ENVIRONMENTAL IMPACT STATEMENT

# MERIDEN SCHOOL STRATHFIELD REDEVELOPMENT

4 July 2019
SSD 9692
FORMAL LODGEMENT
PREPARED FOR MERIDEN SCHOOL

URBIS

**URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:**

| | |
|---|---|
| Director | Sarah Horsfield |
| Consultant | Anna Wang |
| Job Code | SSD 9692 |
| Version | Formal lodgement |

# TABLE OF CONTENTS

**FIGURES:**



**TABLES:**

# GLOSSARY AND ABBREVIATIONS

| Abbreviation | Meaning |
|---|---|
| ACHA | Aboriginal Cultural Heritage Assessment |
| AHIMS | Aboriginal Heritage Information Management System |
| AS | Australian Standard |
| ASS | Acid Sulfate Soils |
| BC Act | *Biodiversity Conservation Act 2016* |
| BCA | Building Code of Australia |
| BDAR | Biodiversity Assessment Report |
| CMD | Centre of Music and Drama |
| CMP | Construction Management Plan |
| Council | Strathfield Council |
| CPTED | Crime Prevention Through Environmental Design |
| CPTMP | Construction Parking and Traffic Management Plan |
| District Plan | *Eastern City District Plan* |
| DOPIE/Department | NSW Department of Planning, Industry and Environment |
| DP | Deposited Plan |
| DSI | Detailed Site Investigation |
| EIS | Environmental Impact Statement |
| EPA | *NSW Environment Protection Authority* |
| EPBC Act | *Environment Protection and Biodiversity Conservation Act 1999* |
| ESD | Ecologically Sustainable Development |
| ESEPP | *State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017* |
| GANSW | NSW Government Architect's Office |
| HIS | Heritage Impact Statement |
| HMS | Hazardous Materials Survey |
| IMP | Infrastructure Management Plan |
| Infrastructure Strategy | *State Infrastructure Strategy 2018-2038* |

| Abbreviation | Meaning |
|---|---|
| LGA | Local Government Area |
| m | metre |
| NIA | Noise Impact Assessment |
| OEH | Office of Environment and Heritage |
| OWMP | Operational Waste Management Plan |
| PSI | Preliminary Site Investigation |
| Region Plan | *A Metropolis of Three Cities – Greater Sydney Region Plan* |
| RAP | Remediation Action Plan |
| RAPs | Registered Aboriginal Parties |
| RMS | Roads and Maritime Services |
| SEARs | Secretary's Environmental Assessment Requirements |
| SEPP | State Environmental Planning Policy |
| SEPP 55 | *State Environmental Planning Policy No.55 – Remediation of Land* |
| SEPP 64 | *State Environmental Planning Policy No. 64 – Advertising and Signage* |
| sqm | Square Metres |
| SSD | State Significant Development |
| SEPP SRD | *State Environmental Planning Policy (State and Regional Development) 2011* |
| SSDA | State Significant Development Application |
| Strathfield LEP 2012 | Strathfield Local Environmental Plan 2012 |
| Strathfield SDCP 2005 | Strathfield Consolidated Development Control Plan 2005 |
| TfNSW | Transport for New South Wales |
| The Minister | the Minister for Planning, Industry and Environment |
| The Regulation | *Environmental Planning and Assessment Regulation 2000* |
| The School | Meriden School |
| TPZ | Tree Protection Zone |
| Transport Strategy | *Future Transport Strategy 2056* |
| Urbis | Urbis Pty Ltd |
| WSUD | Water Sensitive Urban Design |

# SIGNED DECLARATION

This Environmental Impact Statement (EIS) has been prepared in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulations 2000.*

| **Environmental Assessment Prepared by:** | |
|---|---|
| Names: | Sarah Horsfield (Director)<br>*Bachelor of Town Planning, University of New South Wales, Master of Environmental Law (University of Sydney)*<br>Anna Wang (Consultant)<br>*Bachelor of Town Planning (Hons), University of New South Wales* |
| Address: | Urbis Pty Ltd<br>Angel Place, Level 8, 123 Pitt Street<br>Sydney, NSW 2000, Australia |
| In respect of: | Meriden School Strathfield |

| **Applicant and Land Details:** | |
|---|---|
| Applicant: | Meriden School C/- Urbis Pty Ltd |
| Applicant Address: | Urbis Pty Ltd<br>Angel Place, Level 8, 123 Pitt Street, Sydney, NSW 2000, Australia |
| Land to be developed: | Senior Campus: Lot 101 DP862040 3-13 Margaret Street & 10-28 Redmyre Road Strathfield<br>Junior Campus: Lot 1 DP1244199 36-38 Redmyre Road Strathfield<br>Lingwood Prep School Campus: Lot 1 DP723946 16 & 16B Margaret Street Strathfield |
| Project: | The proposed works comprise:<br>• Demolition of existing music building and construction of a new 3-storey above ground (with one level below ground) Centre for Music and Drama (Senior Campus);<br>• Demolition of existing single storey building and construction of a new 2- storey teaching and administration building (Lingwood Campus); and<br>• Demolition of existing dwelling and garage at 4 Vernon Street, creation of new landscaped playground area, construction of a pergola and change of use to formalise the use of 4 Vernon Street to permit *educational establishments* (Junior School Campus). |

I certify that the contents of the Environmental Impact Statement, to the best of my knowledge, has been prepared as follows:

- In accordance with Schedule 2 of the Environmental Planning and Assessment Regulations 2000;
- In accordance with the requirements of the Environmental Planning and Assessment Regulations 2000; and State Environmental Planning Policy (State and Regional Development) 2011;
- The statement contains all available information that is relevant to the environmental assessment of the proposed development; and
- The information contained in this report is neither false nor misleading.

| | | |
|---|---|---|
| Name: | Sarah Horsfield, Director | Anna Wang, Consultant |
| Signature: |  |  |
| Date: | 5 July 2019 | 5 July 2019 |

# EXECUTIVE SUMMARY

This Environmental Impact Statement (EIS) has been prepared by Urbis Pty Ltd on behalf of Meriden School Strathfield (the Applicant) in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulations 2000*. This EIS supports the State Significant Development (SSD) Development Application (DA) SSD_9692 to guide the future development at Meriden School, Strathfield (the site).

This EIS responds to the Secretary's Environmental Assessment Requirements (SEARs) attached at Appendix A. This document should be read in conjunction with the supporting documents provided at Appendix B to Appendix FF.

## The Site

Meriden School Strathfield is located across three campuses, which are within close proximity to one another however are not contiguous landholdings. The SSD relates to all three campuses, which are:

- Senior School Campus: 3-13 Margaret Street & 10-28 Redmyre Road
- Junior Campus: 36-38 Redmyre Road; and
- Lingwood Prep School Campus: 16B – 16 Margaret Street

The site is located within the Strathfield Local Government Area (LGA).

## The Proposal

The proposed SSDA comprises development on each of the three Meriden School campuses. The primary objective of the proposal is to improve the current school facilities to cater for the increased demand for high quality music teaching and learning spaces from existing students, more contemporary teaching spaces (replacing the existing demountable), additional administration facilities and increasing the playground area in the Junior School Campus.

The proposed new teaching facilities within the existing campus area will result in an increased capacity of approximately 50 students across all three campuses. Increasing the school's current total capacity from approximately 1,500 students to approximately 1,550 students across all three campuses.

The proposal seeks consent for the following:

**Senior School Campus – New Centre for Music and Drama**

The demolition of the existing music building located close to the south-western corner of the Senior School Campus and the construction of a new 3-storey building above ground (with two levels below ground) building incorporating a new music academy, drama facilities, music teaching rooms and staff facilities.

The consent for demolition of the drama building located at the south-western corner of the campus was previously granted by Strathfield Council under DA 2014/23 in 16 September 2014. Demolition of the drama building will be carried out under DA 2014/23. This SSDA, does however, seek consent for a revised end-state landscaping design in place of the demolished drama building.

**Junior School – New Landscaped Playground**

The SSDA seeks approval for the demolition of the existing residential dwelling at 4 Vernon Street to make way for a new landscaped playground area for the use of Meriden Junior School. The additional open space can be used for students during recess or lunchtime, as well as an outdoor classroom. The existing garage to the east of the site is to be demolished and a pergola structure is to be constructed. It is also proposed to change the use of the site at 4 Vernon Street to permit *educational establishments*.

**Lingwood Prep School – New Administration and Student Centre**

The Lingwood Prep School site is currently undergoing redevelopment in accordance with DA 2017/159 approved by Strathfield Council on 19 March 2018. The SSDA seeks approval for a teaching and administration building.

To accommodate the new Administration and Student Centre, the existing single-storey building currently used as Business Office is proposed to be demolished. The new two-storey building is designed with maximum flexibility and is able to accommodate a wide range of uses to support the school, and to adapt

with the demands of the school. The proposed building will provide for additional administration spaces and Year 12 student centre, to free up space in the Senior campus for teaching.

## School Vision and Need for The Proposal

For more than 120 years, Meriden has proven its ability to meet and embrace change without losing the ethos and traditions that have stood it in good stead. Meriden adheres firmly to three educational objectives: a high academic standard; the incorporation of Christian values in the educational process; and the creation of an environment conducive to the personal, intellectual and physical development of young women.

Meriden is renowned for its high-quality music program. Not only do the School's orchestras and choirs win prestigious awards and competitions, the music program at the School has a high participation rate: nearly 500 girls across the School are involved in music ensembles, the Music Academy or the Composition Club. The subject of Music is studied by every student from Pre-Kindergarten to Year 8; Music as an elective is chosen by many girls from Year 9 -Year 12. The positive impact of music on the cognitive and emotional development of children is beyond doubt. Recent research has indicated that musicians have more well-developed brains and that musical children tend to perform better in their learning and other cognitive areas. At Meriden, music is also used in praise and worship of God in Chapel and elsewhere.

Furthermore, Drama and Musical Theatre are growing in popularity and expertise. The ability to empathise can be taught through Drama, and Musical Theatre is a wonderful source of joy and fun. It is little wonder that many girls across the School are choosing to be involved in Drama and Musical Theatre performances; these electives are also common choices for girls in Meriden's Senior School.

The current facilities for Music and Drama at the School are proving to be inadequate. The School needs more classrooms, more performance spaces, more music studios and more composition facilities.

To achieve this, and as part of the Go Girl: Strengthening Meriden's Voice Strategic Plan 2017 – 2019, Meriden has focused on providing for a high-quality Centre for Music and Drama, additional green space on both the Junior and Senior School campuses, more facilities for research and collaborative learning in STEM-related areas and new administrative areas.

The new Centre for Music and Drama will consist of Music Academy studios, a large Drama studio, classrooms, performance spaces and staff rooms to meet the ever-increasing demand for high-quality music education. New outdoor play space and additional classrooms will be provided for the Junior campus, and the new playground has been designed to enhance the leafy green character of Vernon Street. The new building within the Lingwood campus will accommodate Business Services, the ICT Department and a new Year 12 Centre. As a result of this new building, space on the Senior School campus will be available for additional classrooms and other learning spaces.

Meriden is confident that the final outcome will provide modern, state-of-the art learning and play spaces for its students, which will still preserve the heritage and character of the School and environment. The final outcome is designed to build upon the progress that the School has made in recent times, to address issues currently facing Australian school girls, to continue to prepare Meriden graduates for their futures, and enable the School to continue to make a significant contribution to Australian education.

## Project Objectives

- To provide a new Music and Drama centre in the Senior campus and a new Administration and Student Centre in the Prep school campus to meet the growing demand from students;
- To provide music and drama learning spaces within the senior school footprint. To meet contemporary learning standards and provide a new state-of-the-art facility and spaces;
- To enable high-quality teaching facility beyond what the School can currently provide;
- Allow for the relocation and consolidation of administration functions to the central zone of three campuses, which will service both the junior and senior school;
- To provide much needed additional outdoor landscaping and recreational areas; and
- Create additional opportunities to share resources and facilities between the School and the school community, through potential shared access to the new Music and Drama Centre and recreational areas

## Planning Framework

Pursuant to Schedule 15 of *State Environmental Planning Policy (State and Regional Development) 2011*, alterations and additions to an existing 'educational establishment' with a capital investment value (CIV) of more than $20 million is identified as 'SSD'.

The CIV for the proposal is calculated at over $20 million. This is detailed in the Quantity Surveyors Cost Assessment at Appendix B. As the cost of works exceeds $20 million, the proposal is SSD and the EIS will be submitted to the NSW Department of Planning, Industry and Environment (DOPIE) for assessment and determination.

## Consultation

Urbis was engaged to provide information and collect feedback on the SSD DA proposal. Community and stakeholder consultation was undertaken, including:

- Neighbouring land owners and residents
- Meriden school community
- Strathfield Council
- NSW Government Architect's Office (GANSW)
- Transport for NSW (TNSW)
- Roads and Maritime Services (RMS)
- Service providers

Overall, feedback on the proposed SSDA was positive and supportive of the objectives of the proposal. Feedback from GANSW have been adopted in the final design of the school buildings.

## Assessment

The key issues for all components of the project identified in the SEARs have been assessed in detail, with specialist reports underpinning the key findings and recommendations identified in the Impact Assessment in Section 6. It has been demonstrated that for each of the likely impacts identified in the assessment of the key issues will either be positive or can be appropriately mitigated. In many cases, the environmental management controls and operational protocols inherent to operation of the School adequately manage and/or mitigate the potential impacts.

The proposal represents a positive development outcome for the site and surrounding area for the following reasons:

**The proposal is consistent with state and local strategic planning policies:**

The proposal has been designed to be consistent with the relevant goals and strategies contained in *NSW State Priorities, The Greater Sydney Regional Plan, A Metropolis of three cities, Future Transport Strategy 2056, State Infrastructure Strategy 2018 – 2038 Building the Momentum, Sydney's Cycling Future 2013, Sydney's Walking Future 2013, Sydney's Bus Future 2013, Better Placed: An integrated design policy for the built environment of New South Wales (GANSW, 2017),* and the *Greater Sydney Commission's Eastern City District Plan.*

**The proposal satisfies the applicable local and state development controls:**

The proposal satisfies the objectives of all relevant planning controls and achieves a high level of planning policy compliance. Where departures to the local development standards (including maximum building height) are proposed pursuant to clause 42 of the *State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017*, justification is provided.

**The design positively responds to the site conditions and future urban morphology:**

The design of the school buildings has been carefully considered to ensure they have good connections to existing school buildings and adjacent external spaces, and solar access has been maximised to all new school buildings and open spaces. The design of the senior school Centre for Music and Drama and the prep school Administration and Student Centre respects the heritage significance of both sites and these new buildings provide a positive streetscape and urban design outcome for the site.

**The proposal provides a superior development outcome for the site:**

The proposal will provide new high quality music and drama facilities, collaborative learning spaces, additional classrooms, new open play space and much needed administrative facilities that better utilise the site area and meet contemporary educational standards.

**The proposal is highly suitable for the site:**

The proposal continues the educational use of the site and seeks consent for the change of use for 2 Vernon Street to formalise its existing use for school purposes, which is permissible with consent and consistent with the zone objectives. Further, there are no significant environmental constraints that would limit the proposal from being developed at the site.

**The proposal is in the public's best interest:**

The proposal will ensure more students have access to new state-of-the-art school facilities, learning spaces, drama facilities and music teaching rooms.

The proposal has been designed to make a positive contribution to the overall built form of the site, having regard to the existing characteristic of the various school campuses and the heritage significance of various buildings on the site.

The proposal will contribute positively to energy efficiency and environmental sustainability across the site.

The proposal will also create temporary job opportunities in manufacturing, construction and construction management during the project's construction phase of works, and job opportunities in teaching and administration at the project's completion.

**The proposal appropriately satisfies each item within the Secretary's Environmental Assessment Requirements:**

The proposal satisfies the SEARS as demonstrated within this EIS.

Considering the above and the content contained in this EIS, it is recommended that the DOPIE approve this SSDA with appropriate standard conditions.

# SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

A request was made to the Minister for the Secretary's Environmental Assessment Requirements (SEARs), pursuant to Clause 3, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* and the SEARs was received on 22 November 2018. The SEARs are addressed within this report and included in full at Appendix A.

Table 1 below provides a summary of the SEARs and identifies the section of the report where the relevant requirement is addressed and/or the appendix reference for the technical consultant's report associated with that requirement.

Table 1 – Secretary's Environmental Assessment Requirements

| Item/ Description | Document/Reference |
|---|---|
| **General Requirements** | |
| The Environmental Impact Statement (EIS) must be prepared in accordance with, and meet the minimum requirements of clauses 6 and 7 of Schedule 2 the *Environmental Planning and Assessment Regulation 2000* (the Regulation).<br><br>Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development. | The Environmental Impact Statement (EIS) has been prepared in accordance with, and meet the minimum requirements of clauses 6 and 7 of *Schedule 2 the Environmental Planning and Assessment Regulation 2000 (the Regulation).*<br><br>Environmental Risk Assessment is addressed in Section 6 of the report. |
| The EIS must be accompanied by a report from a qualified quantity surveyor. | Quantity Surveyors Cost Assessment is attached at Appendix B. |
| **Key Issues** | |
| The EIS must address the following specific matters:<br><br>**Statutory and Strategic Context:**<br><br>*Biodiversity Conservation Act 2016*<br><br>*State Environmental Planning Policy (State & Regional Development) 2011*<br><br>*State Environmental Planning Policy (Infrastructure 2007)*<br><br>*State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017*<br><br>*State Environmental Planning Policy No. 64 – Advertising and Signage*<br><br>*State Environmental Planning Policy No.55 – Remediation of Land* | Statutory and Strategic Context is addressed in Sections 4 and 5 of the EIS, which includes assessment of Permissibility and development standards. |

| Item/ Description | Document/Reference |
|---|---|
| *Draft State Environmental Planning Policy (Remediation of Land)*<br><br>*ferror State Environmental Planning Policy (Environment) and*<br><br>*Strathfield Local Environmental Plan 2012.*<br><br>**Permissibility**<br><br>Detail the nature and extent of any prohibitions that apply to the development.<br><br>**Development Standards**<br><br>Identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards. | |
| **Policies** | |
| Address the relevant planning provisions, goals and strategic planning objectives in the following:<br><br>• *NSW State Priorities*<br>• *The Greater Sydney Regional Plan, A Metropolis of three cities*<br>• *Future Transport Strategy 2056*<br>• *State Infrastructure Strategy 2018 – 2038 Building the Momentum*<br>• *Sydney's Cycling Future 2013*<br>• *Sydney's Walking Future 2013*<br>• *Sydney's Bus Future 2013*<br>• *Crime Prevention Through Environmental Design (CPTED) Principles*<br>• *Health Urban Development Checklist (NSW Health)*<br>• *Better Placed: An integrated design policy for the built environment of New South Wales (GANSW, 2017)*<br>• *Greater Sydney Commission's Eastern City District Plan* | Planning provisions, goals and strategic planning objectives in the identified policies have been addressed in **Table 4** of the EIS. |

| Item/ Description | Document/Reference |
|---|---|
| **Operation** | |
| Provide details of the existing and proposed school operations, including staff and student numbers, school hours of operation, and operational details of any proposed before/after school care services and/or community use of school facilities.<br><br>Provide a detailed justification of suitability of the site to accommodate the proposal.<br><br>Provide details of how the school will continue to operate during construction activities of the new primary and secondary school, including proposed mitigation measures. | Operation matters are addressed in 3.8 of the EIS.<br><br>Suitability of the site is discussed in **Table 12** of the EIS<br><br>Decanting strategy is discussed in Section 3.7.3 of the EIS. |
| **Built Form and Urban Design** | |
| Address the height, density, bulk and scale, setbacks and interface of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces.<br><br>• Address design quality and built form<br><br>• Provide details of any digital signage boards<br><br>• Clearly demonstrate how design quality will be achieved in accordance with *Schedule 4 Schools – Design Quality Principles of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 and the GANSW Design Guide for Schools.*<br><br>• Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development.<br><br>• Provide detailed site and context analysis<br><br>• Provide a detailed site-wide landscape strategy<br><br>• Provide a visual impact assessment<br><br>• Address *Crime Prevention Through Environmental Design Principles.*<br><br>• Demonstrate good environmental amenity | Refer to Design Statement attached at Appendix C.<br><br>No digital signage is proposed as part of this SSDA.<br><br>Landscape plan for all three campuses is attached at Appendix E and discussed in Section 3.5 of the EIS.<br><br>A CPTED Assessment has been undertaken by Urbis and attached at Appendix Y and is discussed in Section 6.16 of the EIS. |

| Item/ Description | Document/Reference |
|---|---|
| **Environmental Amenity** | |
| Assess amenity impacts on the surrounding locality<br><br>Conduct a view analysis to the site from key vantage points and streetscape locations.<br><br>Include a lighting strategy and measures to reduce spill into the surrounding sensitive receivers.<br><br>Identify any proposed use of the school outside of school hours (including weekends) and assess any resultant amenity impacts on the immediate locality and proposed mitigation measures.<br><br>Detailed outline of the nature and extent of the intensification of use associated with the increased floor space, particularly in relation to the proposed increase in staff and student numbers.<br><br>Detail amenity impacts including solar access, acoustic impacts, visual privacy, view loss, overshadowing and wind impacts. | Environmental Amenity is addressed in Section 6.2 of the EIS and in the Design Statement attached at Appendix C.<br><br>Mitigation measure is addressed in Section 9 of the EIS. |
| **Staging** | |
| Provide details regarding the staging of the proposed development (if any). | Staging is discussed in Section 3.7.1 of the EIS. |
| **Transport and Accessibility** | |
| Include a transport and accessibility impact assessment<br><br>The preparation of a preliminary Construction Traffic and Pedestrian Management Plan**.** | A Transport and Accessibility Impact Assessment is attached at Appendix J and discussed in Section 6.3 of the EIS.<br><br>Appendix A of the Transport and Accessibility Impact Assessment Report contains preliminary Construction Traffic and Pedestrian Management Plan (CPTMP) and is discussed in Section 6.3 of this EIS.<br><br>Appendix B of the Transport and Accessibility Impact Assessment Report contains Green Travel Plan and Workplace Travel Plan. |
| **Ecologically Sustainable Development (ESD)** | |
| Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Regulation) will be incorporated in the design and ongoing operation phases of the development. | Ecologically Sustainable Development (ESD) is attached at Appendix K and is discussed in Section 6.4 of the EIS.<br><br>A Climate Change Resilience Statement and a Sustainability - Natural Ventilation Feasibility |

