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12 March 2010

Mr Russel John Strahle
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SECURITY-IIN-CONFIDENCE

Dear Russel,

**Security Design Report:
Macquarie Place, Parramatta**

On the 5 February 2010 a Draft Report was provided to you to check for any 'errors of fact'. We also noted some revisions to current drawings. These revisions do not impact on our analysis or recommendations. We now have pleasure in submitting the Final Report.

Thank you for engaging Harris Crime Prevention Services.

Yours sincerely,

Leon L. Harris Dip.Sec.Studs.,CPP
Principal Consultant



Security Design Report for Project Application

Macquarie Place Development
on behalf of
Crown Landmark Pty Ltd

March, 2010

Security-In-Confidence

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A EXECUTIVE REPORT

The proposal by Crown Landmark Pty. Ltd is to develop a Parramatta CBD mixed use site bounded by Macquarie Street to the north, Marsden Street to the east and Hunter Street to the south. The western perimeter borders an existing multi-storey complex. The development is a mixed use proposal comprising retail, commercial and residential operations. The site is of heritage significance in that some foundations and lower walls of convict-built structures have been excavated. The excavation fronting Macquarie Street is to be preserved for public viewing, rendering that part of the site's footprint particularly 'security vulnerable'.

Security – the prevention of anti-social and criminal behaviour – is therefore critical to the development's overall commercial and heritage objectives. Security of the entire footprint should protect the interests of both. The Report examines security issues in that dual light.

'Security' may be more specifically defined as: *'planning, design and management measures designed to minimise and/or prevent the likelihood of anti-social or criminal behaviour targeting property or persons in any given urban or rural context'*.

There are four inter-related security objectives under consideration.

- | | |
|--------------|--|
| Objective 1: | Legislative Compliance |
| Objective 2: | Crime Risk Impact |
| Objective 3: | Security Design |
| Objective 4: | Security Reputation through Management |

The development should comply with security-related State and Local Government legislation, its operational impact should not add to anti-social or criminal risk/activity in the surrounding neighbourhood, building design should incorporate Crime Prevention through Environmental Design (CPTED) principles and post-construction operations should include a security management plan.

A summary of the objectives, with the conclusions from each, follows.

Security Objective 1: Compliance with Planning Instruments

With respect to security considerations, the project application documentation should comply with Section 79C guidelines of the New South Wales Government's EPA Act, the Department of Planning, Director General's Requirements and should also comply with Parramatta City Council's City Centre Crime Prevention Plan 2008 to 2013; with reference to building and environmental design aspects.

With regard to Security Objective 1, Project application documentation provides the developer with an appropriate foundation upon which to build crime prevention design and security management strategies; to be detailed in the design-and-construct documentation which should reflect specific solutions relating to Security Objectives 3 and 4.

In terms of Section 79C and 75F of the EPA Act, and Parramatta Council's DCP and Crime Prevention policy requirements, DA documentation reflects intended compliance.

Security Objective 2: Impact and Minimisation of Crime Risks

To ensure that the proposed development's design or operations are not likely to cause, condone or promote anti-social or criminal behaviour and/or constitute any increase in community crime or crime risks.

From our review of the DA documentation, there is no indication that the development's overall design is likely to cause, condone or promote anti-social or criminal behaviour.

In our view, the mixed use development of itself does not constitute an increased crime risk to the surrounding CBD locality. While the heritage precinct could 'attract' targeted anti-social or criminal activity, the protective measures proposed alleviate increased risk concerns.

The mixed use operations accord with other CBD interactivity, with pedestrian and vehicle movements to and from the site and its immediate surrounds, generating purposeful presence. The additional legitimate activity will add welcome interspatial flow to that part of the CBD.

Security Objective 3: Designing Out Crime

The development should reflect a 'welcoming and safe space' approach to security by incorporating CPTED principles into design development 'sign-off'; applying aspects of architecture, engineering and technology to promote best-practice security (design) solutions to each of the site's precincts.

We note that, from a security perspective, the DA drawings reflect opportunities for appropriate 'security design' based on CPTED principles, to be incorporated into relevant aspects of the development's detailed design which should focus on:

- the role of architecture and engineering in achieving an integrated 'whole-of-site' security outcome;
- innovative solutions for securing the heritage precinct;
- access control for pedestrian and vehicular traffic;
- layout and interconnectivity of vehicle entrances, exits, loading and parking spaces with the various mixed use operations;
- intra and inter-precinct pedestrian flow and interactivity;
- form and robustness of building perimeter facades and set-back spaces;
- technical surveillance of sensitive precincts including utilities infrastructure;
- development of an interdisciplinary lighting, landscaping and signage sub-plan for the above specifics.

We recommend that the DA approval be conditional on the developer's intention to apply security design solutions to relevant aspects of design documentation included in, but not necessarily limited to 3.3.1 to 3.3.11 in the detailed Report.

Security Objective 4: Marketability, Reputation and Management

Together with recommended and/or agreed security design solutions in Security Objective 3, the implementation of a security management plan should enhance the overall marketability and reputation of the development.

It is our view that the on-going security reputation of Macquarie Place is best served by incorporating the above four strategies as a whole-of-site SMP even though such a plan may not be a development approval condition. A site wide plan will enhance the addresses reputation as desired welcoming and safe space. We acknowledge that ultimately, it is the responsibility of the owner/occupier clients to agree on, and implement, such a plan.

We recommend that, prior to post-construction commissioning, the client seek advice in preparing and implementing the plan, by consulting with local police, the Council, Chamber of Commerce and Heritage Council representatives, together with owner/operators of surrounding precincts to ensure that the plan converges with similar initiatives in place, or proposed, throughout Parramatta's City Centre.

B DETAILED REPORT

1 SECURITY SCOPE OF THE PROPOSED DEVELOPMENT

The proposal by Crown Landmark Pty Ltd is to develop a Parramatta Central Business District (CBD) site bounded by Macquarie Street to the north, Marsden Street to the east and Hunter Street to the south. The western perimeter borders an existing multi-storey complex. The Macquarie Place Development (the development) is a mixed use proposal comprising retail, commercial, community and residential operations. It incorporates a variable height residential tower and four levels of podium space for retail, commercial and residential activity. The site is of heritage significance in that some foundations and lower walls of convict-built structures have been excavated. The excavation fronting Macquarie Street is to be preserved for public viewing, rendering that part of the site's footprint particularly 'security vulnerable'.

Vision for the development creates an innovative and interactive footprint for each of the 'uses', connecting commerce with community and the contemporary with the historic. The central piece of history will showcase an important piece of Parramatta's (European) settlement history. The juxtaposition of historic and contemporary architecture poses additional security challenges. The excavations will encourage casual visitors, history, architecture and archaeology students together with their professional counterparts, highlighting the Macquarie Street (level) precinct as a place of purpose in line with the vision and planning of Parramatta Council (the Council).

Security design for, and security management of, this space requires treatment sensitivity involving inter-disciplinary solutions. The precinct is the site's entry statement. It presents as a unique meeting, learning, socialising and welcoming environment – an environment protected by unobtrusive security solutions. The precinct's significance cannot be overstated; hence the need for a precinct-specific sub-plan engaging architectural form with the specialist disciplines of lighting, signage, landscaping and technology to arrive at the desired protective outcomes.

