



HARRIS CRIME PREVENTION SERVICES

Sydney International Convention, Exhibition
and Entertainment Precinct (SICEEP)

Darling Square: North East Plot

Crime Prevention Through Environmental Design (CPTED)
Report for the Public Domain

for

Stage 2 State Significant Development
Application (SSDA 7)

23rd October 2014

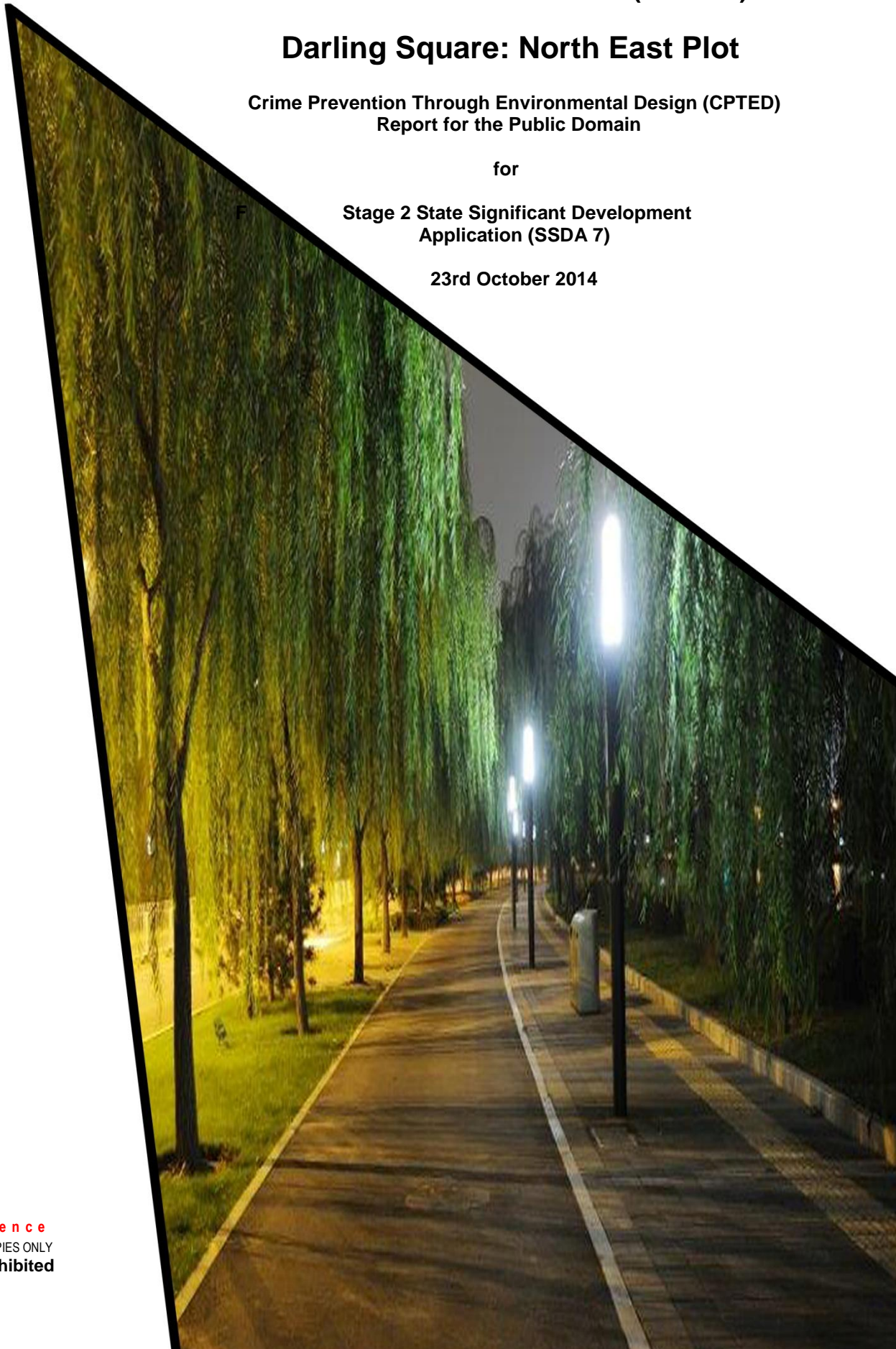




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1 Introduction

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

The Application (referred to as SSDA 7) follows the approval of a staged SSD DA (SSDA 2) in December 2013. SSDA 2 sets out a Concept Proposal for a new mixed use residential neighbourhood at Haymarket referred to as “Darling Square”, previously known as “The Haymarket”. Darling Square forms part of the Sydney International Convention, Exhibition and Entertainment precinct (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”.

More specifically this subsequent DA seeks approval for mixed use development within the North East development plot of Darling Square and associated public domain works. The DA has been prepared and structured to be consistent with the Concept Proposal DA.

1.1 Overview of Proposed Development

The proposal relates to a detailed (‘Stage 2’) DA for a mixed use residential development in the North East Plot of Darling Square together with associated public domain works. The Darling Square Site is to be developed for a mix of residential and non-residential uses, including but not limited to residential buildings, commercial, retail, community and open space. The North East Plot is one of six development plots identified within the approved Concept Proposal.

