



Pinnacle Construction Group

Crime Prevention through Environmental Design Assessment

Residential Unit Development
89 John Whiteway Drive, Gosford

June 2018

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1 Introduction

1.1 Overview

The purpose of this report is to consider the potential crime risk caused by the proposed residential unit development and to identify proactive and preventative building design measures to minimise opportunities for crime.

The report has been prepared in accordance with the Crime Prevention Through Environmental Design (CPTED) guidelines prepared by the NSW Police in conjunction with the Department of Planning.

Crime Prevention through Environmental Design (CPTED) provides a clear approach to crime prevention and focus on the '*planning, design and structure of cities and neighbourhoods*'. The main aims of the policy are to:

- increase the perception of risk to criminals by increasing the possibility of detection, challenge and capture;
- increase the effort required to commit crime by increasing the time, energy or resources which need to be expended;
- reduce the potential rewards of crime by minimising, removing or concealing 'crime benefits'; and
- remove conditions that create confusion about required norms of behaviour.

The NSW Police guidelines provide four key principles in limiting crime through design. These are:

1. Surveillance;
2. Access control;
3. Territorial re-enforcement; and
4. Space/activity management.

We have inspected the site and undertaken a preliminary assessment of the architectural plans against the above guidelines. This report recommends design principles for the residential unit development to reduce the potential for crime.

1.2 Locality

The subject site is located to the east of the Gosford city centre (as shown in Figure 1), which currently contains a mix of residential and commercial development. The site is within close proximity to the centre, Gosford Train Station, bus interchange, shopping centre and commercial area. The site is located within the suburb of Gosford.

Figure 2 identifies that the site is within a R1 General Residential zone, with other R1 zoned land immediately surrounding the site, RE1 Public Recreation further to the east and B4 to the west.

As stated above the site is surrounded by residential development of mainly medium to high density unit development.

Figures 1 and 2 show an aerial of the site and the current zoning of surrounding areas.



