Client
Frasers Broadway Pty Ltd

Project
Block 4S, Central Park
Safety Management Strategy and Safety Management Plan for proposed Student Accommodation Facility

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1 Introduction

1.1 Overview

This report has been prepared to accompany a State Significant Development Application (SSDA) for the proposed development of Block 4 South (Block 4S) at Central Park, for a student accommodation facility and ground level retail development.

The purpose of this report is to carry out a Crime Prevention through Environmental Design (CPTED) analysis of the proposed development of Block 4S, relative to the previously proposed (and approved) scheme for Block 4S.

This report describes the changes in the likely safety impacts and implications of the proposed development of Block 4S, relative to the previously approved scheme. It also addresses safer by design principles relating to safety and crime prevention through the proposed building design and in the public domain.

The previously proposed scheme for Block 4S, 4N and 1 (combined), approved on 26 May 2010, related to the construction of a new 11-15 storey commercial building, accommodating retail floor space, a childcare centre and associated basement car parking (MP 08_0253).

Subsequent modifications to MP 08_0253 were approved in February 2012, May 2012 and July 2012. The modifications related to the size of the central thermal plant, staging of the conditions of approval and the Green Energy rating of the buildings.

The current proposal for Block 4S is a standalone SSDA for a fourteen (14) storey building including residential accommodation for 823 students, a variety of communal recreation, dining and study facilities, rooftop terraces, administration facilities, ground floor retail and a basement Central Park precinct-wide central thermal plant tri-generation plant.

1.2 Consistency with Concept Plan approval and DGRs

This report has been prepared to satisfy the requirements of the Director-General, as outlined in the Director-General's Requirements (DGRs) relating to Block 4S (as well as Block 4N and 1).

This report also satisfies the Statement of Commitments for the Concept Plan approval.

1.2.1 Director-Generals Requirements

This report addresses issue 4 of the DGRs issued with MP 08_0253, as it relates to the appropriate use of 'Safer by Design' principles.

Key issue 4 of the DGRs states:

- *The EA shall address the design quality with specific consideration of the façade, massing, street sections, setbacks, building articulation, use of appropriate colours, building materials, landscaping and 'safer by design' principles.*

1.2.2 Concept Plan Approval Statement of Commitments

This report addresses commitments no. 30 – 32 contained within Schedule 4 of the Concept Plan Approval (MP 06_0171) as modified. Commitments no. 30 – 32 relate to the undertaking of detailed CPTED assessment as part of the PA stage.

The 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.

In relation to commitment 32, it is noted that the NSW Police were consulted during the previous CPTED assessment for MP 08_0253 and further consultation was carried out in the preparation of this report.

1.3 Crime Prevention through Environmental Design (CPTED) Principles

This assessment is based on an overarching strategy for safety and crime prevention at Central Park, as contained within the CPTED Report for the modified Concept Plan (2008). The report sets the CPTED framework for all development in Central Park. The principles adopted in the 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, and are described in Appendix A. They are:

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

The CPTED Report (2008) analyses the crime and safety issues in the neighbourhoods surrounding the Central Park site, including crime hot spots, incidents and trends.

This assessment is consistent with the overarching CPTED Report for the modified Concept Plan and in doing so, is consistent with principles and philosophy of the guidelines outlined in the NSW Department of Urban Affairs and Planning (now the Department of Planning and Infrastructure), *Crime prevention and the assessment of development applications: Guidelines under section 79C of the Environmental Planning and Assessment Act 1979*.

This assessment investigates how the Block 4S design embraces, or intends to embrace, principles central to 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 achieve the aims for safety by design. This is referred to as CPTEM ('Crime Prevention Through Environmental Management'). It is recommended the security management regularly link in with the security systems in place for other buildings in Central Park, particularly other student accommodation in Blocks 3B, 3C and 10, to aim for an integrated approach to security and safety management once the buildings are operational.

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 listed on Plan No. PA-A-5010, prepared by Foster+Partners, have been reviewed in the preparation of this report.

This report complements the existing Safety Management documentation prepared for the site including *Preliminary CPTED Report for Modified Concept Plan* (Elton Consulting, April 2008) and Safety Management Strategy and Safety Management Plans prepared to accompany the Brewery Yard PA.

1.5 Structure of this report

Section 1 introduces the report.

Section 2 provides an overview of the consultation undertaken to date pertaining to CPTED issues.

Section 3 outlines the Safety Management Strategy.

Section 4 outlines the Safety Management Plan.

Section 5 outlines the implementation of the Safety Management Strategy and Plan.

1.6 Disclaimer

Information within this report is based upon information provided to Elton Consulting in November 2012 at the time of this assessment.

In conducting 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.

2 Proposed Development

2.1 Background

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 Central Business District (CBD). The site is in close proximity to Central Station, Broadway Shopping Centre and the University of Technology, Sydney.

Block 4S is located at the western end of the Central Park site. It is bounded by Irving Street to the south, Abercrombie Street to the west, Central Park Avenue to the east and Block 4N to the north.

Following the purchase of the site in June 2007, Frasers Broadway Pty Ltd 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 Broadway Pty Ltd has directed that safety and CPTED be a fundamental component of the design approach.

2.2 Approved Concept Plan

The Concept Plan approval for Central Park (MP 06_0171), as modified in August 2012, permits the construction of a mixed use precinct comprising:

- 11 development blocks
- A maximum Gross Floor Area (GFA) of 255,500m^2 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
- Contributions.

The approved Concept Plan allows for 77,000m^2 of gross floor area in Blocks 1, 4S and 4N combined.

There is no residential floor space approved for Block 4S in the current Concept Plan. It is understood that a modification to the Concept Plan to allow student accommodation use within Block 4S is being lodged concurrently under a separate Section 75W Concept Plan Amendment.

2.3 Approved development

The previously approved scheme for Block 1 and 4 (MP 08_0253) was determined by the NSW Department of Planning and Infrastructure on 26 May 2010.

MP 08_0253 related to the construction of a new 11-15 storey commercial building, accommodating retail floor space, a childcare centre and associated basement car parking at Blocks 1, 4S and 4N (combined).

Subsequent modifications to MP 08_0253 were approved in February 2012, May 2012 and July 2012. The modifications related to the size of the central thermal plant, staging of the conditions of approval and the Green Energy rating of the buildings.

The approved PA for Blocks 1, 4S and 4N allows for:

- 67,980m^2 of commercial floor space
- 4,140m^2 of retail floor space
- 660m^2 of childcare centre use
- 533 car parking spaces (including 134 spaces for Block 8).

A Safety Management Strategy and Safety Management Plan (dated 6 March 2009) was prepared to accompany MP 08_0253. The Safety Management Strategy and Safety Management Plan assessed the proposed development against CPTED and 'Safer by Design' principles. The previously proposed (and approved) design for Block 4S, 4N and 1 was considered to comply with the design principles of CPTED.

An amendment to the approved PA (MP 08_0253) is being lodged separately to effectively excise Block 4S from that approval.

2.4 Proposed development

The proposed development of Block 4S at Abercrombie Street, Central Park comprises of fourteen (14) storeys and includes residential accommodation for 823 students, a variety of communal recreation, dining and study facilities, rooftop terraces, administration facilities, ground floor retail and a basement Central Park precinct-

wide central thermal plant tri-generation plant.

The subject PA will replace the previously approved development for Block 4S (as approved in MP 08_0253).

The proposed development of Block 4S contains 24,769m^2 of GFA consisting of:

- 745m^2 nett lettable area (NLA) of retail space
- 939m^2 NLA of communal space
- 19,305m^2 NLA of student accommodation space across levels 1-13.

The proposed student accommodation facility incorporates bicycle parking, waste storage facilities, plant rooms and a loading bay.

Frasers Property Australia's mission is to set a new benchmark in quality accommodation developments. Constantly scouring the world for innovative design or technological initiatives to bring to local markets, and interpreting new concepts for local conditions, Frasers work with the very best international and local award-winning architects and designers.

Frasers, in joint venture with Sekisui House may have a long term interest in this student accommodation facility. Frasers is committed to the success and suitability for the whole life cycle of each of its developments.

Every Fraser's development has a specific focus on high quality design, sustainability, and community engagement to ensure that each development enhances the economic, social, and environmental attributes of its local community. Development sites are specifically chosen to enable active transport by its residents, with attributes including secure bicycle storage, and close proximity to public transport hubs, walking paths and amenities.

3 Consultation

3.1 Overview

Frasers Broadway has made a major commitment to engage with the community and other key stakeholders regarding Frasers Broadway. This includes consultation on issues pertaining to crime and safety for this project.

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

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

They 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 were:

- 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
- Concern was raised by the City of Sydney Community Safety Officer and the representative from the Security Service at the UTS about crime against students travelling to and from the UTS campus along Broadway (towards Glebe and Annandale) and also through Chippendale towards Darlington
- Other crime hot spots identified by the Redfern Local Area Command were Redfern Railway Station and Victoria Park.

It is intended that the development of the Safety Management Strategy and Safety Management Plan reflects the issues and recommendations arising from these earlier consultations. Frasers Broadway have committed to ongoing consultation with key stakeholders throughout development of the project.

Relevant stakeholders will also have the opportunity to access information about the proposal and / or provide formal feedback at the public exhibition stage.

3.2 Consultation with NSW Police

Consultation with the NSW Police was undertaken in the preparation of this report in order to satisfy commitment No. 32 of the Concept Plan approval.

Elton Consulting met with the Crime Prevention Officer from Redfern Local Area Command on 30 March 2012. The purpose of this meeting was to provide to NSW Police details of the proposal, discuss key CPTED issues as they relate to the site and the proposed development, and receive feedback on safety and crime prevention implications for Block 3B, 3C and 10.

The purpose of that meeting was to update the NSW Police on a student accommodation proposal elsewhere in Central Park. The Crime Prevention Officer provided specific feedback on safety and crime prevention issues relating to the proposed student accommodation at Blocks 3B, 3C and 10, however the feedback was general and can be applied to Block 4S as the same type of use is proposed.

Feedback contained from NSW Police about safety and crime issues for student accommodation is summarised below and referenced throughout the report. Issues raised during discussions with NSW Police have been assessed and mitigation measures to address the concerns, where necessary, have been recommended.

Many of the recommendations made by the Crime Prevention Officer relate to the on-going operation and management of the student accommodation premises. Consequently, the recommendations have been incorporated into this report as issues that should be addressed in a future Plan of Management (PoM) for the student accommodation.

It was highlighted by the Crime Prevention Officer that in many instances, crimes are committed by persons who are known to the victim. For this reason, despite restricted access to many areas within the proposed development, careful consideration should be given to communal and

restricted access areas, such as "back-of-house" areas, in order to ensure safety for all individuals.

Key issues raised by the Crime Prevention Officer in relation to student accommodation facilities, which can be applied to Block 4S, include:

- Communal terrace areas could potentially become a place for nuisance (i.e. loud parties) and antisocial behaviour caused by alcohol consumption. A PoM should be prepared and specify communal rooftop areas as alcohol-free and/or restrict hours of access where necessary.

  Addressed: CCTV cameras are to be installed on the rooftop.

- Garbage rooms present a risk where there are limited opportunities for surveillance and opportunities for offenders to hide. Installation of CCTV cameras to bin rooms to increase security is recommended.

  Addressed: CCTV cameras are to be installed to monitor the entry/exit points to all "back of house" areas. The waste room should have a dedicated CCTV camera.

- It is recommended that the NSW Police/Local Area Command be consulted in the event of any major events in the precinct to ensure a security and safety presence where required.

  Addressed: It is recommended the PoM require consultation with the Local Area Command prior to make events in the area.