Under the Concept Proposal, the North East Plot is planned to accommodate a mixed use podium and three residential buildings (NE1, NE2, and NE3) above and within the podium structure. More specifically, this SSD DA seeks approval for the following components of the development:

- Demolition of existing site improvements including existing Sydney Entertainment Centre;
- Associated tree removal and planting;
- Construction and use of a predominantly 6 storey mixed use podium, including:
 - retail floor space and residential lobbies on Ground Level;
 - above ground parking;
 - residential apartments; and
 - communal facilities.
- Construction and use of three residential buildings above podium;
- Public domain improvements surrounding the site, including interim works;
- Provision of vehicle access to the development from Harbour Street;
- Landscaping works to the podium roof level; and
- Extension 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 SICEEP.

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 Master 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.
- A vibrant and authentic new neighbourhood at the southern end of the precinct, now called 'Darling Square', including apartments, student accommodation, 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; and
- Improved pedestrian connections linking to the proposed Ultimo Pedestrian Network drawing people between Central, Chinatown and Cockle Bay Wharf as well as east-west between Ultimo/Pymont and the City.

On 21 March 2013 a critical step in realising the NSW Government's vision for the SICEEP Project was made, with the lodgement of the first two SSD DAs with the (now) Department of Planning and Environment. The key components of these proposals are outlined below.

1.2.1.1 Public Private Partnership SSD DA (SSD 12_5752)

The Public-Private Partnership (PPP) SSD DA (SSDA 1) includes the core facilities of the SICEEP Project, comprising the new, integrated and world-class convention, exhibition and entertainment facilities along with ancillary commercial premises and public domain upgrades. SSDA1 was approved on 22 August 2013.

1.2.1.2 Concept Proposal (SSD 13_5878)

The Concept Proposal SSD DA (SSDA 2) establishes the vision and planning and development framework which will be the basis for the consent authority to assess detailed development proposals within the Darling Square Site. SSDA2 was approved on 5 December 2013. The Stage 1 Concept Proposal approved the following key components and development parameters:

- Indicative staging of demolition and development of future development plots;
- Land uses across the site including residential and non-residential uses;
- Street and laneway layouts and pedestrian routes;
- Open spaces and through-site links;
- Six separate development plots, development plot sizes and separation, building envelopes, building separation, building depths, building alignments, and benchmarks for natural ventilation and solar access provisions;
- A maximum total gross floor area of 197,236m² (excluding ancillary above ground parking), comprised of:
 - A maximum of 49,545m² non-residential GFA; and
 - A maximum of 147,691m² residential GFA;
- Above ground car parking including public car parking;
- Residential car parking rates;
- Design Guidelines to guide future development and the public domain; and
- A remediation strategy.

In addition to the approval of SSDA1 and SSDA2, the following approvals have been granted for various stages of Darling Square site:

- Darling Drive (part) development plot (SSDA3) for the construction and use of a residential building (student accommodation) and the provision of associated public domain works approved on 7 May 2014;

- North-West development plot (SSDA4) for the construction and use of a mixed use commercial development and public car park building and associated public domain works approved on 7 May 2014; and
- South-West development plot (SSDA5) – construction and use of a mixed use residential development and associated public domain works approved on 21 May 2014.

Approval was also granted on 15 June 2014 for SSDA 6 which includes the construction and use of the International Convention Centre (ICC) Hotel and provision of public domain works.

This report has been prepared to support a detailed Stage 2 SSD DA for mixed use development and associated public domain works within Darling Square (SSDA 7), consistent with the approved Concept Proposal (SSDA 2).

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 (refer to **Figure 1**). The Darling Square Site is:

- located in the south of the SICEEP Site, within the northern portion of the suburb of Haymarket;
- bounded by the Powerhouse Museum to the west, the Pier Street overpass and Little Pier Street to the north, Harbour Street to the east, and Hay Street to the south; and
- irregular in shape and occupies an area of approximately 43,807m².



 SICEEP Site

Figure 1 – Aerial Photograph of the SICEEP Site

The Concept Proposal DA provides for six (6) separate development plots across the Darling Square Site (refer to **Figure 2**):

1. North Plot;
2. North East Plot;
3. South East Plot;
4. South West Plot;
5. North West Plot; and
6. Western Plot (Darling Drive).

The Application Site area relates to the North East Plot and surrounds as detailed within the architectural and landscape plans submitted in support of the DA.



Figure 2 – Concept Proposal Development Plots

1.4 Planning Approvals Strategy

The SICEEP Project has resulted in the lodgement of numerous SSD DAs for the various components of the redevelopment project. Future applications will continue to be lodged in accordance with the Concept Proposal SSD DA for the remaining development plots of Darling Square Site.

2 The Consultancy Scope

Consultancy required Harris Crime Prevention Services (Harris) to provide a Crime Prevention Through Environmental Design (CPTED) report with respect to the public domain, associated with the North East Plot (NEP) development. The scope involved:

- reviewing current (discipline-based) drawings to understand the public domain design philosophy in relation to providing interconnected safe place in Darling Square (the Square);

- identifying CPTED specifics of the NEP's public domain including under-crofts, access approaches, gathering points adjacent to building facades, outdoor retail areas, ground level lobbies and interconnecting streetscapes, facilitating diverse activity generation from, and for, the mixed-use built form;
- referencing current contextual anti-social and criminal behaviour likely to impact on the development;
- clarifying with Lend Lease design team, the CPTED issues and principles incorporated into the drawings;
- ensuring CPTED initiatives accord with relevant legislative and/or planning instruments;
- producing a report in response to the Secretary General's requirements regarding public domain design for the NEP.

