The Design Partnership

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED) REPORT

RESIDENTIAL DEVELOPMENT

43 McFarlane Avenue
GOOGONG NSW

September 2023

Googong Projects (NSW) Pty Ltd

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED) REPORT
RESIDENTIAL DEVELOPMENT
43 McFarlane Avenue Googong NSW 2620

PROJECT NUMBER: 23.014

PREPARED BY

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Quality Control Plan

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A	28.09.23	DRAFT CPTED Report - not for lodgement with Council	KC	KC
B	29.09.23	FINAL CPTED Report	KC	KC

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1 INTRODUCTION

The Design Partnership has been engaged by Googong Projects (NSW) Pty Ltd to prepare a Crime Prevention Through Environmental Design (CPTED) Report for a Residential Development at 43 McFarlane Avenue, Googong in New South Wales.

This report provides an assessment, analysis and recommendations for the design produced for the development.

1.1 What Is CPTED?

Crime Prevention Through Environmental Design (CPTED) is a strategy that aims to reduce crime by designing the built environment according to a set of guidelines.

CPTED is based on the principle that many offenders are guided by rational thought and make a cost/benefit analysis of their actions prior to committing a crime. Applying CPTED methods aims to discourage offenders by maximising the risk and effort of committing a crime, while minimising the benefits and opportunities of committing that crime.

CPTED also identifies ways to create a feeling of safety, leading to increased use of an area, which in turn improves natural surveillance and deters offenders.

In NSW, CPTED is largely administered by Safer By Design, a co-operative made up of NSW Police, local councils, government departments and private sector organisations. The Design Partnership structures its CPTED reports according to Safer By Design guidelines.

Safer By Design identifies seven key areas where CPTED principles can be applied: surveillance; lighting/technical supervision; territorial reinforcement; environmental maintenance; activity and space management; access control; design/definition/designation.

1.2 Scope & Methodology

The scope of this project is an assessment of the proposed mixed use development at 43 McFarlane Avenue Googong (The Development). The plans have been prepared by DNA Architects Pty Ltd and this CPTED Report will form part of a Development Application. This report is authored by Kristy Cianci (Ryan) of The Design Partnership who undertook CPTED training with the NSW Police. Kristy is a registered architect (ARB NSW No. 9254) and specialises in the preparation of CPTED assessments, studies and reports.

The following Methodology was used to prepare the CPTED report:

1. Desktop review of the design.
2. Review of crime data available through the Bureau of Crime Statistics & Research (BOCSAR).
3. Review of CPTED report by Monaro Police District dated 28 March 2023.
4. Due to the time constraints of the deadline, a site visit was not undertaken.
5. Review of media and similar publications.
6. Preparation of draft CPTED Report.
7. Preparation of final CPTED Report for lodgement with Council with the Development Application.

1.3 Structure Of The Report

The basis of this report is a Crime Risk Assessment (CRA), which is used to identify overall crime risk for the project and the appropriate level of CPTED treatments. A summary of the Crime Risk Assessment has been provided as diagrams in Section 4.

The basis of this report is a Crime Risk Assessment (CRA), which is used to identify overall crime risk for the project and the appropriate level of CPTED treatments. A summary of the Crime Risk Assessment has been provided as diagrams in Section 4. Using the CRA as a template, this report assesses the design and provides recommendations under the seven CPTED design principles.

2 THE WIDER CONTEXT

2.1 The Context of Googong

Googong is located within the Queanbeyan–Palerang Regional Council Local Government Area (LGA), ten kilometres south of the Queanbeyan Central Business District (CBD). Googong is situated on Ngunnawal traditional Aboriginal country.

Googong is situated close to Canberra, the capital city of Australia. The suburb is a convenient choice for those who work or study in the city but prefer a suburban lifestyle. The town is surrounded by rural countryside and the nearby Googong Dam. Its natural context provides opportunities for a recreational lifestyle.

Googong is composed of five neighbourhoods, and each will have a neighbourhood centre. The town centre is located in Googong Central. Googong Central, will include 1800 dwellings which will become home to 4,500 residents in a mix of high, medium and low densities. The town centre will consist of a shopping precinct with two major supermarkets, a library, a community centre, council shopfront and a fire station. There will be a public secondary school, an indoor sports centre, Googong Sports Club, a community garden, playing fields and tennis courts, and netball courts.

Googong hosts several community and developer-led events, including Googfest, Boogong and Kitefest.

Googong is dedicated to sustainable living practices, focusing on preserving its natural environment. The town incorporates eco-friendly design elements, green spaces, and conservation efforts to protect the surrounding ecosystem. The town's eco-friendly housing developments and infrastructure reflect this commitment to sustainability. Some notable endeavours include the Googong Water Recycling Plant, which was funded, designed and built by the developers of Googong and gifted to the Queanbeyan-Palerang Regional Council. Googong was also awarded the Green Building Council of Australia's first 5-Star Green Star – Communities rating in 2016. Googong is known for its use of 'reconophalt', a recycled road product used in six netball courts and a car park. Electric car charging stations will also be integrated across the township.

The subject site is proposed opposite the Googong Town Centre.

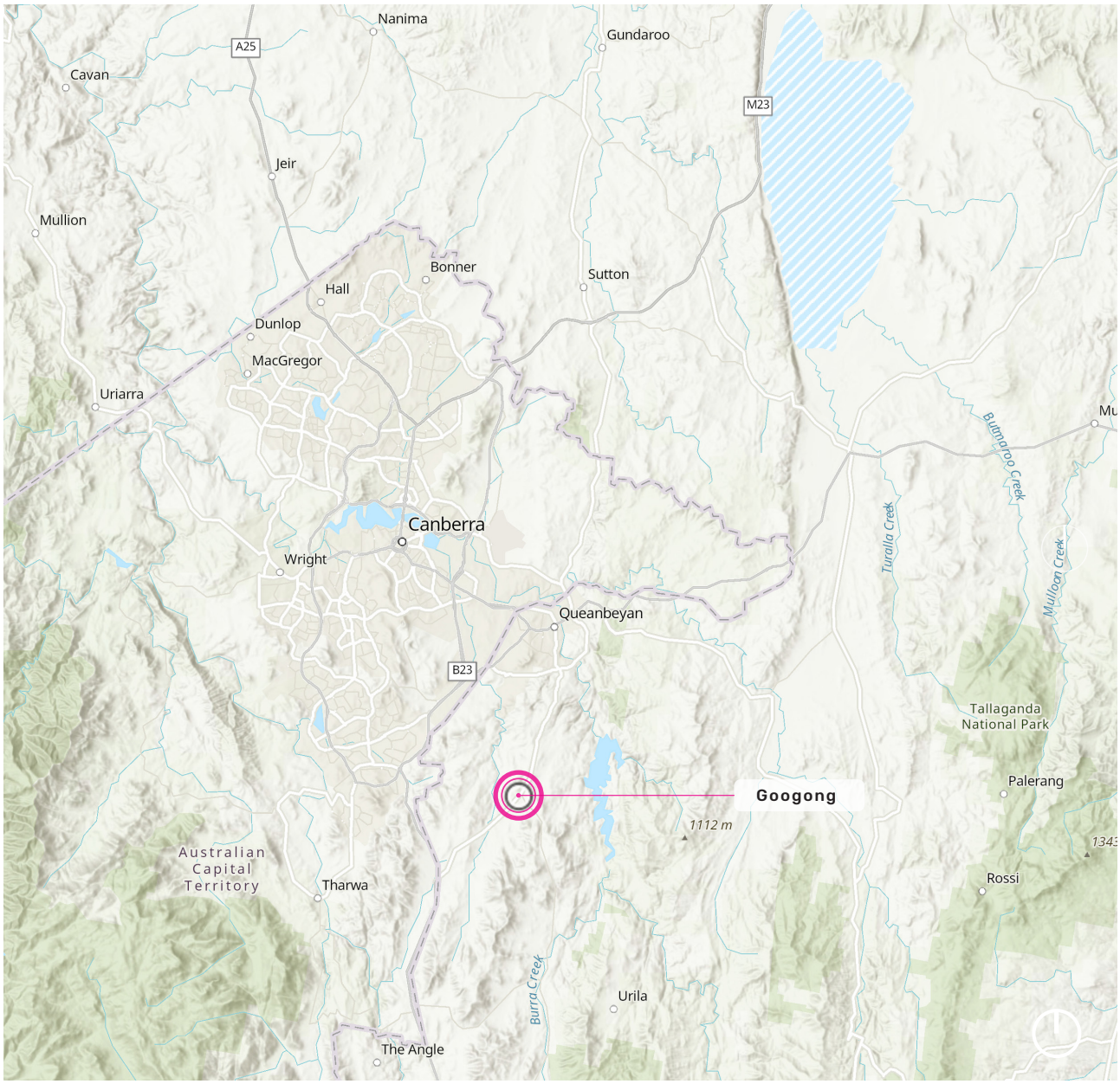


Figure 1: Site's Location (ArcGIS 2023 /TDP 2023)
Location of Googong is south of Canberra and Queanbeyan.

Figure 2: The subject site within Googong (https://www.googong.net/the-googonian-life/masterplan)
The site is located west of Googong Central, the second neighbourhood. The new town centre will be constructed to the west. The site is located on the corner of Wellsvalle Drive, McFarlane Avenue, and Gorman Drive.