3.2.1 Student accommodation operator and education providers

Frasers Broadway Pty Ltd has consulted with a major operator and manager of student accommodation, UniLodge. UniLodge manages approximately 8,000 student accommodation beds nationally, including accommodation in Broadway. Consequently, UniLodge has a broad understanding of the student and local community issues and requirements for student housing.

UniLodge provided input to the design of student accommodation in Central Park. UniLodge provided guidance on general building design, resident access, on-site management requirements, passive and active security measures and the design of common areas, lobbies and roof top amenities.

Frasers Broadway Pty Ltd have met with the University of Technology and the University of Sydney a number times over the past 12 months in relation to student accommodation within Central Park.

4 Safety Management Strategy

4.1 Purpose

This section details the Safety Management Strategy and satisfies Commitment No. 30 contained within the Concept Plan Approval for Central Park.

4.2 Strategy

The following aims underpin the Safety Management Strategy for Block 4S:

- Create a safe public domain for all users, and in particular students, at all times
- Create a safe and easily accessed pedestrian and transport network
- Create a safe environment during the development process
- Address safety needs of special user groups
- Develop a safe community for residents around and on site
- Promote health and injury prevention
- Promote and support safety through formal surveillance and appropriate signage
- Create a safe, secure and well-maintained built environment.

These aims are consistent in principle and philosophy within the guidelines outlined in the NSW Department of Urban Affairs and Planning (now Department of Planning and Infrastructure), *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 Objectives, design elements and recommendations

4.3.1 Create a safe public domain for all users at all times

Objective

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

Design elements

In pursuit of the above objective, the proposal shall include the following design 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
- Entertainment night zones designed to minimise potential disruptions to residents and with safe and direct access to public transport and car parks
- A mix of uses which are compatible with adjoining and co-located uses and are designed to support public safety and health.

Complementary strategies / actions

- Use 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 space
- 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
- Select landscaping that is low-lying to prevent potential spaces for hiding
- Avoid the creation of small corners or entrapment spaces in the public domain.

4.3.2 Create a safe and easily accessed pedestrian and transport network

Objective

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

Design elements

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

- A safe pedestrian network, made up of preferred routes and safe spots in public spaces, that increase safety and 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 students 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, cycleways 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.

Complementary strategies / actions

- Use appropriate lighting in the public domain, particularly on pedestrian and vehicle pathways and entry points to the building / lobby
- Discourage the location of "back" of building areas or blank walls along main roads or pedestrian routes
- Ensure paving of pedestrian pathways and public domain areas is consistent and provide smooth transition along pathways
- Use temporary and permanent signage during construction to assist people to easily locate desired active and public transport services and facilities
- Consult with City of Sydney Council and public transport operators to encourage the development of safe pedestrian networks beyond the boundaries of the site that link to key public transport interchanges such as Central Station and Railway Square.

4.3.3 Create a safe environment during the development process

Objective

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

Complementary strategies / actions

- 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 that signage contains current and relevant information as the area is developed
- 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)
- Provide security barriers and necessary fencing during the construction phase
- Conduct site safety audit each day during construction to ensure safety standards are maintained by workers
- Educate surrounding residents, visitors and business owners on safe areas and "no go zones" during the development process.

4.3.4 Address safety needs of special user groups

Objective

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

Design elements

In pursuit of the above objective, the proposal includes the following 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)

Complementary strategies / actions

- 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
- 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)
- 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.

4.3.5 Develop a safe community for residents around and on-site

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.

Design elements

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

- A centralised technical surveillance system for Central Park
- A coordinated security management system for the student accommodation operators within Central Park
- On-going consultation with surrounding residents and communities on design and construction progress.

Complementary strategies / actions

- Inform adjacent residents and other major stakeholders of key safety initiatives during the construction phase (e.g. provide regular updates on safety initiatives in a newsletter)
- Consult with government agencies, adjacent communities and residents and owners of commercial facilities during development
- Establish robust Plan of Management for the ongoing operation and management of the student accommodation.

4.3.6 Promote health and injury prevention through

Objective

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

Design elements

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

- Encourage a variety of diverse and active uses linked to public open space

Complementary strategies / actions

- Proactively work with all stakeholders during the development phase, including clients, designers, contractors and the workforce, to create an incident and injury-free workplace.

4.3.7 Promote and support safety through formal surveillance and appropriate signage

Objective

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

Design elements

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

- Provide a comprehensive security management system that includes CCTV cameras in the public domain and semi-public areas if the building, and on-site concierge and on-site management to monitor Block 4S 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 4S at all hours (e.g. provide clear information about access routes; ensure that signs that are essential for night-time use are clearly visible; ensure buildings are clearly identified).

4.3.8 Create a safe, secure and well maintained built environment

Objective

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

Design elements

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, through the use of glazing at the ground level where public and private spaces interface
- Ensure amble and safe opportunities for maintenance of the public domain
- Appropriate lighting to ensure exit and entry doors are well lit and not hidden from view
- Wide pedestrian thoroughfares across the site that maximises opportunities for natural surveillance of the site
- Clear delineation of public and private spaces, through the provision of glazing, doors and materials
- Consistent ground surface and transition between public and private spaces.

Complementary strategies / actions

- Use materials, finishes, equipment and fixtures that are attractive, robust, replaceable, reduce opportunities for graffiti and vandalism
- 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 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
- 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

4.4 Translating the Strategy into Safety Management Plan

The next step in implementing this strategy is to transform it into a Safety Management Plan that has practical relevance to the development of the site.

This Safety Management Plan is outlined in Section 5 below.

5 Safety Management Plan

5.1 Purpose

This section details the Safety Management Plan and satisfies Commitment No. 31 contained within Concept Plan Approval. The Plan uses the **aims** from the Safety Management Strategy as the basis to describe the proposed building design.

It also uses the proposed design requirements / complementary strategies outlined in Section 4 to address the guidelines in the *Department of Urban Affairs and Planning Crime Prevention and Assessment of the Development Applications Guidelines under Section 79C of the Environmental Planning and Assessment Act 1979*. Consideration has also been given, in developing the assessment criteria, to local council safety requirements.

5.2 Crime risk review of buildings based on Department of Planning and Infrastructure guidelines

AIM 1: Create a safe public domain for all users at all times

Aim 1 is about creating a public domain around Block 4S that is legible, easy to navigate, promotes social interaction and contains lively public spaces that are filled with activities compatible with surrounding uses. A variety of elements are employed in order to achieve this aim, each of which is assessed in the table below. They include:

- Built form design that facilitates safety, sightlines and surveillance, and avoids entrapment, in the public domain;
- Use of appropriate materials, fixtures, finishes, lighting and landscaping;
- Appropriate building uses that generate activity
- Ensuring maintenance of the public domain is facilitated.

City of Sydney Council defines the public domain as those areas where access to and use of the area is available for any member of the public (see definition in Schedule 3 of *Draft Sydney Development Control Plan 2010*). Typically this includes parks, plazas, footpaths and streets. The public domain surrounding Block 4S comprises of footpaths (and paving) directly bordering the built form, pedestrian and driveway ramps, footpath / street trees, furniture and lighting, and signage (including street name plates, regulatory signage, wayfinding signs and the like.

Block 4S consists of public domain mainly in the form of footpaths and open hardstand area outside of the building footprint. Pedestrian pathways are located around all building frontages. To the west, south and east, the pedestrian footpaths are adjacent to public roads (i.e. Central Park Avenue, Abercrombie Street and Irving Street). To the north of Block 4S, the public domain consists of a pedestrian pathway / through-site link which creates a public walkway between Blocks 4S and 4N.

Assessment Criteria	Design Requirements/ Suggestions	Comment
Activity generators		
Create attractive and inviting public open space.	Design public domain to be interesting and inviting to attract usage by legitimate users.	Public areas within and around Block 4S consist of the public streets and pathways directly surrounding the proposed building, which are made attractive and inviting for legitimate users through the use of appropriate materials, lighting and furniture, and the provision of 'active' ground floor uses. The public domain to the north of the site is a publically accessible, pedestrian-only through site link that connects Central Park Avenue to Abercrombie Street. The link separates Block 4S from the building to the north (Block 4N). This public through-site link is designed to generate pedestrian activity, as its purpose is a public walkway. This link is one of the main east-west links for pedestrians to access the central part of the Central Park site, providing access to the brewery yard (and associated bar/retail/entertainment uses) and Main Park. It is envisaged that the link will generate high volumes of pedestrian activity. The through-site link provides a distance of approximately 12m between Block 4S and 4N. This 12m-wide space shall be made inviting and safe through the provision of fixed seating, appropriate landscaping and high-quality paving materials to encourage people to use and stay in the space (see Level Ground Floor - Retail Plan PA-A-5759). The location of the student accommodation lobby / entry, on the northern facade of the Block 4S, is directly off this pedestrian space. This means the space will generate a high level of activity from students entering and existing. Activity generating uses are located on the ground floor fronting Abercrombie Street (west) and Central Park Avenue (east). The provision of retail uses at the ground floor in these locations will attract shoppers and pedestrian to the public domain. The design of the built form (discussed under AIM 8 in this section of the report) ensures maximum opportunities for surveillance of the public domain areas adjoining the retail spaces. This is achieved through the use of glazing, which facilitates direct sightlines and light spill from internal lighting, and therefore will help to make people using the pathways will feel safe during the day and night. The possibility to include a cafe/restaurant within the ground floor would generate night and day activity in the area. Awnings are proposed along the western, eastern and part of the northern (above the lobby entry) facades. The awnings help to enhance the pedestrian environment by providing shelter from sun or rain, and create an inviting entry space for the retail tenancies and student accommodation lobby.

Assessment Criteria	Design Requirements/ Suggestions	Comment
		Providing balconies that face the surrounding streets and public areas on Level 1 will enhance surveillance of the public domain. Level 1 of Block 4S contains balconies along its entire western and eastern frontage. The balconies provide direct surveillance of the public pathways and streets below, from private rooms and communal lounge / kitchen areas. An outdoor terrace is also provided at the southern end of Level 1, which encourages passive surveillance of Irving Street and adjoining pathways below. A communal area is located at the northern end of Level 1, from which surveillance of the through-site link is possible. As such, all sides of the building contain areas or uses to maximise surveillance of the public domain. There are no large expanses of blank walls at the ground level that would attract graffiti. Adjoining blocks (e.g. Brewery Yard) are attractors for day and night time users. Lighting along pedestrian walkways should be provided at regular intervals along the surrounding streets and pedestrian footpaths. Detail of the lighting selection is not known as this time. It is recommended pole-mounted, recessed lighting is used along Central Park Avenue, Irving Street, Abercrombie Street and along the pedestrian through-site link between Block 4S and 4N. Under awning lighting is also recommended.
Populate and activate open spaces such as streets and squares with activity generators so as to maximise natural surveillance by a diversity of users.	Locate activity generators at strategic locations along pedestrian routes.	As above. The activity generators located on the ground floor of Block 4S, including retail tenancies and lobby to the student accommodation facility, are strategically located along key pedestrian routes. This includes the pedestrian-only through-site link connecting Abercrombie Street to Central Park Avenue, and along main vehicle/pedestrian thoroughfares.
Avoid creating spaces that do not attract use.	Avoid creating unused or unusable "dead" spaces or isolated pockets.	No "dead" spaces are proposed. All public spaces are usable and/or accessible with no open space ending at a wall or barrier.
Ensure that adjoining and co-located uses are compatible and do not create an unhealthy situation or danger.		Adjoining blocks include: • Brewery Yard to the east (commercial, retail, bar and courtyard) • Block 4N to the north (commercial, retail) • The University of Notre Dame - Broadway Campus, St. Benedict Church and residential units on the western side of Abercrombie Street. Student accommodation and a small amount of retail is considered to be a suitable mix of uses in the locality, as they facilitate activation at the street level. The provision of student accommodation within walking distance of tertiary institutions will generate a higher volume of people in the area, which will provide surveillance opportunities. Additional student numbers in this location have a variety of nearby entertainment, retail and public transport options in the

