HARRIS CRIME PREVENTION SERVICES

crime risk reviews | security master planning | designing out crime | 'safe place' management

Crime Risk and Crime Prevention Through Environmental Design (CPTED)

FINAL REPORT

in relation to the

SUMMITCARE

WARMTH WORTH WELLBEING

SUMMITCARE DEVELOPMENT

at

11 – 19 Frenchmans Rd Randwick

August 2020

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EXECUTIVE SUMMARY

Harris Crime Prevention Services (Harris) was commissioned by Centurion Project Management to provide a Crime Prevention Through Environmental Design (CPTED) consultancy for the SummitCare Development (the development) at 11-19 Frenchmans Rd, Randwick NSW.

The development will replace an existing SummitCare facility at part of the address. It comprises the following.

(i) There are 4 residential levels accommodating 86 RACF residents in 1 and 2-bed rooms.
(ii) There are 2 ILUs on the fourth level.
(iii) Basement 1 accommodates 19 car spaces including one ambulance space, plus loading bay. It also accommodates residents' services including kitchen, laundry, waste and other storage rooms. A gym, multi-purpose theatre, hairdresser, some plant and toilets are on this level.
(iv) Basement 2 (lower basement) accommodates storerooms and plant.
(v) Additional to residential units, the ground floor comprises the main (pedestrian) entry and reception, administrative offices, café and dining facilities, lounge and sitting areas, staff station, laundry, multi-purpose and plant rooms.

The site is surrounded by residential properties and is a short distance to commercial retail and licenced premises. It is diagonally opposite Infinite Healthcare.

The Report's scope assesses how CPTED principles have been applied to the overall design, set against assessed contextual anti-social and crime risks. SummitCare's aim is to provide 'welcoming-and-safe-place' for residents, visitors, staff and contractors.

Executive Summary conclusions and recommendations have been extracted from the Report.

Harris defines CPTED as '*applying aspects of architecture, engineering and technology to all urban development proposals (projects) as an intentional environmental crime prevention strategy'.*

The Report's analysis is based on five (Harris adapted) CPTED principles:

Principle 1 Territorial definition – clarity about spatial identify, separation, boundaries and purposes,
Principle 2 Natural surveillance – architecture facilitating strong sightlines for ground plane, basement and/or upper-level observation and surveillance,
Principle 3 Access control – access-egress definitions - who goes where, when and why,
Principle 4 Activity support – the supportive influences of (external) lighting, landscaping and signage,
Principle 5 Target hardening – adding specific and robust architecture and technology.

We have included commentary on Crime Prevention Through Environmental Management (CPTEM), a desirable, but less well known, framework, which aims to monitor and sustain applied CPTED solutions.

Five CPTEM principles are outlined which could (should) form an operational security awareness and stewardship regime for on-going CPTED management. (Section 8) of the Report briefly explains these principles which SummitCare may wish to pursue on occupancy.

Supporting our assessment, conclusions, affirmations and/or recommendations are four appendices:

Appendix 1 NSW Bureau of Crime Statistics and Research (BOCSAR) - reported crime statistics for the suburb of Randwick for the five years April 2015 to March 2020,
Appendix 2 The Risk Management Standard as relevant to the development,
Appendix 3 The Influence of CPTED in Re-designing Public Spaces for Safe and 'Liveable' Activation,
Appendix 4 Expanded Explanation of Crime Prevention as a Design and Management Strategy.

The following CPTED Conclusions and/or Recommendations are extracted from Sections 6 and 7 of the Report:

CPTED PRINCIPLES AND COMPLIANCE	SUMMITCARE RANDWICK DEVELOPMENT CONCLUSIONS AND/OR RECOMMENDATIONS
Principle1 **TERRITORIAL DEFINITION** **(Section 5.1)**	We conclude that the ground level, upper levels, both basements and perimeters are appropriately designed and defined, providing a strong CPTED foundation. Spatial separation and purposes combine to maximise safe causal connectivity, footprint circulation and 'knowledge'. There is no evident internal or external form or function confusion. Intra-site design reinforces safe pedestrian and vehicle circulation throughout the site. Functional specifics are unambiguous providing safe and legible wayfinding certainty for residents, visitors, staff, health care professionals and contractors. This includes entrances, vehicle parking, internal corridors, offices and communal areas. All minimise the potential for opportunistic and/or targeted anti-social behaviour and/or criminal intent. Activity Support, (CPTED Principle 4) should strengthen definitional certainty, as landscaping, external lighting and signage design elements are incorporated.
Principle 2 **NATURAL SURVEILLANCE** **(Section 5.2)**	The site's 'tight' footprint facilitates strong perimeter surveillance from Frenchmans Road and McLellan Avenue. There are less strong surveillance opportunities from the east-west perimeters. Within those constraints, we conclude that the architecture promotes multi-angle, proximate-distant sightlines, enhancing CPTED objectives by encouraging day-night 'eyes and ears' awareness. Natural surveillance within the building zones is enhanced by visually 'open' and purposefully interconnected spaces on all levels. We therefore affirm maximum natural surveillance opportunities throughout the site, reducing the temptation for unauthorised entry aimed at damaging property or harming occupants.
Principle 3 **ACCESS CONTROL** **(Section 5.3)**	Drawings indicate intentional access control measures for: (i) vehicles entering the upper level basement in line with our recommendation for vehicle identification and split roller shutter installation, (ii) day-night secure and controlled pedestrian access from Frenchmans Road and throughout all levels, (iii) plant and other utilities infrastructure, ensuring that external meters, pumps and booster equipment be 'caged' or otherwise enclosed, including the proposed electricity kiosk. While the development has 'low to medium' risk levels for the offence categories identified, new residential developments and neighbourhoods are regularly targeted to 'test' the adequacy and integrity of access control measures and the maintenance/management of those measures.

	It is important that access control measures be strictly adhered to as 'operating procedures' in order that the development maintains a 'crime free' reputation; (Refer CPTEM Section 8).
Principle 4 **ACTIVITY SUPPORT** **(Section 5.4)**	Lighting treatments for the development require elimination of gaps and shadows with consistently high illumination of the main entrance approach, the vehicle entry, ramp and basement spaces and the site's perimeters. External and basement lighting treatments should follow consistent luminaire and lux levels, applying LED 4000K colour temperature patterns. Where practical, we recommend overhead pole luminaires covering ground plane perimeters and open space landscaping, off-street approaches to the main entry, all with sufficient throw, spill and (where appropriate) wash, to eliminate, shadowing and dark gaps, mindful of privacy concerns. Maturing plantings should not obstruct surveillance sightlines around the development's perimeter fencing and/or walls. They should minimise opportunities for concealment or entrapment within the site, including designated garden areas. Mature trees should not be proximate to upper level balconies. Way-finding signage should feature back lighting, for night-time clarity, similar to the coded requirements for exit and emergency signs. Inter-disciplinary coordination of these three 'support elements' is essential to enhance the overall safety (security) of the development. Design development should detail inter-disciplinary solutions.
Principle 5 **TARGET HARDENING** **(Section 5.5)**	Target hardening measures are recommended for the most vulnerable zones within and around the footprint. Camera surveillance is recommended for vulnerable ground level zones– reception, lift foyer, offices, café and dining areas, the off-street pedestrian entry, the McLellan Avenue boundary and the open garden above the basement ramp. Basement camera surveillance should include parking bays, activity spaces, back-of-house operational zones, plant rooms and roller shutter doors. Consideration should be given to install 'help' points. We also recommend specifying security window and door screens for exposed balconies and/or courtyards. Non-glazed surfaces should be anti-graffiti coated. From a crime prevention perspective, treatments recommended are not 'invasive'. We believe that design development drawings can specify combination solutions without creating a sense of fortressing.
COMPLIANCE WITH POLICY AND PLANNING INSTRUMENTS **(Section 6)**	Our assessment concludes that the planning and design development of the proposed multi-level SummitCare project at Frenchmans Road Randwick, complies with, or will comply with, (i) Section 4.15 of the NSW EPA Act, 1979, as amended; (ii) The NSW Police Crime Prevention Checklist; and

	(iii) Randwick City Council's Crime Prevention Plan 2019 – 2021. Subject to on-going design development, the reviewed drawings support development consent, as that consent relates to required incorporation of CPTED principles.

Overall CPTED Assessment Summary

In our professional opinion, the development at Frenchmans Road Randwick, proposed by SummitCare, either has, or will, consider CPTED principles and their application, as assessed, or recommended, prior to 90+% design development-detail.

