



Caddens Estate Development Pty Ltd

Crime Prevention through Environmental Design Assessment

Proposed Mixed Use Development

O'Connell Street, Caddens

March 2024

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1 Introduction

1.1 Overview

The purpose of this report is to consider the potential crime risk generated by the proposed Caddens Corner Project, a staged mixed use and residential precinct development including eighteen (18) buildings, and to identify proactive and preventative building design measures to minimise opportunities for crime. Note this CPTED assessment has been revised to address the updated Architectural Plans issued which include the removal of Building A.

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 and Environment.

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 Caddens Corner Project to reduce the potential for crime.

2 Site and Locality

The site is located in the suburb of Caddens within the Penrith Local Government Area (LGA).

The proposed development is located at 68-80 O'Connell Street, Caddens. The proposed precinct will be located over two allotments; Lot 1 DP1268507 and Lot 2 DP1268507. Lot 2 site is currently vacant of structures whilst Lot 1 accommodates the recently constructed shopping centre.

Caddens and surrounding suburbs are predominantly residential in nature with a number of educational establishments in proximity to the east, north and west. Western Sydney University's Kingswood and Werrington campuses are sited to the west and east respectively and the site adjoins the Nepean Kingswood campus of TAFE NSW in the north. The site also includes the existing Caddens Corner shopping centre west of the proposed development footprint.

An aerial view of the locality is provided in Figure 1 below, showing the subject site outlined in red.

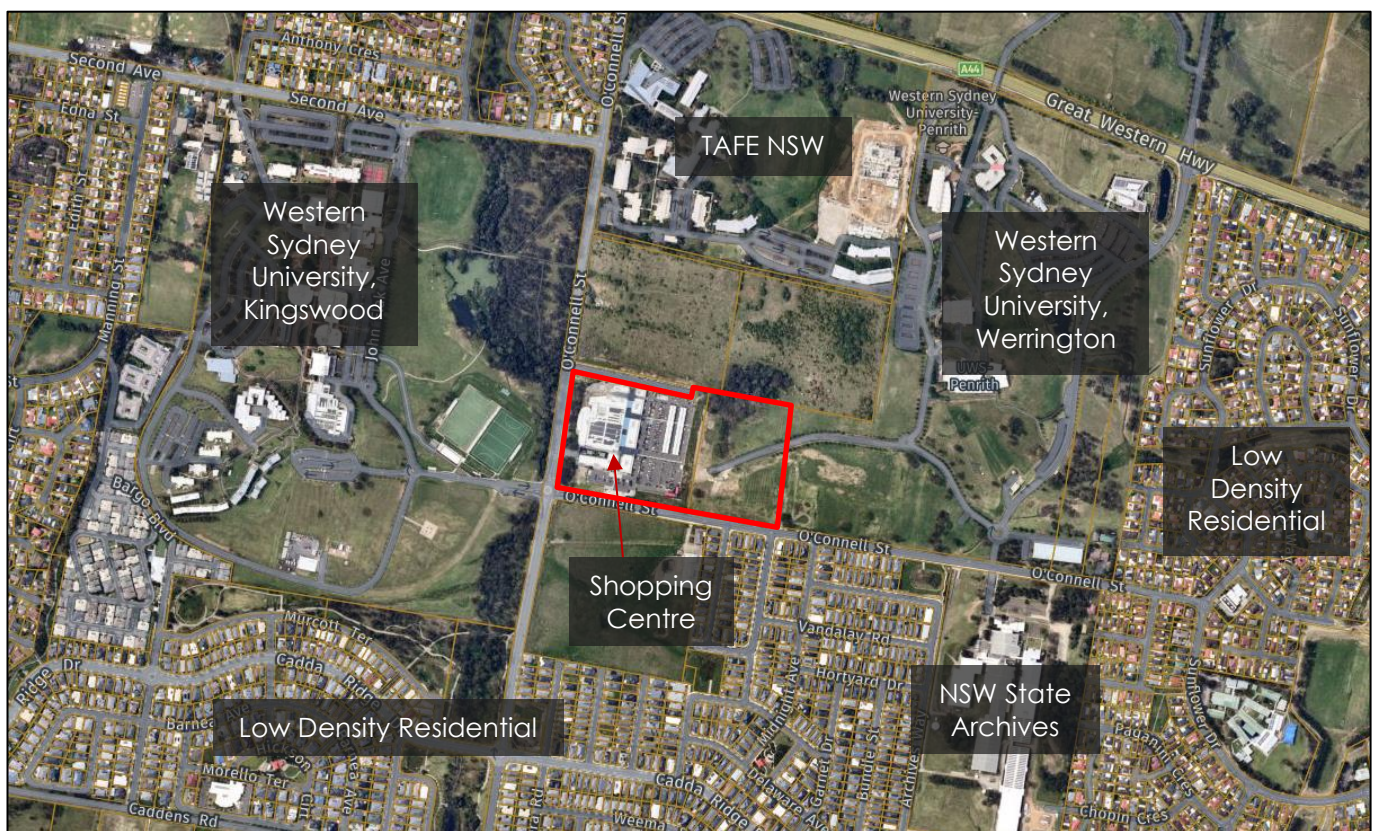


Figure 1: Aerial View of Locality (Source: Nearmap, 2023)

3 Crime Statistics

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

The following table, Table 1, identifies the threat levels in the suburb of Caddens and the Penrith LGA respectively for crimes relevant to the proposed residential and mixed-use development on the site. BOCSAR data ranks crime rates out of 5 levels, with one being the lowest and five being the highest.

Table 1: Threat levels in the Caddens suburb of the Penrith LGA (October 2021 to September 2022)

| Level of Crime | Crime Type by Location | |
|----------------------------|--|--|
| | Caddens | Penrith LGA |
| HIGHEST LEVEL CRIME | No relevant crimes | Robbery (Without a weapon) Steal from retail store |
| HIGH LEVEL CRIME | No relevant crimes | Assault (Non-Domestic) Robbery (With a weapon) Sexual offences Motor vehicle theft Steal from dwelling Steal from person Drug offences |
| MEDIUM LEVEL CRIME | Break & Enter (Dwelling) Steal from dwelling | Assault (Domestic) Robbery (With a firearm) Break & Enter (Dwelling) Steal from a motor vehicle Malicious damage to property |
| LOW LEVEL CRIME | Motor vehicle theft Steal from a motor vehicle | Assault (Alcohol related) |
| LOWEST LEVEL CRIME | Assault Homicide Robbery Break & Enter (Non-Dwelling) Steal from retail store Steal from person Malicious damage to property Trespass | Homicide Break & Enter (Non-Dwelling) Trespass |

There were no High or Highest Level Crimes recorded in the suburb of Caddens during the previous year. The wider Penrith LGA however experienced a number of High to Highest Level Crimes, including incidents of robbery, theft, non-domestic assault and motor vehicle theft.

Medium Level Crimes in the Caddens area included break and enter dwellings and theft from dwellings.

Hotspot crime mapping is provided below for some of the most relevant crimes for the mixed use/residential development at Caddens Corner. The figures compare the crime rate occurrence over a five-year period.

Hotspot mapping shows where high crime areas are and can be used to help understand the factors which affect the distribution and frequency of crime. The “hotspot” indicates where crime occurrences are clustered in particular areas, with the cluster being identified from highest to lowest, indicated in dark orange, light orange and yellow respectively.

The location of the subject site is identified on the hotspot mapping below with a red outline.

