

Art Gallery of New South Wales
Trust

Art Gallery of NSW

Crime Prevention Through
Environmental Design (CPTED)
Statement

Issue | 30 November 2021

This report takes into account the particular
instructions and requirements of our client.

It is not intended for and should not be relied
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is undertaken to any third party.

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Contents

	Page
1 Introduction	1
2 CPTED Guidance	1
3 CPTED Principles	1
3.1 Natural Surveillance	2
3.2 Natural Access Control & Legibility	2
3.3 Territoriality	2
3.4 Space Management	2
4 Existing Building Forecourt & Vernon Curtilage	3
4.1 Natural Surveillance	3
4.2 Natural Access Control and Legibility	4
4.3 Territoriality and Space Management	4
5 Entry Plaza and Surrounding Areas	5
5.1 Natural Surveillance	5
5.2 Natural Access Control and Legibility	6
5.3 Territoriality and Space Management	6
6 Art Garden Area	7
6.1 Natural Surveillance	7
6.2 Natural Access Control and Legibility	8
6.3 Territoriality and Space Management	8
7 Additional Tree Planting to Rear of Existing Building	9
7.1 Natural Surveillance	9
7.2 Natural Access Control and Legibility	10
7.3 Territoriality and Space Management	10
8 Sandstone Woodland (Lincoln Crescent access)	11
8.1 Natural Surveillance	11
8.2 Natural Access Control & Legibility	12
8.3 Territoriality	12
8.4 Space Management	12
9 Overall Site Tree Planting	13
9.1 Natural Surveillance	13
9.2 Natural Access Control and Legibility	13
9.3 Territoriality and Space Management	14
10 Summary and Further Considerations	14

10.1	Summary	14
10.2	Further Considerations	15

1 Introduction

Arup has previously conducted a Crime Prevention Through Environmental Design (CPTED) Assessment of proposed architectural plans (dated 16 February 2018), which provided an assessment of the site's design relating to the application of CPTED principles.

The Assessment:

- Identified areas that fulfilled CPTED objectives and provided additional considerations for the design to address identified vulnerabilities;
- Provided recommendations to guide future design and implementation of CPTED principles;
- Provided a crime profile showing statistics of the general crime found in the area.

Arup has since been engaged to provide an additional CPTED Statement for AGNSW of the specific areas below, to be submitted for a SSDA modification application. The Statement was originally issued on 09 Oct 2020. The Statement has been re-issued with an updated assessment of the Art Garden (see Section 6) now that the artist's design of the Art Garden has been made available.

This Statement will identify and assess the application of CPTED principles within the following areas:

- The Existing Building Forecourt & Vernon Curtilage;
- Entry Plaza and surrounding areas;
- The Art Garden area;
- Tree planting to the rear of the existing building;
- Sandstone Woodland (Lincoln Crescent access); and
- Tree planting across the remainder of the site.

Our review of these proposed designs assumes that additional security controls, including CCTV and lighting, will be incorporated in the site plans to supplement CPTED design principles, however these measures have not been assessed in this statement. These measures have instead been highlighted as further considerations for the design.

2 CPTED Guidance

Arup draws on the guidance of multiple sources for understanding of CPTED principles including:

- *Safer by Design*, Companion Guide, New South Wales Police;
- *Crime prevention and the assessment of development applications: Guidelines under Section 79C of the Environmental Planning and Assessment Act 1979*, New South Wales Police (2001).

3 CPTED Principles

Crime has social and economic impacts on the locality and the greater community. By considering CPTED elements in the design, a space can minimise the risk of crime and anti-social behaviour, creating safer, accessible and liveable places that encourage community participation.

CPTED seeks to influence the design of spaces and buildings to:

- Increase the perception of risk to criminals by increasing the presence of deter, detect, delay and response characteristics;
- Increase the effort required to commit crime by increasing the time, energy or resources which need to be expended by the offender for the offence to be successful;
- Reduce the potential rewards of crime by minimising, removing and concealing rewards; and
- Advertise the proper use of space and making it clear on the types of people permitted throughout the precinct under various operating conditions.

The four CPTED Principles are briefly outlined in Section 3.1 to 3.4 and the areas of the site are then assessed against these four Principles in Sections 4 to 9.

3.1 Natural Surveillance

Natural surveillance refers to the design of a space that facilitates the ability for people to maintain uninterrupted sightlines and view the space around them. This provides a two-way benefit, as people can have the ability to observe their own personal surroundings, as well as be observed by others within the space. Natural surveillance can serve the purposes of both deterring potential offenders from criminal/anti-social behaviour by creating the perception for possible detection, and for users of the space to detect individuals at a distance who may be engaging in such behaviour.

3.2 Natural Access Control & Legibility

Natural access control is a design approach directed at decreasing crime opportunities by discouraging access to targets and creating a perception of increased risk to offenders. This is typically achieved by designing streets, walkways and building entrances to clearly indicate public routes and space and aiming to deter or prevent a threat actor from accessing private or off limit areas. Physical measures should be incorporated to complement this principle, such as fencing, electronic access doors, gates, wayfinding and signage.

