CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

Prepared for

NSW Department of Planning

On behalf of

Parkview Sydney Developments

By

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1. INTRODUCTION

This report constitutes a detailed Crime Prevention Through Environmental Design (CPTED) Report to accompany a Part 3A Concept Plan and Project Application to the Department of Planning for the development proposal located at No. 60 Charlotte street, Clemton Park.

In summary, the proposal is for a Concept Plan including a Project Application consisting of 2 components, on the whole of the former Sunbeam site. Specifically, the proposal involves the following:-

1 **Concept Plan** for use and building envelopes (including GFA of 87,332m², indicative number of apartments, height and building footprints), road layout and landscaping across the subject site; and

2 **Project Application** comprising:

2.1 Subdivision of the whole of the land into 5 allotments including roads and services to be dedicated to Council and a stratum within Lot 2 for a future public reserve;
2.2 Development for roads and services (**staged construction**) with the first stage of construction of roads and services being completed prior to occupation of development on Lots 1 & 3;
2.3 Development of a bulky goods purposes (30,367m² of floor space and ancillary car parking and other services on Lot 1 (refer to plans and schedules);
2.4 Development of a residential flat building (5,897m² of floor space and a child care centre (636m² of floor space) and ancillary car parking and other services on Lot 3 (refer to plans and schedules).

The purpose of this report is to assess the proposed development against the guidelines prepared by the NSW Department of Planning titled "Crime Prevention and the assessment of development application" under Section 75E of the Environmental Planning and Assessment Act, 1979.

This assessment should be considered in respect to the design drawings prepared by Marchese and Partner; Habitation and well as Buchan Group, as submitted with the Application.

2. CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN PRINCIPLES (CPTED)

2.1 Overview

The following table demonstrates the key design responses:

CPTED PRINCIPLE	DESIGN RESPONSE
Surveillance	The proposed development incorporates mixed use zoning concepts to improve upon passive surveillance of the area and fundamental design rules to decrease the number of spaces where loitering may become a problem. Passive Surveillance is improved as residential dwellings are positioned above shops and retail space improving safety of the area particularly at night. Development also surrounds a park improving the feeling of enclosure yet safety and subsequent surveillance of the park. Appropriate design has resulted in the provision of sight lines. Sight lines throughout the development, but more so in residential corridors between corners, lift doors and entrances need to be created to minimise hiding opportunities. This can be achieved through the provision of mirrors and dual frontage/doors addressing both sides for lifts, removal of unnecessary walls/obstructions, clear glazing of lift lobbies and car park portals, as well as maximising sight lines from inside front door of units to corridors.
Access Control	The majority of proposed Car Parking on site is situated under building footprints and thus are secure private bays. Access to these Parking spaces is limited to customers during the day or tenants at night. The use of security shutters/swipe card access to residential car parking levels, lifts that service residential levels, and accessibility to the residential levels is to be implemented and maintained. The use of this technology is necessary to ensure effective use of physical and symbolic barriers to attract, channel or restrict the movement of people to minimise opportunities to commit crime. Access to all dwellings and shops are also controlled through appropriate locking systems and passive surveillance; from the street and adjacent
Territorial Reinforcement	The design of the proposal will need to incorporate aspects to define and distinguish areas strictly for private residential use/access from the areas utilised for public and semi-public purposes. Landscaping and built form helps separate areas and gives unique characteristics to parks and open spaces. Vegetation improves the aesthetics of an area while providing shade during warmer months. Vegetation may inhibit the success of an area through poor maintenance. Pruning and species selection is crucial to improving safety and creating spaces within an area. In addition built form encourages different uses at ground level and may create sight lines or views which strengthen the dynamics of the area.
Space Management	The creation of a well-kept and attractive space will help to attract more people, and thus reduce the likelihood of crime occurring through increased passive surveillance. The use of quality design combined with the implementation of an appropriate management, upkeep and cleaning strategies will reinforce perceptions of safety.

2.2 Current Crime Profile of Canterbury LGA

Canterbury Council acknowledges that Community Safety is more than just crime prevention and emergency management it also includes aesthetics and quality of life amongst others:

- *"sharing responsibility for each other*
- *promoting our wellbeing*
- *enjoying our surroundings*
- *being proud of them and*
- *creating partnerships across the community to maintain them"*

