
Crime Prevention Through Environmental Design and Management Report for SSDA 6

**in relation to
Sydney International Convention, Exhibition and
Entertainment Precinct – ICC Hotel**

for

Lend Lease

August 2013

Security-In-Confidence

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1 Introduction

This report supports a State Significant Development Application (SSDA) submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The Application (referred to as SSDA6) seeks approval for construction of the International Convention Centre (ICC) Hotel component of the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) at Darling Harbour.

This SSDA follows SSDA1, which seeks approval for the core convention, exhibition and entertainment facilities of the SICEEP Project; SSDA2, a staged application that sets out a Concept Proposal for a new mixed use neighbourhood at Darling Harbour known as 'The Haymarket'; and a number of detailed proposals (SSDA3, SSDA4, and SSDA5) for use of development plots within The Haymarket. SSDAs 1 and 2 were submitted to the Department of Planning and Infrastructure (DoPI) in March 2013, and the SSDAs3-5 were submitted in May 2013.

The ICC Hotel forms part of the SICEEP Project, which will deliver Australia's global city with new world class convention, exhibition and entertainment facilities and support the NSW Government's goal to "make NSW number one again".

1.1 Overview of Project

The proposal relates to a SSDA for the ICC Hotel component of the SICEEP Project. The Hotel is located at the northern end of the precinct and comprises a single building with up to 656 keys. The Hotel is being developed by Lend Lease and is consistent with Darling Harbour Live's Preferred Precinct Plan.

More specifically, this SSDA seeks approval for the following components of the development:

- Demolition of existing site improvements;
- Associated tree removal and replanting;
- Construction and use of a single Hotel tower providing for up to 656 keys and including guest facilities, restaurant and ballroom;
- Public domain improvements including integration with existing / proposed works; and
- Extension, realignment and augmentation of physical infrastructure / utilities as required.

1.2 Background

The NSW Government considers that a precinct-wide renewal and expansion of the existing convention, exhibition and entertainment centre facilities at Darling Harbour is required, and is committed to Sydney reclaiming its position on centre stage for hosting world-class events with the creation of the Sydney International Convention, Exhibition and Entertainment Precinct.

Following an extensive and rigorous Expressions of Interest and Request for Proposals process, a consortium comprising AEG Ogden, Lend Lease, Capella Capital and Spotless was announced by the NSW Government in December 2012 as the preferred proponent to transform Darling Harbour and create SICEEP.

Key features of the Preferred Precinct Plan include:

- Delivering world-class convention, exhibition and entertainment facilities, including:
 - Up to 40,000m² exhibition space;
 - Over 8,000m² of meeting rooms space, across 40 rooms;
 - Overall convention space capacity for more than 12,000 people;
 - A ballroom capable of accommodating 2,000 people; and
 - A premium, red-carpet entertainment facility with a capacity of 8,000 persons.

- Providing a Hotel complex at the northern end of the precinct, immediately adjacent to the new International Convention Centre.
- A vibrant and authentic new neighbourhood at the southern end of the precinct, called 'The Haymarket', including apartments, student accommodation, community facilities, shops, cafes and restaurants.
- Renewed and upgraded public domain that has been increased by a hectare, including an outdoor event space for up to 27,000 people at an expanded Tumbalong Park.
- Improved pedestrian connections linking to the proposed Goods Line (formerly Ultimo Pedestrian Network) drawing people between Central, Chinatown and Cockle Bay Wharf as well as east-west between Ultimo/Pymont and the City.

1.3 Site Description

The SICEEP Site is located within Darling Harbour. Darling Harbour is a 60 hectare waterfront precinct on the south-western edge of the Sydney Central Business District that provides a mix of functions including recreational, tourist, entertainment and business.

With an area of approximately 20 hectares, the SICEEP Site is generally bound by the Light Rail Line to the west, Harbourside shopping centre and Cockle Bay to the north, Darling Quarter, the Chinese Garden and Harbour Street to the east, and Hay Street to the south. The SICEEP Site has been divided into three redevelopment areas – Bayside, Darling Central and The Haymarket.

The ICC Hotel Site (refer to **Figure 1**):

- is located within the northern end of the Bayside precinct;
- is bound by Harbourside Shopping Centre to the north and east, the International Convention Centre to the south and Darling Drive to the west; and
- occupies an area of approximately 3,730m².



Figure 1 – Aerial Photograph of the SICEEP Site and Redevelopment Areas

1.4 Planning Approvals Strategy

The SICEEP Project will result in the lodgement of numerous SSDAs for the various components of the redevelopment project. SSDAs have already been lodged for the PPP component of the SICEEP Project (comprising the convention centre, exhibition centre, entertainment facility and ancillary commercial premises and associated public domain upgrades), the Stage 1 Concept Proposal for The Haymarket, and the Stage 2 detailed proposals for three of the development plots within The Haymarket Site. Future applications will be lodged for the remaining development plots within The Haymarket Site.

This Application relates to a SSDA6 for the ICC Hotel component of the SICEEP Project and is consistent with Darling Harbour Live's Preferred Precinct Plan.

2 Consultancy Scope

Harris Crime Prevention Services (Harris) has reviewed drawings to be submitted for the SSDA Stage 6 proposal. The consultancy scope involved:

- (i) reviewing current drawings to understand the design philosophy for proposed built form and its linkages to SICEEP and (northern) Darling Harbour public domain and streetscape activation;
- (ii) reviewing drawings in terms of the external and internal security design and (future) security management requirements;
- (iii) commenting on current contextual anti-social and criminal behaviour patterns and trends;
- (iv) meeting with relevant project representatives to clarify scope rationale;
- (v) ensuring that CPTED and CPTM principles are incorporated into design development and detail documentation aimed at maximising the perception and reality of 'welcoming and safe place'.

Disclaimer

The recommendations outlined in the report are based on information provided to Harris Crime Prevention Services at the time of this assignment. Research and experience that suggest certain design and policy approaches can be adopted to reduce opportunities for crime. It is not possible to guarantee that actual crime will be reduced or eliminated if these suggestions and/or recommendations are implemented.