Figure 1: Aerial photo of site and locality

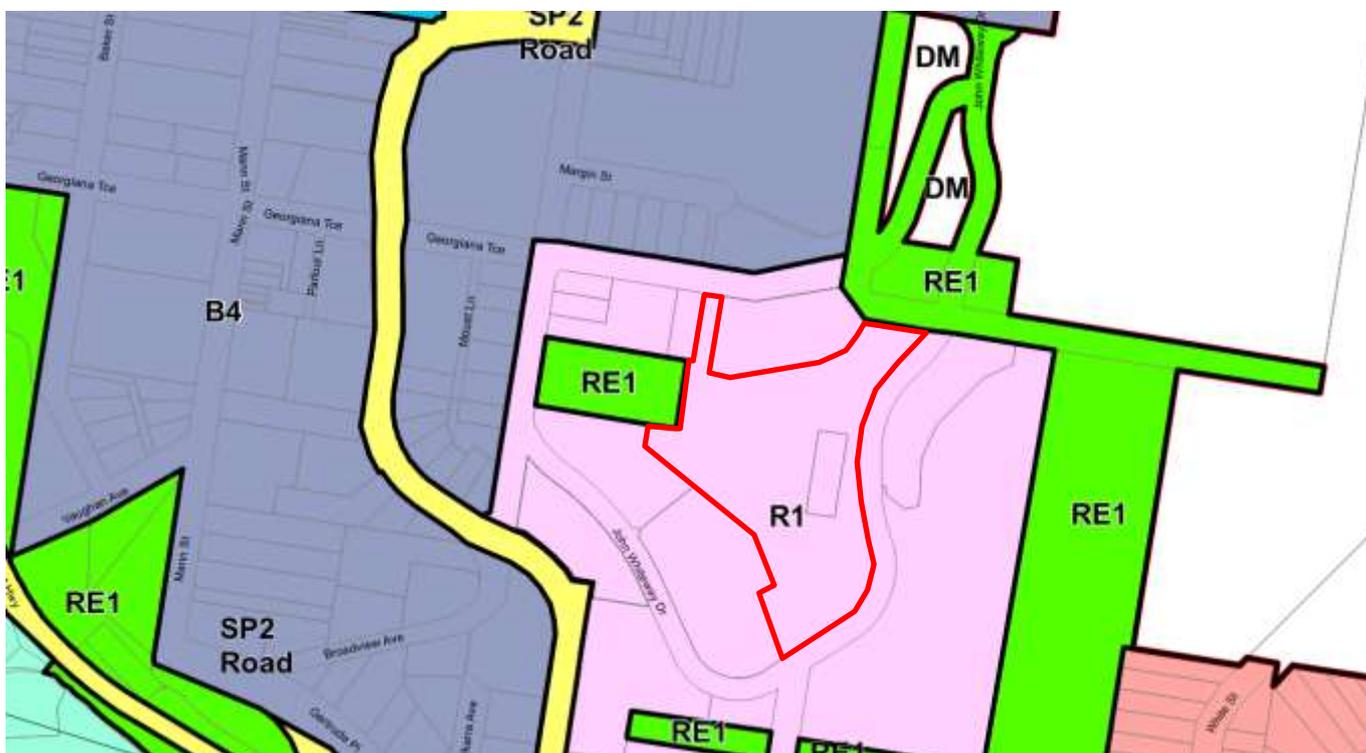


Figure 2: Extract of Land Zoning Map – Gosford LEP 2014

1.3 Crime Statistics

The NSW Bureau of Crime Statistics and Research provides an overview of the crime profile. The data can assist in identifying specific crimes prevalent in an area and guide design to limit the recurrence of anti-social behaviour.

Table 1 shows the threat levels in Gosford, for crimes relevant to the proposed residential development. BOCSAR data ranks crime rates out of 5 levels, from one being the lowest and five being the highest. Table 1 identifies most crimes as having high – medium level rates in Gosford, with the exception of steal from dwelling which is the highest level. The hot spots and crime graphs below show that rates of high level crimes in the immediate area have remained unchanged for Break and Enter Dwelling and Steal from Dwelling, and have decreased for Motor Vehicle Theft.

Table 1: Rates of Certain crimes within Gosford (2016-2017)

Level of Crime	Crime Type by Location Gosford
HIGHEST LEVEL CRIME	Steal from dwelling
HIGH LEVEL CRIME	Motor vehicle theft Break and enter (dwelling) Steal from motor vehicle Steal from person
MEDIUM LEVEL CRIME	Assault (non-domestic) Malicious damage to property
LOW LEVEL CRIME	
LOWEST LEVEL CRIME	

The below figures show “hotspot” crime mapping for some of the above most relevant crimes in Gosford. They compare the crime rate occurrence between 2012 and 2017.

This form of crime mapping is useful as it shows where the high crime areas are and can be used to help understand the factors that affect the distribution and frequency of crime. The “hotspot” indicates where crime occurrences are clustered in particular areas, the cluster is identified from highest to lowest, indicated in dark orange, light orange and yellow.