2.1 Public Domain Definition

In relation to the scope, the *public domain* as defined by Lend Lease for all Darling Square Plots, covers:

- spaces around building perimeters as pedestrian corridors, communal or gathering areas;
- under-crofts and feature columns within the plot as part of the building façade (at ground level);
- outdoor retail areas, commercial and residential lobbies at ground level;
- extended areas beyond development site boundaries (ie: into the greater Haymarket precinct).

2.2 Disclaimer

The commentary, conclusions and recommendations contained in the report are based on information provided to Harris Crime Prevention Services at the time of this assignment. The reduction and/or prevention of crime in urban environments, through appropriate design and management decisions, are internationally accepted strategies. Implementing this report's conclusions and/or recommendations, while following these strategies, cannot guarantee that future crime will be reduced or prevented.

3 Stakeholders

The stakeholders are the key government and consortium agencies, users of, and visitors to, NEP and the broader Haymarket precinct, namely:

- Infrastructure NSW;
- Darling Harbour Live Consortium;
- Owner-Operators of buildings ;
- Residential and retail tenants including IQ Hub, of NE1, NE2, NE3;
- Destination NSW;
- City of Sydney;
- Sydney Harbour Foreshore Authority;
- NSW Police Force;
- Commercial clients, retail staff and customers and NEP visitors;
- Visitors to the Darling Square public domain;
- Haymarket Chamber of Commerce.

4 The NEP and Darling Square's Public Domain

The NEP is a major gateway to Darling Square precinct, attracting vehicular and pedestrian traffic from Goulburn, Pier, Little Pier, Harbour, Hay, Little Hay and Factory Street(s) and Kimber and Factory Lanes. The NEP footprint continues the theme of 'welcoming and safe place' for all who access Darling Square. The built form and public domain offer a transition between some of Haymarket's and Ultimo's history and its present mix of activity including tertiary campuses, retail, residential and commercial premises.

The NEP public domain is a critical (collective) space in the overall 24/7 pedestrian activation vision. Internal and external footprints inviting public (visitor) exploration of the Plot and its surrounds will offer a

mix of landscaped gathering pockets with associated seating furniture, further facilitated by al-fresco retail connected to linked pedestrian share-ways, all providing seamless movement between the NEP, North, North West, South West and Western Plots. The gathering spaces and movement corridors indicate (a) day-night way-finding certainty, (b) sight line clarity and (c) opportunities for observation and informal (passive, casual) surveillance.

From a crime prevention (security) perspective, the NEP and the entire Darling Square precinct replaces vulnerable and 'dead' space, with total activity renewal. The Bureau of Crime Statistics and Research (BOCSAR) has identified the southern end of Sydney's CBD as crime 'hot spots' referred to in the Appendix 1 data. The lighting and signage master planning and other strategies by the City of Sydney (the City), aims to negate this image. CPTED design strategies for the Darling Square precinct will complement the City's similar crime prevention design initiatives for the southern CBD.

The NEP will be the next facilitator for 24/7 pedestrian activation flowing to and from the southern CBD. The combined high and varied activation levels throughout Darling Harbour, Darling Square and the evolving renewal of Ultimo and Broadway, will generate a collective sense of safety (security). The residential, commercial, IQ hub and retail tenancies of NE1, NE2 and NE3 will significantly contribute to this vibrancy with re-developed TAFE and University campuses (including more intentional connections with the University of Sydney and University of Technology Sydney) and with extended links to Chinatown and the Frasers Broadway development.

5 Crime Reduction and Prevention: Design Parameters

The crime prevention design parameters for the NEP mirror those of the surrounding plots. They have a legislative base – State and local government – and they are based on designing-out-crime principles exhibited in the theoretical framework, Crime Prevention Through Environmental Design, (CPTED).

In relation to the Darling Square precinct, the NSW Department of Planning and Environment has issued the Secretary General's Environmental Assessment Requirements (SEARs) 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. Safer-by-Design principles, CPTED, a framework which applies aspects of architecture, engineering and technology to built form design aimed at reducing and/or preventing crime in urban environments. Reference to this requirement falls within Point 3 - "Built Form and Design Excellence" of the SEARs covering the Darling Square's overall concept and master planning; and "Point 4 - Public Domain and Urban Design".

The original DGRs for SICEEP public domain contexts align with the SEARs; specifically: "*The DGRs and Infrastructure NSW documentation (High Level Output Specifications, Project Brief Appendix A.08 2.7 and A.63; DGRs Attachment 1 – Deliverables), reference CPTED in the design of all building elements and/or the public domain. An initial systems management report and early public-private-partnership guidelines for SICEEP, (Ogden, Initial Security Plan 7.3.C.6 and PPP Report Schedule D 5.6.C.3) refer to the need for security design and management regimes throughout SICEEP; the Ogden report detailing security management specifics.*" These references reinforce the importance of ensuring CPTED capability across the entire Haymarket built form and open space footprints.

In previous reports to the client, we have noted that: "*The DGRs require CPTED design principles to (i) underpin the precinct's public domain 'welcoming and safe place' reputation, and (ii) ensure that the CPTED public domain design principles are integrated with principles to be applied to the mixed-use development plots and the student accommodation, and (iii) by implication, (and in accord with Infrastructure NSW), enhance the overall precinct's personal and property safety (security) integrity as part of its 'world class destination' marketability.*" (Harris: 2013)

6 CPTED-Informing Legislation, Instruments and Agencies

The SEARs for the NEP are informed by State environmental law. The inclusion of CPTED principles are endorsed or supported by policies and practices enacted or implied by the Sydney Harbour Foreshore Authority, City of Sydney, Transport for NSW and NSW Police Force.