3.1 Steal from Dwelling

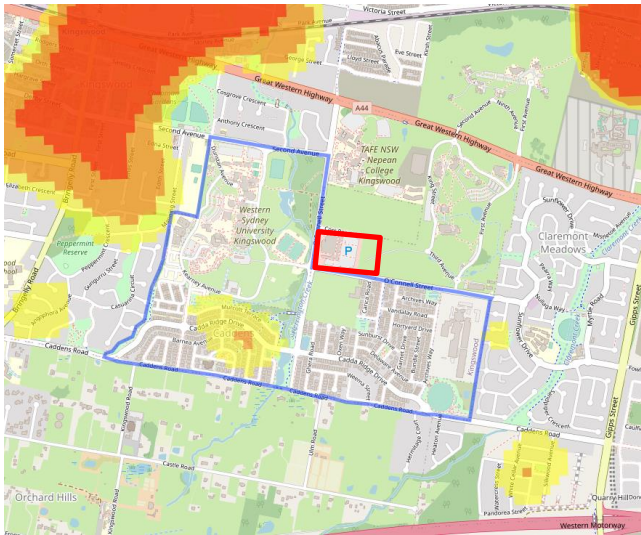


Figure 2: Steal from Dwelling 2017-2018

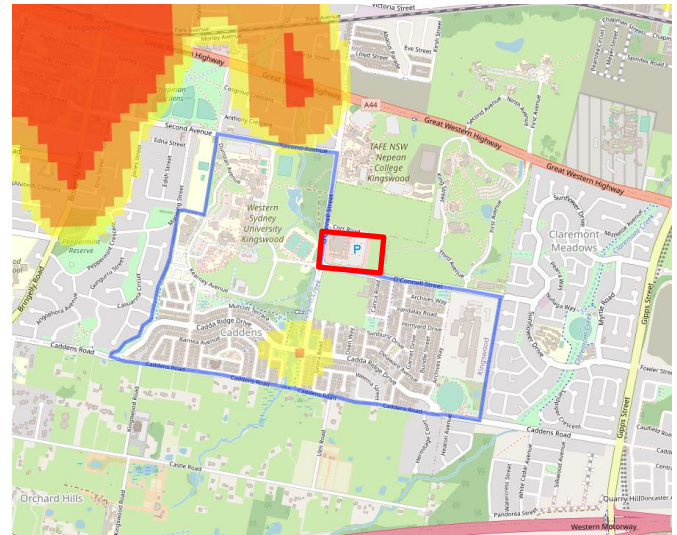


Figure 3: Steal from Dwelling 2021-2022

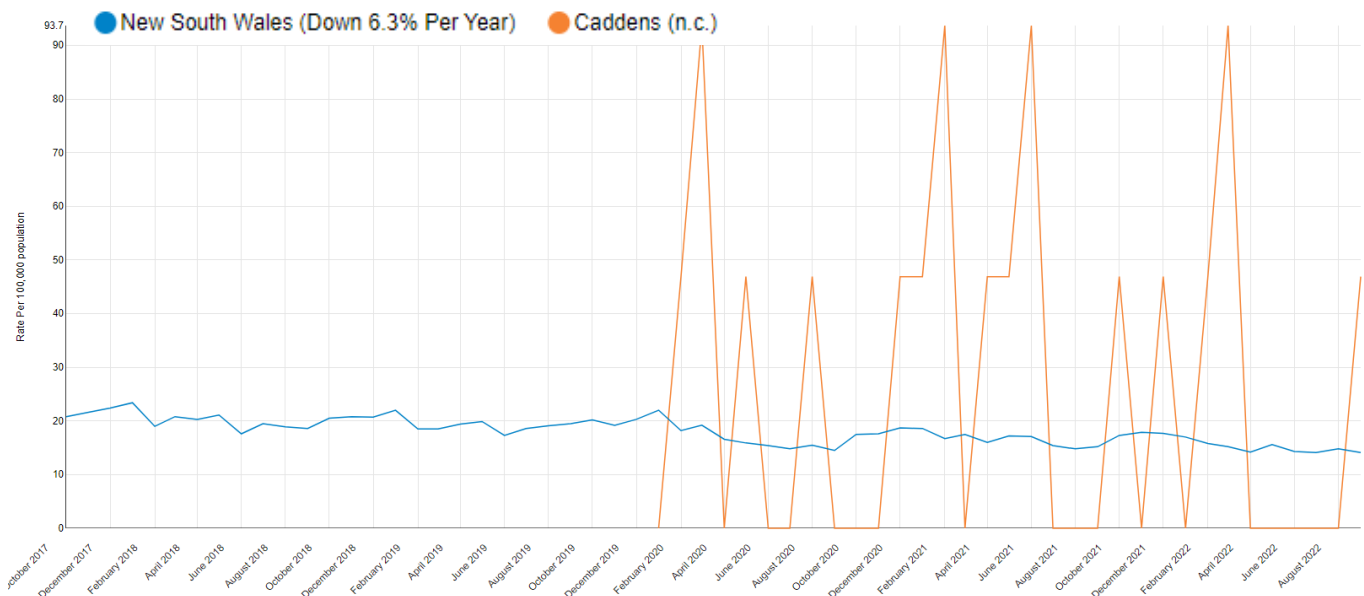


Figure 4: Rates of Theft from a Dwelling in Caddens, October 2017 to September 2022

Figures 2 and 3 above show changes to the hotspot rates of theft from dwellings in the locality surrounding Caddens from 2017 to 2022. The figures demonstrate that the hotspot crime rate within the vicinity of the subject site has remained generally stable over the previous 5 year period. Whilst an increase in incidence of theft has been recorded to the north-west of the site in neighbouring Kingswood, the subject site is not located within a low, medium or high hotspot for theft.

Figure 4 represents a graph of the incidence rates of theft from a dwelling, providing a comparison between NSW and local rates. The graph indicates that during a 5 year period, incidence rates in Caddens have experienced no change since records began, whilst NSW rates have decreased by 6.3% annually.

3.2 Break & Enter Dwelling

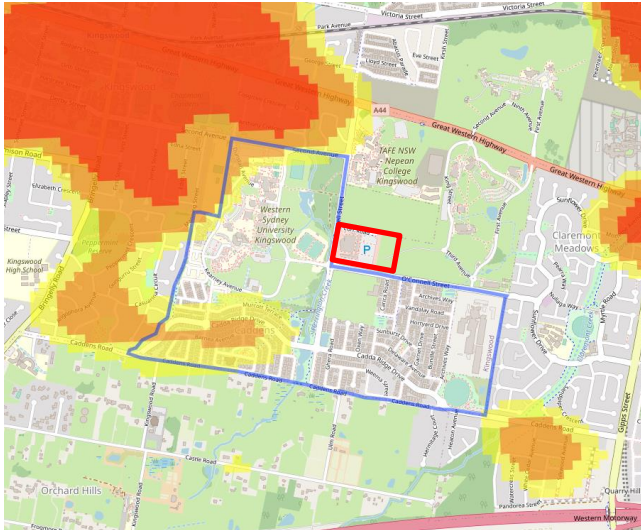


Figure 5: Break & Enter Dwelling 2017-2018

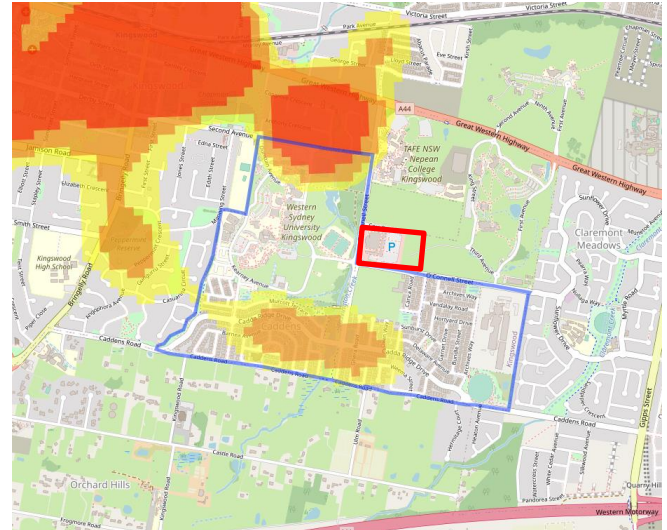


Figure 6: Break & Enter Dwelling 2021-2022

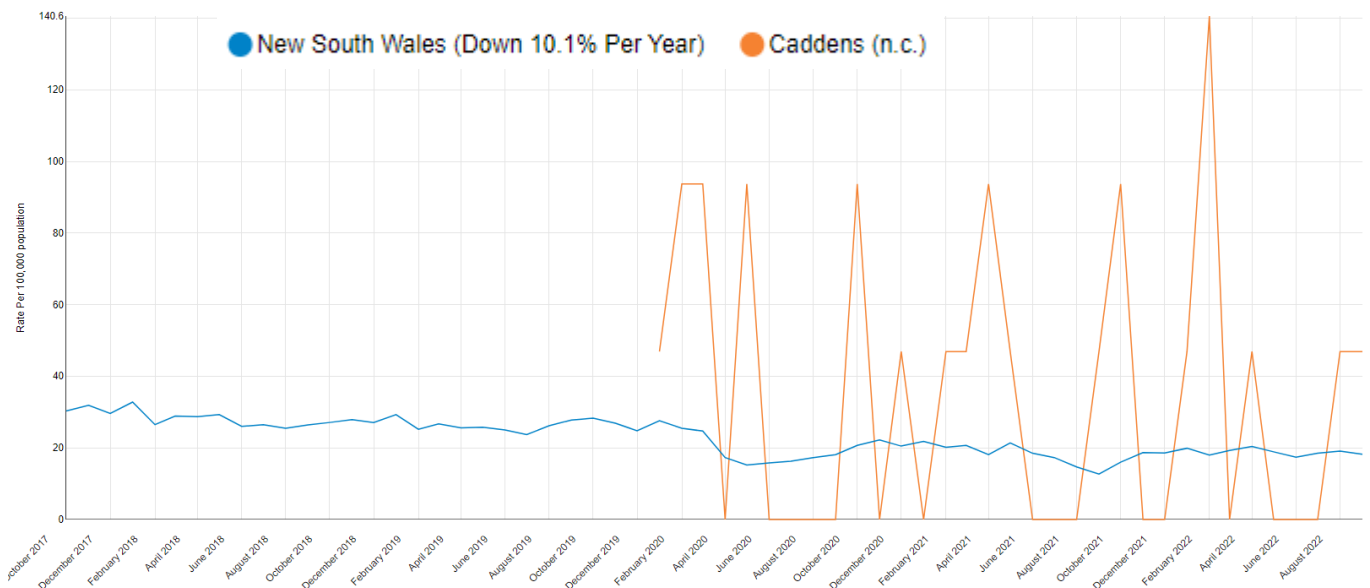


Figure 7: Rates of Breaking & Enter Dwelling in Caddens, October 2017 to September 2022

Figures 5 and 6 illustrate changes to the hotspot rating of incidents of break and enter dwelling in Caddens and its surrounds from 2017 to 2022. Hotspot levels of this offence have remained largely the same over a 5 year period, with an increase in residential areas to the north-west of the subject site surrounding the Great Western Highway and the Kingswood town centre.

Figure 7 includes a graph indicating rates of break and enter dwelling from October 2017 to September 2022, with comparisons between Caddens and the state of NSW. The incidence rate for Caddens has remained largely unchanged since records began, whilst NSW rates have decreased by 10.1% annually.

