

MERIDEN SCHOOL, STRATHFIELD

CPTED ASSESSMENT



11 APRIL 2019
P0006015
FINAL
PREPARED FOR MERIDEN ANGLICAN SCHOOL



URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Associate Director	Lucy Band
Consultant	Alyce Noney
Project Code	P0006015
Report Number	Final

TABLE OF CONTENTS

Executive Summary	i
1. Introduction	1
1.1. Aim of this Report	1
1.2. CPTED certification.....	1
1.3. Methodology	1
2. Proposed Development	2
2.1. The site	2
2.2. Access and transport	3
2.3. The Proposal.....	3
2.4. School operational details.....	3
2.5. Site Visit	4
3. Strategic Context	6
4. Community Profile.....	8
4.1. Demographics	8
4.2. Crime.....	8
4.3. Road and Pedestrian Safety.....	9
5. CPTED Assessment	11
5.1. CPTED Principles	11
5.2. Priority Areas	11
5.3. Senior and Prep Campuses.....	12
5.3.1. Road and pedestrian safety	12
5.3.2. Personal safety	13
5.4. Junior School	13
5.4.1. Road, pedestrian and personal safety	13
6. Conclusion	15
Disclaimer	16

Appendix A Demographic profile

Appendix B Crime profile

FIGURES:

Figure 1 – CPTED principles	1
Figure 2 – Meriden School campuses	2
Figure 3 – Site visit photos.	5
Figure 4 – Crashes map Strathfield LGA, 2016. Site indicated by black star.	9
Figure 5 – Crashes map Strathfield LGA, 2017. Site indicated by black star.	10

PICTURES:

Picture 1 – Perimeter fencing and traffic zones, Senior campus	5
Picture 2 – Secure access on junior campus	5
Picture 3 – Margaret Street pedestrian crossing	5
Picture 4 – Perimeter fencing and security signage	5
Picture 5 – Access signage	5
Picture 6 – Shared driveway at 2 and 4 Vernon Street	5

TABLES:

Table 1 – SEIFA Index, 2016

Table 2 – Crime rates per 100,000 people (October 2017 – September 2018).

Table 3 – Two year crime trends (October 2016 – September 2018)

EXECUTIVE SUMMARY

This Crime Prevention through Environmental Design (CPTED) assessment has been prepared by Urbis Pty Ltd (Urbis) on behalf of Meriden Anglican School (the applicant) for a proposed State Significant Development Application (SSDA) at Meriden School, Strathfield (the school). This CPTED has been undertaken to fulfil the requirements of the Secretary's Environmental Assessment Requirements (SEARs), issued on 22 November 2018. This assessment specifically addresses the need to consider:

An assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures and personal safety in line with CPTED.

The proposed SSD comprises proposes to construct a new music and drama centre on the senior campus, a new teaching and administration building on the prep campus, and a 200 sqm landscaped playground on the junior campus.

SCHOOL OPERATIONAL DETAILS

Meriden School has several existing operational procedures to manage road, pedestrian and general student safety on site. These include the use of school staff for traffic and pick up marshalling, a manned pedestrian crossing by staff during the AM and PM school peak periods and employed security guards who patrol the three campuses during the evenings. A complete list of the school's operational details are contained in **Section 2.4**.

CPTED ASSESSMENT

This CPTED provides a detailed assessment on the proposed development across the three school campuses in accordance with SEARs. Refer to **Section 5** of this report for the complete assessment.

Senior and prep campuses

Margaret Street is the main vehicle and pedestrian access to the senior and prep campuses. Consultation with the school indicates that Margaret Street is very busy during the peak AM and PM peak periods which presents concerns for road and pedestrian safety. The pedestrian crossing on Margaret Street also presents some safety risks due to the proximity of at least four driveways, faded line markers and a narrow crossing which limits the amount of people able to cross concurrently. The proposed new buildings on site will both front Margaret Street, providing opportunities for casual surveillance to observe pedestrian and vehicle movements.

Steal from person rates are also extremely high in Strathfield LGA, with the LGA having the highest rank for this offence across NSW. The proposed development will incorporate CPTED principles through the use of perimeter fencing to provide clear separation between private and private areas, and the use of an employed security guard to patrol during the evening.

Junior campus

Safety crash data indicates there were no car crashes on Vernon Street outside the campus in 2017 and one non-casualty (towaway) incident on Margaret Street. The campus is located on the perimeter of a crime hotspot for steal from motor vehicle crimes.

The proposed development involves the construction of a school playground and retention of a single rear parking space. The proposed development incorporates CPTED principles by incorporating walls and gates around the driveway and car space to reduce the potential conflict between vehicles and children.

RECOMMENDATIONS

The following recommendations are made to improve the proposal's performance against CPTED principles and to reduce identified road, pedestrian and personal safety risks.

Senior and prep campuses

- Upgrade the Margaret Street pedestrian crossing on to improve the safety of the crossing. The following pedestrian treatments may be considered in consultation with transport authorities:

- Widen the pedestrian crossing to allow for more people to cross concurrently.
 - Install low median strip barriers on Margaret Street to prevent U-turns by vehicles and to draw attention to the upcoming crossing.
 - Re-paint line crossings and consider zig zag lines on the road to ensure the crossing is visible and vehicles approach with caution.
- Maintain landscaping schedule to ensure sight lines are not impacted between the proposed buildings and the Margaret Street crossing.
 - Pedestrian walkways from the proposed buildings to Margaret Street should be well-lit to provide safe movement at night.
 - Formalise an operational plan to manage student safety outside of regular school hours. This should include clear communication to the students regarding access, emergency contact numbers and procedures, and guidance around safe travel during the evening.
 - Consider installing CCTV cameras at the main access points to the proposed buildings. Priority should be given to spaces used regularly outside of general school hours.
 - Implement access control for spaces used outside of school hours, particularly the senior study/common space, to prevent unauthorised access.