Co-location of retail, commercial, community and residential objectives provide diverse yet consistent and frequent pedestrian and vehicle volumes, particularly during business hours. While these characteristics are less evident at night or on week-ends, the ebb and flow of 'eyes-and-ears' security 'traffic' is no less important in complementing (security) design and management strategies. The legitimate presence of people is a proven deterrent of opportunistic anti-social or criminal behaviour, particularly behaviour targeting (Parramatta) city centre premises, street scapes or public space. Carefully managed 24/7 limited and secure-access should positively impact on the crime prevention objectives.

As the site is physically exposed on the northern, eastern and southern boundaries, perimeter security is a central plank of deterrence and prevention. Sound perimeter security indicates to passing 'traffic' equally high levels of internal security. This presents a picture of overall (site wide) security integrity.

In today's climate of fear and uncertainty about urban crime associated with high profile CBD space, governments and stakeholder-clients alike are keen to address security whenever new people-focussed developments are proposed; another reason for employing an intentional site-wide solution. Council's policy of reclaiming and transforming CBD precincts for purposeful and casual pedestrian enjoyment, emphasises the need for clever perimeter (security) design, thereby contributing to that policy outcome.

The broad security scope involves design and management strategies for the heritage, retail, commercial and residential precincts – strategies which, in our view, begin with holistic treatment

of the heritage space. In one sense this space becomes the security design and management hub. In another its treatment should be no different to any other 'space'. Each precinct has particular security risks. Each has particular solutions. However all are interconnected in marketing an inclusive spectrum of 'safe space'. The key issues pertinent to this goal include:

- the role of architecture and engineering in achieving an integrated 'whole-of-site' security outcome;
- innovative solutions for securing the heritage precinct;
- access control for pedestrian and vehicular traffic;
- layout and interconnectivity of vehicle entrances, exits, loading and parking spaces with the various mixed use operations;
- intra and inter-precinct pedestrian flow and interactivity;
- form and robustness of building perimeter facades and set-back spaces;
- technical surveillance of sensitive precincts including utilities infrastructure;
- development of an interdisciplinary lighting, landscaping and signage sub-plan for the above specifics.

Security (inter-alia 'safety' in this context) is the prevention of anti-social and criminal behaviour. It is critical to the development's overall commercial and heritage objectives. Security of the entire footprint should protect the interests of both. The Report examines security issues in that dual light. 'Security' may be more specifically defined as: *'planning, design and management measures designed to minimise and/or prevent the likelihood of anti-social or criminal behaviour targeting property or persons in any given urban or rural context'*. It is important to ensure that the development focuses on this inclusive definition in relation to planning, design and management.

While the development's scale and significance poses abovementioned unusual challenges, there are four key 'standard' questions common to meeting the security requirements of all stakeholders. These constitute the Report's scope.

1. Do the security design and management of the proposed development comply with State and Local crime prevention planning instruments?

Security Objective 1: ensuring compliance with the security requirements of Section 79C of the Environmental Planning and Assessment Act (EPA Act), the Department of Planning's Requirements under Section 75F of the EPA Act and the requirements and/or policy guidelines of Parramatta City Council's Development Control Plan, 2005, (DCP) and City Centre Crime Prevention Plan 2008-2013.

2. What are the crime risk impacts of the development on adjacent premises, immediate street scapes and surrounding CBD precincts?

Security Objective 2: assessing the local and neighbouring environments in terms of anti-social behaviour, criminal activity or potential crime risks and the likely positive or negative impact of the redevelopment on those risks;

3. Does the overall security design provide adequate protection for the complex and its stakeholders; retail, commercial, and community employees or volunteers, residents, visitors, contractors, commercial clients and retail customers, and does the building's design enhance the overall security integrity of the site?

Security Objective 3: identifying vulnerable aspects of the development requiring specific security design input aimed at reducing the likelihood of anti-social or criminal activity and preventing opportunities to engage in such activity.

4. What on-going security maintenance and management is envisaged to monitor, contain or reduce levels of future site-wide crime risk?

Security Objective 4: ensuring that there are security design maintenance and security management strategies in place to enhance operational reputation and reduce potential 'new' risks to the proposed complex and its heritage precinct.

In meeting these four security objectives detailed in this Report, it is our opinion that the project's security integrity begins with good security design (*refer Appendix 2*)

In addressing these objectives, the consultants acknowledge that the client's overall vision includes 'security' as a critical component of the development's overall design and operational goals.

2 THE STAKEHOLDERS

The diverse stakeholder base comprises:

- Crown International Group
- The New South Wales Department of Planning;
- Parramatta City Council;
- The Heritage Council
- the broader (Parramatta) community;
- retail, commercial, heritage and residential owner/occupiers;
- Parramatta Local Area (Police) Command;
- visitors and contractors casually or intentionally accessing the site.

Each of these sub-groups will have different security expectations, pertinent to their specific involvement with the site, its safety for commercial, retail, residential and heritage operations. However, their broad expectations are similar in that personal and property safety will be a 'given' of the development. Therefore a 'welcoming and safe environment' is critical to the development's on-going financial viability and, more importantly, its stakeholder requirements associated with that viability. A welcoming and safe environment may be defined as: *'an environment where security has been considered as part of the master-planning, design and construction processes and where security outcomes enhance a project's overall reputation.'*

3 SECURITY OBJECTIVES AND OUTCOMES

3.1 Security Objective 1: Compliance with Planning Instruments

With respect to security considerations, the development's DA documentation should comply with Section 79C guidelines of the New South Wales Government's EPA Act, the Department of Planning, Director General's Requirements and should also comply with Parramatta City Council's City Centre Crime Prevention Plan 2008 to 2013 and the 2005 DCP guidelines, with reference to building and environmental design aspects.

3.1.1 Compliance with State Legislation

The NSW Environmental Planning and Assessment (EPA) Act, 1979 allows provision for instruments to regulate or codify issues pertaining to environmental impacts of (normally) large scale and modest developments. Security (crime prevention) is one of the “impacts” allowed for.

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”*.

The 2001 amendments to the interpretive guidelines for this Section state: *“...Crime prevention falls under these subsections of 79C. Councils have an obligation to ensure that a development provides safety and security to users and the community. If a development presents a crime risk, these guidelines can be used to justify:*

- *modification of the development to minimise the risk of crime, or*
- *refusal of the development on the grounds that crime risk cannot be appropriately minimised”*.

Interpretation of “the public interest” includes the relevant stakeholder individuals and groups – in this case, government, commercial, retail, heritage and community groups. The public interest in relation to the proposed development is to create, sustain and promote ‘safe space’ outcomes, thereby preventing any anti-social and/or criminal behaviour that might put at risk any of those outcomes at risk. The public interest could arguably extend to preventing unacceptable behaviour near to and beyond the perimeters of the site, although strictly speaking, the developer has no responsibility for such behaviour. However, one outcome of a successful whole-of-site security regime would be to model that success to neighbouring premises and or streetscapes.

The other obvious outcome of successful site-wide security is to displace potential unruly behaviour. This (unintended) consequence can be enhanced if the development’s stakeholders agree to work with Council and ‘neighbours’ to spread or share security success such that potential crime risks fail to eventuate through dissuasion. A review of current drawings indicates the client’s design intention to dissuade and displace potentially crime-related behaviour.

The NSW Department of Planning has issued ‘Director General’s Requirements’ (DGRs) pursuant to Section 75 F of the EPA Act. These requirements seek compliance with Safer-by-Design principles in relation to built form and other (security) measures related to the purposes outlined in the Development Application (DA). Safer-by-Design principles are in turn based on Crime Prevention through Environmental Design (CPTED) an internationally accepted model for applying aspects of architecture, engineering and technology to reduce or prevent crime in urban environments. Reference to this requirement falls within “Point 3 – Urban Design”, of the DGRs covering the total development’s design and public domain.