| Item/ Description | Document/Reference |
|---|---|
| Include preliminary consideration of building performance and mitigation of climate change, including consideration of Green Star Performance.<br><br>Provide a statement regarding how the design of the future development is responsive to the CSIRO projected impacts of climate change. | are attached at Appendix L and Appendix M respectively. |
| **Heritage** | |
| Provide a statement of significance and an assessment of the impact on the heritage significance of the heritage items on the site.<br><br>Address any archaeological potential and significance on the site and the impacts the development may have on this significance. | Heritage Impact Statement (HIS) is attached at Appendix G and discussed in Section 6.5 of the EIS. |
| **Social Impacts** | |
| Include an assessment of the social consequences of the schools' relative location and decanting activities if proposed. | Social impact addressed in Section 6.6 of the EIS. Decanting strategy addressed in Section 3.7.3 of the EIS. |
| **Aboriginal heritage** | |
| Address aboriginal cultural heritage (ACH) in accordance with the guide to investigating, assessing and reporting on aboriginal cultural heritage in NSW (OEH, 2011) and aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). | Aboriginal Cultural Heritage Assessment (ACHA) is attached Appendix H and discussed in Section 6.7 of the EIS. |
| **Noise and Vibration** | |
| Identify and provide a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation, construction.<br><br>Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land.<br><br>Identify and assess operational noise, including consideration of any public-address system, school bell, mechanical services (e.g. AIR conditioning plant), use of any school hall for concerts etc. (both during and outside school hours) and any out of hours community use of school facilities, and outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land. | Noise Impact Assessment attached at Appendix R assess the noise and vibration generated during the construction of the buildings and operational phase of the new school buildings.<br><br>Discussed in Section 6.8 of the EIS. |

| Item/ Description | Document/Reference |
|---|---|
| **Contamination** | |
| Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55.<br><br>Undertake a hazardous materials survey of all existing structures and infrastructure prior to any demolition or site preparation works. | Contamination is addressed in Section 5.6 of the EIS.<br><br>A Phase 1 Preliminary Site Investigation (PSI) has been undertaken by Douglas Partners for the Junior and Senior School campus and are included at Appendix P. A Soil Contamination Screening for the Prep School has been undertaken by JK Environment and is included at Appendix FF.<br><br>A hazardous building materials (HBM) survey has been undertaken for all three campuses and is attached at Appendix Q.<br><br>Remediaiton Action Plan have been prepared for Junior and Prep School campuses and is attached at Appendix DD. |
| **Utilities** | |
| Prepare an Infrastructure Management Plan in consultation with relevant agencies.<br><br>Prepare an Integrated Water Management Plan. | An Electrical Services Infrastructure Statement is attached at Appendix U. A Hydraulic Site Services Statement is also attached at Appendix U. The reports have been prepared in consultation with relevant agencies, including Sydney Water and Ausgrid. Utilities is discussed in Section 6.10 of the EIS. |
| **Contributions** | |
| Address Council's 'Section 94/94A Contribution Plan' and/or details of any Voluntary Planning Agreement, which may be required to be amended because of the proposed development | Contribution is addressed in Section 5.9.5 of the EIS. |
| **Drainage** | |
| Detail measures to minimise operational water quality impacts on surface waters and groundwater.<br><br>Stormwater plans detailing the proposed methods of drainage without impacting on the downstream properties. | A Civil Engineering Report enclosed at Appendix AA assessed stormwater management measures for all three campuses and is discussed in Section 6.11 of the EIS. |
| **Flooding** | |
| Identify flood risk on-site (detailing the most recent flood studies for the project area) and consideration of any relevant provisions of the NSW Floodplain Development | A Civil Engineering Report enclosed at Appendix AA assessed the flood risk on site |

| Item/ Description | Document/Reference |
|---|---|
| Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity. If there is a material flood risk, include design solutions for mitigation. | The development sites are not within a Flood Planning Area and is discussed in Section 6.11 of the EIS. |
| **Bushfire** | |
| Address bushfire hazard and, if relevant, prepare a report that addresses the requirements for Special Fire Protection Purpose Development as detailed in Planning for Bush Fire Protection 2006 (NSW RFS). | Bush fire assessment is attached at Appendix O.<br><br>The proposed Special Fire Protection Purpose development (SFPP) does not include land classified as bush fire prone on Strathfield Council's bush fire prone land (BFPL) map.<br><br>The proposed infill SFPP development complies with all the relevant acceptable solutions within 'Planning for Bush Fire Protection 2006', where applicable. |
| **Biodiversity Assessment** | |
| Biodiversity impacts related to the proposed development (SSD 9692) are to be assessed in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). | The NSW Department of Planning, Industry and Environment and the Office of Environment and Heritage each confirmed in a letter dated 03/04/2019 (refer Appendix N) that the development is not likely to have any significant impact on biodiversity values, and therefore the SSD DA is not required to be accompanied by a Biodiversity Development Assessment Report.<br><br>A flora and fauna assessment (attached at Appendix N) has been prepared following the approval of a waiver for the requirement that a Biodiversity Assessment Report (BDAR) and is discussed in Section 5.1 of the EIS. |
| **Sediment, Erosion and Dust Controls** | |
| Detail measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. | An Erosion and Site Sediment Control plan has been prepared for each campus and is attached within the Civil Package attached at Appendix AA, and is discussed in Section 6.12 of the EIS. |

| Item/ Description | Document/Reference |
|---|---|
| **Waste** | |
| Identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.<br><br>Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site. | Construction and operational waste management is address in Section 6.13 of this EIS.<br><br>Construction waste is addressed in the Construction Management Plan at Appendix I.<br><br>An Operational Waste Management Plan has been prepared by Elephants Foot and is attached at Appendix T. |
| **Construction Hours** | |
| Identify proposed construction hours and provide details of the instances where it is expected that works will be required to be carried out outside the standard construction hours. | Construction hours are outlined in Section 3.7.2 of the EIS. |
| **Plans and Documents** | |
| The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. In addition, the EIS must include the following:<br><br>• Architectural drawings<br>• Site Survey Plan<br>• Site Analysis Plan<br>• Sediment and Erosion Control Plan<br>• Shadow Diagrams<br>• View analysis, photomontages and architectural renders<br>• Landscape architectural | The identified relevant plans, architectural drawings, diagrams and documentations are attached at Appendix B and Appendix FF. |

| Item/ Description | Document/Reference |
|---|---|
| • Design report<br>• Geotechnical and Structural Report<br>• Accessibility Report<br>• Arborist Report<br>• Acid Sulphate Soils Management Plan and<br>• Schedule of materials and finishes. | |
| **Consultation** | |
| In particular, you must consult with:<br>• Strathfield Council<br>• NSW Government Architect's Office (through the NSW SDRP process)<br>• Transport for NSW and<br>• Roads and Maritime Services. | Consultation is discussed in Section 8 of the EIS. |

# 1. INTRODUCTION

## 1.1. OVERVIEW

This Environmental Impact Statement (EIS) has been prepared by Urbis Pty Ltd on behalf of Meriden School (the Applicant) in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulations 2000*. This EIS supports the State Significant Development (SSD) Development Application (DA) SSD_9692 to guide future development at Meriden School Strathfield (the site).

The SSD DA seeks development consent for the following within the existing 3 campus areas:

**Senior School Campus – New Centre for Music and Drama**

The demolition of the existing music building located close to the south-western corner of the Senior School Campus and the construction of a new 3-storey above ground (with two levels below ground) building incorporating a new music academy, drama facilities, music teaching rooms and staff facilities.

The consent for demolition of the drama building located at the south-western corner of the campus was granted by Strathfield Council under DA 2014/23 in 16 September 2014. Demolition of the drama building will be carried out under DA 2014/23. This SSDA, does however, seek consent for a revised end-state landscaping design in place of the demolished drama building.

**Junior School – New Landscaped Playground**

The demolition of the existing residential dwelling and garage at 4 Vernon Street and to create a new landscaped playground area for the use of Meriden Junior School. A pergola structure is to be constructed. It is also proposed to change the use of the site at 4 Vernon Street to allow the use of the site as *educational establishments*.

**Lingwood Prep School – New Administration and Student Centre**

The demolition of the existing single storey Business Office and the construction of a new two-storey building, designed with maximum flexibility to accommodate a wide range of uses, and to adapt with the demands of the school. The proposed building will provide for additional administration spaces and Year 12 student centre, to free up space in the Senior campus for teaching.

The proposed works are illustrated in the architectural drawings prepared by Allen Jack + Cottier (AJ+C) in Appendix D.

## 1.2. REPORT STRUCTURE

The purpose of this report is to provide an assessment of the proposal as described above, within the EIS and the attached supporting documents.

This EIS provides the following:

- A description of the site and surrounding context; including identification of the site, existing development on the site, and surrounding development.
- A detailed description of the proposed development;
- An assessment of the proposed development against the relevant strategic and statutory planning controls;
- An assessment of the key issues and impacts generated by the proposed development; and
- A detailed description of the consultation undertaken with respect to the proposal.

This EIS responds to the Secretary's Environmental Assessment Requirements (SEARs) attached at Appendix A. This document should be read in conjunction with the supporting documents provided at Appendix B to Appendix FF.

## 1.3. PROJECT TEAM

Specialist consultants were engaged to assist in the preparation of this SSD, as outlined in Table 2.

Table 2 – Project Team

| Discipline / Input | Consultant | Appendix |
|---|---|---|
| Quantity Surveyors Cost Assessment | Altus Group | Appendix B |
| Urban Design Report (including visual impact assessment) | Allen Jack + Cottier (AJ+C) | Appendix C |
| Architectural Drawings | Allen Jack + Cottier (AJ+C) | Appendix D |
| Landscape Plan | Oculus | Appendix E |
| Arborist Report | Tree IQ | Appendix F |
| Heritage | Urbis | Appendix G |
| Aboriginal Cultural Heritage | Eco Logical | Appendix H |
| Construction Plan of Management | Gledhill Constructions | Appendix I |
| Traffic and Transport Impact Assessment | Ason Group | Appendix J |
| Preliminary Construction Traffic and Pedestrian Management Plan | Ason Group | Appendix J |
| Ecologically Sustainable Development (ESD) Assessment | Norman Disney Young | Appendix K |
| Climate Change Resilience Statement | Norman Disney Young | Appendix L |
| Sustainability - Natural Ventilation Feasibility | Norman Disney Young | Appendix M |
| Flora and Fauna Assessment | Eco Logical | Appendix N |
| Bushfire Assessment | Eco Logical | Appendix O |
| Phase 1 Preliminary Site Investigation | Douglas Partners | Appendix P |
| Hazardous Building Materials (HBM) Register | Douglas Partners | Appendix Q |
| Noise Impact Assessment | Wilkinson Murray | Appendix R |
| Geotechnical Report | Douglas Partners and JK Geotechnics | Appendix S |
| Operational Waste Management Plan | Elephants Foot | Appendix T |
| Structural Schematic Design Report and Structural Design certificate | TTW & SDA Structures | Appendix U |
| Infrastructure and Utilities | Shelmerdines Consulting Engineers and Harris Page and Associates | Appendix V |

| Discipline / Input | Consultant | Appendix |
|---|---|---|
| Consultation Statement | Urbis | Appendix W |
| Accessibility | Funktion | Appendix X |
| Crime Prevention through Environmental Design (CPTED) assessment | Urbis | Appendix Y |
| Building Code of Australia Report and Fire Safety Strategy | Modern Building Certifiers and PGA | Appendix Z |
| Civil Engineering Report | Taylor Thomson Whitting | Appendix AA |
| Survey | LTS & Linker | Appendix CC |
| Remediation Action Plan- Junior School and Prep School | Douglas Partners and JK Environments | Appendix DD |
| Acid Sulfate Soil Desktop Screening | Environmental Impact Services and JK Environments | Appendix EE |
| Soil Contamination Screening - Prep School | JK Environments | Appendix FF |

## 1.4. PROJECT OBJECTIVES

The Project's primary objective is to provide state-of-the art learning and play spaces for students within the existing three campus areas, while preserving the heritage and character of the School and environment. Project objectives are listed below:

- To provide a new Music and Drama centre in the Senior campus and a new Administration and Student Centre in the Prep school campus to meet the growing demand from students;
- To provide music and drama learning spaces within the senior school footprint. To meet contemporary learning standards and provide a new state-of-the-art facility and spaces;
- To enable high-quality teaching facility beyond what the School can currently provide;
- Allow for the relocation and consolidation of administration functions to the central zone of three campuses, which will service both the junior and senior school;
- To provide much needed additional outdoor landscaping and recreational areas, which will benefit the health and well-being of the students; and
- Create additional opportunities to share resources and facilities between the School and the school community, through potential shared access to the new Music and Drama Centre and recreational areas

## 1.5. ANALYSIS OF FEASIBLE ALTERNATIVES

The proposed design responds strongly to the site constraints and opportunities and is considered the best response to both the site and surrounding context.

**A 'do nothing' approach**

Alternatives to the proposed concept plan include the 'do nothing' scenario which would not achieve the project objectives. The consequences of not carrying out the project are far reaching and include:

- Failure to provide suitable learning facilities for pupils;

- Failure to accommodate the growing demand for improved music and drama facilities from exiting pupils;
- Failure to provide additional recreation and sporting facilities for pupils;
- Failure to provide suitable working conditions for teaching and administrative staff;
- Failure to create a more accessible campus for staff, pupils, and visitors;
- Failure to better utilise the existing school site and buildings; and
- Increased maintenance costs of degraded sub-standard buildings.

**Alternative design approach**

The design of the CMD and the new Administration and Student Centre have undergone envelope option testing, to explore the different built form and articulation possibilities, through the choice of built form arrangement, material, colour and architectural variations. The relative merits of the options are discussed and shown in Section 6.1 of this EIS. To summarise:

The final design of the CMD has been chosen based on the following considerations:

- The scale of the building relative to the existing adjacent buildings,
- The address and entry point into the senior school at the western end of Margaret Street and
- The connections between open green space and the Lingwood prep school campus.

The final design of the Administration and Student Centre has been chosen based on the following considerations:

- Streetscape alignment
- Respecting the heritage value of the Lingwood House and garden
- A sense of arrival at Margaret Street

The design options have been the subject of discussions and suggestions from the NSW Government Architect's Office, which have been implemented to progressively improve the overall built form and urban design outcome of the new buildings and playground.

# 2. SITE AND SURROUNDING LOCALITY

## 2.1. SITE DESCRIPTION

Meriden School is located across three campuses which are within close proximity to one another, however are not contiguous landholdings. The School 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.

Each of these campuses are highlighted in Figure 1 below.

The school has a total landholding of approximately 22,225sqm. Each of the sites are irregular land parcels, and each of the campuses have level changes:

- The Senior School campus slopes from the Margaret Street frontage towards Redmyre Road;
- The Junior School campus slopes from Margaret Street towards Vernon Street; and
- Lingwood Prep campus has a gentle slope from south to east towards Margaret Street.

Table 3 – *Meriden School Campus Site Description*

| **Site Name** | **Legal Description** | **Address** | **Existing Development** | **Site Area (Approximate)** |
|---|---|---|---|---|
| Senior Campus | Lot 101 DP862040 | 3-13 Margaret Street<br>10-28 Redmyre Road | Multiple school buildings | 15,042sqm |
| Junior Campus | Lot 1 DP1244199 | 36-38 Redmyre Road | Multiple school buildings | 7571.9sqm |
| Lingwood Prep School Campus | Lot 1 DP723946 | 16B – 16 Margaret Street | Heritage building, administration building and new school buildings under construction. | 3,582sqm |

Figure 1 - Meriden School – three campuses


*Source: Allen Jack + Cottier*

## 2.2. EXISTING DEVELOPMENT

Founded in 1897, Meriden, an Anglican School for Girls holds proudly to its history and comprises three adjacent campuses – Prep School, Junior School and Senior School (refer to Figure 2). The School originated on the Senior School site and has expanded from this site as surrounding properties have being acquired. Each campus is located in close proximity to each other, which fosters a special sense of community and school pride across all age groups.

**Senior Campus**

The Senior campus is the largest campus and fronts Redmyre Road and Margaret Street. The Senior campus has a science wing, library and resource centre, maths learning centre, performing arts studio, maker space, design and creative arts wing, pottery studio, sports centre, swimming pool, indoor and outdoor tennis, netball and basketball courts, lecture theatre, Wallis Auditorium and Chapel and administration building. Large, landscaped grounds with gardens and shaded areas is provided to the west of the campus.

**Junior Campus**

The Junior School campus is located to the east of Vernon Street. The campus features modern, light-filled classrooms, a state-of-the-art library and a dedicated language centre, as well as a music centre, gymnasium and auditorium. Administration office and a uniform shop is also located within the Junior campus. The Junior School is set on lawns used for recreational activities, physical education and sport.

The school recently acquired 4 Vernon Street, which has been used as a uniform shop and is proposed to be demolished and incorporated into the Junior Campus as a landscaped playground area for school purposes. A brick garage is located to the east of the site.

**Prep School**

The existing Prep School is located to the south of Margret Street. It is located within a Federation house surrounded by garden and extensive soft-fall playground. The Prep School building comprises two main teaching and learning areas and a business office is located to the northeast of the campus.

Figure 2 – Existing School Campus


*Source: Meriden School*

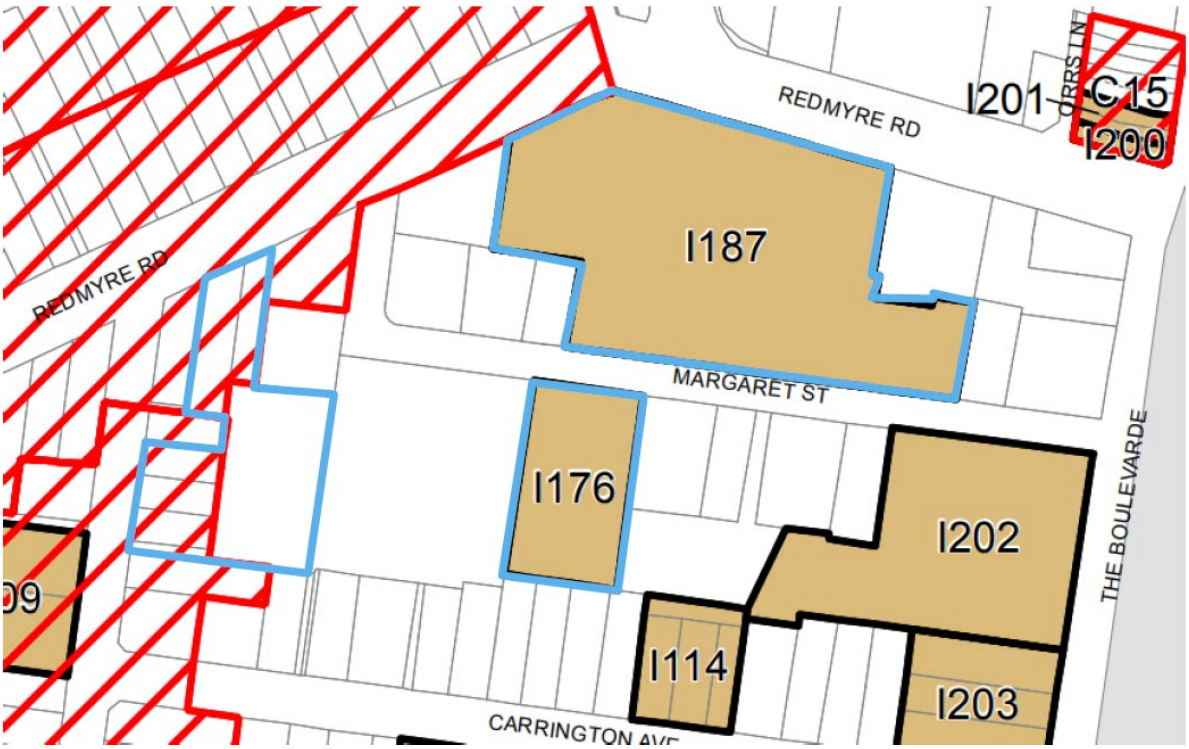
# 2.3. HERITAGE

## 2.3.1. European Heritage

Each of the three campuses has its own heritage context. In summary, both the Senior School Campus and Lingwood Prep School are listed as individual heritage items under the *Strathfield Local Environmental Plan* (LEP) 2012, and parts of the Junior School are located within two adjoining Heritage Conservation Areas (HCAs). These heritage listings are outlined as follows:

- Senior School – whole of the site is listed as a locally significant heritage item (Item 187 under the Strathfield LEP 2012). Notwithstanding that there are a range of buildings across the site from various periods (including modern and late twentieth century).
- Junior School – located within two separate heritage conservation areas, as follows:
    - 4-8 Vernon Street – located within the C16 Vernon Street Conservation Area under the Strathfield LEP 2012.
    - 36-38 Redmyre Road – located within the C14 Redmyre Road Conservation Area under the Strathfield LEP 2012.
- Prep School Campus is listed as an individual heritage item of local significance, under the *Strathfield Local Environmental Plan* (LEP) 2012. The heritage listing describes the property as Item 176, '"Lingwood"—Victorian house and garden (formerly Branxton)' at 16 Margaret Street, Strathfield. The extent of the heritage listing covers the whole of the Lingwood allotment.