Assessment Criteria	Design Requirements/ Suggestions	Comment
		vicinity, meaning that there are opportunities for the student population to distribute as well as gather. The ground floor retail uses help to facilitate passive surveillance. It is recommended that a 24/7 security guard or manager for the student housing be available to monitor and/or report unhealthy or anti-social behaviour before it escalates. CCTV cameras shall be located around the perimeter of Block 4S to reinforce safety and security in the precinct. A Plan of Management shall be prepared and implemented, to address all operational and management procedures to be employed by the student accommodation management. The Plan should reflect the whole of the student accommodation operations, including noise management, security management, technical surveillance and on-site security presence. Continuous lighting and at grade paving ensure the pathways to adjoining uses are safe, legible and easily accessible. Multiple escape routes are provided so to ensure alternative ways of escaping dangerous situations.
Design		
Design public areas to be legible.	Create a public domain that encourages visual and pedestrian permeability and connects into existing grid.	The public domain around Block 4S is legible (i.e. easily understood and navigated) as it connects to the existing grid pattern. As shown in the Ground Floor Plan (Fosters + Partners), the pedestrian pathways that make up the public domain enable it to be clearly legible from the existing street grid. Although the material and finishes details are unknown at this stage, it is recommended that different paving types will be used to clearly differentiate the street from pedestrian pathways. Due to the change in natural ground level from east to west, wheelchair accessible connections from Abercrombie Street are available along Irving Street, as well as ramps in the pedestrian-only link between Blocks 4S and 4N. Although there is no open space proposed as part of this PA, the proposed public domain will activate and provide natural surveillance along pathways leading to proposed open space areas in Central Park. Furthermore, the east west link to the north of Block 4S connects to the east-west portion of Central Park Avenue, thereby "opening up" the site so that the entry / exit to Central Park is easily identifiable, open and legible. The proposal does not create major obstructions to sightlines at the street level across the public domain. As shown in the Ground Floor Plan (Fosters + Partners), plants are to be located

Assessment Criteria	Design Requirements/ Suggestions	Comment
		in the pedestrian-only link, at the corner of Irving and Central Park Avenue, and a row of trees along the Abercrombie Street pathway. The landscaping detail is not known at this stage. Recommended species and planting types are described below, to ensure plants (at the time of planting and in maturity) do not create a visual or physical barrier, so to ensure easy movement, particularly in the evening. Other strategies to ensure the public domain is legible (i.e. easily understood and navigated) include the provision of signage to assist in wayfinding, and the use of different patterns in the path paving to differentiate preferred pedestrian routes. The use of glazing to predominantly all facades of Block 4S will ensure the surrounding streets and pathways are highly visible. 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. Public pathways around the proposed building are straight, wide and connect to existing or proposed public thoroughfares.
Plan and manage entertainment night zones so that they do not disrupt residents and have safe and direct access to public transport and car parks.		It is envisaged that the ground floor will contain retail tenancies intending to operate between 9am to 11pm (subject to future approvals). These 'night zones' are closely situated to public transport services along Broadway and the proposed basement car parking in Blocks 1 and 4N. To ensure the pedestrian route to Broadway is safe, it is recommended that regular streetlights are provided along Central Park Avenue, pedestrian pathways, and that there is consistent transition to the street lighting along Abercrombie Street. Continuous lighting ensures the route between the site and Broadway (public transport) is safe for pedestrians. Access to upper levels will be restricted to students only, thus there will be no direct disruption to people residing in the student accommodation. Appropriate management of spill over noise (from the retail spaces and/or from the communal areas in the student accommodation facility) shall be required to minimise disruption to future residents in surrounding buildings. Noise management shall be addressed in the student accommodation Plan of Management, and in future applications for building use. Operable windows with 'stops' are used for the majority of the building, however trickle vents are to be used in problem noise areas (e.g. Level 2 along Abercrombie Street where there is an interface with a residential development on the western side of Abercrombie Street).

Assessment Criteria	Design Requirements/ Suggestions	Comment
Entrapment spots		
Avoid entrapment spots.	Provide multiple entries / exits to all public open spaces/areas to act as escape routes if people are being pursued.	There is no major recessing in the external perimeter of the proposed buildings, thus opportunities for concealment or entrapment in the public domain are minimised. There are multiple entry and exit routes in the public domain surrounding the proposed building. The street network is such that there are no 'dead-ends'. Opportunities for escape are provided along the street and pedestrian network. At the southern portion of the site, the corridors adjacent to the loading bay driveway are to be monitored by CCTV cameras to discourage criminal behaviour in the small spaces behind the 'wing walls'. If not required for structural reasons, it is preferable that the 'wing walls' be deleted, or a door placed across the outer side of the main loading area.
Natural surveillance		
Design to maximise opportunities for natural surveillance and visibility of public areas from pedestrian, cycle and vehicular movements systems.		From pedestrian, cycle and vehicle movement systems around Block 4S, there will be ample opportunities for natural surveillance of public domain (i.e. of the pedestrian pathways surrounding Block 4S). As shown in the Ground Floor Plan (Fosters + Partners), that there will be clear sight lines between the streets and the pedestrian pathways. The through-site link will be visible from nearby streets as it has a width (12m) that will enable sightlines from east to west. 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 (especially in the through-site link) and the activation of the ground floor uses, which will attract pedestrians to the area surrounding the site. A "drop off" zone located along Central Park Avenue directly adjacent to Block 4S will provide for additional surveillance opportunities and enhances the safety of Block 4S. It is noted that adjacent uses (e.g. Brewery Yard) provide activity-generation that will create additional surveillance opportunities of the pedestrian pathways around Block 4S.
Locate open space where it can be easily observed by legitimate users of adjacent space / buildings.	Locate open space at locations surrounded by a mix of land uses, so it can be easily observed by people who are spending time there (not just passing through).	There is no open space (parks) proposed as part of this PA.

Assessment Criteria	Design Requirements/ Suggestions	Comment
Ensure that the design and location of landscaping allows for natural surveillance.	Select trees for critical locations that do not have branches below 1.5 m (for the trees' protection, it is better if they do not have branches below 2.4 m).	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 surrounding public domain areas and maintenance of wide, paved pedestrian pathways that are well lit. It is recommended that planting be in the form of high-canopy trees planted at an appropriate maturity level so as to not create a visual barrier. There should be no low-lying shrubs (over 1m) in the public domain.
Avoid plants that create areas of concealment.	Select species having regard to their type and location and their mature size and form to minimise possible hiding places for intruders.	It is recommended that no dense shrubs be planted on the ground floor.
Ensure that landscaping does not obstruct building entries.	Avoid placing taller growing plants and trees in areas that screen doorways, entrances and windows.	Although tall trees will be planted along the through-site link 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.
Ensure high visibility around paths.	Ensure that planting within 5m of a pedestrian pathway is lower than 1m or thin-trunked with a high canopy.	It is recommended that all planting within Block 4S is lower than 1m or thin-trunked with a high canopy.
Avoid future sightline impediments.	Avoid use of landscaping materials that could, when mature, serve as screens or barriers to unimpeded views of pathways etc.	Careful consideration should be given in the selection of all plants, taking into account their shape and size as they mature.
Features and fixtures		
Use materials, finishes, equipment and fixtures in the design of the public domain and artworks that are attractive, robust, replaceable as an integrated design solution to reduce opportunities for graffiti and vandalism.		Paving in public areas of the site shall comply with the relevant BCA requirements to ensure slip resistant pedestrian surface materials. It is envisaged that the selection of materials for the public pathways will be consistent with and complement the selection of materials in surrounding blocks in Central Park (i.e. paving design will integrate with other public domain areas). The use of glazing at the ground level has been maximised as a means of deterring vandalism, and no large expanses of blank brick walls that would attract graffiti. The use of lighting at the perimeter of the site, and day and night activity generating uses, will act to deter opportunities for graffiti in the first instance by encouraging surveillance.
Provide facilities in safe, well-used spaces.	Locate facilities (e.g. telephones, barbeques etc) near areas of active use.	Facilities such as telephones should be located in publicly accessible areas along pedestrian pathways, which have clear sightlines from building entrances and windows of the lobby area. Internal building facilities such as accessible bathroom, "back-of-house" areas and communal facilities for the student accommodation are discussed under AIM 8 in this section of the report.

Assessment Criteria	Design Requirements/ Suggestions	Comment
Ensure signage and / or maps at the entrance to open space which provides clear information regarding access routes and designated special use open spaces.		It is understood a forthcoming Signage Strategy will detail measures to address ease of way finding for pedestrians and vehicles. As the public space areas of the proposal are open to the public 24/7, such as the pedestrian pathways, it is not envisaged that signage for the open space areas is critical to assist in wayfinding.
Provide safe routes to facilities.	Ensure that access to facilities is as direct as possible and free of obstruction.	Safe routes will be provided to all facilities, including public transport facilities. Pedestrian routes will be made safe through the use of appropriate fixtures. Lighting will be provided within the public domain, in particular along streets to encourage visibility at night. 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. This is particularly important as students or visitor to the site may include international students, and thereby legibility needs to be created through the non-written strategies such as seamless paving and clear wayfinding.
Provide safe seating in areas of active use.	Locate seating in convenient locations where it can be easily seen.	No outdoor seating is shown in the Architectural Drawings. Seating in communal areas (such as the outdoor terrace on Level 1), should be fixed or stored at times of inactivity so as not to create opportunities for theft.
Landscape - Materials		
Grade planting, with taller plants next to walls.		It is recommended that the design and location of landscape elements such as plants, and the selection of species, be characterised by an orderly arrangement that will not limit the proposal's legibility or pedestrian visibility. It is recommended that the selection of plants adhere to the assessment criteria and design suggestions listed in the columns and rows below.
Specify high-quality plants to increase their chance of survival and their resistance to vandalism.	Rather than planting saplings, consider planting heavy standard (120-140 mm girth), extra heavy standard (140-160 mm girth) or even semi-mature trees (200-720 mm) to make it physically more difficult to snap main growing stems.	See above.
Avoid plants that obstruct natural surveillance.	Avoid medium-height vegetation with concentrated top-to-bottom foliage.	See above.
Use plants that encourage natural surveillance.	Consider plants such as low hedges and shrubs (1 – 1.2m high), creepers, ground covers or high-canopied trees, clean-trunked to a height of 2m, as they permit natural surveillance.	See above.
Protect delicate foliage.	Use sharp-edged foliage to protect more delicate foliage.	See above.