2.2 Social Analysis of Googong

Googong is located within the Queanbeyan–Palerang Regional Council Local Government Area (LGA). Data from Profile.Id.com.au shows the subject site is situated in the Googong-Tralee-Environa catchment. This means that data includes Tralee and Environa, which are planned residential suburbs to the north. Refer to Figure 4 for the catchment boundary.

The Googong-Tralee-Environa catchment has a population of 8,034 residents (2021 ABS Estimated Residential Population (ERP)) in a land area of 96.25 square kilometres with a density of 83.47 people per square kilometre. The 2021 census identifies Googong alone (excluding Tralee and Environa) as having a population of 6,224 people.

Household Types, Size and Dwelling Types

The largest household type is Couples with Children at 53.9% (LGA 33.3%), followed by Couples without Children at 25.9% (LGA 25.6%) and Lone Person households at 18.9% (23.9% LGA).

The fastest growing households are Couples with Children (+852 households), followed by Couples without children (+384 households). 29.1% of households have two people (32.1% LGA), followed by four people in a household at 27.1% (16.8% LGA).

In 2021, Googong-Tralee-Environa had higher proportion of children under the age of 18 and a lower proportion of persons aged 60 or older, when compared to the Queanbeyan-Palerang Regional Council area. Parents and homebuilders (35 to 49), are the highest age group at 26.3% (21.3% LGA). Babies and pre-schoolers (0 to 4) are well above the LGA rate at 12.2% (6.7% LGA) and along with Primary schoolers (5 to 11) at 12.1% (9.1% LGA).

Household types are strongly correlated with the building typology and number of bedrooms, for instance large single dwellings houses correspond with high numbers of bedroom. Larger bedrooms numbers predominate in the suburb. Four bedrooms comprise 58.9% (31.4% LGA) followed by three at 20.6% (29.9% LGA). However, this is likely to change in the suburb as more higher density developments with smaller bedroom numbers are constructed, such as the subject development.

At present, 6.0% of the dwellings were medium or high density, compared to 26% in Queanbeyan-Palerang Regional Council area. Separate houses comprise the second largest group at 93.8% (72.9% LGA).

The greater proportion of separate houses is consistent with larger households. Low density dwellings usually attract larger households and household types such as Couples with Children. The growth of high-density living in Googong may decrease the household sizes in the area over time. High-density living needs greater levels of public amenity such as communal open space and public parks. The use of public parks benefits an area by increasing natural surveillance and Territorial Reinforcement, which is collective community ownership.

On census night, 95.5% of dwellings were occupied which shows a high level of occupancy which assists in providing Surveillance and Territorial Reinforcement of communities.

Car usage and Public Transport

Car ownership is higher in the catchment with 80% of households having access to two or more motor vehicles, while the LGA has 62%. Only 0.4% have no motor vehicle (3.4% LGA). No vehicle ownership may grow as higher density developments increase in the area, and residents take advantage of the public transport system, partially due to reduced ownership of cars.

In 2021, 73.9% of people travelled to work in a private car, 0.8% took public transport and 1.1%

rode a bike or walked. 10.7% worked at home. Working from home numbers have increased since 2016 however the census was held during a COVID lockdown. Regardless, working from home has become more common place and is likely to continue. Working from home improves CPTED outcomes as more people provide natural surveillance for the development and use local cafes and parks, which in turn activates the street.

High-density living needs good access to public transportation as there is generally less parking. Basement parking are more secure than on-street parking; however, these spaces are still vulnerable due to poor surveillance, and residential storage cages are at risk of theft.

Birthplace and language

In 2021, 18.6% of people in Googong - Tralee - Environa were born overseas, compared with 18.4% in Queanbeyan-Palerang Regional Council area. The most common birthplace is India at 3.7%, followed by the United Kingdom at 3% and the Philippines at 1.2%. Languages used other than English at home include Punjabi at 2.4%, Macedonian at 1.5% and Malayalamat at 1.1%.

The ability to speak English (as well as another language) ranks high, which is an important factor when signage is relied upon for CPTED solutions. However, signage considerations will be important to future proof the development should demographics change in the future.

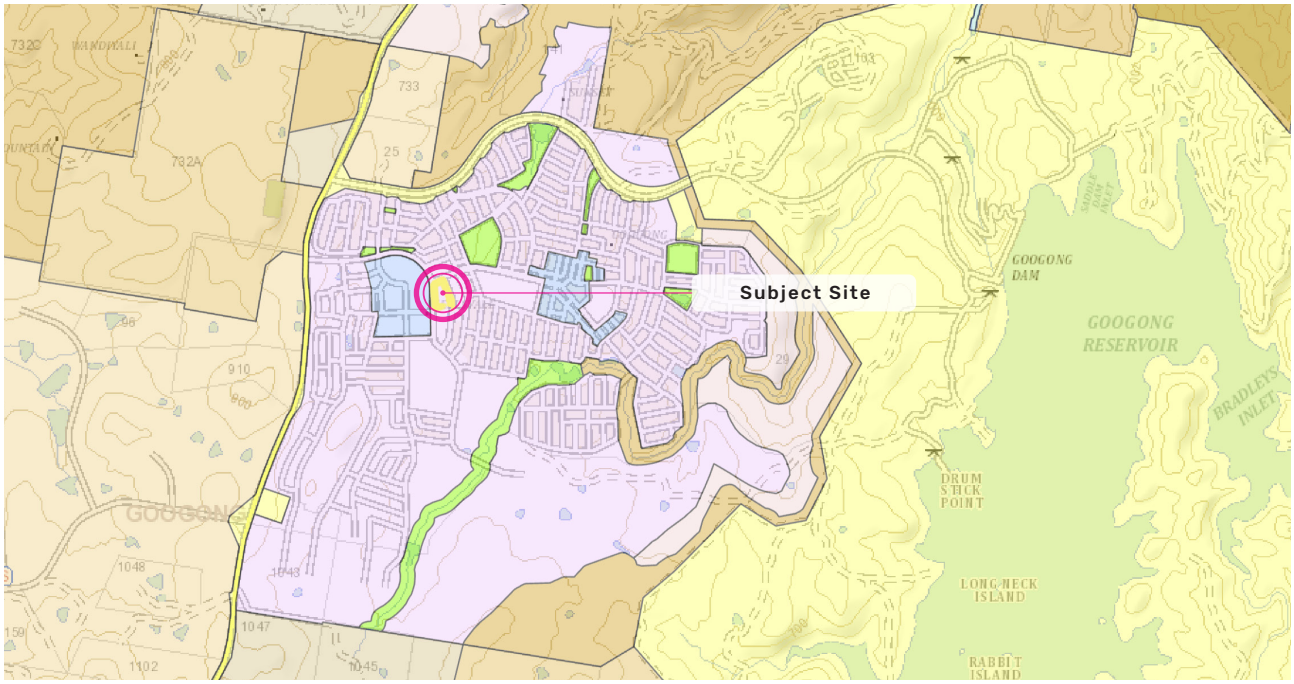


Figure 3: Googong Land Zoning Map (Spatialviewer 2023)
The subject site is zoned R1 General Residential. The town centre is to the west and is zoned E1 Local Centre.