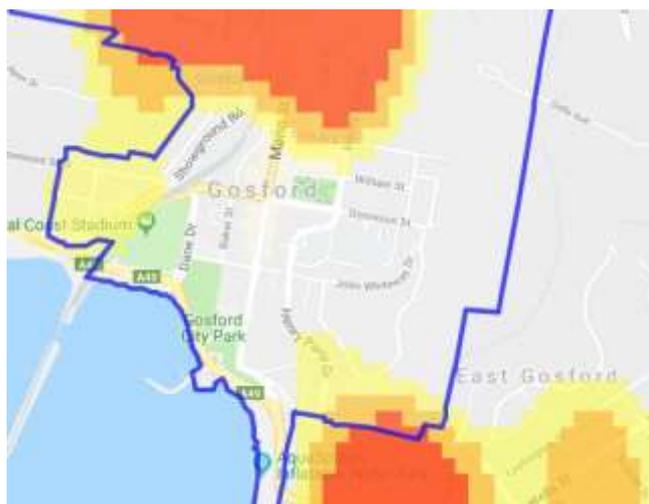


Figure 3: Break & Enter Dwelling 2012

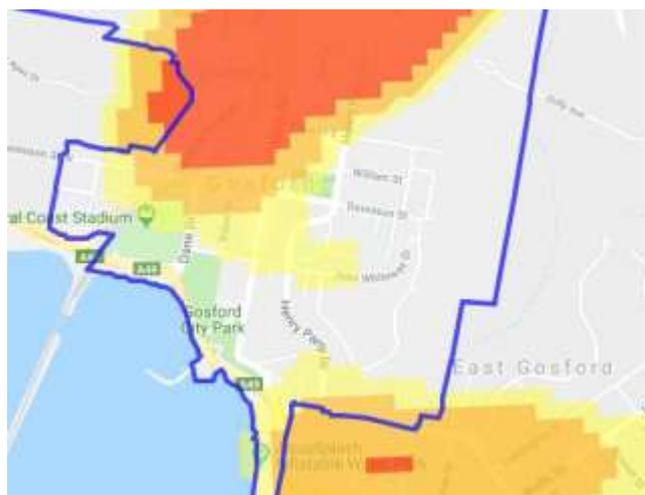


Figure 4: Break & Enter Dwelling 2017



Figure 5: Break & Enter Dwelling from 2012 to 2017

Figures 3 and 4 show changes to the rate of *break and enter dwelling* in Gosford. The figures indicate that the rate of crime has remained stable, while crime has remained generally low within the immediate vicinity between 2012 and 2017. The subject site is currently close to a low rating hotspot area.

Figure 5 is a graph of the rates of *break and enter dwelling*, with comparisons between NSW and Gosford. The graph indicates that between October 2012 and October 2017 the rate of break and enter dwelling in Gosford has not changed per year, while NSW has decreased by 8.0%.