3.3 Malicious Damage to Property

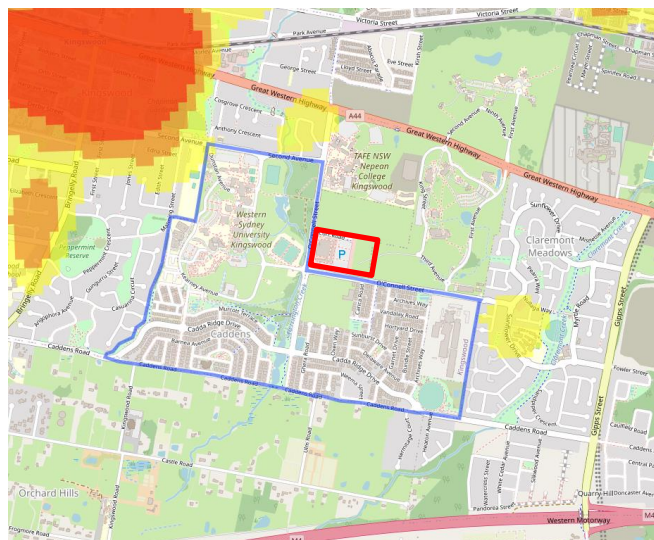


Figure 8: Malicious Damage to Property 2017-2018

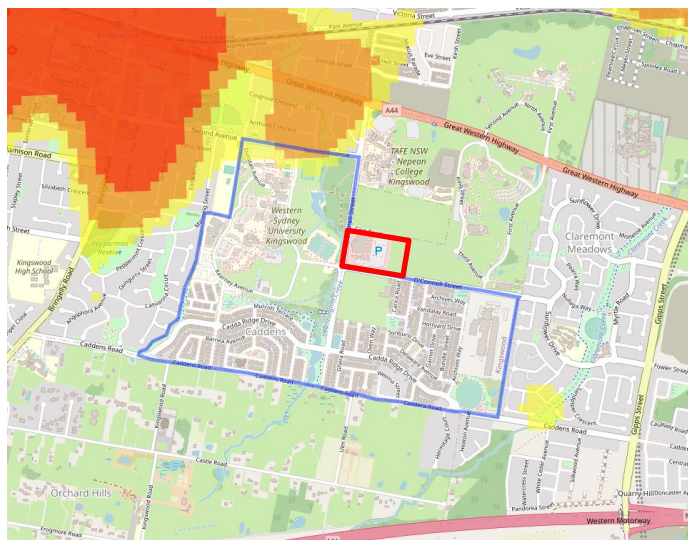


Figure 9: Malicious Damage to Property 2021-2022

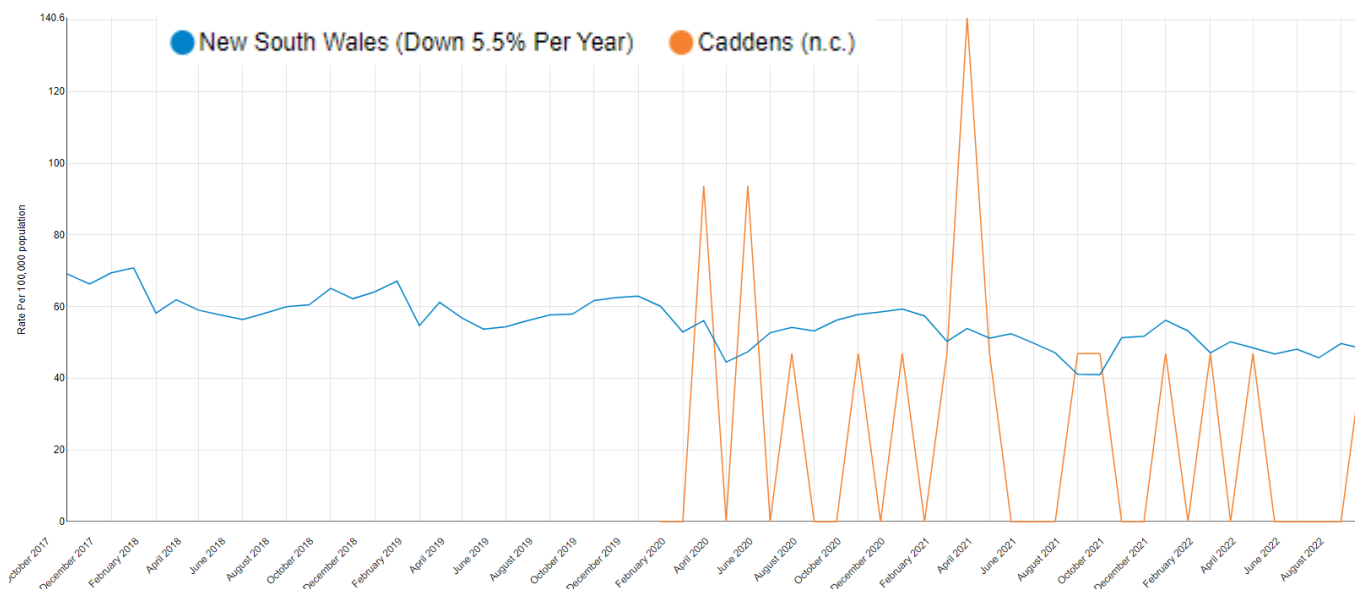


Figure 10: Rates of Malicious Damage to Property in Caddens, October 2017 to September 2022

Figures 8 and 9 show changes to the hotspot rating of malicious damage to property in Caddens over the 5 year period from 2017 to 2022. Hotspot levels of this offence have moderately increased to the north-west of the site surrounding the Great Western Highway and Kingswood area. The subject site or surrounding residential development however is not located within a hotspot area.

Figure 10 illustrates the rates of malicious damage to property offences, with comparisons between Caddens and NSW. Between October 2017 and September 2022, incidence of malicious damage to property in Caddens has remained generally unchanged whilst NSW has seen a decrease of 5.5% per year.

3.4 Motor Vehicle Theft

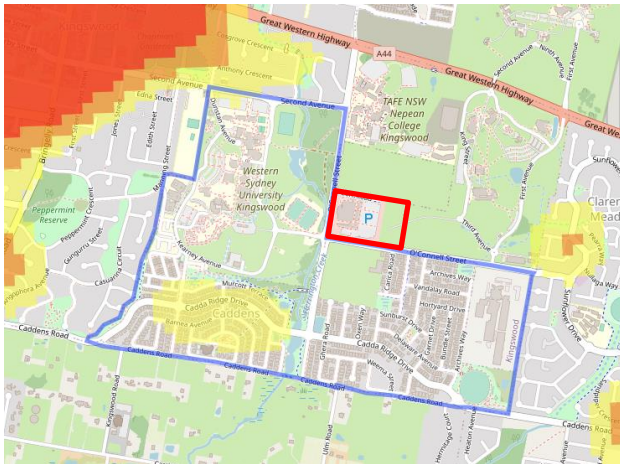


Figure 11: Motor Vehicle Theft 2017-2018

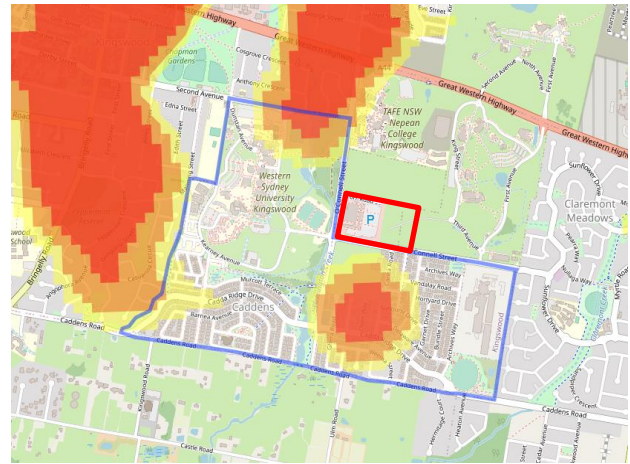


Figure 12: Motor Vehicle Theft 2021-2022

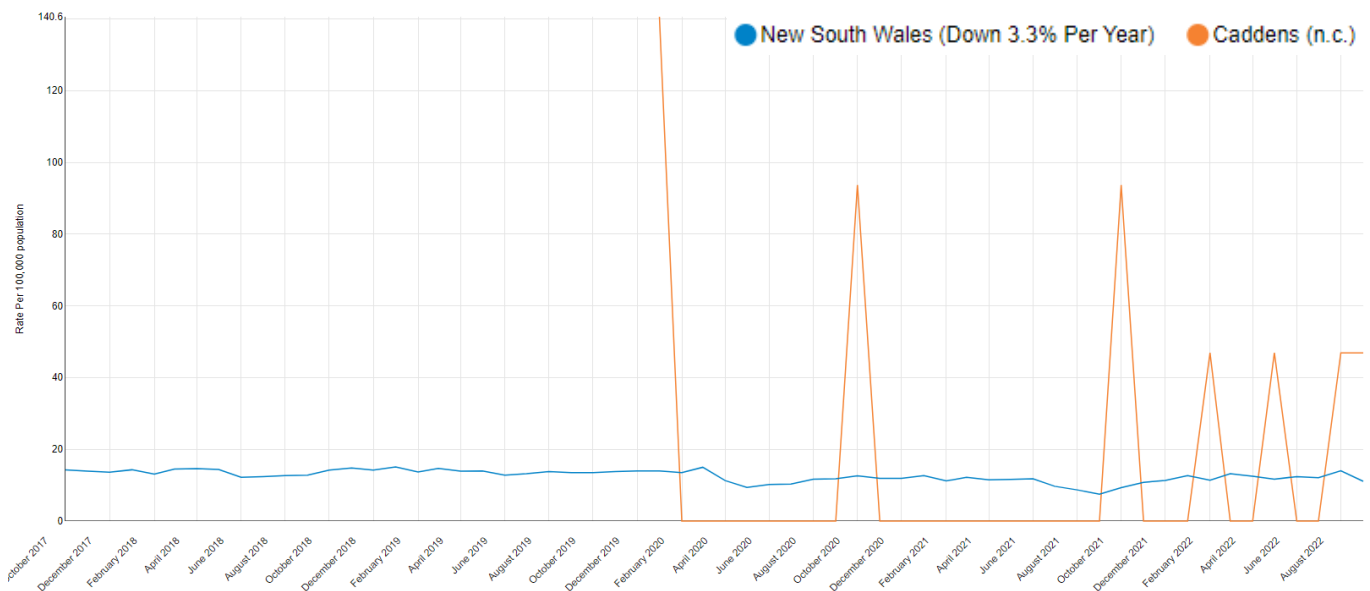


Figure 13: Rates of Motor Vehicle Theft in Caddens, October 2017 to September 2022

Figures 11 and 12 above show changes in the hotspot rate of motor vehicle theft offences in the locality between 2017 and 2022. These figures demonstrate that hotspot ratings for this crime have increased in the area surrounding the site. The site is now in the vicinity of two low to high hotspots to the north-west and south, with a small portion of the north-west of the site included within a low hotspot. These hotspots are concentrated around neighbouring residential areas and the Western Sydney University and TAFE NSW campuses in Kingswood to the north and west of the subject site.

Figure 13 includes a graph of the rates of motor vehicle theft, providing a comparison of Caddens and the state of NSW. Over the previous 5 year period, the rate of motor vehicle theft in Caddens has not seen any change since records began, whereas NSW has observed a decrease in occurrence of 3.3% per year.

The proposed development has implemented measures to separate and distinguish retail and residential car parking and restrict vehicle access to residential car parking, in order to reduce opportunities for motor vehicle theft within the precinct. These are discussed in detail in Sections 3.3 and 4 of this report.