6.1 The EPA Act, 1979 (as amended)

The SEARs are informed by the EPA Act and Regulations 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 relevant stakeholders; in this case, Darling Square’s stakeholders. The public interest in the proposed Darling Square precinct is to generate, through security (CPTED) design and on-going security management, a zero-tolerance of anti-social and criminal behaviour throughout Darling Square and entire SICEEP footprint.

The public interest is particularly relevant when it comes to the security design and security management of Darling Square’s public domain. The NEP’s public domain architecture should contribute to the total Darling Square precinct vision of safe round-the-clock vibrancy. Maximising *“the public interest”* in terms of crime prevention within public domain spaces is the intent of S 79C (1) (e). The Haymarket’s total public domain concept, master plan and design development/detail, should reflect that intent.

6.2 Sydney Harbour Foreshore Authority

The Sydney Harbour Foreshore Authority Act 1998, establishes a management framework, setting out functions...“to protect and enhance the natural and cultural heritage of the foreshore area; and,...”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, 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).

The Authority has a collective security oversight of the Darling Harbour precinct. Because that precinct seamlessly extends to Darling Square, it is reasonable and valid to align that precinct’s crime prevention architecture with that of the greater (Darling Harbour) footprint. We are of the view that the NEP’s public domain architecture is a thematic contributor to that alignment.

6.3 City of Sydney (The City)

The Safe City Strategy document 2007 – 2012 (currently under a second edition review), emphasises the need for built-form and public domain design to incorporate CPTED principles. *“The City aims to design and maintain the public domain to produce attractive and well managed environments that help to discourage criminal or anti-social behaviour.”*

The Strategy aims to minimise public risk within developments under its jurisdiction, referring to relevant supporting State legislation. The Strategy also aligns with local police, public transport and business chamber accords with regard to alcohol consumption and streetscape behaviours throughout the CBD and the City’s village communities.

It is important that the NEP’s public domain security (CPTED) architecture and subsequent security management aligns with the City’s broader crime prevention initiatives for the southern CBD and the village suburbs of Pyrmont and Ultimo. In turn the City’s strategies are aligned with the State’s requirements, reflected in the SEARs for this development.



There are two underpinning legislative platforms around the City's current and future (crime prevention) Safe City Strategy – the Environmental Planning and Assessment (EPA) Act, 1979, as amended, and the Children (Protection and Parental Responsibility) Act, 1997, as amended. This Act states in part: "*The Children (Protection and Parental Responsibility) Act (1997) provides a statutory basis for the development of community safety or crime prevention plans with local governments taking the lead agency role. This Act recognizes the importance of community safety activities that draw upon local knowledge and services in adopting a strategic partnership approach to addressing local community safety issues...*" The Local Government Act gives councils the power to issue and enforce orders which aim to prevent activities that place members of the public at risk. The inherent risks of anti-social and criminal behaviours are critical areas of local government enforcement in cooperation with police and neighbourhoods.

Pending the release of a (second) safe-city policy, there are other existing and re-worked instruments reflecting the broader and changing CBD demographic. These include the City's Safe City Guidelines for CPTED in Apartment Living and discussions around the Sustainable City 2030 document to focus on defining place and green space, the 'night time' city, public facilities, social connections, transport connectivity and activation of public spaces.

Drawings and documentation provided for this report have been reviewed in relation to compliance with the City's intent, that is, to mitigate crime risk through safer-by-design (CPTED) measures. As with our earlier reports in relation to the North West and South West Plots, we are of the view that the client has taken a whole-of-site approach to preventing crime in support of the City's initiatives.

6.4 Transport for NSW

Transport for NSW has issued planning proposals that support the development of (a) 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.

The NEP and the other Darling Square developments (plots) will be serviced by the southern CBD light rail line and associated bus routes. NEP's public domain will connect with streets accessing that network. The NEP's perimeter landscaping, lighting and signage should complement and advance the City's (security) design objective of surrounding streets in creating safe pedestrian corridors to those transport services.

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 CBD and '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 Darling Square is desirable.

7 The Darling Square's Social Context and Crime Risk Factors

7.1 Crime and Crime Risk Profiles

There has been little change to the contextual information in relation to crime data from BOCSAR, since our previous (2013) reports in relation to other plots. In the past, anti-social and criminal activity in and around the proposed Darling Square site has been characterised by episodic intimidating and threatening behaviour, mainly evidenced at night and on week-ends. BOCSAR data indicated vandalism, theft and assaults in and around Pyrmont, Ultimo, Chinatown and the northern end of Broadway. The Darling Square precinct and neighbouring southern city developments are progressively changing that (crime negative) profile.

The Darling Square's safe place goals should match those of the entire SICEEP footprint; that is, to ensure welcoming-and-safe-place outcomes. These strategies should reflect the requirements of other listed stakeholders, in particular the City of Sydney's goals to re-define and market the southern CBD as an exciting (safe) 24/7 destination. Our earlier (2013) report noted: *"The Haymarket is central to the City's and State's safe destination goals for the southern CBD. As this area experiences progressive urban renewal, the inclusion of safe design initiatives across all precincts will hopefully broaden the overall crime prevention 'reach'."*

Matters of lighting, landscaping and signage are key (CPTED Principle 4) considerations both for the NEP and the neighbouring plots. These critical elements support safe night-time activation in and around the Plot. All built form design necessarily differs in form and function. Therefore, CPTED principles may be applied to the specifics of the NEP and not automatically mirror their application to the other plots. However, there will be some common and coordinated applications.