3.3 Territoriality

Territoriality helps identify spaces as public or private, allowing users to understand the territories intended use and avoid trespassing in private areas by accident. However, territoriality can also foster the feelings of ownership over public areas as well. Creating a sense of ownership by users for public spaces, territoriality can instil a desire by visitors to preserve the environment for their enjoyment and use, while intruders who are determined to conduct anti-social or criminal behaviour may become more easily identifiable.

3.4 Space Management

Space management ensures a space is well maintained and can develop a feeling of individual or community ownership of the public realm. Promoting a sense of pride in the community's public asset can indicate to those looking to conduct criminal and anti-social behaviour that the area provides a higher degree of effort to conduct those activity, with the rewards being low or even increasing the risk of being detected. Areas that are well maintained are attractive to users, promoting increased activity in the space. Site cleanliness, repair of graffiti and vandalism, replacement of damaged or unusable walkways, and maintenance of adequate lighting are activities

that should be incorporated into the operational maintenance of the site to ensure ongoing engagement with users.

4 Existing Building Forecourt & Vernon Curtilage

4.1 Natural Surveillance

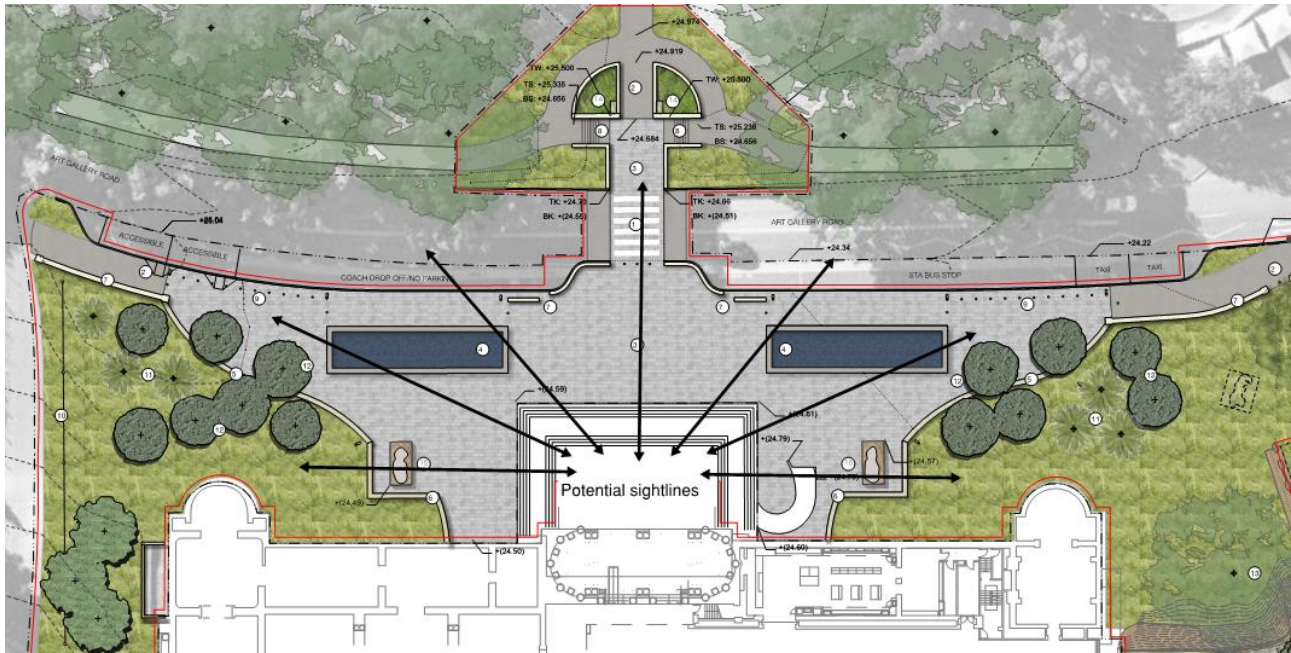


Figure 1 Forecourt (Vernon Curtilage) – potential sightlines

The open-plan design of the existing building forecourt and Vernon Curtilage encourages this space to be used as a key gathering point for visitors. During operating hours, it is expected that natural surveillance is achieved by visitors of the gallery and those moving through the space. The addition of vehicles passing by can also act as an additional layer of natural surveillance for both the forecourt entry and walkways along Art Gallery Road. The presence of neighbouring sites, such as the Domain, the Terrace on the Domain Café and Royal Botanic Gardens can help maximise natural surveillance objectives as these spaces attract visitors who can observe potential criminal/anti-social behaviour and ultimately report offending behaviour.

While understanding that existing buildings may have elements where hidden corners are unavoidable (shown in Figure 2), the design incorporates low walls to screen between these areas and the main entry to the building, which push legitimate users of the space away from vulnerable corners. The design also provides for open vegetation that is set back from the entry, promoting visibility of the surrounding area for users.