Junior school

- Implement a low speed zone for the shared driveway to reduce potential pedestrian and vehicle conflicts.
- Establish appropriate protocols to ensure safe use of the car space and to reduce the potential conflict with playground uses. Consideration should be given to entering/exit the vehicle space when the playground is not in use.
- Provide clear communication to staff regarding the appropriate use of the vehicle space (for either cars or student play area) to ensure safe use.
- Maintain landscaping of playground and associated boundary treatments to uphold sightlines within the playground and with the main junior campus.

CONCLUSION

This assessment found that the design incorporates a number of CPTED principles, including safe road procedures, access control and landscape maintenance which maximise student and road and pedestrian safety on site. The upgrade of the Margaret Street pedestrian crossing, installation of CCTV cameras and development of a formalised operational plan for the school campuses will further enable the proposed development to adequately incorporate CPTED principles.

1. INTRODUCTION

This Crime Prevention through Environmental Design (CPTED) assessment has been prepared by Urbis Pty Ltd (Urbis) on behalf of Meriden Anglican School (the applicant) for a proposed State Significant Development Application (SSDA) at Meriden School, Strathfield (the school). The proposed development involves the construction of a new Centre for Music and Drama, administration building and landscaped play area.

This CPTED has been undertaken to fulfil the requirements of the Secretary's Environmental Assessment Requirements (SEARs), issued on 22 November 2018. This assessment specifically addresses the need to consider:

Transport and accessibility: an assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures and personal safety in line with CPTED.

1.1. AIM OF THIS REPORT

A CPTED assessment identifies and analyses potential improvements to design which may help to reduce crime and anti-social behaviour. The design of a proposed development is assessed against the four key CPTED principles. Where CPTED risks are identified, the report makes recommendations to reduce the likelihood of the crime from occurring.

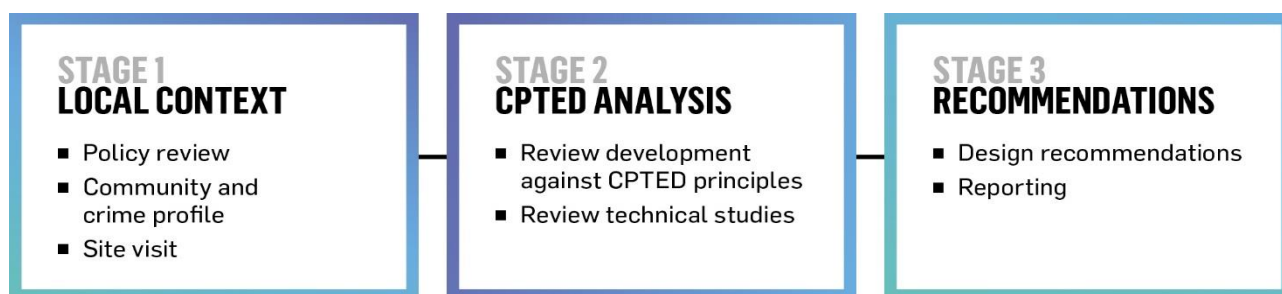
Figure 1 – CPTED principles



1.2. CPTED CERTIFICATION

This report has been reviewed by a certified professional who has completed the NSW Police Safer by Design Course.

1.3. METHODOLOGY



2. PROPOSED DEVELOPMENT

2.1. THE SITE

Meriden School is located across three campuses within close proximity in Strathfield suburb. The school has a total landholding of approx. 22,225 sqm and comprises:

- Senior School Campus fronting both Redmyre Road and Margaret Street;
- Junior Campus fronting Vernon Street and Margaret Street; and
- Lingwood Prep Campus fronting Margaret Street.

The three campuses are highlighted in Figure 2 below.

The school is located approximately 13km west of the Sydney CBD in Inner West Sydney. The site is located within a mixed use area in close proximity to residential, retail and transport services. Strathfield Plaza is located immediately north of the senior campus, comprising a retail centre and commercial office tower. Further north is Strathfield Station, located approximately 200m from the Senior Campus. The school campuses are predominately surrounded by three and four storey residential apartments to the east and detached residential buildings to the south.

Strathfield LGA contains numerous educational establishments. Within a 500m distance from the site, there are several schools and education institutions including:

- Strathfield Girls High School
- St Martha's Catholic Primary School
- Santa Sabina College
- Strathfield TAFE

Figure 2 – Meriden School campuses



Source: Allen Jack + Cottier Architects 2018

2.2. ACCESS AND TRANSPORT

The site is well serviced by public transport with several bus stops on Redmyre Road. Strathfield Station is located approximately 200m from the Senior Campus and is a major rail interchange providing connectivity to Sydney CBD, Parramatta, North Shore, Inner West, the Western and Southern suburbs and country rail links.

The school also operates several bus services to parts of Sydney to service areas where high levels of Meriden students reside.

2.3. THE PROPOSAL

The proposed SSDA comprises development on each of the three school campuses as follows:

Senior campus

- Demolition of existing music building in south west corner.
- Construction of a new 4 storey Music and Drama Centre.

Prep campus

- Demolition of existing single storey Business Office.
- Construction of a new two storey Teaching and Administration Building.

Junior campus

- Demolition of existing residential dwelling at 4 Vernon Street.
- Construction of new 200sqm landscaped playground area for use during recess and lunch breaks, as well as outdoor learning.

2.4. SCHOOL OPERATIONAL DETAILS

Meriden School has several existing operational procedures to manage road, pedestrian and general safety including:

- Implementation of a traffic management plan to manage bus drop offs/pick ups and associated student marshalling.
- RMS traffic zones including school zones, bus zones and a kiss and ride zone along the Margaret Street school boundary.
- Use of school staff to man the pedestrian crossing during peak AM and PM school times.
- Supervised marshalling procedures for afternoon pick up for the junior students. As part of this procedure, staff wait at the Margaret Street kiss and ride zone and radio to the junior campus when a parent has arrived. The child is then escorted by staff across campuses.
- Staggered kiss and ride times for the pre-school and junior school to reduce peak traffic.
- Employed security staff who patrol all three campuses from 5pm – 9pm Monday to Friday. Campuses are locked by security from 10pm Monday to Friday and patrol premises overnight.
- Manned entry points to the Junior School campus by staff to chaperon students inside.