The development context (neighbourhood) does not add to identified whole-of-site crime risks, given the apparent local stewardship and Council resolve to maintain a 'crime free' environment.

The development's design complies with State Government's 'social impact' and 'public interest' requirements, under Section 4.15 of the EPA Act, and the CPTED requirements of NSW Police.

We affirm that the completed development should promote a 'welcoming-and-safe' day-night circulation and activation footprint for residents, staff, visitors, attending health care professionals and contractors.

Our assessment indicates that the development should make a positive crime prevention contribution to Randwick City Council's broader 'community safety' objectives set out in their 'Safer Randwick City' and Development Control Plans. CPTED architecture is a contributor to those Plans. The development's CPTED-applied architecture could 'model' future similar developments promoted and/or approved by the Council.

THE REPORT

1 INTRODUCTION

Harris Crime Prevention Services (Harris) was commissioned by Centurion Project Management to provide a Crime Prevention Through Environmental Design (CPTED) consultancy for the SummitCare Development (the development) at 11-19 Frenchmans Rd, Randwick NSW.

The development will replace an existing SummitCare facility at part of that address. It comprises the following.

(i) There are 4 residential levels accommodating 86 RACF residents in 1 and 2-bed rooms.
(ii) There are 2 ILUs on the fourth level.
(iii) Basement 1 accommodates 19 car spaces including one ambulance space plus loading bay. It also accommodates residents' services including kitchen, laundry, waste and other storage rooms. A gym, multi-purpose theatre, hairdresser, some plant and toilets are on this level.
(iv) Basement 2 (lower basement) accommodates storerooms and plant.
(v) Additional to residential units, the ground floor comprises the main (pedestrian) entry and reception, administrative offices, café and dining facilities, lounge and sitting areas, staff station, laundry, multi-purpose and plant/storage rooms.

The site is surrounded by residential properties and is a short distance to commercial retail and licenced premises. It is diagonally opposite Infinite Healthcare.

The Report's scope assesses how CPTED principles have been applied to the overall design, set against assessed contextual anti-social and crime risks. SummitCare's aim is to provide 'welcoming-and-safe-place' for residents, visitors, staff, health care professionals and contractors.

1.1 Preventing Crime Within the Development Footprint

Generically, residential aged care facilities are increasingly becoming 'crime risk vulnerable'. Designing out opportunistic or planned crime within these contexts is therefore critical; hence the incorporation of CPTED into relevant aspects of aged care architecture as a preventative measure.

This development of SummitCare's Frenchmans Road site provides an opportunity to prevent and/or mitigate crime-related risks, by applying CPTED architecture and technology into final planning documentation.

CPTED solutions also consider the surrounding (neighbourhood) context, which may or may not positively or negatively influence the development's crime prevention objectives.

In this, and most urban developments, crime risks and offence categories follow a predictable pattern. They target people, commonly intimidation and assaults. They target property to damage and/or steal.

When and how easily these offences are committed may vary depending on:

(i) the surrounding context's potential to provide opportunities ('attract') anti-social or criminal behaviour,
(ii) time of day or night for such opportunities,
(iii) the intended targets – people and/or property, and
(iv) how easy or difficult it is to unlawfully gain access to the site.

The aim of this Report is to:

(i) assess crime risks and influencing variables,
(ii) identify elements of the architecture likely to minimise opportunistic or planned criminality,
(iii) affirm and/or recommend application of CPTED principles to those elements as an intentional and integrated strategy.

The ultimate goal is to create and sustain a 'zero tolerance' of anti-social and/or criminal behaviour where *risks* and not the crime itself are identified, reduced and prevented.

We also recommend applying Crime Prevention Through Environmental Management (CPTEM); something Harris regards as essential to identify and manage on-going operational crime risks.

Our contention from a commercial perspective, is that preventing crime through design will enhance the development's marketing and take-up reputation. Managing on-going crime risks (CPTED + CPTEM) will strengthen crime prevention outcomes.

2 REPORT STRUCTURE, SCOPE AND OUTCOMES

There are no national or international mandated or codified methods or Standards to 'bind' a particular approach to CPTED assessments or reports. This Report's structure is written against the community safety (security) aims of SummitCare, local crime risk intelligence and the development's context.

2.1 Structure of the Report

The structure provides a scope assessment cum analysis based on the available crime risk information. CPTED principles are applied to mitigate perceived or actual risks and/or past local incidents. The Report is structured as:

(i) the introduction, crime prevention across the development footprint – **Section 1**
(ii) the report structure, scope, outcomes, stakeholders and approach – **Section 2**
(iii) crime intelligence and crime data – **Section 3**
(iv) crime risks to the development – **Section 4**
(v) CPTED definition, principles, applications, conclusions and recommendations – **Section 5**
(vi) compliance with State and Council planning and/or policy instruments – **Section 6**
(vii) the link between, and value of, a combined CPTED and CPTEM strategy. Creating and maintaining 'welcoming-and-safe-place' is the interdependent objective – **Section 7**
(viii) references – **Section 8**
(ix) supporting appendices – **1 to 4**

2.2 Agreed Scope

The consultants have:

(i) clarified with the architect/client regarding the entire development's crime risk parameters,
(ii) undertaken physical inspections of the site and neighbourhood to better understand the development's relationship with its surroundings,
(iii) assessed potential day-night crime risk 'disruption' to site-wide safe activation and circulation,
(iv) reviewed internal and external sightlines to address safe day-night circulation,
(v) evaluated basement access and parking, kitchen/laundry, back of house, waste storage, lift foyer, loading bay,
(vi) reviewed entry/reception lobby, residential, visitor and contactor access, communal spaces and balconies (if proposed), landscaping, external lighting and signage,
(vii) considered the security of utilities and communications infrastructure, and,
(viii) provided a Crime Prevention Through Environmental Design (consultancy) report.

2.3 Expected Scope Outcomes

Harris believes that the entire development should 'model' a welcoming-and-safe-place reputation. This would:

(i) enhance the architectural integrity and client objectives of the development,
(ii) holistically protect all assets – people, property, systems and infrastructure,

(iii) reinforce the site's implementation of site-wide CPTED design and management solutions,
(iv) meet the expectations of secondary stakeholders, e.g. insurers, auditors,
(v) compliance with the requirements of Section 4.15 of the EPA Act and with the security (crime prevention) requirements of Randwick City Council and NSW Police.

2.4 Key (Project) Stakeholders

Key stakeholders include:

(i) Randwick City Council,
(ii) Boffa Robertson Group,
(iii) Centurion Project Management,
(iv) SummitCare, its residents, staff, visitors and contractors,
(v) The neighbouring community,
(vi) NSW Police.

While each stakeholder will have different community safety expectations, their broad expectations are similar in that personal and property safety is a 'given' of the designing-out-crime objectives.

2.5 Appendices

Supporting our assessment, conclusions, affirmations and/or recommendations are four appendices:

Appendix 1 NSW Bureau of Crime Statistics and Research (BOCSAR) - reported crime statistics for the suburb of Randwick for the five years April 2015 to March 2020,
Appendix 2 The Risk Management Standard as relevant to the development,
Appendix 3 The Influence of CPTED in Re-designing Public Spaces for Safe and 'Liveable' Activation,
Appendix 4 Expanded Explanation of Crime Prevention as a Design and Management Strategy.

2.6 Approach

Harris defines 'welcoming and safe environment' as: '*built form and public space environments where crime prevention has been a consideration of concept, master-planning, design development and construction processes and where safe place outcomes enhance an overall community safety reputation.'*

This definition underpins out approach which: '*seamlessly welcomes, defines, guides, directs, encourages, regulates and limits legitimate and safe activity; appropriate to functional objectives.'* In this way, the development aims to override opportunistic and deliberate anti-social and criminal behaviour.

A (collective) urban development community safety (crime prevention) objective is summarised by Harris as: '*creating and sustaining living, working, recreation and social environments through appropriate urban design, direct stakeholder management and broader community stewardship*.' It is a partnership approach.

2.7 Notes and Disclaimer

Note 1 Harris' consultancy services are provided independently; i.e. we are *not* affiliated with, nor receive benefits from, any organisation that supplies security hardware, installs security systems, monitors alarm systems or provides guarding/patrol services. This independence is critical to the way we approach security solution options and recommendations.