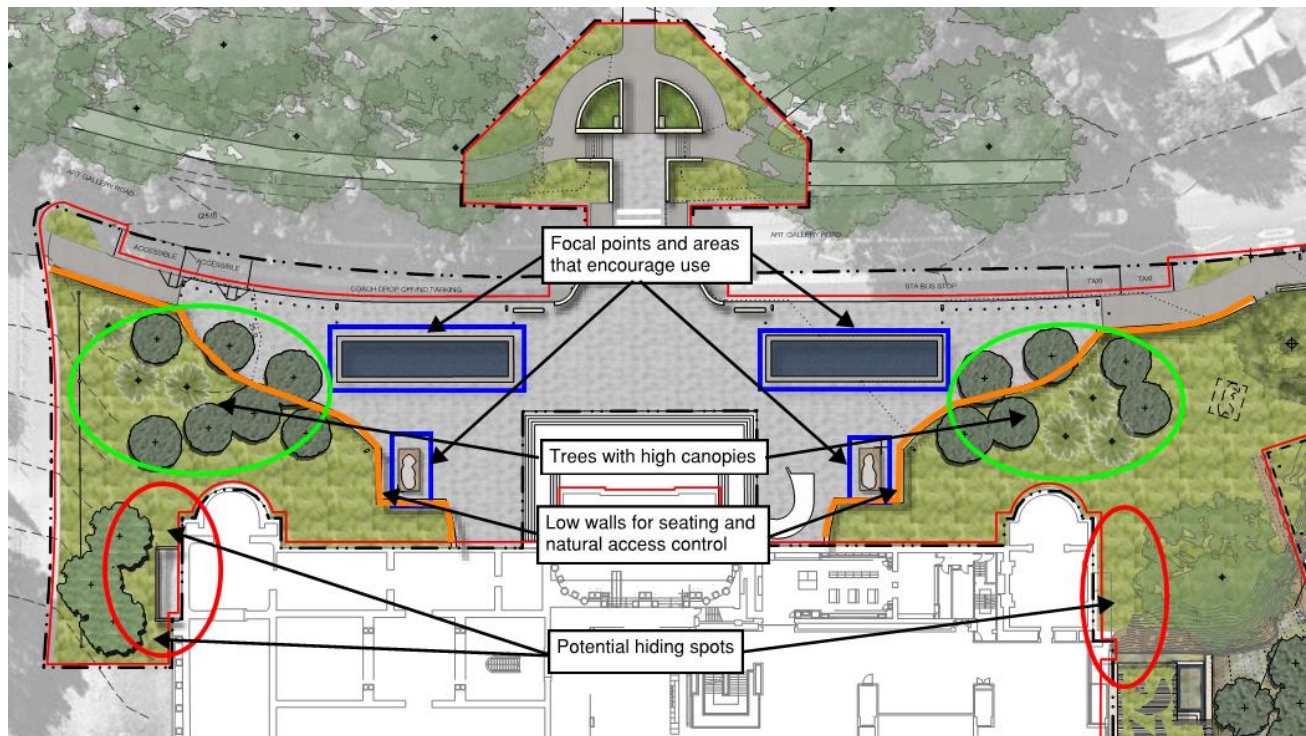


Figure 2 Potential hiding spots and design elements that reflect CPTED principles

The use of reflecting pools, artwork or statues, seating and lighting creates focal points for users and those moving through the space and encourages surveillance by drawing people's attention to surrounding area. These elements may also encourage their use, even if a user's primary reason is not to access the building. This may reduce the risk of criminal behaviour as these acts would be readily observed by legitimate users of the space.

Trees in these areas reflect high canopies (as proposed in LD_DA_00-02 Landscape Masterplan) which will limit impedance on sightlines or lighting beneath the tree canopy. Ongoing maintenance is crucial to ensure that canopies are maintained to several metres above the ground. Their placement along the sides of the entrance should not be grouped in order to limit the opportunity for hiding places or for areas where activity cannot be observed by users within the paved forecourt area.

It is assumed that additional physical elements that aid surveillance (CCTV, lighting) will be included in the design, however these measures have not been provided for this assessment.

4.2 Natural Access Control and Legibility

The utilisation of stone walls, paving and vegetation around the forecourt area help guide visitors to the entrance, while simultaneously mitigating against pedestrians unintentionally travelling into isolated spaces or potential areas where they cannot be observed.

4.3 Territoriality and Space Management

The layout of the existing building forecourt clearly defines territoriality as a public space, and enforces the feeling of ownership by users, while providing safe entry for visitors to the building. The placement of low stone walls, vegetation, stairs and bollards assist in defining the area as the public realm. The area is open and inviting, which may encourage users to dwell in the space or use it as informal meeting spaces.

As the existing building forecourt serves as one of the most visible areas of the site, fixtures and fittings that are vandal resistant or easy to clean should be incorporated. Consideration should be given to vandal resistant fittings including lighting, CCTV cameras or unsecured streetscape elements such as rubbish bins, signage, seating etc. to limit the potential for vandalism.