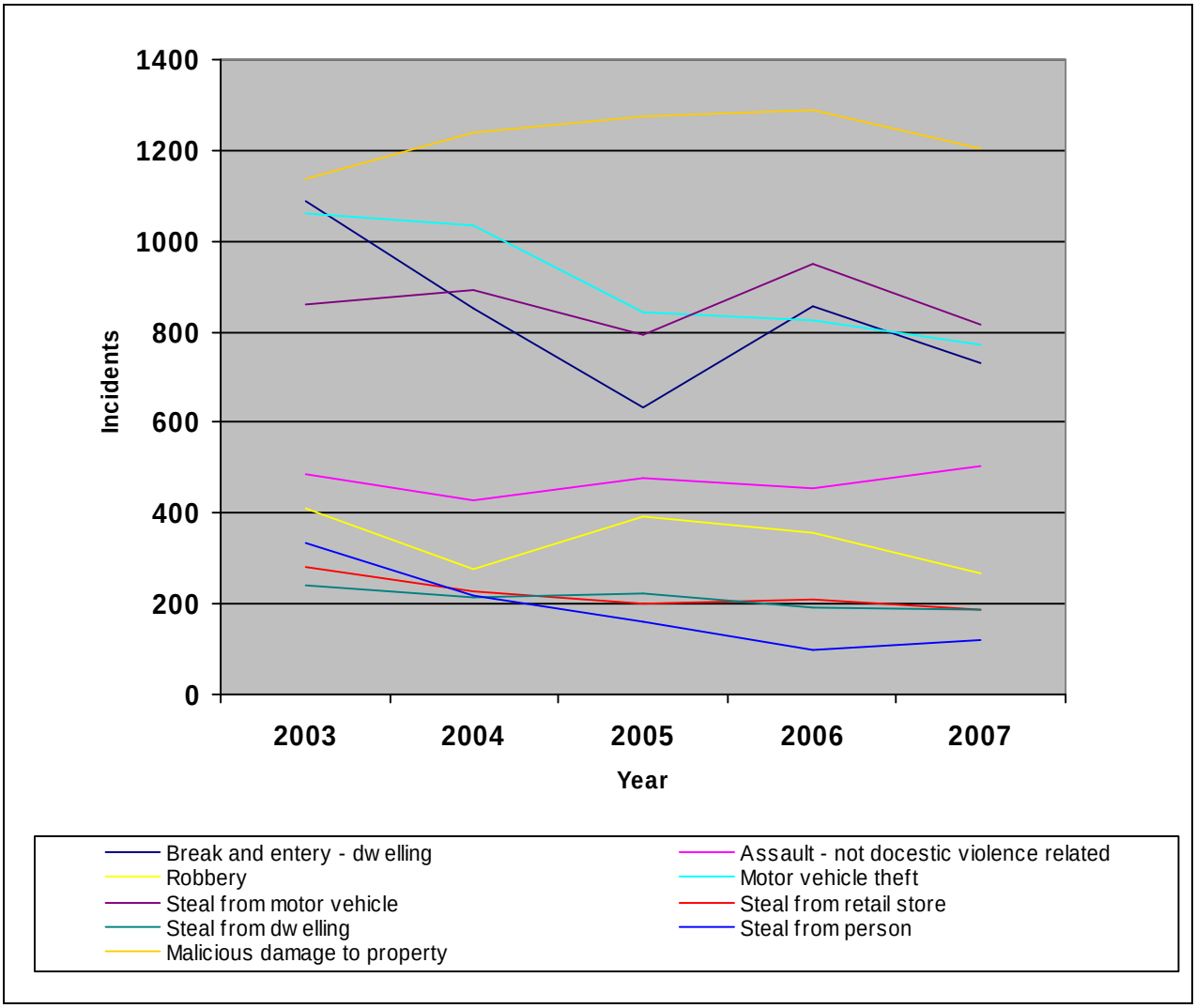
Council is committed to promoting the interests of the residents of Canterbury City…Our goal through this policy is to foster the well being of our residents through the promotion of community safety and crime prevention. The local community is fundamentally concerned about these issues and a sense of safety underpins the fabric of the community and social harmony we seek to generate for all residents…To achieve our vision of 'A great place to live and work' we are committed to promoting community partnerships, social justice and participation".

Canterbury Council Development Control Plan No. 29 Crime Prevention through Environmental Design aims to:

"raise community awareness and promote design as a genuine crime prevention strategy. It aims to help the general community identify their role in the crime prevention process. The plan sets up performance criteria and design requirements/ suggestions that help to reduce the potential for crime and create safer environments".

The DCP contains performance criteria, design and or requirements/suggestions in order to meet the aims of the plan.

The following table compares criminal incidences at different time occurrences in the Canterbury LGA from 2003-2007:



Source: Bureau of Crime Statistics and Research: Local Government Area Ranking Tool

Figure 1: Comparison of crime related occurrences in Canterbury LGA 2003-2007

2.3 Design Considerations

2.3.1 Relationship between Design and Crime

Crime Prevention: Aims to prevent crime and anti-social behaviour before it occurs.
Social prevention: Aims at addressing socio-economic causes of crime.
Situational prevention: Seeks to reduce opportunities for crime and anti-social activity through changing the environment

Crime Prevention for development is an holistic approach involving:

- CPTED (Crime Prevention through Environmental Design) principles
- Engineering and physical measures. Eg. CCTV, security doors, security patrols, mirrors
- Management strategies. Eg. Security Management Plan Crime Prevention Through Environmental Design

- Crime Prevention Through Environmental Design (CPTED) aims to reduce crime and change perceptions of crime through changing the physical environment.
- CPTED increases risk for criminals by increasing chance of detection, challenge and capture.
- Increases effort required to commit crime by increasing the time, energy and resources needed to be expended.
- Removes conditions that create confusion about behaviour norms.