Note 2 The scope excluded the development/provision of a technical security brief, security systems design and specifications or lighting brief and specifications.

Note 3 In part, our CPTED assessment, conclusions and recommendations are informed by compliance with legislation, regulation, policies and protocols. (These are addressed in **Section 6**).

Note 4 The commentary, assessment, conclusions and recommendations outlined in the report are based on information provided to Harris Crime Prevention Services at the time of this assignment.

Our research and experience suggest certain design and policy approaches can be adopted to reduce opportunities for crime. It is not possible to guarantee that actual crime will be reduced or eliminated if these suggestions and/or recommendations are implemented.

3 CRIME INTELLIGENCE AND CRIME DATA

Crime risks to the development (**Section 4**) have been sourced from, and informed by, the following:

3.1 Anecdotal Evidence and Site Visit

From documents reviewed, the Council is committed to a stewardship mantra throughout their local government area (LGA), encouraging all business and community stakeholders to adopt and support 'zero tolerance' of anti-social and criminal activity.

Frenchmans Road is a highly (vehicle) trafficked thoroughfare flanked by a medium density residential neighbourhood, characterised by single and multi-storey dwellings. There are established older style terraced houses, mid 1960s-70s and more recent unit blocks.

The site's northern boundary fronts Frenchmans road and the development's rear boundary will be set back from McLennan Avenue. East and west boundaries will share common residential fence lines. The local school, club, commercial and minor retail premises serve the locality as well as the broader community.

Our site inspection suggests 'settled' neighbourhood (including site-surrounding streets), with no evidence of property damage or neglect targeting dwelling frontages, facades or fences.

The neighbourhood is not seen as a contextual crime risk 'hot spot' and, in our view, there is no concerning (negative) issues.

3.2 The NSW Bureau of Crime Statistics and Research (BOCSAR)

The BOCSAR data (**Appendix 1**) indicates that reported crime for Randwick suburb is 'stable' and that over the five years April 2015 to March 2020, there has been positive changes in trends or patterns of offending in property and people categories, relevant to this development (**Section 4**). There are no serious 'spikes' in categories.

The relevant trends downwards are (a) non-domestic assaults up 9.9%, 'stable', (b) intimidation, stalking and harassment are 'stable' (c) drug offences, disorderly conduct, motor vehicle offences and steal from dwellings are down collectively between 9 and 15%, year-on-year.

We observe that most of the other categories remain 'unchanged' or 'stable' year-on-year, all of which augers well for some success in crime reporting and prevention measures throughout Randwick.

However, we caution that BOCSAR collates data on reported crime only.

While (reported crime) percentages are stable, unchanged or are dropping, the number of offences in these categories remain arguable high. There should be no complacency and risks should continue to be monitored, noting the vulnerability of the development site.

3.3 NSW Police – Eastern Beaches Police Area Command

The Crime Prevention Officer (CPO) at Maroubra Police Station has advised that at, or near, the development site, there are no specific concerns regarding anti-social or criminal activity. The CPO confirms our assessment that the neighbourhood is not considered a crime 'hot spot'.

Police intelligence confirms the veracity and frequency of anti-social or criminal behaviour within Randwick is occurring, as surmised by BOCSAR.

As with most Sydney suburbs, opportunistic crime is likely on weekends, holiday times with summer nights a 'spike' predictor, especially in the eastern suburbs. From time to time, there are predictable 'outbreaks' of noise-generated street-based behaviour in and around licensed premises, mainly on weekends.

Randwick City has a number of health and aged care facilities. All are conscious of personal and property security. SummitCare has procedures in place to contact local police should an urgent or investigative response be required. Police are mindful of the vulnerability of residents and staff in this and other facilities.

4 CRIME RISKS TO THE DEVELOPMENT

4.1 The Context and Potential Crime Risk Impacts

Potential offences targeting the development are common to many retirement and aged care complexes. Vulnerability is reduced at this site as its boundaries are more manageable – two main street frontages with side boundaries abutting established dwellings.

However, we caution that the development's context and immediate street 'edges' are never going to be exempt from opportunistic crime. As with all targeted property crime, graffiti vandalism is often a 'first strike' to (a) test the vulnerability and accessibility of a site and (b) test the resolve to remove graffiti and monitor further incursions.

The graffiti 'test' also targets 'the new' to see what 'opportunities' exist for tagging vulnerable built form. While the existing facility may not have been targeted, the architecture should address, and management monitor, the vehicle and pedestrian entrances, during construction and post occupancy.

Fortunately, the context indicates a shared stewardship against any criminality likely to 'disrupt' the neighbourhood.

4.2 Assessed Crime Risks to the Development

Based on anecdotal observation, police intelligence and data, the following crime categories are relevant to the development. The risk levels are based on the International Standard - ISO 31000:2009, a helpful framework to identify and manage any organisational risks, including crime risks (**Appendix 2**).

Categories (i) to (iv) following are assessed at the 'low' to 'medium' risk levels. Categories (vi) and (vi) are obviously at the 'high' to 'extreme' risk levels, although not considered likely in this setting. However, the development's operational vulnerability as an aged care facility cannot be ignored, hence our cautious inclusion of (i) to (vi).

The offence categories are:

(i) intimidating behaviour targeting residents, staff, visitors, health care professionals and contractors,
(ii) physical and/or sexual assaults targeting persons on or near the premises,
(iii) unauthorised access to, and theft of property from, basements, ground and upper levels,
(iv) damage to fences, basement and reception-foyer entrances,..

(v) arson or explosions(s),
(vi) injury or death to persons, damage to, or destruction of, property, from targeted and potentially, drug-alcohol 'fuelled'.

The most likely targets for unlawful access leading to offences (i) to (iv) are the perimeters, the basements, exposed balconies and reception foyer, including waiting spaces and offices. These 'breach points' are the focus of the five CPTED principles.

Gaining (unauthorised) access to upper levels is much less likely given proposed and recommended 24/7 lift access authorisation technology.

Assessing *potential* risks, levels and categories must be balanced against the '*consequences*' of a breach and an *actual* incident. Even the most minor offence in this setting can have major consequences. Hence the need to give priority to all categories as potentially serious.

5 CPTED PRINCIPLES: DEFINITION, EXPLANATION AND APPLICATION

CPTED has been defined variously through the decades under common, but slightly varied, themes. Harris defines CPTED as '*applying aspects of architecture, engineering and technology to all urban development proposals (projects) as an intentional environmental crime prevention strategy'.*

Harris identifies and applies five CPTED principles:

Principle 1 Territorial definitions – clarity about spatial identity, separation, boundaries and purposes,
Principle 2 Natural surveillance – architecture facilitating natural observation and surveillance,
Principle 3 Access control – who goes where, when and why,
Principle 4 Activity support – the supportive influences of (external) lighting, landscaping and signage,
Principle 5 Target hardening – adding specific and robust architecture and technology.

Explanation of these (short) definitions and each principle's application to the development follows. All five principles are explained and applied to each of site zone – perimeter, buildings and their functions, the basement and communal-social gathering spaces.

Applications of proposed architecture and/or engineering have been reviewed and have either been *affirmed* or *recommendations* made to enhance CPTED outcomes.

We restate that CPTEM encourages stakeholder understanding of the introduced CPTED measures, so that crime prevention (zero tolerance) ownership-stewardship of the development will be holistically intentional. Appendix 4 expands on the CPTED and CPTEM definitions.

The Executive Summary collates the conclusions, affirmed or recommended CPTED treatments (applications) extracted from this Report.

5.1 CPTED Principle 1 Territorial Definitions

5.1.1 Generic Explanation

Defining territorial boundaries, spatial separation and purposes are the elements of this first CPTED principle. The aim is to maximise built form and public domain 'knowledge certainty' for all who have day-night access to a site.

Stakeholder, occupant, visitor or contractor knowledge (identification) of territorial sub-spaces increases destination and circulation confidence; (for example, design of building entrances, public and communal spaces in mixed-use sites, sporting, retail, commercial or social gathering places, pedestrian corridors and vehicle entrances).

When 'place' form and function are easily identified, it removes confusion of purpose, enhances safe circulation and maximises alertness to any surrounding risks or threats.

5.1.2 Application – The Development's Footprint and Perimeters

The development is on an expanded site, fronting Frenchmans Road Randwick. It is in a residential area and bounded by dwellings to the east and west of the footprint. The northern boundary is set back from McLellan Avenue. The pedestrian and vehicle entry is from Frenchmans Road. There is no off-street entry from McLellan Avenue.