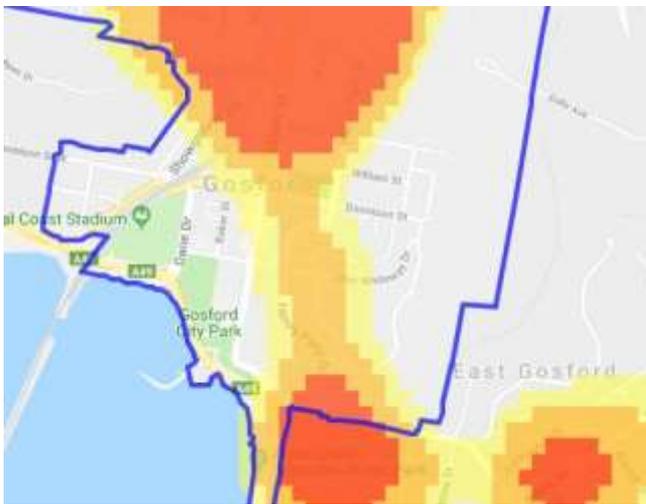


Figure 6: Steal from Dwelling 2012

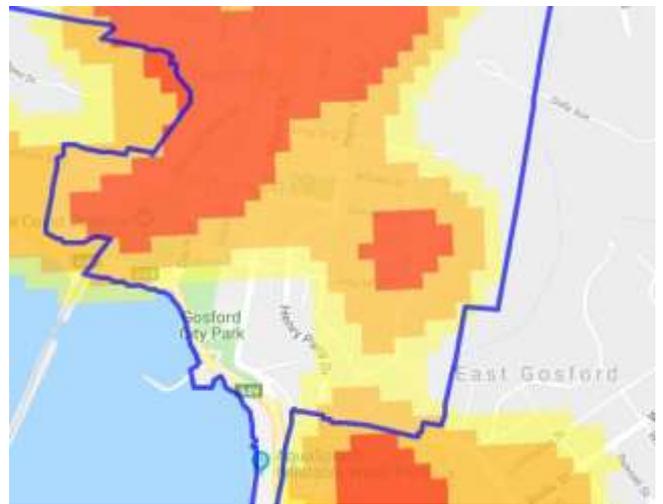


Figure 7: Steal from Dwelling 2017

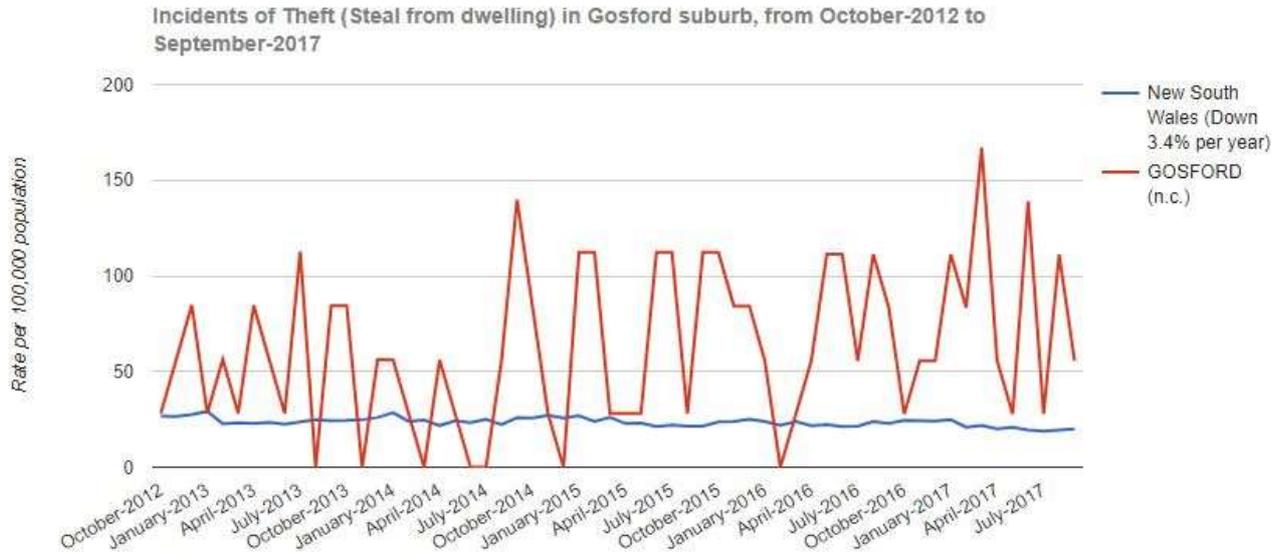


Figure 8: Steal from Dwelling from 2010 to 2015

Figures 6 and 7 show changes to the rate of *Steal from dwelling* in Gosford. The figures indicate that the rate of crime in the vicinity of the site has generally decreased. In 2012 the area was low-medium and it has remained in low-medium in 2017. The subject site is currently within a medium rating hotspot area.

Figure 8 is a graph of the rates of *steal from dwelling*, with comparisons between NSW and Gosford. The graph indicates that between October 2012 and October 2017 the rate of steal from dwelling in Gosford has not changed, while NSW has decreased by 3.4%.