3 Stakeholders

The ultimate (occupancy) stakeholders are the owner/operator(s), users of, and visitors to, the Hotel. Key government, agency, consortium stakeholders are:

- Infrastructure NSW
- Darling Harbour Live Consortium
- Destination NSW
- City of Sydney
- Sydney Harbour Foreshore Authority
- NSW Police Force

4 The Project and Crime Prevention

The ICC Hotel (the Hotel or project) is integral to the overall crime prevention objectives of the revitalised Darling Harbour precinct and of the SICEEP re-vitalisation. It will also become an integral part of the existing Bayside precinct and its activation with Cockle Bay, the Harbourside shopping complex and the Maritime Museum.

There are existing multi-agency crime prevention (community safety and/or security) initiatives to provide seamless safety from Cockle Bay to the Haymarket, including feeder street and roadway connectors to and from each Darling Harbour sub-precinct. The initiatives are overseen by the City of Sydney (the City), the Sydney Harbour Foreshore Authority (SHFA) and the NSW Police Local Area Commands (LACs). Examples are: (a) recent Mayoral – LA Commander crime prevention forums, (b) Police Marine Command working with cruise boat operators to manage late night passenger disembarkation, (c) special licensing of private patrolling security officers fulfilling a 'meet-and-greet' role, (d) SHFA rangers patrolling and monitoring (their) CCTV network, (e) the City's late night 'economy' focus, encouraging extended CBD retail opening hours and lane-way activation, and (f) auditing and strengthening the City – Police liquor accords with licenced premises.

The Hotel footprint is therefore the connecting gateway south to the entire SICEEP project and north east to Harbourside and the existing Cockle Bay precinct. In activation density terms, the pedestrian traffic flow along and across Harbourside Place will vary depending on: (a) movement between the hotel and the ICC during conventions and exhibitions, (b) day and night visitor circulation around of the immediate area, (c) higher level traffic volumes from public space entertainment programs combined with ICC

events. In essence the architecture of the Hotel, the ICC and surrounding streetscape activation is the key to managing a zero-tolerance-of-crime target.

The Hotel will accommodate international and local visitors to Sydney including, convention, conference and entertainment centre participants. Safe 24/7 pedestrian activation within and outside the Hotel will benefit from security design and security management measures aimed at sustaining the Hotel's contribution to SICEEP's preferred 'safe space (place)' reputation.

Sustaining reputation involves a combination of security design and security management. Holistic crime prevention is SICEEP's immediate and long term goal. The Hotel's security design must be 'supported' by post-construction security management. This report concerns both.

Security design is theoretically underpinned by the principles of Crime Prevention Through Environmental Design (CPTED). Security Management is underpinned by the practical principles of Crime Prevention Through Environmental Management (CPTM).

4.1 CPTED Principles

We identify five CPTED principles or design elements; (i) territorial definition (ii) surveillance (iii) access control (iv) activity support and (v) target hardening.

CPTED principles are a formal outworking of the NSW Department of Planning and Infrastructure's Director General's Requirements (DGRs) pursuant to Schedule 2 of the Environmental Planning and Assessment (EPA) Act, Regulation 2000. These requirements seek compliance with Safer-by-Design principles in relation to built form, with specific reference to the Public Domain. CPTED is an internationally accepted model for applying aspects of architecture, engineering and technology to reduce or prevent crime in urban environments. The original references to this requirement fall within "Point 3 – Urban Design", of the DGRs (issued January 2013) covering the total SICEEP Project.

More generally, CPTED principles are part of the regulatory guidelines within the EPA Act and should be considered by approving authorities when considering urban development projects across NSW. Other States and many local councils throughout Australia have planning instruments requiring safer-by-design strategies to be incorporated into planning proposals.

4.2 Safe Activation and Circulation

Activity generation is critical to one of CPTED's principles – natural (passive or informal) surveillance. The Hotel's building envelope should promote environmental legibility and liveliness facilitating 24/7 surveillance within, and external to, the building with relevance to its perimeters and approaches. As with other SICEEP public domain and structures, day-night activation in and around the Hotel will encourage an eyes-and-ears surveillance and safe place 'ownership' culture by staff and management as part of a CPTM strategy. We have noted in previous reports that there is sufficient published evidence to suggest that anti-social and crime risks are controlled, reduced and prevented by legitimate 'claimed' space activity.

There is no formal (external) public space within the building envelope. However there are public footpaths along the western, southern and eastern hotel perimeters. There is also an existing footpath on the eastern side of the slip lane, alongside Harbourside; classified as a shared zone. There is an existing pedestrian crossing near the roundabout on the northern end. The Hotel's public spaces are internal informal gathering zones; the ground level lobby and on levels devoted to functions, meetings and recreation. The safety (security) of these spaces is paramount to the holistic safety of the Hotel.

4.3 Crime Prevention Goal Summary

In summary, the crime prevention goal of the Hotel's design and operational footprint is (a) to prevent crime and anti-social behaviour in and around that footprint and (b) to ensure that the Hotel's CPTED and CPTM strategies support those of Cockle Bay, Bayside, Darling Central and The Haymarket precincts.

5 The Hotel's Context and Crime Risk Factors

We noted in our report on the broader SICEEP concept (February 2013) that CPTED design principles and parameters are influenced by contextual purposes, the first of which, in the case of the ICC and ICC Hotel, are safe destination objectives; safety in an environment free from intimidating and/or criminal confrontation and property security.

The second contextual purpose is the return on investment. The Hotel's welcoming and safe place reputation remains a key driver in bringing guests and visitor numbers to experience the architecture, facilities, its direct connection to the ICC and the broader immediate link to the Bayside precinct. The expectations of investors are that the Hotel venture is not subjected to property or reputational damage from negative behaviours.

However, over recent years, according to reports released by the NSW Bureau of Crime Statistics and Research (BOCSAR), Darling Harbour and adjoining Pyrmont – Ultimo suburbs are identified as crime 'hot spots' for assaults, theft, robbery, property damage and theft of, or from vehicles. Times, frequency and exact locations are not identified by BOCSAR. Police and press reports have placed anti-social and criminal behaviour in and around Cockle Bay and Bayside often late at night.

Of relevance to the Hotel's context are locations around Bayside's north western and north eastern zones i.e. under the Distributor fly-over, around public toilets, adjacent to the IMAX theatre, fast food outlets and the play spaces. Incidents involving alcohol-affected disembarking cruise passengers from Cockle Bay wharf and disorderly behaviour of groups transferring from (late night) CBD venues to Darling Harbour have been widely reported.