Assessment Criteria	Design Requirements/ Suggestions	Comment
Apply "green screens" on graffiti-prone walls to avoid graffiti.	Carefully locate climbing plants in key locations to prevent graffiti. Take care in selecting these plants, as some are known to damage brickwork and wall surfaces.	See above.
Utilise "keep-off" planting.	Use shrubs such as prickly thorns to prevent short cuts across beds but ensure that no dangers are created.	See above.
Minimise opportunities for vandalism.	Avoid loose stones for ground cover near buildings with windows.	It is recommended that the design and location of landscape elements such as ground cover not include loose stones and the like.
Use hard landscaping as appropriate.	Use hard landscaping details such as low fencing and walls to deter cycle, skateboard, rollerblade or vehicle movement, where required.	Vehicle entry to the pedestrian-only thoroughfare will be restricted through kerbs along the street edge. It is recommended that kerbing is used at the interface between streets and the pedestrian-only link to deter vehicles from using this space. It is recommended that attractive, granite hard landscaping be provided along the footpaths. Where seating is provided in the public domain, seats should be designed to be comfortable for sitting but not for sleeping. Their design should also discourage skateboarding.
Provide stable surfaces on all pathways.	If deterrent surfaces are constructed using cobbles or large pebbles, make sure that they are embedded for two-thirds of their own depth.	It is recommended that all surfaces have stable and seamless paving, or provide appropriate transitions where paving materials differ.
Provide solid, non-slip surfaces for pathways.	Avoid using gravel paths and borders, as these both provide loose material that can be used as missiles and may cause difficulties for people with impaired movement.	It is recommended that all pedestrian pathways in Block 4S feature non-slip materials, in particular across the loading bay driveway. Roughened surfaces to discourage skateboarding could be considered in areas where skateboarding may become a problem, such as around seating in the pedestrian-only thoroughfare.
Maintenance		
Consider maintenance processes in public open space design.	Design public open space for easy maintenance of well used areas.	There is no open space (parks) proposed as part of this PA. Maintenance of the external / public domain areas is to be detailed in a Plan of Management for the student accommodation facility.
Ensure that public open space appears well cared for. This will deter vandals.	Ensure that open space and associated amenities are well maintained, indicating that the area is well cared for by ground staff.	As above.

AIM 2: Create a safe and easily accessed pedestrian and transport network

The pedestrian and transport network surrounding the site comprises of:

- Central Park Avenue: one of the key roads within the Central Park site, this road provides access between Broadway (Parramatta Road) and O'Connor Streets and is the main link to the existing road network and the new internal streets. Central Park Avenue is the eastern border of Block 4S.
- Irving Street: provides a road link between Abercrombie Street and Central Park Avenue. This road is the southern boundary of Block 4S. Irving Street is part of a conceptual east-west links that traverses the Central Park site - from Abercrombie Street, along Irving Street, past the Brewery building and Main Park, across Kent Road and via a through-site link between Blocks 3B and 3C to Kensington Lane.
- Abercrombie Street: an existing north-south thoroughfare that connects Broadway (Parramatta Road) to the City South at Cleveland Street. Abercrombie Street is the western boundary of Block 4S.
- Pedestrian link: a 12m wide pedestrian-only link separates Block 4S from Block 4N to the north, and provides an open pedestrian connection between Abercrombie Street and Central Park Avenue. Stairs and ramps are located at the Abercrombie Street end of the link to account for the change in topography.
- Pedestrian pathways directly adjacent to streets and surrounding the student accommodation building.

This network of streets and pathways is made safe and accessible through the design of the public domain and adjacent buildings (e.g. activity generating uses fronting onto the main routes), use of materials and fixtures (e.g. lighting, appropriate landscaping and furniture to promote activity) and technical surveillance systems (e.g. CCTV). The pathways immediately adjoining Block 4S shall provide seamless access and transition to adjoining pathways, roads or public spaces so as to enable safe movement across Central Park. Further detail is provided in the table below.

Assessment Criteria	Requirements/Suggestions	Comment
Design of routes and pathways		
Ensure that all pedestrian routes (footpaths along the side of streets, pedestrian laneways/alleyways, and pathway within public open space) are clearly defined to increase safety and security of all users during the day and night (use lighting to encourage use of preferred routes).	Ensure that careful consideration of existing and likely preferred routes is reflected in the design of pathways.	Pedestrian footpaths along the side of roads around Block 4S are organised in a grid. The grid creates legibility whereby pedestrian pathways at right angles to one another allow visual permeability through the site. A legible public realm makes is easy to navigate on foot, rather than having to rely altogether on 'second tier' information such as signage. The proposed pathways around Block 4S connect to the broader pedestrian network established in the Central Park Concept Plan approval (as modified). The pedestrian routes, including pathways along the side of roads and the pedestrian-only link between Abercrombie Street and Central Park Avenue, are to be well lit at night to ensure safety of pedestrians and students. Lighting should be designed to illuminate building entry points, in particular the student accommodation lobby. Lighting should be used to illuminate the east west connections to Central Park Avenue from Abercrombie Street, which are located on the north

Assessment Criteria	Requirements/Suggestions	Comment
		and south sides of the site. The pedestrian and vehicle routes are open 24 hours a day, 7 days a week. The design of lighting should prioritise safe movement of pedestrians and eliminate any dark spaces along footpaths to ensure safety and confidence in pedestrians. This should be detailed in a Lighting Strategy or detailed lighting design plans. It is envisaged the proposed lighting will be compliant with Australian Standards and Design Guides for Lux Levels. The pathways are to be defined through the use of clearly distinguishable outdoor paving materials that match (or provide a seamless transition) to the outdoor paving used elsewhere in Central Park. These should be seamless transition across the fall in natural ground level from east to west. All paving materials should be non-slip, in particular across the loading bay driveway. The design of the pathways and routes provides ensures straight and direct links for both pedestrians and vehicles. Round corners and curves are minimised so as to achieve direct and short sightlines for people in the public realm. Paving materials used along the pathways should clearly distinguish the pedestrian from the vehicle realm.
Encourage establishment of activities with a high after hours use along the edges of the pedestrian network.		The proposed retail uses within Block 4S have potential to convert to night-time uses (e.g. restaurants or cafes) or trade with extended trading hours. This has the potential to increase pedestrian activity, and therefore passive and active surveillance, of the surrounding public domain in Block 4S. The location of the lobby entry/exit point directly adjacent to the pedestrian-only link helps to provide natural surveillance of the pedestrian areas as this is the primary access point to the upper levels, and encourage activity after working hours.
Create activity centres (shopping, restaurant and entertainment areas) that have short logical connections to the public transport and the safe pedestrian network.		The proposed route from Block 4S to Broadway (i.e. activity centre) is a short distance and is integrated with the pedestrian and transport network for Central Park. Along Abercrombie Street or Central Park Avenue, the route to public transport facilities is short and direct. Continuous lighting is to be proposed along the perimeter of the site along to promote safety and visibility, especially at night. The pedestrian routes will be lined with retail uses to encourage surveillance and light spill, for an enhanced feeling of safety.
Provide public transport stops (taxi and bus) which maximise natural surveillance.		The existing bus stop along Broadway and at Central is well located to service the site. Natural surveillance will be provided by the retail uses located along Broadway.
Optimise opportunities for alternative transport by designing footpaths, cycleways and pedestrian areas so that pedestrians and cyclists have		As shown in the Ground Floor Plan (Foster + Partners), cyclists and pedestrians have multiple options to travel to/from Block 4S. Pathways adjacent to the streets are located around the perimeter of the building. A network of linked pathways ultimately connects to the pathway network along surrounding (existing) streets such as Broadway and Abercrombie. Safe bicycle parking facilities are located on the ground level of Block 4S to encourage cycling as a preferred

Assessment Criteria	Requirements/Suggestions	Comment
priority over vehicles (where possible).		form of transport. Further details of bicycle facilities are provided below.
Use temporary and permanent signage to assist people to easily locate desired services and facilities to ensure people feel safe and secure in the public domain, and are directed along safe routes to activity centres and public transport (this may involve the establishment of temporary signage during the construction process).		A comprehensive Signage Strategy will be prepared to address ease of wayfinding for pedestrians accessing services and public transport and for motorists.
Develop partnerships with City of Sydney council and public transport operators (e.g. State Transit, Taxi operators) to encourage the development of safe pedestrian network links that extend beyond the boundaries of the site to key public transport interchanges such as Central station and Railway Square.		Frasers Broadway Pty Ltd and the project traffic consultant have previously held discussions with State Transit about public transport infrastructure. Dialogue between Transport for NSW (Roads and Maritime Services) and Frasers Broadway Pty Ltd to determine roadworks, road speeds, etc., is ongoing.
Edging of pathways		
Make sure that path edging is consistent and sturdy.	Ensure that paving of paths meets surrounding ground at grade to avoid falls.	It is recommended that paving meets surrounding ground at grade level, and that handrails are provided along external stairs (where applicable). Pedestrian pathways should provide a seamless and consistent transition between the surrounding streets, footpaths and building entries. Paving should be sealed and treated to ensure slip resistance.
Clearly define paths from surrounding ground.	Provide clear edge definition between paths and surrounds / planting.	Attractive, robust and durable paving materials, and differentiated patterns in the paving design, shall be employed to create a clear colour, texture and tactile delineation between the paths and surrounding non-pathway surfaces. All driveways should be non-slip.
Apply careful use of high-edging.	Use high edging (such as garden walls) to define edges of paths and planter beds; stained broom-finished concrete is the best material. This type of edging may	Details on the use of high edging are unknown at this time. Any application of high edging should not create an obstruction or visual barrier.

Assessment Criteria	Requirements/Suggestions	Comment
	also be used as seating. Ensure that edging cannot obscure potential assailants.	
Sightlines		
Landscape and light paths to maximize sightlines.	Apply footpath lighting and landscaping so that it is possible to see ahead and to both sides of the path, and therefore avoid the chance of attack by a hidden intruder.	The design and siting of landscape elements along the footpaths in Block 4S is shown in the Ground Floor Plans (Foster+Partners), including plants and seating. Details about plant selection and lighting will be developed by the consultant team prior to construction. It is recommended that be used across the site to ensure that streets are visible from the building entrances/exits, and there are clear sightlines from the building entries, in particular the lift lobby, to outdoor public pathways. It is recommended that lighting used in the public domain have the following characteristics: • Pole-mounted lighting system installed along Abercrombie Street and main vehicle thoroughfares • Lighting evenly spaced at regular intervals along all streets surrounding Block 4S • Recessed lighting is preferable to avoid glare for pedestrians, which may present a safety risk • Consistency in lighting lux levels and colour so as not to create shadows where assailants can hide • Lighting of the public areas of Block 4S should not create any dark spaces along footpaths, so to enhance safety and confidence in pedestrians. It is recommended the proposed lighting will be compliant with Australian Standards and Design Guides for Lux Levels.
Orient paths to maximise sightlines.	Avoid curves or changes in grade that will impede sightlines. Make paths relatively straight where that does not create a monotonous appearance.	The pedestrian network is based on a right angle grid pattern and will not include any curves or bends that could impede sightlines. This allows for direct sight lines.
Avoid blind corners on pathways.	Ensure that pathways are direct and avoid sharp "blind corners". All barriers along pathways should be optically permeable (see-through) including landscaping, fencing, etc.	There are no major obstructions on public pathways or within the pedestrian-only link, so to prevent the disruption of sightlines. Stairs at the Abercrombie Street end of the pedestrian-only link are required to account for the change in natural ground level, however ramps are provided in this location to facilitate wheelchair access. The area where stairs are located is a high traffic pedestrian area that is visible from two streets, and thus is not considered a vulnerable area. Sightline impediments should be minimised by ensuring all landscaping in the public domain is maintained regularly, and should take into account its height and characteristics at maturity, so as to ensure no future sightline obstructions.