Removal of graffiti demonstrates guardianship of the space; that the space is cared for by the community, reducing the reward of criminal or anti-social acts. Removal of graffiti can improve the image of the space for visitors, increased perception of safety and community spirit that can ultimately increase patronage. The incorporation of finishes that are easy to clean (e.g. anti-graffiti paint) will provide for easier maintenance, and fit and help restore the space to its intended condition.

5 Entry Plaza and Surrounding Areas



Figure 3 Entry Plaza and Surrounding Areas access

5.1 Natural Surveillance

During operating hours, it is expected that natural surveillance is achieved by visitors to and from the Entry Plaza or those dwelling in the space, and those moving through the space towards the Art Garden area. Vehicles passing by can also act as an additional layer of natural surveillance for both the walkways along Art Gallery Road and the entry points into the Entry Plaza and buildings.

The tree plantings along the roadway appear to provide adequate spacing that would encourage the ability to see from the kerb into the Entry Plaza without obstruction. These trees, if maintained, should not restrict the ability for users to maintain sightlines to or from the Entry Plaza or pathways. Smaller plantings within the Entry Plaza are potted, however reflect similar canopy heights to surrounding trees, which are unlikely to impede on sightlines.

5.2 Natural Access Control and Legibility

The location of the Entry Plaza adjacent to the existing building forecourt can assist in naturally drawing people to its location, with pathways to other locations making it a central hub for pedestrians to traverse the site. These pathways are clearly defined in the differing materials and texture used from the surrounding landscape, encouraging users to stay on the pathway and guiding them away from isolated areas. Figure 3 highlights the pedestrian routes to the Entry Plaza and Entry Pavilion.

Further consideration of wayfinding signage in the design can help indicate to pedestrians the correct direction of travel via the defined paths and assist them in accessing the desired areas quickly, reducing the potential for individuals to be in areas that are potentially unsafe.

5.3 Territoriality and Space Management

The demarcation of footpaths along Art Gallery Road and pathways leading into the Entry Plaza, clearly separates the legitimate pathways from the general landscaped areas – indicating the paths that visitors are expected to utilise as intended as public and private spaces. This encourages the legitimate use of spaces and discourages use of areas that are not intended for public use. The demarcation also signals to users of the space where their focus of community ownership is, promoting the desire to keep those spaces clean and free of damage for them to enjoy.

Ongoing maintenance of trees is crucial to ensure that canopies are maintained to several metres above the ground. Their placement along the sides of the entrance should not be grouped to create the opportunity for hiding places or areas where activity cannot be observed by users within the paved Entry Plaza area and other entrances.

Removal of graffiti demonstrates guardianship of the space; that the space is cared for by the community, reducing the reward of the act. Removal of graffiti can improve the image of the space for visitors, increased perception of safety and community spirit and ultimately increase patronage. The incorporation of finishes that are easy to clean (e.g. anti-graffiti paint) will provide for easier maintenance, and fit and help restore the space to its intended condition.

The Entry Plaza should reflect fixtures and fittings that are vandal resistant or easy to clean. Consideration should be given to vandal resistant fittings including lighting, CCTV cameras or unsecured streetscape elements such as rubbish bins, signage, seating etc. to limit the potential for vandalism.

6 Art Garden Area



Figure 4 Art Garden CPTED features

6.1 Natural Surveillance

The circular design of the artwork commission in the Art Garden allows for pedestrians to maintain natural surveillance of surrounding areas. This is further enhanced by the low-lying built structures within this space. The design and tree plantings have considered type and placement consistent with CPTED principles to facilitate natural surveillance. People in nearby buildings can also provide additional natural surveillance.

The multiple designated places for gathering within the artwork facilitate and encourage legitimate usage of this area on both a community and individual level. Promotion of outdoor activities and public programs that draw users to enjoy this space and increase footfall in this area may increase levels of natural surveillance on a consistent basis and deter potential offenders. The artwork has a public program element that will see events take place throughout the year, meaning the space will be consistently used by the public.

Sightlines beneath the tree canopy will ensure users can observe other areas of the artwork. The vegetation will change dramatically in appearance throughout the year: depending on the season the visibility through the vegetation will be clear, at other times when the vegetation is fully grown, visibility will be more obscured. However, even the fully grown vegetation will not obscure pathways.

In addition, the lighting along pathways will facilitate visibility to enable clear wayfinding and natural surveillance. Lighting will be targeted in certain areas of the artwork so that main pathways are clearly accessible at night-time and pedestrians can avoid being drawn into darker spaces. There is linear lighting all along the main pathways and stairs at foot level, and spot LEDs at intervals.

6.2 Natural Access Control and Legibility

The design of the artwork contains several walkways providing visitors with options to utilise this space. The design will consider signage where necessary to limit ambiguity of where pathways lead.

Paths 1, 2, 3 and 4 are the main thoroughfares through the site, and signage will indicate this. Both the seasonal track and the service pathway are also open to the public.

The seasonal track is not a main thoroughfare, but rather an experiential track for visitors to experience the cycle of vegetation growth. When the vegetation grows denser over spring and summer, the track will be more like a bush track with high grass up to knee or hip height. There are lights in the seasonal track. As per discussion with the crown certifier, DDA consultant and ergonomic consultant, these lights will be on a different track to the rest of the work, so that they can be turned off at night so as not to attract people into the path.