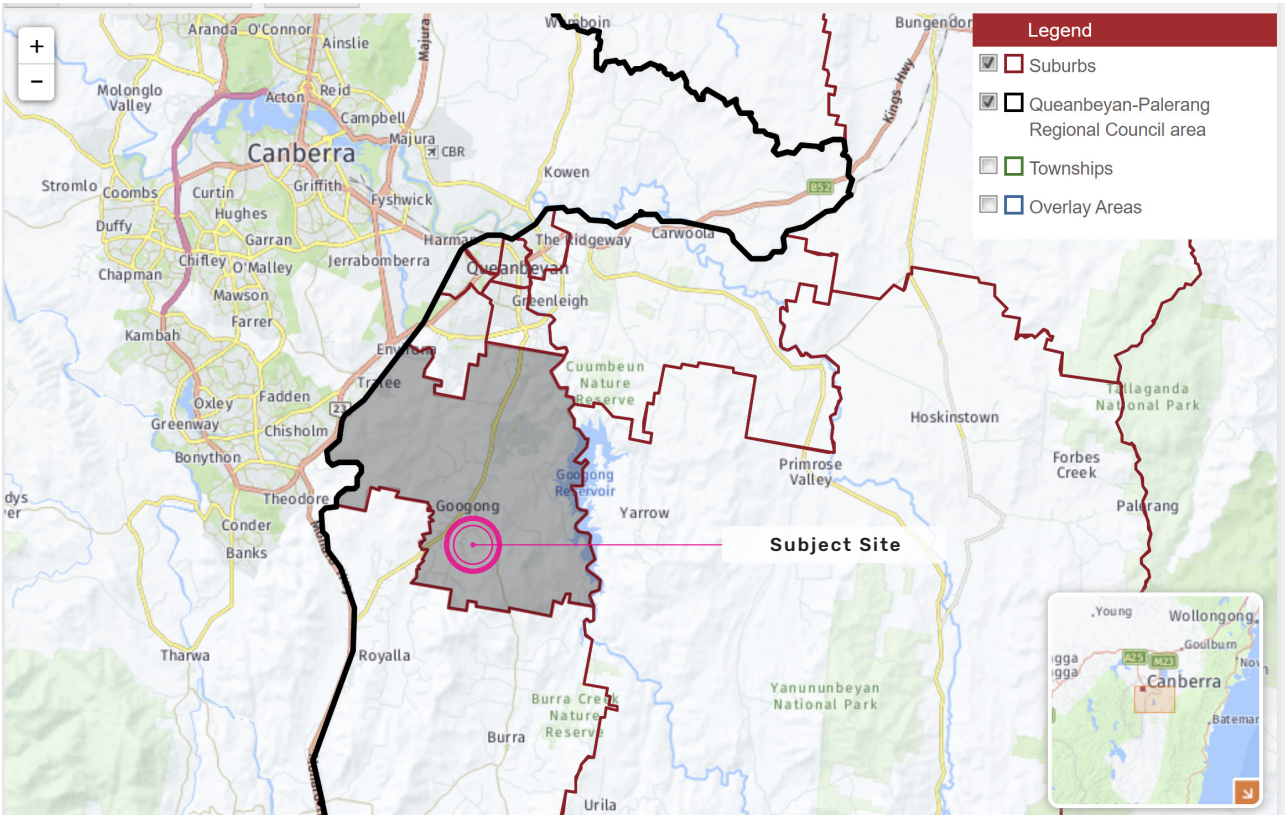


Figure 4: Profile Id catchment
Googong-Tralee-Evirona catchment within the Queanbeyan–Palerang Regional Council Local Government Area (LGA). (ProfileID 2023)

3 THE PROPOSED DEVELOPMENT

The residential development proposes six, four-storey buildings comprising 138 units, including 52 townhouses, 37 sky houses, 49 residential apartments, residential communal areas, waste areas and a single basement carpark. The development's southern boundary is a proposed through-block pedestrian link that connects McFarlane Avenue with Wellsvalle Drive. The link will improve pedestrian connectivity to the town centre. Building 4 addresses the pedestrian link.

The development site comprises one lot with frontage to McFarlane Avenue, Wellsvalle Drive and Gorman Drive. The development site is zoned R1 General Residential. Refer to Figure 3.

The subject development is summarised as follows:

Table 1 - Summary of Uses
Buildings 1 - 6
• Building 1: 19 Residential Units • Building 2: 18 Residential Units • Building 3: 19 Residential Units • Building 4: 43 Residential Units • Building 5: 24 Residential Units • Building 6: 15 Residential Units
Basement Carpark
• 233 parking spaces for Residential Units • 28 parking spaces for Visitors • Carparking spaces have been designated. • Storage cages are proposed at the end of each parking space or between spaces.
Communal Open Space
• Central Courtyard between the six building which comprises picnic tables, BBQs and shelters. • Hard and soft landscaping, including the site's deep soil within the centre of the development. • Circulation paths, stairs and ramps which connect to the street and each building. • There are seven pedestrian entry points into the Central Courtyard.

Aspects of the proposed development are explored in further detail below.

Apartments, Skyhouses and Units

The development has three dwelling typologies comprising two storey apartments with ground floor entries, two storey sky houses above the ground level and single storey units in Buildings 5 and 6. The lift and fire stairs for each building are located in the Central Courtyard, which is available to all residents. The lifts and stairs, which service units and sky houses, do not have a secure lobby space and are open to the air. The lift and stair arrangement forms an alcove. There are several entry points into the development which are open and unsecured.

Basement carpark

All six buildings will share a single storey basement carpark. Entry to the carpark is proposed from McFarlane Avenue. A gate is identified at the bottom of the ramp, which will control access to the basement. Storage cages are proposed in the basement, either at the end of the parking space or between parking spaces.

Waste Areas

Waste areas are proposed in two locations. Waste Enclosure 1 is proposed on the ground floor of Building 1 on the corner of McFarlane Avenue and Gorman Drive. Waste Enclosure 2 is proposed on the ground floor of Building 3 which is west of the basement driveway. Bins are moved to the street via a wide ramp adjacent the pedestrian entry stairs.

Central Courtyard

The Central Courtyard is defined by the six buildings. The space is a mix of soft and hard landscaping and is located over deep soil which can facilitate more substantial landscaping. BBQs and picnic tables are provided centrally within the communal space and are overlooked by the surrounding units. Ramps are provided to address level changes. There are seven entry points into the courtyard from the streets.

Figure 5 : Proposed development
Renders of the proposed development (DNA Architects 2023)

4 CRIME RISK ASSESSMENT SUMMARY

4.1 Crime Prevention Assessment Site & Building Analysis

Site analysis helps in the understanding of a place – how the built form, landform and local user groups can increase or decrease criminal activity.

The following diagrams are a visual representation of the Crime Risk Assessment (CRA) undertaken for this project. The outcomes of this analysis are incorporated into the Assessments and Recommendations provided in Sections 5 – 12.

4.1.1 Context Analysis

Figure 6: Summary Crime Prevention Assessment - Context Analysis (Google Earth / TDP 2023).

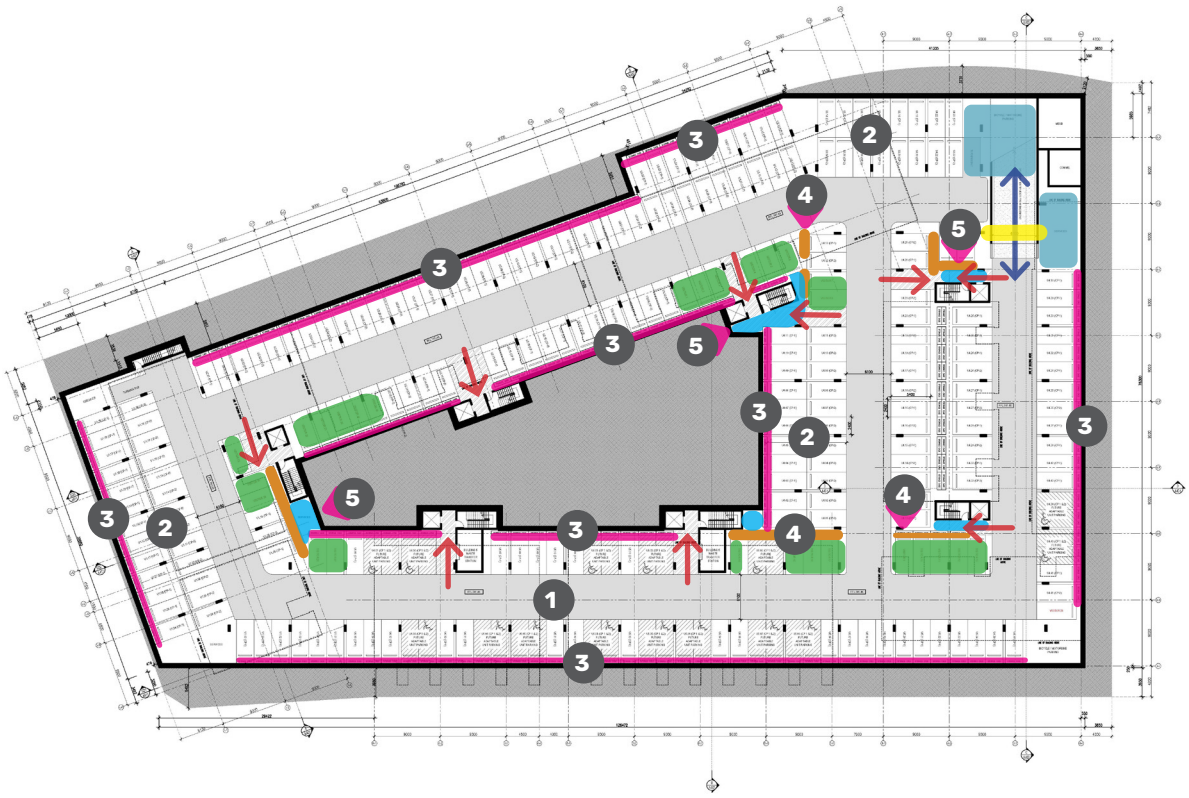
The subject site is located east of the Googong Town Centre, which is under construction. The town centre will be the third precinct developed in the suburb. It will include a shopping precinct with two major supermarkets, a library, community centre, council shopfront and fire station. There will be a public secondary school, an indoor sports centre, Googong Sports Club, a community garden, playing fields and tennis courts, and netball courts.

To the east of the subject site is existing low density residential dwellings. The new town centre, along with the subject development, will commence the stage of higher density living. This brings a new typology to the suburb, which has its own unique benefits and constraints when it comes to CPTED. In particular when large numbers of people live in close proximity.

There is no public transportation in the suburb at this stage except for the 830 bus service connecting Googong to Canberra CBD via Queanbeyan. As the suburb grows in time, more bus routes will likely be available to reduce car reliance. However, public transport stops can experience higher crime rates.

- Subject site.
- Primary movement
- 830 Bus - Googong to Canberra CBD via Queanbeyan & Karabar
- Pedestrian / green link
- B — Bus Stop
- 1 — Anglican School
- 2 — Low density residential
- 3 — Proposed Town centre
- 4 — Googong Public school (K - 12)
- 5 — Proposed Sports Precinct / Club

4.1.2 Building Analysis - Shared Basement Carpark



1 Carpark format generally has good wayfinding as its a circuitous route.

2 Stacked parking can reduce sight lines and create concealment spaces. Good lighting and CCTV will be required.

3 Storage cages are located against walls. While not desirable from a practical sense eg. cages are difficult to access and require the car to be moved, which can cause conflict in the carpark. However, wall cages do not create concealment spaces.