3.5 Break and Enter (Non Dwelling)

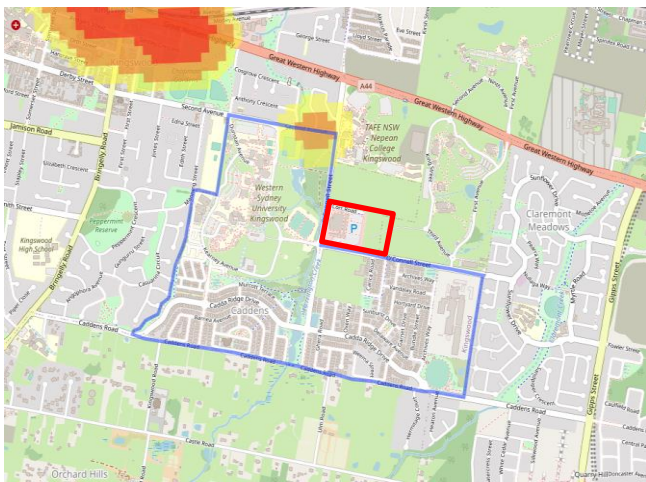


Figure 14: B & E (Non dwelling) 2017-2018

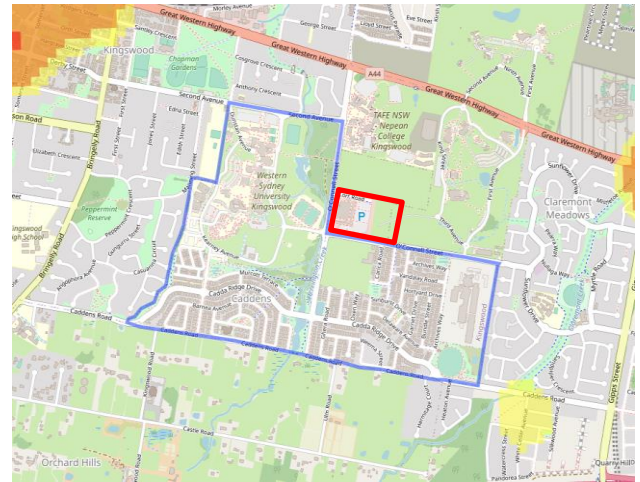


Figure 15: B & E (Non dwelling) 2021-2022

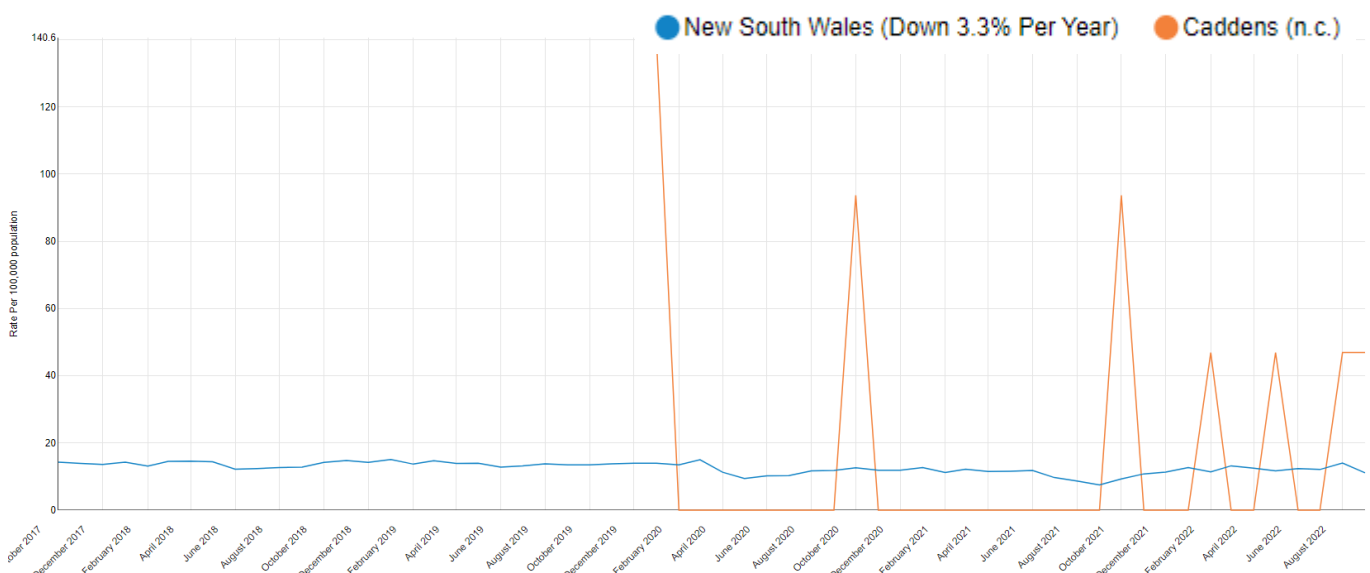


Figure 16: Break and Enter (Non dwelling) in Caddens, October 2017 to September 2022

Figures 14 and 15 above show changes in the hotspot rate of break and enter (non dwelling) in the locality between 2017 and 2022. The figures confirm there has been a decrease in hotspot events surrounding the subject site. The site was not located within a hotspot rating in 2022.

Figure 16 includes a graph of the rates of break and enter (non dwelling), providing a comparison of Caddens and the state of NSW. Over the previous 5 year period, the rate of retail theft in Caddens has not seen any change, whereas NSW has observed a decrease of 3.3% per year.

4 Proposed Development

The proposed development comprises a staged precinct of eighteen (18) mixed use and residential buildings (Buildings B - U) comprising 469 units.

Residential apartments are to be provided as follows:

Stage 1

- Building B – 19 units;
- Building C – 23 units;
- Building H – 35 units; and
- Building J – 26 units (103 units total).

Stage 2

- Building D – 26 units
- Building E – 29 units
- Building F – 25 units
- Building G – 35 units (115 units total)

Stage 3

- Buildings K & L – 57 units; and
- Buildings M & N – 55 units (112 units).

Stage 4

- Buildings P & Q – 48 units;
- Building R – 20 units;
- Building S – 24 units;
- Building T – 23 units; and
- Building U – 24 units (139 units).

An extract of the Site Plan is provided in Figure 17.

The precinct will adjoin the existing Caddens Corner shopping centre. Buildings R, S, T and U will provide retail floor space at the ground floor level. All other buildings in the precinct will support residential development only. Residential apartment buildings feature clear points of entry at their respective ground floor levels and upper floors are accessible via internal stairways and lifts.

Detailed discussion of more specific proposed elements is provided under subheadings below.

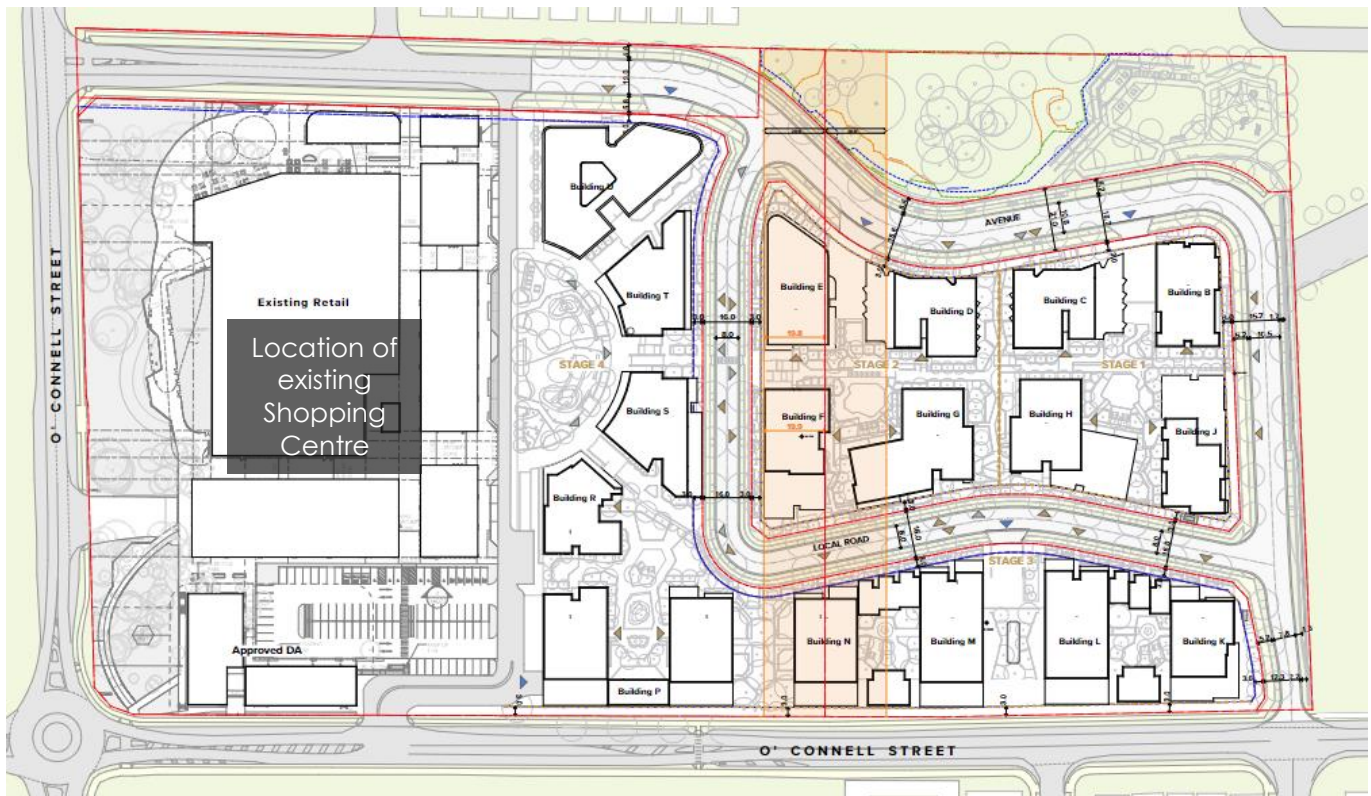


Figure 17: Extract of Site Plan, showing proposed precinct (Source: Turner, 2024)

4.1 Buildings R, S, T and U & Retail Floor Space

Retail floor space will be provided at the ground floor in Buildings, R, S, T and U in the west of the precinct, adjacent to the existing Caddens Corner shopping centre as shown in Figure 18. The retail floor space will be provided with dedicated retail car parking spaces as indicated in development plans.