We have previously noted that predicting the specifics of hot-spot crimes in any urban context is difficult. Also, people's perceptions of crime can often be disproportionate to recorded crime data. Research routinely shows how many people over-estimate the likelihood of becoming a victim of crime particularly in public places, on public transport, in shopping centres and on deserted streets. Research is also inconclusive as to what risk factors trigger criminal behaviour in such circumstances. More objective and conclusive are the known alcohol and other drug triggers.

The impact of inconsistent or lack of purposeful and safe activation in and around Darling Harbour will diminish as the SICEEP projects progress. The Hotel's incorporation of CPTED principles will have a contributing impact in reversing negative behaviours.

It is important to take account of the current crime and crime risk profiles associated with connector linkages in order to 'set' CPTED design principles into those connector site contexts.

The connector sites are the suburbs/zones of The Haymarket, Pyrmont, Ultimo and Sydney's central and southern CBD. These are feeders to the existing site via surrounding streets, walkways, lanes, promenades, car parks and public transport; including the Harbourside Place via Darling Drive, Bathurst and Liverpool Streets. These connectors have mixed use destination functions, including residential, institutional, commercial, retail, Hotel, recreational built form with accompanying pocket parks or other public passive or active gathering spaces.

Activation, legibility and liveliness characteristics of the ICC, the Hotel and the immediate surrounding footprints will create new and consistent surveillance opportunities along that east-west corridor; significantly reducing negative behaviours.

6 CPTED: The Project's Informing Legislation, Instruments and Agencies

Incorporation of CPTED principles into the Hotel's design is underpinned by State and local government legislation, guidelines, crime prevention (community safety plans, strategies, policies and practices; either EPA enacted or implied by the Sydney Harbour Foreshore Authority, City of Sydney, Transport for NSW and NSW Police Force. (These have also been referenced in reports submitted by Harris Crime Prevention Services in relation to other SICEEP projects)

6.1 The EPA Act, 1979 (as amended)

The EPA Act and Regulations are the instruments whereby developments subject to State or local government approval are required to consider the prevention of crime as a consent condition.

Section 79C (1) states: *"In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development, the subject of the development application"*.

Section 79 (1) (b) adds: *"...the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality"*.

Section 79 (1) (e) adds: *"...the public interest"*.

Interpretation of *"the public interest"* includes the relevant stakeholders – in this case, the Hotel's stakeholders. The public interest in the proposed project mirrors that of interest in the entire SICEEP footprint; an interest of personal safety and property security.

6.2 Sydney Foreshore Authority

The Sydney Harbour Foreshore Authority Act 1998, establishes a management framework, setting out functions (a)...*"to protect and enhance the natural and cultural heritage of the foreshore area; and, (c)...to promote, coordinate, organise, manage, undertake, secure, provide and conduct cultural, educational, commercial, tourist, recreational, entertainment and transport, activities and facilities..."* [Section 12 (1)]

While the Act makes no specific reference to the management of anti-social and/or criminal behaviour, in and around Darling Harbour, the Authority, by implication, seeks an environment within its precinct responsibilities which permits and promotes the wide ranging activities falling within its jurisdiction, including public safety (security).

6.3 City of Sydney

The City of Sydney developed the *Safe City Strategy 2007-2012* to provide *"an overarching to guide the City and its partners in tackling the complex range of crime and safety issues affecting both the Central Business District and our urban villages. This is in recognition that the causes of crime are complex, many and varied and that only working together effectively on a broad range of issues can we continue to create safer, vibrant and more prosperous communities"* (City of Sydney, 2006b: 2). To achieve these goals, the City of Sydney established key community based objectives around preventing anti-social or criminal behaviour.

All development applications in relation to the City's 'village' network (the urban LGA) are required to submit CPTED reports, undertaken either by specialist NSW police or by private planning or security consultants. The Haymarket DGRs and the City's policy instruments are therefore aligned and underpinned by the EPA Act and guidelines.

6.4 Transport for NSW

Transport for NSW has issued planning proposals for (a) the extension of the city's light rail network, (b) greater emphasis on seamless bus and light rail interchanges and (c) general improvements to personal safety and property protection across the entire metropolitan network with the creation of the NSW Police Transport Command. These proposals directly impact on, and are impacted by, the Haymarket master plan. In particular, transport policy and procedures affirm the need for CPTED design as part of any re-design of the light rail station and bus stops.

6.5 The NSW Police Force

The NSW Police Force has appointed crime prevention officers within most of the State's local area commands. Their role is to proactively review (a) anti-social and criminal behaviour 'hot spots' with a view to risk amelioration through increased police or security presence and/or through situational crime

prevention measures – involving physical modification of (usually) external built form, applying CPTED principles.

City Central Local Area Command (LAC) works closely with City of Sydney ‘village’ communities, assessing and documenting issues likely to negatively or positively impact on criminality, especially in public domains. The LAC also manages alcohol and crowd control accords within the CBD, in conjunction with City of Sydney staff and private security companies.

The LAC also hosts community safety precinct committees, comprising business and community representatives whose role is to monitor crime risks and recommend crime reduction and prevention initiatives. Police input into, or review of, CPTED design development initiatives for the Hotel and entire SICEEP is desirable.

7 CPTED: Integration with the Hotel’s Design

A review of SSDA6 drawings affirms the client’s incorporation of CPTED design principles in line with the compliance requirements of state and local authorities referred to in Section 6 above. We are confident that implementation of the principles as design development/detail will form part of construction certificate drawings. Application of CPTED principles should relate to total asset protection; protection of people and protection of property. Drawings have been reviewed in this light.