4 Storage cages are located between cars, and block reduces sight lines and creates concealment spaces. Opportunities to reconfigure cages are recommended.

5 Concealment spaces created by the storage cages.

Entry to lifts / buildings above. Several are close to concealment spaces created by the storage cages.

Entry to the carpark from street above. The garage door is proposed at the bottom of the ramp which leaves the walls of the driveway vulnerable to graffiti and also creates a concealment space.

Visitor parking is located in various positions throughout the carpark. Clustering visitor parking near different lifts can assist with directing visitors to the lift core they are required to access; however, can be difficult for wayfinding overall. Visitor parking is located in areas with highest levels of concealment created by storage cages.

Concealment areas that lead to services areas. Good, even lighting and CCTV is needed if spaces cannot be secured.

Figure 7: Summary Crime Prevention Assessment - Proposed Basement Carpark (DNA Architects/ TDP 2023).
Basement carpark is for residents and their visitors. Resident storage cages are provided in carpark.

4.1.3 Building Analysis - Ground Floor and Central Courtyard

1. Central Courtyard - provides communal open space for the development.
2. Accessible ramp that transitions between McFarlane Ave and the Central Courtyard. It does not provide mid block accessible access.
3. Ramps to the street provide accessible access and also used to move waste bins to the street.

B1 Buildings 1 - 6

Pedestrian entry points into the development from the street. Access points are open and unsecure. Provides access to lifts.

Lift / stairs from basement to Central Courtyard and units above. Lifts and stairs are open without a lobby. Act as an alcove.

Communal active spaces including seating and BBQs. Overlooked by surrounding units. Furniture at risk of vandalism from public.

Active frontages comprising habitable rooms and open space/ balconies.

Semi Active frontages;as they are bedrooms which are less activate and have a greater emphasis on privacy.

Blank solid walls may be at risk of graffiti, particularly due to lack of natural surveillance and accessibility.

Driveway access from McFarlane Avenue to the basement carpark below.

Figure 9: Summary Crime Prevention Assessment - Proposed Ground Floor and Central Courtyard (DNA Architects/ TDP 2023).

Six buildings comprise the development. Together they form the Central Courtyard, which provides communal open space for the residents. The ground plane is uncontrolled; this means the public can use the site as a through site link and potentially gain access to the basement and units. Some blank walls may be at risk of malicious damage due to lower levels of natural surveillance. The streets benefit from good natural surveillance provided by living and open spaces that address the street. There is less natural surveillance internally at the ground level as the rooms fronting the Central Courtyard are bedrooms and entries.

4.2 Crime Prevention Assessment: Crime Data

Analysis of Crime Data has limitations that are important to consider when undertaking an assessment of a place and its proposed development.

The crime data that is available for the suburb will not specify if it relates specifically to the study area. However, hotspots can provide an indication if there is activity happening to a specific area. Hotspots are noted in Table 1 below and mapped in Figure 8.

It is also important to note additional limitations with regard to the reporting of crime, that 'the reporting of crime is influenced by a number of factors, including public understanding of what constitutes a crime and the public's willingness to report crime.' (Weatherburn 2011).

Data used for crime assessments are from NSW Bureau of Crime Statistics (BOCSAR).

Crime Data Summary

The assessment of crime data was focused on activities that relate to the future operations.

For this development it includes, crimes relating to residential living, the public domain (crimes that could occur on the street), and in basement carparks. The summary below identifies the rates are n.c or not counted due to the low rates or lack of mapping for the crime.

Table 2	Year to June 2022		Year to June 2023		Hotspot
Offence	Googong Rate per 100,000	NSW Rate per 100,000	Googong Rate per 100,000	NSW Rate per 100,000	yes/no n.c not counted
Assault: Non-Domestic Assault	40.2 (3)	344.3	40.2 (3)	400.2	No
Sexual Offences	53.6 (4)	175.7	53.6 (4)	183.2	n/c
Theft	616.5 (46)	2032.3	683.5 (51)	2297.4	n/c
Theft: Steal from Dwelling	26.8 (2)	192.2	53.6 (4)	189.1	No
Theft: Break and Enter Dwelling	67.0 (5)	214.3	120.6 (9)	235.7	No
Theft: Steal from Person	0 (0)	20.5	0 (0)	25.6	No
Theft: Motor Vehicle Theft	80.4 (6)	132.4	93.8 (7)	162.9	Near
Theft: Steal from Motor Vehicle	107.2 (8)	325.7	160.8 (12)	347.7	Near
Malicious Damage	187.6 (14)	588.2	254.6 (19)	600.3	Near

Table 2 : Crime data snapshot
Data for Rates per 100,00 over a two year period for Googong- June 2022 and June 2023. The table shows that crime activities relating to theft including residential and vehicles. Malicious damage is also recorded in the area. There are no hotspots on the site but there are hotspots in the suburb for Motor Vehicle Theft, Steal from Motor Vehicle and Malicious Damage. All rates are generally stable unless noted.

Summary of Findings.

Analysis of BOCSAR data for Googong identifies a number of risks that should be considered in the design and management of the development.

Theft
The rates for Motor Vehicle Theft and Steal from Motor Vehicle in Googong are below the state average. Regardless, this type of crime is recorded in the suburb and should be considered in the design and management of the development, particularly as Googong is in its infancy and is likely to change over time. While there are no hotspots over the site, there is a small hotspot for Steal from Vehicle to the east. This means access to the carpark needs to be controlled. While the carpark is predominately for residents, there will be visitor parking.

Beyond design advice recommending good sight lines and limited concealment spaces, residents are also warned not to leave valuables in their cars. Storage cages are particularly at risk in carparks and must be designed with good sight lines that discourage offenders. The configuration of the storage cages also creates concealment spaces.

Theft from dwellings is a risk and will be a new use for the site, particularly this higher density typology. The developments arrangement has an open Central Courtyard from which lifts and stairs provide access to open walkaways. While this is an attractive arrangement it does leave the development vulnerable to theft and malicious damage, as the Courtyard is accessible from the street by seven pedestrian entries which are not secure.

Assault
Rates for Non-domestic Assault and Sexual Offences are well below the NSW average, there are also no hotspots. The proposed basement carparks, amenities and service areas of the building will need to well considered.

Malicious Damage

Malicious Damage is also below the average but is recorded in the suburb and there is a small hotspot to the north of the site. Developments with easy access and with large blank walls are at risk of graffiti. Furniture and other urban furnishings will also be at risk in the Central Courtyard.

It's important to note that the existing crime data cannot predict the future and the dynamics of the future population. Therefore, designs should consider that new anti social and criminal activity could take place in this area in the future. This requires resilient design approaches. Crime activity can change from year to year. This may not be because the activity has increased, but because activity is reported inconsistently or because Police are targeting that particular crime activity.

BOCSAR Hotspot Mapping

A hotspot identifies crime density and is assigned a colour (red, orange or yellow) to reflect the strength of the hotspot. Hotspots are not adjusted to reflect the number of people living or visiting the location. This means they do not necessarily reflect areas with a higher than average risk of victimisation. This is why its important to refer to the actual counts of crimes in Table 1. However, hotspots can identify patterns, building or spatial typologies which are more impacted. Hotspots are unlikley to be recorded on the site as it is undevelopment. The hotspots recorded are in the developed areas and indicate what could occur in the area.

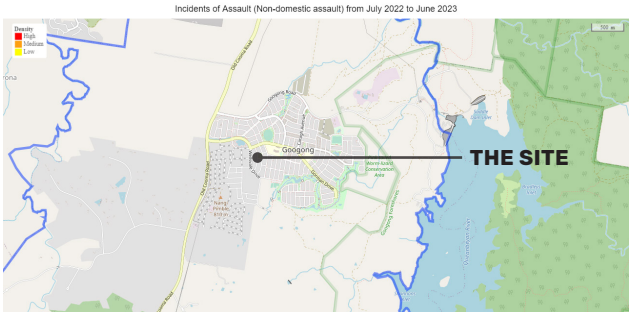


Figure 10: Hotspot - Non-Domestic Assault 2023 (BOCSAR2023). The Development is NOT within a Non-Domestic Assault hotspot.

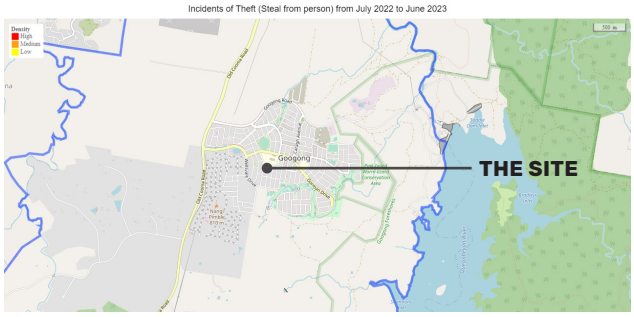


Figure 11: Hotspot - Steal from Person 2023 (BOCSAR2023). The Development is NOT within a Steal from Person hotspot.