2.3.2 The CPTED Principles

Crime Prevention Through Environmental Design - or CPTED is much more far-reaching than dead bolts on doors and locks on windows, CPTED crime prevention principles can be applied easily and inexpensively to building or remodelling, and have been implemented in communities across the nation. The results have been impressive; in some CPTED communities, criminal activity has decreased by as much as 40 percent. What is the secret to CPTED crime prevention? Design that eliminates or reduces criminal behaviour and at the same time encourages people to "keep an eye out" for each other. These are just a few of the ingredients that go into creating an effective CPTED crime prevention environment; that is, a safer more liveable community.

The Four Strategies of CPTED:-

- **Natural Surveillance** - A design concept directed primarily at keeping intruders easily observable. Promoted by features that maximize visibility of people, parking areas and building entrances: doors and windows that look out on to streets and parking areas; pedestrian-friendly sidewalks and streets; front porches; adequate night time lighting.
- **Territorial Reinforcement** - Physical design can create or extend a sphere of influence. Users then develop a sense of territorial control while potential offenders, perceiving this control, are discouraged. Promoted by features that define property lines and distinguish private spaces from public spaces using landscape plantings, pavement designs, gateway treatments, and "CPTED" fences.
- **Natural Access Control** - A design concept directed primarily at decreasing crime opportunity by denying access to crime targets and creating in offenders a perception of risk. Gained by designing streets, sidewalks, building entrances and neighbourhood gateways to clearly indicate public routes and discouraging access to private areas with structural elements.
- **Target Hardening** - Accomplished by features that prohibit entry or access: window locks, dead bolts for doors, interior door hinges.

Particular consideration has been given to the incorporation of these principles concerning entrances, lift cores (access/exit from basement and residential levels), corridors, interrelationships with existing retail and commercial spade, lighting, legibility and accessibility, ownership and space management, security and safety, and minimisation of ‘entrapment’ opportunities.

3. ASSESSMENT AGAINST CPTED PRINCIPLES

CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts. Research into criminal behaviour shows that the decision to offend or not to offend is more influenced by cues to the perceived risk of being caught than by cues to reward or ease of entry. Consistent with this research, CPTED based strategies emphasise enhancing the perceived risk of detection and apprehension.

Consistent with the widespread implementation of defensible space guidelines in the 1970s, most implementations of CPTED as of 2004 are based solely upon the theory that the proper design and effective use of the built environment can reduce crime, reduce the fear of crime, and improve the quality of life. Built environment implementations of CPTED seek to dissuade offenders from committing crimes by manipulating the built environment in which those crimes proceed from or occur. The three most common built environment strategies are natural surveillance, natural access control and natural territorial reinforcement. Natural surveillance and access control strategies limit the opportunity for crime. Territorial reinforcement promotes social control through a variety of measures.

Below follows an assessment of the Concept Plan against these principles or strategies whilst a more detailed assessment of the Project Application (Lot 1 and Lot 3) are contained within **Appendix A** to this report.

3.1 Surveillance

Natural surveillance increases the threat of apprehension by taking steps to increase the perception that people can be seen. Natural surveillance occurs by designing the placement of physical features, activities and people in such a way as to maximize visibility and foster positive social interaction among legitimate users of private and public space. Potential offenders feel increased scrutiny and limitations on their escape routes.

The proposed development has been designed so that buildings address the street so as to provide additional casual surveillance to new Alfred Street, New Troy Street, New Wade street and New Harp Street.

Additional measure to enhance internal surveillance and maximising of sight lines need to be implemented. Sight lines in residential corridors between corners, lift doors and entrances will be created to minimise hiding opportunities.

This can be achieved through the provision of mirrors and dual frontage/doors addressing both sides for lifts, removal of unnecessary walls/obstructions, clear glazing of lift lobbies and car park portals, as well as maximising sight lines from inside front door of units to corridors.

- Effective lighting to public park; and
- Landscaping that increases the aesthetics of the area without providing offenders with a place to hide or entrap victims.

The proposed development consists of open pathways bordered by low lying vegetation and limited fencing. All pathways within the proposed development are permeable and thus avoid the unappealing environments which are created through poor urban design. External entry paths and foyers to buildings within the proposed development are direct to avoid potential hiding places.