Figure 3 – Heritage Context




*Source: Strathfield LEP*

## 2.4. SITE ACCESS

**Senior School**

The primary pedestrian access to the Senior school campus is from Margaret Street near the Turner House and Redmyre Road near the Wallies Building. Multiple secondary pedestrian access points are also provided along Margaret Street and Redmyre Road. Senior school pick-up and drop off zones are located at Margaret Street. The Senior school has primary vehicular access points from Margaret Street, at the end of the Sports Centre, and to the western side of Redmyre Road.

**Junior School**

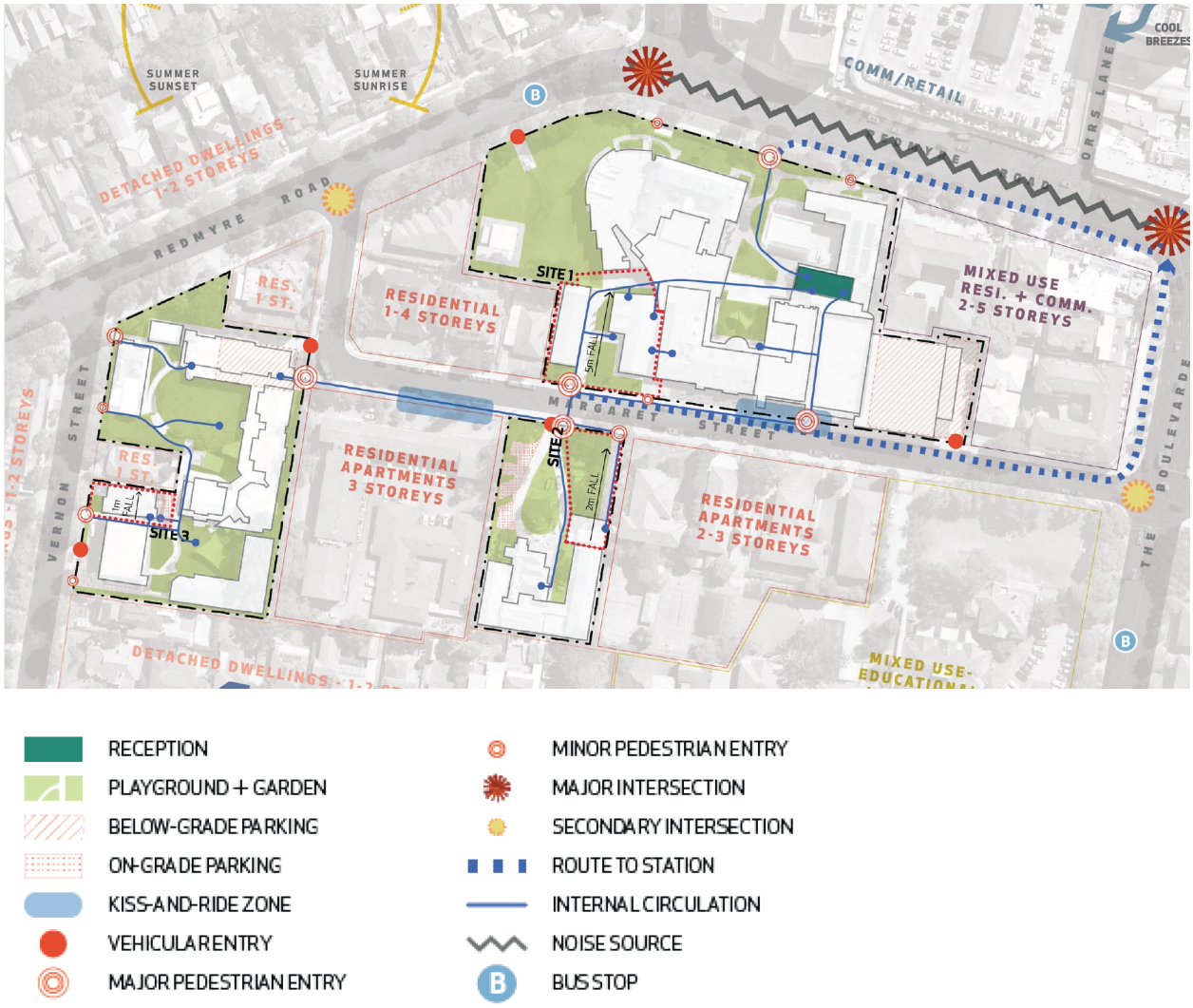
The primary pedestrian access to the Junior school campus is from Margaret Street, located to the east of the site, near the Junior School reception. Multiple secondary access points are provided from Vernon Street. Junior school pick-up and drop off zones are located at Margaret and Vernon Street. The Junior school has a primary vehicular access point from Margaret Street, and a secondary vehicular access point from Vernon Street, outside the Blackman Auditorium.

**Prep School**

Pedestrian and vehicular access to the Prep school campus is from Margaret Street, at the centre of the site. The Prep school pick-up and drop off zone is shared with the Junior School is located along Margaret Street.

Existing vehicle and pedestrian site access points are illustrated in the Site Analysis Diagram in the Design Report attached at Appendix C and is shown below in Figure 4.

Figure 4 – Site access arrangement




*Source: AJ+C*

## 2.5. CAR PARKING

There is an existing car parking capacity for 98 vehicles across the Senior and Junior Campuses, and the completion of the approved Lingwood Campus Stage 1 works (under DA 2017/159) will provide an additional 8 parking spaces. There is a total of 106 car parking spaces across the three campuses.

## 2.6. PUBLIC TRANSPORT

The School is well serviced by local public and active transport services and infrastructure. Strathfield Station is located approximately 200m – 400m to the north of the School. Strathfield Station is a major rail hub that provides Sydney and intercity train services.

Bus stops are located within 400 metres walking distance from the School in Redmyre Road, The Boulevarde, Albert Road and a major bus interchange is also located at Strathfield Station. There are twelve bus routes within walking distance of the School.

Additionally, the School currently provides private school bus services for its students which operate along eight routes.

## 2.7. SERVICES

The site currently contains and is connected to all necessary services including electricity, gas, water, communications, drainage and sewage.

## 2.8. FLORA AND FAUNA

A Flora and Fauna assessment has been prepared by Eco Logical and is attached at Appendix L. This report identified the following flora and fauna at the site:

- The field survey confirmed that the vegetation within the three development sites to be Urban exotic/native.
- One mature native Syncarpia glomulifera (Turpentine) (>70cm diameter at breast height) was recorded within the Prep School Campus site. This tree appears to have been planted and does not represent a threatened ecological community. It is proposed for removal, along with other planted exotic and native species.
- There are no previous BioNet records of threatened flora and fauna species previously recorded within the three development areas. No threatened flora or fauna species were identified during the field survey.
- There are no riparian corridors located within the three development areas.
- It is unlikely that the study area provides any habitat for threatened fauna species other than limited foraging resources for the highly mobile Grey-headed Flying-fox. This is considered to be negligible on a local scale and would not result in a long-term decline of any threatened species.
- No threatened or endangered species are identified on the Atlas mapping system as being recorded within the school grounds.

## 2.9. SITE CONTEXT AND SURROUNDING DEVELOPMENT

Meriden School is located in Strathfield, approximately 13km west of the Sydney CBD. Strathfield includes a town centre around the train station, with a range of mixed use activities, medium and high density residential areas, and low density residential.

Immediately surrounding the site are:

- To the north: Strathfield Plaza, comprising a single-storey retail centre and 8-storey commercial tower. Further to the north is Strathfield Station and the Strathfield Town Square.
- To the east: 3 and 4-storey residential flat buildings. Further east is the southern part of the Strathfield town centre mixed use area.
- To the south: low-scale detached residential buildings, and the Santa Maria Del Monte school campus.
- To the west: low-density residential area, characterised by single and two-storey buildings, and the St Peter and Paul Russian Orthodox Church.

## 2.10. PLANNING HISTORY

Relevant recent planning history for the subject site is summarised as follows.

### 2.10.1. DA 2017/159 Prep School

DA 2017/159 was approved by Strathfield Council on 19 March 2018 for the:

*“Demolition of existing structures and construction of new teaching areas, covered outdoor play area and alterations and additions to existing heritage listed item "Lingwood House" at existing primary school.”*

The proposed landscape area within Prep School as part of this SSDA responds to the landscape design approved under DA 2017/159.

### 2.10.2. DA 2014/23 Senior School

DA 2014/23 was approved by Strathfield Council on 16 September 2014 for the:

*“Demolition of the existing building at 3 Margaret Street, partial demolition of the eastern side of the Turner/Hope/Science Building and the adjacent tennis courts*

*The construction of a three (3) storeys sports facility comprising four (4) sports courts, fitness room, change rooms, amenities, staff facilities and teaching spaces above one (1) level of basement parking for (60) vehicles.”*

Consent for demolition of the drama building located at the south-western corner of the campus was granted by Strathfield Council under DA 2014/23. Therefore, demolition of the drama building will be carried out under DA 2014/23.

However, this SSDA seeks consent for the end state landscaping design in place of the demolished drama building to ensure an integrated landscape design is achieved at this part of the senior campus.

# 3. PROPOSED DEVELOPMENT

## 3.1. DEVELOPMENT SUMMARY

This SSDA seeks development consent for the alterations and additions to all three campuses of Strathfield Meriden School. Proposed works are located in the existing campus area and include:

**Senior School Campus – New Centre for Music and Drama**

- The demolition of the existing music building located towards the south-western corner of the Senior School Campus.
- Construction and use of a new 3-storey above ground (with two levels below ground) building incorporating a new music academy, drama facilities, music teaching rooms and staff facilities.
- Removal of one tree and landscape works.

The consent for demolition of the drama building located at the south-western corner of the campus was granted by Strathfield Council under DA 2014/23. Demolition of the drama building will be carried out under DA 2014/23. However, this SSDA seeks consent for a revised end state landscaping design in place of the demolished drama building.

The orientation and design of the new building will also result in additional open space being provided within the campus. The new Centre for Music and Drama building will significantly improve the streetscape presentation to Margaret Street.

**Junior School – New Landscaped Playground**

- The demolition of the existing residential dwelling at 4 Vernon Street
- Create a new landscaped playground area for school use purposes.
- Demolish the existing garage located to the east and construct a new pergola structure.
- Removal of three trees.
- Change the use of the site at 4 Vernon Street to permit *educational establishments*.

The playground provides over 200sqm of lawn and landscaping and can be used for students during recess or lunchtime, as well as an outdoor classroom. Additionally, the proposed landscaping along the street edge will contribute to the leafy green character along Vernon Road.

**Lingwood Prep School – New Administration and Student Centre**

The Lingwood Prep School site is currently undergoing redevelopment in accordance with DA 2017/159 approved by Strathfield Council on 19 March 2018. The SSDA seeks approval for a teaching and administration building.

- The demolition of the existing single storey Business Office
- Construction of a new two-storey building, designed with maximum flexibility to accommodate a wide range of uses, and to adapt with the demands of the school.
- Removal of six trees and landscaping works.

The new two-storey building is designed with maximum flexibility and is able to accommodate a wide range of uses to support the school, and to adapt with the demands of the school. The proposed building will provide for additional administration spaces and Year 12 student centre, to free up space in the Senior campus for teaching.

Figure 5 – Proposal Overview (proposed building locations are within the red hatched area)


*Source: AJ+C*

Figure 6 – Illustration of proposed buildings and playground


*Source: AJ+C*

## 3.2. DESIGN PRINCIPLES

An Architectural Statement and Urban Design review report has been prepared by AJ+C Architects and is attached at Appendix C. The proposal incorporates the following Urban Design considerations for each campus:

**Senior School Campus – New Centre for Music and Drama**

- Visually unifying the built form of the school campus along Margaret Street, tying together the Wallace and Hop/Turner buildings with material, consistent street setback and geometric references to both buildings;
- Improve connection across Margaret Street to the Lingwood Prep School campus by providing a landscaped, vegetated corridor visually linking the new CMD building to the landscaped forecourt of Lingwood campus;

- To provide consistent floor finishes between existing connected spaces, as well as the interior and exterior floor levels.
- To provide generous, fluid space for the music faculty to connect between the ground and upper floors, with wide atria, a wide curving stair and new lift;
- Ensuring access to solar and ventilation. The music academy located in the southern half of the basement is provided with ample high level glazing with access to daylight and views out to trees and the sky;
- Extensive use of deep roofs, awnings and louvres to protect the interior from harsh north and western sun load;
- To provide tempered and spill air-conditioning with natural convection ventilation to the central atrium, amphitheatre and breakout spaces;
- To integrate planting and landscaping around the footprint and on the upper level of the building;
- Incorporate open green space to the west and north, to maintain and enhance connection between the existing playgrounds, playing fields and Wallace building under croft;
- Substantial use of environmentally sustainable design initiatives and consideration of embodied energy in material selection;
- To ensure that noise generated from inside of the CMD can be contained within the building to minimise acoustic impacts to residential neighbours. This is achieved through locating the practice rooms below ground and with smaller windows. Windows from classrooms and practice rooms will be fixed, to minimise noise.

Figure 7 – CMD Photomontage: Margaret Street View looking North-West


*Source: AJ+C*

**Junior School – New Landscaped Playground**

- Increased landscaped play space for students;
- Creation of a safe and private outdoor learning environment, by providing boundary fence and separate and lockable entry to the pergola carport;
- Incorporation of a pergola for sun protection and drinking fountain for good amenity; and
- Maintaining the existing driveway and onsite parking space, to reduce impacts on on-street parking.

Figure 8 – Proposed Playground

*Source: AJ+C*

**Lingwood Prep School – New Administration and Student Centre**

- Sympathetic design to the heritage values of the Lingwood House and gardens through setbacks, height datums and detailed architectural language;
- A contemporary interpretation of the gable roof, which is sympathetic to the traditional language of Lingwood House and Margaret Street. The pitched roof enables height and bulk of the development to be concentrated away from the Lingwood House;
- Sympathetic design to the contextual bulk and scale of surrounding developments. The proposed street setback ensure alignment with neighbouring dwellings along Margaret Street and respects heritage curtilage;
- Nest the new building behind existing mature vegetation along Margaret Street. To screen the building from the street and mitigates views impacts towards the Lingwood House from Margaret Street;
- Use of colours and materiality of the new administration and student centre is inspired by neighbouring kindergarten playground; and
- Low impact solutions and environmental comfort are key to the proposal. Louvres have been utilised along the northern and western façades to protect the building from the hot western sun. The building is designed with net zero energy. This is to be achieved through the use passive building principles, solar panels, shading and ventilation among other techniques.

Figure 9 – Proposed Administration and Student Centre

*Source: AJ+C*

## 3.3. EXTERNAL MATERIALS AND FINISHES

The proposal has been appropriately designed with external materials and finishes that complement the surrounding natural and built environment of Strathfield. The building materials are durable, hardwearing, low maintenance and evoke smart building design. Selected materials for each campus are shown in the Urban Design Statement in Appendix C and in the architectural drawings in Appendix D.

## 3.4. DEMOLITION

The proposal involves the demolition of three buildings and a garage. One of them is an existing residential dwelling. The buildings to be demolished in the Senior and Prep schools are outdated. The dwelling and garage on 4 Vernon Street were not built for educational purposes.

Whilst the dwelling on 4 Vernon Street is located in a conservation area, none of the buildings to be removed are classified as items containing heritage significance. The proposal represents a positive outcome, as the construction of modern school buildings and open space areas will provide new state of the art facilities for improved learning, teaching, play and administrative services.

## 3.5. LANDSCAPING

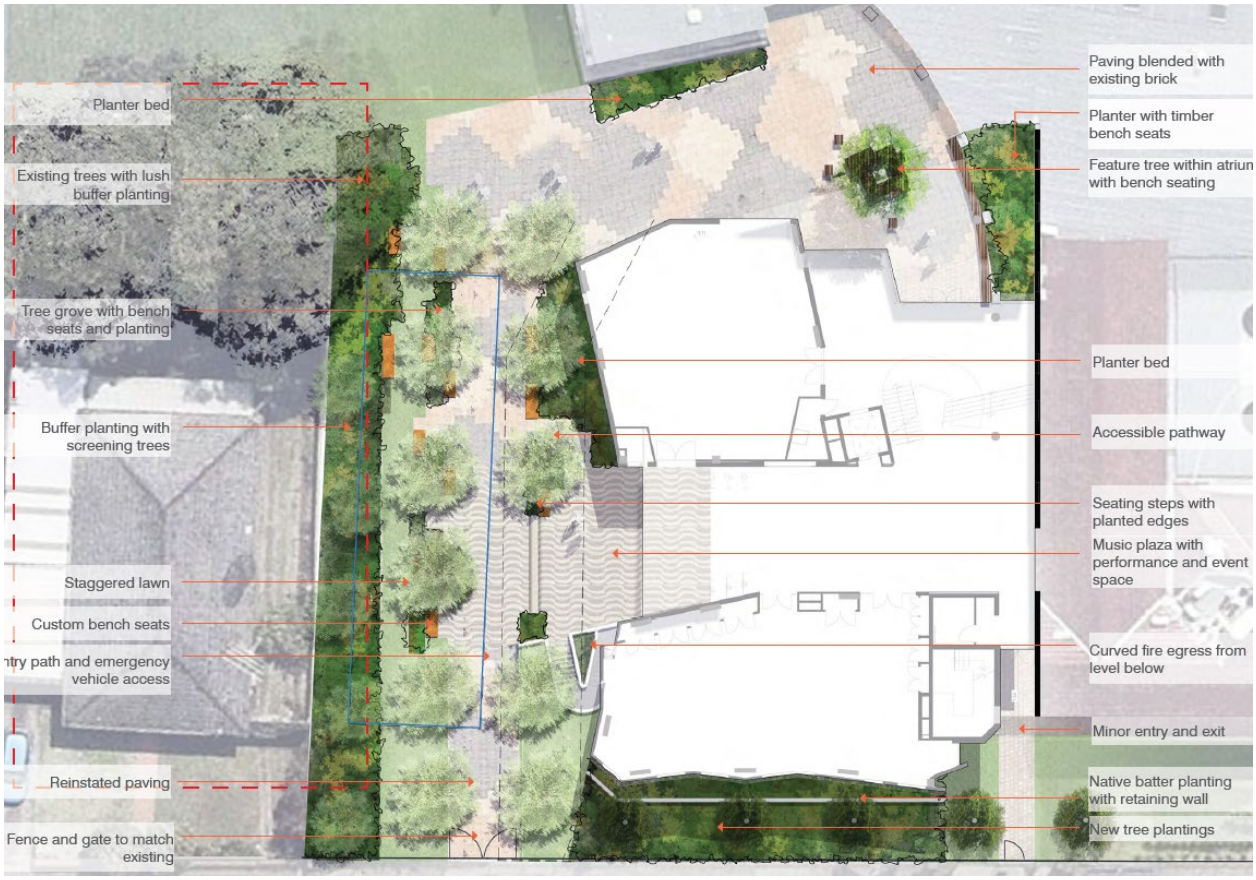
### 3.5.1. Proposed Landscaping

Landscape design has been incorporated into each site to improve the landscaping setting and provide new outdoor play space for each campus.

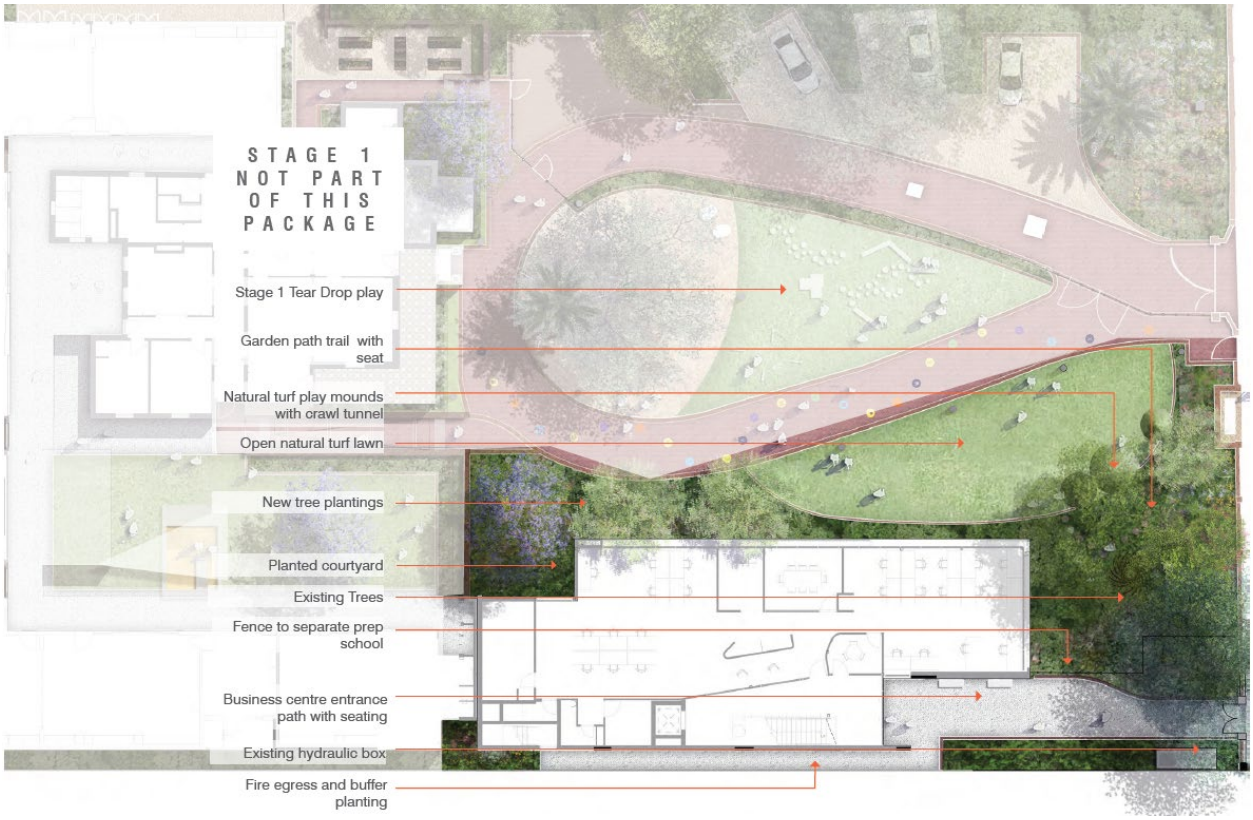
The outdoor play space proposed for the Junior campus comprise a variety of landscape features and outdoor furniture to enhance the outdoor play experience for students. Some of these features include a pergola structure with climbing plants, brick seating wall with timber bench fixture and drinking fountain. The playground is securely separated by boundary fence along the street and the pergola to the east.