During the AM, senior students taking the bus are dropped at Margaret Street and junior students at Vernon Street to allow for direct pedestrian access to the associated campuses.

Meriden School hours are conducted from 8:20am to 3:10pm. The school hosts several before and after school activities which means students/staff are generally on campus beyond these hours. A study/common space is available to senior students on the senior campus. This space is open until 8:30pm during

weekdays and is not staffed during the evenings. A security guard is employed on campus from approximately 5pm – 9pm and is available to assist these senior students in the event of an emergency.

The following procedures have been implemented by the school to enable safe cross campus movements during the PM peak:

- Students for pick up wait on school premises with staff. Staff at the Margaret Street kiss and ride zone radio to the junior campus when a parent has arrived. The child is then escorted by staff across campuses.
- Students for bus pick up are escorted by staff to the senior campus via the Margaret Street pedestrian crossing. Students are supervised in the marshalling zone in the senior campus before being loading onto the bus.

The majority of junior school classes are facilitated on campus however classes frequently use the senior campus for recreational and extra curriculum activities. All junior campus students are escorted by staff to the Senior Campus, via Margaret Street, when required.

2.5. SITE VISIT

A site visit was conducted by Urbis on 11 January 2018 between 10am and 11am. The site visit involved a perimeter inspection of the school campus boundaries. Key observations are provided below:

- Clear separation between public and private areas with perimeter fencing around all school campuses.
- Deterrence of unauthorised access through locked and/or closed gates throughout the campuses and secure electronic access on the Junior campus.
- Clear signage at entrance points to direct people through the school.
- Evidence of mechanical surveillance with approx. five CCTV cameras on site and fence signage displaying on site security.
- Margaret Street has heavy traffic during peak school times. A pedestrian crossing on this street facilitates movement between the senior and prep campuses.
- Line markings on Margaret Street and the pedestrian crossing are faded.
- Small, raised concrete buffers are located on the pedestrian crossing. This prevents people from easily walking side by side through the pedestrian crossing.
- Landscaping is well maintained on site, with clear sight lines between the Senior campus and Margaret Street.
- Students generally use the signalised access and pedestrian path on Redmyre Road to access the school from the station. The road surface here is uneven and there have been reports of tripping accidents previously.
- Operation of five CCTV cameras on site which are located primarily on the access points

Figure 3 overleaf shows photos from the site visit.

Figure 3 – Site visit photos.



Picture 1 – Perimeter fencing and traffic zones, Senior campus



Picture 2 – Secure access on junior campus



Picture 3 – Margaret Street pedestrian crossing



Picture 4 – Perimeter fencing and security signage



Picture 5 – Access signage



Picture 6 – Shared driveway at 2 and 4 Vernon Street

3. STRATEGIC CONTEXT

The following section provides a summary of relevant state and local policies in relation to crime and safety.

NSW Crime Prevention and Assessment of Development Applications (2001)

In April 2001, the NSW Department of Infrastructure, Planning and Natural Resources (former Department of Urban Affairs and Planning) introduced the Crime Prevention Legislative Guidelines (the Guidelines) to Section 79C of the Environmental Planning and Assessment Act, 1979. These guidelines require consent authorities to ensure that development provides safety and security to users and the community.

The Guidelines introduce the four CPTED principles which are used in the assessment of development applications. These are: surveillance, access control, territorial reinforcement and space management.

The Guidelines aim to help councils implement and consider the CPTED principles. CPTED assessments seeks to influence the design of buildings and places by:

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

Strathfield Council, Community Safety Strategy 2016 – 2020 (2016)

Strathfield Council Community Safety Strategy 2016 – 2020 (the Strategy) sets out actions to improve community safety in the council area over a four year period. The Strategy identifies Strathfield as a known education centre in Inner West, with the LGA containing several public and private schools. Meriden High School is stated as providing education to students from overseas and students with English as a second language.

Crime data from the Bureau of Crime Statistics and Research (BOCSAR) was analysed to understand crimes rates in Strathfield and to inform future priority actions. Based on BOCSAR, motor vehicle theft and steal from motor vehicle rates have reduced by 42% and 24% respectively since 2010 and are trending down.

However, steal from person rates are extremely high in Strathfield, with the LGA having the highest ranking for this offence compared to all NSW LGAs. Steal from person is identified as an action area in the Strategy to help reduce rates and increase safety awareness. Key actions of relevance to this assessment include to:

- Activate space around hot spots to increase informal surveillance and encourage guardianship of the space.
- Provide lighting in hot spot areas and areas used for commuting.
- Increase community awareness of how to avoid victimisation, particularly around personal behaviours that contribute to risk.

Strathfield Council Development Control Plan (2005) Part M Educational Establishment

Strathfield Council Development Control Plan (2005) Part M Education Establishment applies to the construction, alteration, change of use and and/or operation of educational establishments.

Part M Section 4.14 Safety by Design outlines the relevant safety considerations to ensure educational establishments provide effective design to improve safety and security to users and minimise crime opportunities. Details of Section 4.13 Safety by Design are as follows:

Guidelines:

- a) *The 4 principles used to assess developments for minimising opportunities for crime are surveillance, access control, territorial reinforcement and space management.*

b) Good surveillance means that people can see what others are doing. Would be offenders are often deterred from committing crime in areas with high levels of surveillance. From a design perspective, 'deterrence' can be achieved by:

- *clear sightlines within an educational establishment site and between public and private places*
- *eliminating hiding places*
- *effective lighting of pedestrian pathways, car parks and access ways*
- *landscaping that does not provide offenders with a place to hide or entrap victims.*

c) Access control means making it clear where people are permitted to go or not go. Illegible boundary markers and confusing spatial definition make it easy for criminals to make excuses for being in restricted areas. However barriers should not be tall or hostile creating the effect of a compound. Effective access control can be achieved by creating:

- *landscapes and physical locations that channel and group pedestrians into target areas*
- *restricted access to internal areas like car parks or other rarely visited areas.*

Territorial reinforcement can be achieved through design with clear transitions and boundaries between public and private space and clear design cues on who is to use space and what it is to be used for.

e) Space management ensures that space is appropriately utilised and well cared for. Space management strategies include maintaining site cleanliness, the rapid repair of vandalism and graffiti, the replacement of faulty pedestrian and car park lighting and the removal or refurbishment of decayed physical elements.