For example, there should be a coordinated lighting sub-plan whereby street, building perimeter and landscape lighting styles, luminaire design, colour renditions, throw and spill impacts are complementary to surrounding street lighting in order to create a sense of safe, purposeful way-finding (pedestrian) movement. Design development/detail requires design synergy to avoid spillage and penetration confusion between the external NEP lighting (facade, other perimeter, lobby, retail, IQ hubs and car park entrances) and the 'beyond' lighting of nearby streets, Square gathering points and landscaped zones. The matter of lighting complementarities between connecting CBD precincts and The Haymarket should receive post-construction attention, in order to discourage CPTED-prompted crime prevention displacement beyond the precinct's boundaries.

7.2 Public Domain Plot and Precinct Connectors

The NEP is bounded by Harbour Street, Little Hay Street and Factory Lane with the western perimeter fronting the Square. The three street connectors promote directional enquiry to each of the function or operational building zones (NE1, NE2 and NE3). Each building offers varied mixed-use experiences, combining liveliness and permeability, as with the neighbouring plot developments. The three buildings are readily discernible with (potential) access indicated by the site's overall set-back from the (street) connectors, providing almost uninterrupted sight lines along each perimeter facade. The NEP's internal and external (perimeter) public domain design aims to reinforce overall sight line certainty.

The NEP is interconnected with the adjacent mixed-use plots, including the approved West Plot student accommodation, west of Darling Drive. The interconnectedness creates purposeful and clearly articulated safe- place design continuity. The continuity parameters include the precinct's visibility, liveliness and legibility to address the objective of a whole-of-site 24/7 safe destination.

The NEP will add to this intentional 24/7 activation. The Plot's retail and IQ hubs anticipate this outcome. The residential towers and commercial offices will also generate 'stream' pedestrian day and night traffic volumes. The intentional night time economy to, from, around and within the NEP, will also encourage 24/7 precinct-wide natural surveillance; deterring random or planned criminal or anti-social behaviour. The NEP will ensure a 360 degree (surveillance) frame of reference. The NEP's surveillance 'frame' will cover Hay Street, Little Hay Street, Factory Lane and the Square.

8 CPTED Principles

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. We define five CPTED principles that should inform the NEP's public domain footprint.

CPTED Principle 1	Territorial Definition – defines spatial form and function
CPTED Principle 2	Access Control – manages access to defined areas
CPTED Principle 3	Natural Surveillance – casual, informal, but purposeful observation
CPTED Principle 4	Activity Support – design to reinforce safe purpose or location
CPTED Principle 5	Target Hardening – design to reduce the ease of offending

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.

This report's scope limits CPTED comment to Zones 1 and 2, as defined.

9 Application of CPTED to the North East Plot Public Domain

SSDA7 addresses the building envelope and immediate interface with the public domain, While the surrounding streets and the Square are the subject of separate development applications, the CPTED principles are applicable to the specific interface spaces, namely:

- perimeter approaches;
- boundary spaces external to building facades;
- outdoor retail areas;
- commercial, IQ hub and public access lobbies at ground and podium levels;
- immediate vicinity streetscape connectivity;
- linkages with Darling Square's broader (public) domain.

The application of CPTED to public domain areas should ultimately extend to the Plot's entire external and internal architecture to ensure building and domain safe design integration. (We re-emphasise that CPTED principles should be applied to 'standardise' the safe place design of approaches to, and within, each of Darling Square's built form and public domain footprints.)

The NEP drawings have been reviewed in the light of that total footprint and in conjunction with our report on the South West Plot's public domain; as the NEP has a similar form and function footprint. We maintain that activity generation is critical to one of CPTED's principles – natural (passive or informal) surveillance. The proposed retail and social gathering spaces planned for Darling Square will facilitate intra plot and inter-plot surveillance. In our view, the Darling Square development encourages and maximises 24/7 passive surveillance.

Public domain pockets are interwoven within and around the entire Darling Square site, promoting an eyes-and-ears surveillance and safe place stewardship culture. There is sufficient published evidence to suggest that anti-social and crime risks are controlled, reduced and prevented by legitimate 'claimed space' activity. The opportunity for invitational public domain access in and around the NEP's ground and podium levels strengthens the certainty of safe place outcomes.

The NEP's footprint provides surveillance opportunities from (i) the podium, (ii) each building's external entry portals, (iii) the retail spaces, (iv) the IQ hubs and (v) the residential apartments. The diverse activity generated around and within the footprint at all levels in all three buildings, provides a surveillance continuum, virtually on a 24/7 basis.

9.1 The Plot's Perimeter Approaches and Boundaries

It is essential that each (boundary) street, lane and the Square promote day-night identity certainty, which guides pedestrians: (a) legibly along the four facades, (b) towards building public access points, including retail, (c) towards social gathering spaces and (d) indicates non-public access.

Reviewed drawings indicate definitional clarity with regard to each of these requirements. The Square provides a seamless connection with NEP's western perimeter. There is no visual uncertainty between the North Plot's eastern (ground level) facade and the NEP's north western corner. There are adequate sight lines between the Square and Factory Lane. The Harbour and Little Hay Street connections with the Plot's southern and eastern boundaries also have sight line clarity.