Main entries address pedestrian walkways within the development with windows overlooking these sidewalks and car parking spaces. Some entry paths are constricted by corners and potential hiding places. In these instances, mirrors and other mitigation measures will be implemented in accordance with Council's requirements. Further streets have not only been designed for service but also so as to also provide casual surveillance from passing vehicles.

The proposal incorporates a large percentage of open space into the design of the subject site. In accordance with the provisions of Council's DCP, these communal public areas have been addressed through passive surveillance measures. The habitable rooms and buildings surrounding such open space address the space in an socially friendly and safe way. All rooms which face onto areas of open space provides surveillance over these areas allow greater community use of the space and general feeling of safety.

Very few communal and utility areas occur within the proposed development. The communal areas that exist are easily seen from various points including the appropriate street thoroughfare. Vegetation occurring within the public open space does not hinder safety objectives. Low lying vegetation and tree planting is to accompany footpaths, streets and buildings within the proposed development. Trees are positioned along street thoroughfares and within areas of open space which can accommodate larger vegetation without impairing safety. Low branches and foliage is to be removed where this barrier would conflict and adversely effect community safety. Therefore children's play areas, car parks and pedestrian pathways are not adversely affected by the provision of landscaping. Appropriate spacing is applied to the landscaping of trees with dense low growth to discourage dense vegetation and potential threat to safety. Further Landscaping within the proposed development will not conceal the front door to a building when viewed from the street. Low lying vegetation has been selected to reduce any adverse effects to the entrance from the street.

Both natural and artificial lighting is used to reduce poorly lit or dark areas. Through exposure, lighting deters crime and vandalism improving the urban environment at night. Movement positioned lights will be located in areas with minimum use from pedestrians and residents. Flood lights are inappropriate due to the minimal use of certain areas and thus if implemented would only cause unneeded additional lighting in conjunction with street and private lights. In conjunction with street lights which will bridge illumination gaps, commercial use lighting is sufficient and will justly improve spaces where vegetation and buildings may create areas of low illuminated quality. However this lighting will not adversely effect private neighbouring properties. Energy efficient lighting methods are to be implemented to save energy. Minimal use of flood lighting within the proposed development will further reduce unnecessary energy demand.

Car parking areas are adequately lit and will be painted in light colours which will increase levels of illumination. The proposed development consists of a mix of uses including, residential, retail, and aged care.

Precinct C within the proposed development includes retail and a supermarket on the ground floor with residences above. Due to the positioning of this precinct within the middle of the proposed development further surveillance is maximised of adjacent properties. Further, Car parking facilities are provided under ground below buildings consisting of retail shopping, residences and seniors living.

3.2 Access Control

The design includes measures such as physical barriers at the entry ramps to private residential car parking. In addition signs will be openly displayed making it clear as to where people are permitted or prohibited. The proposal ensures clear boundary markers and spatial definition. General means to ensure this are:

- Provide swipe card access to lift lobbies/common open space/balconies to control accessibility of residential lifts and areas; and
- Articulate residential car parking areas and lift cores from commercial/public car parking areas/lift cores;
- Provide an attractive public open space which encourages people to make use of the space;
- Provide landscaping which channels pedestrians to a specific location.

Natural access control limits the opportunity for crime by taking steps to clearly differentiate between public space and private space. By selectively placing entrances and exits, fencing, lighting and landscape to limit access or control flow, natural access control occurs.

Entry points to all buildings within the proposed development are easily recognised from architectural design features and public design methods such as direct pathway entrances. Street numbers are to be appropriately positioned and be easily visible from the streetscape.

All development within the subject site will be equipped with a series of high quality locks which will provide a sound level of protection from intruders. Access to upper levels will be restricted through the provision of security locked doors and entry points. Further Alarm systems will be implemented through all new developments and will be subject to a Construction Certificate. CCTV surveillance will be installed in accordance with Council's requirements. In addition gates to all private areas and dwellings will be provided with locks to prevent opportunities for intruders.

Design elements that may make it easy for intruders to cross from dwelling to dwelling are reduced as the proposed development consists of no carports, or skillion extensions. These built forms are common for illegal access to property allowing an intruder to gain access to a dwelling or neighbouring dwelling within the proposed development. In addition, trees are positioned away from building footprints to inhibit the ability of access to storeys extended above the ground floor.

3.3 Territorial Reinforcement

The proposal provides clear transition between public and private space through the use of landscaping and built form. The location of landscaping around the perimeter of open space, buildings setbacks and frontages, street addresses, varying pavement types all encourage the activation of streets and the public domain.

The proposal has clearly indicated thoroughfares for circulation through informal and formal articulation of pathways and entrances. It is considered that treatments of passageways and thoroughfares will ensure that stakeholders which currently frequent the area will benefit from legibility of the space.

The "village" concept of the proposal will enhance the community's sense of ownership of the place which they are more likely to visit and care for.