3.1.2 Compliance with Local Government Legislation and/or Policy

Parramatta City Council’s DCP, 2007, requires developers to consider CPTED principles when submitting DA documentation. Council’s City Centre Crime Prevention Plan (2008 -2013) sets out key initiatives for maintaining the CBD as ‘safe space’. Council’s 2025 vision document detailing

the City Centre's revitalisation insists that the control and prevention of anti-social and criminal behaviour is an essential component of future visionary architectural form. Council is working with the Department of Planning in ensuring a coordinated approach to compliance through innovative design.

Throughout New South Wales and other States, development applications are increasingly required to demonstrate the incorporation of CPTED or Safer-by-Design principles into master planning and design documentation. (*These principles are explained fully as Appendix 2*)

Documentation for the proposed development should incorporate relevant CPTED design features to better reflect compliance with State and Local requirements. Specific opportunities for the client to address CPTED options are referred to in Security Objectives 3 and 4 of this Report. However, we are satisfied that the client has taken a whole-of-site approach to security; the intention of which is to ensure the prevention of crime and the curbing of anti-social behaviour as critical to the redevelopment's success.

3.1.3 Security Objective 1: Conclusions and Recommendation

Drawings to be submitted in conjunction with the DA reflect the potential for design development in line with State and Local Government guidelines and/or policy requirements. With regard to Security Objective 1, DA documentation provides the developer with an appropriate foundation upon which to build crime prevention design and security management strategies. This would be detailed in the design-and-construct documentation which should reflect specific solutions relating to Security Objectives 3 and 4.

In terms of the Director General's requirements pursuant to Section 75F of the EPA Act, in terms of the Department of Planning's guidelines pursuant to Section 79C of that Act and in terms of Council's crime prevention development guidelines and/or policies, there is intended compliance.

3.2 Security Objective 2: Impact and Minimisation of Crime Risks

To ensure that the proposed development's design or operations are not likely to cause, condone or promote anti-social or criminal behaviour and/or constitute any increase in community crime or crime risks.

3.2.1 Urban Developments and Crime Risks

Our reports continually emphasise that issues of anti-social behaviour, crime and crime risk management in dense urban environments are far from academic in today's security conscious world. The (security) reputation and therefore viability of every new commercial, retail, recreational and residential development, especially in town and city centres is often put at risk from either a development's omission to seriously consider security strategies at design and post construction management, or conversely, from the impact of neighbouring precincts permitting crime risk and activity to 'spill' over to a new development.

Identifying crime trends and crime risk impacts can be fairly subjective. Statistics only relate to reported crime. The subjectivity arises when a crime risk analysis tries to second-guess total crime and crime trends by linking reported crime to anecdotal 'evidence' of unreported crime; sometimes said to be equal to, or more than, the reported crime in the more common property categories.



Therefore the security design and security management of this development must assume that random (opportunistic) anti-social behaviour and/or crime will occur in and around its three street frontages, unless effective counter measures are put in place.

From a crime minimisation and crime prevention perspective, Macquarie Place must be viewed in relationship to neighbouring or adjoining environments. However we again stress that in the first instance, a site wide security strategy must set benchmarking standard that might then be emulated by adjacent complexes and beyond.

This suggests a continuum of perimeter strategies. The goal is to foster a different non-tolerance of crime reputation through a determination to 'build' an alternative reputation for the immediate and surrounding precincts. Design of the development's perimeters, vehicle and pedestrian access points should minimise opportunities for anti-social or unlawful behaviour, which if allowed to gain any tolerance or momentum, will 'contaminate' adjacent scapes and structures.

Obviously design is not the only way to counter the fear and reality of crime in the CBD. It is one well-recognised approach aimed at complementing other social, environmental and policing measures that already exist in the broader Parramatta community. However, as stated earlier, the DA documentation must indicate a potential through design development, to facilitate the containment and/or reduction of crime within and adjacent to the proposed site.

However, mitigation of local crime risks will also depend on the relationship between the project and its 'neighbours' – adjacent office and retail blocks and their associated streetscapes.

3.2.2 Determining Crime Risks and Their Impact

The Australian and New Zealand Standard 4360:2004 (ASNZS 4360) is the current benchmark instrument whereby generic risk is identified, quantified and 'modelled' as a risk management tool. The Standard is used nationally and, to a growing extent, internationally. It is an imperfect but useful method to tabulate and understand the nature, source, frequency, and consequences of risk 'types'. Initial or assessed risk calculations are given levels based on a likert-style scale, usually as 'negligible' 'low' 'medium' 'high' and 'extreme'.

In determining specific crime risks for this development, the Standard provides guidance only. Scaled crime risk levels may be determined (assessed) from objective (official) crime statistics, police intervention, community observations and Council concerns

But determining risks associated with crime in and around major CBD sites is equally subjective in the way those risks are identified, quantified, assessed and managed. Subjectivity comes from different versions and/or perceptions of behaviours which may or may not become criminal incidents. Anti-social behaviour is common in some CBD precincts in towns and cities, especially at night when young people tend to 'cruise' empty and echoing streets, irrespective of whether they intend to commit crime. Noise and boisterousness do not constitute unacceptable behaviour to some, while they do to others. If alcohol is involved, then noisy night time behaviour by individuals or groups can escalate and deteriorate into criminality.

The purpose of this objective is to identify the development's impact on the immediate and surrounding streets. If the impact is deemed negative, then this could add to the 'safe space' aim for all who legitimately access the site. There are two issues, (i) does the proposed development's design or operations impede the perception or reality of internal safety and (ii) are there any design or operational compromises that might cause, or cause an increase in, anti-social or criminal behaviour in the nearby streets or premises?

There is a third issue – that of existing anti-social or criminal activity in the immediate and

neighbouring CBD. This is a separate matter that is unrelated to this security objective. The developers have no responsibility for security certainty. They obviously have no moral or legal obligation with regard to a negative or positive security environment. However their approach to security design and management for the site may have a positive 'spill' and indirect influence on that environment. It depends on (a) how the development's security model is understood and received and (b) how that model accords with police and Council initiatives. If the model is right, positive displacement of crime risks and activity is more likely to occur; a win for all stakeholder interests.

Crown International's duty-of-care is simply to provide site wide safety for its stakeholders; that is, providing a development where property and people are protected and where safety (security) is promoted through appropriate design and management.

In summary, this objective 'measures' existing neighbourhood (CBD) crime risks while simultaneously assessing how the proposed development (positive or negative) impacts upon those risks. While Standard 4360 can be used to conduct a longitudinal study of crime risks impacting on the CBD, it is not a model for determining more pragmatically, potential or actual crime risks. More immediate data enabling analysis comes from:

- characteristics of neighbouring CBD premises and streets, conducive to a safe or unsafe local environment ;
- local police intelligence, operational intervention in the vicinity of the site;
- perceptions and interventions by Council and business groups;
- trends from the NSW Bureau of Crime Statistics and Research (BOCSAR), refer *Appendix 1*.

Collectively, these sources show continuous but not alarming concern at the range of property and person-related crimes in and around the city centre. Council and the Parramatta Local Area Command confirm that there are occasional 'spikes' in anti-social and criminal activity in or around the proposed Macquarie Place due possibly to sporting or cultural activities centred on the mall, in nearby park lands or at sporting venues.