Figure 12: Hotspot - Break & Enter Dwelling 2023 (BOCSAR2023). The Development is NOT within a Break & Enter Dwelling hotspot

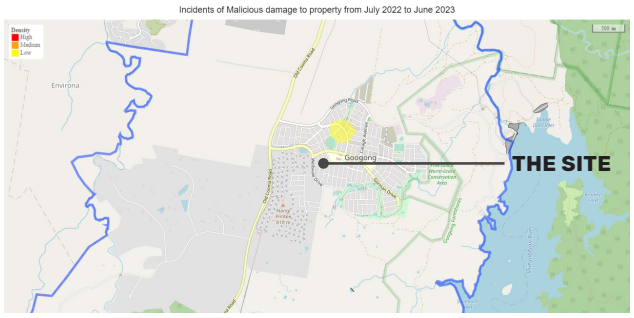


Figure 13: Hotspot - Malicious Damage 2023 (BOCSAR2023). The Development is NOT in a Malicious Damage Steal from Dwelling hotspot; however there is a hotspot to the north.

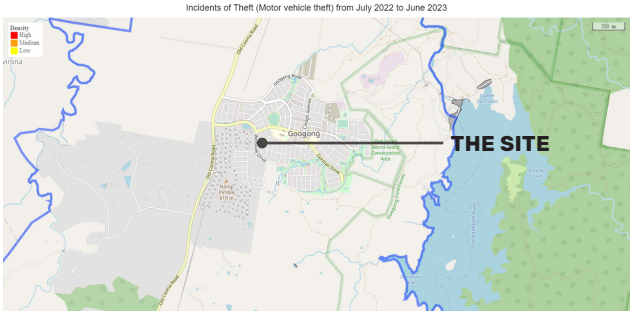


Figure 14: Hotspot - Motor Vehicle Theft 2023 (BOSCAR2023). The Development is NOT within a Motor Vehicle Theft hotspot.

Figure 15: Hotspot - Steal from Motor Vehicle 2023 (BOSCAR2023). There is no hotspot over the site; however there is one to the east.

5 SURVEILLANCE

Surveillance is a core element of CPTED. There are three types of surveillance - Natural, Technical and Formal. The concept of surveillance seeks to discourage anti-social behaviour by creating an environment where people can see and interact with others. When people feel they are being watched, they are less likely to commit a crime.

Surveillance is achieved through well considered urban design, careful selection of landscaping solutions and lighting. This can create a safer environment. Successful surveillance outcomes are the product of good design.

5.1 Assessment

At this stage, detailed designs have not been prepared. This assessment and the following recommendations provide guidance for the future development of the site.

5.1.1 Existing Conditions Assessment

The subject site comprises one lot and is vacant. The site addresses Wellsvalle Drive, McFarlane Avenue and Gorman Drive. A pedestrian link between Wellsvalle Drive and McFarlene is on the southern boundary. It will improve connectivity for the residential areas to the west and the Town Centre to the east.

5.1.2 Proposed Design Assessment

The development proposes a residential development comprising townhouses, sky homes, units, car parking and waste areas. The new uses and the people living and visiting the development will provide activation and natural surveillance for the precinct, its streets and the proposed through-block link. The following provides an analysis of each of the key uses and spaces.

Residential Living

Six buildings are proposed and contain a mix of dwelling typologies. All dwellings, except the units, are two-storey with living rooms on one level and bedrooms on the second level. There is a third bedroom at the living room level for some typologies. All ground floor dwellings have two entries, one from the external streets via private courtyards and the second entry from the internal courtyard. The streets have higher activation as living spaces and balconies address the street. Bedrooms overlook the Central Courtyard; however these provide less natural surveillance due to privacy needs as they adjoin open circulation spaces. The only exception is the townhouses in Building 4, which provide living spaces and balconies that overlook the Central Courtyard. The movement of residents along the open circulation corridors will provide natural surveillance.

Central Courtyard

The configuration of the six buildings forms the Central Courtyard. This space functions as the development's communal open space for its residents. The space provides seating, BBQs and shelters that will encourage the use of the space, providing natural surveillance.

Entry Points

There are seven points in which to access the Central Courtyard. These access points do not have strong natural surveillance from the residential dwellings. This is likely due to privacy needs of residents. This leaves these spaces vulnerable and there are less capable guardians who can monitor who comes and goes into the development, particularly non-residents and visitors.

Basement Carpark

A single basement carpark is proposed for residents and visitors. The driveway ramp to the basement is from McFarlane Avenue. The internal carpark arrangement generally has good sight lines except for storage cages between parking spaces and creates concealment areas or block sight lines. Otherwise, there are minimal internal obstructions.

Waste Rooms

The waste rooms are located on the ground floor of Building 1 and 3. These spaces will rely on CCTV and management.

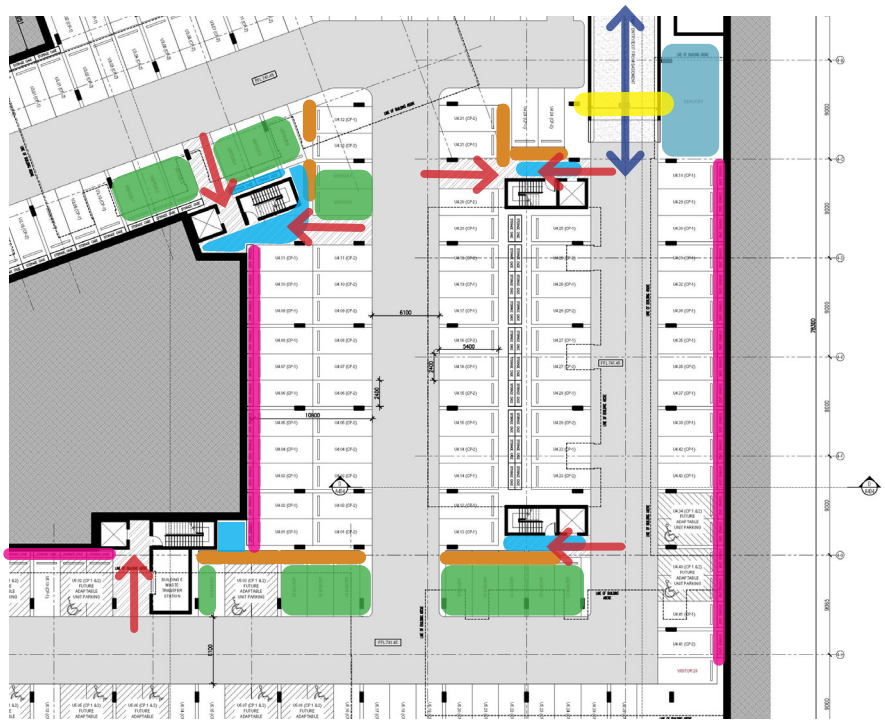


Figure 16: Basement Analysis
Concealment spaces created by the configuration of storage cages (blue). Visitor parking is located close to these areas and visitors are more likely to be unfamiliar with a carpark and may be confused when trying to find the appropriate access point. Concealment spaces also place storage cages at risk of theft.

5.2 Recommendations

The proposed development significantly improves the surveillance opportunities for the location.

5.2.1 Natural Surveillance and Sight lines

Sight line considerations are multi-directional. They are essential for the public looking into the development and those within it looking out into the public domain. There is surveillance from the development to the street as it presents active frontages comprising living spaces and balconies. However, natural surveillance over the Central Courtyard is lower as it comes from bedrooms and the circulation space. Landscaping treatments can impact natural surveillance and sight lines and require long term management.

Table 3 is a guide in providing good sight lines.

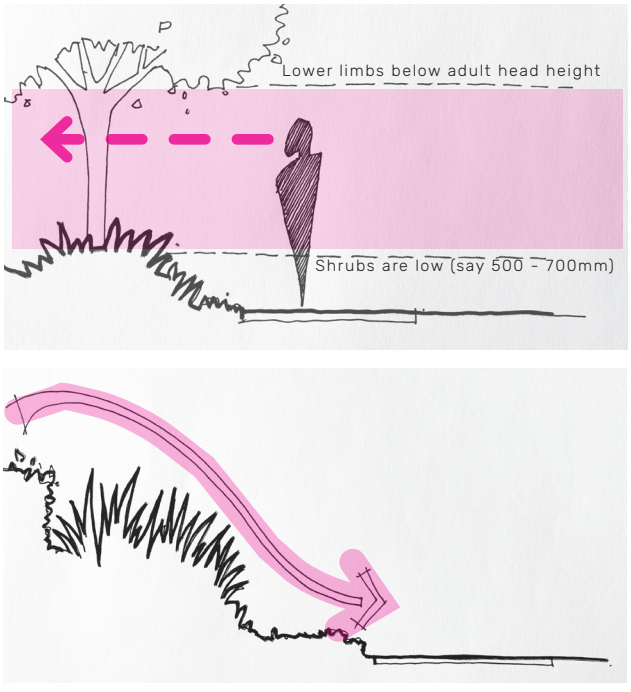


Figure 17: Sight lines and landscaping
(top) Sight lines can be achieved by keeping shrubs low and ensuring the lower limbs of trees are above head height. This reduces opportunities for concealment. It allows for people to have good distant sight lines and recognise a person from a distance. (bottom) Where dense landscaping is proposed adjacent to a path the vegetation is recommended to step down to the path to broaden the view corridor.