3.4 Space Management

Opportunities for graffiti and other forms of vandalism need to be further minimised in basement car parking areas and common open space/balconies through appropriate finishes and surveillance measures. If graffiti/vandalism was to occur at any given time, the applicant will prepare a policy in accordance with Council requirements.

Materials will be selected based not only on their aesthetic appearance but in conjunction with their ability to deter graffiti or vandalism. In addition, vegetation placed in proximity to large walls will deter graffiti as the wall bulk will be broken by vegetation and viewing of wall difficult. All lighting within the proposed development will be placed above the streetscape and protected by covering to limit damage from vandalism. Moreover, all street furniture will be secured and constructed of hard vandal resistant materials placed within areas of high passive surveillance and in well lit spaces.

Maintenance of a site is of importance as the cleaner an environment the indication and social message is one of intolerance to disorder and intruders. The proposal is to be well maintained with constant site cleanliness, rapid repair and removal or refurbishment of decayed physical elements.

4. CONCLUSION

This report has been prepared to detail the crime minimisation design mechanisms proposed within the Concept Plan and assess these mechanisms in accordance with the four (4) crime prevention through environmental design principles.

In summary, the project is appropriate within the context of the subject site and is consistent with the NSW Police and Department of Planning guidelines on minimising crime risk.

Should the NSW Police or Council consider that additional measures are required, the applicant asks to be consulted in the first instance prior to rejection of the proposal or imposition of any conditions which will alter the design.

APPENDIX A

ASSESSMENT AGAINST

DCP 29: CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

PROJECT APPLICATION ASSESSMENT AGAINST DCP 29

The Project Application consists of the development of a bulky goods centre (31,655m² of floor space) and ancillary car parking and other services on Lot 1 (Building A) whilst development of a residential flat building (6,521m² of floor space and a child care centre 604m² of floor space) and ancillary car parking and other services are proposed on Lot 3 (Building B). Refer to Architectural plans at **Appendix ?** of the Environmental Assessment Report.

Assessment of the Concept Plan in general, is provided within the table below whilst more attention was given to the 2 components of the Project Application pursuant to Canterbury Councils DCP 29 – Crime Prevention Through Environmental Design.

REQUIREMENT		COMPLY	COMMENT
1. All Development Types			
1.1 Natural Surveillance			
A. Avoid Blind Corners Avoid blind corners in pathways, stairwells, hallways and car parks.	• Pathways should be direct. All barriers along pathways should be permeable (see through) including landscaping, fencing etc. • Consider the installation of mirrors to allow users to see ahead of them and around corners. • Install glass panels in stairwells where appropriate.	Yes	The overall proposed development consists of open pathways bordered by low lying vegetation and limited fencing. All pathways within the proposed development are permeable and thus avoid the unappealing environments which are created through poor urban design. External entry paths and foyers to buildings A and B are direct to avoid potential hiding places. Main entries of Buildings A and B address pedestrian walkways. Some entry paths are constricted by corners and potential hiding places. In these instances, mirrors and other mitigation measures will be implemented in accordance with Council's requirements.

B. Community / Public Areas Provide natural surveillance for communal and public areas	• Position active uses or habitable rooms with windows adjacent to main communal/ public areas (eg playgrounds, swimming pools, gardens, car parks). • Communal areas and utilities (eg laundries and garbage bays) should be easily seen. • Where elevators or stairwells are provided, open style or transparent materials are encouraged on doors and/or walls of elevators/ stairwells. • Waiting areas and entries to elevators / stairwells should be close to areas of active uses, and should be visible from the building entry. • Seating should be located in areas of active uses.	Yes	The proposed development incorporates significant open space into the design of the subject site. In accordance with the provisions of this DCP, these communal public areas have been addressed through passive surveillance measures. In particular the habitable rooms of Building B address the communal open space in a socially friendly and safe way. All rooms which face onto areas of open space provides surveillance over these areas which allow greater community use of the space and general feeling of safety. In addition openings in buildings are located and designed to overlook public places to maximise casual surveillance. The communal areas that exist are easily seen from various points including the appropriate street thoroughfare. Seating is provided within areas of public open space.
C. Entry Points Provide entries which are clearly visible	• Entrances should be at prominent positions. • Design entrances to allow users to see in before entering.	Yes	In accordance with Council's requirements, the main entry to a building A and B will maximise casual surveillance through their central and streetscape facing position. Initial access to buildings allows users to view into the entrance through the incorporation of glass into the design.
D. Fencing Fence design should maximise natural surveillance from the street to the building and from the building to the street, and minimise opportunities for intruders to hide	• Front fences should be predominantly open in design (eg pickets and wrought iron) or low in height. A sense of privacy can be increased by light coloured fencing. • High solid front fences should have open elements above 1m.	Yes	Front fences are to a height of 1.8m with a 900mm face brick wall with timber battens above to allow natural surveillance from the street to the building and from the building to the street while maintaining a sense of privacy.