Figure 10 below illustrates the proposed landscape design for each campus. The full details of the Landscape Plan with plant species can be viewed at Appendix E.

Figure 10 – Landscape Plan




**Senior School Landscape Design**



**Prep School Landscape Design**


**Junior School Playground Design**

*Source: Oculus*

## 3.5.2. Tree removal

The proposal seeks consent to remove a total of ten trees within the overall site area, some of these trees have been identified as 'low retention value' or 'Consider for Removal'. Retained trees are considered trees viable for retention in the existing environment. The loss of vegetation is considered acceptable given the substantial benefits associated with the project and the extent of new planting proposed.

Construction works will be undertaken in accordance with the recommendations within the Arborist Reports contained in Appendix F to ensure that the trees to be retained within the site are suitably protected.

# 3.6. SITE ACCESS

## 3.6.1. Vehicular Access

Vehicular access to the existing single car parking space to the north of the new landscaped playground area will remain via the existing shared driveway.

It is proposed that all other existing vehicular access arrangements to the three campuses be maintained as detailed below.

**Senior School**

The Senior school has primary vehicular access points from Margaret Street, at the end of the Sports Centre, and to the western side of Redmyre Road.

**Junior School**

The Junior school has a primary vehicular access point from Margaret Street, and a secondary vehicular access point from Vernon Street, outside the Blackman Auditorium.

**Prep School**

Vehicular access to the Prep school campus is from Margaret Street, at the centre of the site.

### 3.6.2. Pedestrian Access

It is proposed that pedestrian access to the campuses themselves be maintained as part of the SSDA. Pedestrian access to the new Centre for Music and Drama, new landscaped playground, and new Administration and Student Centre is detailed below.

**Senior School – New Centre for Music and Drama**

The primary pedestrian access to the Senior School Campus is from Margaret Street near the Turner House and Redmyre Road near the Wallies Building. Multiple secondary pedestrian access points are also provided along Margaret Street and Redmyre Road. Pedestrian access to the new CMD is provided from an access point at Margaret Street via a gate which links to a walkway leading to primary pedestrian access points. The primary pedestrian access point for the new CMD is provided via doors at ground level at the northern elevation at ground floor. A secondary access point is provided via a set of stairs which lead to glazed sliding doors at the western elevation at ground floor. Access is also provided via the existing Hope Turner Building to the east at ground level.

**Junior School – New Landscaped Playground**

The primary pedestrian access to the Junior school campus is from Margaret Street, located to the east of the site, near the Junior School Administration Office. Multiple secondary access points are provided from Vernon Street. Pedestrian access to the new landscaped playground area is provided from Vernon Street via a gate which links to a walkway that leads to a gate at the end of an existing walkway to the south east.

**Prep School - New Administration and Student Centre**

Pedestrian and vehicular access to the Prep school campus is from Margaret Street, at the centre of the site. Primary pedestrian access is proposed from Margaret Street via a gate linking to a walkway that connects to a door at the ground floor of the northern elevation of the new Administration and Student Centre.

## 3.7. CONSTRUCTION MANAGEMENT

A Construction Management Plan (CMP) had been prepared by Gledhill Constructions (enclosed at Appendix I) outlining the proposed construction methodology and possible impacts.

Key elements of the Construction management plans are detailed below. All construction works on site will be subject to finalisation of the CMP having regard to project programming and staging.

### 3.7.1. Staging

It is envisaged that the main works will be delivered in two stages:

- Stage 1 from January 2020 to December 2020: Prep School new Administration and Student Centre and Junior School Playground
- Stage 2 from January 2021 and finish in April 2022: Senior School Centre of Music and Drama.

The indicative total length of construction for stage 1 and 2 is 28 months in total.

### 3.7.2. Work Hours

The proposed construction works will be undertaken during the following hours:

- Monday to Friday – 7.00am to 5.00pm
- Saturdays – 8.00am to 1.00pm
- Sundays / Public Holidays – No work

If required, after hours permits will be sought from the relevant authorities.

### 3.7.3. Decanting strategy

The following decanting strategy is proposed to temporarily relocate staff and students during the construction stages:

**Construction Stage 1:**

- Uniform store to relocate offsite to a commercial premise on Lyons Street, Strathfield
- Business Services to relocate into Senior School Staff Common Room

**Construction Stage 2:**

- Business Services to relocate back to the new Business Centre in Lingwood Prep School campus
- IT to relocate to the new space in the Business Centre in Lingwood Prep School campus, freeing up space for classrooms
- Music staff to relocate to Senior School Staff Common Room
- Music Academy to relocate to the existing demountable on Selbourne lawn (currently used for teaching space)
- Year 12 Common Room in the Wallis Building will be the temporary music classroom space

## 3.8. CAPACITY AND OPERATION HOURS

Once completed, the proposed new teaching facilities will result in an increased capacity of approximately 50 students across all three campuses. Increasing the school's current total capacity from approximately 1,500 students to approximately 1,550 students across all three campuses.

The School currently employees a total of 242 permanent teachers and administration staff across all three campuses. A total of two additional teachers and administration staff positions will be created as a result of the proposal.

**Operation hour**

The following hours of operation apply to the school. The existing hours of operation of the current school facilities will remain.

**Senior School:**

- Monday to Friday: 0645 - 1800
- Closed on weekends and public holidays
- After hour activities are generally held at the new Centre of Music and Drama and the existing Wallis Auditorium and the Tennis Court:
    - Outdoor Tennis court:
    - Monday to Friday: 0630 - 1830
    - Saturday: 0730 – 1630
    - Closed on Sundays and public holidays
- New Centre of Music and Drama & Existing Wallis Auditorium:
    - Monday to Friday: 1800 to 2130
    - Saturday: 0700 to 1600
    - Closed on Sundays and public holidays

- Year 12 Student Common Room is open for individual study till 8pm for year 12 students only from Monday to Friday

**Junior School:**

- Monday to Friday: 0800 to 1800
- OOSH (on Junior School campus): 0700 - 1800
- Closed on weekends and public holidays.
- Afterhours activities are generally held at Blackman Auditorium:
    - Monday to Friday: Weekly music ensemble practice from 0730. Infrequent evening events (up to 2-3 times per term) up until 1930.
    - Saturday: Infrequent daytime events (up to 2-3 times per term) between 0900 - 1700.
    - Closed on Sundays and public holidays

**Prep School (Lingwood):**

- Monday to Friday: 0800 to 1800
- Closed on weekends and public holidays.
- No after hour activities are provided.

It is noted that these hours vary occasionally to cater for the ongoing changing needs of the school and its school community. The existing school buildings will continue to operate as they currently are. No additional community uses are proposed on the site at this stage.

# 4. STRATEGIC PLANNING CONTEXT

In accordance with SEARs, the following strategic planning policies have been considered in the assessment of the proposal:

- NSW State Priorities;
- A Metropolis of Three Cities – Greater Sydney Region Plan;
- Future Transport Strategy 2056
- State Infrastructure Strategy 2018 –2038 Building the Momentum
- Sydney's Cycling Future 2013
- Sydney's Walking Future 2013
- Sydney's Bus Future 2013
- Health Urban Development Checklist (NSW Health)
- Better Placed: An integrated design policy for the built environment of New South Wales (GANSW, 2017)
- Greater Sydney Commission's Eastern City District Plan

Consistency with the relevant goals contained to the above strategic policies is discussed in Table 4 below.

The following strategic planning documents are applicable to the subject site and proposed development:

Table 4 – Consistency with Strategic Planning Policies

| Strategic Planning Document | Comment |
|---|---|
| **NSW State Priorities** | NSW State Priorities is the State Government's plan to guide policy and decision making across the State. The proposed redevelopment of the site is consistent with key objectives contained within the plan, including:<br>• Creating Jobs: Create 150,000 new jobs by 2019<br>The proposal will create temporary job opportunities in construction, and construction management during the project's construction phase of works. 2 new jobs will be created for teachers and administration staff during the operation phase.<br>The proposal will contain high quality facilities, learning spaces and equipment for use by students and teaching staff. This will provide students with greater opportunities to learn and improve their music and drama skills.<br>Overall, it is considered that the proposal is consistent with the goals and objectives set out within the NSW State Priorities. |
| **A Metropolis of Three Cities – Greater Sydney Region Plan** | A Metropolis of Three Cities is a bold vision for three, integrated and connected cities that will rebalance Greater Sydney – placing housing, jobs, infrastructure and services within easier reach of more residents, no matter where they live. The Plan sets a 40-year vision (to 2056) and |

| Strategic Planning Document | Comment |
|---|---|
| | establishes a 20-year plan to manage growth and change for Greater Sydney in the context of social, economic and environmental matters.<br><br>It is anchored on the strategies of infrastructure and collaboration, liveability, productivity, sustainability and implementation.<br><br>Education facilities are considered as vital infrastructure in the city. The proposal seeks to update the facilities of an existing school within an established neighbourhood. By doing so, it will help to maintain the vibrant mix of people and activities within Strathfield.<br><br>As mentioned in other parts of the EIS, temporary jobs will be provided in construction phase and new permanent jobs will be provided in education and service related sector.<br><br>Sustainability is also a key consideration, particularly in the proposed design, construction, and operation of the buildings. The design of the school incorporates sustainable design principles and is further discussed in Section 6.4 of the report. |
| **Future Transport Strategy 2056** | Future Transport Strategy 2056 is the NSW Government's update of the 2012 NSW Long Term Transport Master Plan and was finalised on 18 March 2018.<br><br>The focus of the plan is to enable people and goods to move safely, efficiently and reliably around Greater Sydney, including having access to their nearest centre within 30 minutes by public transport, 7 days a week. The transport system will also support the liveability, productivity and sustainability of places on our transport networks.<br><br>The subject site benefits from being near the Strathfield Interchange Station and bus stops, which are within 5min walk away, as well as the School's private bus services. The site is within 20 minutes train ride to Sydney CBD and Paramatta CBD, as well as other local centres. Therefore, the site is located within a highly accessible location and is well serviced by public transport. This is reflected in the fact students to the school come from all over Sydney. |
| **State Infrastructure Strategy 2018 –2038** | State Infrastructure Strategy 2018-2038 sets out Infrastructure NSW's independent advice on the current state of NSW's infrastructure and the needs and priorities over the next 20 years. It looks beyond the current projects and identifies policies and strategies needed to provide infrastructure that meets the needs of a growing population and a growing economy.<br><br>The Strategic objective for the Education sector is to '*Deliver infrastructure to keep pace with student numbers and provide modern, digitally-enabled learning environments for all students*.'<br><br>The proposed development will help meet this objective by improving the School's facilities and outdoor play area, enabling the school to provide a better learning environment for its pupils. |

| Strategic Planning Document | Comment |
|---|---|
| **Sydney's Cycling Future 2013** | Sydney's Cycling Future seeks to make bicycle riding a feasible transport option within Sydney through the three pillars of safe, connected cycle networks, better use of existing infrastructure, and policy and partnerships.<br><br>There are currently limited dedicated cycling facilities and routes that directly connect with the School. The existing Strathfield Council Cycling Map details local bike routes to the south and north-west of the Site. The Bay-to-Bay route, located to the west of the School, includes off road sections along Cooks River, which runs generally in a north-south direction.<br><br>Strathfield Council intends to improve the cycling facilities and routes in the future as detailed in their Active Travel Plan Report. The proposed bicycle network identifies Redmyre Road as part of the local network (on road). |
| **Sydney's Walking Future 2013** | Sydney's Walking Future (2013) aims to promote walking as a means of effective transport within Sydney by encouraging investment in safe, permeable walking networks. The actions set out in Sydney's Walking Future will make walking the transport choice for quick trips under two kilometres, and will help people access public transport.<br><br>The document draws from research and consultation of stakeholders by the NSW Government. It found that more than 50 per cent of children live less than two kilometres from School. However, 70 per cent of 5-9 year old children and 46 per cent of 10-14 year old children are driven to school in Greater Sydney. Connectivity and reduced delays, pedestrian safety and security, health and wellbeing benefits, and supporting facilities will encourage Sydneysiders to walk more.<br><br>Meriden is located within an established residential neighbourhood, within walkable distance to Strathfield Plaza where people live, work, shop, dine, rest and play. The School is very accessible by walking for students, parents, staff and visitors from the local community as well as from key transport nodes, such as the Strathfield Train Interchange for the broader school community. |
| **Sydney's Bus Future 2013** | Sydney Bus Future (2013) outlines the NSW Government's long-term plan to deliver simpler, faster, and better bus services within Sydney to meet current and future customer needs.<br><br>There are numerous bus stops within walking distance to Meriden School, which are serviced by several bus routes outlined in Section 2.6 of this EIS. |
| **Health Urban Development Checklist** | The Healthy Urban Development Checklist by NSW Department of Health seeks to ensure that communities in the State are created to promote healthy habits and active mobility. The proposal for Meriden School satisfies a range of items contained to the checklist, including: |

| Strategic Planning Document | Comment |
|---|---|
| | • *Encourage incidental physical activity;*<br>• *Promote opportunities for walking, cycling and other forms of active transport;*<br>• *Promote access to usable and quality public open spaces and recreational facilities;*<br>• *Reduce car dependency and encourage active transport;*<br>• *Consider crime prevention and sense of security*<br>• *Promote quality streetscapes that encourage activity*<br>• *Provide access to a range of facilities to attract and support a diverse population; and*<br>• *Promote a sense of community and attachment to place*<br>The proposal therefore aids in promoting a healthy and sustainable built environment. |
| **Better Placed: An integrated design policy for the built environment of New South Wales** | Better Placed – An integrated design policy for the built environment of NSW 2017 is the NSW Government Architect's Office policy to guide design. Better Placed provides clarity on what the NSW Government means by good design and outlines processes for achieving this. It has been created to assist everyone involved in design projects or the development assessment process and advocates that everyone has a role in ensuring our cities and towns are better places. The policy is based on seven objectives that define the key considerations in the design of the built environment:<br>*1. Better fit: contextual, local and of its place*<br>*2. Better performance: sustainable, adaptable and durable*<br>*3. Better for community: inclusive, connected and diverse*<br>*4. Better for people: safe, comfortable and liveable*<br>*5. Better working: functional, efficient and fit for purpose*<br>*6. Better value: creating and adding value*<br>*7. Better look and feel: engaging, inviting and attractive*<br>The Urban Design Statement at Appendix C discuss how the proposal has adopted these seven objectives into the design process. |
| **Eastern City District Plan** | The Eastern City District is at the centre of the Eastern Harbour City, recognised as Australia's global gateway and financial capital. The district is highly accessible to the Harbour CBD, which has half a million jobs and the largest office market in the region. The Eastern City District covers the Bayside, Burwood, City of Canada Bay, City of Sydney, Inner West, Randwick, Strathfield, Waverley and Woollahra local government areas. |

| Strategic Planning Document | Comment |
|---|---|
| | This District Plan responds to major transport, health and education investments in the District, either committed or planned, such as Sydney Metro and the CBD and South East Light Rail, which aligns with Future Transport 2056. Planning priorities that directly relate to the proposed development at Meriden include:<br>• **Planning for a city supported by infrastructure**<br>The School benefits from good access to public transport, specifically through bus links and train services at Strathfield station. The students, staff and visitors benefit from the close proximity to public transport and the well-connected and established walkways around the School.<br>• **Providing services and social infrastructure to meet people's changing needs**<br>With the proposed development, Meriden is adapting to changing requirements of students and trends in learning methods. Meriden has focused on providing for additional high-quality facilities for collaborative learning and new administrative areas.<br>The new Centre for Music and Drama will consist of Music Academy rooms, a large Drama studio, classrooms, performance spaces and staff rooms to meet the ever-increasing demand for high-quality music education. New outdoor play space and additional classrooms will be provided for the Junior campus. The new building within the Lingwood campus will accommodate Business Services, the ICT Department and a new Year 12 Centre. As a result of this new building, more space on the Senior School campus will be available for additional classrooms and other learning spaces.<br>The final outcome will provide modern, state-of-the art learning and play spaces for its students, which will still preserve the heritage and character of the School and environment. |

# 5. STATUTORY PLANNING ASSESSMENT

As outlined in the SEARs, the statutory provisions contained in the following planning instruments were considered:

- Biodiversity Conservation Act 2016
- State Environmental Planning Policy (State & Regional Development) 2011
- State Environmental Planning Policy (Infrastructure 2007)
- State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
- State Environmental Planning Policy No. 64 –Advertising and Signage
- State Environmental Planning Policy No.55 –Remediation of Land
- Draft State Environmental Planning Policy (Remediation of Land)
- Draft State Environmental Planning Policy (Environment)
- Strathfield Local Environmental Plan 2012

## 5.1. BIODIVERSITY CONSERVATION ACT 2016

The purpose of the *Biodiversity Conservation Act 2016* is '*to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.'*

A flora and fauna assessment (attached at Appendix N) has been prepared following the approval of a waiver for the requirement that a Biodiversity Assessment Report (BDAR) be submitted with the State Significant Development Application.

The NSW Department of Planning, Industry and Environment and the Office of Environment and Heritage each confirmed in a letter dated 03/04/2019 (refer Appendix N) that the development is not likely to have any significant impact on biodiversity values, and therefore the SSD DA is not required to be accompanied by a Biodiversity Development Assessment Report.

The assessment considers the ecological constraints of the proposed development on threatened species, populations and communities listed under the *NSW Biodiversity Conservation Act 2016 (BC Act),* and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act*) that occur within the development sites.

As noted in the assessment, no remnant native vegetation was recorded during the site inspection, and the vegetation present was confirmed as Urban Exotic /Native.

The current footprint will result in the removal/impact to approximately 0.032 ha of Urban Exotic/Native vegetation including one mature Syncarpia glomulifera (Turpentine). This latter species does not correlate with any threatened ecological community within the Strathfield local government area.

The Urban Exotic/Native vegetation within the study area may provide limited potential foraging resources for the highly mobile species Pteropus poliocephalus (Grey-headed Flying-fox). Following the site inspection, habitat assessment and the consideration of vegetation clearing impacts, it was concluded that the impact area is quite small and not significant.

Several buildings will be demolished in the proposed development, with one being considered potential roosting habitat for threatened microbat species. An additional survey was undertaken to determine threatened microbat activity in the vicinity and roof cavity of that building. No threatened microbat presence was detected, and it is considered unlikely that these species use habitat within the study area.

This flora and fauna assessment has concluded that the proposed works are unlikely to result in a significant impact on any threatened ecological communities and threatened species. As such, the proposal meets the requirements of the *Biodiversity Conservation Act 2016.*

## 5.2. STATE ENVIRONMENTAL PLANNING POLICY (STATE & REGIONAL DEVELOPMENT) 2011

The proposal is classified as State Significant Development on the basis that it falls within the requirements of clause 15 of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP), being '*development that has a capital investment value of more than $20 million for the purpose of alterations or additions to an existing school'*. The capital investment value of the project is anticipated to be $24,764,233 (Excl. GST) as outlined within the Cost Report provided in Appendix B. Part 2 of the SEPP further states that development control plans do not apply to State-significant developments.

## 5.3. STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE 2007)

*State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)* provides the legislative planning framework for infrastructure and the provision of services across NSW. Since gazettal of *State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017* on 1 September 2017, each of the provisions that related to educational establishments within ISEPP have been repealed. Accordingly, ISEPP no longer applies to the proposal.

## 5.4. STATE ENVIRONMENTAL PLANNING POLICY (EDUCATIONAL ESTABLISHMENTS AND CHILD CARE FACILITIES) 2017

*State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017* (Education SEPP), provides the legislative planning framework for the effective delivery of educational establishments and early education and care facilities across the State.

The Education SEPP establishes consistent State-wide assessment requirements and controls, that override development standards contained within other environmental planning instruments. Part 4 of the Education SEPP identifies school specific development controls, with clause 35 Schools—development permitted with consent containing the relevant controls. The proposal has been assessed against the relevant provisions of Part 4 within the following table.