Table 3: Sight lines	
1.	As the design is developed ensure fences facilitate sight lines are maintained from the dwellings to the street. While the fence can be a mix of solid and slatted fencing, locate the slatted component where it provides the best sight lines from the dwelling to the street. Darker slatted fences increase sight lines.
2.	Sight lines can be impacted by light levels. Basement carpark lighting should be designed to maximise internal sight lines. Painting the walls, columns and ceilings of the carpark white can boost lighting outputs.
3.	While most residential storage cages are located behind parking spaces against walls, a number are positioned between or adjacent parking spaces which results in concealment spaces. These concealment spaces are located close to lifts and visitor parking spaces and some offenders prey upon people that appear lost or confused. Reduce concealment spaces by relocating storage cages.
4.	Maintain landscaping to preserve sight lines within the Central Courtyard - between buildings (subject to level changes), lifts/stairs and entries into the space.
5.	The ceiling height in the carpark is variable and, in some sections, exceeds 3 metres in height. Carparks with ceilings below 2.2 metres can leave CCTV, lights and signs at risk of damage. However, car parks with above average ceiling heights, above 3 metres, can be expensive to light to minimum Australian Standards. Areas with concealment due to storage cages will require higher levels of lighting. Refer to Section 6 Lighting.

5.2.2 Vegetation and Landscaping

The proposed development will benefit from new landscaping treatments in the street, and the internal courtyard. The design and installation of trees and landscaping can improve the amenity and CPTED outcomes for the development. However, if they are not designed, installed and maintained to CPTED principles they can create new issues.

Table 4 is a guide to assist with the planning, design and long term care of the landscape spaces.

Table 4: Vegetation and landscaping	
1.	As the design is developed ensure landscaping is limited to ground covers, shrubs and taller trees. Lower tree limbs should be above average head height and shrubs should not provide concealment opportunities. The creation of pockets which facilitate concealment should also be avoided by consistent planting and replacing dead plants which can result in gaps.
2.	Shadowy spaces are created where the trees obscure light fall from light poles and internal lighting. Consider the location of lighting and trees so as not to block the fall of light. This is particularly important at the residential lift/stairs where good lighting at night is important.
3.	Future clarification on lighting design is recommended to test light spill and shadows. This may include modelling of proposed lighting in conjunction with landscaping.
4.	Undertake a regular review of the vegetation and landscaping to ensure that it has not grown to create new or re-establish former spaces of concealment and entrapment.

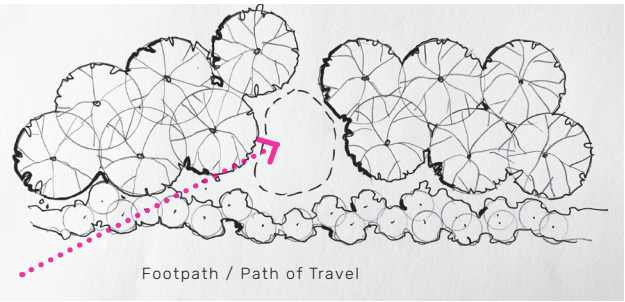


Figure 18: Concealment spaces

Concealment spaces can result from plant die-off and need to be monitored and dead plants replaced. Concealment and entrapment spaces can also be created by inconsistent planting.

5.2.3 Places of Concealment and Entrapment

Places of concealment and entrapment can be easily created in the public and private domain. These are spaces which may enable someone to hide or trap a person. These spaces can be formed through design decisions or are the result of vegetation growth and poor maintenance.

Table 5 is a guide to assist with the planning, design and long term care of buildings and landscape.

Table 5: Places of concealment and entrapment	
1.	As the design is developed, minimise alcoves and recesses which can conceal a person, particularly through movement zones such as the pedestrian entries and the circulation corridors. Where recesses are unavoidable, use lighting, splays and mirrors to reduce concealment opportunities.
2.	The basement fire egress that exits onto McFarlane Avenue is a concealment space and could be used by offenders for assault, theft or be a target for graffiti. The best solution is to secure by placing a door at the ground level. If not practical, then sensor lighting, anti graffiti coatings, rapid graffiti removal and CCTV is recommended.
3.	Provide lighting that does not create concealment spaces, particularly in Building 4's open corridors.
4.	Reposition storage cages that are creating concealment spaces.
5.	The lift and fire stairs are acting as concealing alcoves. Provide good even lighting and mirrors in the alcove and the areas leading to these spaces. Ensure transitional lighting is provided.
6.	Where units and their open spaces/terraces are set below the street they are at risk of theft, particularly units along Wellsvalle Drive. The recommendations under Access Control are important, including keyed locks for windows and doors; windows should be capable of being locked in a partially open position eg. bolt lock and external windows and doors to be of solid construction. Security doors in these concealed spaces may be required, particularly if crime occurs in these dwellings. Sensor lighting should also be provided. Any landscaping in front of these terraces should not increase the concealment risk.

6 LIGHTING & TECHNICAL SUPERVISION

Lighting and Technical Supervision refers to the role that lighting and products such as CCTV have in improving safety in the public domain. Many public spaces have lighting however, the specified products are often inappropriate, or are not wisely located. Often lighting creates new issues, as poorly located lighting can create shadows that previously didn't exist. Likewise, CCTV can often be a waste of money if there is low risk of crime, is poorly located or if no one is monitoring the footage. The following assessment and recommendations identifies methods to use lighting and technical supervision to achieve the best outcome.

6.1 Assessment

At this stage detailed designs have not been prepared. This assessment and the following recommendations provide guidance for the future development of the site.

6.1.1 Existing Conditions Assessment

Future lighting surrounding the development is identified as follows:

- Street lighting in Wellsvalle Drive.
- Street lights in McFarlane Avenue.
- Street Lights in Gorman Drive.
- Lighting for individual surrounding dwellings.

Lighting design has not been identified for the pedestrian link between Wellsvalle Drive and McFarlane Avenue.

6.1.2 Proposed Conditions Assessment

Lighting design has not been undertaken at this stage and will be further developed during the construction documentation phase.

Lighting design and maintenance program for the development will be important to assist with both actual and perceived safety.

The following recommendations can be used by the project architects and the consultant team to incorporate lighting and lighting enhancing features into their designs.

6.2 Recommendations

The guidelines should be considered in the design and management of the development:

Table 6: Lighting Design	
1.	General • Ensure no shadowy spaces are created by the buildings, the gaps between the lights themselves and the landscape. • Any signage should be as legible at night as it is during the day. • Lighting strategy and design is recommended to be undertaken by a qualified lighting engineer for the development to test light spill and identify any spaces of shadow and concealment. • Future advice on lighting design, during the construction documentation and construction phase is recommended. This may include modelling of proposed lighting in conjunction with landscaping is recommended to test light spill and shadows. • Landscaping is recommended to be limited to ground covers, shrubs and taller trees. The landscaping should not provide concealment opportunities created by shadows. Trees and landscaping can block street and park lighting, forming shadows.
2.	Lighting and CCTV • The street should have effective lighting which improves visibility and as a result reduces fear. • Bollard lighting is discouraged as it is prone to vandalism and is not particularly effective at illuminating faces. • All lighting should comply with relevant Australian Standards, particularly AS 1158. • Avoid using low-pressure sodium lamps. • Vandal-resistant lamps are recommended. • Avoid the use of coloured lighting • Lighting can lose up to 20% capacity within 12 months, resulting in inadequate light levels. This should be considered when selected lighting type and brightness. • Monitor alcoves and recesses with CCTV. • Sensor lights on the balconies are recommended. • Install sensor lighting and light timers. • CCTV and lighting should be considered in tandem to ensure the lighting outputs are adequate for usable footage. • Given the nature of the development, CCTV is recommended particularly at each lift, in the carpark basement, in the Central Courtyard, at each pedestrian entry into the development from the street, in circulation corridors, the driveway and waste rooms.
3.	Building Entries and other ingress/egress points • The pedestrian entries, the circulation corridors and lifts/stair entries should be bright and even to identify signage, the building name and number to assist with emergency services finding the building. • Design lighting to allow for eyes to adjust after leaving a transitional space - as it can take up to half an hour for eyes to adjust. Use transitional lighting to help eyes adjust. • Lighting in the communal areas and pedestrians paths/movement corridors should be bright enough to identify a face 10 metres away. Illuminate areas adjacent to avoid creating pockets of shadow.
4.	Central Courtyard - Residential Communal Space • Lighting is recommended in residential communal spaces to encourage their use in the evening, however lighting should not impact on privacy and amenity of the residents. Lighting should align with hours of operation. Should anti-social behaviour occur in the space, by residents or people outside the area, then lighting may need to be turned off and sensor lighting activated.
5.	Basement Carpark • Lighting should be bright and even to allow an person to see inside a parked car. • Provide lighting in service area corridors such as the services area adjacent the driveway ramp.

7 TERRITORIAL REINFORCEMENT

Territorial Reinforcement recognises the importance of ownership of public spaces. Spaces that are well used and cared for are less likely to attract crime and anti-social behaviour. The role the community plays is often important to the success of the public space.

This principle seeks to remove the confusion from the public domain – to make the purpose of each space clear. This includes the definition of boundaries, function and operation of a space.