7.1 Activation and CPTED Design

There are six activation categories relevant to identifying, preventing, monitoring and managing anti-social and criminal behaviour within and around the Hotel. They relate to access and egress of:

- (a) in-house staff and internal staff movement
- (b) maintenance contractors to designated (internal) locations
- (c) delivery drivers and couriers
- (d) Hotel guests
- (e) participants in conferences and functions including ‘set-up’ personnel
- (f) casual visitors accessing public and informal gathering zones

The protection of the Hotel and indeed all SICEEP buildings, facilities and interconnecting public spaces are (a) an initial holistic crime-prevention-by-design challenge and (b) an on-going crime risk management challenge. Strategic interdependence is therefore essential in meeting both challenges. Lighting, signage and technology are the key architectural/engineering ‘drivers’ focussing on:

- (i) external pedestrian activation and circulation
- (ii) the structure, facade and perimeter
- (iii) lobby circulation
- (iv) internal floor (level) layouts and functions
- (v) loading and unloading facilities
- (vi) utilities and communications infrastructure
- (vii) basement circulation

Our commentary on these specific areas encompasses the seven above categories. The SICEEP vision guarantees high levels of pedestrian activation around and within the Hotel. Vehicle circulation is restricted to car and van drop-off and pick-up along Harbourside and to loading and unloading by single axle and articulated lorries at the ground level loading dock.

7.2 External Pedestrian Circulation

North-south and east-west pedestrian circulation between and around the ICC, Hotel, Harbourside Place and the one-way slip lane will promote surveillance continuity at street level, with additional surveillance benefits from the Hotel’s first seven upper levels (Mezzanine to Level 04).

Drawings indicate excellent sight lines along and within interconnecting pedestrian purposes. The width of Harbourside Place and approaches from the Boulevard, the Harbourside retail precinct and Cockle Bay's promenade, ensures that there is no sense of circulatory hesitation in terms of destination and/or casual 'enquiry' of the Hotel and its external structural spaces.

Exit circulation from the Hotel towards the ICC, Darling Drive or the Boulevard provides (reverse) purpose or directional certainty. Landscaped areas along Harbourside Place's median strip are proposed either as low plantings or high under-canopy trees, resulting in no sight line interruption or opportunity for concealment/entrapment. Delineation of pedestrian and vehicle routes is clear.

External lighting and signage – directional and warning - along Harbourside Place and around the Hotel's circulatory options should be master-planned holistically with all SICEEP ground level external lighting, including overhead and/or down lighting from the Hotel's under croft.

Overall, design for external (to the Hotel) ground level pedestrian circulation engenders liveliness and circulatory safety along all axes.

7.3 Ground Level Structure: Façade and Perimeter

Drawings indicate ease of (pedestrian) circulation to and from the main lobby entrance. The under-croft's support columns do not impede sight lines on approach and there is nothing to suggest that the columns would conceal a person or persons intent on entrapment. There is a possible option of circulation along the east, north and western perimeters, including passing the loading dock. Design detail should reflect the extent of this option to manage pedestrian access to and past the loading bay entrance.

Directional and warning signage should indicate the limits of pedestrian access around the perimeters. Installation of bollard barriers should be contemplated to support warning signs.

Vehicles dropping or collecting guests, staff or visitors have an all-weather sight line vision along Harbourside Place and towards the main entry doors. Security or concierge staff also have uninterrupted east-west observation advantage along the under-croft and Place. We understand that lighting plots for the under-croft will specify overhead illuminance commensurate with the Hotel's welcoming statement.

The facades comprise masonry and glass. As with other SICEEP buildings, there may be the temptation to damage (including graffiti) vulnerable wall expanses, if for no other reason than the facades are there, they are new and they are a target challenge. Vandal resistant glazing and masonry coatings should be applied to each perimeter wall.

Camera surveillance should cover the entire perimeter. External lighting will play a critical role in aesthetically 'wrapping' the Hotel. Overhead (under eave) lighting should be specified to eliminate any possibility of up-light or wall light glare. Consistent subtle illuminance and throw patterns will ensure total facade and pavement coverage with no shadowing.

There should be a convergence of lighting at the Darling Drive loading dock ramp such that the (Darling Drive) street lighting and ramp approach (overhead) lighting do not clash in terms of illuminance, throw, spill and colour.

7.4 Lobby Circulation and Facilities

The ground level lobby design invites purposeful and safe entry. Design legibility encourages appropriate surveillance throughout. The lobby and informal gathering zones afford appropriate sight line observation from the entry doors to reception, concierge, escalators and lift lobby. Passive surveillance to and from the street is possible from the informal waiting/gathering space. Activation is legible and ordered.

The three-way restricted access to back-of-house general office and storage spaces, including the safe deposit room referred to in 7.7 below, reflects controlled (access) design. The public toilets are appropriately designed to prevent entrapment.

7.5 Internal Floor Plans: Levels Mezzanine to Level 04

Access to the mezzanine, Level 1B and Level 3B is defined by, and restricted to, the plant and switch room contractors. Access to all other podium levels includes visitors, staff, guests, contractors and function/conference participants. Activation is difficult to define for these levels and CPTED design problematic, other than to ensure (a) clear and frequently installed directional and warning signage (b) appropriate IP camera surveillance (c) systematically implemented and check listed room locking regime and (d) there is 'vigilance of challenge' to restrict location confusion and minimise the temptation for unauthorised access.

Podium Level 1 invokes maximum 'mixed use'. There is (invited) public access to the ballroom, restaurant and function, conference and break-out or meeting rooms plus an informal pre-function area. All these spaces will be subject to day-night use. Access is by lift and escalator from the ground level.

The Podium Level 1 lift lobby is open and offers appropriate 'waiting' passive surveillance. Kitchen, wash room and storage areas have restricted access via internal stairs and a goods lift core. The circulation corridors and goods lift lobby should be under camera surveillance. Camera surveillance should also be considered for strategic locations covering meeting rooms, the ballroom and pre-function space.

A concierge desk located on the Podium Level 3 floor plan provides good surveillance of members of the public and guests accessing the floor from the lift lobby for the restaurant and bar.

The northern sector's Podium Level 2 floor plan is appropriate to the restricted access designation.

Both lift lobbies on this level should be under camera surveillance as should the circulation corridors and spaces leading to the plant rooms, computer rooms, housekeeping, employee facilities, workshop and general offices.

It is our view that ideally a security office be located on Podium Level 3 which should replicate design and systems specified for the ground level control room, to facilitate a dual or co-management configuration. The reason for this recommendation is that bar areas are often difficult to manage and may require a security presence or response should there be disturbances or incidents; either of which could damage the hotel's reputation.