The service pathway is also open to the public, there are no gates at either end. There is lighting within the garden bed structure along this path - linear lighting along a light cove at the base on the footpath, and spot LEDs at intervals where the garden bed wall makes a slight point.

6.3 Territoriality and Space Management

The artwork commission will be a living artwork held in the Art Gallery's collection; it is clearly identified as a public space for community use. Lawns, tree canopy shade and in-built seating encourage use by the public, allowing for a connection with nature, which is intended to encourage gathering and community activity.

Removal of graffiti demonstrates positive maintenance and guardianship of the space. If graffiti is found on the handrails or sandstone seating it can be removed according to the artwork's maintenance manual through a relatively easy process. The handrails are bronze and are easy to clean and sandstone can either be washed, slightly sanded back, or replaced.

7 Additional Tree Planting to Rear of Existing Building

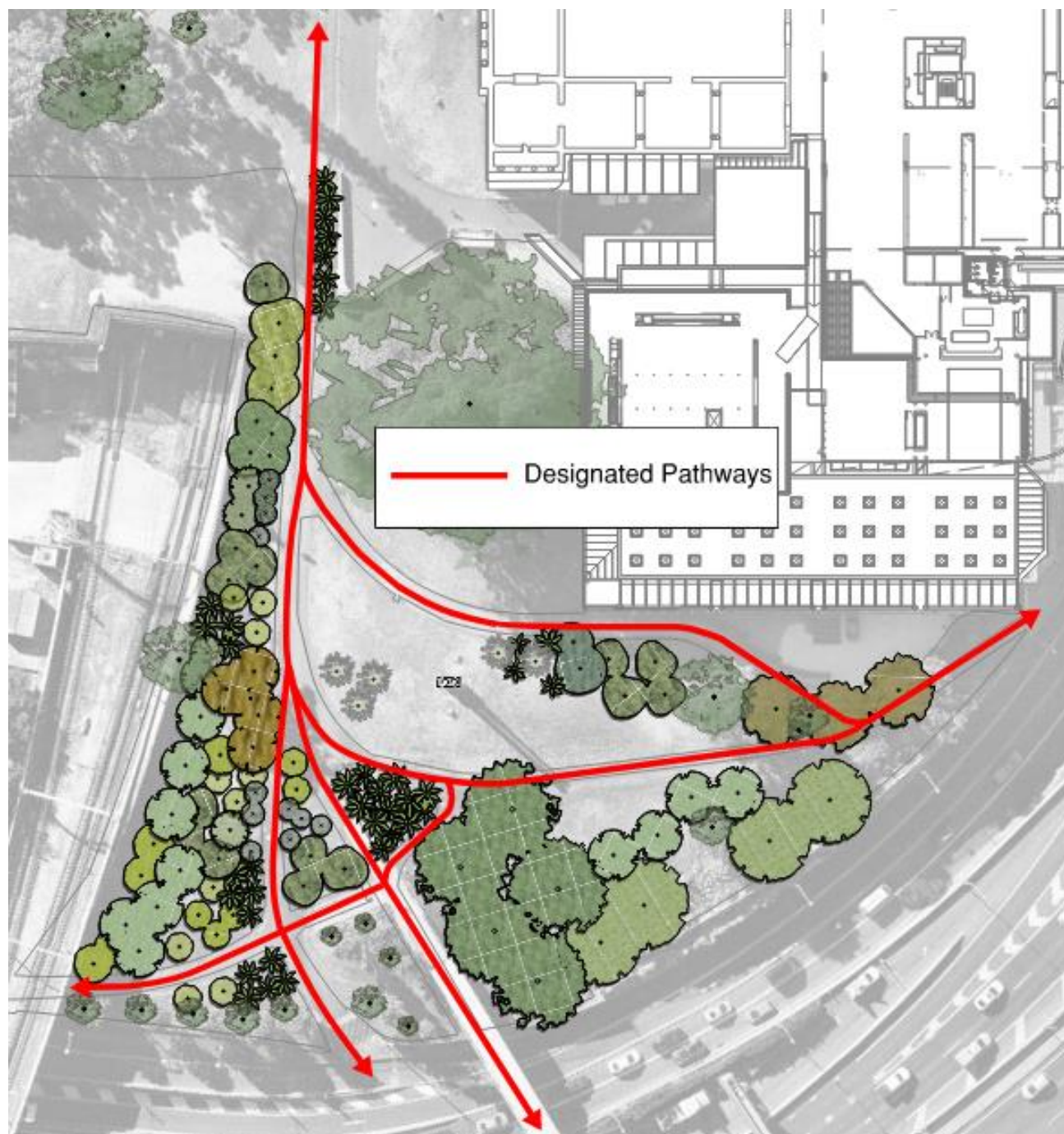


Figure 5 Additional plantings and pathways

7.1 Natural Surveillance

Tree plantings in this area (proposed in the LD_DA_00-02 Landscape Masterplan) provide for plantings of various canopy heights. The proposed design does not appear to crowd the public pathways, maintaining natural or artificial lighting of the space. This will assist natural surveillance of the area at night or when light levels are low.