Residential development above retail floor spaces is generally provided with separate access points and lifts, toilet facilities and waste collection rooms. Note these access points are in addition to public lifts and stairways to elevated public spaces between residential buildings. Spaces between the buildings are provided with clear sightlines, assisting wayfinding and providing observation between building exteriors and the public domain.

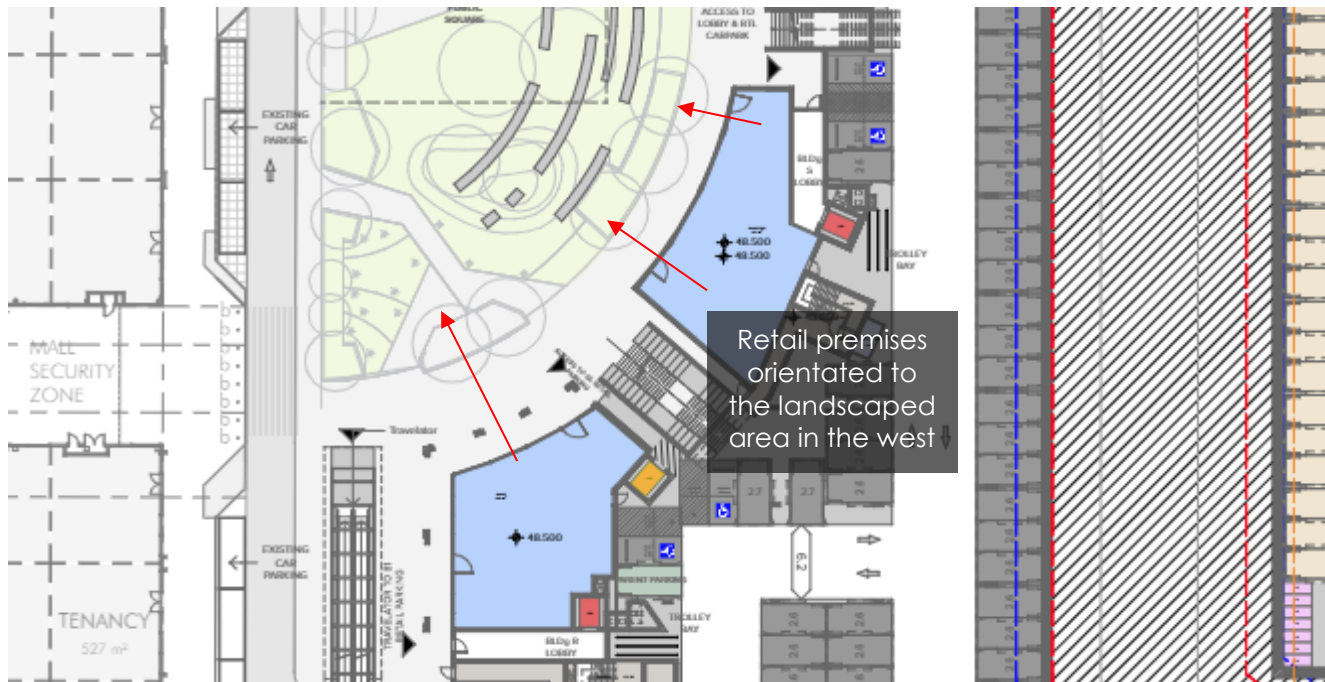


Figure 18: Extract from GA Plan [RL 48.00] (Source: Turner, 2024)

4.2 Residential Development

The residential built form will be accommodated within all buildings, including Buildings R, S, T and U that will also accommodate retail tenancies at ground floor level. The masterplan layout has been designed to facilitate natural surveillance of building entry points, vehicle entry points and pedestrian thoroughfares through the site. Natural surveillance will be further promoted through balconies and glazing within storeys above.

Residential apartments will be accessed from lobby entries at ground level with controlled entry and lift access to levels above. Basement parking will be provided for all buildings with vehicle access provided from the new internal road network and O'Connell Street in the south. Parking is discussed in more detail in Section 4.3.

Balconies associated with residential apartments will not be accessible from commercial or communal areas, only from the interiors of residential apartments.

Refer to Figures 19 & 20 below for an analysis of Elevation plans and CPTED design measures.

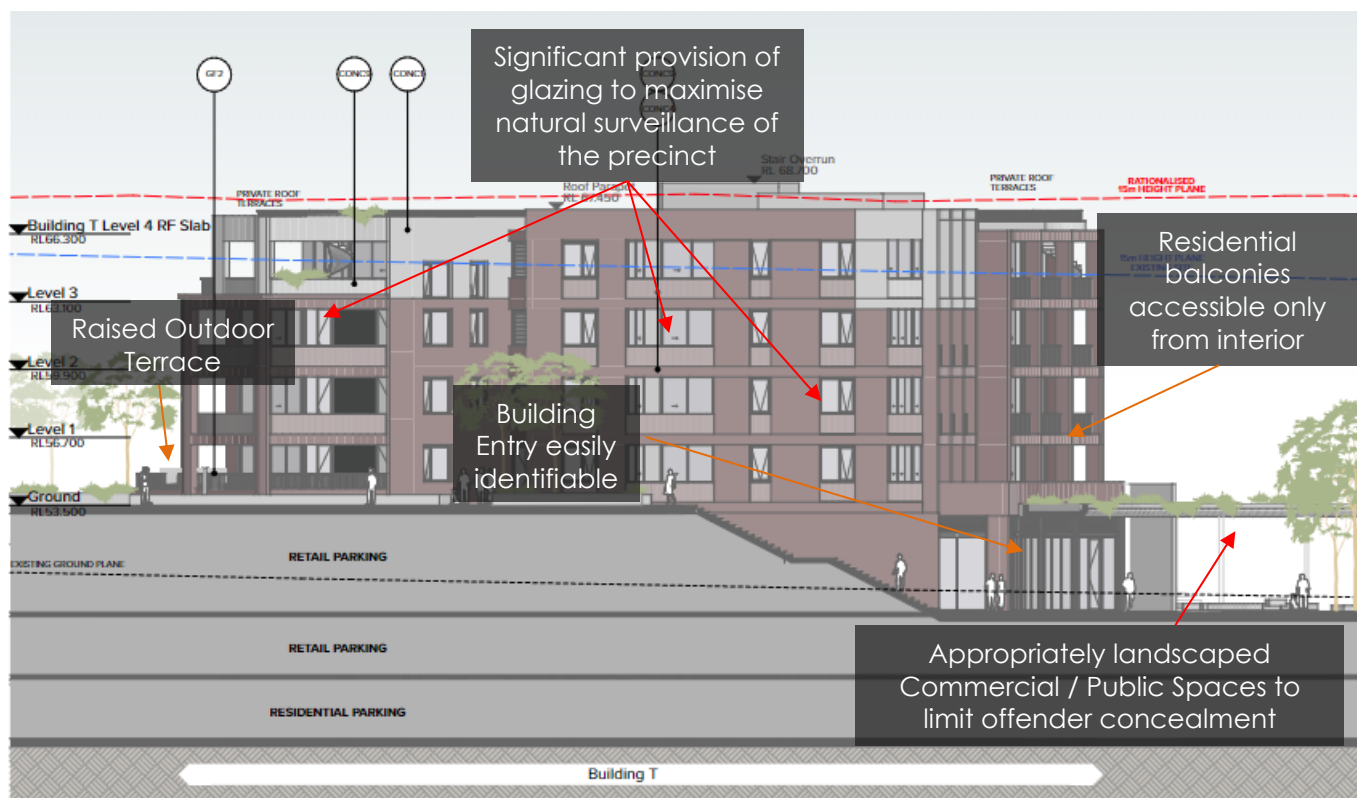


Figure 19: Extract from Building T Northwest Elevation (Source: Turner, 2024)

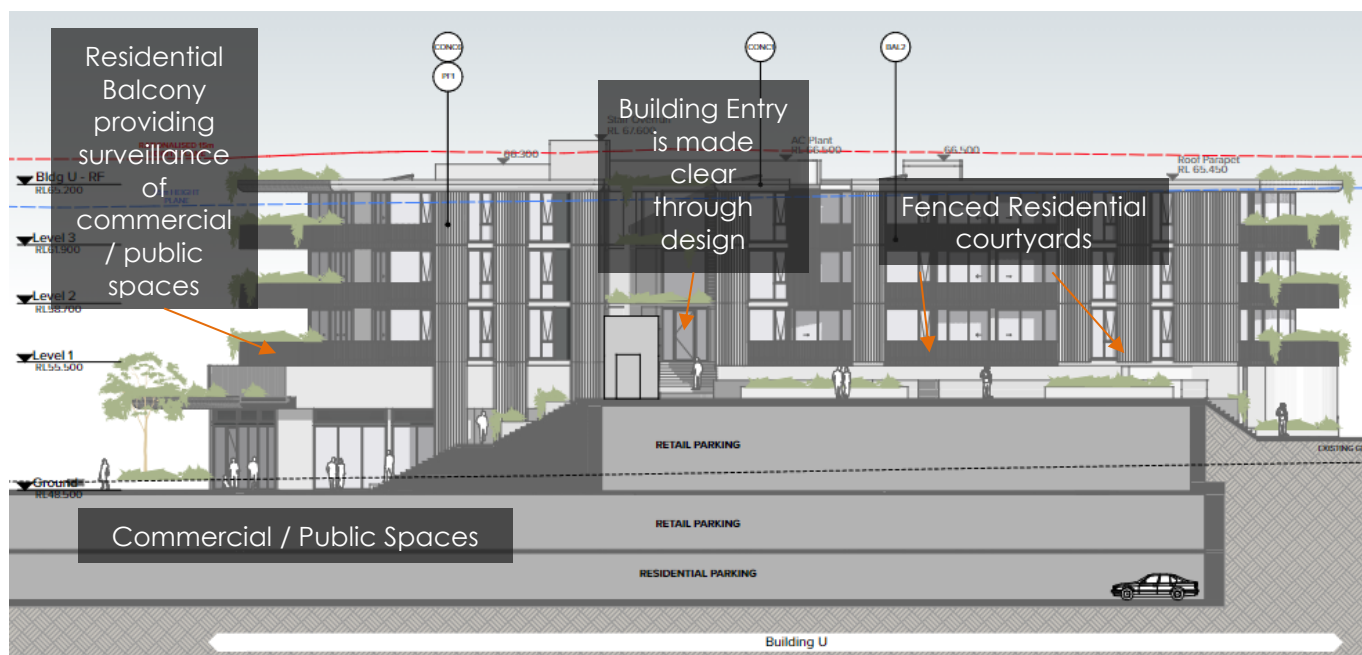


Figure 20: Extract from Building U Southeast Elevation (Source: Turner, 2024)

4.3 Car Parking

Parking will be provided within a number of basement facilities that service different buildings within the precinct as shown in Figures 21-23. Buildings B – J have access to a large, consolidated eastern car park, whilst Buildings P – U possess a consolidated basement car park which provides parking for both retail and residential uses.