Table 5 – Education SEPP Compliance Table

| Clause | Proposal | Compliance |
|---|---|---|
| **Clause 35 Schools—development permitted with consent** | | |
| (1) Development for the purpose of a school may be carried out by any person with development consent on land in a prescribed zone. | The proposed development is in R3 Medium Density zone, which is a prescribed zone for the purposes of the Education SEPP. | YES |
| (2) Development for a purpose specified in clause 39 (1) or 40 (2) (e) may be carried out by any person with development consent on land within the boundaries of an existing school. | Development consent is sought for the proposed works. | YES |
| (5) A school (including any part of its site and any of its facilities) may be used, with development consent, for the physical, social, cultural or intellectual development or welfare of the community, whether or not it is a commercial use of the establishment. | The community does not use the school facilities outside of school hours. This is not proposed to change. The school, however, does invite local residents to special music performance nights. | N/A |
| (6) Before determining a development application for development of a kind referred to in subclause (1), (3) or (5), the consent authority must take into consideration: | The EIS addresses the design quality of the development. A formal response to the Schedule 4 School Design Principles is | YES |

| Clause | Proposal | Compliance |
|---|---|---|
| (a) the design quality of the development when evaluated in accordance with the design quality principles set out in Schedule 4, and<br><br>(b) whether the development enables the use of school facilities (including recreational facilities) to be shared with the community. | included in the Design Report prepared by AJ+C (refer to Appendix C). As stated, the community does not use any of the school facilities out of school hours and this is not proposed to change.<br><br>The school, however, does invite local residents to special music performance nights. | |
| (7) Subject to subclause (8), the requirement in subclause (6) (a) applies to the exclusion of any provision in another environmental planning instrument that requires, or that relates to a requirement for, excellence (or like standard) in design as a prerequisite to the granting of development consent for development of that kind. | The *Strathfield Local Environmental Plan 2012* requires a competitive design process to be completed for land within Strathfield Town Centre and identified as 'Area 2' on the floor space ratio map. The subject site is not located within the Strathfield Town Centre or Area 2. and a competitive design process is not required for the site under the LEP. | YES |
| (8) A provision in another environmental planning instrument that requires a competitive design process to be held as a prerequisite to the granting of development consent does not apply to development to which subclause (6) (a) applies that has a capital investment value of less than $50 million. | The CIV of the proposal is less than $50 million and a competitive design process is not required. | YES |
| (9) A provision of a development control plan that specifies a requirement, standard or control in relation to development of a kind referred to in subclause (1), (2), (3) or (5) is of no effect, regardless of when the development control plan was made. | Noted | N/A |
| (10) Development for the purpose of a centre-based child care facility may be carried out by any person with development consent on land within the boundaries of an existing school. | The proposal does not include any centre based child care. | YES |
| (11) Development for the purpose of residential accommodation for students that is associated with a school may be carried out by any person with development consent on land within the boundaries of an existing school. | The proposal does not include any residential accommodation. | N/A |

Clause 42 of the Education SEPP allows the proposal to contravene a development standard imposed by the Education SEPP or any other environmental planning instrument under which the consent is granted:

> ***'State significant development for the purpose of schools—application of development standards in environmental planning instruments***
>
> *Development consent may be granted for development for the purpose of a school that is State significant development even though the development would contravene a*

*development standard imposed by this or any other environmental planning instrument under which the consent is granted.'*

The proposed Music and Drama Centre exceeds the Height of Building development standard of 11m by 1.64m. However, as per clause 42 of the Education SEPP, development consent may still be granted, without the need for a formal clause 4.6 Variation to either development standard.

Clause 35(6) requires the consent authority to consider the design quality principles set out in Schedule 4 of the Education SEPP prior to determination. The proposal has been designed having regard to the design quality principles and responds to each of them in the following way:

**Principle 1: Context, built form and landscape**

The proposed development has been designed sympathetically to have regard to the heritage significance of both Senior and Lingwood campus. The orientation of the new Centre for Music and Drama has been designed to enhance views from the Senior School campus to Lingwood House on the Lingwood campus. Similarly, the location, orientation and scale of the new Administration and Student Centre on the Lingwood campus has been designed to minimise the impact on the heritage curtilage of the Lingwood House.

The design of the proposed new school buildings has been influenced by the surrounding built and natural character of Strathfield. In particular, the proposal incorporates a range of building materials and colours that are sympathetic against the existing school buildings and the surrounding residential character.

Landscape plans are prepared for each school campus, which enhance the landscape setting of each site and provide outdoor play area for students.

**Principle 2: Sustainable, efficient and durable**

The proposal will adopt a range of ESD initiatives, and an ESD Report is attached at Appendix K. The proposal will also provide positive social and economic benefits for the school community and local community by ensuring that teaching facilities are meeting contemporary educational needs.

**Principle 3: Accessible and inclusive**

The proposed school buildings and playground have been inclusively designed to provide safe and equal access for all, as outlined within the Access Design Assessment Report attached at Appendix X.

**Principle 4: Health and safety**

The proposal will provide additional playground space on the Junior campus which will encourage passive recreation.

Crime Prevention Through Environmental Design (CPTED) measures will be incorporated into the design, operation and management of the site to ensure a high level of safety and security for students and staff. A CPTED assessment report is contained in Appendix Y.

**Principle 5: Amenity**

The proposal will contain state-of-the-art facilities, spaces and equipment for use by students and staff, and will provide a pleasant learning environment. Subject to the careful management and implementation of each recommended mitigation measure in Section 9 of the report and the attached consultant reports, the proposal will not result in any unacceptable impacts on neighbouring properties.

**Principle 6: Whole of life, flexible and adaptive**

The proposal involves construction of new classrooms and associated facilities, which have been designed to ensure flexibility and longevity.

**Principle 7: Aesthetics**

The design of the new buildings and playground area will incorporate high quality finishes, which are aesthetically pleasing and respond to the site context and surrounding receiving environment.

A more detailed assessment of the proposal against the design quality principles is undertaken within the Architectural Statement at Appendix C**.**

## 5.5. STATE ENVIRONMENTAL PLANNING POLICY NO. 64 –ADVERTISING AND SIGNAGE

*State Environmental Planning Policy No. 64 – Advertising and Signage* (SEPP 64) aims to ensure that advertising and signage is compatible with the desired amenity and visual character of an area and provides effective communication in suitable locations and is of high quality design and finish. It does not regulate the content of signs and advertisements.

Clause 8 and Clause 13 of SEPP 64 prevents development consent from being granted to signage unless the consent authority is satisfied that it is consistent with the objectives of the SEPP and has satisfied the assessment criteria specified in Schedule 1.

The proposal does not seek detailed planning approval for any signs. Any future informational, directional, and wayfinding signages to be proposed on site will be checked against the assessment criteria on Schedule 1 of the Education SEPP – Exempt Development.

## 5.6. STATE ENVIRONMENTAL PLANNING POLICY NO.55 –REMEDIATION OF LAND

*State Environmental Planning Policy No.55 – Remediation of Land* (SEPP 55) provides a state-wide planning approach for the remediation of land and aims to promote the remediation of contaminated land to reduce the risk of harm to human health or the environment. Clause 7(1) requires the consent authority to consider whether land is contaminated prior to the issuance of consent to a development application.

A Phase 1 Preliminary Site Investigation (PSI) has been undertaken by Douglas Partners for the Junior and Senior School campus and are included at Appendix P. A Soil Contamination Screening for the Prep School has been undertaken by JK Environment and is included at Appendix FF.

The PSI reports for each site specifies the findings of a preliminary investigation of the site in accordance with the contaminated land planning guidelines and was prepared to:

- Identify potential sources of site contamination and the potential contaminants of concern from site history information and a site walkover;
- Identify potential receptors to contamination;
- Establish a preliminary conceptual site model (CSM);
- Provide a preliminary assessment of the contamination status of the site with respect to the proposed development from the collection and laboratory analysis of soil samples;
- Provide a preliminary waste classification assessment; and
- Provide recommendations for further work for the proposed development.

**Contamination**

Senior Campus

At the time of writing the site and nearby properties are not on the 'List of NSW contaminated sites notified to the EPA'.

Site history information indicates that the site was used for residential purposes prior to its current use as a secondary school. Potential sources of contamination have been identified to include imported contaminated filling (to level the site) and hazardous building materials (impacting ground surfaces from previous demolition works). The potential for contamination from these sources is considered to **be low**.

As the investigation was preliminary in nature, field work was limited to the collection of soil samples from five test bores and five test undertaken for geotechnical purposes.

Soil sampling from boreholes and test pits and laboratory analysis for common contaminants has indicated an absence of soil contamination. On this basis it is considered that the site is suitable for the proposed development from a contamination perspective.

Testing for waste classification purposes indicates that the filling has a preliminary classification as General Solid Waste (non-putrescible) and the underlying natural soil/rock is preliminarily classified as Virgin Excavated Natural Material (natural material).

The PSI concludes that the site is considered suitable for the proposed new school building, subject to the implementation of the following recommendations prior to or after building demolition:

- Further testing will need to be undertaken (post-demolition) to confirm the classifications for soil and rock that will be excavated for the proposed basement and disposed (or re-used) off-site.
- A hazardous building materials survey should be undertaken (if not already completed) for demolition of the existing building.

A hazardous building materials survey has been prepared for the demolition of the existing building on all three campuses. The results of the hazardous building materials survey is discussed below.

Junior Campus

Aerial photographs indicate that the site was occupied by a residential house with front and back yard since (before) 1930. The house may have been used for office purposes from 1950 according to historical title deeds. Apart from some possible changes to the arrangement of the back yard which has a detached garage, the site has remained essentially the same since 1930 (according to aerial photographs).

At the time of writing the site and nearby properties are not on the 'List of NSW contaminated sites notified to the EPA'.

Based on current and previous site uses, and site observations, the potential sources of contamination and associated contaminants are summarised as follows:

- S1 – Filling and surficial soil. Imported contaminated filling used to form/level the site. Deterioration of hazardous building materials may have impacted surficial soils. Various potential contaminants are possible, such as metals, total petroleum hydrocarbons, BTEX, PAH, OCP, OPP, PCB, phenols and asbestos;
- S2 – Hazardous building materials in structures at the site. The potential contaminants are lead (from lead-based paint), asbestos (from asbestos-containing materials) and PCB (from capacitor in light fixtures and paint).

As the investigation was preliminary in nature, field work was limited to the collection of soil sample from four boreholes drilled for geotechnical purposes.

The tested filling has concentrations of lead and PAH above the health-based Site Assessment Criteria, and, on this basis, it is considered that remediation will be required to make the site suitable for the proposed open play space development.

It is recommended that the remediation approach is to be adopted and should be documented in a Remediation Action Plan (RAP). The RAP should include the requirements for addressing data gaps (such as within the current building footprint, following its demolition).

As recommended by the PSI report, a RAP has been prepared by Douglas Partners and is attached at Appendix DD. The overall goal of the remediation programme outlined in the RAP is to render the site suitable, from a contamination perspective for the proposed development.

In keeping with the outcomes and recommendations outlined in PSI, the extent of remediation at the site is defined as follows:

- Elevated levels of lead and PAH exceeded health based investigation and/or screening levels in all the fill samples tested.

There were also some exceedances of the environmental screening levels for TRH. These exceedances are **not considered to be significant**.

On this basis, all fill at the site is subject to the requirements and strategies of this RAP. The selected (preferred) remediation strategy is as follows:

- Excavation of fill from the site and off-site disposal; and

- Validation of the removal of all fill.

The detailed procedures and sequence for the remediation work has been outlined in the RAP. The Principal and/ or Contractor must obtain all required approvals, licences and permissions prior to commencement of remediation works, and implement relevant conditions.

It is concluded that the site can be rendered suitable for the proposed development subject to proper implementation of the remediation procedures, unexpected finds protocols and completion of the validation assessment detailed in this RAP.

Prep School

A Soil Contamination Screening assessment has been undertaken by JK Environments and is attached at Appendix FF. The primary aims of the screening were to identify potentially contaminating activities based on the information provided in EIS 2017 report and make a screening of the soil contamination conditions.

The screening objectives were to:

- Assess the soil contamination conditions via implementation of a soil sampling and analysis program;
- Extract the conceptual site model (CSM) from the EIS 2017 report;
- Assess the potential risks posed by contamination to the receptors identified in the CSM (Tier 1 assessment);
- Assess whether the site is suitable or can be made suitable for the proposed development (from a contamination viewpoint); and
- Assess whether further intrusive investigation and/or remediation is required

Field work was limited to the collection of soil sample from three boreholes drilled for geotechnical purposes. The data collected from the site indicated the presence of targeted contaminants in fill and natural soils above the assessment criteria. The identified soil impact is likely to be associated with impacted fill soil imported on to the site. Potential risks associated with the elevated concentrations of carcinogenic PAHs, TRHs and zinc exist in the soil samples.

Based on the findings of the screening, it is concluded that the site can be made suitable for the proposed development, subject to successful implementation of following recommendations:

- Undertake groundwater contamination assessment;
- Prepare a Remediation Action Plan (RAP) to include a procedure for removing and of the identified contamination; and
- Once all the contamination issue identified in the RAP has been addressed (i.e. removed and validated) prepare a site validation report in order to demonstrate the identified contamination has no longer a risk.
- Undertaking a waste classification for the off-site disposal of the material. This will be required during the site remediation process.

As recommended by the Soil Contamination Screening report, a RAP has been prepared by JK Environments for the Prep school campus and is attached at Appendix DD.

The aim of remediation is to address the risks posed by the contamination encountered at the site and to make the site suitable for the proposed development

In keeping with the outcomes and recommendations outlined in PSI, the extent of remediation at the site is to remediate PAH, TRH and Zinc Impacted Fill Area. On this basis, all fill at the site is subject to the requirements and strategies of this RAP. The selected (preferred) remediation strategy is as follows:

- Removal of contaminated material to an appropriate facility and reinstatement with clean material where required.

The detailed procedures and sequence for the remediation work has been outlined in the RAP.

It is concluded that the site can be made suitable for the proposed development provided this RAP is implemented accordingly and the data gaps listed below are addressed:

- One groundwater monitoring well, as a minimum, should be installed at downgradient of the site once the soil remediation and validation was completed. Groundwater from the well should be sampled and analysed for a range of targeted contaminants. The findings of the groundwater assessment should be included in the site validation report.
- If the presence of this material is confirmed by A Hazardous Building Material assessment, it should be removed as soon as possible and validate (i.e. issue a clearance certificate).
- A site validation report should be prepared on completion of remediation activities and should be submitted to the consent authority

**Groundwater**

Groundwater assessment was included in the PSI for each campus. A summary of observation is provide below:

Senior School

The nearest surface water body is Powells Creek which is located approximately 500 m to the north of the site. Powells Creek flows into Homebush Bay, approximately 4 km to the north of the site. Based on topography, it anticipated that groundwater at the site would flow towards the north in the direction of Powells Creek.

A search of the Water NSW website did not reveal any registered groundwater bores within 500 m of the site.

Junior school

The nearest surface water body is Powells Creek which is located approximately 600 m to the north of the site. Powells Creek flows into Homebush Bay, approximately 4 km to the north of the site. Based on topography, it anticipated that groundwater at the site would flow to the north or north-west and migrate towards Powells Creek.

A search of the Water NSW website did not reveal any registered groundwater bores within 500 m of the site. During ground surveying, a groundwater monitoring well was installed. No free groundwater was observed during auguring of boreholes.

Prep School

Groundwater was not encountered in deeper boreholes to a maximum depth of 6m.

**Acid Sulfate Soils**

Acid Sulfate Soils Assessment have been prepared for all campuses and are included at Appendix EE.

A review of the Strathfield Council LEP indicates that all three campuses are not located in a Class 5 risk Area. A review of the Acid Sulfate Soil Risk Map risk maps prepared by *Department of Land and Water Conservation (1997)4* indicates all campuses are not located in an area classified as known occurrence of acid sulfate soil. Based on the risk maps there also do not appear to be any risk areas within 500m of the three campuses.

Based on the information reviewed, there is negligible potential for Acid Sulfate Soil or Acid Sulfate Soil potential and an Acid Sulfate Soil Management Plan is not considered necessary for the proposed development.

**Hazardous Building Materials (HBM) Survey**

A hazardous building materials (HBM) survey has been undertaken for all three campuses and is attached at Appendix Q. The survey presents the following results:

| Building / Area | Non-Friable Asbestos | Friable Asbestos | SMF | Lead Paint | Lead Dust | PCB |
|---|---|---|---|---|---|---|
| Business Services Building | ✗ | ✗ | ✓ | ✗ | ✓ | ✗ |
| Uniform Store | ✗ | ✗ | ✓ | ✓ | ✓ | ✗ |
| Centre of Music and Drama (CMD) | ✗ | ✗ | ✓ | ✓ | ✓ | ✗ |

SMF = synthetic mineral fibre, PCB = polychlorinated biphenyls.

It is concluded that the site can be made suitable for the proposed works, subject to:

- An appropriate intrusive/destructive investigation for HBM once the relevant buildings/areas have been adequately vacated and prior to the proposed works (i.e. demolition/refurbishment) commencing;
- Controlled removal of all relevant HBM, and clearance certification confirming adequate removal of all relevant HBM, in accordance with relevant regulatory requirements including those in the NSW WHS Regulation 2017, subordinate codes of practice, standards and guidelines; and
- The recommendations outlined in Appendix C - Hazardous Building Materials (HBM) Register of the Hazardous Building Materials (HBM) Survey Report must be implemented.

In conclusion, potential contamination has been identified for each site. Senior school campus is considered suitable for the proposed new school building. Remediation Action Plan has been prepared for Junior and Prep school in order to render the site from identified potential contamination, so it is suitable for the proposed development.

## 5.7. DRAFT STATE ENVIRONMENTAL PLANNING POLICY (REMEDIATION OF LAND)

The *Draft State Environmental Planning Policy (Remediation of Land)* is the proposed new land remediation SEPP set to replace SEPP 55. Public exhibition of the 'explanation of intended effect' for the Draft Remediation SEPP and draft planning guidelines was completed in April 2018.

The Draft Remediation SEPP will retain the objectives of SEPP 55 and reinforce the successful aspects of the framework. In terms of relevant changes applicable to development applications, clause 7 of SEPP 55 is proposed to be incorporated into the Draft Remediation SEPP. In addition, the list of potentially contaminating activities and the purpose of a 'preliminary site investigation' (PSI) and 'detailed site investigation' (DSI) will be integrated into clause 7 of the Draft Remediation SEPP.

A PSI for each campus has been submitted as part of this application, attached in Appendix P. The result of the PSI is discussed above. Followed by the PSI, Remediation Action Plan for Junior and Prep school has been prepared and submitted as part of this application (attached in Appendix DD).

The Remediation Action Plan establish appropriate remedial strategies for the Junior and Prep School campuses to allow the site to be mitigated suitable for the proposed development. The remediation approaches have been summarised in the section above and outlined in Section 9 of the EIS.

## 5.8. DRAFT STATE ENVIRONMENTAL PLANNING POLICY (ENVIRONMENT)

The Draft State Environmental Planning Policy (Environment) (Draft Environment SEPP) is the new SEPP seeking to consolidate, repeal and replace the following seven existing SEPPs:

- State Environmental Planning Policy No. 19 – Bushland in Urban Areas
- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011

- State Environmental Planning Policy No. 50 – Canal Estate Development
- Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment
- Sydney Regional Environmental Plan No. 20 – Hawkesbury-Nepean River (No.2-1997)
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- Willandra Lakes Regional Environmental Plan No. 1 – World Heritage Property.

Public exhibition of the Draft Environment SEPP was completed in January 2018. The Draft Environment SEPP will deliver a policy instrument that contains a single set of planning provisions for catchments, waterways, bushland and protected areas.

The land the site is located on is currently not subject to any of the abovementioned SEPPs, nor is it identified as being attributed to any catchments, waterways, bushland or protected areas

# 5.9. STRATHFIELD LOCAL ENVIRONMENTAL PLAN 2012

Strathfield Local Environmental Plan 2012 (SLEP) is the principal environmental planning instrument governing development at the site. An assessment against the relevant controls of the SLEP has been undertaken in the subsections below.