The public toilet approach corridor on this level should be under camera surveillance. Consideration should be given to re-designing the male and female toilet entries to eliminate a second door air-lock. This recommendation accords with crime prevention principles in that the possibility of concealment and/or entrapment is reduced. All public toilets on this and other levels (for example Podium Level 3) should feature outward-swinging doors and/or safety hinges for emergency door removal.

Podium Level 4 invites passive and active recreation. The level features a pool and deck, rooftop landscaping, a gymnasium, plant, storage facilities, and combination change room/toilets. The Hotel's IP surveillance network should provide camera coverage of both lift lobbies stairwell doorways and circulation corridors.

The height specification for pool perimeter safety glass balustrade should be a minimum of 1.5 metres but 2.0 metres is recommended. The rationale is to 'target harden' a vulnerable 'wall' which, in extreme cases, could be the focus of skylarking behaviour resulting in objects being thrown or dropped towards the street. Landscaping should feature low level plantings to avoid concealment with external overhead lighting to feature around the pool and landscaped areas.

7.6 Internal Floor Plans: Level 05 to 37 including the Club Lounge

Typical floor plans for guest rooms indicate appropriate lift-to-room directional circulation. Camera surveillance coverage is recommended lift lobbies and corridors, including goods lift lobbies.

The lower roof plan appropriately separates back-of-house plant rooms from the club lounge; accessible by programmed proximity card. The lounge provides appropriate visual surveillance throughout the circulation space.

The upper roof layout is secure, accessible by goods (staff) lift. However camera surveillance is recommended for the lift lobby and corridors leading to plant rooms.

7.7 Loading Facilities, Security Control, Luggage and Waste Management

Loading facilities are limited to ground level circulation in a 100 square metre loading dock. Vehicles enter off Darling Drive reverse to load or unload within the building. Approach surveillance is limited with no pedestrian circulation indicated in the Hotel's northern quarter drawings. This defines loading bay access minimising the potential for un-noticed unauthorised access. Essentially, the loading bays are (and should be) accessed by drivers and Hotel or events contract staff specifically engaged in legitimate load transfers.

Lighting, camera surveillance and physical checking of goods is required at all times. There should be restricted proximity card access to and from the dock from back-of-house offices. Camera surveillance is to be part of a whole-of-hotel IP network which, in this precinct, should manage (a) the loading bay entry doors, (b) the loading or unloading process (c) doorways to adjacent rooms (d) the toilet approaches (e) the corridor and (f) the (goods) lift lobby.

Help points should be considered for installation in goods lift lobbies on all levels. The purpose is to provide communication to security and/or back of house staff in the event of any emergency or incident involving delivery personnel including in-house staff.

The loading dock ramped entry should have automated open grill (transparent) roller doors with warning signage restricting access and camera surveillance covering the entrance, the ramp and loading dock platforms and Darling Drive's ramp intersection. The delivery service corridor should not impede movement, nor should there be a perception of feeling trapped or isolated at the goods lift lobby.

The security control room is appropriately located, although the existing wall and/or cupboard should be removed to permit uninterrupted (passive) surveillance between the control room, the circulation corridor and loading spaces. Its design should signal its importance to (a) monitor the loading, unloading and waste management process, (b) protect ground level and basement utilities and communications infrastructure and (c) manage the entire Hotel's security regime; CPTM.

The control room/office area should be spacious and ergonomically designed. All communications and camera monitoring equipment would be located within this space. The features of the ground level security control should complement (in design and function) the security control room on Podium Level 2.

The indicative sliding entry door to the toilet is appropriate, provided it can be easily removed in a medical or other emergency.

We note that there is access from the loading area to back-of-house offices which, in turn, allow access to luggage storage and the front lobby. It is important that all loading and unloading be carefully supervised by Hotel staff with reference to (a) access control (b) excessive simultaneous movements likely to cause process confusion and (c) the locking of doors not relevant to the process.

There should be a specific sub-plan for internal lighting covering the loading ramp and entrance, the loading bays, corridors and lift lobby. All lighting should be high-bay or overhead, with no wall or low fixtures along the ramp recess so as to prevent glare. Illuminance and colour rendition should be consistent, should exceed minimum lux levels for high identification purposes and there should be no shadowing along circulation space or doorways.

Mindful of BCA, fire or other regulations, goods lift doors at this level (and all levels) should have fixed toughened glass panels for eye level surveillance of lift or lobby/level approaches.

The waste management, luggage storage and safe deposit rooms are particularly vulnerable. We note that the latter rooms are only accessed from back-of-house offices, which is appropriate. All three should be under IP camera surveillance and their (overhead) lighting levels should give high illuminance. Their design should permit location and identification certainty. The floor layout of these spaces including storage racks, shelves or safes, should restrict the potential for concealment upon entry.

Waste storage can be intentionally or accidentally set alight. Combustible (waste) materials should be stored where its location and collection may be physically observed where possible and/or be under camera surveillance. Fire detection and fire suppression systems should be installed in all waste storage areas.

7.8 Utilities and Communications Infrastructure

Of critical importance is the protection of plant rooms, and utilities infrastructure. CPTED design should ensure that all plant, equipment, communications systems, fire booster pumps, diesel and water storage tanks are secured with restricted access to location-specific authorisation. On entry to these spaces, contractors should be supervised and/or are under IP surveillance at all times.

The basement lift lobby and circulation corridor should also be under camera surveillance. The lobby, corridor, plant and utilities rooms should be clutter free and should be designed to maximise observation into each space from doorways before entry.

We note that the ground level sub-station is completely enclosed. However we would recommend that the (north facing) boosters be similarly enclosed; a recommendation for all SICEEP buildings.

7.9 Security Technology and Control

Application of security technology – surveillance cameras, access control, duress and/or ‘hold-up’ alarms, intruder detection and help points – is CPTED-critical. We have recommended more obvious CCTV (IP Network) locations and back-of house help points in relation to observation, formal surveillance and emergencies to cover deliveries and internal goods or ‘product’ movements; consistent with high volume 24/7 operations.

The hotel’s integrated security systems design brief will review these recommendations; applying relevant technologies to purpose - for example, duress and/or ‘hold up’ alarm installations at lobby reception and the Podium Level 3 bar.

There should be a dedicated security control ‘centre’ at either of the locations suggested (ground level or Podium Level 3), or other location(s) determined in design detail. The room should have ‘authorised-person’ access, should be ergonomically designed and of sufficient size to house, with easy access to, monitoring and communications equipment.