The precinct car parks minimise unnecessary obstructions and possess clear sightlines of vehicle passageways and entries.

Retail parking has been indicated in grey in development plans, whilst residential parking is indicated in beige. All vehicle entry points will benefit from boom gate or roller door entry to basement levels.

Buildings K, L, M, and N possess a separate consolidated basement car park for residents in the south-east of the precinct.

Retail parking is provided in the western car park of the precinct, accommodating retail premises in Buildings R, S, T and U. Retail parking is located on the two upper floors of the western car park, including the ground floor. The lowest level of the car park is restricted to use by residents of Buildings P – U. Residential parking is secured from the retail sections by separation of different floors and access control measures including roller shutter doors, providing appropriate security for vehicles between the mixed uses.

The western car park has 2 points of access at the ground level: one from the road to the north under Building U and one driveway from the road adjacent the shopping centre to the west under Building Q which is secured with a roller shutter door and intercom.



Figure 21: Extract Building P Floor Plan, showing car parking [RL 48.00] (Source: Turner, 2023)

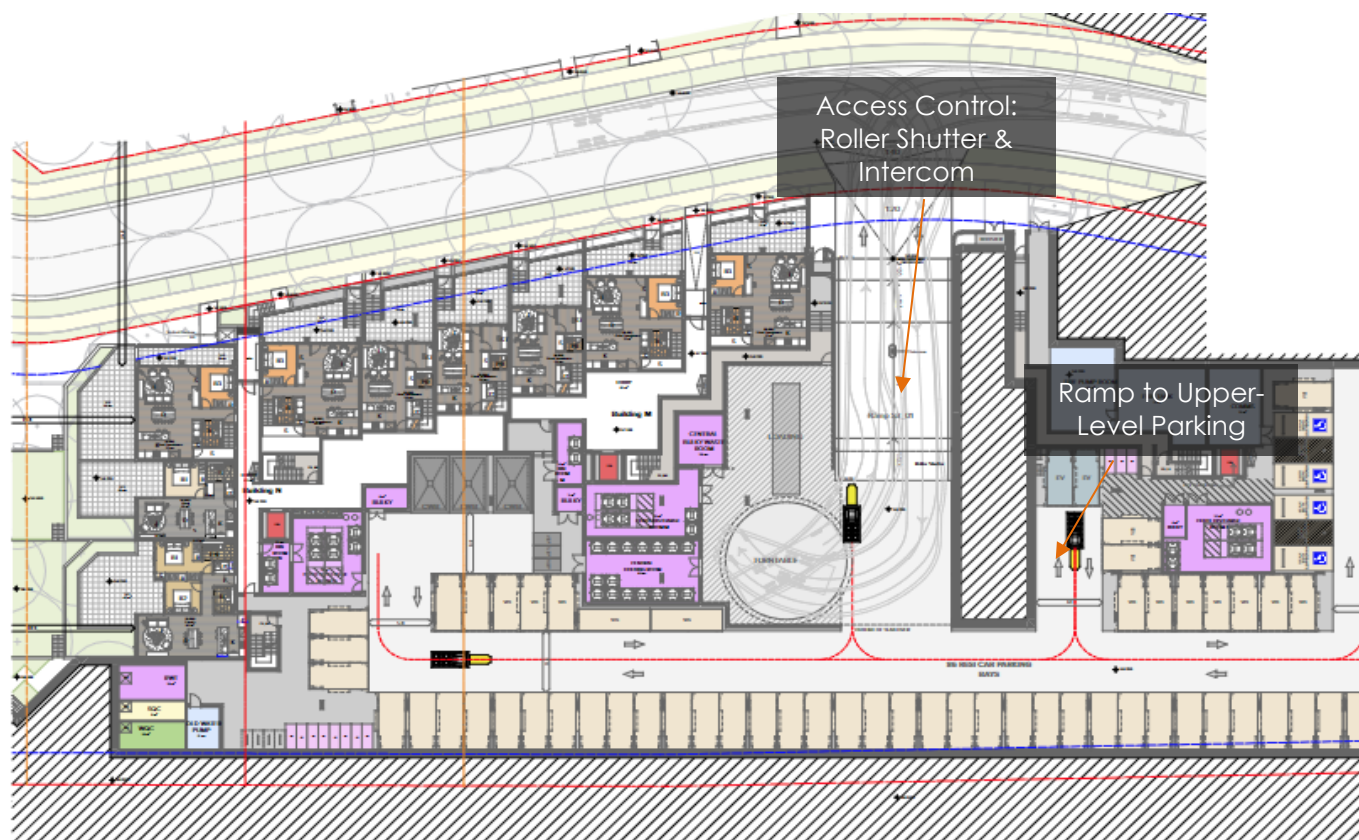


Figure 22: Extract Buildings K, L, M and N Car Parking [RL 56.70] (Source: Turner, 2024)

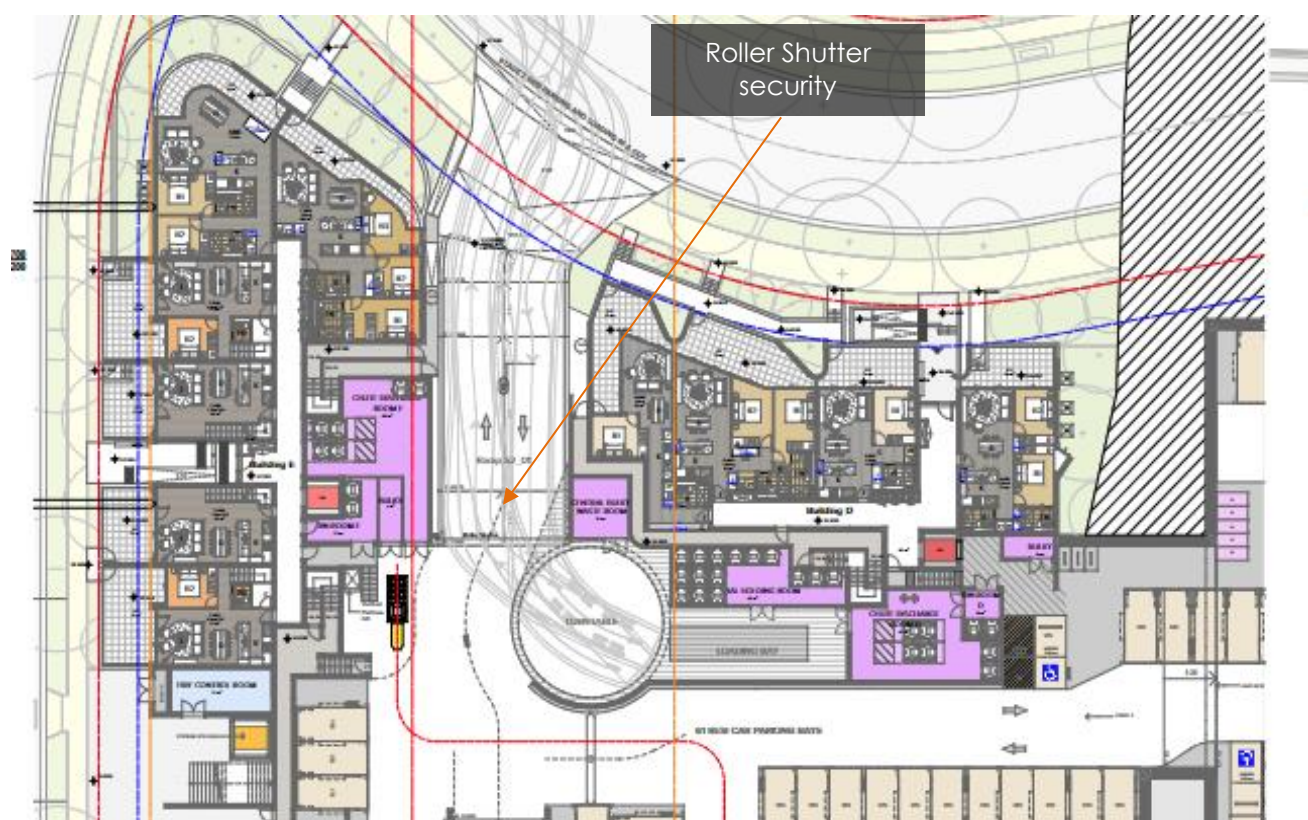


Figure 23: Extract Buildings D, E, F and G Car Parking [RL 52.70] (Source: Turner, 2024)

4.4 Communal & Public Open Spaces

The precinct benefits from a number of public open spaces, comprising areas between buildings, northern and western landscaped areas, rooftop gardens, as well as courtyards located within the perimeter of buildings. The removal of Building A also facilitates additional open space in the north of the precinct.

Residential buildings within the precinct overlook these spaces, providing passive surveillance and natural security of the area. The apartments have been designed to share views of outdoor public areas whilst maintaining the privacy of internal habitable areas and private open spaces. The design orientation towards public open spaces also provides implicit reinforcement of the space as being public space, rather than having ambiguous use or ownership. This further clarifies the appropriate use and access of the space to visitors and residents in line with social norms.

Access to private residential courtyards and any rooftop communal spaces will be controlled by secure doors and fencing with swipe card control to be implemented for residents only. Communal spaces and hallways benefit from clear sightlines, minimising ambiguous spaces and potential hiding places which may be used by trespassers or offenders.

The precinct has been designed to facilitate pedestrian movement and circulation through the site at ground level as evident in Figure 24. Fenced private open space areas will ensure the public access through the site will not generate any unacceptable access to property concerns. Further, the increased natural surveillance that public access will provide is beneficial for the security of the precinct. Recommendations for CCTV surveillance of public lift access points are provided in Section 5.1.

The adopted CPTED design measures will reduce opportunities for crimes such as break and enter, by increasing criminals' perceptions of risk and likelihood of being caught, as well as the criminals' effort required to commit and benefit from a crime.