## 5.9.1. Zoning and Permissibility

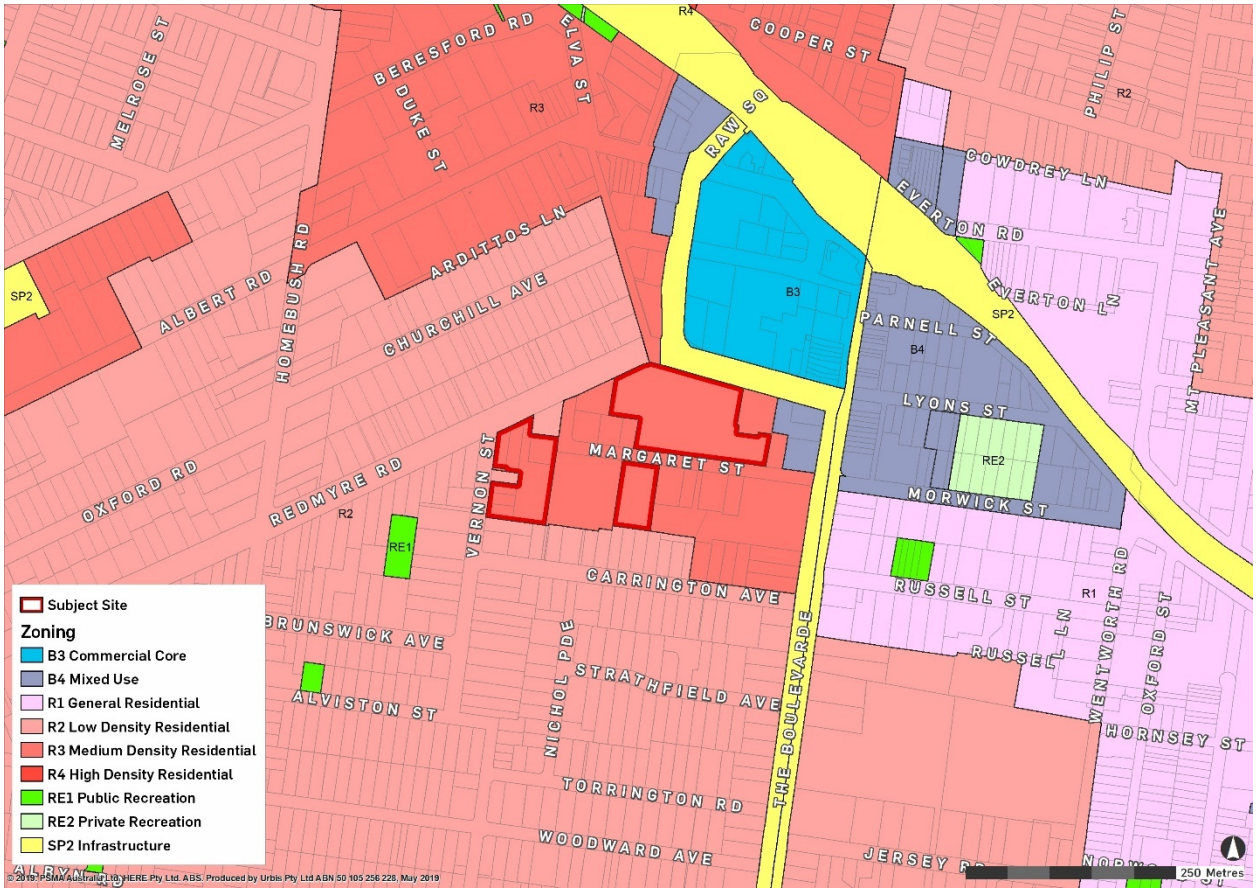
The site is zoned R3 Medium Density under the SLEP. 'Educational establishments' are not permitted within the R3 zone (refer to Figure 11).

However, the R3 Medium Density zone is identified as a 'prescribed zone' under Clause 33 Part 4 of the *Education SEPP*. Clause 35(1) of the Education SEPP permits development for the purpose of a school to be development with consent within a prescribed zone.

> *"35 Schools—development permitted with consent*
>
> *(1) Development for the purpose of a school may be carried out by any person with development consent on land in a prescribed zone."*

Accordingly, by way of Clause 35(1) of the Education SEPP, the proposed development across all 3 campuses is permitted as 'development with consent' on the site.

Figure 11 – Land Zoning Map (Strathfield LEP 2012)




*Source: Strathfield LEP*

## 5.9.2. LEP Provisions and Development Standard

Other relevant provisions contained to the *RLEP 2014* are addressed in Table 6 below.

Table 6 – SLEP Compliance Table

| Consideration | Control | Proposal | Compliance |
|---|---|---|---|
| R3 Medium Density<br><br>Zoning objective | • *To provide for the housing needs of the community within a medium density residential environment.*<br><br>• *To provide a variety of housing types within a medium density residential environment.*<br><br>• *To enable other land uses that provide facilities or services to meet the day to day needs of residents.* | The proposed new CMD, administration and student centre and playground provide facilities to meets the growing demand from students and the day to day needs of the existing school community. The proposed new facilities enable high-quality teaching beyond what can currently be provided for the existing and future students that lives in the Strathfield LGA.<br><br>It is clear that the existing school is a compatible land use that provides educational facilities for the residents in the area and the boarder LGA. | Generally consistent with zoning objective. |
| Clause 4.3 – Building Height | All three campuses are subject to a building height control of 11 metres. | **Senior Campus:**<br><br>3 Storeys (above ground), with two levels below ground level. | The senior campus will exceed the height control |

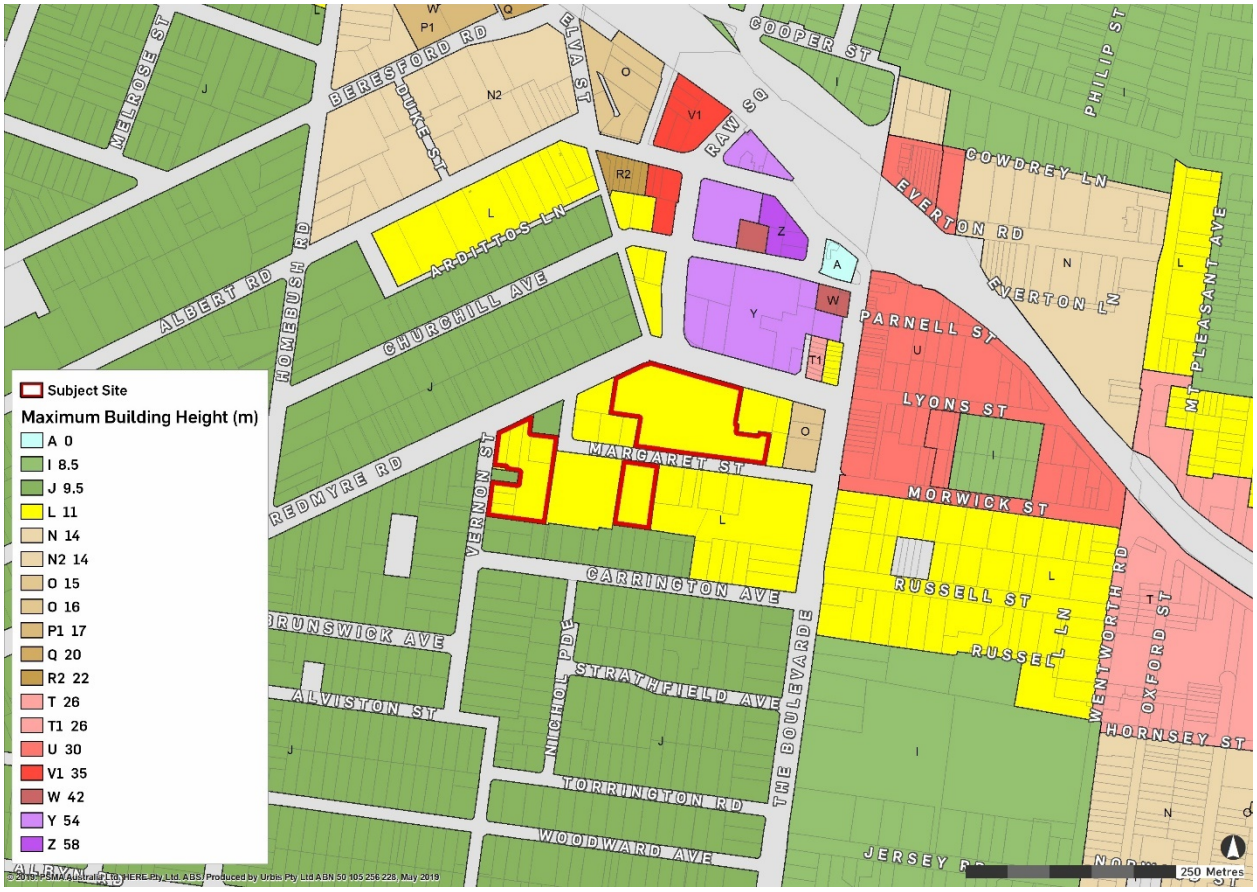
| Consideration | Control | Proposal | Compliance |
|---|---|---|---|
| | | Maximum height of 12.64m measured to the top of the lift overrun.<br><br>**Junior School**<br><br>Non-applicable. The proposed pergola is less than 11m.<br><br>**Prep School Campus**<br><br>Two Storey.<br><br>Maximum height of approximately 8.32m. | by 1.64m. See justification in Section 5.9.3. |
| Clause 4.4 - Floor Space Ratio (FSR) | All three campuses are each subject to a FSR of 1.2:1. | **Senior Campus:**<br><br>Existing: 9,624sqm (0.64:1)<br><br>Proposed: 11,435sqm (0.76:1)<br><br>**Junior School:**<br><br>No additional gross floor area is proposed.<br><br>**Prep School Campus FSR:**<br><br>Existing: 894sqm (0.25:1)<br><br>Proposed: 1,354sqm (0.38:1) | Yes |
| Clause 5.10 – Heritage Conservation | The Senior Campus and the Lingwood Campus are identified as local heritage items in the SLEP:<br><br>• Item I187 'Meriden School'<br><br>• Item I176 '"Lingwood" – Victorian house and garden (formerly Branxton)'<br><br>The Junior campus is also located within the Vernon Street Conservation Area. | A Heritage Impact Statement and Aboriginal Cultural Heritage Report are attached at Appendix G and Appendix H respectively.<br><br>The proposal is not expected to unreasonably impact on the heritage significance of the site.<br><br>Aboriginal Heritage and European Built Heritage matters are discussed in more detail at Section 6.5 and 6.7 of this report. | YES |
| 6.1 Acid sulfate soils | The subject school campuses are Class 5 Acid Sulfate soil. No works are proposed within 500m of the adjacent Class 1, 2 ,3 or 4 land. | | YES |
| Clause 6.2 - Earthworks | Earthworks must not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land. | The proposed earthworks will be generally limited to the footprint of the proposed school buildings. The earthworks are not anticipated to have an adverse environmental impact. A Geotechnical Report has been prepared by Douglas Partners attached at Appendix S. | YES |

## 5.9.3. Height of building

The maximum height limit on the site is 11m (refer to Figure 12).

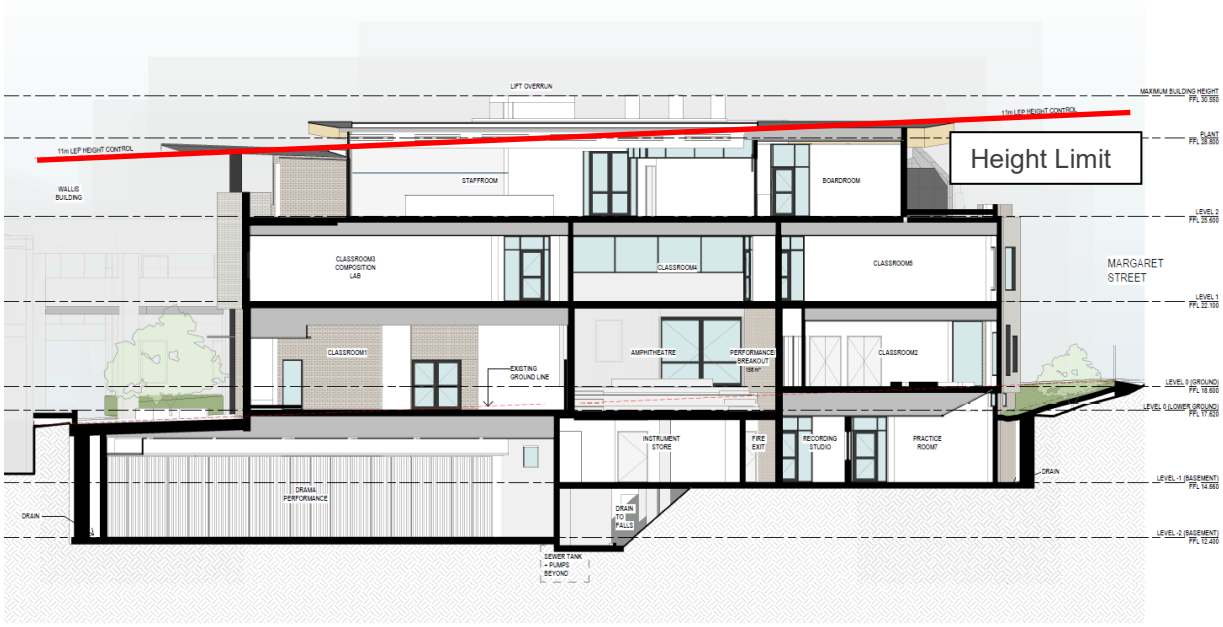
The proposed Prep school administration building complies with the height control. The proposed Centre of Music and Drama has a maximum height of 12.64m measured from the lowest point of the existing ground line to the top of the lift overrun, which exceeds the height development standard. The height non-compliance is shown in Figure 13.

Figure 12 – Building Height Map (Strathfield LEP 2012)




*Source: Strathfield LEP*

Figure 13 – Height non-compliance




*Source: AJ+C*

Ordinarily a Clause 4.6 variation would be required to vary this height of buildings standard, however Clause 42 of the ESEPP states that:

> *"Development consent may be granted for development for the purpose of a school that is State significant development even though the development would contravene a development standard imposed by this or any other environmental planning instrument under which the consent is granted."*

As such no clause 4.6 is required. Notwithstanding this, the proposed building height is acceptable for the following reasons:

- The area of the height non-compliance relates to small area of the roof and the lift overrun, which provides equitable access for all students and staff.
- The building has been carefully designed to visually unify the school buildings along Margaret Street, tying together the existing Wallace and Hope/Turner buildings with material, height and geometric references. The building has been aligned to the Wallace and Hope/ Turner Buildings along Margaret Street. The upper level of the building is setback further from Margaret Street to minimise perceived bulk. Landscaping area to the west and integrated planting and landscaping on the upper level of the building also help to minimise the perceived bulk of the building,
- The building height exceedance will not impact privacy to any neighbouring residential dwellings. The only residential dwelling interfacing the Centre of Drama and Music is to the west at 15 Margaret Street. Minimal window openings are proposed on the western elevation. The separation distance to 15 Margaret Street is approximately 18m, which provides sufficient acoustic and privacy buffer to the residential dwelling. Further, the proposed CMD incorporates landscaping and trees within the western setback, to provide screening and ensure the protection of privacy.
- Shadow diagrams provided in the architectural plan package at Appendix D demonstrate that no material overshadowing will be cast on any neighbouring properties. The additional shadows occur within the school and to Margaret Street.
- There are no iconic views across the site.
- Space within metropolitan school sites are extremely limited and as such the provision of multi-storey buildings are necessary. To achieve the floor space requirements necessary for the school's future

operations it has been necessary to slightly exceed the maximum height of building development standard.

- The additional height will facilitate the delivery of a high-quality music and drama centre to meet the ever-increasing demand for high-quality music and drama education. Compliance in this circumstance would not improve the outcome. Rather, it would unreasonably impact on the ability to deliver this much needed education infrastructure and design excellence.

The proposed building height exceedance will not create any material impacts to the privacy or view amenity of neighbouring properties or from the public domain. The variation is therefore considered to be acceptable.

## 5.9.4. Strathfield Consolidated Development Control Plan 2005

Part M of the Strathfield Development Control Plan 2005 (SDCP) provides detailed controls for school developments. However, under Clause 11 of *State Environmental Planning Policy (State and Regional Development) 2011,* the application of local development control plans is excluded when assessing DAs for SSD projects. Notwithstanding this, the proposal has been assessed against the key relevant controls of the SDCP in the table below.

Table 7 – Strathfield DCP 2012 Compliance Table

| Control | Objective / provision | Proposal | Complies |
|---|---|---|---|
| **PART M – Educational Establishments** | | | |
| **1.4 Zones where *educational establishment* are permissible** | Permissible in Residential Zones | Complies. | YES |
| **4.1 Design Principles** | Development should satisfy all relevant design principles listed in the DCP. | Design principles have been addressed in the Design Report attached at Appendix C | YES |
| **4.2 Site Analysis** | All applications shall include a Site Analysis Drawing. | A Site Analysis Drawing has been prepared (see Appendix D). | YES |
| **4.3 Site Requirements** | 1. To ensure that the relationship between an educational establishment and adjoining land uses is favourable and the amenity of surrounding development is not adversely affected; and<br><br>2. To ensure that an educational establishment is located where it can operate satisfactorily in terms of pedestrian and vehicular safety and traffic impact on the surrounding road network and other land uses in the vicinity.” | Impact on surrounding residential amenity is addressed in Section 6.2. The proposal will have minimal amenity impact to adjoining land uses.<br><br>Pedestrian and vehicular safety and traffic impact is addressed in the Traffic and Transport Report in Appendix J. | YES |
| **4.4 Building Design and Envelope** | Development should be compatible with height, bulk, scale, siting and character of adjoining and nearby residential zone | The proposal is consistent with the streetscape character and nearby residential zone. This is | YES |

| Control | Objective / provision | Proposal | Complies |
|---|---|---|---|
| | Ensure protection of neighbouring properties from excessive noise generated by an educational establishment | discussed in Section 6.1 of the report.<br><br>Acoustic impact and mitigation measures are addressed in Section 6.8 of the report. | |
| **4.5 Bulk Scale and Site Coverage** | 1. Façade treatments must integrate the visual components of the building into and enhance streetscape.<br><br>2. Where sites are within or adjoining Residential 2A or 2B zoned areas maximum site coverage is 60%. | Façade treatments is integrated with the visual components of the building to the enhance streetscape. Façade treatment and streetscape presentation is addressed in the Design Report attached at Appendix C.<br><br>The new buildings have been incorporated with sufficient landscape area on each of the campuses. | YES |
| **4.6 Height** | 1. The maximum height for an educational establishment in or adjoining a residential land use zone is:<br><br>a) 2 storeys, and<br><br>b) 9.5 metres above natural ground level.<br><br>2. On large sites in or adjoining a residential land use zone, applications seeking a variation of maximum height will be considered on merit. | As per clause 42 of the Education SEPP, development consent may still be granted, without the need for a formal clause 4.6 Variation to the building height development standard.<br><br>The proposed Prep school administration building complies with this height control. The proposed Music and Drama Centre has a maximum height of 12.64m, which exceeds the height development standard by 1.64m.<br><br>Height non-compliance is addressed in Section 5.9.3 of the report. | Acceptable on merit. |
| **4.7 Setbacks** | **Minimum Front Setbacks in or adjoining residential zones**<br><br>Minimum front wall setbacks in or adjoining residential zones apply as follows:<br><br>Main Frontage – 9m<br><br>Secondary Frontage – 5m | **Front Setbacks**<br><br><u>Senior School</u><br><br>The senior school Centre for Music and Drama has a consistent front setback as the existing school buildings along Margret Street. | YES |

| Control | Objective / provision | Proposal | Complies |
|---|---|---|---|
| | Where existing front setbacks in nearby residential properties are greater than the minimum setbacks, greater setbacks consistent with adjoining residential properties shall be provided.<br><br>**Minimum Side and Rear Boundary Setbacks**<br><br>Side and rear boundary wall setbacks in or adjoining residential zones should be consistent with the side and rear setbacks in the nearby vicinity. However, the following minimums apply:<br><br>Single Storey – 3m<br><br>Two Storey – 4m<br><br>**Minimum Setbacks for Occupiable Open Space**<br><br>Setbacks to people gathering areas of open space such as playgrounds and active sports courts and the like that are potential sources of noise in or adjoining residential zones must include a landscape buffer area a minimum of 3m wide to facilitate dense landscaping. | Prep School<br><br>The new prep school building follows the established front setback alignment of adjacent dwellings, maintaining the existing streetscape character.<br><br>**Side and Rear Boundary Setbacks**<br><br>Senior School<br><br>The Centre for Music and Drama is setback approximately 15m from the adjoining dwelling at 15 Margaret Street.<br><br>Prep School<br><br>The new admin and student centre is setback approximately 1.2m from the adjoining dwelling at 12-14 Margaret Street. This side setback follows the existing side setback established by the school building located to the rear of the prep school campus and is consistent with the setback of the existing school building proposed to be demolished. Minimal additional shadow will fall within 12-14 Margaret Street, and appropriate acoustic and privacy measure have been incorporated. This is addressed in Section 6.8 of the report.<br><br>**Minimum Setbacks for Occupiable Open Space**<br><br>Senior School<br><br>Buffer planting of more than 3m wide is provided along the western boundary.<br><br>Junior School<br><br>The playground is setback approximately 2.5m from 2 Vernon Street. The playground is | |

| Control | Objective / provision | Proposal | Complies |
|---|---|---|---|
| | | separated by boundary fencing and an existing driveway from 2 Vernon Street. | |
| **4.8 Visual Privacy and Views** | 1. Educational establishment windows, doors, balconies, terraces, external elevated areas shall not overlook into internal rooms and external living areas within adjoining properties and properties in the vicinity.<br><br>2. Educational Establishments shall have minimal impact on the existing outlook and views of adjoining properties and properties in the vicinity | Visual privacy and view impacts are addressed in Section 6.2 of the report. | Refer to Section 6.2 |
| **4.9 Acoustic Privacy** | All Applications must be supported by a Noise Impact Assessment | Noise Impact Assessment is attached at Appendix R and addressed in Section 6.8 of the report. | YES |
| **4.10 Overshadowing and Solar Access** | Development must not overshadow adjoining and nearby existing dwellings so that less than 4 hours of solar access is received to the windows of habitable rooms and to the majority of private open space, and solar collectors a between the hours of 9am and 3pm at the winter solstice. | Analysis on the potential additional overshadowing impacts resulting from the proposal have been included in the Architectural Set at Appendix D. The proposed buildings will result in minimal additional overshadow to nearby dwelling houses. Majority of the overshadow will occur within the school sites or to the street. | YES |
| **4.11 Environmentally Sustainable Development** | Development should incorporate principles of passive solar design, the use of energy efficient materials and technology and utilization as far as possible of renewable energy. | An Ecologically Sustainable Development (ESD) report has been prepared by Norman Disney & Young and is attached at Appendix K. The proposal incorporates a number of ESD initiatives. | YES |
| **4.14 Safe by Design** | Educational establishments shall satisfactorily incorporate principles of safety by design set out in the Guidelines | A CPTED Assessment has been undertaken by Urbis and attached at Appendix Y. The CPTED Assessment concludes that the design incorporates a number of CPTED principles, including safe road procedures, access control and landscape maintenance which maximise | YES |

| Control | Objective / provision | Proposal | Complies |
|---|---|---|---|
| | | student and road and pedestrian safety on site. | |
| **4.15 Traffic, Parking and Access** | A Traffic and Parking Impact Assessment Report is recommended | Traffic and Parking Impact Assessment is attached at Appendix J. | YES |
| **4.16 External Impacts Management Plan** | Prepare an External Impacts Management Plan that details operational processes to fully address the objectives above. | Operational processes during the construction of the new school buildings are outlined in Section 3.7.3 of the report. Operation measures are addressed in Section 3.8 of the report.<br>The proposal does not seek to alter the existing school operation procedures. | YES |
| **4.20 Stormwater Drainage and Re-Use** | Stormwater Management Plan should be submitted. | The required Stormwater and detention tank has been addressed and shown in the Hydraulic Services Assessment attached at Appendix U. | YES |

## 5.9.5. Contributions

The site is covered by the Strathfield Section 94A Development Contributions Plans, which authorises the Council to collect contributions of money from developers to provide for local infrastructure needed by the relevant development. The plan was prepared in reference to Section 7.11 of the EP&A Act.