Assessment Criteria	Requirements/Suggestions	Comment
Natural surveillance		
Co-locate pedestrian, cycle and vehicle movement routes, to maximise activity and natural surveillance opportunities, whilst ensuring a safe interface between them (e.g. dictate low vehicle speed limits in shared zones and heavy pedestrian areas; provide clear definition between bicycle and pedestrian path ways etc).	Ensure that all footpaths are visible from active rooms of adjacent buildings, particularly those where reliable night-time activity can be predicted (e.g., apartments).	People accessing the site will be guided or directed by the proposed use of lighting and paving. In addition to adjacent Blocks which oversee Block 4S, the proposed design provides opportunities for natural surveillance of the public domain / pathways in Block 4S. There will be opportunities for direct surveillance to/from: • Ground floor retail in Block 4S • Abercrombie Street, Irving Street and Central Park Avenue • Communal terrace on Level 1 (Irving Street end) • Balcony from student accommodation communal area on Level 1 • Private rooms and communal lounge areas in the upper levels of Block 4S, which have a glazed façades for direct overlooking of the public domain • Lobby of Block 4S, which is finished with clear glazing, allowing clear sightlines to the public areas whilst delineating the public and private territory.
Encourage legitimate use for natural surveillance.	Encourage the casual use of spaces adjacent to pathways so that they can become "animated" and filled with appropriate uses that promote natural surveillance, such as playgrounds.	The ground floor public area adjacent to Block 4S (on the western and eastern facades) will be lined with a mix of retail spaces that can accommodate restaurants, cafes and the like. These uses can potentially be used by workers, students, residents and general visitors to Central Park. These uses will encourage activity and provide natural surveillance to the site. There will be opportunities for pedestrian activity/social gathering in and around the retail uses, which can potentially extend outdoors onto the pathways to accommodate outdoor dining.
Entrapment spots adjacent to pedestrian routes		
Avoid creating entrapment spots by pedestrian routes.	Avoid creating entrapment spots (e.g. storage area, hidden area below or above grade) adjacent to a main pedestrian route, movement predictor or private dead-end alleyway.	There are no dead end or entrapment spots proposed within the development in the public domain. As stated above, the use of glazing along the walls of the ground floor uses will assist in creating sightlines to/from the lobby entrance and the retail spaces. This means that the potential for entrapment is minimised. There are four doors at the southern end of the proposed building leading to the pathway adjacent to Irving Street. These doors provide a means of entry/exit to the "back of house" areas, including an exit for the emergency fire stairs and entry/exit to the corridor that accesses the fire pump and plant rooms. A "wing wall" creates a potential area for entrapment in this location, although it is noted the space is visible from a vehicle thoroughfare and thereby likely to be able to be surveyed. It is recommended that CCTV security cameras are positioned to

Assessment Criteria	Requirements/Suggestions	Comment
		capture this space at the Irving Street end of the development.
Avoid creating entrapment spots by pedestrian routes.	Avoid gaps in the street, such as entrances to interior courtyards, which may create an environment that is or appears isolated after dark.	See above. The loading bay at the Irving Street end of the proposed development should be well lit and monitored by CCTV cameras to ensure safety and avoid creating dark entrapment spaces. Alternatively, a minor design change or roller door could be placed at the outer perimeter.
Escape routes from movement predictors		
Avoid dead-ends.	Provide a visible exit point (or escape route) which provides an alternative route back to the built environment to enable a person to avoid a situation in which he or she might feel threatened. Provide signposts to identify exit routes.	All pedestrian routes have alternative access (escape route). Signage should be used to detail the location of streets, bus stops and other major landmarks to assist in ease of way finding for pedestrians accessing services and public transport. It is understood that a forthcoming Signage Strategy will detail the proposed location, design and content of signage.
Avoid creating entrapment spots.	Ensure that if pathways have a landscape border it is of low-lying or high branching vegetation. Avoid trees or bushes that create entrapment spots and reduce sightlines.	Although details of plantings are unknown at this stage, it is recommended that no low-lying plants are selected for the site.
Maintenance		
Maintain paths and surrounding areas.	Ensure that pathways and surrounding landscaping is carefully maintained to avoid hazards.	Pathways should be maintained and kept free of litter.
Maintain laneways and boundaries.	Ensure that laneways and fencing on laneway boundaries are adequately maintained.	No fencing is proposed.
Cycleways - Safe routes		
Design bicycle routes both for convenience and security.	Locate cycle routes near vehicle and pedestrian traffic during the day and evening. Avoid empty spaces and dangerous crossings as possible.	The bicycle lane along Balfour Street and the proposed off-road/shared way along Abercrombie Street are located adjacent to pedestrian and vehicle traffic. Additional signalised crossings will be provided along Broadway and Abercrombie Street to minimise potential dangerous crossings.

Assessment Criteria	Requirements/Suggestions	Comment
		Lighting of these thoroughfares shall enhance the cycle pathways by providing safety through adequate illumination and thus visibility of the cycle pathways.
Avoid tall bushes, dense shrubbery and dense clusters of trees immediately adjacent to routes and at predictable stopping points such as road crossings.	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.	No bushes, dense shrubbery of clusters should be planted. Careful consideration should be given to the selection of all plants, that will take into account their shape and size as they mature.
Signage and lighting		
Ensure that routes are well lit.	Maintain consistent lighting of cycle paths and immediate surrounds.	Appropriate lighting shall be provided to key pedestrian pathways, Abercrombie Street, Irving Street, and Central Park Avenue.
Bicycle parking areas		
Ensure that bicycle parking areas are well lit.		As shown in the Ground Floor Plan (Foster + Partners), a motorbike and bicycle storage room is located on the ground floor. The room is accessed from the lobby space, in close proximity to the reception / management area. The room should be locked and security key accessible for the use of residents/tenants of the student accommodation. All bicycle parking areas shall be lit at all times.
Safe bicycle parking and locking facilities.	Ensure bicycle parking is located where it can be informally surveyed from streets and interiors of the building, not hidden behind walls or fences, for example.	Bicycle storage is located at the ground level and accessed directly from the building lobby, which is an area envisaged to have high volumes of pedestrian activity. It is recommended that the room be lit at all times and/or with sensors when people enter the room. As an added safety measure, it is recommended that CCTV be provided in the bike room.
Car park design		
Ensure that the design of car parks provides direct access routes that maximise natural surveillance and visibility.		Nil basement car parking is proposed. Some at-grade parking along Central Park Avenue will be provided. On-street parking shall be design to Council requirements.
Ensure that roof heights in car parks are above 2.2m to allow for maximum visual surveillance and to reduce vandalism of lighting fixtures.		As above.

Assessment Criteria	Requirements/Suggestions	Comment
Ensure basement car parks uses materials and finishes that reflect light.		As above.
Surveillance		
Ensure open sightlines which allow for maximum surveillance of car parks.		There are clear sightlines between the on-street car parking along Central Park Avenue and public areas of Block 4S and surrounding blocks.
Where appropriate use technical surveillance measures in car parks and buildings.		Technical surveillance of the public domain around Central Park Avenue is proposed. It is envisaged these security cameras would capture on-street parking.
Entrapment spaces		
Ensure blind spots, sharp angle corners, heavy columns and entrapment spots are minimised within car parks.		As above.
Building egress and access		
Ensure direct and easy access is provided from the car park to the street, apartment blocks, and retail outlet.		On-street parking will have direct access to the street and adjacent pedestrian pathways.
Secure pedestrian and vehicular entrances and exits to car parks.		As above.

AIM 3: Create a safe environment during the development process

It is intended that safety management systems and protocols for the construction phase of the development will be detailed 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.

Assessment criteria	Requirements/Suggestions	Comment
Construction sites		
Develop a specific management program for construction sites.		A Construction Safety Management Plan for the site is to be prepared.
Avoid creating opportunities for vandalism during construction.	During construction, delay installing equipment until the site is ready, then promptly remove rubbish.	24-hour supervision of the site will limit opportunities for vandalism. More detailed guidelines and directives to minimise damage to the site should be identified in the Construction Safety Management Plan.
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 prominent location).		24 hour supervision of the site will ensure rapid identification and action on graffiti or repair requirements. Building contracts should incorporate requirements for contractors to meet the requirements of the Construction Safety Management Plan.
Proactively manage and stage development so that a safe environment is maintained for visitors, business owners and residents at all times during the construction process (e.g. management public access to areas under construction, undeveloped sites and roads).		This should be addressed in a Construction Safety Management Plan.
Ensure that signage contains current and relevant information as the area is developed.		This should be addressed in a Construction Safety Management Plan as well as the Signage Strategy.

Assessment criteria	Requirements/Suggestions	Comment
Educate surrounding residents/visitors/business owners on safe areas and "no go zones" during the development process.		Consultations with City of Sydney, TAFE, UTS and surrounding residents / businesses should be undertaken before and during the construction phase to inform stakeholders and the community about safe areas and "no go zones". In addition, information on the construction process should be provided and kept up to date on the Central Park website, community newsletter and site hoardings. Community information and feedback sessions should continue to be held regularly at the site to keep residents up to date on the process of the development. The most recent session was held on 31st March 2012.
Maintenance		
Place signage indicating contact details for emergency maintenance in prominent locations.		It is recommended that a Signage Strategy of Plan be prepared to ensure relevant and current information about emergency maintenance is available during the construction process.
Remove graffiti promptly to maintain a "cared for" image.		It is understood that all common activities and maintenance issues will be administered and managed by the Building Management Committee designated for the whole site.
Durable surface materials		
Use robust, replaceable materials.	Specify materials that can withstand normal hard use and can be easily replaced. Use standard-sized panels, panes and fittings to facilitate replacement.	It is recommended that the proposal utilises attractive, robust and durable materials and maintain an Operations and Maintenance Manual to detail all fixtures and materials used in the development, so to facilitate replacement when necessary.
Select security grilles, shutters and doors that allow natural observation of the street.	Ensure that security grilles and security doors are optically permeable (see-through) and sympathetic to the architectural style of the building.	This information is currently not available, however will need to be integrated into the detailed design specifications for the proposed building.

AIM 4: Address safety needs of special user groups such as children, older people and people living with a disability

Aim 4 is about ensuring the specific safety needs of special user groups (e.g. children, younger people, older people and people living with a disability). In Block 4S, the ground level pedestrian environment has been orientated towards maximising pedestrian movement and comfort with the provision of easy access pathways, ramps and lifts. The pedestrian routes through the site are direct, cover a short distance to the bus network located along Broadway, and link to the street network surrounding the site.

Discussions have previously occurred and are on-going with the RTA (now RMS) and City of Sydney Council, to determine speed limits within the internal road system.

The approved Concept Plan (MOD 2) was independently assessed by Access Associates Sydney (May, 2008) to test accessibility across the site for people with disabilities. The report stated the proposal has the potential to meet all accessibility requirements as per Australian Standards. Recommendations of an access report / study for this PA shall be complied with to ensure accessibility and safety for special user groups.

Assessment Criteria	Requirements/Suggestions	Comment
Create a safe environment in the for children and young people	Ensure safe road crossings, consider change in level and materials to ensure safe use	A "drop off" zone is located along Central Park Avenue directly adjacent to the outer edge of Block 4S. The area around the "drop off" zone shall be designed to make drivers and pedestrians aware of cars in the vicinity. Careful selection of paving/road materials in the designated drop off area should delineate this as a special zone and signal to drivers to slow down. Signage for motorists and pedestrians should be provided to inform them of the location and rules for the "drop off" zone. Road crossing shall be provided at key locations to ensure safety. The speed limit surrounding Central Park Avenue should reflect the "drop off" zone so as to provide safety for pedestrians, cyclists and motorists, and encourage vehicles to slow down around the zone. There is level access at all building entry points. Footpaths around the proposed building are to accommodate for the change in natural ground level from east to west across Block 4S. In the pedestrian-only link, five ramps are provided to enable access at a safe gradient.
Provide a safe environment in for older people and people living with a disability	Clear signage to identify safe and accessible access and egress for people with disability	It is understood that the forthcoming Signage Strategy will detail measures to address ease of way finding for pedestrians accessing services and public transport and for vehicles. The ground level pedestrian environment shall maximise pedestrian comfort and amenity. All pathway surfaces should be stable, firm, relatively smooth in texture and non-slip, as well as being made of non-glare substances. All public domain areas are to be wheelchair accessible to accommodate access for people with

Assessment Criteria	Requirements/Suggestions	Comment
		disabilities. There shall be seamless transition in the paving materials along all pathways in the surrounding public domain. Overly smooth and non-porous paving materials can provide inadequate traction for people in wheelchairs, users of canes and walkers, should be avoided.
Undertake discussions with relevant authorities and community organisations to manage homelessness and social issues in a positive way.		Discussions will be undertaken with City of Sydney Council in this regard. It is noted that the proposal will provide much needed student accommodation in a high demand area of the City. The close proximity of the site to the University of Notre Dame, UTS, TAFE and other education institutions, as well as the co-location of other student housing along Regent Street and within Central Park, means that the site is ideally located to provide for a suitable accommodation option for students. Liaison by the operator / manager of the student accommodation with nearby educational institutions should occur and be detailed in a Plan of Management, to ensure the accommodation is meeting the needs of a range of students, including local and international students.