The BOCSAR statistics indicate a disturbing upward trend in property damage for the LGA between 2004 to 2008.

Throughout the CBD there is evidence of property damage, often from graffiti, and damage to street furniture, signs and facades, especially in areas where after-hours and night time occupancy of premises is less than might be the case towards the main shopping centre (Westfield) and Church Street Mall. Alcohol fuelled aggressive behaviour is reported to police by patrolling security officers and concerned or targeted individuals. Parklands to the north and west of the proposed development attract their share of damaging or aggressive behaviour, again mainly on week-ends and at night. Vehicle and/or property theft is prevalent in and around streets adjacent to Westfield Shopping Centre. Actual statistics vary.

The upward trend in property damage confirms the need to address the development's perimeter (security) design in particular with attention to facade materials, paints, glazing, gating, entry points, recesses and lighting. (refer *Security Objectives 3*)

Council's City Centre Crime Prevention Plan notes the following:

"Central to any effort to prevent crime is a solid understanding of the nature of existing crime problems. This requires detailed analysis of existing crime data. Detailed crime data was provided by the Parramatta Local Area Command (NSW Police Force) for the purposes of examining existing crime problems in the City Centre. While not all crime is reported to police, reported crime data does provide very important insights into the nature and extent of crime in a

particular area.” (2008:13)

According to locally compiled Police and Council statistics (Crime Prevention Plan opcit), the most frequently reported crimes in the Parramatta City Centre continue to be stealing from retail stores, from motor vehicles, stealing of motor vehicles and stealing from individuals. Assaults and malicious damage are the other most common offences. These are similar to criminal activity in most high density urban settings. They reflect the nature of a city centre.

There are many and varied explanations for levels, types, sources and frequency of such offences and behaviour in and around the CBD but debate around these characteristics is only relevant to devising design and management strategies that will ‘secure’ Macquarie Place in such a way as not to add to existing anti-social or criminal activity. The responsibility of this development is to, at worst contain, but at best, make a positive contribution to the goal of preventing anti-social or criminal activity anywhere in the CBD. In this regard, Objectives 3 and 4 of this Report are the key.

3.2.3 Crime Risks in Neighbouring Environments

Parramatta CBD is the subject of revitalisation master planning. Currently, there are precinct pockets where vandalism and other criminal damage is evident. There are safety concerns from commuters accessing or exiting the transport interchange and nearby streetscapes. Public parks and CBD open spaces have been frequented (especially on week-ends and at night) by individuals and groups intent on causing nuisance, harm or damage to visitors and locals transiting or seeking recreational enjoyment. Council, commerce, police, the State Government and the community have been collaborating on Parramatta 2020, a plan to re-develop the entire CBD to attract business, residential and recreational activity, with security (personal and property safety) as a key platform.

Initiatives for open space, commercial, retail, residential and recreational connectivity have begun with an initial focus on transport, streetscape design and community facilities. CBD development proposals should reflect the master plan’s intent. A recent example is the justice precinct where building and intra spatial relationship design have exemplified new standards of security. The transport interchange and treatment of the Church Street civic place extension are other examples.

These are the beginnings of master planning. Each affords ‘security’ new prominence. Each is a step in reducing anti-social and criminal behaviour risks, threats and incidents Each contributes to creating the vision of a transformed and safe CBD.

While this development has no direct relational responsibility for anti-social and criminal behaviour (security) issues in neighbouring and surrounding environments, there is the obvious obligation under Council’s DCP and City Centre Crime Prevention Plan to avoid the perception that anti-social and criminal behaviour is of no consequence to the security of surrounding neighbourhoods.

3.2.4. Adjoining and Surrounding Buildings

There is little evidence of graffiti and vandalism targeting premises in close proximity to the proposed Macquarie Place; to the north, east or south. Buildings in surrounding streets are dual or multi-storey, comprising mixed use commercial, government office and retail space. Each appears to have uncoordinated combinations of external perimeter security lighting and/or CCTV coverage. There are no observable lighting ‘standards’ or strategies from one structure to the next. Nor is there any attempt to complement perimeter lighting with street lighting.

External lighting, landscaping and CCTV coverage of the proposed site could (should) showcase the precinct. Perimeter security strategies of recent developments could be assessed as to:

- (i) their relevance and effectiveness for Macquarie Place to ensure relevance and effectiveness;
- (ii) opportunities for neighbouring premises to adopt Macquarie Place perimeter security design;
- (iii) establishing a 'standard' (or guidelines) for possible 'roll out' by Council across other CBD locations.

3.2.5 Security Objective 2: Conclusions and Recommendation

From our review of the DA documentation, there is no indication that the Macquarie Place development's overall design is likely to cause, condone or promote anti-social or criminal behaviour. In our view, the development of itself does not constitute an increased crime risk to the immediate or surrounding locations within the CBD.

There is every indication that design documentation will reflect the desire of the developer's to positively contribute to providing an extended secure environment beyond each of the three street frontages, resulting from innovative architectural form, and from lighting, landscaping, signage and surveillance technology applied site wide, but particularly applied to the Macquarie Street ground level precinct.

3.3 Security Objective 3: Designing Out Crime

The development should reflect a 'safe space' approach to security by incorporating CPTED (Safer-by-Design) principles into design documentation 'sign-off'; applying aspects of architecture, engineering and technology to promote best-practice security solutions for all of the site's precincts, in line with State and Local Government requirements.

3.3.1 Overall Security Design

Designing *out* crime implies designing in security (safety). As mentioned above, if implemented, each of the following design specifics should enhance the collective sense of security.

CPTED principles are basic to Council's DCP and underpin the crime prevention requirements of the Department of Planning (refer Objective 1). The developer's site drawings introduce significant issues with regard to pedestrian and vehicle movement as that movement impacts on the mixed use vision for the site. Therefore way-finding and parking design is critical to preventing and/or resolving security related tensions in the accessing the various precincts. Macquarie Street is the site's welcoming heart. Security design should support the heart's form. Importantly, the heart is heritage which again from a security perspective requires design sensitivity.

CPTED, Safer-by-Design or security design, principles seek inter and intra spatial architectural connectivity which maximises legitimate people-centred activity encouraged by perceptions of personal safety and belonging. This is achieved by designing for territorial (precinct) ownership, good surveillance sight lines and clarity of access – the three themes of Oscar Newman's 'Defensible Space' concept of the 1970's (refer Appendix 2).

'Security design' may be defined as '*an environmental crime prevention strategy; applying aspects of architecture, engineering and technology to all urban development proposals.*' We have considered the following specific design aspects of the DA documentation in relation to incorporating this definition and the abovementioned principles facilitating spatial (territorial) definitions, passive and active surveillance and access control through welcoming way finding.

Design development should document specific security design in relation to:

- lighting, landscaping and signage
- alarm and surveillance technology
- building and site perimeters
- the heritage precinct and archaeological centre
- street level pedestrian entry
- contained (purposeful) and casual pedestrian flow
- vehicle movement and parking
- contractor and emergency vehicle access
- utilities infrastructure

3.3.2 Underpinning Sub-Disciplines - Lighting, Landscaping and Signage

In essence, these three architectural sub-disciplines provide a coordinated foundation for meeting the whole-of-site security design objective. In concert, they define, identify, guide, permit and restrict vehicle or pedestrian movement to or from each precinct. It is therefore recommended that interdisciplinary sub-planning occur to create an overarching (security) design strategy for each of the areas referred to in 3.3.3 to 3.3.8 following.