Any relevant contribution that applies to educational establishment will be paid prior to the issue of construction certificate.

# 6. KEY ASSESSMENT ISSUES

The Key Issues as per the SEARs have been assessed in additional to other issues deemed relevant, with impacts noted and mitigation measures proposed where necessary in this report:

- Built Form and Urban Design
- Environmental Amenity
- Transport and Accessibility
- Ecologically Sustainable Development (ESD)
- Heritage
- Social Impacts
- Aboriginal Heritage
- Noise and Vibration
- Contamination
- Utilities
- Stormwater Management and Flooding
- Sediment, Erosion and Dust Controls
- Waste
- Accessibility
- BCA Compliance
- Crime Prevention Through Environmental Design

## 6.1. BUILT FORM AND URBAN DESIGN

The height, bulk, and scale of each built form and public domain element of the proposal has been considered in detailed in the Architectural Design Statement at Appendix C.

**Methodology**

The design of the CMD and the new Administration and Student Centre have undergone envelope options testing, to explore the different articulation possibilities through the choice of material, arrangement of the built form, colour and architectural variations.

These design options have been the subject of discussions and suggestions from the NSW Government Architect's Office, which have been implemented to progressively improve the overall built form and urban design outcome.

**Assessment**

The design process and the relative merits of the built form options are discussed and shown on the following pages.

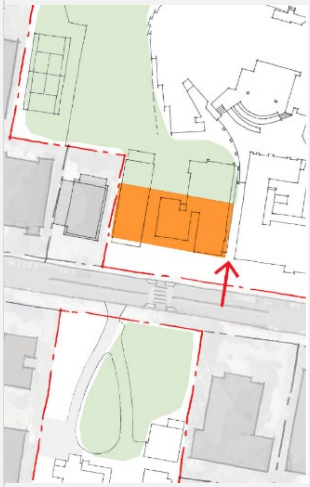
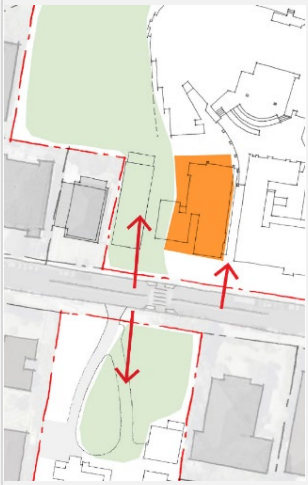
Senior School – New Centre for Music and Drama (CMD)

Design for the new CMD has been the subject of envelope option testing and massing studies to consider the scale of the proposed building. The massing study is underpinned by three major considerations:

- The scale of the building relative to the existing adjacent buildings,
- The address and entry point into the senior school at the western end of Margaret Street and
- The connections between open green space and the Lingwood prep school campus.

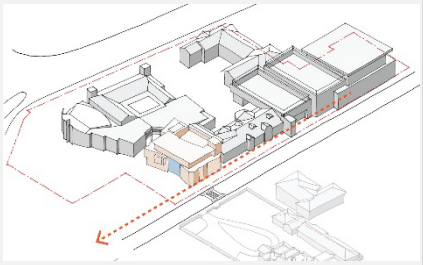
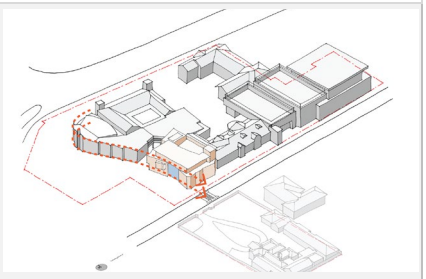
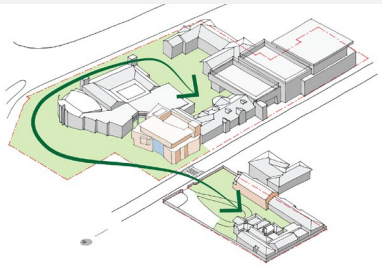
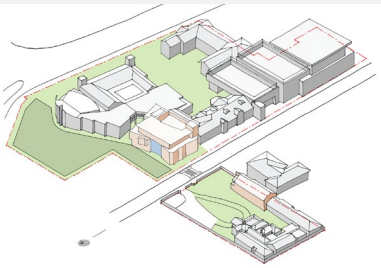
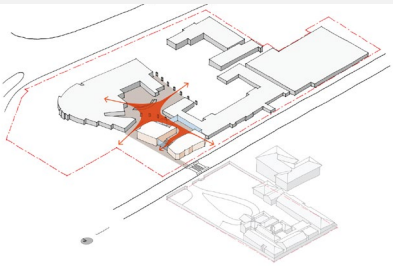
The massing studies and the merits of each option that was considered for the Seniors school campus is described below:

Table 8 – CMD Massing Option Testing

| Option 1 | Option 2 | Option 3 | Option 4 |
|---|---|---|---|
|  |  |  |  |
| Establish two built forms that are separated by a new walkway that aligns with the existing pedestrian crossing on Margaret Street. However the built forms are separated and do not provide linkage to Lingwood school campus. | Provide a upper level link across the two built forms. This deisgn layout limites the space for internal voids and performance areas. | The forms are consolidated into a bulkier rectangular footprint to allow for protected informal performance spaces and circulation. The mass does not allow for a strong pedestrian connection between Margaret Street and the Senior School. | The mass is rotated to maintain a strong visual connection to existing green space to the west, and allows for landspace linkage across the road to Lingwood Prep School. Existing building lines along Margert Street are also maintained. |

Option 4 has been chosen as the preferred built form design for the senior campus. Option 4 allows the building to be positioned and scaled to create a presence at the western end of the campus along Margaret Street, whilst responding to the height, scale and form of the existing Hope/Turner building and the overall Margaret Street elevation. The built form was further refined to achieve the following design responses:

Table 9 – CMD Build form and design response

| **Building positioning** | **Streetscape Setback** | **Alignment to the existing Wallace Building** |
|---|---|---|
|  |  |  |
| Building positioned and scaled to sit comfortably within its educational context. The scale is carefully considered to create a balanced elevation along Margaret Street, providing a facade on the western end which 'mimics' the facade of the existing sports centre on the eastern end. This site also provides the opportunity for increased legibility along Margaret Street | Building setbacks along Margaret Street is consistent with the existing Hope/Turner building and the alignment of the Margaret Street streetscape. | The articulation of the western elevation of the CMD responses to the geometry and western elevation of the existing Wallace Building to the north. |
| **Landscape linkage** | **Optimising land capacity** | **Integration with existing school building** |
|  |  |  |
| The building is pushed eastward to maintain and improve connected open space within senior campus and across Margaret Street to Lingwood Prep School gardens and playground. | Building location allows for future development opportunities to the west. | Ground level of the CMD seamlessly connect back to Senior School and Wallace under-croft space, creating generous covered and interconnected common spaces within the campus |

Overall, the new CMD will provide a modern addition to the streetscape that is sympathetic to the scale, height, materiality, and texture of adjacent buildings and the height and scale of the Wallace Building within the school campus.

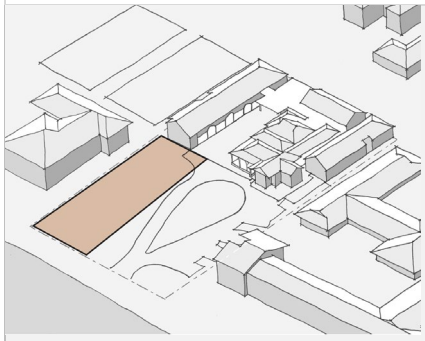
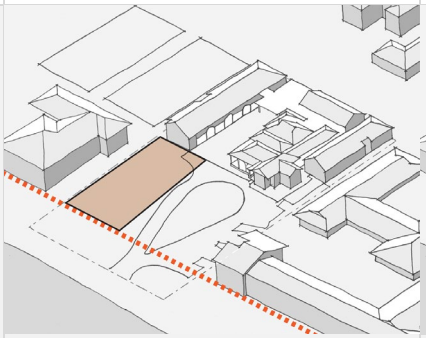
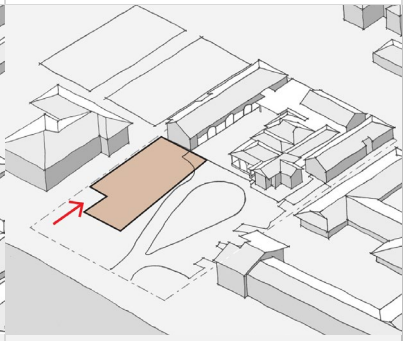
Lingwood Prep School – New Administration and Student Centre

Similarly, the design for the new Administration and Student Centre has also been the subject of envelope option testing and massing studies. The massing study is underpinned by three major considerations:

- Streetscape alignment
- Respecting the heritage value of the Lingwood House and garden
- A sense of arrival at Margaret Street

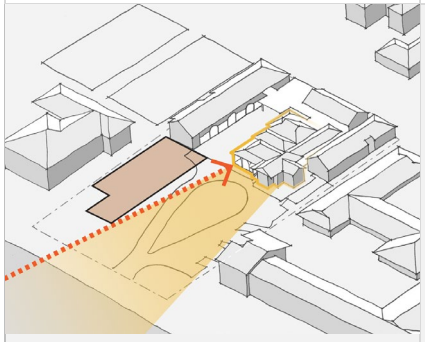
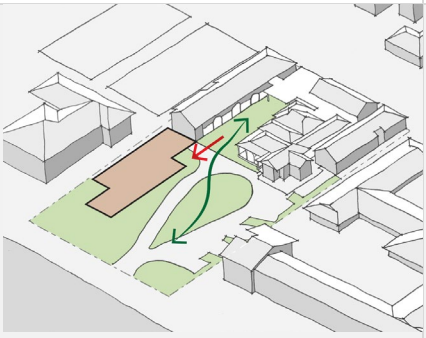
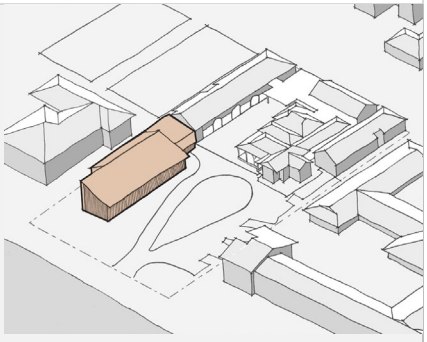
The massing studies and the merits of each option is described below:

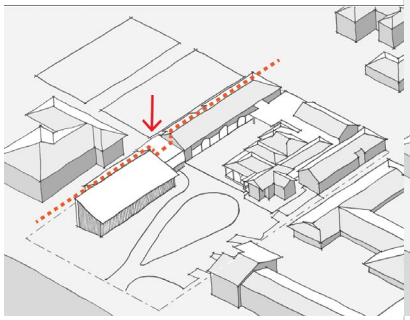
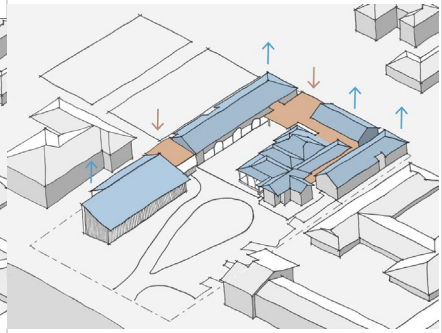
Table 10 – New Administration and Student Centre Massing Option Testing

| Option 1 | Option 2 | Option 3 |
|---|---|---|
|  |  |  |
| Maximum building footprint is established, which does not respond to Margaret Street streetscape alignment. | The building footprint has been cut back to align with the Margaret Street streetscape alignment, and to open up the east to west view corridor to the teardrop shaped driveway and the Heritage building and garden from Margarte Street. | After consultation with the Government Architect NSW, a setback entry to the north east of the building was developed. This setback helps to define the entry through generous landscaping and a striking framed awning. |

Option 3 has been adopted as the final built form footprint, to ensure that it is sympathetic to the surrounding context on Margaret Street and the heritage Lingwood House. The built form was further refined to achieve the following built form elements and design response:

Table 11 – New Administration and Student Centre Build form and design response

| Heritage view curtilage of Lingwood House | Greater connection and breathing space between playgrounds | Gable roof form to respect heritage character |
|---|---|---|
|  |  |  |
| Narrowed footprint to allow for curtilage view to the heritage item - Lingwood House from Margaret Street. Maintaining the presence | Setback south western corner to allow for greater connection and breathing space between the open space and playgrounds. This setback helps to visually reduce | The final built form adopted heritage context through the implementation of gable roof. The contemporary interpretation of the |

| | | |
|---|---|---|
| of the heritage value from the streetscape. | the built form, dividing it into two intersecting rectangles and creates a more appropriate, human scale. This also helps to define the Pre-Kindergarten classrooms from the Administration and Student Centre. | gable roof has been designed as a sympathetic response to the heritage context of the prep school campus, whilst also establishing its own contemporary architectural language. |
| **Continuation of ridge line to main height character** | **Series of gabled pavilions** | |
|  |  | |
| The gradual fall on the site made it possible to achieve a 2 storeys built form, to maintain the same height datum as the single storey Pre-Kindergarten building. | A visual break in the form was created through lowering and flattening the connection between old and new buildings, continuing the pavilion language throughout the Prep School campus. | |

Overall, the proposed administration and student centre is able to maintain the setback alignment along Margaret Street. The sitting and design of the built form is able to allow for curtilage view to the heritage item - Lingwood House and garden from Margaret Street. The gable roof form and height respects the heritage context of the site and responds to the existing school structures.

**Mitigation Measures**

Given the above, the following mitigation measures should be incorporated in the design of the two buildings in each campus:

CMD

- Be sympathetic to the height and scale of the Wallace Building within the school campus.
- Maintain street setback alignment along Margaret Street.

Administration and student centre

- Maintain street setback alignment along Margaret Street.
- The built form should allow curtilage view to the heritage item - Lingwood House and garden from Margaret Street.

# 6.2. ENVIRONMENTAL AMENITY

## 6.2.1. Solar Access and Overshadowing

Analysis on the potential overshadowing associated with proposed built form elements at each campus has been prepared by AJ+C at Appendix D.

### Methodology

Shadow diagrams have been provided for every hour of summer and winter solstices from 9am to 3pm. The shadow diagrams assist the assessment of solar access and overshadowing impacts.

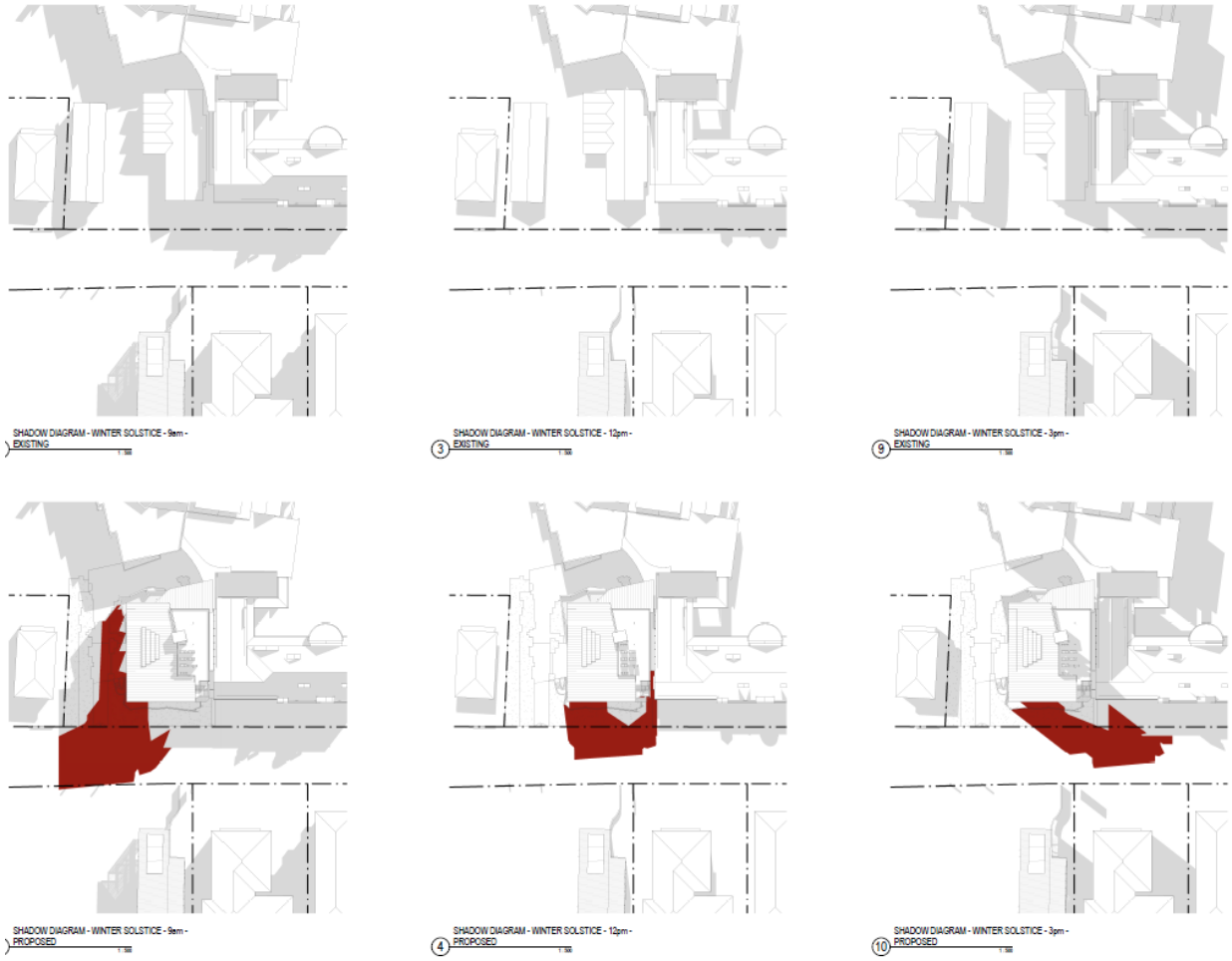
### Potential impacts

**Senior School – New Centre for Music and Drama**

The proposed building envelope is anticipated to result in the following additional shadow impacts in winter (refer to Figure 14):

- At 9am, additional shadow is cast over the landscaped area to the west of the CMD within the senior campus and onto Margaret Street.
- At 12pm, additional shadow is cast over the front setback of the CMD and onto Margaret Street. A minor amount shadow also falls to the east of the CMD within the senior campus.
- At 3pm, additional shadow moves further to the east, falls within the front setback of the senior campus and onto Margaret Street.
- Overall, no additional shadow impacts the dwelling to the west of the site, located at 15 Margaret Street. Majority of the additional shadow is restricted to within the campus. The proposed open space to the west and the existing open space located within the Senior Campus is able to receive adequate solar access throughout the day. Accordingly, the proposed CMD will not cause additional shadow to nearby residential dwelling and is able to maintain solar access to proposed and exiting school open space areas. The proposed CMD is not anticipated to have any adverse shadow impacts compared to the existing built form.

Figure 14 – Shadow diagram: Senior School




*Source: AJ+C*

**Junior School – New Landscaped Playground**

The existing dwelling is proposed to be demolished as a result of the proposed playground. As no new buildings will be proposed, solar access is improved to the south. No additional overshadowing will result from the proposed new landscaped playground.

**Lingwood Prep School – New Administration and Student Centre**

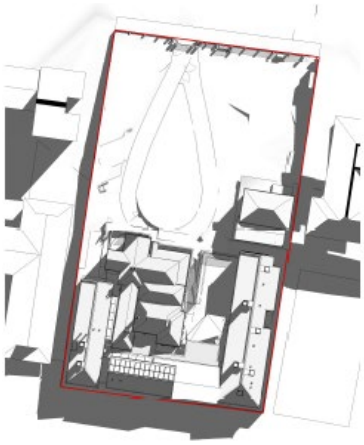
The proposed building envelope is anticipated to result in the following additional shadow impacts in winter (refer to Figure 15):

- At 9am, additional shadow falls to the open space area to the west of the Administration and Student Centre. Additional shadow is restricted within the prep school campus.
- At 12pm, a minor amount of additional shadow falls within small areas of the campus to the south and north.
- At 3pm, additional shadow moves further to the east. A portion of additional overshadowing falls onto the western elevation of the adjoining residential apartment building located at 12-14 Margaret Street. The shadow impacts on a portion of the ground floor windows on the western elevation.
- Overall, the majority of additional shadow falls within the campus. The open space located to the west of the new administration and student centre is able to enjoy full solar access from 12pm to 3pm in winter. Additional shadow to the residential flat building located at 12-14 Margaret Street only occurs at 3pm to the lower ground floor windows. This additional overshadowing is considered minor and acceptable in this instance, considering the height of the new building is well below the maximum building height control. 2 or more hours of solar access is maintained to the living area and open space of 12-14 Margaret Street.