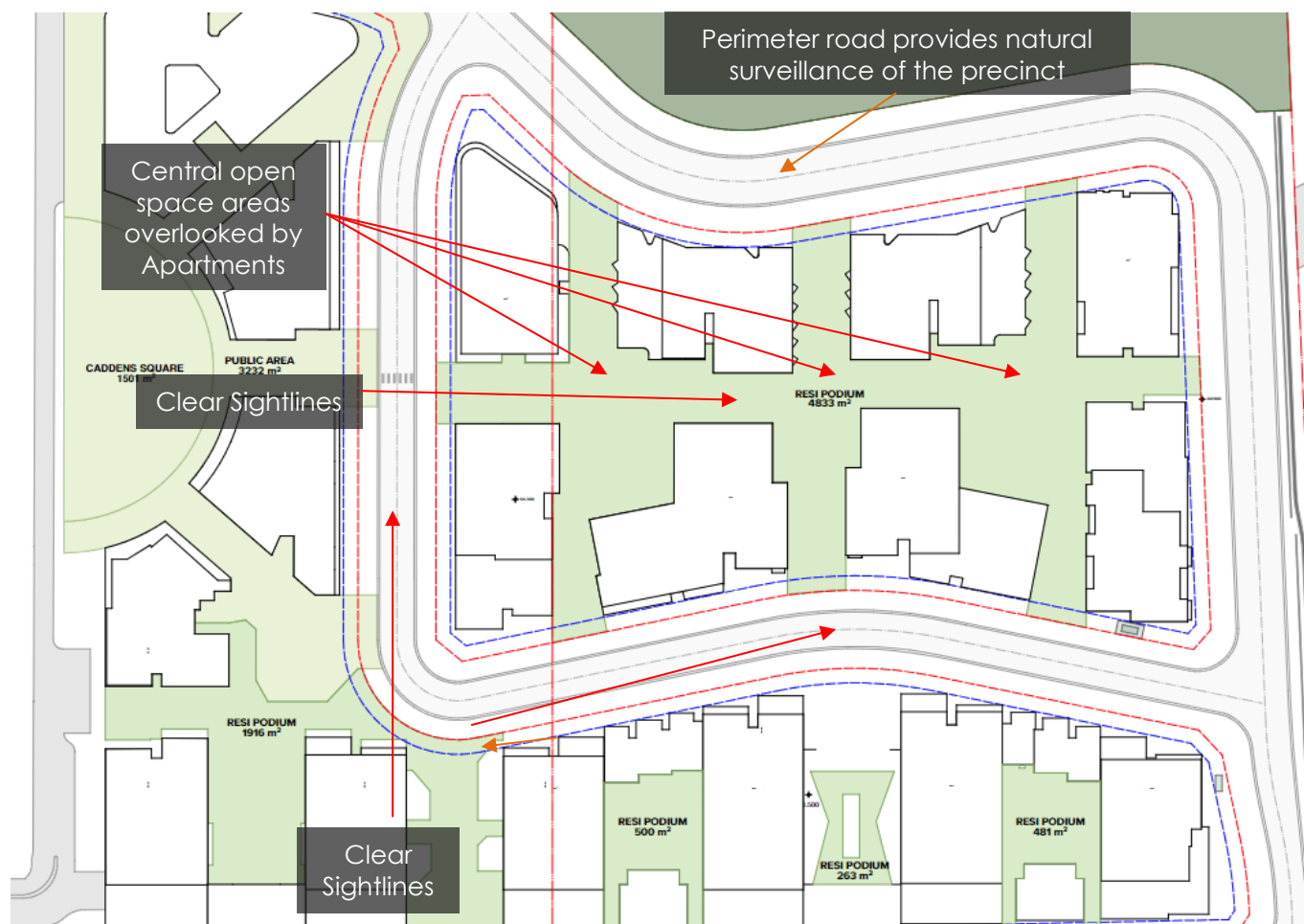


Figure 24: Extract Local and District Open Space Plans (Source: Turner, 2024)

4.5 Landscaping

A Landscape Plan has been prepared by Site Image Landscape Architects and submitted as part of the development application. Extracts from proposed Landscape Plans are provided in Figures 25 and 26 below.

A public park is now proposed in the north east of the site which will facilitate community interaction within a welcoming landscaped space.

Landscaping across the precinct includes an appropriate mix of street trees and planting of common open space areas such as courtyards which are located a suitable distance from balconies and living spaces to prevent use as natural ladders. Building exteriors are bounded by various garden beds and suitable scale of plantings, discouraging vandalism and trespassing onto terraces and into low-lying dwellings.

Trees and shrubs are well-spaced to prevent their use for concealment and landscaping around building perimeters is to be low in height. Clear sightlines are preserved throughout the precinct across the streetscape, around walkways and between buildings.

Rooftop gardens in Buildings R, F and B are only accessible from the interiors of these buildings, with their use exclusive to tenants and their guests. Access control will prevent unauthorised access to these areas.



Figure 25: Landscaping around Buildings U, T, E, D, C, B (Source: Site Image Landscape Architects, 2024)

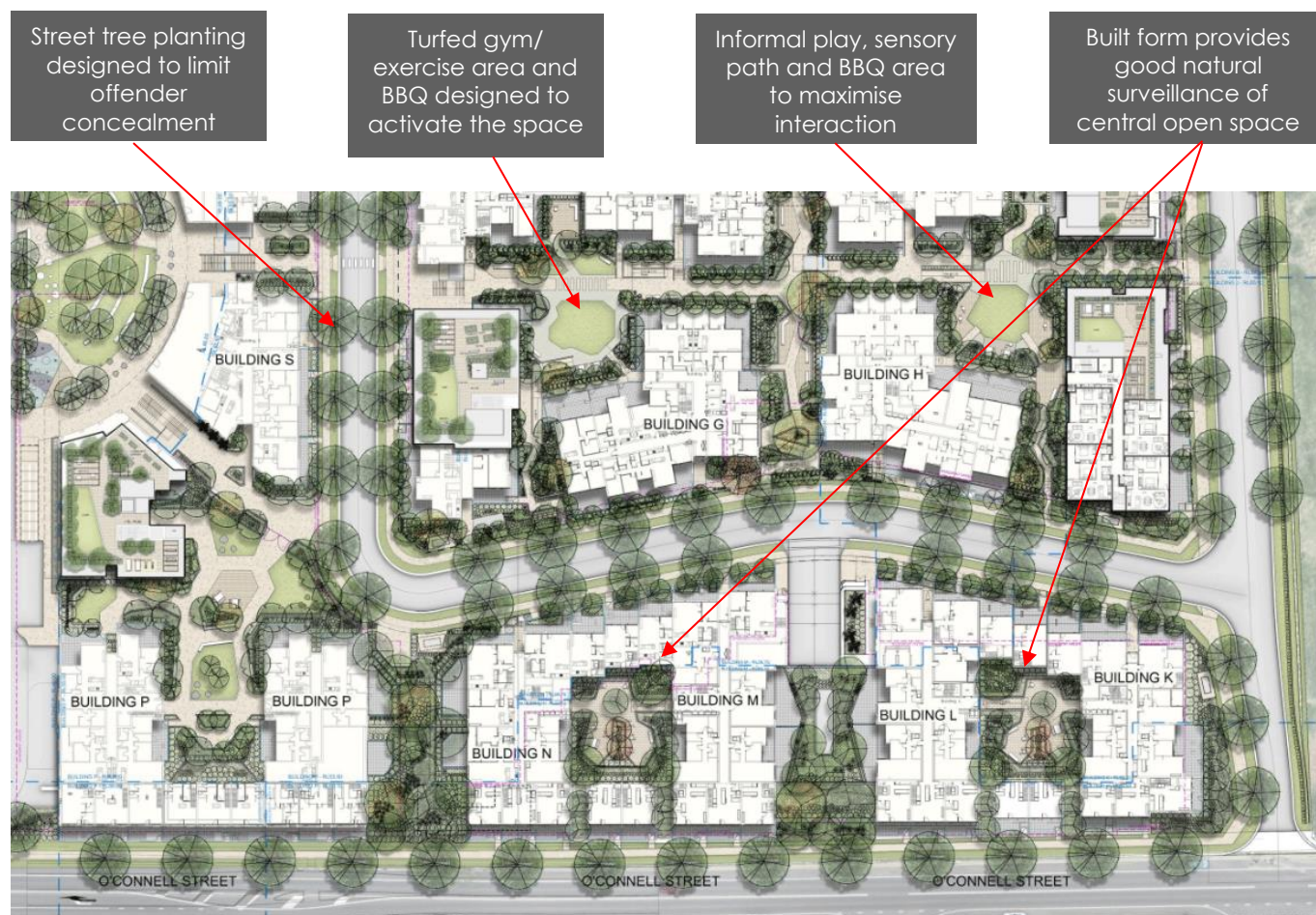


Figure 26: Landscaping around Buildings S, R, Q, P, F, G, H, J, N, M, L, & K (Source: Site Image Landscape Architects, 2024)

5 CPTED Principles

5.1 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 Caddens Corner residential development include:

- Residential apartments facilitate passive surveillance of commercial areas, entry points and open public spaces;
- Clear sightlines are maintained between and within public and private spaces within the residential precinct; and
- Landscape design provides aesthetic enhancement and maintains privacy, without obscuring visibility, safety or surveillance of public areas or points of entry.