Lighting in this context refers to external and internal public space illumination – façades, landscaped areas, pathways, corridors, lobbies, reception foyers, vehicle ramps, parking areas, perimeter set-backs and/or recesses. From a security perspective lighting design must coordinate all mono and multi-chromatic spectra, ideally eliminating 'up' or eye level 'throw' which causes glare. (Bollard lighting is an example. While an aesthetically pleasing way-finding option, bollards can cause glare and shadowing. They often become 'buried' in mature landscaping and are targets for vandalism. We recommend that these not be used in the heritage precinct or in terraced areas.)

Our preferred (security) option is to 'down light' all relevant areas. Down lighting maximises surveillance opportunities and minimises glare-related confusion. In this context there is opportunity for under-eave, high wall and pole mounted luminaires all of which will add to site-wide lighting pattern consistency, assisting with purposeful way-finding. Down lighting also reduces long shadowing, which promote concealment. From an Energy-saving CFL and LED are as effective as halogen or incandescent alternatives.

Landscaping is critical to territorial definition and surveillance facilitation. The Macquarie Street precinct and terraces will require attention in keeping with CPTED principles maintaining low level shrubs, grasses or planter box or grasses at 1.0 to 1.5 metres high at maturity, again to reduce opportunities for concealment. Where trees are being considered, at maturity, under-storeys should be ground-cleared by at least 1.0 metre.

Signage has two security (and safety) purposes – directional and controlling. Directional signage should provide coordinated way-finding clarity throughout the site. Colour coded signage in line with safety Standards has beneficial security outcomes, complementing lighting, even landscaping, in 'guiding' purposeful or casual pedestrian flow. Uncertainty often causes hesitancy, even panic, when way-finding is vague or is poorly lit. Controlling signage should

indicate restricted access and off-limits demarcation. It is a pre-challenge measure to advise (notify, identify, clarify) persons and vehicles as their location and its legitimacy.

Design development presents an opportunity to incorporate appropriate security architecture from the three sub-disciplines into car vehicle ramps and parking, terraces, all street-active areas and main or foyer entrances.

3.3.3 Alarm and Surveillance Technology

The nature of this development requires appropriate security and surveillance technology to support physical (security) design. The technology's function is to detect and deter suspicious, anti-social or criminal behaviour. While there is on-going debate as to effectiveness, it is now a mainstream design measure. Where potential law-breakers are aware of the presence of technology, such awareness and deterrence constitutes prevention. Security technology specifications must include capability to interface with other fire and emergency systems.

We are of the view that CCTV technology should support the development's physical design and (post-construction) management measures, not the reverse. While technical surveillance must be 'published' to alert owner/occupiers and casual users, the location of cameras should focus on key areas including, the Macquarie Street, main entry and heritage precinct, pedestrian entry points in Marsden and Hunter Streets, reception foyers, lift lobbies, building perimeters, vehicle entry and loading points, vehicle parking, infrastructure and key installations co-located within basement parking. Regular testing of systems capability is essential (refer Objective 4).

3.3.4 Building and Site Perimeters

The three street frontages require attention to facades to minimise opportunities for graffiti and other damage. The design of public and stakeholder entry points should maximise surveillance through attention to sight lines looking towards and away from access points. Landscaping and lighting play a key role in sight line effectiveness.

Street level retail and/or commercial facades should be constructed and/or treated with graffiti resistant materials, including paints and colours to dissuade vandalism. Glazed retail frontages would ordinarily be toughened (to the relevant Standard) to resist damage. Although dimensionally small, the proposed (indicative) recesses either side of structural columns along Marsden and at the south east Hunter Street corner should be reduced to a 450 (maximum) gap, or if architecturally or structurally possible, eliminated, to avoid concealment opportunities. The aim is to provide a continuous sight line, especially along Marsden Street for persons entering and exiting retail premises directly onto the street.

The perimeter definition along Macquarie Street and north east corner of Marsden Street proposes wide swing lockable gates supported either side by 3 metre high toughened glazed and structurally mounted walls. This prevents after-hours access of the heritage precinct while permitting casual viewing from the street. The extensive glazing increases the risk of damage. However, the overall treatment of the precinct should mitigate that risk.

3.3.5 The Heritage Precinct and Archaeological Centre

This preliminary commentary forms part of a whole-of-development crime prevention consultancy undertaken by Harris Crime Prevention Services, the aim of which is to identify and mitigate risks of anti-social and/or criminal behaviour likely to negatively impact upon the development's reputation as a welcoming and safe environment.

The Report by Edward Higginbotham and Associates (September 2009) highlighted the conservation areas and the key issues for (a) their preservation and (b) public access.

Securing the archaeological conservation areas is arguably the focus of an overall strategy of security design and management for the whole development.

New buildings and newly constructed public space present new targets for graffiti and other forms of criminal damage. The added attraction of an 'open' and significant historical site may raise the competitive stakes for those seeking to inflict maximum damage. From a security risk perspective, leaving the areas un-enclosed is not an option. We understand that the precinct is to be gated outside week-day business hours.

In an earlier report on the archaeology and the Centre we made the following observations which, in our view remain relevant.

- (a) Maintain strict security measures throughout construction – fully enclosed, alarmed, CCTV monitored and externally lit protective structures;
- (b) Pedestrian movement at or near the areas should be designed to maximise interest while minimising unlawful access opportunity;
- (c) Installation of 'activity driven' recording cameras would augment, but integrate with, whole-of-site CCTV and alarm detection systems;
- (d) The Interpretation Centre should also be under constant internal and external CCTV surveillance;
- (e) The design and location of possible concierge style security offices/control points within observational 'reach' of the sites would facilitate purposeful passive surveillance;
- (f) Regular security patrols should focus on the archaeology, particularly at vulnerable evening and week-end periods.

3.3.6 Street Level Pedestrian Entry

Pedestrian access to the commercial floors is only from Marsden Street using a corridor lobby and single lift. Residents may access towers from Macquarie or Hunter Streets. Public access to retail/heritage space is from Marsden or Macquarie Streets. Residential and commercial access is controlled by proximity card technology, activating sliding glass doors into lobbies.

The Macquarie Street heritage plaza affords maximum passive and technical surveillance options for a significant public domain. However, the archaeological centre's entrance appears partially obscured from the main entry steps and would benefit from pre-entry CCTV surveillance. The plaza's design retains a breadth and depth, affording wide angle passive or technical surveillance. Consideration should be given to CCTV installations along the Marsden Street retail strip.

Sight lines from Marsden Street to the commercial lift/lobby are unobstructed. Graduated overhead lighting would add to lift and lobby certainty, particularly for 'first time' commercial clients unfamiliar with the space.

The width and depth of the Hunter Street (residential) entry provides residents and visitors with an appropriate and controlled entry statement. However, the two structural columns severely limit the ability to view beyond the entry/exit doorway. As designed they can conceal one or more persons intent on causing harm. If possible, the columns should abut re-aligned walls to provide maximum visibility. CCTV surveillance (and warning signage) should be installed.

3.3.7 Contained (purposeful) and Casual Pedestrian Flow

The drawings indicate contained and controlled pedestrian movement from the basement and street levels. All, except visitors and members of the public, have designated entry and limited access points determined by appropriate technology. Design documentation will better express this flow. From a security perspective, movement confusion has been eliminated. Public access to podium and tower space is by invitation. There is always an issue around unauthorised 'following' but this is a post construction security management matter.