Drawings indicate each of the Plot's public access entry points to ground and podium levels. As with the other plots, the NEP building footprint has appropriate set-backs along each of its four (feeder) street boundaries, enhancing approach clarity. Approach clarity also defines access place and purpose. Design development/detail will enhance this territorial principle through 'on approach' lighting, landscaping and signage (activity support) design.

The footprint also indicates potential gathering spaces, again subject to detailed landscaping and lighting plans. We understand that all public domain landscaping within the boundary of this SSDA will engage with approach pathways and terracing to ensure pedestrian awareness of the Plot's access protocols. Concept landscaping of gathering and/or meeting spaces defines activity generation and legitimacy for all points of entry and will enhance building approach and/or perimeter surveillance.

The greatest approach legibility fronts the Square. The lesser legibility covers the northern and southern perimeters where visual approach cues are only slightly compromised by the usual visual impacts of building footprints which is a characteristic of the whole CBD.

We conclude therefore that pedestrian movement in and around the Plot's boundaries is sufficiently directional and legible (to and from connector streets including the Square) to promote low or negligible levels of pedestrian vulnerability by design. We again note that natural surveillance around all four perimeters will be encouraged by the IQ hub, retail tenancies, residential apartments, public and private entry activation at regular day and night intervals. The apartment window and balcony orientations for NE1, NE2 and NE3 will ensure routine surveillance of street and podium level activation.

As an architectural feature, we note the proposed rectangular vertical ground to podium columns. These and other smaller recesses don't appear to pose any concealment or entrapment risks as they do not obscure any of the sight line angles around the NEP's perimeter.

9.2 Entry Foyers, Landscaping and Public Domain Separation

We understand that the NE2 building has a separate entry while NE1 and NE3 share theirs. The residential and/or commercial entry foyers will be appropriately restricted to the relevant tenancies. The concept drawings indicate no issues with foyer approaches and there are no restrictive sight line concerns. From a surveillance view point, each foyer's approach shows unobstructed sight line (approach) visibility. As with the South West Plot, there is separation of each ground level entrance. Private residential parking is appropriately separated by perforated roller shutters. The concept parking layout design is appropriately spaced to facilitate observation clarity.

The landscaping concepts are designed to promote informal ground level and podium circulation, pocket gathering spaces and a welcoming extension of the greening of each plot and the Square. Drawings indicate grassed and ground covering, low boxed or plot plantings complemented by mid to high canopy trees as features. Design development/detail should ensure that there are no opportunities for concealment or entrapment along the pathways, at the gathering (walled and seating) spaces and in less accessible corners. Deep soil tree plantings should ensure that canopy understory exposure maximises sight lines. Shrub plantings should be set back from pathways and should reach no more 1.0 – 1.5 metres in height at maturity to limit concealment. Walled seating spaces should enable near to mid distance observation, while respecting privacy.

Lighting the landscaped areas for sight line and surveillance certainty should aim to reduce or eliminate glare or shadowing; maximising consistent (Kelvin) colour scales and utilising throw and soft 'wall washing' where appropriate. Lighting design is always problematic from a CPTED perspective. Decorative eye-level, up-lights, bollards or spherical luminaires pose a problem in public or communal spaces as there are often lighting style and colour clashes resulting in unwanted glare and shadowing. Decorative overhead or down lighting creating wash, throw or spill effects, avoids glare and shadowing problems. We realise this is a difficult balance, but raise it for design development consideration.

9.3 Outdoor Retail – The Haymarket Square

The Square is the precinct's public domain hub, which in turn invites exploration along the Boulevard, into Dickson's Lane and to surrounding features of the entire precinct. (The design of the Square is not included within SSDA7 and will be subject to a further development application.) The NEP's exploratory public spaces will form part of the Haymarket's extensive ground level and podium level exploration 'grid', linking the NEP's northern, southern and western retail and/or commercial tenancies with those of neighbouring plots and the proposed outdoor experiences in the Square itself. This combined liveliness and legibility will collectively ensure activation legitimacy, encouraging high levels of casual 24/7 occupancy, which in turn, discourages anti-social or criminal behaviour.

In relation to public domain security (safety), we re-iterate observations from our 2013 reports on the North West and South West Plots. The combined mixed retail zones provide linear breaks around each Plot's boundary, facilitating 'owned' space, particularly if 24/7 activation of the Square and its surrounds is realised. Promotion of outdoor retail will enhance surveillance and more purposefully activate the space.

From a CPTED perspective, activation of the Square, the Plot's surrounding approaches and street activation edges via interconnecting streets and lanes, should add safe-place value as permeable thoroughfares characterised by high visibility exploratory and 'stay' attraction. There are fewer opportunities for anti-social intimidating behaviour given this proposed level of activation continuity. The 'certainty of safety' for retail tenants and their employees will also be enhanced.

9.4 Activation with Macarthur Street and the UPN

The Ultimo Pedestrian Network (UPN) initiative will eventually connect with the Darling Square precinct. Its design has significant CPTED features, recommended by JBA Planning. The UPN parallels Darling Drive and follows a redundant rail line to be transformed into a pedestrian connector between Hay Street and Ultimo Road. Its final stage will link with a proposed new pedestrian access design from Macarthur Street to the Darling Square project. The three-way link between the UPN, Macarthur Street and the Haymarket's SWP is significant. It will encourage greater pedestrian flow from the neighbouring tertiary campuses and from Ultimo streets, including a more transparent connection with the Power House Museum. While the UPN and Macarthur Park are the subject of separate development applications, their proposed interconnectedness with the Square strengthens the broader safe pedestrian activation continuum objective.