Requirement:

1. Educational establishments shall satisfactorily incorporate principles of safety by design set out in the Guidelines above.

4. COMMUNITY PROFILE

The profile of a community can influence the type and likelihood of crime that may impact a development. The following section contains a brief analysis of the characteristics of Strathfield suburb based on data from the Australian Bureau of Statistics (ABS) and the Bureau of Crime Statistics and Research (BOCSAR).

4.1. DEMOGRAPHICS

The full demographic summary table is provided in **Appendix A**.

In 2016, Strathfield suburb had a population of 25,813 people, representing 64% of Strathfield LGA's population. Key findings of the suburb's population include:

- The suburb is a family area, with the majority of the population living in family households (71.4%) as couple families with children (49.6%).
- Strathfield is characterised as a young, education precinct. A third (33.7%) of the population attend university or a tertiary institution which is reflected in the higher rates of people aged 20 – 29 years (25.5%). By comparison, only 19.2% of Greater Sydney attend university and 15% are aged 20 – 29 years.
- In relation to school rates, 15% of the suburb attend primary school and 17.2% attend secondary school which is slightly lower compared to Strathfield LGA (18.4% and 18.1% respectively).
- Strathfield is highly culturally diverse, with only 34.6% of the population born in Australia and 29.1% speaking English only at home. By comparison, 57.1% of Greater Sydney were born in Australia and 58.4% speak English only at home.
- The suburb is considerably less car dominant compared to Greater Sydney. A fifth (18.0%) of the suburb do not own a car and 42% use public transport to travel to work which is considerably higher than Greater Sydney (11.1% and 22.8% respectively).
- Strathfield suburb is highly advantaged. SEIFA results indicate the suburb is in the top ten percent of all NSW suburbs for advantaged and disadvantaged. The suburb also has a higher median weekly household income (\$1,892) compared to Strathfield LGA (\$1,781) and Greater Sydney (\$1,750).

4.2. CRIME

Crime data from the NSW Bureau of Crime Statistics and Research (BOCSAR) was analysed to identify the crime profile in Strathfield suburb. For comparison purposes, data for both Strathfield LGA and NSW has been used to help assess risk compared to LGA and state wide averages. The full crime profile is contained in **Appendix B**.

For the purposes of this report, only crime relating to motor vehicle and personal theft was analysed. Of the crime types assessed, key findings include:

- Over the past two years (October 2016 to September 2018), crime types in Strathfield suburb have stabilised.
- From October 2017 to September 2018, Strathfield suburb had lower crime rates (per 100,000 people) for 'motor vehicle theft' and 'steal from motor vehicle' compared to Strathfield LGA and NSW.
- 'Steal from persons' crime rates are considerably higher in Strathfield suburb (99.8) compared to NSW (55.0).
- BOCSAR publishes hotspot maps to illustrate areas of high crime density relative to concentrations across NSW. These maps highlight that the site is in a crime hotspot for 'motor vehicle theft', 'steal from motor vehicle' and 'steal from persons'. However, the majority of these hotspots are concentrated on Strathfield Station to the north east of the site.

4.3. ROAD AND PEDESTRIAN SAFETY

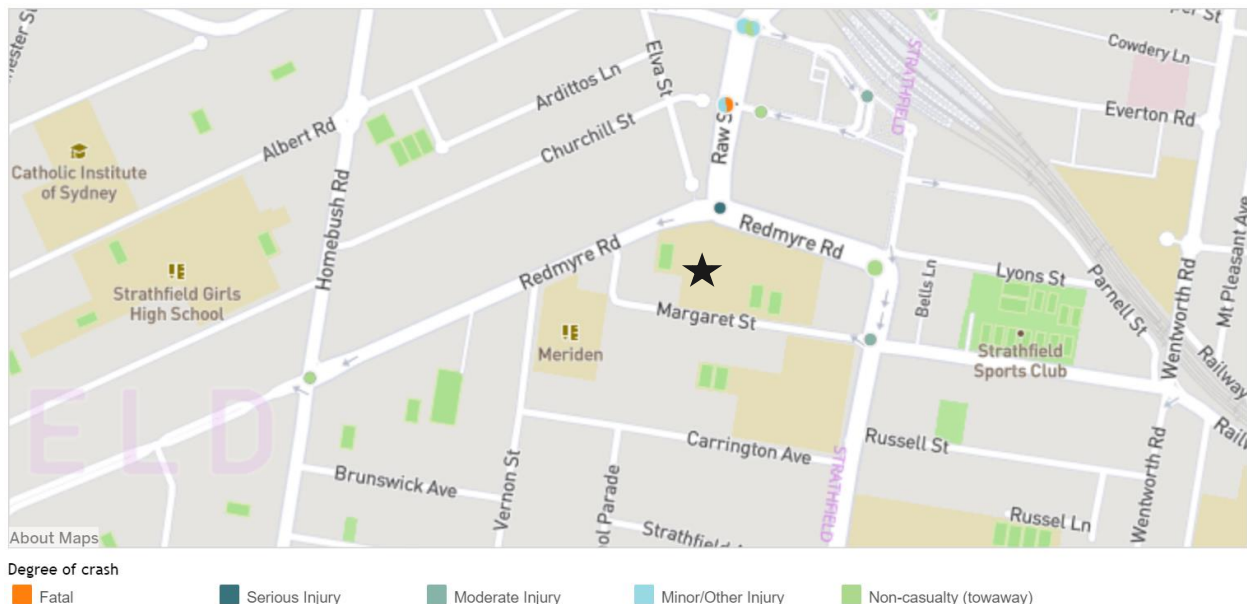
Transport for NSW Centre for Road Safety provides road crash data to obtain information on deaths and serious injuries for all crashes across the state. Key crash and casualty data of relevance to this assessment include:

- From 2013 to 2017, there were 767 crashes in Strathfield LGA and 981 crash casualties.
- Crashes were generally less severe in the LGA, with 12% of crashes resulting in serious injury compared to 19% in NSW. The majority of crashes in the LGA resulted in a non-casualty (44%) or a minor/other injury (24%).
- Similarly, crash casualties in Strathfield LGA were also less severe compared to NSW. Only 18% of casualties in the LGA were serious injuries compared to 27% in NSW. The majority of Strathfield LGA casualties were minor/other injuries (47%) followed by moderate injuries (34%).
- Casualty statistics can be further classified by road user and age. The statistics for pedestrian users and school aged children (0 – 20 years) were analysed in Strathfield LGA to more accurately reflect the main user groups of Meriden School.
- From 2013 to 2017, there were 9 pedestrian casualties in Strathfield LGA in people aged 0 – 20 years. Of these casualties, 22% resulted in a serious injury (2 casualties), 56% in moderate injury (five casualties) and 22% in minor/other injury (2 casualty).
- By comparison, pedestrian casualties in people aged 0 – 20 years across NSW were more severe with 1% resulting in a fatality and 44% in serious injury.

Transport for NSW Centre for Road Safety also publishes maps which show the location and severity of each crash. Figure 4 and Figure 5 show the crashes which occurred on adjacent streets around the site in 2016 and 2017 respectively.

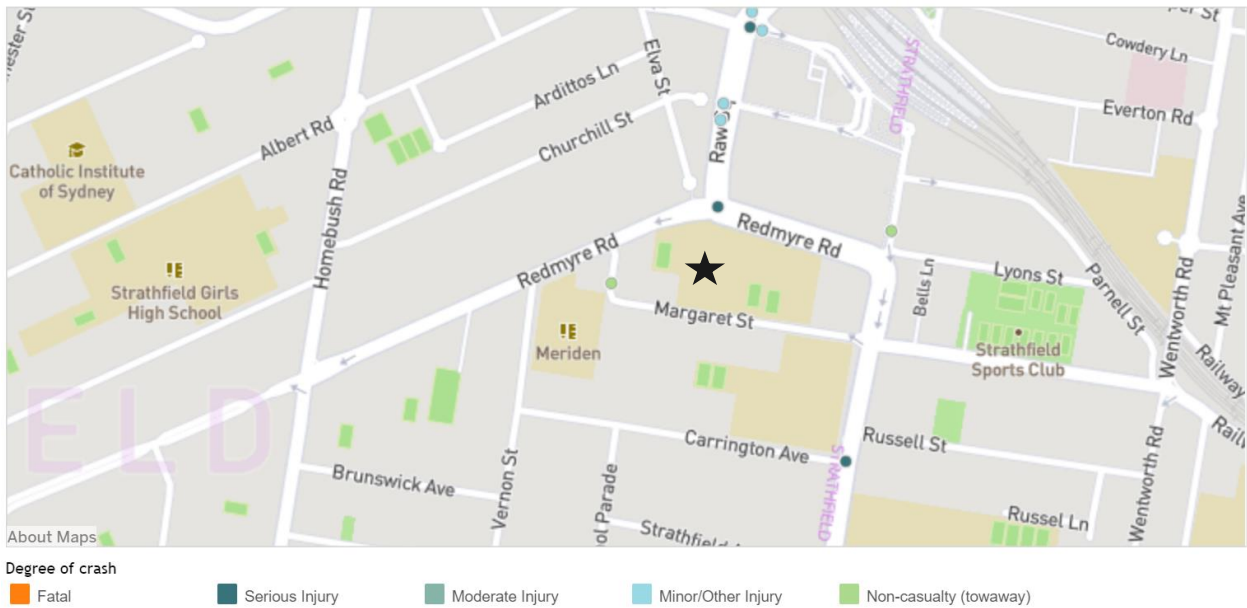
The number of car crashes around the site have remained relatively consistent, with 10 in 2016 and nine in 2017. The severity of crash casualties have decreased, with the majority of crashes in 2017 resulting in minor/other injuries and no recorded fatalities. It should be noted that the fatality recorded in 2016 on Raw Square occurred in the evening (9pm) outside of school hours.

Figure 4 – Crashes map Strathfield LGA, 2016. Site indicated by black star.



Source: Transport for NSW

Figure 5 – Crashes map Strathfield LGA, 2017. Site indicated by black star.



Source: Transport for NSW

5. CPTED ASSESSMENT

5.1. CPTED PRINCIPLES

A CPTED Assessment identifies and analyses potential improvements to the design of a project which may help reduce crime and anti-social behaviour as per the NSW Government best practice guidelines, outlined below.

Surveillance	Access control	Territorial reinforcement	Space and activity management
			
Places that are well supervised through natural (passive), mechanical (CCTV) or organised (security guard) surveillance are less likely to attract criminal behaviour.	Designing spaces to control who enters and prevent unauthorised access. This can be achieved through natural barriers, mechanical controls or formal controls.	The way in which a community demonstrates ownership over a space. Places that feel owned and cared for are likely to be used, revisited and protected.	Space and activity management involves monitoring site usage, managing site cleanliness and repairing vandalism and broken physical elements to decrease fear of crime.

5.2. PRIORITY AREAS

This CPTED assessment specifically addresses the SEARs requirement to consider:

An assessment of road and pedestrian safety adjacent to the proposed development and the details of the required road safety measures and personal safety in line with CPTED.

The following discussion provides a detailed assessment and recommendations for each school campus development in accordance with SEARs.

5.3. SENIOR AND PREP CAMPUSES

5.3.1. Road and pedestrian safety

Existing environment

Data from the Transport for NSW Centre for Road Safety indicates there were nine car crashes in 2017 in streets surrounding the site. The majority of crashes were minor or resulted in non-casualty (towaway). Consultation with the school indicates there have been no reported crashes or pedestrian incidents reported during school peak times.