The site is clearly defined. The Frenchmans Road architecture details, street-edge fencing, mid-site gated pedestrian entry and end-site vehicle entry.

Boundaries to west-west dwellings are unmistakable, as is the McLellan Avenue set-back. From a CPTED perspective, the site is 'tight'. While the likelihood of unlawful access is minimised as a result, the western boundary is vulnerable. (Refer Principle 3)

5.1.3 Application – Ground Plane Definitions

Internally, the ground level definitions facilitate location knowledge and ease of movement. The reception foyer is a welcoming zone, inviting visitors in particular to safely 'explore' the immediate surroundings. There is appropriate spatial separation of ground level zones. Offices, multi-purpose room, plant and rooms for health care professionals. To the north and west are residential units. The café, dining, lounge and waiting spaces are readily identified from the reception foyer.

Ground level units have courtyard and/or balconies facing neighbouring properties. There is scattered off-street and over-ramp landscaping.

5.1.4 Application – Upper and Lower Level Basements

The design features a single off-street entry to the upper basement. There is no vehicle, public or resident access to the lower basement. Its definitional footprint is a secured zone for staff and contractors. It is accessed via internal lifts.

The upper basement has an off-street vehicle entry ramp leading to the 19 car parking spaces. The parking layout also accommodates an ambulance bay and an appropriate space for delivery and collection vehicles.

A 'winged' arrangement defines the upper basement's multi-purposes. The (western) car park leads to a secured dual-lift foyer. The lift lobbies are well positioned and have appropriate visual connections with the parking and social activation spaces.

The lifts are also accessed by driver-contractors, on-duty staff and residents. The northern zone provides back-of-house operational spaces – staff facilities, kitchen, laundry, general and waste storage. The (secured) eastern zone defines a gym, hairdresser and multi-purpose theatre, all accessed by internal lift or through the lift foyer doors.

Generally, there are strong visual links around upper and lower basements. They promote safe wayfinding multi-functional circulation and awareness of spatial purposes. Parking bay arrangements are clear. Ramping and aisle traffic design avoids opportunity for 'in-basement' concealment or entrapment. There is no sense of clutter or confusion in the defined spaces.

5.1.5 Application – Utilities Infrastructure

Plant rooms are basement-secured. Utilities fronting the boundary (eg gas / hydrant infrastructure) will be housed in secure enclosures. The substation kiosk will be set back from the boundary, securely fenced and monitored by CCTV.

(We reinforce the vulnerability and crime risks associated with unsecured or plant infrastructure. It is open to seal-breaking, allowing hydrants or meter taps to be turned on or off. An extreme risk would be the 'taping' of an explosive device to visible and unsecured gas or water main pipes. (Refer to 4.2 above)

5.1.6 Application – Residents' Room (Unit) Security

From a CPTED perspective, there are no design issues with ground-plane or upper level rooms, corridors and lift lobbies for intra-level connections, staff stations, offices, dining and storage facilities.

5.1.7 Application – Waste Storage and Management

Space allocated for general storage, waste collection and disposal is securely defined. SummitCare has well developed protocols in managing waste and drawings indicate these protocols will be followed in this complex.

CPTED Principle 1 Conclusions and/or Recommendations

We conclude that the ground level, upper levels, both basements and perimeters are appropriately designed and defined, providing a strong CPTED foundation.

Spatial separation and purposes combine to maximise safe causal connectivity, footprint circulation and 'knowledge'. There is no evident internal or external form or function confusion. Intra-site design reinforces safe pedestrian and vehicle circulation throughout the site.

Functional specifics are unambiguous providing safe and legible wayfinding certainty for residents, visitors, staff, health care professionals and contractors. This includes entrances, vehicle parking, internal corridors, offices and communal areas. All minimise the potential for opportunistic and/or targeted anti-social behaviour and/or criminal intent.

Activity Support, (CPTED Principle 4) should strengthen definitional certainty, as landscaping, external lighting and signage design elements are incorporated.

5.2 CPTED Principle 2 Natural Surveillance

5.2.1 Generic Explanation

The principle of natural (aka informal or casual) surveillance encourages (i) the observation of built form and public domain spaces and purposes by user/stakeholders and (ii) the observation and notation within or around spaces of usual or unusual activity and behaviour, potentially (or actually) leading to anti-social or criminal threats and incidents.

Natural surveillance is purposeful observation. Maximum surveillance impact requires sightline certainty, facilitated by clear proximate-distant and longitudinal-latitudinal fields. The aim is to know who or what is within a surveillance field and to observe specific unlawful action or intent.

Legible and permeable architecture should ordinarily promote natural surveillance in and around clear reference fields. CPTED surveillance-focused architecture adds a crime prevention 'layer' to legible and permeable circulation and activation creativity.

Natural surveillance may be augmented (supported) by the (target hardening) installation of IP Network (CCTV) systems – Principle 5.

5.2.2 Application – Whole-of-Site Surveillance

The development footprint affords opportunities for site-wide natural surveillance by residents, staff and visitors:

(i) from Frenchmans Road and along the Frenchmans Road perimeter (boundary),
(ii) from, and along the McLellan Avenue perimeter,
(iii) from courtyards and balconies.

Sightlines at, or around these spaces facilitate surveillance, notwithstanding the overall 'tightness' of the development footprint.

5.2.3 Application – Pedestrian and Vehicle Entry

There are good ground plane proximate and distant surveillance sightlines at the approaches of both entrances. The reception foyer and adjacent operational spaces encourage observation of the short approach pathway and building entry.

Staff manning the appropriately designed reception foyer permit 'office hours' surveillance of the main door, lift lobby, café and waiting zones, permitting legitimate 'challenge' of access requests.

The vehicle entry ramp and roller shutters are clearly visible from Frenchmans Road. Principle 5 outlines the recommendations of technical (camera) surveillance at the shutters and along the entry ramp.

5.2.4 Application – The Basements

Internal natural surveillance is enhanced by the 'winged' design (Principle1) of the upper level basement and by the circulation of staff and residents in and around each basement zone. The lower basement's restricted access affords immediate sight-awareness of the rooms on exiting the lifts.

We do not see any obvious sightline impediments in either basement.

5.2.5 Application – Balcony and Room Surveillance

The architecture encourages informal resident surveillance from ground plane and upper level unit (room), balconies and windows especially from those facing Frenchmans Road and McLellan Avenue; less so with east-west orientation.

In general, staff circulating on all levels could be alerted to 'unusual' noise and would be able to 'investigate' from perimeter-facing rooms and/or from within the upper basement.

CPTED Principle 2 Conclusions and/or Recommendations

The site's 'tight' footprint facilitates strong perimeter surveillance from Frenchmans Road and McLellan Avenue. There are less strong surveillance opportunities from the east-west perimeters.

Within those constraints, we conclude that the architecture promotes multi-angle, proximate-distant sightlines, enhancing CPTED objectives by encouraging day-night 'eyes and ears' awareness.

Natural surveillance within the building zones is enhanced by visually 'open' and purposefully interconnected spaces on all levels. We therefore affirm maximum natural surveillance opportunities throughout the site, reducing the temptation for unauthorised entry aimed at damaging property or harming occupants.

5.3 CPTED Principle 3 Access Control

5.3.1 Generic Explanation

Access control is a consequential extension of defining territory (Principle 1) and natural surveillance (Principle 2). Open and/or restricted access must be: (a) readily identified through the appropriate built form (approach) architecture, (b) supported by the physical access control system (pacs) and (c) able to prevent and/or identify unauthorised access.

This increases basement activation significantly, having both a positive and negative impact. Activation in and around basement spaces facilitates observation. Conversely, as a multi-functional space, if breached by vehicle or pedestrian tailgating, it leaves occupants, vehicles and property vulnerable to targeting.

5.3.2 Application – Pedestrian and Vehicle Access

The development has one pedestrian access (entry), a short pathway from Frenchmans Road to the main door and reception foyer. Unlawful access may be attempted from the east-west boundaries and from McLellan Avenue; hence the need to maximise natural and technical surveillance of these zones.

All vehicle access is via the Frenchmans Road ramp. There is no ground plane drop-off or reserved parking, other than public on-street bays.

In our view, vehicles entering the basement must be appropriately identified prior to activating the roller shutters. We recommend shutters remain closed and be subject to authorised access at all times, for the reasons outlined below.