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

Table 2: Surveillance issues and recommendations

| Surveillance Issues | Recommendation |
|---------------------|--|
| Perimeter | <ul style="list-style-type: none"> • Minimise density of planting around building perimeters to maintain clear sightlines and limit natural ladder opportunities. • Public and commercial areas, including perimeters and the access roads, shall be well lit at night in accordance with the Australian Standards for lighting. |
| 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 at entry points that don't require permanent evening illumination. • Glazing should allow natural surveillance of surrounding areas from within interior spaces. |
| Public Lift | <ul style="list-style-type: none"> • Ensure the public lift and surrounds are well lit at night in accordance with Australian standards. • Consider use of CCTV surveillance at lift entry points and the publicly accessible areas in the centre of the precinct. • Signage should identify any CCTV surveillance in this area to further deter criminal activity. |
| Car Parking | <ul style="list-style-type: none"> • Minimise density of planting near car park entry points to maintain clear sightlines to retail and residential car parking areas. • Car parks within the precinct should be well lit at night and |

| Surveillance Issues | Recommendation |
|-----------------------------|---|
| | <ul style="list-style-type: none"> minimise potential places for entrapment. Consideration should be given to the installation of Close Circuit TV (CCTV) in these areas. |
| Positioning of CCTV cameras | <ul style="list-style-type: none"> Consideration should be given to the installation and maintenance of CCTV throughout the precinct. It is recommended that lobby areas, pedestrian pathways, retail spaces and landscaped public open space areas (including the public park) should also be clearly visible through CCTV. Position CCTV at places where the offender/s is most likely to have to pass or want to access, such as building entry/exit points, storerooms or areas where high value items are kept. 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. In areas where image capture will not be compromised by insufficient lighting. |
| Lighting | <ul style="list-style-type: none"> Lighting should be vandal resistant. Lighting should satisfy the relevant Australian Standard. Effective illumination at ground level should reduce any opportunity for shadowing along the pedestrian access paths. Car parks should be illuminated to provide increased visibility, particularly in storage areas or areas of potential entrapment. Street numbers on buildings should be illuminated to facilitate site identification. |
| Landscaping | <ul style="list-style-type: none"> Planting proposed in the Landscape Plan should not obstruct surveillance along road frontages and site perimeters. Landscaping should allow clear sightlines along designated pedestrian paths through the precinct and within areas of mature tree planting. Vegetation should be low in areas where offenders could easily hide. Landscaping should not impede natural surveillance of building or car park entries. Landscaping should be effectively maintained to promote active surveillance from residents and any vegetation or debris on pathways must be removed to maintain sightlines. |
| General Recommendations | <ul style="list-style-type: none"> Entry areas to foyers should have transparent doors and glazing. Minimise posters on shop / retail / commercial windows (where possible) to ensure visibility to and from the public domain is maintained. 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. |

5.2 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:

- Retail and residential spaces are accessed via separate points of entry at the ground floor level;
- Internal areas, including residential hallways and courtyards, are to be secured with high quality doors;
- Retail and residential car parks are limited to 1-2 entry / exit points;
- Access to residential car parking is restricted by roller doors linked to swipe card and intercom systems; and
- Residential lifts and stairways are located internally, and lifts are secured for use by residents using swipe card systems to levels above.

Table 3 lists potential 'access control' issues and recommended strategies to minimise crime risk.

Table 3: Access control issues and recommendations

| Access Control Issues | Recommendation |
|-----------------------|--|
| Perimeter | <ul style="list-style-type: none"> • Secure fencing should be constructed and maintained within private residential terrace areas at ground level in order to prevent unauthorised access from pedestrians, users of nearby commercial premises or other trespassers. • Consider the use of sensor lighting in these areas and communal spaces. |
| Ram Raids | <ul style="list-style-type: none"> • Where accessible by a vehicle, bollards, large rocks or planter boxes should be installed at entrances to prevent ram raids. • Any ATMs should be located within buildings to minimise ram raid risk and the potential use of explosives to access ATMs. |
| Service Counter | <ul style="list-style-type: none"> • Consider installing above counter barriers to prevent criminals from jumping or climbing retail counters. |
| Landscaping | <ul style="list-style-type: none"> • Avoid planting large trees or shrubs adjacent to buildings to prevent use of "natural ladders" for access to roofs, balconies or residential terrace areas. • Vegetation should be maintained to allow for clear sightlines. • Landscaping should not inhibit entry to access gates, paths or building entries. |
| Entrances | <ul style="list-style-type: none"> • Entrances should be secured and controlled via electronic cards and intercom. • Elevator access to residential floors and interiors should only be available via an electronic swipe card or intercom system. • Regular maintenance of lobby areas, car parks, and building entrances is essential for effective access control. |
| Car Parking | <ul style="list-style-type: none"> • Electronic access doors to residential car parks secured by swipe cards or intercom systems should be maintained in order |

| Access Control Issues | Recommendation |
|-----------------------------------|---|
| | to effectively limit unauthorised access and mitigate opportunities for theft. |
| 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, security contractors, time delay locks, and minimum cash held on premises. Ensure all back and side doors and windows are kept secure. All glass should be reinforced. Predetermine and designate escape routes and safe areas for employees to move to when required. Ensure that staff members are aware of security and armed robbery procedures and what to do in the case of such an event. This routine should be regularly practiced as with any other type of emergency drill. |

5.3 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:

- Entrance design to buildings provide a clear demarcation between public and semi-private space for residents, using design cues and secure doors;
- Residential car parking features access control measures, including roller door systems, and clear physical separation from public retail parking and the precinct streetscape, which indicate distinct usage and private access separate to the public domain;
- Clear design cues associated with fenced residential terraces delineate these private spaces and identify who they are owned and used by; and
- Architectural design incorporates common areas and public open spaces which promote resident interaction and the responsibilities of users for areas.

Table 4 lists potential 'territorial reinforcement' issues and recommended strategies to minimise crime risk.

Table 4: Territorial reinforcement issues and recommendations

| Territorial Reinforcement Issues | Recommendations |
|----------------------------------|--|
| Creating a sense of | <ul style="list-style-type: none"> Common open space areas for residents should allow resident maintenance and inclusion, in conjunction with a |

| Territorial Reinforcement Issues | Recommendations |
|----------------------------------|---|
| place/ownership | <ul style="list-style-type: none"> designated environmental contractor maintenance plan. A clear distinction should be provided in landscaping and paving to identify separation between public and private spaces. |
| Way Finding | <ul style="list-style-type: none"> Provide clear signage for pedestrians and motorists, including directional and information signage for areas accessible to the public. Consider the introduction of a public address system for within the precinct to assist with security and management of emergencies. Signage is recommended to be installed at foyer entries and primary pedestrian points identifying a masterplan map to enable residents and visitors to locate certain areas. Paths within communal residential and public open spaces should be maintained and appropriate for all mobilities. Entry and exit points should be clearly identified, particularly in basement car parks throughout the precinct where way finding may be more difficult. |
| Communal Areas | <ul style="list-style-type: none"> Internal hallways, stairs, lifts and courtyard areas to residential buildings should be well maintained to allow the spaces to be used by residents and visitors. These areas should encourage social interaction between all residents to increase surveillance and reinforce ownership of these spaces by residents of the precinct. Ground floor residential terrace fencing and gates should be regularly maintained. |
| General Recommendations | <ul style="list-style-type: none"> Consider installation of a monitored security alarm system. Prominently display any signs indicating the presence of a security system throughout the precinct, the continual surveillance of significant areas such as site links, car parking and open space, and any other security measures present. Consider installation of security screens or roller shutters to vulnerable retail windows and/or skylights, subject to BCA compliance. |

5.4 Space Management

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

Table 5 lists potential 'space management' recommendations 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 5: 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. Designated waste storage areas should be secured for |

| Space Management Issues | Recommendations |
|-----------------------------|---|
| | <p>authorised access only.</p> <ul style="list-style-type: none"> • Signage should be displayed distinguishing separate retail and residential waste storage spaces. |
| 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 along building perimeters and the frontage of the retail tenancies to prevent graffiti on blank walls. |
| Toilets | <ul style="list-style-type: none"> • 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 or commercial facilities. • Consider installing vandal proof lighting. |
| 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. |

6 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*: Building entrances, public and semi-private open spaces, car parks and building perimeters should be well lit at night;
- *Natural Surveillance*: Promote natural surveillance via residential balconies, terraces and interiors, the precinct streetscape and communal open spaces. Entry areas to foyers should have transparent doors and glazing. Minimise posters on shop windows (where possible) to ensure visibility to and from the public domain is maintained;
- *Landscaping*: Maintain sight lines wherever possible via effective landscaping techniques using CPTED principles;
- *Concealment*: Reduce opportunities for hiding in bushes and landscaping in secluded areas via low planting or taller trees and canopies; and
- *Formal Surveillance*: Consider installation of Closed Circuit TV (CCTV) at key building entry points in addition to the contracting of a formal surveillance team to perform regular security assessments of the precinct.

Access Control

- *Designated Key Card Access*: Key/swipe card access should be implemented to enforce restricted access to residential lifts, interiors, and car parking and restricted commercial areas;
- *Landscaping*: Large trees should not be planted immediately adjacent to balconies and terraces to prevent the vegetation being used as an improvised or "natural ladder";
- *Internal Communal Areas and Semi-Private Space*: These areas for residents should be clearly designated and access control should be maintained via key/swipe card access or intercom systems;
- *Car Parking*: Retail and residential car parking should be clearly designated and access to residential car parking should be controlled using effectively maintained key/swipe card door access or intercom systems;
- *Signage*: Signage should be provided identifying restricted and monitored areas, including car parks;
- *Security*: Ensure use of high quality locking systems, reinforced glass and signage and stickers. All glass should be reinforced. Predetermine and designate escape routes and safe areas for employees to move to when required. Ensure that staff members are aware of security and armed robbery procedures and what to do in the case of such an event. This routine should be regularly practiced as with any other type of emergency drill; and
- *Crime Prevention*: Bollards, large rocks or planter boxes should be installed at entrances to prevent ram raids. Any ATMs should be located within buildings to minimise ram raid risk and the potential use of explosives to access ATMs. Consider installing above counter barriers to prevent criminals from jumping or climbing retail counters.

Territorial Reinforcement

- *Landscaping*: Engage a landscape contractor to maintain precinct perimeter and communal areas and keep pathways free of vegetation;
- *Signage & Way Finding*: Provide signage to visitors of the site outlining access control measures, emergency evacuation measures and procedures. Signage should be implemented in pedestrian site links and distinguishing public and restricted spaces. A public address system

should be implemented to facilitate navigation of the precinct for security and emergencies. Street numbers on buildings should be illuminated to facilitate site identification;

- *Fencing*: Ensure fencing identifies a clear distinction of private areas within low-lying terraces;
- *Car Parking*: Clearly delineate spaces through signage, boom gates or shutter doors, physical separation and other security measures; and
- *Alarm*: Consideration should be given to the installation of an alarm and dedicated CCTV system.

Space Management

- Implementing an on-going maintenance plan for waste, vandalism, toilets, community facilities, landscaping, fencing, and lighting across the precinct.

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