7.1 Assessment

At this stage detailed designs have not been prepared. This assessment and the following recommendations provide guidance for the future development of the site.

7.1.1 Existing Conditions Assessment

At present, the site is vacant. The site is under the control of the owner of the lot. The streets are controlled and managed by Queanbeyan–Palerang Regional Council. Boundary definition is created by the streets and the boundary with the pedestrian through-block link.

7.1.2 Proposed Design Assessment

The new development will change the current Territorial Reinforcement framework of the site. The introduction of new residential uses will require management and maintenance requirements for the site. A more detailed analysis is provided of the spaces and their uses.

Management
As a whole, the development will be encouraged to be formally managed by a company with a strong track record of managing large residential developments. They will be responsible for maintenance of the site and formalise how spaces will be used and managed. Individually, new residents will provide collective 'ownership' over the site and its shared spaces.

Central Courtyard - Communal Spaces
The Central Courtyard and the paths that connect to the street are private for residents and their invited guests. The courtyard is not a public space, and to reduce the risk of crime, the courtyard must be designed and managed to reduce trespassing. Good design can reduce the crime risk and make the development easier to manage.

The lifts and stairs (that connect to the basement and dwellings above) are located in the Central Courtyard. These access points are not secured within a lobby, and access could be gained if a door is left propped open. Refer to Section 10 Access Control. The lift and stairs also form an alcove which is a concealment space. To achieve Territorial Reinforcement for this space, it will be through controlling the access points, providing good even lighting, clear signage, and improving sight lines.

Basement Carpark
Security of the basement carpark is very important for both vehicle theft and steal from vehicle. Other crime activities including non-domestic assault, steal from person and sexual assault are also recorded in the area code which could take place in the carpark. Ensuring that visitors to the carpark can easily find the appropriate lift will improve the safety of the carpark.

Waste Areas
There are two waste areas which are located under Building 1 and 3. These spaces are proposed to be secured.

7.2 Recommendations

Table 7: Territorial Reinforcement	
1.	Lighting Lights in the ground can be used to reinforce paths of travel within the development, such as the entries Central Courtyard, residential corridors and lifts. Refer to Section 6 for detailed recommendations.
2.	Maintenance • Maintenance of the development is a powerful tool in Territorial Reinforcement. Spaces that are well maintained and designed for functionality will be used, thereby providing natural surveillance and community control. • A Maintenance Plan should form part of the Plan of Management. The Maintenance Plan should include the selection of durable materials and plant species that do not require extensive maintenance.
3.	Signage • Signage should be used to clarify ownership and responsibilty. In the case of damage, signage should assist the residents in reporting damage. • Clear signage should be installed throughout the development. Overuse of signage is not supported as it becomes less effective. Consistency of design will add to the overall sense of a cohesive community and sense of place. • The street name and building name should be clearly visible from the street and illuminated. Each building should be numbered or named. • Directional signage to units is recommended. • A map of the site and each building is required in the lift alcoves to assist with wayfinding.
4.	Working Group Establish a working group comprising the residents to raise issues and incidents and to identify possible solutions.
5.	Waste Areas The waste areas are semi-private and this should be clearly expressed through signage and Access Control. A change in material/colour on the floor is recommended to distinguish it from more public areas such as external footpaths.
6.	Pedestrian Entry points Ensure there is clarity of entry to the residential entries into the Central Courtyard. Distinguish entry points with structures, change in materials and signage. Change the paving treatment from the street to create a visual cue of entering a private place. Secure each pedestrian point with a gate. This prevents access while demonstrating to the public that this is a private development, particularly as the site could become a through-site link. Refer to Section 10 Access Control.
7.	Basement carpark The basement carpark is proposed to be secured. As the design is developed in the future ensure the door is not be a boom gate as it should prevent pedestrian and vehicular access and be secured with swipe card or remote control. Video / audio intercom is required for visitor access. Park Smarter signage is recommended in the basement
8.	Landscaping and Fencing Landscaping can be used to provide boundaries between the public and private realms. The maintenance of landscaping between Building 4 and the pedestrian link is important and should be managed by strata.
9.	Letterboxs • Letterboxes are not identified at this point. Letterboxes are at risk of identity theft and are best secured within a residential lobby. • Each letterbox should be individually secured with access by Australia Post via a key or swipe card stored in a safe cylinder storage. • CCTV is recommended at the letterbox locations.
10.	Construction Phase Measures to secure the site during construction are required. A plan should be established prior to commencing construction. Actions include: • Store tools and building materials in strong rooms with tamper proof security systems.

8 ENVIRONMENTAL MAINTENANCE

Environmental Maintenance is the maintenance and management of physical assets. This takes place during the operational stage of the Precinct. The assessment and recommendations provided below are guidance for the current design process and for future management. Public spaces that are poorly maintained, damaged, vandalised, appear abandoned and full of rubbish are unlikely to attract positive user groups. These types of spaces show a lack of pride by the community. Well maintained spaces send a positive message and tells potential offenders that people are watching and using this space. It is a good deterrent. Good design can help with maintenance in the future.

8.1 Assessment

Environmental Maintenance will generally occur in the detailed design and operational stage however, there are opportunities to integrate solutions during the design phase which will assist in the management of the new development. The aim is to create a development that is easy to maintain.

8.1.1 Existing Conditions Assessment

At present, the site is vacant and is managed by the owners of the site.

8.1.2 Proposed Design Assessment

The proposed development presents an opportunity to provide a consistent and well maintained development that benefits the local community by activating the public realm.

8.2 Recommendations

Table 8: Environmental Maintenance	
Design Stage	
1.	Walls and fences at the street, along the driveway edges and the pedestrian entries are at risk of malicious damage. • The use of anti-graffiti coatings is recommended. • Murals and other forms of public art can also assist in deterring graffiti. • Consider green walls or wall hugging plants that cannot be hidden behind to make it difficult to apply or recognise graffiti.
2.	Select materials that are robust and durable. Materials/elements should not be easily removed.
3.	Provide rubbish bins in the internal courtyard and communal space and plan for regular removal to avoid build up of waste.
4.	Specify low maintenance and drought-resistant plant species.
5.	Avoid the use of porus materials in areas with the greatest risk of graffiti tagging. Ghost tags can remain after tagging on porus surfaces.
Management & Operational	
6.	Establish an Environmental Maintenance Plan as part of the Plan of Management.
7.	Establish a reporting system that allows residents and visitors to quickly report damage or anti social behaviour.
8.	Repair or replace broken or damaged furniture/bins/ signs/lights quickly
9.	Review the current trends in crime in the area with the local Police and regularly update Environmental Maintenance Plan

9 ACTIVITY & SPACE MANAGEMENT

Activity and Space Management identifies strategies to establish natural community control.
These strategies include:

- Formal supervision
- Control of the space
- Maintenance of the space.

Activity and Space Management has strong correlations to earlier sections of this report. For instance, poor Environmental Maintenance results in urban decay which sends a negative image. This section explores how to improve community safety by increasing visitation and use of a space

9.1 Assessment

Activity and Space Management will generally occur in the operational stage however, there are design opportunities during the design phase which will assist in the management of the new development. The aim is to create natural community control.

9.1.1 Existing Conditions Assessment

The management of the subject site will change significantly following the construction of the new residential development. The new mix of residents and visitors will require a higher level of Activity and Space Management.

9.1.2 Proposed Design Assessment

The development will comprise a combination of semi-private and private spaces. The management company has yet to be determined however, they will play an important role in the functionality and operations of the development. Despite good design there are still areas of overlap which will need to be managed to ensure the development does not become a target. The Plan of Management will need to address CPTED matters in the developments operations.

Residential development in bedroom communities, such as Googong, which has many people commuting to Canberra and Queanbeyan, are at risk of burglary during the day, midweek. As working from home is growing in acceptance, all-weather communal workspaces that overlook the courtyard could be beneficial to increase surveillance.

9.2 Recommendations

The design should enforce clarity of land use - making it clear what is semi-private (delivery, waste and visitor can go), and what is private (where residents can go).

Table 9: Activity & Space Management	
Managing public, semi public & private space	
1.	Use different paving treatments between the different spaces within the development such as differentiating the street footpath from the entry footpath, Central Courtyard, and driveway. Define the pedestrian entries to the development with entry features/statements/structures.
2.	Clearly identify areas which are not accessible to visitors such as storage areas and waste rooms. However, be cautious of the over use of signage as it may become less effective.
3.	Use CCTV, signage, controlled access (pin or eqv.) to manage public access.
4.	Consider incorporating a communal workspace that opens onto the Central Courtyard.
Plan of Management	
5.	Develop a Plan of Management that integrates CPTED guidelines for surveillance, access control, hours of operation and maintenance recommendations. Review the current trends in crime in the area with the local Police and regularly update Plan of Management.
6.	Establish a Maintenance Plan, forming part of the Plan of Management, that ensures the site remains clean and well maintained. The Maintenance Plan should include routines for rubbish removal and actions when rubbish accumulation occurs.