The upper level basement is vulnerable in that it is relatively easy to breach either by vehicle or pedestrian 'tailgating', each time the shutter is opened. 'Successful" breaching this basement level affords intended offenders opportunities to target property and people, given the higher-than-usual activation of what, in other circumstances might be a more benign space.

The design of the walled ramp and access roller shutters is critical, as is their location. The pre-entry set-back is appropriately positioned. We recommend 'split' (perforated) roller shutters to prevent unauthorised vehicle entry, when a vehicle is exiting. To deter and/or identify unauthorised (tailgating), facial and/or number plate recognition technology should be installed. The recognition technology may also deter or detect pedestrian tailgating.

Both roller shutters should always be capable of remote operation and/or via intercom and camera identification to duty staff.

However, SummitCare's operational practices require that the roller shutters remain open during the hours of 7am to 6pm and has indicated they are able to manage the safe access of vehicles and the safe circulation of the upper basement level utilising CCTV monitoring.

5.3.3 Application – Internal Building Access

During 'office hours', front door access will be monitored by duty reception or other assigned staff. After-hours access to all built-form spaces by residents, visitors, staff and contractors will be specified and controlled electronically. This includes lift access from the upper and lower level basements and ground to upper levels.

5.3.4 Application – Storage, Plant, Waste and Utilities Infrastructure Access

Throughout the complex (on all levels) plant and comms rooms, general waste and bin storage spaces are appropriately secured within the basement. We reinforce the need to enclose meters, hydrants and booster pumps should either be secured in recessed secured cabinets or 'caged' if externally located.

We note the proposed electricity sub station (kiosk) will be recessed, appropriately fenced and CCTV monitored.

Our reports usually emphasise that internal waste storage areas should remain 'ordered' and kept free of surrounding (near doorway or gateway) clutter. Ideally, for waste storage and plant rooms, the secure entry doors should have 'eye level' glass panels to enable external observation of these spaces by security and other relevant staff. The area should be protected by fire detection and suppression systems in case of unintended fire or, arson.

CPTED Principle 3 Conclusions and/or Recommendations

Drawings indicate intentional access control measures for:

(i) vehicles entering the upper level basement in line with our recommendation for vehicle identification and split roller shutter installation,

(ii) day-night secure and controlled pedestrian access from Frenchmans Road and throughout all levels,

(iii) plant and other utilities infrastructure, ensuring that external meters, pumps and booster equipment be 'caged' or otherwise enclosed, including the proposed electricity kiosk.

While the development has 'low to medium' risk levels for the offence categories identified, new residential developments and neighbourhoods are regularly targeted to 'test' the adequacy and integrity of access control measures and the maintenance/management of those measures.

It is important that access control measures be strictly adhered to as 'operating procedures' in order that the development maintains a 'crime free' reputation; (Refer CPTEM Section 8).

5.4 CPTED Principle 4 Activity Support

5.4.1 Generic Explanation

CPTED activity support applies (external) lighting, landscaping and signage architecture to a footprint's form and function design, 'supporting' definitional clarity, passive and technical surveillance and access control (Principles 1 to 3).

- *External Lighting* should reflect 'purpose' consistency: wayfinding, destination, social gathering and decorative-aesthetic. Each requires differing luminarie styles, lighting types, spread, throw, spill, wash and lux levels, to accord with lighting Standards and architectural briefs.

  CPTED lighting applications can (should) often exceed those Standards and briefs so as to highlight spaces and circulation - activation 'corridors'.

  Differential lighting should avoid cross-over colour (temperature) clashes to enhance surveillance identification of property and people. All external lighting should optimise sightline legibility, to facilitate proximate-distant wayfinding and destination confidence.

- *Landscaping* should combine aesthetics and purpose with an intent to prevent concealment or entrapment.

- *Signage* supports wayfinding and destination certainty, access limiting (controlling), warning and emergency awareness.

  Signage should have maximum day-night visual impact (including international pictorial signage). It should limit text and, ideally, should not be 'housed' (displayed) as high or wide column-pylon structures which can facilitate concealment or entrapment.

5.4.2 Application – External, Entrance, Basement Lighting

The main CPTED lighting requirements for the development relate to:

(i) the off-street pathway to the main pedestrian entry,
(ii) approach lighting for the roller shutters and vehicle ramp area,
(iii) perimeter lighting for Frenchmans Road and McLellan Avenue,
(iv) internal lighting for both basements,
(v) open spaces.

CPTED-recommended external lighting will support safe 24/7 night-time resident, staff, visitors and contractors accessing the front door and/or accessing the upper level basement.

Pole and/or under eve down lighting will provide non-glare and non-gap wayfinding for the pedestrian and vehicle ramp access. Pole lighting is also recommended for the street facing perimeter corners and the over-ramp garden, again subject to practical and privacy constraints.

Given the privacy issues along the east-west perimeter, low-level overhead or down lighting is recommended. The aim is to illuminate courtyard areas without unnecessary throw, spill or wash, a potentially difficult ask.
In this regard, bollard and wall-mounted installations are not recommended as 'safe illumination' solutions. They are prone to vandalism (even within secure areas), they provide limited lighting throw and spill, even at ground level, causing contrast problems. They can cause glare and can become hidden by maturing landscaping. Wall-mounted lighting also causes glare and potential momentary way-finding uncertainty.

All external lighting should specify colour (temperature) consistency. LED installations of 4000 Kelvin is the recommended ground plane and basement colour temperature. The white-natural light spectrum around 4000 Kelvin has advantages over blue, orange or yellow colour output.

From a crime prevention perspective, yellow, orange and blue renditions distort natural colour profiles and features. White light installations strengthen contrasting colours and identify individual (personal) features more distinctly.

Upper and lower basement levels should follow the external colour temperature recommendation. Roof-recessed 'down' lighting should feature throughout upper and lower level basement zones to maximise visual certainty. The ramp, basement lift lobbies, parking bay installations, approaches to the multi-purpose spaces and back-of-house zones, should exceed minimum lux levels, to spread basement-wide illumination consistency and for object and personal identification.

5.4.3 Application – Landscaping

There is limited proposed landscaping given the nature of the site. With all plantings, it is important that grassed areas, shrubs and trees promote sightlines and limit opportunities for concealment. Planting choices should support levels of day and night surveillance.

From a CPTED perspective, it is important that any tree under-canopy not restrict surveillance sightlines. There is no indication that trees and other plantings will impede balcony, window and door sightlines from any of the resident, staff or communal spaces. Where mature trees are proximate to balconies for example, 'climbing' can lead to easy unauthorised access to upper-level apartments rooms (units).

5.4.4 Application – Signage

There are no issues in relation signage. The development site will be appropriately identified, including back-lit numbering. Emergency and warning signs in basement areas will be specified as per BCA codes.

CPTED Principle 4 Conclusions and/or Recommendations

Lighting treatments for the development require elimination of gaps and shadows with consistently high illumination of the main entrance approach, the vehicle entry, ramp and basement spaces and the site's perimeters.

External and basement lighting treatments should follow consistent luminaire and lux levels, applying LED 4000K colour temperature patterns.

Where practical, we recommend overhead pole luminaires covering ground plane perimeters and open space landscaping, off-street approaches to the main entry, all with sufficient throw, spill and (where appropriate) wash, to eliminate, shadowing and dark gaps, mindful of privacy concerns.

Maturing plantings should not obstruct surveillance sightlines around the development's perimeter fencing and/or walls. They should minimise opportunities for concealment or entrapment within the site, including designated garden areas. Mature trees should not be proximate to upper level balconies.

Way-finding signage should feature back lighting, for night-time clarity, similar to the coded requirements for exit and emergency signs.

Inter-disciplinary coordination of these three 'support elements' is essential to enhance the overall safety (security) of the development. Design development should detail inter-disciplinary solutions.

5.5 CPTED Principle 5 Target Hardening

5.5.1 Generic Explanation

Target hardening is often called 'situational' crime prevention. It aims to reinforce other CPTED principles and to proactively ‘strengthen’ form, infrastructure, structures, fixtures, fittings and furniture in and around identified vulnerable spaces. Target hardening design is an added crime risk defence layer.
Design measures aim to increase the efforts intending offenders must expend attempting to damage property and/or harm or injure people.

Target hardening can apply additional physical, mechanical, structural and electronic treatments to deny or limit access. Electronic alarms or surveillance cameras are the more common target hardening measures. However, the principle's design goal is to avoid place ‘fortressing’.