Margaret Street is the main vehicle access to the senior and prep campuses and has a pedestrian crossing to allow safe movement between the campuses. The Transport Assessment prepared by Ason Group notes that vehicle and bus queuing for afternoon pick ups often block Redmyre Road and Margaret Street. The Transport Assessment considered that these traffic conditions clear quickly and are typical of school peak environments. Consultation with the school indicates that Margaret Street is very busy with pick up/drop traffic during the school AM (8:00 – 8:20) and PM (2:50 – 3:30) peak and presents concerns for road and pedestrian safety.

Site visit observations indicated the Margaret Street pedestrian crossing presents some safety risks with at least four driveways in proximity to the crossing, faded line markers and a narrow crossing which limits the amount of people able to cross concurrently.

Assessment of proposed development

The proposal includes the construction of a three storey Centre for Music and Drama (CMD) on the senior campus and a two storey teaching and administration building on the prep campus. Both buildings front Margaret Street, providing opportunities for casual surveillance to observe pedestrian and vehicle movements.

The teaching and administration building will contain a study/common space for senior students which is expected to increase student pedestrian movement across Margaret Street. Safe pedestrian movement will be facilitated via the Margaret Street pedestrian crossing with a direct walkway to the building.

Recommendations

- Upgrade the Margaret Street pedestrian crossing on to improve the safety of the crossing. The following pedestrian treatments may be considered in consultation with transport authorities:
 - Widen the pedestrian crossing to allow for more people to cross concurrently.
 - Install low median strip barriers on Margaret Street to prevent U-turns by vehicles and to draw attention to the upcoming crossing.
 - Re-paint line crossings and consider zig zag lines on the road to ensure the crossing is visible and vehicles approach with caution.
- Maintain landscaping schedule to ensure sight lines are not impacted between the proposed buildings and the Margaret Street crossing.
- Pedestrian walkways from the proposed buildings to Margaret Street should be well-lit to provide safe movement at night.

5.3.2. Personal safety

Existing environment

Steal from persons rates are extremely high in Strathfield LGA, with the LGA having the highest rank for this offence in NSW LGA's. The campuses all contain perimeter fencing which provides clear separation between public and private areas. Gates are closed and/or locked after hours to prevent unauthorised access. There are approximately five CCTV cameras on site which are located primarily on access points. The school is currently investing in a new CCTV network to include up to 15 cameras.

Assessment of proposed development

The proposal includes the relocation of the senior study/common space to the new teaching and administration building on the prep campus. It is expected this space will continue to open until 8:30pm for students. A patrolling security guard is available on campuses during this time if needed by the senior students.

The new Centre for Music and Drama is expected to host student practice before and after school and may host evening events. Both buildings have frontages to Margaret Street, providing greater opportunities for casual surveillance particularly during the evening.

Recommendations

- Formalise an operational plan to manage student safety outside of regular school hours. This should include clear communication to the students regarding access, emergency contact numbers and procedures, and guidance around safe travel during the evening.
- Consider installing CCTV cameras at the main access points to the proposed buildings. Priority should be given to spaces used regularly outside of general school hours.
- Implement access control for spaces used outside of school hours, particularly the senior study/common space, to prevent unauthorised access.

5.4. JUNIOR SCHOOL

5.4.1. Road, pedestrian and personal safety

Existing environment

Perimeter fencing around the junior school campus provides clear separation from private and public areas. Electronic access control is provided on campus to prevent un-authorised access. A single storey house currently occupies 4 Vernon Street and is used and owned by the school. A shared driveway is located between 2 and 4 Vernon Street.

Existing road and pedestrian environment

The junior campus is bound by Vernon Street and Margaret Street. Transport for NSW Centre for Road Safety crash data indicates there were no car crashes on Vernon Street outside the campus in 2017 and one non-casualty (towaway) incident on Margaret Street. The campus is located on the perimeter of a crime hotspot for steal from motor vehicle crimes.

Direct pedestrian access to the school is via Vernon Street. Vehicle and bus access are facilitated via kiss and ride/bus zones in Vernon Street during the AM peak and Margaret Street during PM peak.

Assessment of proposed development

The proposal involves the demolition of the single storey house at 4 Vernon Street and the construction of a school playground. The playground will be separated from the Vernon Street frontage by boundary fencing and garden and landscaping works. The current gate access on Vernon Street will be removed to prevent unauthorised access. The playground will be accessible from internal school grounds only.

The shared driveway between 2 and 4 Vernon Street will remain on site, with a brick wall providing separation between the driveway and playground. The driveway will lead to a singular car space at the rear of the playground which will be retained. The car space will be gated and features a retaining wall on two boundaries to prevent vehicle overrun and to provide separation with the main junior campus. The car space will have landscape pavers to allow the area to be used by students for seating and/or play.

Recommendations

- Implement a low speed zone for the shared driveway to reduce potential pedestrian and vehicle conflicts.
- Establish appropriate protocols to ensure safe use of the car space and to reduce the potential conflict with playground uses. Consideration should be given to entering/exit the vehicle space when the playground is not in use.
- Provide clear communication to staff regarding the appropriate use of the vehicle space (for either cars or student play area) to ensure safe use.
- Maintain landscaping of playground and associated boundary treatments to uphold sightlines within the playground and with the main junior campus.

6. CONCLUSION

Urbis has undertaken a CPTED assessment for the proposed SSD at Meriden School, Strathfield in accordance with the SEARs requirement to assess road, pedestrian and personal safety in line with CPTED principles.

The assessment found that the design incorporates a number of CPTED principles, including safe road procedures, access control and landscape maintenance which maximise student and road and pedestrian safety on site. The upgrade of the Margaret Street pedestrian crossing, installation of CCTV cameras and development of a formalised operational plan for the school campuses will further enable the proposed development to adequately incorporate CPTED principles.