Together with the orientation of the South East and South West Plot's, The NEP's south eastern corner and the Little Hay Street pedestrian extension will invite relatively seamless pedestrian connectivity with Macarthur Street and UPN users. Public domain design development of this interconnectivity provides an opportunity to 'model' a uniform safe-place strategy through intentional collective activation.

9.5 Streetscape Connectivity and Broader Public Domain Linkages

From a crime prevention perspective, each Darling Square plot promotes intra site and inter site (adjacent precinct) public domain connectivity. In our view, the NEP's internal and perimeter public domain design contributes to that connectivity. Safe spatial liveability is Darling Square's reputational objective and, in our view, the NEP's public domain architecture contributes to that objective.

The NEP footprint connects seamlessly with the Square's pocket gathering, retail spaces and with the Boulevard. The surrounding streetscapes propose gathering spaces and shared cycle/pedestrian pathways. The Boulevard continues as the spinal focus of Darling Square and SICEEP developments. Its relationship with the NEP supports the Darling Square's connectivity objectives.

9.6 Specific Public Domain Crime Risks

High level transparent and vibrant public domain activation in and around the NEP's envelope can also pose risks from persons wishing to cause damage to building structures, including damage to utilities and communications infrastructure. Design development will doubtless address more formal (IP Camera Network) surveillance and physical barrier options as part of on-going security management for this and other plots within the Darling Square. High profile buildings and public spaces have now become possible targets for deliberate terrorist-style attacks. While it is usually not possible to easily identify or mitigate such risks, basic design steps can be taken to minimise them. These steps relate to landscaping, lighting and infrastructure, which, together with other measures, should be addressed at design development.

Publicly accessible landscaped paths and gathering pockets can provide opportunities to hide suspicious packages or explosive devices left un-noticed under shrubs, under fixed furniture or secreted just beneath soil or mulch, especially in boxed plantings. As extreme as it may seem, a desirable option is to assess all landscaped areas with a view to installing perforated wire or plate mesh at around 50 to 100 mm depths as a proactive preventative measure. It is a prudent and cost-effective risk mitigation option.

Public domain internal and external lighting should ensure that plotting illuminates corners, under-crofts, recesses and/or ramps; all locations for intentionally leaving suspicious bags and/or packages. From a crime prevention perspective, we encourage installation of overhead pole or recessed down luminaires specifically to enhance perimeter and internal (public domain) sight lines while avoiding shadowing and glare. Consideration could be given to installing subdued under-seat lighting in vulnerable open space or landscaped areas, to reduce the likelihood of concealing bags or packages in those locations.

All utilities infrastructure should be securely contained to reduce or eliminate the risk of tampering, aimed at causing disruption and damage. We particularly refer to past practices in existing CBD buildings where electricity kiosks and/or pumps, pipes, cables, meters and booster pumps for water, fire and sewage are either exposed at street level or are within easy reach in public car parks. Exposed infrastructure should now be considered criminal targets. Design development should ensure that such utilities, and associated piping or cabling, are not exposed to public reach.

10 Scope Conclusions

The North East Plot's drawings have been reviewed in accordance with the consultancy scope. Drawings indicate significant 24/7 mixed-use pedestrian activation within and around the NEP. This development's public domain will merge with those surrounding the North, North West, South West, South East and Western Plots. The entire public domain allocation for Darling Square should collectively and seamlessly ensure 'welcoming and safe place' for the precinct.

Drawings define public domain and private space at ground and podium levels. High volume and frequent activation will enhance surveillance options along each of the Plot's boundaries. Surveillance will be further enhanced by the Plot's outward-facing towers, ground level and podium orientations, thereby encouraging retail, residential and commercial tenancies to casually observe pedestrian movement and gatherings in surrounding streets and landscaped zones.

The Plot's relational activation with Little Pier Street, Little Hay Street, Factory Lane and the Square, in conjunction with activation generated by each of the other plots and the Boulevard, will strengthen overall (observational) ground level surveillance. The Plot's activation with the Boulevard and Square will be supported by extended retail trading.

In addition, the Plot's connectivity to and through adjacent southern Sydney precincts, including the proposed (western) student accommodation plots, tertiary campuses, the markets, and Chinatown, will provide new and strong CPTED sight line corridors. Innovative pedestrian penetration connecting Macarthur Street and the Ultimo Pedestrian Network with the Plot's footprint should significantly deter anti-social or criminal behaviour in those precincts.

We are advised that design development will focus on the specifics of landscaping, lighting and signage (activity support) design. All are key elements of public domain safety around the Plot's boundaries; set-

backs, streetscapes and open (pocket) spaces; inviting informal gathering, alfresco dining, walking or cycling. Lighting and landscaping design of the Plot's eastern Hay Street (and Little Hay Street) pedestrian extension, paralleling the light rail corridor, will require sensitive and coordinated planning in partnership with City of Sydney and the Sydney Harbour Foreshore Authority.

11 Conclusions Summary

Harris Crime Prevention Services is of the opinion that the North East Plot's public domain design accords with the Schedule 2 requirements of the Secretary General, NSW Department of Planning and Environment, in that, CPTED principles have been considered and applied to concept designs.