The grouping of plantings should consider how dense the vegetation will be, to limit the opportunity for hiding spots or dark areas where anti-social or criminal activity would be fostered. This is especially important as this area would likely see less user activity than the other areas of the precinct, which may encourage negative behaviour as the likelihood of being seen and apprehended is lower.

Pathways and green space should provide suitable lighting to allow users to view the area surrounding them and avoid creating potential dark spots as a result of canopy shade. Plantings at the rear of the existing heritage building should be positioned away from any fencing to avoid the ability for threat actors to gain access to private areas via trees.

7.2 Natural Access Control and Legibility

Pathways that lead to and from clearly designated public spaces help to clearly identify where legitimate use of access is for this space, while fencing at the rear of the existing heritage building restricts access to this private land.

Wayfinding in this area should be considered to provide directions for users to reach their intended destination quickly.

7.3 Territoriality and Space Management

This area provides pathways that lead to and from clearly designated public spaces, which reduces the ambiguity that this space is also intended for public use. This green space is clearly designed for public use and encourages people to utilise the space for rest and relaxation as well as a travel path.

Private land at the rear of the existing heritage building clearly designates this area as private property.

Regular maintenance of this area and the proposed additional plantings to discourage loitering is important. Trees should be well maintained to ensure sightlines are clear and encourage lighting of the space. Any plantings should also be trimmed regularly to ensure places to hide are limited, as spaces that have dark or obscured spots encourage anti-social or criminal activity.