5.5.2 Application – IP Network (CCTV) Installations

We have identified vulnerable spaces (zones) likely to attract attempted unauthorised access – balconies, perimeter set-backs, vehicle and pedestrian access points and the basements. CCTV (IP Network) surveillance of these spaces is recommended.

We acknowledge privacy and footprint difficulties in covering the western and eastern boundaries. However, it is possible to access these spaces un-noticed with the potential to ‘scale’ balconies. Covering the McLennan Ave and Frenchmans Road perimeters is a less intrusive measure. The most appropriate solutions should be adopted during design detail.

Upper basement coverage should include the roller shutters, the approach ramp, parking bays, lift lobbies, plant rooms, approaches to back-of-house operations, to the multi-purpose ‘wing’, storage and plant rooms.

It is also advisable to include the pedestrian approach to, and coverage of, ground level spaces including the reception foyer, café, lounge, lift foyer and the above-ramp open garden.

The exact location of surveillance cameras will be client-identified. However, we recommend laying cable to all proposed coverage areas to facilitate additional camera installations should they be required, while avoiding additional cabling costs (and disruptions) later.

5.5.3 Application – Basement Help Points

Given the day-night circulation within the upper level basement, it may not seem necessary to install help points. However, we do recommend one or two installations near the lift foyer and within the car park bays. The basement is susceptible to unauthorised access (Principle 3) from the vehicle ramp to all basement zones.

The condition of installing help point technology is that the ‘feed’ would need to go to a manned terminal; possibly an additional expense or, Smart device, e.g. phone/tablet. If our basement lighting recommendations are adopted, cameras will more easily identify persons requiring assistance.

5.5.4 Application – Unit (Room) Balconies

Drawings detail ground and upper level balconies. These are susceptible to scalable (unauthorised) access. Room courtyard access is also possible. As an extra precaution, we recommend installation of security screens for doors and windows to prevent possible external breaches.

5.5.5 Application – Building and Wall Façades

The Frenchmans Road facing walls, including the vehicle ramp, are prime targets for ‘tagging’. While no masonry coatings can guarantee protection from graffiti damage, we recommend investigating and applying the latest protective material, to minimise likely defacing. Protective coatings should be applied to all exposed non-glazed surfaces.

CPTED Principle 5 Conclusions and/or Recommendations

Target hardening measures are recommended for the most vulnerable zones within and around the footprint.

Camera surveillance is recommended for vulnerable ground level zones– reception, lift foyer, offices, café and dining areas, the off-street pedestrian entry, the McLellan Avenue boundary and the open garden above the basement ramp.

Basement camera surveillance should include parking bays, activity spaces, back-of-house operational zones, plant rooms and roller shutter doors.

Consideration should be given to install 'help' points. We also recommend specifying security window and door screens for exposed balconies and/or courtyards.

Non-glazed surfaces should be anti-graffiti coated.

From a crime prevention perspective, treatments recommended are not 'invasive'. We believe that design development drawings can specify combination solutions without creating a sense of fortressing.

6 INFORMING LEGISLATION, REGULATION AND/OR POLICY INSTRUMENTS

CPTED in New South Wales is a compliance requirement for specified mid to large developments falling with State and/or local government planning or policy instruments.

6.1 Environmental Planning and Assessment Act

Consideration of crime prevention for mid to large scale developments in New South derives from Section 4.15 (1) (b) and (e) of the NSW Environment Planning and Assessment (EPA) Act 1979, (as amended).

The Act allows provision for State and local government instruments to regulate or codify issues pertaining to the evaluation of environmental impacts of developments. Social "*impacts*" (b) and "*the public interest"* (e) fall within this Section. Under the heading 'Evaluation', Section 4.15 (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:*

(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,

(c) the suitability of the site for the development,

(d) any submissions made in accordance with this Act or the regulations,

(e) the public interest."

In the case of 'green' or 'brown' field developments, interpretation of "*the public interest*" includes stakeholder proponents, post-development occupants and, by extension, the wider community.

Local Government authorities in NSW are required to consider the various impacts within S.4.15 when evaluating developments. Councils recognise the importance of mitigating anti-social and criminal behaviour within their constituencies.

Many have incorporated the CPTED framework into Development Control Plans and/or Crime Prevention Plans, requiring crime prevention considerations as a specific development consent condition. Randwick City Council is among them.

The *public interest* interpretation aims to ensure CPTED-relevant architecture creates and promotes 'safe place' outcomes, i.e. to prevent anti-social and/or criminal behaviour which could put at risk people and property associated with a new development footprint.

6.2 Randwick City Council

Council's 'A Safer Randwick City' Plan, originally adopted in 2008, outlines the role of CPTED in creating public space and approving urban developments.

Under the Heading 'Safe Places Using Crime Prevention Through Environmental Design (CPTED) Principles' (Section 8.4) Council states: "*Randwick City is committed to enhancing safety of public spaces such as shopping strips, streets and beaches. A key strategy would be to adopt 'Crime Prevention Through Environmental Design' (CPTED) principles as part of its own capital works projects. Council is also commencing a review of all of our planning documents, therefore an opportunity exists to require all development applicants to address CPTED principles as part of the urban design criterion*."

Elsewhere in the Plan, Council's aim is explicit: … "*to provide a unique opportunity to ensure CPTED is incorporated into the new comprehensive DCP…. as part of the design and assessment of new developments."*

Council's 'Comprehensive Development Control Plan – 2013' requires CPTED principles to be included in most of the City's development applications, for example, business, residential, industrial, boarding house and mixed-use developments. This development comes within Council's categories.

6.3 NSW Police

The NSW Police Force has appointed crime prevention officers (CPOs) to most of the State's Area Commands. Their role is to proactively review (a) anti-social and criminal behaviour 'hot spots' with a view to risk mitigation through increased police or security presence and/or through situational crime prevention measures, that is physical modification of (usually) external built form by applying CPTED principles.

The Police have developed their own Crime Prevention Through Environmental Design (or Safer-by-Design) guidelines as a 'Check List'. This Report has been undertaken with reference to relevant parts of the guidelines which are based on CPTED principles.

CPTED Compliance Conclusions and/or Recommendations

Our assessment concludes that the planning and design development of the proposed multi-level SummitCare project at Frenchmans Road Randwick, complies with, or will comply with,

(i) Section 4.15 of the NSW EPA Act, 1979, as amended;

(ii) The NSW Police Crime Prevention Checklist; and

(iii) Randwick City Council's Crime Prevention Plan 2019 – 2021.

Subject to on-going design development, the reviewed drawings support development consent, as that consent relates to required incorporation of CPTED principles.

7 CPTEM PRINCIPLES AND (GENERIC) EXPLANATIONS

CPTEM is a post-construction platform whose principles complement and support CPTED. It is an occupancy management initiative which maintains embedded (security) design and monitors 'place' crime risk to sustain a safe (secure) built form environment. The objective is to sustain a development's on-going reputation as 'welcoming and safe place'.

While the Report's scope and our engagement is CPTED-focussed, we recommend an intentional and integrated CPTED and CPTEM strategy for the development. Harris is of the view that security design (CPTED) and security management (CPTEM) strategies are interdependently and inexorably linked.

CPTEM is often over-looked to the detriment of a development's reputation outcomes – marketability and stakeholder duty-of-care. In our opinion, on-going security management should be become the norm. Where CPTEM has been overlooked, the benefits of CPTED can be compromised.

Ad hoc and/or intermittent attention to CPTEM can negate CPTED's effectiveness and can leave owner-occupier stakeholders exposed to litigation in the event of threats or incidents occurring on any part of a development's post-occupancy footprint.

Managing and measuring occupancy (operational) crime risks need not be onerous. A body corporate for example would add CPTEM to their responsibilities. In the short and longer term, it is a stakeholder stewardship-educational move, aimed at site-wide cooperative community safety (security) awareness.

The Harris identified five CPTEM principles are:

Principle 1 Design maintenance - checking for design obsolescence, redundancy, replacement;
Principle 2 Systems management - testing for operational capability of support technology;
Principle 3 Policies and procedures – knowing and following (security) policies and procedures;
Principle 4 Threats and Incidents – recognising, responding, reporting and recording;
Principle 5 New Crime Risks and Outcome Evaluation – reviewing impacts and benefits of CPTED and CPTEM strategies.