8 Conclusion

In summary, drawings reviewed for the SSDA6 application reflect design attention to CPTED principles as a platform for construction certificate documentation. The Hotel’s architecture affords opportunities for territorial definition, access control, natural and technical surveillance, activity support and target hardening. There is a clear architectural intention to protect Hotel owner-stakeholders including patrons (guests) visitors, staff, contractors and the Hotel property. We are of the view that incorporation of CPTED principles complies with State and local government planning and/or policy instruments in relation to preventing crime within the Hotel. As such, the architecture contributes to the overall SICEEP objective of initiating and sustaining the re-vitalised Darling Harbour footprint as a preferred ‘welcoming and safe place’ destination.

9 Report Addendum

Statutory authorities and agency stakeholders are equally concerned with security design and occupancy security management. CPTED and CPTEM strategies are inextricably linked. Neither should be contemplated or implemented in isolation.

9.1 CPTM Principles

We identify five CPTM principles or elements for post-construction (occupancy) management consideration; (i) design maintenance (ii) systems management (iii) risk re-appraisal (iv) community engagement monitoring and (v) outcome evaluation. While there are no theoretical underpinnings of CPTM, there is growing interdisciplinary recognition that CPTED in isolation ignores management and environmental post-construction changes which, if not addressed, can negate any security design benefits.

9.2 CPTM and the Hotel's Security Management

Post-construction (occupancy) security management is an essential part of the Hotel's marketability and reputation as a welcoming and safe place. Unlike CPTED, there are no legislative, planning or policy guidelines underpinning a CPTM strategy. However, as mentioned earlier, security design in isolation undermines the potential for the Hotel's holistic security objectives. CPTM is the point of connection with security design. Implementation of a CPTM regime should also contribute to the development's 'duty of care' and workplace health and safety requirements. Obviously the developer is not responsible for applying CPTM policies and practices. This becomes the responsibility of the Hotel's owner-operator(s).

The effectiveness of an holistic security regime will depend on the capacity of owner-occupier stakeholders to maintain the capacity and capability of design features, for example security systems, lighting and signage and to develop and deliver formal security awareness, procedures and practices to manage on-going anti-social and crime (security) risks. Security, facilities management and all staff become part of a CPTM ownership model. Ideally CPTM is incorporated into staff roles and responsibilities; becoming 'security aware' and promptly reporting security equipment failures, suspicious behaviour and/or other operational irregularities which could have security risk implications.

The practical outworking of CPTM includes the development of a formal security management plan at the Hotel's executive level and the adoption of that plan by all in-house and contracted staff who, for the most part will simply be required to remain observant and vigilant when accessing all levels, including balconies, foyers, toilets, offices, waste storage areas and when locking and unlocking back-of-house zones. Adoption of security awareness procedures need not be arduous. They should be similar to procedures adopted for emergency safety and/or fire responses.

The Hotel's CPTM strategy should also align with the City's crime prevention initiatives, security awareness and other formal crime risk initiatives developed by the Local Area (Police) Command and Transport for NSW.

While the initial marketability and reputation of the Hotel will be driven by design and destination attractiveness, its on-going reputation will depend on how an informal and more formal security management regime evolves.

9.3 Design Maintenance and Systems Management

There are two issues here – failure and redundancy. These relate to the maintenance of locks, exit points, lighting and security technology. It is our experience that these design features, once installed and commissioned, often fail for lack of comprehensive maintenance scheduling. Failures particularly occur in systems relating to security communications, CCTV surveillance, access control and alarms. It is also our experience that redundancy is often not part of security budget planning.

There are two types of redundancy, use-by dates and, usually, the roll-out of new technologies or better lighting. In the case of technology, hardware and systems should be constantly reviewed and realigned to meet contemporary (risk) challenges and conditions and in order to ensure that the hardware and software interfaces continue to complement (support) the human resource and security procedures/practice strategies. Monitoring and maintaining all aspects of security design initiatives – technical and non-technical – is critical to ensuring on-going 'safe place'.

9.4 Risk Re-Appraisal: Stakeholder Security Awareness and Management

A security awareness (procedures and practices) profile is necessary to ensure lasting security integrity and to sustain levels of (security) confidence integrity.

Security awareness is often delegated to the security professionals contracted to 'protect' stakeholder interests by patrolling neighbourhoods. In one sense this is appropriate. In another it is not. There is stakeholder responsibility to develop basic observational awareness when moving throughout all internal spaces from basement to podium to roof-top, lift lobbies, waste storage, function and break-out rooms, the pool and visitor and/or guest gathering spaces – irrespective of whether levels and floor spaces are access-restricted.

The aim is to understand the 'normal' so as to notice and the report the 'abnormal'; for example, noting and reporting obvious incidents of vandalism, other intentional building damage and/ or systems failure. Basic security awareness by observation and reporting check lists form the basis for reviewing and responding to on-going crime risks.

Security awareness is the point of connection with the Hotel's security design. Security awareness is (a) a partnership between staff, stakeholder agencies and security professionals and (b) encouraging guests, visitors and contractors to be 'security aware'.

9.5 Outcome Evaluation

It is our experience that stakeholder evaluation of security design and/or management initiatives does not occur, post construction. Commissioning handovers refer to 'coded' operating systems – fire and other emergency systems for example, but there is often little enthusiasm for, understanding of, and method to, operationally manage security, particularly in high visibility, high profile projects such as the Hotel.

Evaluation is critical to affirming or otherwise the Hotel's 'safe place' reputation. It is important to determine (a) what should be evaluated (b) who should be involved in security evaluation and (c) what mechanisms or processes encourage basic, but effective, evaluation of an integrated CPTED and CPTM regime.

Primary staff stakeholders and/or security management professionals should develop a simple check list to 'rate' the Hotel's safety (security) reputation based on an understanding of, and participation in, security risk management. Also the Hotel's security goals should be linked to immediate (adjacent Darling Harbour) precinct risk reappraisal and operational initiatives by the City and stakeholder agencies. Shared crime prevention (security) experiences assisted by security, policing and City expertise, could (should) be part of an integrated SICEEP CPTM strategy.