E. Landscaping Avoid landscaping which obstructs natural surveillance	• Avoid medium height vegetation with concentrated top to bottom foliage. Plants such as low hedges and shrubs (1 - 1.2m high), creepers, ground covers or high canopied vegetation are good for natural surveillance. • Trees with dense low growth foliage should be spaced or have the crown raised to avoid a continuous barrier. • Use low ground cover or high canopied trees, clean trunked to a height of 2m around children's play areas, car parks and along pedestrian pathways. • Avoid vegetation that conceals the building entrance from the street.	Yes	Low lying vegetation and tree planting accompany footpaths and streets. In areas of close proximity to units and building entrances the presence of low lying vegetation is particularly prominent. Appropriate spacing is applied to the landscaping of trees with dense low growth. Trees are positioned along street thoroughfares and within areas of open space which can accommodate larger vegetation without impairing safety. Low branches and foliage is to be removed where this barrier would conflict and adversely effect community safety. Therefore children's play areas, car parks and pedestrian pathways are not adversely affected by the provision of landscaping. Landscaping within the proposed development will not conceal the front door to a building when viewed from the street.
F. Lighting Ensure lighting does not produce glare or dark shadows Entrances, exits, service areas, pathways, car parks etc. should be well lit after dark when they are likely to be used	• Use diffused flood lights and/or movement sensitive lights. • Direct these lights towards access / egress routes to illuminate potential offenders, rather than towards buildings or resident observation points. • Lighting should have a wide beam of illumination, which reaches to the beam of the next light, or the perimeter of the site or area being traversed. • Avoid lighting spillage onto neighbouring properties as this can cause nuisance and reduce opportunities for natural surveillance. • As a guide, the areas should be lit to enable users to identify a face 15m away. • Use energy efficient lamps /fittings/switches to save energy.	Yes	Both natural and artificial lighting is used to reduce poorly lit or dark areas and therefore deterring crime and vandalism improving the urban environment at night. Movement positioned lights are located in areas with minimum use from pedestrians and residents. Flood lights are inappropriate due to the minimal use of certain areas and thus if implemented would only cause unneeded additional lighting in conjunction with street and private lights. In conjunction with street lights which will bridge illumination gaps, commercial use lighting is sufficient and will justly improve spaces where vegetation and buildings may create areas of low illuminated quality. However this lighting will not adversely effect private neighbouring properties. Car parking areas are adequately lit and painted in light colours which will increase levels of illumination.
G. Mixed land uses Where permitted, provide appropriate mixed uses within buildings to increase opportunities for natural surveillance.	• Locate shops and businesses on lower floors and residences on upper floors. In this way, residents can observe the businesses after hours while the residences can be observed by the businesses during business hours. • Incorporate car wash services, taxi ranks and shop kiosks etc within car parks. • Include shop kiosks and restaurants etc within parks. • Refer to the relevant planning instrument for permissible uses in the zone of the property. Some uses may require rezoning.	Yes	The proposed development consists of a mix of uses including, residential, retail, and aged care. Lot 2 within the Concept Plan includes retail and a supermarket on the ground floor with residences above. Due to the positioning of this precinct within the centre of the proposed development further surveillance is maximised of adjacent properties. Lot 1 allows for residential and child care uses. These 2 uses complement each other with respect to arrival of people and casual surveillance.

H. Security Security grilles, shutters and doors should allow natural observation of the street and be sympathetic to the architectural style of the building	• Security grilles and security doors should be permeable (see through). • Avoid solid shutters on front windows and doors.	Yes	
1.2 Access Control			
A. Building id Ensure buildings are clearly identified by street number.	• Street numbers should be at least 7cm high, and positioned between 0.6m and 1.5m above ground level on the street frontage. • Street numbers should be made of durable materials, preferably reflective or luminous, and unobstructed (eg by foliage). • Location maps and directional signage should be provided for larger development.	Yes	Street numbers will be appropriately positioned and be easily visible from the streetscape.
B. Entry Points Clear entry points	• Entrances should be easily recognisable through design features and directional signage. • Minimise the number of entry points.	Yes	Entry points to all buildings within the proposed development are easily recognised from architectural design features and public design methods such as direct pathway entrances. Entry points to all buildings are minimised to only one main clearly marked entrance.
C. Landscaping Use vegetation as barriers to deter unauthorised access. Avoid large Trees/shrubs and buildings works that could enable and intruder to gain access to the dwelling or to neighbouring dwellings	• Prickly plants can be used as effective barriers. Species include bougainvilleas, roses, succulents, and berberis species. • Avoid large trees, carports, skillion extensions, fences, and downpipes in situations that could provide a means of access to second storey windows or balconies.	Yes	The proposed development consists of no carports, or skillion extensions that would enable an intruder to gain access to a unit or neighbouring dwelling within the proposed development. In addition, trees are positioned away from building footprints to inhibit the ability of access to storeys extended above the ground floor. Landscaping was positioned so as not to inhibit sight lines.
D. Security Use security hardware and/or human measures ONLY where required to reduce opportunities for unauthorised access.	• Install quality locks on external windows and doors. • Install viewers on entry doors. • If security grilles are used on windows they should be openable from inside in case of emergencies. • Ensure skylights and/or roof tiles cannot be readily removed or opened from outside. • Consider monitored alarm systems. • Provide lockable gates on side and rear access ways. • Consider building supervisors or security guards.	Yes	All development within the subject site will be equipped with a series of high quality locks which will provide a sound level of protection from intruders. Gates to all private areas and dwellings will be provided with locks to prevent opportunities for intruders.
1.3 Ownership			