Figure 9: Motor vehicle theft 2012

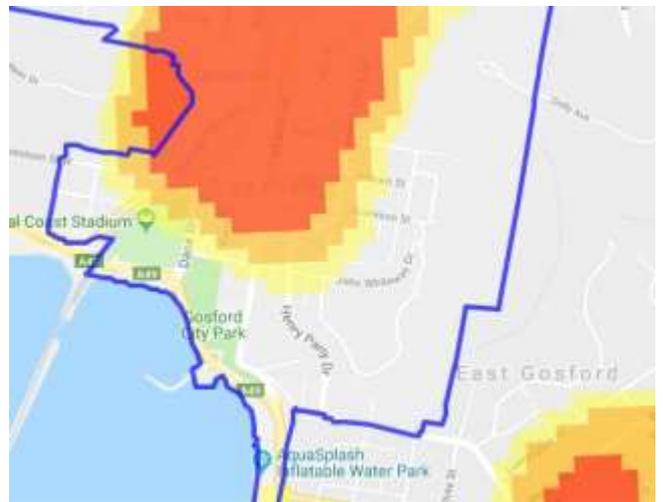


Figure 10: Motor vehicle theft 2017

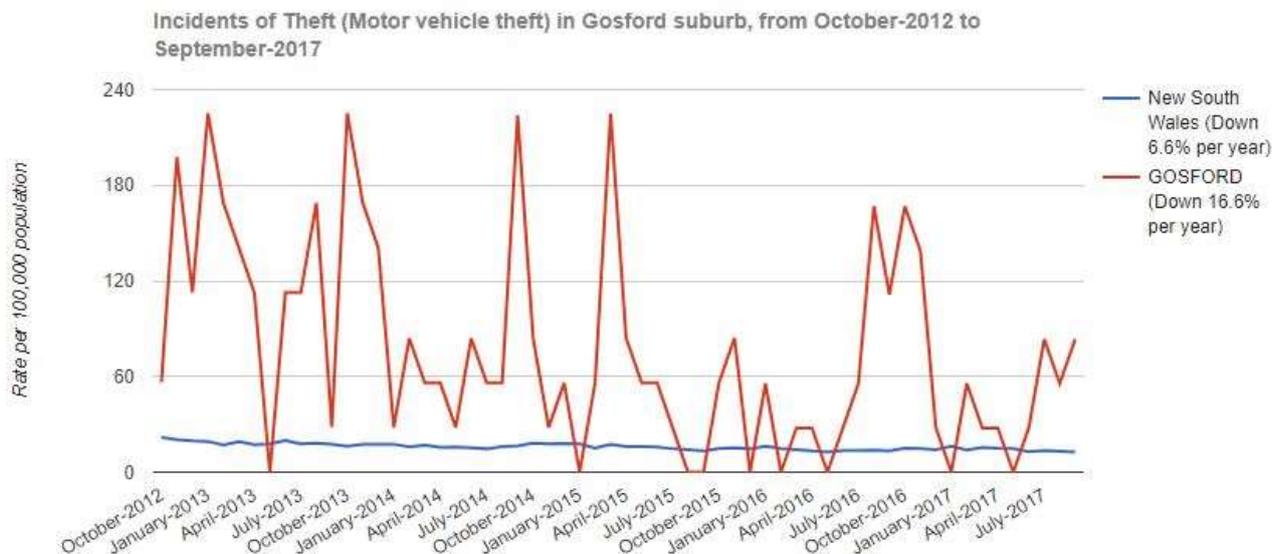


Figure 11: Motor vehicle theft from 2010 to 2015

Figures 9 and 10 show changes to the rate of *Motor vehicle theft* in Gosford. The figures indicate that the rate of crime at the site has decreased between 2012 and 2017. The subject site is currently within a hotspot area with no rating.

Figure 11 is a graph of the rates of *motor vehicle theft*, with comparisons between NSW and Gosford. The graph indicates that between October 2012 and October 2017 the rate of motor vehicle theft in North Gosford has generally decreased by 16.6%, while NSW has only decreased by 6.6%.

1.4 Proposed Development

The proposed development will involve the construction of a residential flat development comprising five residential flat buildings with a total of 299 units plus basement car parking, swimming pool and communal landscaped open space areas.

The development will be constructed in three stages:

- Stage 1 will include site preparation and earthworks (as detailed in Section 3.4);
- Stage 2 will include Blocks A, B & C comprising 185 units and basement car parking spaces; and
- Stage 3 will include Blocks D & E comprising 114 units, communal swimming pool and basement car parking spaces.

Refer to Architectural plans submitted as a separate documentation. Figure 12 below is an extract from the Site plan to provide context.



Figure 12: Site plan extract

Residential Units

299 units, including a range of unit types and sizes including:

- 42 x one bedroom (with study);
- 196 x two bedroom (with study);
- 44 x two bedroom adaptable units (15% of total);
- 1 x three bedroom;
- 12 x three bedroom (with study); and
- 4 x four bedroom (with study).

Each apartment will include private open space in the form of a balcony or terrace.

Car parking

Car parking will be provided in basement levels and includes:

- 364 car parking spaces (260 of these designated as tandem spaces which equate to an overall total of 623 spaces);
- 21 motorcycle spaces;
- 128 bicycle spaces; and
- Vehicular entrance is from John Whiteway Drive.

Landscaping & communal areas

An integrated landscape plan has been provided, it includes:

- Pool and gym;
- Deep soil planting;
- Various integrated communal areas to the rear which include open space, barbeque and seating facilities; and

2 CPTED Principles

2.1 Surveillance

Principle 1 - Surveillance:

The *Crime Prevention and the Assessment of Development Applications* states that 'the attractiveness of crime targets can be reduced by providing opportunities for effective surveillance, both natural and technical'.

From a design perspective, 'deterrence' can be achieved by:

- clear sightlines between public and private places;
- effective lighting of public places; and
- landscaping that makes places attractive, but does not provide offenders with a place to hide or entrap victims.

Positive surveillance features of the development include:

- Significant opportunity for natural surveillance along John Whiteway Drive via balconies and common areas;
- Clear sight lines to communal areas and street entrances to reduce offender concealment; and
- Effective lighting design for entrances will provide increased street surveillance.

Table 1 lists potential 'surveillance' issues and recommended strategies to minimise crime risk.