The following generic explanations are the suggested 'triggers' for implementation, once a development becomes 'operational'. We are reinforcing an holistic CPTED-CPTEM strategy. We have not suggested any applications of the principles in this context as this is not the report's focus.

7.1 CPTEM Principle 1 Design Maintenance

Generic Explanation

Most CPTED initiatives require regular maintenance, testing, repair and/or replacement. Awning, porch and all external lights, signs, landscaping, security window and door-locking furniture, fencing and gates should receive scheduled maintenance to ensure security design integrity and purpose.

7.2 CPTEM Principle 2 Systems Management

Generic Explanation

This involves the management of security technology systems, to affirm (design) capability and integrity. This includes physical (electronic) access control, alarm and IP Network (CCTV) surveillance systems. Each requires scheduled testing for reliability, obsolescence, redundancy, replacement and/or re-alignment.

7.3 CPTEM Principle 3 Policies and Procedures

Generic Explanation

In most commercial, retail, recreational, industrial and institutional premises, there are policies and procedures to be understood and complied with in the event of fire and other emergencies. Policies and procedures should also include security threats and incidents in mid to high rise apartment buildings; and would be a body corporate or strata management responsibility.

In a crime prevention stewardship environment, all stakeholders should be aware of 'what-to-do-in-the event-of…' scenarios. Owner-occupiers should complete a policies-procedures induction and, if

appropriate training, to ensure 'what-to-do' compliance, similar to awareness of, and procedures for, fire and other emergencies.

To support policies and procedures, there should be general stakeholder awareness of crime risks, how those risks are best managed and by whom. Councils and local police crime prevention officers can assist stakeholders in conducting crime risk and crime prevention (security) awareness seminars. They can also assist in the development of policies and procedures.

7.4 CPTEM Principle 4 Responding to Threats and Incidents

Generic Explanation

Knowing how to identify and respond to anti-social and crime threats and incidents is critical. Security and/or facilities managers, strata managers etc. should develop and 'rehearse' agreed responses covering the most common major or minor crime categories.

Depending on the circumstances, crime or security-related post-threat or incident reports are submitted by emergency services, police and/or insurers. However, they rely on input from those impacted or witnessing the threat or incident. It is important that these statements follow a consistent procedural pattern.

While it may seem obvious, recording and reporting threats and incidents to authorities must be (i) factual, (ii) relevant, (iii) accurate, (iv) clear, (v) concise and (vi) complete, (in so far as circumstances permit).

7.5 CPTEM Principle 5 CPTED Risk Mitigation Evaluation and New Crime Risks

Generic Explanation

Implementation of CPTEM and CPTED requires on-going reviews of crime (security) risks and regular evaluation of both strategies to 'test' the relevance, cost-effectiveness, impact and value (real and perceived), for replication and/or improvement to future (security) design and management outcomes.

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APPENDICES

APPENDIX 1 CRIME STATISTICS FOR THE SUBURB OF RANDWICK NSW

The following crime statistics are supplied by the NSW Bureau of Crime Statistics and Research. They are indicative of reported crime only and can only be taken as a guide to actual crime occurring in Randwick over the (reported) 5-year period, April 2015 – March 2020.

NSW Crime Statistics April 2015 to March 2020 Randwick (Suburb)											
	5 Year Trend to March 2020	Year to March 2016 Count	Year to March 2016 Rate	Year to March 2017 Count	Year to March 2017 Rate	Year to March 2018 Count	Year to March 2018 Rate	Year to March 2019 Count	Year to March 2019 Rate	Year to March 2020 Count	Year to March 2020 Rate
Homicide	n.c.	0	0	0	0	0	0	0	0	1	3.1
Assault - domestic	Stable	45	142.7	63	197	62	191.4	42	129.2	64	196.9
Assault - non Domestic	Up 9.9% per year	104	329.5	92	288.2	149	460.1	152	467.7	156	480
Sexual assault	n.c.	10	31.6	11	34.4	19	58.7	15	46.2	24	73.8
Indecent assault, act of indecency and other sexual offences	n.c.	21	66.6	21	65.6	19	58.7	18	55.4	30	92.3
Robbery without weapon	n.c.	2	6.3	3	9.3	3	9.3	2	6.2	6	18.5
Robbery with a firearm	n.c.	0	0	0	0	2	6.2	0	0	0	0
Robbery with weapon not a firearm	n.c.	2	6.3	2	6.3	1	3.1	0	0	1	3.1
Intimidation , stalking & harassment	Stable	52	164.7	62	194.1	59	182.2	77	236.9	68	209.2
Other offences against the person	n.c.	5	15.9	1	3.1	1	3.1	0	0	1	3.1
Break & enter dwelling	Down 15.7% per year	71	225	60	187.6	39	120.5	66	203.1	37	113.8
Break & enter non dwelling	n.c.	11	34.9	39	122	28	86.5	19	58.5	9	27.7
Motor vehicle theft	Down 9.5% per year	42	133	33	103.3	40	123.5	29	89.2	29	89.2
Steal from motor vehicle	Down 14.7% per year	130	412.1	113	354.4	75	231.7	105	323.1	71	218.5
Steal from retail store	Stable	38	120.4	61	190.5	76	234.7	79	243.1	44	135.4
Steal from dwelling	Down 15.4% per year	108	342.1	87	272.3	60	185.3	68	209.2	57	175.4
Steal from person	n.c.	12	38.1	11	34.4	16	49.4	11	33.8	11	33.8
Liquor offences	Stable	77	244.3	82	256.4	73	225.6	70	215.4	87	267.7
Disorderly Conduct (criminal intent)	n.c.	4	12.7	6	18.8	1	3.1	4	12.3	3	9.2
Disorderly conduct (trespass)	n.c.	18	57	17	53	14	43.3	19	58.5	38	116.9
Disorderly conduct	Stable	50	158.5	50	156.4	57	176.2	45	138.5	71	218.5
Drug offences	Stable	108	343	272	846.6	142	438.7	91	280	230	707.7
Malicious damage to property	Stable	133	421.7	135	422.3	129	398.4	139	427.7	136	418.5
Prohibited and regulated weapons offences	n.c.	13	41	5	15.7	13	40.2	13	40	16	49.2
Arson	n.c.	1	3.2	4	12.5	2	6.2	2	6.2	4	12.3

APPENDIX 2 APPLYING THE RISK MANAGEMENT STANDARD TO IDENTIFYING CRIME TRENDS AND PATTERNS

Accurately predicting anti-social and crime risks, patterns and trends within and around the development will always be problematic. There are no risk and mitigation absolutes or guarantees. However, the International Standard - ISO 31000:2009 provides a helpful framework to identify and manage any organisational risks, including crime risks.

Identifying and mitigating *crime* risks is a legitimate application of the Standard. The Standard provides a theoretical and practical framework whereby contexts, risks, levels and consequences can be identified and managed.

The Standard defines generic risk as... "*the effect (impact) of uncertainty on objectives*" (ISO 31000 Clause 2.1). The Standard's objective is to identify and remove or manage the uncertainty so as not to negatively impact on organisational objectives.

Harris has adapted and applied the Standard by defining (crime) risks within the **context,** assessing **risk levels** and affirming and/or recommending appropriate CPTED treatment.

The collective term '**risk**' has been more widely defined as: ...'*the likelihood of something untoward happening and the consequence(s) if one or more risks become threats or incidents*.'

A '**threat**' may be defined as *'unacceptable and escalating behaviour stemming from one or more 'uncontrolled' risks, which if not urgently managed, is likely to lead to harm or damage with negative consequences or outcomes*.'

An '**incident**' may be defined as *'an uncontained threat with likely negative harm or damage consequences*.'

Threats and incidents are progressive in their definitions. If risks remain unidentified and untreated (unmanaged), they can rapidly and easily become threats or incidents. CPTED solutions should 'match' the adapted Standard's risk levels and assessed categorised behaviours. Recommendations and/or affirmation of architectural solutions should be proposed against this backdrop.

The following table outlines generic risks and risk levels, potentially applicable to any assessment of crime risks in an urban or rural neighbourhood.