AIM 5: Develop on-going liaison with stakeholders surrounding the area and on the site for a safe community

On-going consultation with external stakeholders who have shown an interest in Central Park will be maintained. Opportunities for input during the construction phase of the project will be provided. Once operational, ongoing liaison between the on-site security management systems is recommended, in particular with nearby student accommodation facilities, in order to ensure the safety of students.

Assessment Criteria	Requirements/Suggestions	Comment
Inform adjacent residents and other major stakeholders of key safety initiatives during the development phase (e.g. provide regular updates on community safety initiatives in a newsletter).		Information on the construction process shall be provided on the Central Park website, community newsletter and site hoarding boards. Regular community information and feedback sessions are held at the site to keep communities informed about the progress of planning, development and construction, including safety and access issues. The most recent session was held on 31st March 2012.
Foster partnerships with government agencies, adjacent communities and residents and owners of commercial facilities during development of the block.		A major aspect of the Frasers Broadway Pty Ltd approach has been to facilitate active partnerships with key stakeholders and the community. Refer to the Community Consultation Plan for details of the engagement strategy for the next phase of the development process. As the proposal relates to student accommodation, it is recommended that security management system be expanded to include relationships with surrounding buildings (e.g. hotels/motels/ businesses and residential buildings). A 24-hour on-site security officer shall actively liaise with the security management teams of student accommodation premises in the local area, to ensure a co-coordinated approach to ensure the safety of all residents. The details of the coordinated management system shall be outlined in a Plan of Management.
Promote a centralised technical surveillance system for Central Park.		It is understood that a centralised security management system may 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. Refer to attached draft Security Management Plan in Appendix B.

AIM 6: Promote health and injury prevention

Aim 6 is to encourage people to work and live a healthy lifestyle and to take an active role in safety and injury prevention. This project has involved local and international collaboration between built environment specialists with a deep understanding of creating safe, active spaces. This has included consultation with operators / managers of student accommodation to understand issues that are specific to the safety of students and implement these lessons in the building design.

Assessment Criteria	Design Requirements/Suggestions	Comment
Work with masterplanners, landscape architects, urban designers, recreational planners and architects to create an environment that encourages people to lead healthy, socially engaged, and physically active lives.		The proposal encourages pedestrian activity by providing safe, accessible and easily legible pedestrian walkways that link in with the existing thoroughfares within Central Park and the surrounding community.
Promote the development of safe and injury-free activities and environments for all users by not only complying with safety standards, but proactively promoting injury prevention, and individual and community safety.		CPTED principles have been incorporated into the design approach to ensure the development of model 'Safer by Design' approach to public domain. It is recommended that activities and events run by students, or organised through the student accommodation facility, be co-ordinated through the on-site student accommodation security management system. The NSW Police and City of Sydney Council should be consulted prior to any major outdoor / public activities initiated by the students.
Proactively work with all stakeholders during the development phase, including clients, designers, contractors and the workforce to create an incident and injury-free workplace (e.g. establish a stakeholder focus group that carries out monthly inspections).		Regular project meeting have been undertaken with the project team through the design and development of Central Park. A Construction Safety Management Plan shall be developed to ensure that safety principles are considered throughout the construction phase.

Assessment Criteria	Design Requirements/Suggestions	Comment
Plan of Management for student accommodation		
Promote safety through the preparation and implementation of a plan of management for the student accommodation facility.		Prior to occupation of the building, a Plan of Management for the student accommodation facility must be prepared. The Plan of Management shall outline responsibility for the operation, administration, cleanliness and fire safety of the premises, including compliance with the Emergency Management and Evacuation Plan. The Plan of Management should contain safety and security measures to address the following items (but is not limited to these items): • Internal signage indicating the property on-site security / manager and contact number • Emergency contact numbers for essential services such as fire, ambulance, police, and utilities such as gas, electricity, plumbing • Installation of perimeter lighting • Appropriate locks and secure doors, particular to the communal areas and terrace/outdoor spaces and balconies • Measures to secure non-pedestrian entry to "back of house" areas (i.e. security card/key access) • All residents to have own room keys (note: keys for security entrance doors should be made available to essential services such as fire brigade in case of emergency) • Provision for residents to ring emergency services in the event of an emergency (i.e. provision of a landline telephone at reception) • Control the hours of operation of outdoor areas on the rooftop terrace • Recommendations relating to the positioning of expensive equipment within rooms (i.e. not in the direct sightlines from the doors) • Responsibility for the operation, administration, cleanliness and fire safety of the premises, including the management's responsibility for the control of noise and litter generated by tenants and the management's responsibility for the removal of all graffiti from the building within 48 hours of its application. The student accommodation operators / managers shall ensure that the behaviour of tenants entering and leaving the premises does not detrimentally affect the amenity of the neighbourhood. In this regard, the operators / management shall be responsible for the control of noise and litter generated by tenants of the premises.

AIM 7: Promote and support safety through formal surveillance and appropriate signage

Aim 7 is focused on promoting safety and crime prevention through the installation of features that assist people to navigate their way around Block 4S, and to feel safe. The installation of signage in the public domain will assist people to find their way to nearby areas. Installation of formal technical CCTV systems will help create a safe environment by ensuring vulnerable areas are monitored.

The table below comments on the use of signage and formal surveillance in Block 4S.

Assessment Criteria	Design Requirements/Suggestions	Comment
Formal Surveillance		
Use signage to increase safety by improving people's ability to find their way about the site, and to and from its surrounding areas at all hours	Provide clear information about access routes; ensure that signs that are essential for night-time use are clearly visible; ensure buildings are clearly identified.	It is understood that the forthcoming Signage Strategy will detail measures to address ease of way finding for pedestrians accessing services and public transport and for vehicles. Legibility is provided by straight pedestrian thoroughfares at right angles to one another allowing visual permeability through the site. From a community safety point of view, the street network provides the area with a legible public realm that is easy to navigate on foot, rather than having to rely altogether on 'second tier' information such as signage. This is particularly important for international students who may not be able to rely on signage.
Promote a feeling of safety and security for businesses, residents and visitors.		People in the public domain will feel safe through the installation of signage to help them navigate and CCTV cameras to deter criminals. In addition, the design of the proposed development (discussed under AIM 8 below) creates additional opportunities for formal surveillance. This includes formal surveillance from the ground floor retail uses, which are glazed to promote visibility between the public and private realm. In addition, the first floor contains balconies, communal terraces and/or glazing along the majority of the façade of the building, which enables surveillance of the public domain below. These building elements are discussed further below. To enhance safety for students, it is recommended that a Plan of Management be developed for the student accommodation. The Plan should outline the security measures for the site, linked to the overarching Security Management Plan for Central Park (if applicable). The Plan should outline how the technical surveillance system will be monitored and managed. It is recommended that the student accommodation security management system attempt to develop links and relationships with surrounding businesses and residents. It is understood that the forthcoming Signage Strategy will detail measures to address ease of way finding for pedestrians accessing services and public transport and for vehicles.

Assessment Criteria	Design Requirements/Suggestions	Comment
Provide a permanent security presence including a 24-hour on-site security and facilities control centre. The facility will be responsible for the provision of the following services: 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.		The Plan of Management for student accommodation shall specify the need for a staff member / security officer to be present on site 24 hours a day. The 24/7 officer shall attempt to link in with the overall Central Park security system (if applicable). It is recommend that the security officer forms a working relationships with the security management of nearby student housing providers in Central Park, and not be stationary (i.e. there should be opportunities for a secondary officer to undertake patrols around the student accommodation buildings at certain times of the day). A staff member shall be present at all times in the student accommodation lobby / reception area in Block 4S. It is recommended that the Plan specify that all security officers / guards should have two-way radio contact. Security cameras shall be located to monitor all high-activity areas, such as the building lobby entry point, outside the building along the major pedestrian routes along Central Park Avenue and Abercrombie Street, access to "back-of-house" areas fronting Irving Street, at the entry to the loading bay, and public areas in the basement level (e.g. corridors opposite the lift). Access to student accommodation levels above the ground floor shall be restricted by way of a security card or key system. It is noted that concerns about access between floors of the student accommodation has been raised by the NSW Police, however the discussions resulted in a view that access between student accommodation levels should be unrestricted in order to allow students to gather together. Access to individual room shall be restricted to key access only.
Installation of real-time video surveillance (CCTV) coverage of entry lobbies to all buildings, entry and exits to car parks; pedestrian walkways in public and communal spaces, coverage of public open spaces, access points to public open spaces and to visitor parking areas.		As stated above, it is recommended that as part of the /Plan of Management, CCTV cameras be installed at all major entry and exit points as well as within the public domain. These should form part of the technical surveillance system. CCTV cameras shall also be installed at the outdoor terrace on level 1 and monitored at all times. CCTV cameras should be recessed if possible (under eaves in the perimeter of the building), and should be positioned at all external corners of the proposed buildings.
Security patrols to entail a permanent presence of licensed uniformed security officers.		It is recommended that as part of the Plan of Management, afterhours security guards would patrol the site in addition to the 24 hour presence of trained personnel.

Assessment Criteria	Design Requirements/Suggestions	Comment
Provide an electronic security system that provides intruder detection and electronic access control. Access control should use a common platform across all buildings yet provide flexibility in credential card types and formats.		Appropriate security systems to prevent unauthorised access to the student accommodation levels, or to private "back-of-house" areas, should be implemented to ensure no unauthorised entry. It is understood that a centrally administered Security and Facilities Control Centre may be established to coordinate all security at Central Park. If so, the Plan of Management for the student accommodation facility shall integrate with the overall site security system.
Streets designed to accommodate emergency vehicles Emergency access.		Emergency vehicle access must be made available via all streets within the street network in Central Park.
Signage design		
Ensure that signage is easily legible.		It is understood that a forthcoming Signage Strategy will detail measures to address ease of way finding for pedestrians accessing services and public transport and for motorists. It is recommended that the signage strategy incorporates the use of LED electronic signage where appropriate. It is recommended that signage include warnings/details about the emergency access/egress for the proposed buildings.
Ensure that signs that are essential for night-time use are clearly visible.	Illuminate or use reflective or luminous signs for night-time use.	The Signage Strategy should document requirements for night time visibility of essential signs. Avoid signage that creates glare for night time users.
Ensure buildings are clearly identifiable by number and/or name.		Building numbering and/ or naming should be addressed in the Signage Strategy.
Signage Location		
Utilise a signage plan to develop a carefully considered strategy for the location of signs.	Prepare a signage plan for the building, related to the system of "safe routes" and preferred pedestrian paths and indicating destinations, facilities and amenities en route.	This issue is to be addressed in the Signage Strategy. It is recommended that signage be placed in the public domain of Block 4s and/or in the lobby area, to alert students to the nearest car parking entry point.
Locate signs where people will see them.	Locate signs strategically at building entrances and near activity nodes.	This issue is to be addressed in the Signage Strategy.