DISCLAIMER

This report is dated 11 April 2019 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd's (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Meriden Anglican School (**Instructing Party**) for the purpose of CPTED Assessment (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

In preparing this report, Urbis may rely on or refer to documents in a language other than English, which Urbis may arrange to be translated. Urbis is not responsible for the accuracy or completeness of such translations and disclaims any liability for any statement or opinion made in this report being inaccurate or incomplete arising from such translations.

Whilst Urbis has made all reasonable inquiries it believes necessary in preparing this report, it is not responsible for determining the completeness or accuracy of information provided to it. Urbis (including its officers and personnel) is not liable for any errors or omissions, including in information provided by the Instructing Party or another person or upon which Urbis relies, provided that such errors or omissions are not made by Urbis recklessly or in bad faith.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A DEMOGRAPHIC PROFILE

Demographic table – 2016 ABS Census data

Data item	Strathfield suburb	Strathfield LGA	Greater Sydney (GCCSA)
Population	25,813	40,312	4,823,991
Median age	32	32	36
Average people per household	3	3	2.8
Age distribution (%)			
Aged 0-4	4.3%	5.7%	6.4%
Aged 5-9	4.0%	4.9%	6.4%
Aged 10-14	4.3%	4.8%	5.8%
Aged 15-19	6.2%	6.1%	6.0%
Aged 20-24	11.7%	9.6%	7.1%
Aged 25-29	13.8%	12.4%	7.9%
Aged 30-34	9.9%	10.6%	8.1%
Aged 35-39	6.5%	7.3%	7.4%
Aged 40-44	5.0%	5.8%	7.1%
Aged 45-49	5.5%	5.7%	6.7%
Aged 50-54	5.9%	5.9%	6.3%
Aged 55-59	5.4%	5.4%	5.8%
Aged 60-64	4.2%	4.3%	5.0%
Aged 65-69	3.5%	3.3%	4.4%
Aged 70-74	2.8%	2.6%	3.3%
Aged 75-79	2.4%	2.1%	2.4%
Aged 80-84	2.0%	1.7%	1.8%
Aged 85+	2.7%	1.9%	2.0%
Country of birth and Indigenous identification (%)			
Australia	34.6%	36.7%	57.1%
Born overseas country #1	China: 10.3%	India: 10.9%	China: 4.7%
Born overseas country #2	India: 10.1%	China: 10.0%	England: 3.1%

Data item	Strathfield suburb	Strathfield LGA	Greater Sydney (GCCSA)
Born overseas country #3	Republic of South Korea: 9.8%	Republic of South Korea: 7.7%	India: 2.7%
Aboriginal or Torres Strait Islander	0.2%	0.3%	1.5%
Language spoken at home (%)			
English only	29.1%	29.3%	58.4%
Language other than English #1	Korean: 10.9%	Mandarin: 10.0%	Mandarin: 4.7%
Language other than English #2	Mandarin: 10.6%	Korean: 8.8%	Arabic: 4.0%
Language other than English #3	Cantonese: 7.6%	Cantonese: 7.0%	Cantonese: 2.9%
Family composition (%)			
Couple family without children	34.0%	31.3%	33.4%
Couple family with children	49.6%	52.1%	49.5%
One parent family	12.8%	13.7%	15.2%
Other family	3.6%	2.9%	1.8%
Household composition (%)			
Family households	71.4%	74.5%	73.6%
Lone person households	17.7%	17.5%	21.6%
Group households	10.9%	8.1%	4.7%
Dwelling structure (%)			
Separate house	47.3%	41.8%	56.9%
Semi-detached	4.8%	6.4%	14.0%
Flat or apartment	47.1%	49.9%	28.1%
Other dwelling	0.4%	1.0%	0.6%
Tenure (%)			
Owned outright	30.1%	25.2%	29.1%

Data item	Strathfield suburb	Strathfield LGA	Greater Sydney (GCCSA)
Owned with mortgage	23.1%	28.1%	33.2%
Rented	41.7%	42.5%	34.1%
Other tenure type	0.7%	0.5%	0.9%
Employment (%)			
Unemployed	6.8%	7.0%	6.0%
Occupation (%)			
Professionals	33.7%	31.8%	26.3%
Technicians and Trades Workers	9.9%	10.3%	11.7%
Clerical and Administrative Workers	13.1%	13.9%	14.6%
Managers	11.4%	11.6%	13.7%
Sales Workers	9.7%	9.2%	9.0%
Labourers	8.2%	7.9%	7.5%
Community and Personal Service Workers	8.6%	8.6%	9.6%
Machinery Operators and Drivers	2.8%	4.1%	5.6%
Income (\$)			
Median personal weekly income	\$662	\$682	\$719
Median family weekly income	\$1,985	\$1,894	\$1,988
Median household weekly income	\$1,892	\$1,781	\$1,750
Education (%)			
Preschool	3.0%	4.0%	5.5%
Primary	15.0%	18.4%	26.0%
Secondary	17.2%	18.1%	19.8%

Data item	Strathfield suburb	Strathfield LGA	Greater Sydney (GCCSA)
Technical or further education institution	7.1%	6.3%	6.1%
University or tertiary institution	33.7%	27.0%	19.2%
Level of highest educational attainment (%)			
Year 9 or below	4.7%	5.1%	7.1%
Year 10	4.9%	5.7%	9.4%
Year 11	2.1%	2.5%	3.1%
Year 12	22.2%	21.0%	17.3%
Certificate level I-IV	5.1%	6.5%	12.2%
Advanced Diploma and Diploma level	8.0%	8.2%	9.3%
Bachelor Degree level and above	40.9%	38.0%	28.3%
Motor vehicles (%)			
None	18.0%	13.8%	11.1%
1 motor vehicle	37.2%	40.6%	37.1%
2 motor vehicle	25.1%	27.7%	32.8%
3 or more vehicles	14.7%	13.7%	15.7%
Travel to work (%)			
People who travel to work by public transport	42.0%	36.3%	22.8%
People who travelled to work by car as driver or passenger	44.4%	50.6%	59.8%

Socio Economic Indexes for Areas (SEIFA)

The Socio-Economic Indexes for Areas (SEIFA) has been developed by the Australian Bureau of Statistics (ABS) to provide an overview of social and economic wellbeing and welfare of communities across a range of spatial scales. Four indices have been developed:

- Index of Relative Socio-Economic Disadvantage: focuses primarily on disadvantage, and is derived from Census variables like low income, low educational attainment, unemployment, and dwellings without motor vehicles.