Low Level Risks	disturbances, intimidation, and aggressive behaviour towards individuals or groups; graffiti and other minor property damage to the façades or street fixtures, fittings, paving, luminaires, plantings and signage
Medium Level Risks	escalating intimidating or threatening behaviour leading to assault, and/or damage to personal property; unauthorised access, damage to and/or theft of property from the building, vehicles and/or vehicle theft
High Level Risks	'medium level' crime risks escalated to intentional (planned) personal harm and /or damage to building facades and structures and/or property including plant and associated utilities infrastructure
Extreme Level Risks	immediate and dangerous threats to people and/or property, including the building and contents, vehicles, and/or nearby structures and/or utilities infrastructure, including bomb threats and hostile vehicle penetration

The question always arises as to how to respond to each risk level. Responses through design are an important determinant. CPTED principles can be matched against risk levels and solutions, mindful of the consequences of responding or not responding to each 'level'.

Crime risk mitigation through design must be matched with other post-occupancy responses (for example CPTEM) to ensure a coordinated and integrated management approach to both creating and maintaining 'crime free' environments.

APPENDIX 3 THE INFLUENCE OF CPTED IN RE- DESIGNING PUBLIC SPACES FOR SAFE AND 'LIVEABLE' ACTIVATION

3.1 Preventing Crime in Urban Public Spaces

The question of activating and sharing large or small urban public spaces has been occupying city planners globally for the past 40 + years. Prior to 'motorism' public spaces were primarily for pedestrians in major cities, towns and centres. The immediate general question is whether public spaces can and should be designed or re-designed to accommodate the contemporary emphasis on pedestrianisation. Obviously, the answer depends on historic and existing use, and the willingness of stakeholders to change the use.

In this Century, urban public space renewal and re-sharing is becoming a priority. Vehicle take-overs are being challenged by governments, corporations and communities. Pedestrianisation is making its collective presence felt.

There are many reputable architects and planners in numerous countries helping facilitate the urban space-occupancy challenges. Prominent among them is Jan Gehl, a world-renowned architect who, for the past 50+ years has devoted his career, professionally and passionately, to raising issues and solutions for small and large public precinct renewal.

Gehl has written compellingly on (public) spatial sharing versus separation - defining and designing for both options. His research has concluded overwhelmingly that people should re-claim city, town and suburban spaces.

> *"It's no secret that we have always built cities for people until cars started to invade our lives. So by studying old cities you can get a lot of inspiration for what would also be a good solution for today by looking at people more than we look at making the cars happy."* (Gehl 2015)

The added contemporary element in urban reclamation and renewal is *security* (*crime prevention*), an all-too-broad a word with many confusing interpretations. CPTED interprets 'security' through design, harnessing architecture and/or engineering to collaboratively *reduce or prevent* anti-social and criminal behaviour.

Harris defines this collaboration to provide 'welcoming and safe (secure) place' as: '*built form and public space environments where crime prevention has been a consideration of concept, master-planning, design development and construction processes and where safe place outcomes enhance a community's overall reputation'.*

CPTED is also referred to as designing-out-crime and/or safer-by-design, defined by Harris as '*applying aspects of architecture, engineering and technology to all urban development proposals as an intentional environmental crime prevention strategy'.* CPTED is a globally recognised designing-out-crime framework. It is our preferred framework for these projects.

3.2 The Influence of CPTED on Community Safety

CPTED's application to, and influence on, urban community safety has a 40+ year track record. Published books and papers began from CPTED's emergence in the 1970s.

Liggett (2004) quotes Greenberg, Rohe and Brantingham and Brantingham in that historical context.:

> "*The design of the built environment can affect crime through its effect on the degree of access, ease of entrance and exit, and surveillability (Greenberg and Rohe, 1984). For example, alleys and mid-block connections increase the number of escape routes, open a block or a neighborhood to exploration, and aggravate the criminal risk for residential or commercial establishments (Brantingham and Brantingham, 1993).*

Kennedy (1993):

> *"While there have been several notable exceptions (eg Rand, 1983, 1984), most architectural literature pertaining to security deals primarily with the immediate physical structure itself. Criminogenic aspects of the physical environment have not been routinely selected for analysis by design teams… As professional architecture continues to evolve, however, the profession must incorporate those findings of other disciplines which relate so directly to its mission of creating a safe environment."*

Contemporary Korean criminologists Jae Seung Lee, Sungjin Park, and Sanghoon Jung (2016) observe:

> *"Crime prevention through environmental design (CPTED) is one of the most popular urban planning strategies for improving safety in cities. The major purpose of CPTED is to deter potential criminals by modifying urban environments. It is based on the urban design and environmental psychology belief that human behaviour can be*
>
> *influenced by the surrounding environment. CPTED is often used to renovate declining neighbourhoods that suffer from crime."*

CPTED principles should be applied where there is a *primary* intention to create re-development 'attractors' aimed at bringing people into separate or shared social gathering spaces where CPTED supports architecture and engineering in promoting safe activation, reducing or preventing anti-social behaviour and the likelihood of crime.

CPTED is therefore best applied when safe people spaces are the goal, either in the absence of vehicles or at the very least, where vehicle flow and parking are separately defined.

Definitional clarity of place purpose, activation and circulation will determine the application and potential benefits of CPTED in both centres. CPTED emphasises 'welcoming and safe place' in a potentially 24/7 activation environment.

The five CPTED principles – territorial definition, natural surveillance, access control, activity support and target hardening – have informed this report's assessment, conclusions and recommendations.

SUMMARY: CPTED PRINCIPLES SHOULD BE APPLIED WHEN SPACES AND PLACES ARE IDENTIFIED, SEPARATED OR SHARED AND DESIGNED FOR STAKEHOLDER-AGREED PURPOSE(S) WITH AN EMPHASIS ON PEOPLE AND PROPERTY PROTECTION (COMMUNITY SAFETY AND/OR SECURITY).

APPENDIX 4 EXPANDED EXPLANATION ON CRIME PREVENTION AS A DESIGN AND MANAGEMENT STRATEGY (CPTED PLUS)

4.1 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 of 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 is 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.

Consideration of crime prevention for mid to large scale developments in New South derives from Section 4.15 (1) (b) and (e), of the NSW Environment Planning and Assessment (EPA) Act, 1979 as amended. The Act allows provision for State and Local instruments to regulate or codify issues pertaining to the evaluation of environmental impacts of developments. “Social impacts” and “the public interest” fall within this Section under (b) and (e) respectively. Crime risks and crime risk mitigation (crime prevention) are relevant to these provisions.

Increasingly, local authorities are introducing instruments and/or guidelines requiring ‘security (safety or crime prevention) by design’ to form part of DA documentation.

Notwithstanding local and State based instrument 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.

4.2 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.

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.

4.3 CPTED Principles

Crime Prevention Through Environmental Design (CPTED or security design) is based on five principles – territorial definition, access control, natural surveillance, activity support and target hardening.

4.4 The Principle of Territorial Definition

Crowe (2003) 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 DA stage, 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.

Early on in the designing-out-crime research, Geason and Wilson (1989:5) claimed 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.

4.5 The Principle 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, walkways, 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 with alarm and images transmitted real time to portable wireless technology.

4.6 The Principle 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. Later studies have supported these claims.

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.

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, walkways, landscaping, low-line fencing, steps and doorways are obvious examples.

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.

4.7 The Principle of 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.

4.8 The Principle of 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'.

4.9 Crime Prevention Through Environmental Management (CPTEM)

The application of CPTED design principles (4.4 to 4.8) must be reinforced by the place management of identified security (anti-social and criminal behaviour) risks. The two strategies complement each other. Design seeks to reduce risks through creative physical intervention.

Management seeks to build on the design outcomes by monitoring and managing on-going risks through stakeholder awareness protocols, through technology maintenance and renewal and through cooperative place management by police, security and facilities operatives.

There are five CPTEM Principles:

- Principle 1 Design maintenance - checking for design obsolescence, redundancy, replacement;
- Principle 2 Systems management - testing for operational capability of support technology;
- Principle 3 Policies and procedures – knowing and following (security) policies and procedures;
- Principle 4 Threats and Incidents – recognising, responding, reporting, recording and reviewing;
- Principle 5 New Crime Risks and Outcome Evaluation - impact of CPTED and CPTEM strategies.

Each principle is part of a CPTEM ‘whole’.

CPTEM is often over-looked to the detriment of a development’s reputation outcomes – marketability and stakeholder duty-of-care. On-going security management may fail if it is not approached strategically and responsibly. Ad hoc and/or intermittent attention to CPTEM can negate the design strategy and can leave owner-occupiers exposed to litigation in the event of threats or incidents occurring on any part of a development’s footprint.