8 Sandstone Woodland (Lincoln Crescent access)

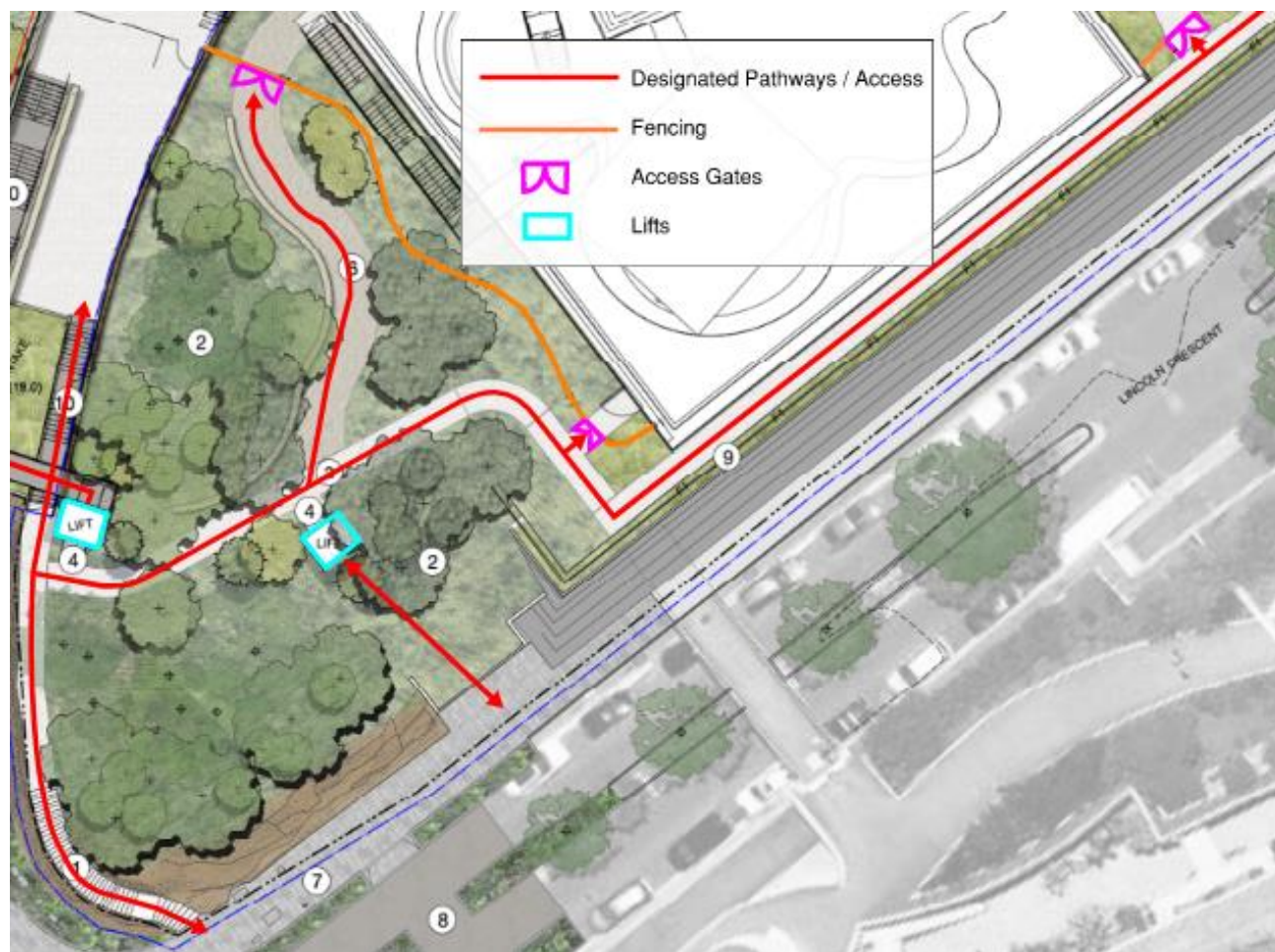


Figure 6 Sandstone Woodlands with pedestrian access to Lincoln Crescent below

8.1 Natural Surveillance

Natural surveillance in this area may be restricted through the plantings proposed in the overall planting masterplan. The density of the proposed planting master plan may reduce sightlines for users and increase the ability to create hiding places. This is of note, given the immediate access of stairs out of the area and into adjacent neighbourhoods. This could be attractive to those looking to engage in anti-social or criminal activity as it reduces the likelihood of being seen whilst offending or being apprehended, while providing quick and easy escape out of the area.

Users of the pathways and the lifts are further restricted from natural surveillance from nearby buildings, as overhead sightlines are obscured (from the existing buildings) as the area is set down from the levels above. The adjacent Gallery building also provides no rear windows that may allow for casual surveillance from above. Therefore, it is recommended that tree plantings should possess suitable canopy heights which are unlikely to impede on natural surveillance, especially when positioned closely to lift and stair access points. A regular maintenance routine should be adopted to ensure that users are able to observe the space that is not disrupted by overgrown vegetation.

Pathways and green space should provide suitable lighting to allow users to view the area surrounding them and avoid creating potential dark spots.

8.2 Natural Access Control & Legibility

Access control is clearly supported by changes to the pathway materials, identifying legitimate pathways through public areas. Additional pathways connected to buildings are restricted with fencing and access gates, providing clear messaging that these areas are for restricted use.

Level changes may create confusion for users as to which way to go. Wayfinding should be considered for this area to help users move along the correct paths and not find themselves at a gate they cannot access or areas they are unable to escape from easily. i.e. dead ends.

8.3 Territoriality

This area provides clear designation of what is public and private space, with access into back of house or emergency egress areas restricted by fencing and gates, while allowing for movement away from these restricted spaces into the public realm when required. These physical barriers should be supported with signage and access controls to avoid accidental or deliberate incursion and avoid ambiguity on identifying the space behind the fencing as a restricted area. The stairs and lift access directly to and from clearly identifiable public space below also indicate that the green space is provided for public use.

8.4 Space Management

Regular maintenance of this area to discourage loitering is important. Trees should be well maintained to ensure sightlines are clear and encourage lighting of the space. Any plantings should also be trimmed regularly to ensure places to hide are limited, as spaces that have dark or obscured spots can encourage anti-social or criminal activity.