Corridor, lobby and lift locations adequately define movement certainty. CCTV surveillance at all key entry/exit points, including basement vehicle-pedestrian 'interchange' walkways and lobbies is strongly recommended.

3.3.8 Vehicle Movement and Parking

The site plan indicates an orderly series of parking spaces in each of the basement areas. There is a single entry two-way ramp and all levels are access controlled. The loading level features a loading – waste removal dock which itself is secured by (pedestrian) access control technology. CCTV should monitor loading-removal transfers. Technical surveillance should also cover all basement level lift lobbies and (as mentioned elsewhere) the entrances to infrastructure and systems control rooms.

Lighting is critical in all vehicle movement space. Graduated overhead lighting should inform the ramp's entrance to and through the secure door, which should feature a transparent grill design, with the over-riding mechanism located away from easy external manual reach. The dock and lift lobby areas should be illuminated (ideally above the minimum Standard) to highlight these spaces. Even though all vehicle movements are controlled, there is always the possibility of unanticipated tail-gating. Therefore, throughout the basement levels, lighting should provide high-definition vehicle recognition and recognition of pedestrians moving towards or away from vehicles. Reflective ceiling paint aids lumen strength and minimises shadowing.

There is good (security) alignment between parking spaces and structural columns, which ideally should be round or elliptical to avoid concealment; notwithstanding the acknowledgement that all levels are access controlled. The lift lobbies are clear of obstructions (apart from the occasional structural column), again providing wide-angle sight lines. The sight lines between spaces and along parking rows are appropriate.

3.3.9 Contractor and Emergency Vehicle Access

This relates primarily to ramp approach, turning and designated parking spaces for at least one emergency vehicle on each basement level. The vehicle movement and parking plan should indicate by well lit and signed areas reserved contractor and emergency vehicle parking. CCTV coverage of these access and parking points is essential.

3.3.10 Utilities Infrastructure

All utilities and communications infrastructure should be considered vulnerable at connection and feeder points. Given the site's access control design, designated plant rooms and control rooms should adequately protect all systems. CCTV should cover all plant/control room entry doors and contractors should be made aware of this security management measure as part of their induction. Infrastructure plant, control and caged spaces should be free of clutter to enable easy access by contractors and/or emergency personnel.

3.3.11 Waste Storage

Waste storage can be intentionally or accidentally set alight therefore, combustible waste materials should be stored where its location and collection may be observed by human resources and technology, e.g. CCTV. Fire detection and fire suppression systems should be installed.

3.3.12 Security Objective 3: Conclusions and Recommendation

We note that, from a security perspective, the DA drawings reflect opportunities for appropriate 'security design' based on CPTED principles, to be incorporated into relevant aspects of the development's detailed design which should focus on:

- the role of architecture and engineering in achieving an integrated 'whole-of-site' security outcome;
- innovative solutions for securing the heritage precinct;
- access control for pedestrian and vehicular traffic;
- layout and interconnectivity of vehicle entrances, exits, loading and parking spaces with the various mixed use operations;
- intra and inter-precinct pedestrian flow and interactivity;
- form and robustness of building perimeter facades and set-back spaces;
- technical surveillance of sensitive precincts including utilities infrastructure;
- development of an interdisciplinary lighting, landscaping and signage sub-plan for the above specifics.

We recommend that the DA approval be conditional on the developer's intention to apply security design solutions to relevant aspects of design documentation, including, but not necessarily limited to, points 3.3.1 to 3.3.11 above.

We recommend that the DA approval reflect the developer's intention to incorporate the above into design documentation.

3.4 Security Objective 4: Marketability, Reputation and Management

Together with recommended and/or agreed security design solutions in Security Objective 3, the implementation of a security management plan (SMP) should enhance Macquarie Place's overall marketability and reputation.

3.4.1 Post-Construction Operational Security Management

The effectiveness of a holistic security regime will depend on the capacity of Macquarie Place's owner-occupier stakeholders to develop and deliver formal security procedures and practices as a strategy to manage on-going crime (security) risks.

Implementation of security risk management regime should contribute to the development's 'duty of care' and occupational health and safety requirements.

Ultimately, from a security perspective, Macquarie Place will succeed as a preferred 'destination' (a) if there is good security design (detailed in Objective 3) and (b) on-going security risks are identified and managed to support design. This fourth objective encourages the developer to

match the design benefits with operational security management. The simplistic notion that deploying contracted security patrols, is *the* solution, is but a small part of meeting this objective.

In line with Objective 2, a continuum of effective security management should enhance the design aim of welcoming and safe space while indirectly (hopefully) seeking to promote broader (beyond site) crime free environments. There is no point in 'designing out' crime if there are no post-construction strategies to monitor and manage on-going crime risks.

The development's marketability and initial reputation in the first instance will stem from its appeal as a new and exciting 'address'. In the longer term, reputation will in part depend on how security is valued as a contributor to the address. From the outset, security will impact on marketability as the address is 'sold' to its prospective client base. There are four elements to ensuring a positive and ongoing reputation from a security perspective;

- scheduled security technology maintenance,
- skilled security monitoring and incident response,
- sound security procedures and practice,
- targeted management of reputation and 'new' risk.

These four elements form the framework for a recommended Security Management Plan (SMP).

3.4.1.1 Scheduled Security Technology Maintenance

There are two issues – failure and redundancy.

It is our experience that security technology, once installed, fails for lack of comprehensive maintenance scheduling. Failures occur in systems relating to security communications, CCTV surveillance, access control and alarms. Installation of coordinated camera or alarm systems throughout the site is of little value unless there is regular maintenance and testing scheduling. It is also critical that owner occupiers, including casual and contract staff servicing the complex, have a working knowledge of the interconnectivity of each technology type. There are two aspects:

- (i) Accredited technicians must regularly test all equipment, not just systems which require mandatory checks.
- (ii) The testing regime must include checks of incident response equipment to ensure clear and rapid reporting and recording of systems reliability.

It is also our experience that redundancy is often not part of security budget planning. There are two types of redundancy, a use-by date and the roll out of new technologies. In both cases, technologies need to 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. Capabilities must match specifications. This particularly applies to Macquarie Place given (a) its mixed use profile and (b) its custodianship of the heritage precinct.

3.4.1.2 Security Monitoring and Incident Response

Security management involves the creation of a security monitoring system (SMS); a template and check list detailing zoned coverage of the site. The template should feature a site map with each of the physical points to be formally checked by staff and/or technicians assigned for that purpose on a random and scheduled basis. The map's template log should be managed electronically. Intra-site coordination is essential ensuring that designated personnel have simultaneous access to all aspects of the monitoring and checking process. Key security

technology, lighting and signage distribution points throughout the tower, offices, retail areas, basements, roofs and perimeter, should feature clearly on the site map.

Incident response procedures should be clear with all owner/occupiers understanding emergency and general communication lines to report suspicious or threatening activity. Regular incident reporting rehearsals should be part of this aspect of security management. Key criteria for engaging security (patrol) contractors (perhaps even security technicians) must be a demonstrated familiarity with intra-site systems distribution, understanding of environmental observation methods and interpersonal communication skills.

3.4.1.3 Sound Security Procedures and Practices

A practical and easily disseminated security awareness (procedures and practices) program is necessary for all site operations. Security awareness is as essential as OH&S and emergency procedures awareness.