10 ACCESS CONTROL

Access Control identifies methods to manage access to and within a site. Methods may range from site restrictions, through to helping people leave a site safely.
Three methods are generally used: Natural Control, Technical or Mechanical Control and/or Formal Access Control. Natural Control Solutions seek to restrict and channel people into specific areas. Restrictions/ channelling can be a good deterrent for criminals as it increases the risk of being caught.
Methods are typically Natural Control solutions which may include:

- Landscape site planning such as fencing, water features, paths and vegetation
- Building site planning
- Wayfinding signage
- Control of lines of sight

Technical or Mechanical Control Solutions may include the use of Closed Circuit Television (CCTV) equipment. Lastly, Formal Access Control solutions would be the use of security officers.

10.1 Assessment

Access Control is determined during the design and operational stage which will assist in the management of the development.

10.1.1 Existing Conditions Assessment

At present, the site is vacant. There is no access control for the site.

10.1.2 Proposed Design Assessment

Residential Access
Each building proposes a single lift and stair that is external to the building and located within the Central Courtyard. The lift and stair provide access to an external corridor and to the units that open from the corridor. These lifts/stairs are not visible from the street and require a visitor or delivery person (for instance, fast food) to enter from one of the seven pedestrian entries into the central space. This makes wayfinding challenging for someone unfamiliar with the development. In CPTED, this is a concern as it creates an opportunity for an offender to exploit this ambiguity and use it as an excuse to explore the development.

The lifts and stairs are not secured in a lobby, making it easier to access the levels above. Although the lift and stairs can be secured with a swipe card, research has shown that doors are often propped open. Encouraging people to use the stairs is a good urban design outcome; however, it needs to be balanced with resident's safety and ongoing costs to repair malicious damage. This suggests that a secured lobby to the lifts in the Courtyard and controlled access from the street are needed. Access Control from the street could be a physical barrier or symbolic depending on how well the Central Courtyard is landscaped and how the lifts are designed.

Letterboxes are not yet identified and are at risk of identity fraud. They are best located in secure places such as residential lobbies however, the development does not propose lobbies that address the street. The letterbox location should be identified early, given the number of dwellings and limited space available. Stand alone letterboxes should not create concealment spaces and should be located in highly visible areas that have natural surveillance and CCTV.

Basement Parking
The basement carpark provides parking for residents and their visitors. Access to the basement is via a ramp from McFarlane Avenue. A door is proposed at the bottom of the ramp. The door should prevent access by both pedestrians and vehicles.

Bike storage is not identified in the documentation; however, if included in the future, bike storage is recommended in individual secure transparent lockers, as bikes and bike parts are often stolen and opaque lockers can be used to store illegal items.

Fire Stairs

As discussed under Residential Access, fire stairs are opportunities where access can be illegally obtained, for instance, by a fire door propped open by a resident. Alarming fire stairs are recommended and the stairs with poor surveillance, such as the basement stair discharging to McFarlane Avenue is a priority. The stairs within the Central Courtyard are challenging as alarming the stairs prevents them being used for general movement. Daily use encourages good health, creates social interactions and improves natural surveillance. Securing the seven pedestrian entries from the street has an important role in improving the security of the private areas of the development.

Waste Areas

There is no internal access from the waste areas however, many sexual assaults occur in waste areas and should be secured.

10.2 Recommendations

Table 10: Access Control	
Semi public and private space	
1.	Secure the basement carpark with a door that prohibits access for both vehicles and pedestrians.
2.	Provide swipe card/fob access, CCTV and visual/ voice intercom at each of the seven pedestrian entries and to each lift. A voice/visual intercom for visitors is also required in the basement.
3.	Use door closers and alarms on fire exits to ensure fire doors are not left open. Use signage to warn people of penalties in propping doors open which leaves the building unsecured. CCTV is proposed around these exit points.
4.	Regularly review the Plan of Management to address issues as they arise.
5.	All external door hinges to be mounted so they cannot be removed.
6.	Avoid creating natural ladders. As the design develops, the building's facade and balconies should not facilitate climbing. This includes balcony to balcony, horizontally.
7.	Windows require quality keyed locks and unused windows must be closed and sealed permanently, particularly when in concealed locations. Skylights to be secured. Doors onto balconies and adjacent windows should be secured with locks. Windows should be capable of being locked in a partially open position eg. bolt lock. External windows and doors to be of solid construction. Window security should not trap residents in the case of an emergency.
8.	Letterboxes are recommended to be located in a secure space and individually locked.
9.	Secure and limit public access to the waste room and building services.
10.	Construction sites to be secured and locked. Provide CCTV. Building materials stored in strong rooms, Security needs to be tamper proof.
11.	Security bars and grills are not encouraged unless there is an identified risk. Bars and grills increase fear as they are perceived to be unsafe places.

11 3 D's : DESIGN/DEFINITION/DESIGNATION

It is important for the design, definition and definition of a public space to be in harmony. If a space comprises uses that conflict with another use, dangerous situations could arise. Offenders often exploit situations that are confusing.

This can be described as the three D's.

Designation
- What is the designated purpose of this space?
- What this its original purpose?
- How well does the space support its current or its intended use?
- Is there a conflict between its current and intended use?

Definition
- How is space defined?
- Who owns the space and is it clear?
- Where are its borders?
- Is the space defined by social or cultural factors – does this affect how space is used?
- Are the legal or administrative rules clearly set out and reinforced in policy?
- Are there signs?
- Is there conflict or confusion between designation and definition?

Design
- Does the physical design support the intended function?
- Does the physical design support the desired or accepted behaviour?
- Does the physical design conflict with proper functioning of the space?
- Is there confusion or conflict in the physical design which is intended to control behaviour?

11.1 Assessment

If the recommendations in previous sections are carried out it will be clear which spaces are semi public and which are semi-private.

Ongoing maintenance by strata and a clear plan for maintenance work will be beneficial.

Spatial boundaries throughout the site will reinforce intended function if the recommendations in this report are carried out.

11.2 Recommendations

- Undertake a 3 D's assessment regularly during the operation of the development.
- Implement recommendations from Sections 5 – 11.

12 CONCLUSION

12.1 Summary

The proposed development will change the current use of the site - from a vacant site to a residential development providing residential living, communal space and associated carparking. Analysis of BOCSAR data for the locality identifies crimes for theft of vehicles, steal from vehicles, malicious damage, break and enter and assault. While there are no hotspots over the site (as the area is no yet developed) there hotspots in nearby recently completed areas. The CPTED review undertaken by NSW Police (dated 28 March 2023) identified trending crimes to include break and enters during the construction phase and once a building is complete, break and enter into the basement, stealing from motor vehicles, stealing of number plates and damaging property in communal areas.

The nature of the crimes are relevant to this assessment as the development will contain residential dwellings, a large number of vehicles and communal spaces - all of which could become targets. These crime activities require careful design and management of the pedestrian entries to the development, communal areas and the carpark.

The documentation is at a Development Application level. Therefore, many specific details are yet to be fully established and will be documented during future design stages. However, this report endeavours to provide recommendations to guide the plans for future design development, to ensure the development is set in the right direction. The key recommendations address all principles including Surveillance (including Lighting), Territorial Reinforcement, Environmental Maintenance, Activity and Space Management and Access Control. The proposed design has the opportunity to be attractive and will be a contribution to evolving nature of Googong if the key issues identified under 12.2 and the rest of the report are addressed.

A high level of consistent maintenance and the delivery of high quality finishes will demonstrate to patrons and visitors that this is a well loved development - demonstrating there is guardianship over the development. Therefore, it is important that there is a strong visible presence of people and the limiting of opportunities for criminal behaviour so there is no perception of vulnerability which could turn this site into a target. Consultation with local area police is highly recommended to monitor the area and the proposed development.

12.2 Key Issues

Below provide three key concepts to consider as the design is developed in the future. Please refer to Section 5 - 11 for detailed guidance.

Managing access to the Central Courtyard and Units
The development is located on the edge of a zone change which can create confusion and ambiguity - for instance, the Local Centre is likely to have spaces where the public are encouraged to explore. However, a purely residential development discourages this and the design needs to clearly discourage public access.

At present there are seven pedestrian entry points into the development. These locations have low levels of natural surveillance due to the orientation of units. There are a number of solutions including:

- reducing the number of pedestrian entry points.
- securing the entry points with gates.
- providing good even lighting and CCTV at the entry points.
- Providing a video/voice intercom at the pedestrian entry to allow access to invited visitors or delivery people.
- Provide a pin/swipe card access or equivalent at the entry point for residents.

The lifts and stairs that provide access to the units are challenging as they are located within a private space. Best practice recommends that residential entries are provided from the street. To improve security, gates with controlled access at the pedestrian entries, along with good even lighting and CCTV is essential.

Some units and their open space/terraces are set below the street and are concealed spaces. These units are at higher risk of theft. Landscape design and maintenance regime should not increase concealment and must be maintained regularly. As the design is developed, incorporating high quality sensor lighting in the terraces and high quality doors, windows and hardware will be important.

Storage Cages

Some storage cages are located in places that create concealment and entrapment spaces. Consider relocating cages or reduce in height.

Landscape treatment of communal courtyard

As the design is developed, implemented and maintained, ensure good sight lines are provided that supports natural surveillance and reduces fear. The CPTED police officers report identified that the communal furniture is at risk of vandalism. Therefore the selection of furniture and other urban elements should be robust and vandal resistent where practical. Flame proof bins are recommended. Otherwise, damaged equipment will need to be replaced quickly. High quality lighting which works in sync with the landscape design and maintenance is also essential.

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APPENDIX A - DESIGN DRAWINGS