We are also of the view that the Plot's public domain designs align with crime prevention (community safety) policies and/or objectives of the Sydney Harbour Foreshore Authority, the City of Sydney, Transport for NSW and the NSW Police Force, in promoting safer-by-design strategies throughout the Sydney LGA.

We note the client's intention to advance the implementation of CPTED principles at design development and design detail stages.

12 Methodology

The methodology indicates the process undertaken taken by the consultants in preparing our report. The consultants have:

- (a) reviewed the drawings in order to understand the North East Plot's public domain potential as a contributor to the overall Darling Square 'welcoming and safe place' vision;
- (b) received input from the North East Plot's Project management representatives;
- (c) noted the contextual crime risk backdrop;
- (d) (previously) visited the site during the day and night;
- (e) reviewed (security focussed) State and local government planning instruments and/or the crime prevention policies outlined in relevant government authority documentation.

13 References

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- 4 Director General of Planning and Infrastructure NSW (DGRs) under Schedule 2 of the Act (revised 21st January 2013).
- 5 Harris Crime Prevention Services, Security Design Consulting Services: The Haymarket Master Plan, March 2013.
- 6 Harris Crime Prevention Services, Crime Prevention Through Environmental Design Reports: North West and South West Plots, Public Domain, 2013.
- 7 Hassell, Southern Precinct Public Domain Plan – concept drawings.
- 8 JBA Planning, CPTED Assessment – Ultimo Pedestrian Network Stage 2, 2012.
- 9 NSW Government, 1979, Environmental Planning and Assessment Act and Guidelines, NSW Government publication.
- 10 NSW Bureau of Crime Statistics and Research statistical data on Haymarket suburb, 2014.
- 11 NSW Bureau of Crime Statistics and Research, City of Sydney crime hotspots data 2014.
- 12 The Sydney Harbour Foreshore Authority Act 1998.
- 13 Sturt Noble Associates – Concept landscaping drawings October 2014, incl. SK-1432-01.



- 14 Tzannes Associates, architecture – urban design, concept drawings set: 10424 DHL Nos: AD: 000100, 020100, 020200, 0202000, 030100, 030200, 030300, 030400, 030500, 030600, 041000, 041100, 042000, 042100, 043000, 044000, 044100, 050100, 050200. Rev A, September 2014.
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Appendix 1 CBD Related Crime Data from the NSW Bureau of Crime Statistics and Research (BOCSAR)

We caution that BOCSAR data provides a general overview; no specific locations, time of day, outcomes of investigations as no police reports are released. However the data is indicative of the fact that the crime categories listed are of concern to a city intent on attracting greater visitor numbers, throughout the year, in all seasons and beyond daylight hours. Alcohol and drugs are seen as major negative catalysts in profiling some southern CBD precincts as (presently and historically) unsafe.

NSW Crime Statistics July 2011 to June 2014 for Haymarket (Suburb)							
	3 Year Trend to June 2014	Year to June 2012 Count	Year to June 2012 Rate	Year to June 2013 Count	Year to June 2013 Rate	Year to June 2014 Count	Year to June 2014 Rate
Homicide	n.c.	0	0	0	0	0	0
Assault - domestic	down 23.8% per year	49	810.4	43	697.5	29	470.4
Assault - non Domestic	down 15.6% per year	339	5602.5	342	5547.4	246	3990.3
Sexual assault	n.c.	9	148.6	15	243.3	7	113.5
Indecent assault, act of indecency and other sexual offences	stable	25	415.9	34	551.5	21	340.6
Robbery without weapon	stable	41	680	24	389.3	34	551.5
Robbery with a firearm	n.c.	2	33.1	2	32.4	1	16.2
Robbery with weapon not a firearm	n.c.	13	214.1	9	146	9	146
Harassment, threatening behaviour & private nuisance	stable	34	563.8	42	681.3	40	648.8
Other offences against the person	n.c.	4	23.5	10	58.1	5	29
Break & enter dwelling	n.c.	20	334.1	13	210.9	15	243.3
Break & enter non dwelling	stable	59	979.7	52	843.5	59	957
Motor vehicle theft	n.c.	9	149.9	11	178.4	3	48.7
Steal from motor vehicle	stable	143	2352.6	112	1816.7	75	1216.5
Steal from retail Store	down 22.2% per year	185	3058.5	159	2579.1	114	1849.1
Steal from dwelling	stable	20	332.2	21	340.6	23	373.1
Steal from person	down 16.4% per year	406	6712.7	357	5790.8	289	4687.8
Liquor offences	up 21.9% per year	249	1457.6	392	2276.7	373	2166.3
Disorderly conduct	down 19.4% per year	196	3242.8	219	3552.3	130	2108.7
Drug offences	down 29.4% per year	654	10807	474	7688.6	332	5385.2
Malicious damage to property	stable	181	2993	235	3811.8	130	2108.7
Prohibited and regulated weapons offences	stable	59	981	60	973.2	38	616.4
Arson	n.c.	2	33.1	5	81.1	0	0

Appendix 2 Explanatory 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 a theoretically-based crime-prevention-by-design strategy.

(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 security management awareness, (d) responding appropriately to crime related risks, threats and incidents and (e) evaluation CPTED and CPTM outcomes.

(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 Place or 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 and complementary (security) design and management initiatives.

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.

Appendix 3 CPTED Principles – Definitions

Principle 1: 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.

Principle 2: 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'.

Principle 3: 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.

Principle 4: 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.

Principle 5: 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'.