Security awareness is usually resisted by owner/occupiers who would rather leave all crime related matters to employed professionals. In one sense this is appropriate. In another it is not. While professional management of security is part of any holistic regime, in this sensitive CBD environment involving complex mixed use operations and involving heritage protection, informal and internal procedures must also apply. As with OH&S and as with fire and other emergencies, security should be a condition of access and occupation. Usually when emergencies arise there are security implications. Either the emergency is sparked by a crime-related threat or incident, or the emergency requires security procedures to be implemented as part of limiting harm or damage. Our experience shows all too often, that security awareness, procedures, practice and management fails to gain owner-occupier attention.

Site security (safety) awareness within and surrounding the development should be developed in conjunction with Council officers and police to maximise the collective aim of keeping the CBD crime free. All stakeholders of the development have an obligation to accept some responsibility to contribute to the collective well-being of Parramatta City.

Security awareness is the point of connection with security design characteristics. Although the security (awareness) emphasis is 'low key' and largely unobtrusive through architecture, overt and covert (alarm) technology, there is every reason to encourage a security awareness mind-set, particularly for each of the operational precincts. Security awareness should form part of the mandatory site induction particularly for retail and commercial tenants, contractors and, to a lesser extent, residents. The awareness for retail and commercial tenants should include capability to understand and/or manage, in so far as their responsibilities permit, the SMS. Implementation of a security awareness, procedures and practice plan will assist in managing overall legal liability, providing tangible evidence as part of 'duty of care' and other risk management requirements.

3.4.1.4 Targeted Management of Reputation and 'New' Risk

Shared security goals should lead to shared security expertise and a shared approach to security and emergency risk management; the final element in achieving the fourth objective.

Lasting security outcomes are usually jeopardised if there is no clear plan by the major owner-stakeholder leadership to proactively manage security; that is, to manage the technology, manage full-time or contracted security teams and, ipso facto, manage new crime risks, which if ignored could relegate the development to 'just another CBD address'.



We would encourage the allocation of resources to developing a *formal* crime risk management strategy as part of the overall plan to promote the creativity in form, function and reputation. An executive facilities management led strategy is one which:

- establishes and monitors a formal security management plan, including the development of informal security awareness procedures and practices,
- oversees its implementation and assessment as to effectiveness,
- assesses the effectiveness of SMS and security design interaction,
- takes responsibility to conduct random and scheduled security systems checks,
- formally liaises with counterparts in neighbouring premises, with Council and with police to inform and be informed about collaborative security management initiatives;
- researches new technologies,
- manages and provides input into annual security budgeting processes with regard to the above.

An SMP which engages internal and external stakeholders drives effectiveness and drives a regime of continuous improvement.

3.4.1.5 Security Objective 4: Conclusions and Recommendation

It is our view that the on-going security reputation of Macquarie Place is best served by incorporating the above four strategies as a whole-of-site SMP even though such a plan may not be a development approval condition. A site wide plan will enhance the addresses reputation as desired welcoming and safe space. We acknowledge that ultimately, it is the responsibility of the owner/occupier clients to agree on, and implement, such a plan.

We recommend that, prior to post-construction commissioning, the client seek advice in preparing and implementing the plan, by consulting with local police, the Council, Chamber of Commerce and Heritage Council representatives, together with owner/operators of surrounding precincts to ensure that the plan converges with similar initiatives in place, or proposed, throughout Parramatta's City Centre.

4 CONSULTANCY METHODOLOGY

The methodology indicates the perspective taken by the consultants in undertaking our analysis and making recommendations. The consultants have:

- (a) reviewed the drawings in order to understand the commercial and architectural goals of the proposed development;
 - (b) received input from the developers' design and management representatives;
 - (c) explored the crime risk backdrop including information about local anti-social and criminal activity;
 - (d) visited the site during daylight and evening hours;
 - (e) obtained information in relation to (security focussed) planning authority instruments.
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Appendix 1: Parramatta LGA Crime Statistics

The following crime statistics are relevant to the Macquarie Place environment. They are issued by the NSW Bureau of Crime Statistics and Research.

Recorded victims within the Nowra-Bomaderry Statistical Sub Subdivision.	2004	2005	2006	2007	2008
Murder	2	5	6	1	2
Assault (domestic violence related)	574	618	688	711	574
Assault (non domestic violence related)	986	1019	1128	1109	1150
Sexual assault	76	73	81	104	77
Indecent assault/act of indecency/other sexual offences	80	103	95	100	118
Robbery without a weapon	225	191	231	230	178
Robbery with a firearm	29	23	22	22	24
Robbery with a weapon not a firearm	99	110	133	106	97
Break & enter – dwelling	1529	1389	1376	1374	1265
Break & enter non dwelling	732	601	580	502	375
Motor vehicle theft	1026	990	1008	836	758
Steal from motor vehicle	1577	1499	1614	1946	1657
Steal from retail store	737	693	778	793	720
Steal from dwelling	416	355	384	367	314
Steal from person	454	452	434	513	380
Arson	148	162	181	185	150
Malicious damage to property	1848	1935	1992	2921	2111

Parramatta LGA

Trends in Recorded Crime Statistics, 2004 to 2008

Offence category	Annual percentage change 2007 to 2008	Average annual percentage change 2004 to 2008
Murder*	N.A.	N.A.
Assault - domestic violence related	Down by 19.3%	Stable
Assault - non-domestic violence related	Stable	Up by 3.9%
Sexual assault	Down by 26.0%	Stable
Indecent assault, act of indecency and other sexual offences	Stable	Up by 10.2%
Robbery without a weapon	Stable	Stable
Robbery with a firearm	Stable	Stable
Robbery with a weapon not a firearm	Stable	Stable
Break and enter - dwelling	Stable	Down by 4.6%
Break and enter - non-dwelling	Down by 25.3%	Down by 15.4%
Motor vehicle theft	Stable	Down by 7.3%



Steal from motor vehicle	Down by 14.9%	Up by 1.2%
Steal from retail store	Stable	Stable
Steal from dwelling	Stable	Down by 6.8%
Steal from person	Down by 25.9%	Stable
Fraud	Up by 27.9%	Up by 7.7%
Malicious damage to property	Up by 4.5%	Up by 3.4%

It is relevant to note the significant increase in malicious damage to property (all be it the type of property is not identified); increasing by an annual percentage change, 2007 to 2008 by 4.5% and an average annual percentage change, 2004 to 2008 by 3.4%.

These tables 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.

"N.A." indicates that the number of incidents recorded was too small for a reliable trend test to be performed.

* For *murder*, the trend test is applied to the monthly number of recorded victims.

Appendix 2: Crime Prevention as a Design Strategy

A 2.1 Rationale

Crime prevention has been linked to urban design since the late 1970s. The concept originated in the United States and Canada when sociologists, criminologists and architects began to link criminal behaviour in public spaces with poor design and layout of those spaces.

Today, there are four broadly defined models of crime prevention. They may be implemented individually, although ideally initiatives derived from each will overlap. The four models are:

Crime Prevention By Social Intervention – a model that sustains the integrity and safety of (often disadvantaged) communities through government and corporate and local support for programs, development initiatives and improvements to infrastructure.

Crime Prevention By Community Development – a model that encourages settled communities to develop partnerships in accepting responsibility for protecting personal and neighbourhood assets through a commitment to networking and sharing responsibility for community development goals.

Situational Crime Prevention – a model that focuses on place-specific crimes, targeting offences and offenders by pro-active and responsive security or law enforcement strategies.