A. Maintenance Create a 'cared for' image	• Ensure the speedy repair or cleaning of damaged or vandalised property. • Provide for the swift removal of graffiti. • Provide information advising where to go for help and how to report maintenance or vandalism problems.	Yes	All lighting within the proposed development will be placed above the streetscape and protected by covering to limit damage from vandalism. Moreover, all street furniture will be secured and constructed of hard vandal resistant materials placed within areas of high passive surveillance and in well lit spaces.
B. Materials Use materials which reduce the opportunity for vandalism	• Strong, wear resistant laminate, impervious glazed ceramics, treated masonry products, stainless steel materials, anti-graffiti paints and clear over sprays will reduce the opportunity for vandalism. Flat or porous finishes should be avoided in areas where graffiti is likely to be a problem. • Where large walls are unavoidable, consider the use of vegetation or anti-graffiti paint. Alternatively, modulate the wall, or use dark colours to discourage graffiti on vulnerable walls. • External lighting should be vandal resistant. High mounted and/or protected lights are less susceptible to vandalism. • Communal/ street furniture should be made of hard-wearing vandal resistant materials and secured by sturdy anchor points or removed after hours.	Yes	Materials will be selected based not only on their aesthetic appearance but in conjunction with their ability to deter graffiti or vandalism. Vegetation placed in proximity to large walls will deter graffiti as the wall bulk will be broken by vegetation and viewing of wall difficult. All lighting within the proposed development will be placed above the streetscape and protected by covering to limit damage from vandalism. All street furniture will be secured and constructed of hard vandal resistant materials placed within areas of high passive surveillance and in well lit spaces.
C. Spaces Spaces should be clearly defined to express a sense of ownership and reduce illegitimate use/entry	• Physical and/or psychological barriers (eg fences, gardens, lawn strips, varying textured surfaces) can be used to define different spaces.	Yes	Landscaping provided within spaces of the proposed development creates areas of interest and enclosure defined by different vegetation types and varied number of plantings. In addition thought the use of different pavement materials areas were defined.
D. Pride & Involvement Encourage design that promotes pride and a sense of place for community	• encourage community involvement in design. • Encourage volunteer management and maintenance areas. • Encourage wide community use of areas	Yes	Wider community use of the proposed development is assured through the provision of not one type of use but many including seniors living and retail and public open space. This mix of developments intrinsically promotes wider community use of the area.
4. Car Parks			
4.1 Natural Surveillance			

A. Lighting Provide adequate lighting. Please refer to Section 1.1 of this document for further information.	• Illuminate all external edges and access points to car parks during opening hours of the car park. • To allow for the adjustment of driver and pedestrian vision, lighting intensity to covered or underground car parks should be graded. Brighter light should be used at entrance and pedestrian access ways and dimmer light should be used elsewhere. • Lighting should be sufficiently bright to enable a car park user to see into the rear seat of a parked car before they enter the car.	Yes	All car parks within the proposed development are situated beneath the building footprint and thus are secured. Nonetheless access points are clearly marked and all parking arrangements are adequately lit including on street parking which is lit by street lights. Lights used at entrances to underground car parks are brighter then those used throughout the car space. However lighting is not to be too dim so as to enable a user to see clearly into the rear seat before entering.
B. Materials Use materials that enhance natural surveillance within the car park	• Encourage the use of transparent materials for walls and doors. • Paint the ceilings and walls of the car park in light colours to enhance brightness. • Reflective film can be used on windows overlooking car parks. Potential intruders will not know if they are being observed during daylight hours.	Yes	As the majority of car parking facilities are underground, the use of transparent materials for walls or doors is unnecessary.
C. Security Grilles Allow natural observation	• Consider the installation of open style security grilles to individual parking spaces.	Yes	Carparking is located below buildings within basements.
D. Site & Building Layout Ensure clear sight lines throughout the parking area. Design car parks to allow for natural surveillance	• Avoid large expanses of car parks. • Where large expanses of car parks are proposed, provide surveillance such as security cameras. • Access to lifts, stairwells and pedestrian pathways should be clearly visible. • Avoid hidden recesses.	Yes	All car parks are underneath the proposed building footprint. Therefore visually, the car parks will have no adverse impact. Through sound design hidden recesses were avoided. Disabled parking spaces are provided close to lifts and stairwells.
4.2 Access Control			
A. Lighting Provide adequate lighting to encourage use and access to the facility.	Illuminate all external edges and access points to car parks during opening hours of the car park.	Yes	Both natural and artificial lighting is used to reduce poorly lit or dark areas and therefore deterring crime and vandalism improving the urban environment.
B. Security Provide security to monitor access to area.	• Use security devices (eg intercom or remote lock facility) where appropriate. • For large developments, locate a help point on each parking level and/or allocate security staff. • For a multi level car park, use only a limited area of the car park outside peak hours. • Consider the installation of boom gates or similar devices at entrances and exists of the car park.	Yes	Entry lobby areas to and from car parking areas should be transparent allowing viewing into and from these areas. The area is clearly marked as the park has extensive street frontage along with broad openings between and within buildings. This allows numerous visual connections from the whole site to the centrally located park.