Assessment Criteria	Design Requirements/Suggestions	Comment
Avoid entrapment spaces	Ensure that the size and siting of signs outside the building do not create entrapment spaces.	This issue is to be addressed in the Signage Strategy.
Locate signs for maximum visibility.	Locate signs so that they are not likely to be obscured by growing vegetation as it matures.	This issue is to be addressed in the Signage Strategy.
Content of signs		
Provide clear information about security.	Provide interior and exterior signage that indicates where to go for assistance.	This issue is to be addressed in the Signage Strategy.
Provide clear information about the location of public facilities and amenities.	Provide signage describing the location of telephones, duress buttons, taxis, bus stops and the nearest "safe" place.	This issue is to be addressed in the Signage Strategy.
Provide clear signage at local public facilities.		This issue is to be addressed in the Signage Strategy.
Provide clear information about hours of operation.	Clearly indicate closing hours at building entrances adjacent to public areas that are closed off at night. Clearly indicate where to go for help.	This issue is to be addressed in the Signage Strategy.
Provide clear information about access routes	Provide clear and regular signposting to main pedestrian routes.	This issue is to be addressed in the Signage Strategy.
Provide clear information about the location of the entry, space, etc.	Provide maps of the building at all main entrances and ensure that information is in plain words in the languages of various identified user groups. Make sure all signs are clearly marked with "you are here".	This issue is to be addressed in the Signage Strategy.

AIM 8: Create a safe, secure and well maintained built environment

Aim 8 focuses on the proposed student accommodation building, and assesses whether the built environment is secure, feels safe to users and deters crime. Aspects of the built environment that influence the feeling of safety include:

- Proposed use of the building to promote activity
- 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 kept well maintained) to enhance safety.

The creation of active retail and commercial edges around the perimeter of the proposed building will be important to activate the public domain. It is anticipated that this area will attract a high volume of students, as well as nearby residents and visitors who will utilise the retail opportunities within the building. To ensure the safety and 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 ensure their safety.

It is understood that all common activities and maintenance issues will be administered and managed by the Building Management Committee designated for the whole site, in conjunction with the management/operators of the student accommodation.

Assessment Criteria	Requirements/Suggestions	Comment
Design		
Promote usage by cross demographic user groups.		The proposal provides for a range of uses across the site including day and night retail uses, with the potential for a night café/restaurant use, and student housing. The proposed uses will attract a wide range of users groups including workers, residents (existing and future), students (UTS and TAFE) and general visitors during different times and days of the week.
Design building so that they feel safe for all and deter crime (e.g. create a legible hierarchy of spaces).		The building design is such that users feel safe and opportunities for crime are avoided/ prevented, and a legible hierarchy of space is created. As shown in the Ground Floor Plans (Foster+Partners), the ground level retail along the western and eastern facades will provide an active edge. The ground floor retail tenancies will feature multiple building entries to the retail space. Entry to the lobby / student accommodation reception is located directly from the 24/7 pedestrian-only site link, allowing pedestrians to have unimpeded access to the building entry. The extensive use of glazing at the building entry/exit points will create opportunities for direct visibility into the major facility in Central Park, whilst maintaining clear territorial boundaries

Assessment Criteria	Requirements/Suggestions	Comment
		between indoor/outdoor and public/private spaces. • Communal areas Communal area on Level 1 and Level 13 (i.e. indoor communal areas and outdoor terraces) have been designed with an "open plan" to enable visibility and clear sightlines. Doors between the internal and outdoor communal areas are glazed so to provide direct sightlines and visibility for students. Doors to the outdoor terraces should be lockable to enable the management / operator to secure the areas at certain times. Glass balustrades shall be installed at the terraces and landscaping shall be in the form of small plants that do not create opportunities for hiding. The outdoor terrace on level 1 is accessible from the communal area and from private accommodation rooms. Plants and outdoor furniture in the communal area of the terrace should not create obstructions in sightlines or places for attackers to hide. Only plants that do not obstruct sightlines between the communal area and communal terrace space should be selected. Therefore large bushy plants (above 1m in height) should be avoided. Glass used in the balustrade shall be a robust and durable material to minimise opportunities for damage. Soft landscaping is provided as a "wall" separating the communal terrace space from the private part of the terrace, to create privacy for the apartments. It is recommended that a wall (e.g. of glass or otherwise) separate the communal from private areas of the outdoor terrace. Soft landscaping can be used on either side of the wall to achieve the desired aesthetic. Where plants are introduced, they should be in the form of climbing plants (i.e. creepers) or plants of a size that would not create space for an intruder to hide. On levels 1, 4, 7, 10 and 13, a small communal sitting area is located at the northern end of each floor alongside the lifts. Glazing along the northern façade will provide opportunities for surveillance into the pedestrian-only link below. This space is not closed off and contains no doors, and should thus remain open at all times. Study/meeting rooms are located in the communal areas to enable gathering, private study and the like. All walls that separate the communal area from these private rooms should be glazed. The study room doors should be lockable, to ensure students with their backs to the door cannot be attacked.
Ensure all entrances provide safe egress and access; remove opportunities for illegitimate entry.		There is one entry to the lobby Block 4S. Security measures shall be applied to both lobby doors to reduce opportunities for illegitimate entry. The entry/exits will be glazed to enable visibility for students entering/exiting the building. Sightlines to this entry should be enhanced by appropriate lighting design and clear, unimpeded sightlines to/from the outdoor areas.

Assessment Criteria	Requirements/Suggestions	Comment
		The ground floor retail uses are fully glazed, but should be security lockable (with security key card or lock system) to ensure safe entry. The ground floor contains several doors that provide entry/exit to the circulation space in the "back-of-house" area. It is recommended these doors be lockable to allow entry for security personnel / management / students only. Opportunities for illegitimate entry to "back of house" areas from the lobby are minimised as the reception / security management staff are able to monitor and oversee these areas from the reception area. Opportunities for illegitimate entry to the back of house areas from the Irving Street end of the building should be minimised by either: • Making these doors exit-only and self-locking, or • Applying security locks / access.
Ensure that exit and entry doors are not hidden from view.	Locate entrances at prominent positions. Ensure that the front door to the building faces the street.	Entry to the lobby of Block 4S is considered ideal from a surveillance/public safety point of view as it is visible from public areas. At the Irving Street end, the doors to the "back of house" areas are visible from the public street, however this areas is not considered as "active" as the lobby-entrance. The installation of appropriate lighting and CCTV at the entry point is considered a satisfactory response. The location of all other building entry/exit points is directly off, and clearly visible from the adjacent public domain areas/streets.
Create a legible hierarchy of spaces.	Encourage a clear hierarchy of space from the public street to the semi-private areas of buildings to increase the territoriality of the building and make it uncomfortable for offenders to loiter in entranceways.	The selection of paving materials assists to create a clear hierarchy of space between public and private areas. Paving should differentiate the public pathways from internal building areas. Internal spaces within buildings at the ground floor are distinguished from outdoor public areas through the use of glazing along the active ground floor facades and different tiles/floor materials. The use of glazing creates a good visual connection between internal ground floor uses and public environments, thereby deterring crime by making the offender's behaviour more easily noticeable to passersby and users of the active spaces. 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. The internal student accommodation space is monitored by a reception / security presence at the lobby entry point, thus deterring criminals from loitering in the lobby.

Assessment Criteria	Requirements/Suggestions	Comment
Design entrances to be clearly defined entry points.	Make the area around the main entranceway clearly distinguishable from public walkways leading to it so that users feel distinctly that they are entering an area controlled by the users.	The main building entrances are via a glazed door to the lobby and glazed doors to individual retail tenancies. Appropriate lighting should be applied to the entry points, in the form of recessed down-lights, to illuminate these as main entrances. The entry doors to lobbies should be controlled by security card/key access. This ensures secure/unrestricted access and allows the on-site security guard to patrol the area and not be required to be stationary at all times.
Design entrances so that they cannot hide intruders.	Provide a direct external entry path and foyer to the building to avoid potential hiding places.	The entries are glazed and are located off public streets/thoroughfares, and as such will have direct access. Hiding places are minimised through the use of appropriate lighting (for improved surveillance), and the avoidance of low-lying planting in the areas outside the lobbies that would enable offenders to hide.
Design entrances for maximum visibility.	Design building lobbies to be visible from the exterior. Ensure clear views out from within buildings for people exiting.	Proposal complies, as noted above.
Avoid locating ramped and lift entrances in isolated areas.	Locate ramp and lift entrances in safe, well-used areas.	The lifts within the Block 4S are located in highly visible areas. The lift is located directly opposite the reception area, thus providing opportunities for surveillance around the lift. It is recommended that the door to the lift foyer/lobby on the ground floor is fully glazed, so as to maintain clear sightlines but act as a secondary secure access point.
Secure non-pedestrian entrances.	Ensure that non-pedestrian entrances are secured against illicit entry.	It is recommended that the Plan of Management include measures to secure non-pedestrian entry through security card/key access to "back of house" areas. As stated above, it is recommended that CCTV cameras monitor the entry/exit points to "back of house" areas.
Remove opportunities for illegitimate entry.	Locate delivery hatches, bins, light fixtures and landscaping /trees so that they do not assist an intruder to gain access to windows and doors.	It is recommended that the Plan of Management include measures to prevent illegal entry, such as secure card access to student accommodation floors and "back of house" areas.
Street frontages of retail facilities to reinforce pedestrian activity at ground level		The proposed retail uses at the ground level will reinforce pedestrian activity at the ground level and around the building/lobby entry points.
Clearly define spaces to express a sense of ownership and reduce illegitimate use / entry.	Physical and / or psychological barriers (e.g., fences, gardens, lawn strips, varying textured surfaces) can be used to define spaces.	Internal and external spaces will be defined by glass doors (to define ownership but maintain sightlines). It is also recommended that outdoor paving materials be differentiated from indoor flooring materials to define the space.
Ensure that lifts feel used and 'cared for'.	Use graffiti and vandal-resistant materials in lift design.	It is recommended that glazing be used for the doors to the lift lobby on the ground floor, which will deter opportunities for graffiti. The option to install glass panel in the lift doors at eye level shall be considered, however is not essential.

Assessment Criteria	Requirements/Suggestions	Comment
Surveillance		
Design buildings, streets and public open spaces so that they deter public nuisance, loitering and inappropriate behaviour.		The proposal includes retail uses along the western and eastern street frontages which are fully glazed to promote surveillance. This provides an active edge to the public realm, promotes clear and unobstructed natural surveillance of the street and encourages ground level pedestrian activity. In turn, this will assist to deter crime by making the offender's behaviour more easily noticeable to passersby. Similarly, the building lobby and main entry to the student accommodation, located off the pedestrian-only link on the northern façade, is glazed to allow for uninterrupted sightlines. Loitering and antisocial behaviour in the reception/lobby area will be minimised through the presence of a 24 hour security/reception detail within the building lobby. The western façade will be less active, however the Floor 1 terrace provides for direct opportunities for surveillance of Irving Street.
Ensure that all retail development allows for clear, unobstructed casual surveillance from the shop to the street, footpath and other areas.		As mentioned above, retail uses along the ground floor are adjacent to and accessible from highly public areas of the development. The retail uses on the ground floor will have the potential for extended hours for café/restaurants in order to encourage night time use and activity. This will maximise natural surveillance and encourage activity after working hours.
Reduce entrapment risks at Automatic Teller Machines (ATMs) and public telephones.	Do not locate ATMs in out-of-the-way places or adjacent to licensed premises. Ensure clear sight lines and provide card access only to those internal spaces after hours. Locate public facilities such as Automatic Teller Machines (ATMs) and public telephones at a highly visible location that is well lit at night.	No details of ATMs are provided in the documentation. All facilities in the public realm should be provided in areas that are well-lit and not obstructed by walls.
Locate lifts for maximum visibility and natural surveillance.		As discussed, the lift doors are located in visible areas including the lobby.
Materials		
Use materials, finishes, equipment and fixtures that are attractive, robust,	Do not use highly vulnerable materials such as flimsy paneling, delicately made light fittings and external fixtures that can	It is recommended that the proposal use attractive, robust and durable materials where possible. It is understood that all common activities and maintenance issues will be administered and managed by the Building Management Committee designated for the whole site. The Plan