We are of the view that CPTM is linked to CPTED compliance requirements. The Hotel's operational stakeholders have on-going responsibility to identify and manage (reduce or prevent) risks associated with possible or probable anti-social and criminal behaviour. The EPA Act's 'public interest' test is a continuing one. We therefore recommend that, prior to occupancy, the client-stakeholder(s) seek advice in preparing and implementing a CPTM plan, by consulting with local police and the City, to ensure that the plan converges with initiatives in place, or proposed, for SICEEP.

10 References

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Appendix 1 Crime Statistics

The following crime statistics are relevant to the SICEEP Hotel environment. They are issued by the NSW Bureau of Crime Statistics and Research. Number of recorded incidents and rate per 100,000 population.

Recorded victims within the Sydney Local Government Area.	2008	2009	2010	2011	2012
Murder	4	4	6	5	4
Assault (domestic violence related)	872	897	908	880	884
Assault (non domestic violence related)	4320	3891	4030	3794	3733
Sexual assault	170	215	194	190	195
Indecent assault/act of indecency/other sexual offences	262	255	333	285	299
Robbery without a weapon	937	737	547	487	473
Robbery with a firearm	43	45	30	23	19
Robbery with a weapon not a firearm	260	216	172	165	166
Break & enter – dwelling	1550	1594	1286	1225	1264
Break & enter non dwelling	1333	1015	928	813	824
Motor vehicle theft	1048	760	679	707	552
Steal from motor vehicle	5861	4348	2774	2728	2241
Steal from retail store	1885	1912	1965	2288	2452
Steal from dwelling	932	921	1058	941	1139
Steal from person	3591	3618	3105	2898	2747
Malicious damage to property	4411	3789	3578	3659	3398

Arson	83	75	64	56	58
Possession and/or use of cocaine	189	290	350	302	386
Possession and/or use of narcotics	198	292	292	236	272
Possession and/or use of cannabis	1934	1961	2700	2796	2682
Possession and/or use of amphetamines	442	359	548	768	863
Possession and/or use of ecstasy	540	731	901	652	1003
Possession and/or use of other drugs	420	513	844	884	911
Dealing, trafficking in cocaine	43	63	42	39	78
Dealing, trafficking in narcotics	114	123	145	85	91
Dealing, trafficking in cannabis	58	51	56	68	39
Dealing, trafficking in amphetamines	97	71	86	136	138
Dealing, trafficking in ecstasy	125	133	93	78	112
Dealing, trafficking in other drugs	27	54	70	116	74
Cultivating cannabis	5	2	6	3	4
Manufacture drug	4	2	3	4	1
Importing drugs	4	5	6	4	5
Other drug offences	561	581	518	533	723

Trends in Recorded Crime Statistics, 2008 to 2012

Offence category	24 month trend^^	60 month trend^^
Murder*	nc**	nc**
Assault - domestic violence related	Stable	Stable
Assault - non-domestic violence related	Stable	-3.6%
Sexual assault	Stable	Stable
Indecent assault, act of indecency and other sexual offences	Stable	Stable
Robbery without a weapon	Stable	-15.7%
Robbery with a firearm	nc**	nc**
Robbery with a weapon not a firearm	Stable	-10.6%
Break and enter dwelling	Stable	-5.0%
Break and enter non-dwelling	Stable	-11.3%
Motor vehicle theft	Stable	-14.8%
Steal from motor vehicle	-17.9%	21.4%
Steal from retail store	Stable	6.8%
Steal from dwelling	Stable	Stable
Steal from person	-5.2%	-6.5%
Malicious damage to property	-7.1%	-6.3%
Arson	Stable	-8.6%
Possession and/or use of cocaine	27.8%	19.5%
Possession and/or use of narcotics	Stable	Stable
Possession and/or use of cannabis	Stable	8.5%
Possession and/or use of amphetamines	Stable	18.2%
Possession and/or use of ecstasy	Stable	Stable

Possession and/or use of other drugs	Stable	21.4%
Dealing, trafficking in cocaine	Stable	Stable
Dealing, trafficking in narcotics	Stable	Stable
Dealing, trafficking in cannabis	-42.6%	Stable
Dealing, trafficking in amphetamines	Stable	Stable
Dealing, trafficking in ecstasy	Stable	Stable
Dealing, trafficking in other drugs	-36.2%	28.7%
Cultivating cannabis	nc**	nc**
Manufacture drug	nc**	nc**
Importing drugs	nc**	nc**
Other drug offences	35.6%	Stable

This table shows the results of statistical tests for a significant upward or downward monthly trend in the number of criminal incidents recorded over 2 years and 5 years respectively, for selected offence categories. Where the trend is significant, the annual percentage change in the number of incidents is shown.

^ For murder and manslaughter, the data are counts of recorded victims, not criminal incidents.

^^ The trend test used was a two-tailed Kendall's rank-order correlation test with a 0.05 level of significance.

For the 24-month trend the annual percentage change is provided if the trend was significant.

For the 60-month trend the average annual percentage change is provided if the trend was significant.

Rates are only calculated for the major offences. Ranks are not calculated for murder due to the low number of recorded victims per LGA.

** Trend information is not calculated (nc) if at least one 12-month period in the selected timeframe had less than 20 incidents.

Note: The statistics need to be treated with caution as they represent only reported crime, therefore, a number of categories may also show lower than actual incidents.

Further, it is important to note that changes in reported crime are also significantly affected by factors other than changes in victimisation, including (i) changes in the willingness of the public to report crimes to police, and (ii) changes in policing policy and practice. The second factor particularly affects trends in recorded drug and weapons offences, and trends in offensive behaviour, so changes in the number of incidents for these offences may reflect shifts in policing, rather than in actual crime rates.

Where the number of recorded incidents is low, a very small change in the actual number of incidents may result in a disproportionately large change in derived ratios such as the rate per resident population or the percentage change over time.

Therefore, it is important that any increase in criminal activity should be factored into the auditing and development of site policies, procedures (including maintenance), technology and training.

Appendix 2 Explanatory Terms and Principles

A2.1 General Terms

Harris defines, explains and/or interprets the following terms relevant to this report:

(i) Crime Prevention

Social, economic, policing, community and personal initiatives, practices or policies aimed at identifying, containing, reducing and ultimately preventing opportunistic or planned anti-social or criminal behaviour.