C. Site and Building Layout Ensure ease of access and safety within the car park. Clearly distinguish between private and public space	• Minimise the number of entry and exit points. • Pedestrian corridors should be created for large developments.	Yes	The proposed development has minimised the number of entry and exit points and provided ease of movement of pedestrians through the provision of zebra crossings and elevators to take large numbers of users quickly and efficiently.
D. Signage Ensure that parking areas are clearly identified by signage to prevent unintended access and to assist persons trying to find their car.	• Provide signage that is clearly visible, easy to read and simple to understand • Use strong colours, standard symbols and simple graphics for signs. • Upon entering the car park provide both pedestrians and drivers with a clear understanding of direction to stairs, lifts and exits. • Use creative signage to distinguish between floors to enable users to easily locate their cars. • Advise users of security measures that are in place and where to find them eg intercom system. • Provide signs at the car park advising users to lock their cars. • Where exits are closed after hours, ensure this information is indicated at the car park entrance.	Yes	Access to all basements will be clearly identified by signage
5. Open Space			
5.1 Natural Surveillance			
A. Landscaping Avoid landscaping which obstructs natural surveillance Please refer to Section 1.1 of this document for further information.	• Select planting species having regard to their type and location to minimise possible places for intruders to hide • When planting is provided within 5m of a pedestrian pathway, it should be lower than 1m to thin trunked with high canopy.		Trees are positioned away from building footprints to inhibit the ability of access to storeys extended above the ground floor. Landscaping was positioned so as not to inhibit sight lines. Landscaping that increases the aesthetics of the area without providing offenders with a price to hide or entrap victims. Appropriate spacing is applied to the landscaping of trees with dense low growth.
B. Lighting Allow adequate brightness. Ensure lighting does not produce glare or dark shadows. Please refer to Section 1.1 of this document for further information.	• Illuminate access points to open spaces and pathways • Located brighter lights in highly used areas		Effective lighting to public park such as bollard lighting, in ground lighting and post lighting. In conjunction with street lights which will bridge illumination gaps, commercial use lighting is sufficient and will justly improve spaces where vegetation and buildings may create areas of low illuminated quality.

C. Site & Building Layout Encourage activity and allow natural surveillance	• Open space should be clearly designed and situated at locations easily observed by people. Parks and playgrounds should be placed in front of buildings and should face streets rather than back lanes. • To encourage use, seating, play equipments and BBQ areas should be provided. • Seating should be conveniently located and easily seen. • Facilities (eg. toilets and telephones) should be located close to areas of active uses. • Access to facilities should be direct and free of obstruction		The pubic open space encourage use through the provision of play equipment and designated soft fall play areas as well as seating and catering areas The placement of buildings around the public open space ensures casual surveillance from upper levels
5.2 Access Control			
A. Signage Ensure that signage is clearly visible, easy to read and simple to understand	• Both directional and behavioural signage should be provided at entrances to parks.		Directional and behavioural will be provided at entrances to parks.
B Site & Building Layout Offer a choice of clearly defined pathways	• Pathways should be direct and follow pedestrian desire lines.		A footpath system provides a valuable pedestrian network around the site. The footpaths link to recreational areas, visitor parking and building entries. Feature line marking and change in paving surface will be used to distinguish the pedestrian environment
5.3 Ownership			
Pride and involvement Encourage design that promotes pride and a sense of place for community	• Provide features that reflect the community's needs (eg play equipment, open areas etc) • Consider using cultural themes applicable to the area • Encourage community involvement in design • Encourage volunteer management and maintenance of public areas.		Wider community use of the proposed development is assured through the provision of not one type of use but many including seniors living and retail and public open space. This mix of developments intrinsically promotes wider community use of the area. In addition the open space provides for fot fall play surfaces and play equipment as well as areas for outdoor dining or cathering