Assessment Criteria	Requirements/Suggestions	Comment
replaceable, reduce opportunities for graffiti and vandalism.	be easily removed.	of Management for the student accommodation shall ensure that any graffiti is promptly removed.
Avoid extensive use of problem materials such as heavy-duty mesh, cyclone fencing and grilles, which may encourage wilful damage.	Do not use flimsy materials at the expense of building appearance. Unattractive, impersonal areas can deter users and become unsafe. Avoid solid shutters on front windows and doors that will create an impression that the area is uninhabited and inhibit natural surveillance.	Details of building materials are unknown at this stage, however it is recommended that robust, durable and high quality materials are used as far as possible.
Use materials which reduce opportunities for vandalism.	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. Avoid flat or porous finishes in areas where graffiti is likely to be a problem.	It is recommended that high quality and durable materials be used throughout the design of the external facades of the building in order to reduce the opportunity for vandalism. Opportunities for graffiti and other forms of vandalism are to be minimised through appropriate finishes and surveillance measures (e.g. extensive use of glazing along the perimeter of the building where possible). If graffiti/vandalism was to occur, graffiti removal is to occur immediately by contracted specialist cleaners or coordinated by the Building Management Committee or Student Accommodation management/operator.
Use graffiti-resistant materials and design.	Avoid large blank walls that invite graffiti. Where large walls are unavoidable, consider the use of vegetation or anti-graffiti paint. Alternatively, modulate the wall, or use dark colours to discourage graffiti on vulnerable walls.	The design of the building does not include large blank walls.
Use open style transparent materials on stairwells.	Install glass panels in stairwells, where appropriate to promote visibility.	As shown in Elevation 02 (North Façade), the external façade to fire stair on the northern facade of the building will be glazed with operable windows, and thus will be visible behind glazing.
Maintenance		
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		It is understood that common activities and maintenance issues will be administered and managed by the Building Management Committee designated for the whole site, which will coordinate with the operator/manager of the Student Accommodation.

Assessment Criteria	Requirements/Suggestions	Comment
damage or repair needs.		
Hardware and fixtures		
Ensure that security hardware is robust.	Use sturdy, non-corrosive catches, bolts and locks.	Details of security hardware are not available however, it is recommended that robust and durable security hardware is used. It is also recommended that non-corrosive security locks and bolts will be used.
Ensure that service boxes are secure.	Use flush-mounted meter boxes or service points within a secure building/enclosure for protection.	It is recommended that service boxes be secure at all times.
Ensure that communal furniture is robust and secure.	Communal / street furniture should be made of hardwearing vandal resistant materials and secured by sturdy anchor points or removed after hours.	Communal furniture in the internal communal areas and the communal terraces shall be durable and safely anchored to the floor.
Provide deadlocks for storage areas.	Specify appropriate heavy-duty hardware, such as dead-bolt locks for all storage areas adjacent to pedestrian routes.	It is recommended the bike storage area is lockable. As an additional safety measure, a glass panel in the door to the bike storage room could be considered for additional safety for people entering/exiting the room.
Provide physical barriers to limit access to restricted areas.		Access to restricted areas such as plant rooms, and the like, shall be prevented through the use of security cards/key for maintenance workers and managers/operators only.
Utilise materials for durability and visible permeability.	Use transparent, unbreakable materials in parts of doors and walls at major entry points.	It is recommended durable and robust materials be used at major entry points, including sturdy glazing.
Security devices must be carefully selected and used to prevent reducing the building to a fortress like appearance.	Transparent or open grill devices should be as unobtrusive as possible.	It is recommended that any security fixtures be designed to be unobtrusive and blend with the design of the building.
Use security hardware and / or human measure ONLY where required to reduce opportunities for unauthorised access.	As required: Install high-quality locks on external windows and doors. Provide monitored alarm systems. Provide building supervisors or security guards.	Security alarms and fixtures should be installed to best practice specifications. It is recommended that this be included as part of the Plan of Management.
Lighting – general		
Design lighting so that entrances, exits, service areas, pathways, car parking etc., are well lit after dark when they are likely to be used.		Lighting details are unknown at this stage. A range of recommendations for the selection, location and maintenance of lighting is provided below. • All external public domain areas are required to be well lit through the installation of street lighting and/or external building lighting.

Assessment Criteria	Requirements/Suggestions	Comment
		• Building entry points shall be lit to a higher lux level than surrounding streets. • Adequate internal lighting (in the building entries and lobbies) as well as light-throw from street lights should ensure the pathways around Block 4S are well lit in the day and night. • It is recommended that all external lighting and lighting in semi-private areas will be compliant with Australian Standards and Design Guides for Lux Levels.
Provide a safe level of illumination across the site with an emphasis given to preferred routes to encourage their usage by pedestrians.		Central Park Lane, Abercrombie Street, Irving Street and the pedestrian-only link (between Block 4S and 4N) must be well lit to encourage pedestrians to use these thoroughfares. All street lighting shall preferably be pole-mounted lights.
Treat lighting in a comprehensive manner; select an approach consistent with the local conditions and crime problems specific to the context.		As above.
Minimum standards for lighting		
Ensure that all exterior lighting complies with the minimum light technical values and principles as set down in Australian Standards.		It is envisaged the proposed lighting will be compliant with Australian Standards and Design Guides for Lux levels. This will be detailed at the next design phase.
Lighting must meet local council lighting requirements	Comply with the City of Sydney Exterior Lighting Strategy.	All lighting fixtures shall meet Council lighting requirements.
Location and orientation of lighting		
Ensure that entrances, exits, service areas, pathways, car parks, etc. are well lit after dark when they are likely to be used.	As a guide, areas should be lit well enough to enable users to identify a person's face from 15m away.	The location of lighting is not known at this time. It is recommended that street lighting is installed at regular intervals and distances to meet Local Council requirements for street lighting, and additional sources of lighting located: • On the underside of awning or in building entries (where glazed) to illuminate the building/lobby entry point • At the loading bay and "back of house" doors accessing the building at the Irving Street end.

Assessment Criteria	Requirements/Suggestions	Comment
Ensure inset spaces, access/egress routes and signage is well lit.	Direct lights towards access / egress routes to illuminate potential offenders, rather than towards buildings or observation points.	As above.
Use lighting to encourage use of preferred pedestrian routes.	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.	As above. Lighting shall be installed at regular intervals along all thoroughfares to encourage pedestrian activity, in particular the pedestrian-only link.
Illuminate signage	Provide adequate illumination for directional signage and maps.	Signage to direct students to student accommodation shall be lit, where necessary.
Minimise opportunities to use lighting fixtures in vandalism or theft.	Avoid locating lighting columns and electrical equipment alongside walls or low buildings, as they can provide opportunities for climbing and further vandalism or criminal acts.	Noted.
Minimise opportunities to vandalise lighting fixtures.	Provide high-level, out-of-reach lighting to maintain a daylight appearance, reduce the number of targets for attack and provide a high level of general lighting.	Noted.
Consistency of lighting		
Take care not to create heavy shadow areas, especially close to pathways etc.	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.	Outdoor lighting shall ensure appropriate light spill onto the streets and pathways through the use of external lighting at regular intervals.
Consider creating variety in brightness levels to give pedestrians an impression of warmth.	Use a mixture of lighting (within the constraints applied by the relevant Australian Standards).	Noted.
Luminaire selection		
Utilise FCO lighting to reduce glare	Wherever practical, use luminaires that have a Full Cut-Off (FCO) light distribution characteristic to keep discomfort and	It is recommended FCO lighting is used.

Assessment Criteria	Requirements/Suggestions	Comment
	disability glare to a minimum.	
Select light sources which provide good colour rendition — preferably equal to or better than Ra 85.		Detailed to be provided in the detailed design of lighting.
Provide adequate number of luminaires for effective lighting.		Noted.
Avoid time-switched lamps, as they can be inoperative for days if there is a long maintenance cycle.		Time switch lamps are discouraged to be used in the student accommodation facility, to ensure ongoing light and perceived safety of the area at all times.
Maintenance of lighting		
Ensure that light fixtures are maintained in a clean condition and promptly replaced if burnt out or broken.		It is understood that all common activities and maintenance issues will be administered and managed by the Building Management Committee designated for the whole site, which shall be coordinated with the management/security for the student accommodation.
Site planning and design		
Ensure that a CPTED lighting expert is consulted through out the design and development phase to ensure that lighting provisions and requirements are in accordance to Australian Standards and/or building management practices.	Ensure that CPTED consultants liaise with lighting consultants regarding CPTED lighting provisions and requirements according to Australian Standards and/or building management practices.	CPTED lighting experts to be consulted in the selection of lighting.

5.3 Conclusion

The Safety Management Plan details how the design of Block 4S meets and/or exceeds safety and crime prevention requirements. Frasers Broadway Pty Ltd or any future purchasers of Block 4S 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.

A Plan of Management will need to be prepared for the subject student accommodation facility. The managers / operators of the student accommodation should co-ordinate with, or at least attempt to link with the management strategies of other areas in Central Park, in particular other student accommodation facilities, to provide a safe environment in the longer term.

The Project Application is considered worthy of support from a safety and crime prevention perspective, subject to the recommendation contained within this report.

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 *Safety Management Strategy and Safety Management Plan*.

6 Implementation of Safety Management Plan

Frasers Broadway Pty Ltd shall ensure the *Safety Management Strategy and Safety Management Plan* will be implemented by a qualified person at the next phase of the project.

A Plan of Management for the student accommodation facility shall be prepared and implemented prior to its occupation.

7 Appendix A

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 exists; 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.

8 Appendix B

FRASERS BROADWAY

Security Management Plan Block 4S Student Accommodation Facility

Key elements of the proposed Security Management Plan for Block 4S are described below:

Block 4S

1. Main entry reception/concierge desk will be located in the building lobby. It will have staff in position 24 hours, 365 days a year.
2. During the hours 8.00am to 8.00pm there will be 2 reception/concierge staff. After hours (8pm till 8am) there would be 1 reception staff member/concierge in position at all times. An afterhours security guard patrolling the building will support the reception staff member/concierge. They will have two-way radio contact. The concierge desk during afterhours will have access to the various security cameras located throughout the building.
3. It is envisaged that subject to the tenant's requirements the entry to the lift lobby at ground floor may have a security access. The lifts will have security access control that can be isolated should the floors have multiple tenancies or require additional security.
4. It is envisaged that the passenger lifts will not serve the basement levels.
5. There is a goods lift which will have access control.
6. All fire stairs will have reed switches and will not allow re-entry unless via security control, which is automatically released in fire mode, or by release remotely by security at the respective intercom points.
7. The lobby will have at least one CCTV camera coverage.
8. There will be CCTV camera coverage of the surrounding public domain and main fire egress points.

Retail Areas

1. The retail areas can be open to the public from 7am till 11:30pm 365 days/year (subject to DA approval).
2. Within the retail areas there will be colour CCTV cameras monitoring each tenancy, which will record back to a central security office for Block 4S. The retail component and individual outlets will be linked to the security office for the student accommodation.
3. A static guard will be patrolling the entire area during open hours and will start at 5am till midnight. The guard will be equipped with a 2 way radio in case of disturbances or reporting spills that will require immediate assistance.
4. It is envisaged that the static guard during the day will patrol the lobbies, pedestrian-only thoroughfare and perimeter. At night, the static guard will patrol the external areas as well as providing back-up for the concierge/reception desk.