(ii) Security Design [inter alia Safer-by-Design]

Comprehensive (holistic) crime prevention strategies, codes or guidelines; applying aspects of architecture, engineering and technology design to master planning (macro), design development (meso) and design detail (micro) project briefs.

(iii) Crime Prevention Through Environmental Design (CPTED)

CPTED is a coined version of security design; a model based on the concept of 'defensible space' and the design elements of territoriality, surveillance and access control. The CPTED model has largely been adopted throughout the developed world as legitimate crime prevention strategies.

(iv) Security Management [inter alia Crime Prevention Through Environmental Management (CPTM)]

Post-security design management initiatives by police, security and facilities operatives by (a) coordinated (crime) risk analysis and monitoring, (b) maintenance and renewal of security technology and (c) engaging project stakeholders and the wider community in awareness of and/or participation in, safe space and welcoming place experiences.

(v) Holistic Crime Prevention Project Profiling

Engaging inter-disciplinary design-and-construct and operational specialists to plan and execute crime prevention (security) design and management strategies over the life of a project; that is from concept to operational occupation.

(vi) Safe Space

Physical and social private, communal and public zones, areas, places or precincts where security design and security management are interdependently incorporated into built form development.

(vii) Welcoming and Safe Place

A built environment that welcomes, defines, guides, directs, encourages, regulates, challenges and limits pedestrian and vehicular activity to override and prevent opportunistic and planned anti-social and criminal behaviour through simultaneous (security) design and management initiatives.

A2.2 CPTED Principles

Harris is of the view that security design (CPTED) and security management (CPTM) strategies are interdependently and inexorably linked. Often they are not and, in circumstances where security design has been overlooked, traditional operational security management and technology are substituted.

CPTED's underpinning principles provide a theoretical and purposeful framework whereby architecture re-focuses, re-emphasises and/or re-packages design-against-crime practices that have long existed.

Harris identifies five CPTED principles that should inform all built form master planning and design developments. Each of the following principles informs, or is informed by, key planning and design purposes for all projects with regard to buildings, facilities associated structures and public domain and their inter-connectedness with specific development (project) security objectives. These objectives include project and precinct activation, visibility, liveliness and legibility criteria across day-night, week-day and week end use.

CPTED Principle 1	Territorial Definition
CPTED Principle 2	Access Control
CPTED Principle 3	Natural Surveillance

CPTED Principle 4 Activity Support
CPTED Principle 5 Target Hardening

There are also four spatial zones into which the principles may be applied:

- Zone 1 Public Space - for open and general use; precincts serving a variety of purposes;
- Zone 2 Semi-Public Space - open public precincts but with restricted usage;
- Zone 3 Semi-Private Space - space defined by occupancy and ownership usage;
- Zone 4 Private Space - singly defined purpose usage by specific individuals.

(i) Territorial Definition

This is a delineator of one or more of the above spaces. Territorial design defines form and function of spatial ownership, emphasising invitational purpose. Perimeters and creative bounded form confirm spatial integrity and cared for legitimacy.

(ii) Surveillance

Spatial design maximises opportunities for surveillance – formal and informal. The design principle increases the number, width, depth, height and length of sight lines: the capacity of people and technology to observe movement and activity at distance. Design legibility and spatial connectivity are key.

- *Natural surveillance* encourages casual observation of all users of known and defined urban space.
- *Social surveillance* encourages regular (and possibly casual) users of space to more deliberately observe and routinely monitor, challenge or report suspicious pedestrian and vehicle movements through precincts or into buildings.
- *Technical surveillance* employs digital and visual recognition technology to manage defined spatial access and support human surveillance activity. Closed Circuit Television or Networked IP Camera technology, alarms and access control systems are now mainstream crime prevention and crime management tools in urban design. While they must be incorporated into security design briefs, their inclusion should be the subject of separate documentation supporting CPTED's design principles. The (eventual) application of technologies throughout the entire Precinct are a given but are not part of this report's considerations.

All forms of surveillance encourages a 'security ownership' of territory and promotes informal 'security intelligence'.

(iii) Access Control

Access control design applies subtle architecture in support of territorial definition, by clearly indicating the directional or destination limits, restricting or halting access through certainty of access and movement. Lighting, movement corridors, landscaping, low-line fencing, steps and doorways (as opposed to doors) are obvious examples. The principle encourages 'distinguishing' design between legitimate access and users and/or occupiers of urban space, and those seeking access illegitimately or unlawfully.

(iv) Activity Support

This involves the use of creative signage, (external) lighting and other landscaping way-finding design to encourage intended patterns of usage, generating activity certainty or liveliness, particularly in the public domain. The activity support principle reinforces activity purpose and location security.

(v) Target Hardening

Target hardening increases the efforts that 'offenders' must expend in their intent to disrupt legitimacy and put at risk legitimate activity. It is directed at denying or limiting access to potential criminal targets through the use of more intentional and less subtle access control design including deliberate physical barriers such as security fencing, gates, locks and electronic alarms. However, the design goal is to avoid 'fortressing'.

A2.3 CPTM Principles

CPTM principles or elements support the CPTED platform and are integral to an overall (holistic) crime prevention regime across all forms of urban development – public space and building footprints. These principles are:

CPTM Principle 1	Design Maintenance
CPTM Principle 2	Systems Management
CPTM Principle 3	Engagement Monitoring
CPTM Principle 4	Risk Reappraisal
CPTM Principle 5	Outcome Evaluation

(i) Design Maintenance

CPTED design initiatives require regular maintenance and/or testing for reliability, obsolescence, redundancy and replacement. Lights, signs, landscaping, security doors, cameras, alarms and locks should receive scheduled maintenance and appraisal to ensure (design) capability.

(ii) Systems Management

This involves the testing and management of security systems as they integrate with fire and emergency systems to ensure operational readiness at all times.

(iii) Engagement Monitoring

Engagement of security managers with facilities and operational executives to ensure an on-going understanding of, and commitment to, security awareness, policies, practices and procedures.

(iv) Risk Reappraisal

Security and/or facilities managers conducting regular 'desk top' risk assessments to identify risk variables and options for managing those variables.

(v) Outcome Evaluation

Evaluating all CPTM principles incorporated into post-construction operations with a view to reporting strategy (policy, practices and procedures) outcomes key management and executive personnel.