9 Overall Site Tree Planting

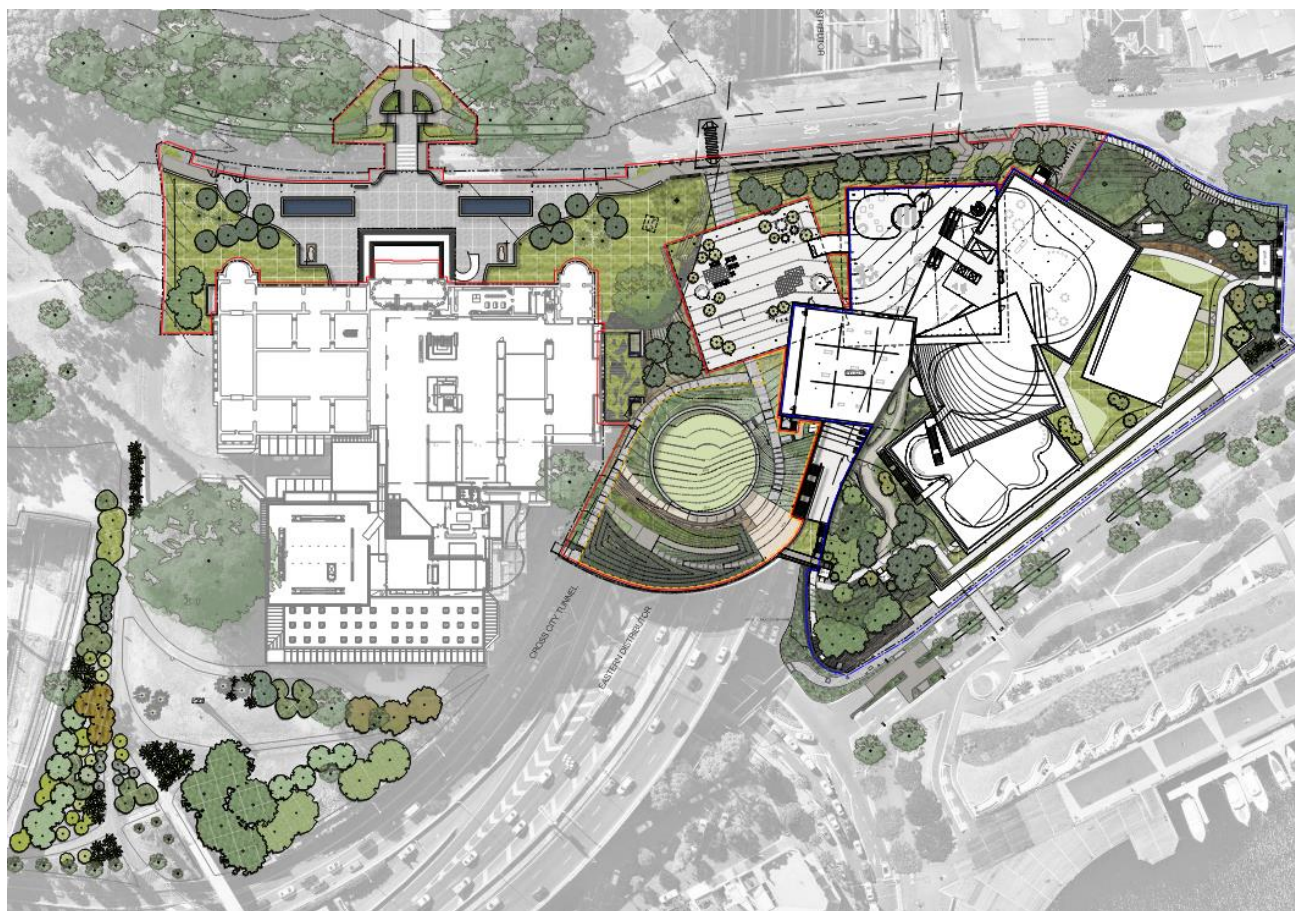


Figure 7 Tree planting masterplan

9.1 Natural Surveillance

The overall planting scheme of AGNSW as proposed in the current design aims to achieve the natural surveillance objectives by providing for tall plantings that will not obstruct visibility or impede on lighting, however consideration should be given to the density of plantings to limit the creation of covert areas.

It is critical to undertake regular maintenance of all vegetation and ensure that consistent tree canopy and shrubbery heights are maintained to achieve natural surveillance.

In addition, overall tree planting should not interfere with any existing or future CCTV and lighting objectives (not assessed in this statement).

9.2 Natural Access Control and Legibility

The use of walls, designated pathways and landscaping for access control around the site is reflected in the overall design. The use of walls to restrict movement, the change in paving materials and paving colour identifies legitimate pathways for public areas, and landscaping helps deter movement in areas not designated for pedestrian use.

The incorporation of additional measures (i.e. wayfinding, signage for restricted areas, fencing) will complement the current tree scheme and encourage access control.

9.3 Territoriality and Space Management

The proposed plantings indicated in the masterplan can dictate the intended use of a space as public or private. Sporadically placed trees can indicate the presence of a public green space and encourage gathering, while plantings used as screenings around fences or walls can indicate the space behind as private or not intended for use.

All plantings should be maintained to avoid creating hiding spots or dark spaces that foster anti-social or criminal activity. An unmaintained space makes this activity easier as it cannot be observed or reported.

10 Summary and Further Considerations

10.1 Summary

The above statement has highlighted key CPTED principles and identified how these principles are deployed in the following areas of the design:

- The Existing Building Forecourt & Vernon Curtilage;
- Entry Plaza and surrounding areas;
- The Art Garden area;
- Tree planting to the rear (south-east) of the existing building;
- Sandstone Woodland (Lincoln Crescent access); and
- Tree planting across the remainder of the site.

A summary of the CPTED principles identified in the design are:

10.1.1 Natural Surveillance

Pathways, entrances, buildings and landscaping that maximise the ability for users to see others at a distance and to be seen by others in a space, including:

- Walls, trees and other plantings that reduce the ability to create hiding places;
- Walls, trees and other plantings that do not impede sightlines; and
- Focal points in public spaces that would naturally draw people's attention to an area.

10.1.2 Natural Access Control and Legibility

Use of visual cues to indicate where legitimate pathways are for entry and exit points, including:

- Materials and colour changes (e.g. paving); and
- Landscaping.

10.1.3 Territoriality and Space Management

Clear definition between areas for public and private use and encouraging ownership of public spaces by users through:

- Spaces that are clearly identified as public or private areas using walls, landscaping and pathways; and
- Making a space inviting for users and encouraging patronage while making it feel safe to be in.

10.2 Further Considerations

Further considerations may increase the effectiveness of these CPTED principles in the design, including:

- **Fixtures, fittings and surfaces** that are vandal or graffiti resistant and easy to clean;
- **Maintenance** of landscaping and the removal of vandalism and graffiti (including allowing for access by maintenance vehicles);
- **Lighting** that supports surveillance and allows visitors to safely observe the space around them, especially at night;
- **Wayfinding signage** that clearly indicates the designated pathways for visitors; and
- **CCTV** in public areas external to buildings.