted behaviours?
- » Does the physical design conflict with or impede the productive use of the space or the proper functioning of the intended human activity?
- » Is there confusion or conflict in the manner in which physical design is intended to control behaviour?

Once these questions have been asked, the information received may be used as a means of guiding decisions about the use of human space. The proper functions have to be matched with space that can support them.

The design must assure that the intended activity can function well and it must directly support the control of any behaviour that results.

Five key CPTED principles

CPTED is supported by the following five overlapping principles that are applied to specific sites and situations.

Territoriality

Territoriality is a concept that clearly delineates private space from semi-public and public spaces, and creates a sense of ownership. People usually protect territory that they feel is their own and have a certain respect for the territory of others. Fences, paving, art, signs, good maintenance and landscaping are some physical ways to express ownership. Identifying intruders is much easier in a well-defined space. An area that looks protected gives the impression that greater effort is required to commit a crime. A cared for environment can also reduce fear of crime. Areas that are run-down and the subject of graffiti and vandalism are generally more intimidating than areas that do not display such characteristics. Ownership creates an environment where appearance of such strangers and intruders stand out and are more easily identified through:

- » An enhanced feeling of legitimate ownership by reinforcing existing natural surveillance and natural access control strategies with additional symbolic or social ones;
- » Design of space to allow for its continued use and intended purpose; and
- » Use of pavement treatments, landscaping, art, signage, screening and fences to define and outline ownership of space.

Natural surveillance

Natural surveillance is a design concept directed primarily at keeping intruders under observation. Provision of natural surveillance helps to create environments where there is plenty of opportunity for people engaged in their normal behaviour to observe the space around them.

Criminals usually do not want to be seen. Placing physical features, activities and people in ways that maximise the ability to see what is happening discourages crime. For example, placing cafés and kiosks in parks increases natural surveillance by park users, while placing clotheslines near play equipment in a multiple unit development increases natural surveillance of the play area.

Barriers such as bushes or sheds can make it difficult to observe activity. Areas can be designed so they are more easily observed through design and placement of physical features to maximise visibility. This will include:

- » Building orientation, windows, entrances and exits, car parks, rubbish bins, walkways; landscape trees and shrubs, use of wrought iron fences or walls, signage and other physical obstructions;

- » Placement of persons or activities to maximise surveillance possibilities; and
- » Minimum maintained lighting standards that provide for night-time illumination of car parks, walkways, entrances, exits and related areas to promote a safe environment.

Access control

Access control is a design concept directed primarily at decreasing criminal accessibility. Provision of natural access control limits access and increases natural surveillance to restrict criminal intrusion, especially into areas where they will not be easily observed. Access can be restricted by physical barriers such as bollards, fences, doorways etc., or by security hardware such as locks, chains and alarms. Human measures can also be used, such as security guards. All these methods aim to increase the effort required to commit a crime and therefore, reduce the potential for it to happen.

When present, intruders are more readily recognised through:

- » Use footpaths, pavement, gates, lighting and landscaping to clearly guide the public to and from entrances and exits; and
- » Use gates, fences, walls, landscaping and lighting to prevent or discourage public access to or from dark or unmonitored areas.

Activity support

Activity support is the presence of activity planned for the space. Activity support involves placing activity where the individuals engaged in such an activity will become part of the natural surveillance system. Examples include:

- » Place safe activities in areas that will discourage would be offenders, to increase the natural surveillance of these activities and the perception of safety for normal users, and the perception of risk for offenders;
- » Place high-risk activities in safer locations to overcome the vulnerability of these activities by using natural surveillance and access control of the safe area;
- » Locate gathering areas in locations that provide for natural surveillance and access control or in locations away from the view of would-be offenders; and
- » Improve the scheduling of space to allow for effective use and appropriate intensity of accepted behaviours.

Maintenance

Proper maintenance of landscaping, lighting treatment and other features can facilitate the principles of CPTED, territorial reinforcement, natural surveillance and natural access control. Functions include:

- » Proper maintenance of lighting fixtures to prescribed standards;
- » Landscaping which is maintained at prescribed standards; and
- » Minimising the conflicts between surveillance and landscaping as the ground cover, shrubs and trees mature.

Crime risk assessment: key design elements

During a crime-risk assessment process, specific types of problems can be identified. These include features such as activity generators, edge effects, movement predictors, conflicting user groups, crime “hotspots” and displacement effects. Once identified, CPTED principles can be brought to bear to reduce the impact of these problems. These are summarised below.

Activity generators

Activity generators are features that tend to create local activity: playgrounds, benches, picnic areas and kiosks. Crime opportunities can be high in such areas if CPTED is not applied. In some circumstances, activity generators can be used to reduce opportunities for crime.

Edge effects

Edge effects are generated around the actual, or perceived, physical borders of different land uses, such as the edge of a park, the border of a commercial strip or around a shopping mall. Research has shown that high crime rates have been found in such areas. Contemporary CPTED aims to identify, soften or eliminate as many as possible.

Movement predictors

Movement predictors are predictable or unchangeable routes or paths that offer few choices to pedestrians. Pedestrian bridges, enclosed pathways and staircases are examples. Often alternate routes are unavailable to pedestrians and this becomes a problem, especially if the movement predictor contains entrapment areas where offenders can hide and wait for victims. Movement predictors also determine the awareness spaces that offenders have of neighbourhoods and where targets may be located.

Conflicting user groups

Urban features designated for one legitimate group can conflict with other groups nearby, such as older people. In addition, different groups using design features for different reasons can often cause conflicts, such as walking trails used by both bicyclists and hikers. Attention must be given to avoid generating opportunities for problems by creating or exacerbating conflicts between user groups.

Hotspots

Hotspots are existing high-crime locations that can affect a nearby area. These can include areas of high car theft such as certain underground parking lots, pick-pocketing in bus terminals, or specific pubs experiencing fights at closing time. Consideration must be given to the proximity of such locations and how to provide for public safety in the project.

Displacement

The 'displacement phenomenon' occurs when crime is moved away, or drawn into, new projects. Many aspects of a problem or crime can be displaced, including its place, timing, and nature of offence, target and the method. Research has shown that displacement is not always negative. It can be controlled, and even used positively, if proper CPTED planning principles are incorporated.

Thinking like a criminal when designing to reduce crime: Rational Choice Theory

Criminologists have long known that criminals make rational choices about their targets and generally:

- » The greater the risk of being seen, challenged or caught, the less likely they are to commit a crime;
 - » The greater the effort required, the less likely they are to commit a crime;
 - » The fewer the reasonable or believable excuses that can be offered, the less likely they are to commit a crime; and
 - » The lesser the actual or perceived reward, the less likely they are to commit a crime.
- » CPTED principles in planning, design and management of the environment are therefore used to ensure that:
- > There is more chance of being seen, challenged or caught;
 - > Greater effort is required;
 - > Territorial boundaries make it clear when people are not on public land or in public space;
 - > The actual or perceived rewards are less; and
 - > Opportunities for criminal activity are minimised.



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