Table 1: Surveillance issues and recommendations

Surveillance Issues	Recommendation
Perimeter	<ul style="list-style-type: none"> • Perimeters should be well lit at night.
Entrances	<ul style="list-style-type: none"> • All entrances should be well lit at night especially in alcoves and corners. • Entrances should be well defined and clearly sign posted. • Consideration should be given to the use of sensor lights in some areas.
Car Parking	<ul style="list-style-type: none"> • Minimise density of planting in this area to maintain clear sightlines on John Whiteway Drive. • The car park should be well lit at night and located away from potential entrapment areas. • Consideration should be given to the installation of Close Circuit TV (CCTV) within the basement car park areas.
Landscaping	<ul style="list-style-type: none"> • Landscaping should be free from obstructions and allow clear sightlines along designated paths. • Vegetation should be low (below 700mm) in areas where offenders could easily hide. • Foliage density should be effectively maintained to promote more active surveillance from residents. • Any vegetation or debris on pathways must be removed to maintain the sightlines required for crime preventing surveillance.

Surveillance Issues	Recommendation
Positioning of CCTV cameras	<ul style="list-style-type: none"> • Position CCTV at places where the offender/s is most likely to have to pass or want to access, such as car park entry / exit points. • CCTV should be: <ul style="list-style-type: none"> • Clearly visible to deter potential offenders; • Placed at a height that captures a full view of the offender's face whilst not being obscured by other interferences; and • In areas where image capture will not be compromised by insufficient lighting
General Recommendations	<ul style="list-style-type: none"> • Lighting should be vandal resistant. • Lighting should satisfy the relevant Australian Standard. • Signs should be erected in areas which are restricted prohibited or under surveillance to discourage criminal or anti-social activity. • Consider contracting a local security firm for regular inspections of the site. • Prune all trees and shrubs around buildings to enable clear visibility.

2.2 Access Control

Access Control can be defined as physical and symbolic barriers that are used to 'attract, channel or restrict the movement of people'.

Effective access control can be achieved by creating:

- landscapes and physical locations that channel and group pedestrians into target areas;
- public spaces which attract, rather than discourage people from gathering; and
- restricted access to internal areas or high-risk areas (like car parks or other visited areas). This is often achieved through the use of physical barriers.

Positive access control aspects of the design include:

- Designated swipe card and intercom access to enter car parks and each unit block;
- Car park limited to two access points; and
- Strategic landscape plan which removes the opportunity for trees and plants to be used as entry points to apartments.

Table 2 lists potential 'access control' issues and recommended strategies to minimise crime risk.

Table 2: Access control issues and recommendations

Access Control Issues	Recommendations
Perimeter	<ul style="list-style-type: none"> • Secure fencing should be constructed to prevent access from neighbouring properties. • The perimeter areas should be regularly inspected by a security contractor. • Install sensor lighting.
Landscaping	<ul style="list-style-type: none"> • Avoid planting large trees adjacent to buildings to prevent use of "natural ladders" for access to roofs or balconies. • Vegetation should be maintained to allow for clear sightlines. • Fenced areas should define private spaces.
Entrances	<ul style="list-style-type: none"> • Entrances should be secured and controlled via electronic cards and intercom. • Elevator access to levels should only be available via an electronic swipe card or intercom access. • Regular maintenance to entrances is essential for effective access control.
Communal Areas	<ul style="list-style-type: none"> • Access to residential communal open spaces, such as pools, should be restricted through lift access or swipe card system.
General Matters for Consideration	<ul style="list-style-type: none"> • Fully secure all external doors and windows with good quality locking devices. Make sure they are regularly maintained. All doors should be of solid construction and well fitted. • Make use of signage and stickers promoting security measures such as: security alarms, video surveillance and security contractors.

2.3 Territorial Reinforcement

Territorial reinforcement can be achieved by enhancing 'community ownership of public space' as it sends positive signals and reduces opportunities for crime.

Effective territorial reinforcement and community ownership can be achieved by creating:

- *design that encourages people to gather in public space and to feel some responsibility for its use and condition;*
- *design with clear transitions and boundaries between public and private space; and*
- *clear design cues on who is to use space and what it is to be used for.*

Care is needed to ensure that territorial reinforcement is not achieved by making public spaces private spaces, through gates and enclosures.

Positive territorial reinforcement aspects of the proposal include:

- Complex common areas that are effectively designed and professionally maintained;
- The entrance design to buildings provide a clear transition from public to semi-private space; and
- Clear design cues which identify certain spaces and who they are to be used by.