Crime Prevention By Environmental Design – a model that incorporates aspects of architecture, engineering and technology to enhance the form, function and reputation of the built environment as “safe space”.

Crime Prevention Through Environmental Design (**CPTED**) is a coined version of the Crime Prevention By Design model; one that takes a specific approach to reducing and preventing crime by applying architectural design principles to urban developments which focus on territoriality, surveillance and access control. CPTED and the other models have largely been adopted throughout the developed world as legitimate crime prevention strategies.

Throughout the 1980s and 1990s, State and local authorities within Australia, responsible for urban development approvals, have been gradually adopting the CPTED or similar crime prevention (design) concepts when approving both large and small scale development applications.

Within Australia, there is recognition by all stakeholders involved in urban development, (however the term is defined) that designing out crime should form part of *mandated* development application criteria.

In 2001-2, the New South Wales Parliament assented to changes in guidelines under Section 79C of the EPA Act to include crime prevention as one of the “matters of public interest” which must be considered in approving development applications.

Increasingly, local authorities are introducing instruments and/or guidelines requiring ‘security’ to form part of DA documentation.

Notwithstanding local and State based regulatory requirements, it would seem prudent that developers seek to incorporate crime prevention-by-design guidelines to all projects, especially given the marketing and legal emphases on personal and community safety (security) Australia.

It is conceivable that, if built environments can be “secured” by adopting agreed crime prevention design guidelines, (protocols, etc.), then such guidelines will in time become mandatory in much the same way as Building Codes and Occupational Health and Safety standards have been adopted.

Incorporation of crime prevention architecture and engineering into relevant planning documentation throughout the design-and-construct stages is the ideal way to ensure compliance with local and State requirements.

A 2.2 Aims: Crime Prevention By Design

The broad aim of crime prevention design principles is to create and sustain safer communities by incorporating crime prevention design initiatives into all urban development.

From the literature, it is possible to identify two specific aims:

- To promote the legitimate and safe use of all natural and built environments by incorporating crime prevention or security design codes or guidelines into all development planning and approval processes.
- To enhance the reputation of developed environments by ensuring that crime prevention or security design criteria are integral to all architectural and engineering documentation submitted for review and approval by relevant authorities.

A 2.3 The Concept of “Defensible Space”

Oscar Newman (1972) coined the term. He developed the concept in relation to significant crime problems in high-rise ghetto type housing developments of New York City in the 1960s. Newman suggested that the urban design of inner city precincts was directly attributable to anti social behaviour and high crime rates.

Newman recognised that there were three spatial issues that should be addressed in all future urban planning – territoriality, surveillance and access control. Each can be linked with architectural and/or engineering documentation in a coordinated approach towards making public and private spaces relatively crime free.

A 2.4 The Concept of Territoriality

It is essential to provide a sense of territorial definition and boundary limits from the first point of contact with any built environment design. That point of contact may be the front door of a building. It may be the off-road set back of an industrial estate, or it may be the main street – boulevard, divided road and/or entry statement – of a new sub-division. “On approach”, the sense of definition of access and use should be evident.

Crowe (2000:37) suggests that the right physical design contributes to a positive sense of territorial use and ownership – a sense of territorial influence. In urban developments, territory may be defined or classified as public space, semi-private or communal space, restricted space and private or secure space.

Mixed use sub-divisions are particular cases in point. Each such development concept should flag spatial use and spatial hierarchy. This hierarchy should be evident as concepts, principles and foreshadowed specifics at the DA stage, to be followed by detail submitted throughout relevant aspects of design documentation.

The DA stage and design documentation architecture (and engineering) of vehicle or pedestrian corridors, commercial, retail, recreational, institutional, and residential precincts is as important as the architecture of the buildings that will eventually occupy those precincts. One without the other contributes to a sense of territorial confusion where territorial clarity is required.

Geason and Wilson (1989:5) claim that well designed housing projects make it clear which spaces belong to whom – some being completely private, some being shared and some public. Architects and developers of course claim that these aspects are always part of concept design, master-planning and detailed documentation. The difference is that they are seldom designed to standards or principles aimed at repelling crime.

A 2.5 The Concept of Surveillance

Spatial design should maximise opportunities for surveillance – formal and informal. The design principle here is to increase the number and length of sight lines; the capacity of people and technology to observe movement and activity at distance.

The location, mass, height, proximity and form of buildings therefore become critical design features. The relationship of buildings to all open spaces and to roads, pathways, cycle-ways, parks and other streetscape forms is equally critical.

There are three agreed forms of surveillance that should be encouraged: *natural, social and technological*.

Natural surveillance encourages casual observation and monitoring of all users and owners of known and defined urban space.

Social surveillance encourages casual observers, through natural surveillance, to routinely monitor, challenge or report suspicious pedestrian and vehicle movements through precincts or into buildings.

Technological surveillance employs CCTV and other monitoring devices to alarm premises or spaces to deter/detect and respond to unlawful access or unlawful behaviour. In the past, analogue CCTV surveillance technology consumed personnel resources including managing the recording, e.g. replace tapes of these early systems. Network cameras and network video recording (NVR's) offers a more cost-effective alternative. Modern fast moving 'dome' cameras, which respond to alarm pre-set positions can be utilised. The 'alarm' may be a help call button being activated, a secured door being opened (using a door contact) or movement (using a passive infrared detector) and transmitted real time to wireless hand held technology.

A 2.6 The Concept of Access Control

Debate continues about ways to control, restrict or prevent access to buildings and to open precincts. The deployment of technology has been the recent favoured design strategy. This (in our view) over-reliance on technology has tended to limit creative physical design alternatives.

In the mid-1980s a significant study was carried out in the UK into some of England's (often referred to as) notorious or infamous housing estates – high and medium rise ghettos where crimes against property and people has been running rife.

The study by Coleman (1985) showed in part that there were numerous building and precinct design flaws which encouraged uncontrolled access to ill-defined spaces. Coleman suggested that gates, gaps, fences, landscaping, lighting, doorways, stairwells, steps, paths, seats, power poles coupled to ad hoc building design and poor definition of territory, not only attracted

unauthorised access, but once access was gained, the various design flaws encouraged graffiti, vandalism, theft and assault.

The point of all physical (built environment) design from a crime perspective is to define and indicate purpose. For example a gate to a property must be positioned to indicate whether or not it is a main entry and, if so by signage, mechanical, electronic or other means, entry is generally allowed or is by permission only. A gate's design and integration with a fence or adjoining building gives some indication of who and how entry is to be gained.

Gates are usually the most common definers of territory, separating private and public space in industrial, commercial, institutional and residential precincts. There are some precincts without gates at their points of entry, thus inviting crossover to the next point of territory definition; ie a building, parking area etc.

While gates (and similar barriers) present as recognised objects for territorial definition and separation, crime prevention-by-design principles encourage broader and less intrusive definitional architecture; architecture which not only restricts or halts access, but which encourages entry, access and movement. Lighting, pathways, landscaping, low-line fencing, steps and doorways are obvious examples.

Coleman's study, highlights the need for developers to think holistically about distinguishing between legitimate (legal) access and users and occupiers of urban space and those seeking access illegally.

By applying crime prevention design principles to housing estates, to commercial, institutional and industrial complexes, to retail and recreational outlets and to transport infrastructure, there is more than one opportunity to clearly define appropriate entry and movement corridors.

Appendix 3: References - Report and Appendices

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