- Index of Relative Socio-Economic Advantage and Disadvantage: is a continuum of advantage (high values) to disadvantage (low values), and is derived from Census variables related to both advantage and disadvantage.
- Index of Economic Resources: focuses on financial aspects of advantage and disadvantage, using Census variables relating to residents' incomes, housing expenditure and assets.
- Index of Education and Occupation: includes census variables relating to the educational attainment, employment and vocational skills.

Scores: A lower score indicates that an area is relatively disadvantaged compared to an area with a higher score. The area with the lowest score is given a decile of 1, the area with the second lowest score is given a decile of 2 and so on, up to the area with the highest score is given the highest decile.

Table 1 – SEIFA Index, 2016

	Advantage and Disadvantage	
	Score	Decile
Strathfield Suburb	1078	10
Strathfield LGA	1063	10

APPENDIX B CRIME PROFILE

Table 2 – Crime rates per 100,000 people (October 2017 – September 2018).

Crime type	Strathfield suburb	Strathfield LGA	NSW
Motor vehicle theft	118.3	137.0	166.5
Steal from motor vehicle	295.7	415.8	490.5
Steal from persons	99.8	118.1	55.0

Source: BOCSAR

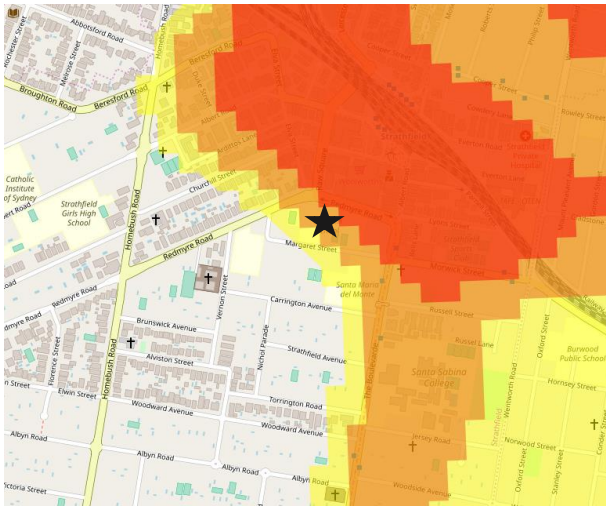
The following table contains the two year crime trends for [LGA name] and NSW. BOCSAR does not calculate crime trends at a suburb level.

Table 3 – Two year crime trends (October 2016 – September 2018)

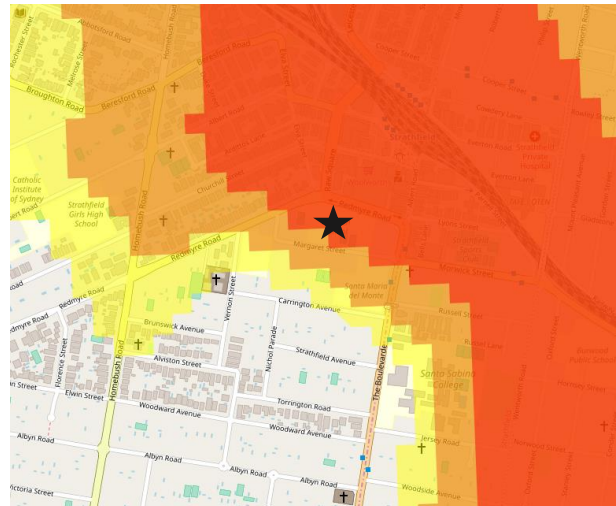
Crime type	Strathfield LGA	NSW
Motor vehicle theft	Stable	Down 3.2%
Steal from motor vehicle	Stable	Down 2.8%
Steal from persons	Stable	Down 8.4%

BOCSAR publishes 'hotspot' maps to illustrate areas of high crime density relative to crime concentrations across NSW. The maps overleaf show that there are hot spots for motor vehicle theft, steal from motor vehicle and steal from persons.

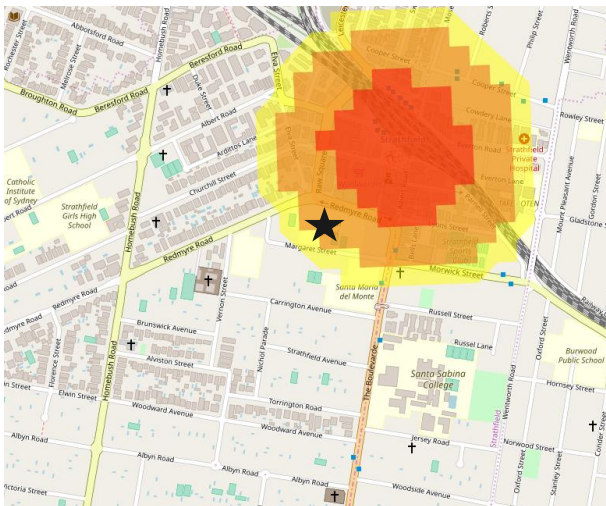
Figure 6 – Crime hotspots, October 2017 – September 2018. Site indicated by black star. Source: BOCSAR



Picture 7 – Motor vehicle theft



Picture 8 – Steal from motor vehicle



Picture 9 – Steal from persons



BRISBANE

Level 7, 123 Albert Street
Brisbane QLD 4000
Australia
T +61 7 3007 3800

MELBOURNE

Level 12, 120 Collins Street
Melbourne VIC 3000
Australia
T +61 3 8663 4888

PERTH

Level 14, The Quadrant
1 William Street
Perth WA 6000
Australia
T +61 8 9346 0500

SYDNEY

Level 23, Darling Park Tower 2
201 Sussex Street
Sydney NSW 2000
Australia
T +61 2 8233 9900