Table 3: Territorial reinforcement issues and recommendations

Territorial Reinforcement Issues	Recommendations
Creating a sense of place/ownership	<ul style="list-style-type: none"> • Common courtyards and open space areas should allow resident maintenance and inclusion, in conjunction with a designated environmental contractor maintenance plan. • Clear distinction should be provided in landscaping and paving to identify separation between public and private spaces.
Neighbouring properties	<ul style="list-style-type: none"> • Maintain quality fencing to restrict access from neighbouring properties. • Fencing should clearly delineate separate blocks if required.
Way Finding	<ul style="list-style-type: none"> • Provide clear signage for pedestrians and motorists. • Explore options to introduce a public address system to assist with security and management of emergencies. • Paths within the communal open spaces should be maintained and appropriate for all mobilities. • Clearly identify entry and exit points, especially in basement levels where way finding may be more difficult.
Communal Areas	<ul style="list-style-type: none"> • Communal areas should be well maintained. • These areas should encourage social interaction between all residents. • Perimeter fencing should reinforce these areas and be regularly maintained.
General Matters for Consideration	<ul style="list-style-type: none"> • Prominently display any signs indicating the presence of a security system, the continual surveillance of the premises and any other security measures present.

2.4 Space Management

Space management 'ensures that space is appropriately utilised and well cared for'. Strategies include activity coordination, site cleanliness, rapid repair of vandalism and graffiti and the replacement of decayed physical elements.

Table 4 lists potential 'space management' issues and recommended strategies to minimise crime risk. The objective should be to minimise the perception of urban decay by maintaining clean and undamaged areas to minimise the fear of crime and avoidance behaviour.

Table 4: Space management issues and recommendations

Space Management Issues	Recommendations
Waste storage	<ul style="list-style-type: none"> Garbage bins and waste storage receptacles should be regularly emptied to prevent overflowing rubbish.
Graffiti	<ul style="list-style-type: none"> Remove graffiti as quickly as possible to minimise potential for cumulative graffiti and vandalism actions. Install vandal resistant lighting where applicable. Shrub planting to the John Whiteway Drive frontage of the buildings and fencing to prevent opportunity for graffiti.
Toilets	<ul style="list-style-type: none"> Communal toilets should be regularly maintained and kept clean at all times. Lighting should be consistent and even to maximise visibility. Consider installing vandal proof mirrors in communal facilities.
Lighting Repair	<ul style="list-style-type: none"> The management regime should ensure that lighting is repaired as soon as possible after any lighting failure or damage.
Cleanliness and Maintenance	<ul style="list-style-type: none"> The management regime shall ensure that the site is kept clean and tidy at all times. Clear all building perimeters including fences of rubbish and potential climbing aids. Maintain well-built and adequately secured boundary gates and fences.

3 Conclusion

Our assessment of the proposal in accordance with the CPTED principles confirms that the development can be managed to minimise the potential risk of crime and a re-design of the proposal is not required.

The recommended strategies are summarised as follows:

Surveillance

- *Lighting*: Entrances, communal open spaces, car parks and perimeters should be well lit at night;
- *Natural Surveillance*: Promote natural surveillance via balconies and open spaces overlooking John Whiteway Drive;
- *Landscaping*: Maintain sight lines wherever possible via effective landscaping techniques using CPTED principles;
- *Concealment*: Reduce the opportunity for hiding in bushes and landscaping in secluded areas via low planting or taller trees; and
- *Formal Surveillance*: Potential contracting of a formal surveillance team to perform regular security assessments of the premises.

Access Control

- *Fencing*: Perimeter fencing should limit access and allow entry for residents and guests only.
- *Designated Key Card Access*: Key/ swipe card access should enforce this restricted access to the premises;
- *Landscaping*: Large trees should not be planted near balconies to prevent the vegetation being used as a "ladder";
- *Communal Areas*: These areas should be clearly designated, and access should be controlled via key/swipe card access or intercom system;
- *Signage*: Provide signage identifying restricted and monitored areas, including the car park; and
- *Security*: Ensure use of high quality locking systems, reinforced glass and signage and stickers.

Territorial Reinforcement

- *Landscaping*: Engage a landscape contractor to maintain perimeter and communal areas.
- *Fencing*: Ensure fencing identifies a clear distinction of areas;
- *Car Park*: Clearly delineate spaces through signage, boom gates, physical separation and other security measures;
- *Alarm*: Consideration should be given to the installation of an alarm and dedicated CCTV system; and
- *Signage*: Provide signage to any visitors to the site which outline access control measures and procedures.

Space Management

- Implementation of an on-going maintenance plan for waste, vandalism, toilets, community facilities, landscaping, fencing and lighting.

This report can be relied on as guide for security management across the site.