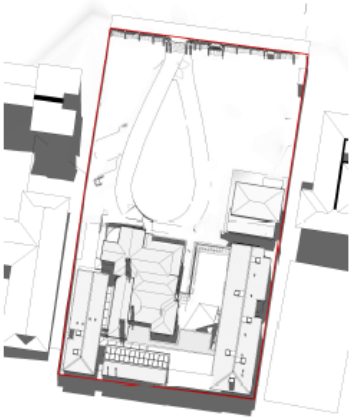
**Mitigation measures**

Given the above, the design of the buildings ensure that the proposal can comply and provide sufficient solar access to surrounding dwellings, therefore mitigation measure is not required.

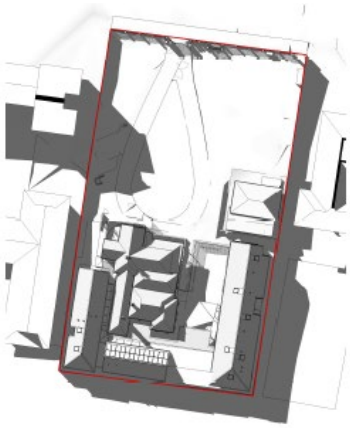
Figure 15 – Shadow diagram: Prep School



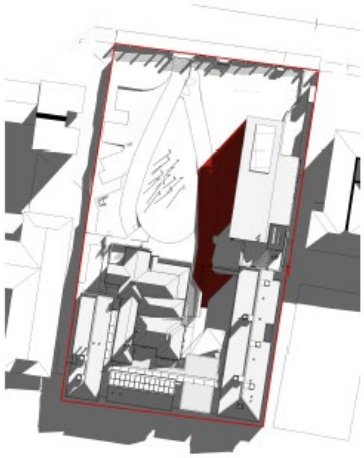
1 EXISTING BUILDING SHADOW DIAGRAM - 9AM - WINTER SOLSTICE
1 : 500



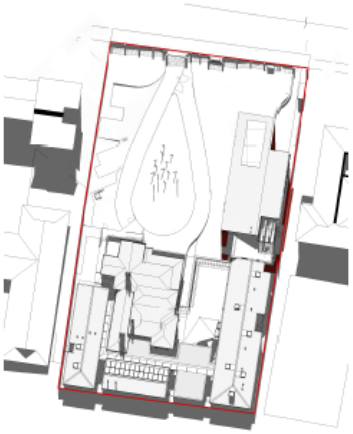
1 EXISTING BUILDING SHADOW DIAGRAM - 12PM - WINTER SOLSTICE
1 : 500



1 EXISTING BUILDING SHADOW DIAGRAM - 03PM - WINTER SOLSTICE
1 : 500

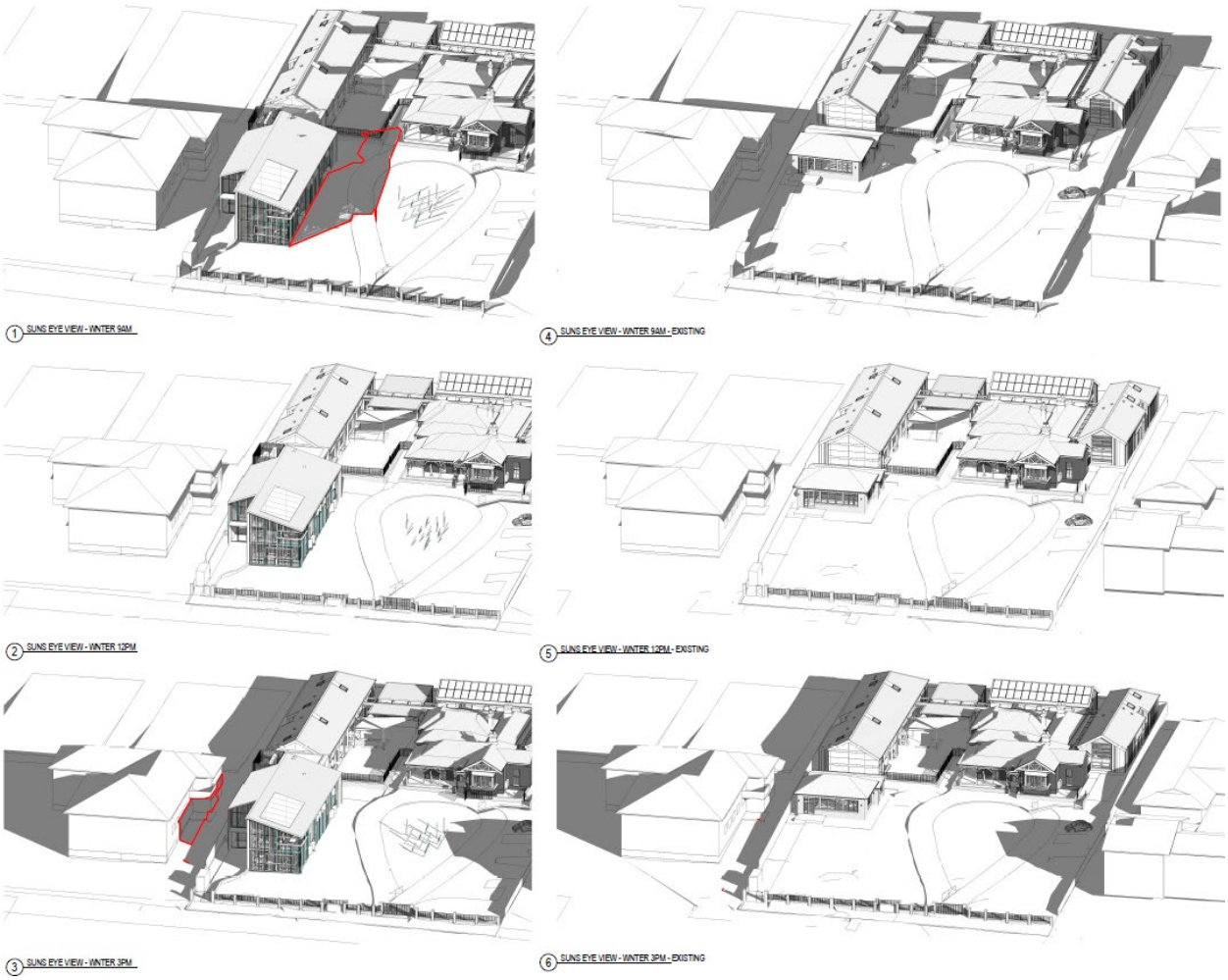


PROPOSED BUILDING SHADOW DIAGRAM - 9AM - WINTER SOLSTICE
1 : 500



2 PROPOSED BUILDING SHADOW DIAGRAM - 12PM - WINTER SOLSTICE
1 : 500

2 PEOPOSED BUILDING SHADOW DIAGRAM - 03PM - WINTER SOLSTICE
1 : 500




*Source: AJ+C*

## 6.2.2. View and Visual Impact

### Methodology

A view and impact analysis are included in the Architectural Design Statement prepared by AJ+C at Appendix C.

No significant view is available in the surrounding area. Street montage from different points along Margaret and Vernon Street have been prepared to assess view and visual impacts from the streetscape.

Each proposed new built form does not interrupt views or vistas to or from the public domain and from other surrounding buildings to any significant extent. View and visual impact of each campus is assessed below:

**Senior School – New Centre for Music and Drama**

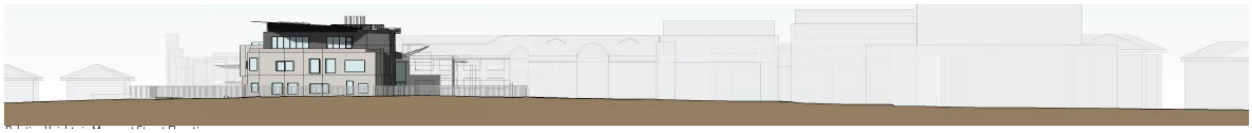
The Centre for Music and Drama has been thoughtfully designed in relation to the Margaret Street context. It aims to be sympathetic to the adjacent brick buildings in texture and architectural context, whilst simultaneously providing a contemporary addition to the street (refer to Figure 16).

The proposed building maintains the building alignment along Margaret Street, and the average building height along Margaret Street (refer to Figure 17). This is to ensure the building maintains the existing streetscape character, and is a appropriate scale and form that provides a contextual fit in the streetscape.

Figure 16 – Proposed Margaret Street montage


*Source: AJ+C*

Figure 17 – Margaret Street Elevation



*Source: AJ+C*

**Junior School – New Landscaped Playground**

The proposed playground has been designed through careful detailing of the play space to reduce visual impact on neighbouring properties and provides a positive visual impact along Vernon Street.

The design of the play ground is consistent with the Government architects recommendation:

> "*The panel supports the conclusion reached by the heritage specialist that while the house is located in a conservation area, it is of poor quality and not contiguous with surrounding buildings. Further, the argument that the recently completed school auditorium ends the heritage streetscape to the south of Vernon Street is accepted."*

The proposed playground landscape design improves the visual amenity along the streetscape and open up views from Vernon Street, into the school in comparison to the existing streetscape (refer to Figure 18).

Figure 18 – Existing and proposed Vernon Street streetscape

Existing Street Frontage

Proposed Street Frontage

*Source: AJ+C*

**Lingwood Prep School – New Administration and Student Centre**

The scale and proportion of the proposed Administration and Student Centre has been carefully considered to protect views of the heritage gardens and Lingwood House from the public domain and Margaret Street. The proposal is able to minimise view impact to surrounding heritage context by adopting the following design and built form measures:

- The potential visual impact of the overall height of the new two storey building has been mitigated by setting the form of the building into the natural topography of the site. This ensures the building to form a consistent roof line with existing building onsite, which reduces the overall appearance of bulk and scale. The proposed building is able to maintain the existing built form bulk within the site, and is not overpowering when viewed from Margaret Street.
- To ensure the focus of the campus is the heritage item, the proposed building is nestled behind existing mature trees and foliage along Margaret Street. The existing trees along Margaret Street screens the building and minimise perceivable visual impact from Margaret Street.
- The narrow building foot print allows for curtilage view to Lingwood House and the tear drop garden from Margaret Street. Maintaining the presence of the heritage value from the streetscape.
- A visual break between the existing building and the proposed is created by continuing the pavilion language throughout the campus.
- The hipped roof form allows the build form to be 'pushed' to the eastern portion site, resulting in an asymmetrical form. This allows for the maximum height of the new roof form to be located away from the Lingwood heritage building. This mitigate potential visual impacts of the proposal to the heritage item and provide breathing space between the two buildings.
- Despite having pops of colour in the vertical louvres, the use of a recessive base colour palette of greys and neutral tones, reflective glazing and repetitive vertical elements, ensures the building is generally responding to the grand heritage teardrop garden and recently restored Lingwood House.

Figure 19 – Proposed Margaret Street Montage

Margaret Street View looking East

Margaret Street View looking South

*Source: AJ+C*

## 6.2.3. Visual Privacy

The proposed buildings and landscaped playground space have been designed to maintain privacy for adjoining developments through setbacks, built form, window placements, and appropriate screening. Visual privacy will be maintained for surrounding residential buildings.

**Senior School – New Centre for Music and Drama**

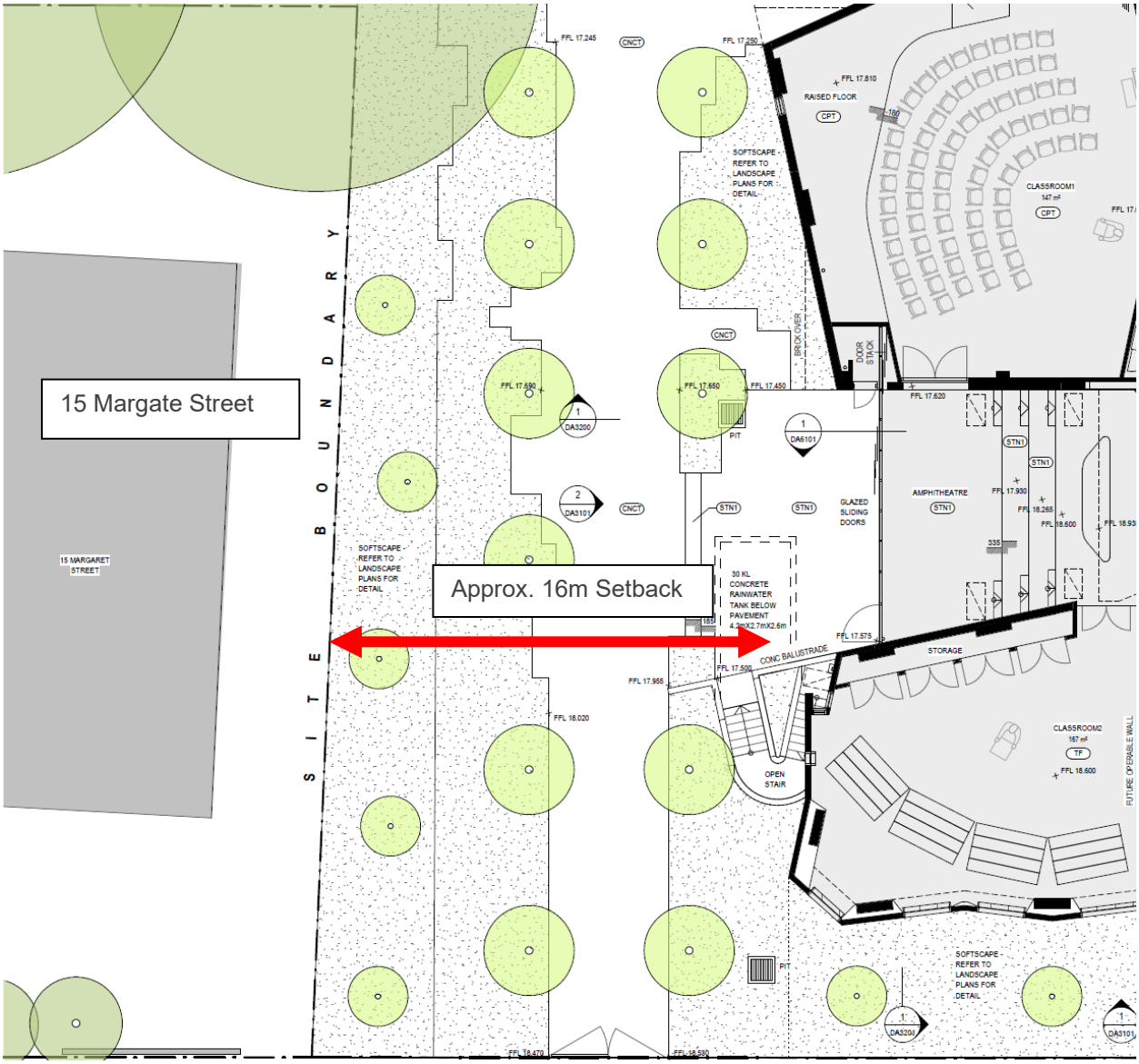
To the north and east of the new building is the existing school campus and Margaret Street is located to the south of the building. A residential flat building is located to the west at 15 Margaret Street.

The privacy of 15 Margaret Street is maintained and overlooking is minimised through substantial building setback and landscape buffer to the west of the building.

The proposed new CMD is setback approximately 16m from the boundary of 15 Margaret Street (refer to Figure 20). The 16m setback provides sufficient separation distance between the CMD and the existing residential flat building.

The western setback of the CMD is also heavily landscaped. Buffer planning is proposed along the western boundary with mature trees scattered around the setback. The buffer landscaping provides further privacy screen for 15 Margaret Street.

Figure 20 – CMD Ground floor plan



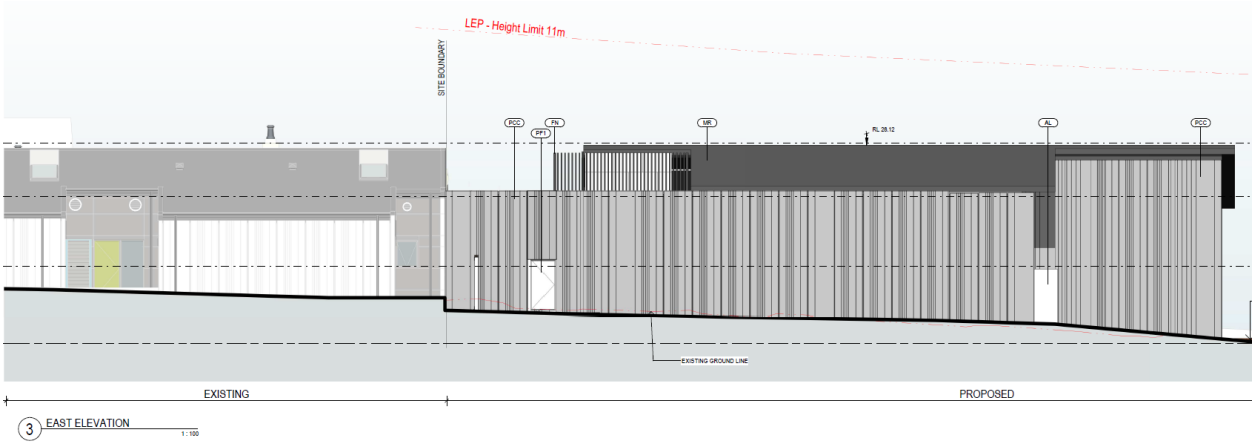

*Source: AJ+C*

**Lingwood Prep School – New Administration and Student Centre**

To the south and west of the new building is the existing school campus and Margaret Street is located to the west of the building. A residential flat building is located to the east at 12-14 Margaret Street.

To maintain the privacy at 12-14 Margaret Street, no windows are proposed to the eastern elevation of the building (refer to Figure 21).

Figure 21 – Eastern elevation of Administration and Student Centre




*Source: AJ+C*

A door is provided on the ground floor which has access to the eastern boundary, however, this door is used for fire exit purposes and the main entry to the building is at the front of the site. Accordingly, the privacy of the 12-14 Margaret Street will be maintained.

**Junior School – New Landscaped Playground**

To the south and east of the playground is the existing school campus and Vernon Street is located to the west of the playground. A dwelling house is located to the north of the playground at 2 Vernon Street. Visual privacy is protected for the dwelling located at 2 Vernon Street, through the following design measures:

- A pergola with climbing plants will be located near the northern boundary to screen the playground to the north.
- The boundary fence around the peripheral of the playground will also screen the playground from nearby dwellings.
- The shared driveway (approx. 2m in width) located to the north of the playground provides an appropriate separation distance to 2 Vernon Street.

### 6.2.4. Lighting

Subtle lighting is proposed in the driveway of the Junior School for way-finding, and it will only be used during school hours under supervision. Lighting is not provided within the playground itself, to reduce light split impact to 2 Vernon Street.

The lighting strategy for the proposed CMD and the administration and student centre building are subtle under lighting proposed for for way-finding. The proposed lighting is of very low intensity and will not create light spill to nearby dwellings. Lighting in the CMD will incorporate LED sources throughout. Controls will be installed to ensure that lighting in unoccupied areas will be automatically switched off to sustain amenity.

## 6.3. TRAFFIC AND PARKING

A Transport Assessment of the development has been prepared by Ason Group (Appendix J). Appendix A of the Transport Assessment report contains **Construction Traffic and Pedestrian Management Plan,** Appendix B of the Transport Assessment report contains **Green Travel Plan** and **Workplace Travel Plan.**

Key traffic and parking impacts and mitigation measures are presented below.

**Traffic Generation**

The Traffic Assessment undertaken has considered the increase of 50 students and 2 staff across all three School campus. The additional traffic generation as a result of the proposal is based on the assumption that 36 extra students to be accommodated by the Senior Campus and an extra 14 students to be accommodated by the Junior Campus.

Travel surveys undertaken for the Junior Campus revealed that 90% of trips are generated during AM School peak hour, and 83% in the PM School peak hour. Surveys undertaken for the Senior Campus revealed that 91% of trips are generated during AM School peak hour, and 82% are generated PM School peak hour.

Additional traffic generation is based on the increase in student capacity of 50 students and 2 additional staff, and accounting for a reasonable car occupancy (i.e. more than 1 student per car) as reported in the Travel Surveys.

Traffic modelling has concluded the following additional vehicle trips in the morning (generated by additional students):

A total of 46 additional students arriving at the School during the morning peak hour, with 25 travelling by car. As a result, there would be a total of 32 additional vehicle trips per hour travelling to / from the School (17 arrivals / 15 departures).

Traffic modelling has concluded the following additional vehicle trips in the afternoon (generated by additional students):

A total of 41 additional students departing the School during the afternoon peak hour, with 23 travelling by car. As a result, there would be a total of 30 additional vehicle trips per hour travelling to / from the School (14 arrivals / 16 departures).

Although the travel survey indicates that staff usually arrive and depart outside of student arrival and departure times, the traffic assessment assumes the worst-case scenario of the additional staff all arriving and departing at the same time as the students via private vehicles. Therefore, it is assumed for this worst-case assessment that there would be 2 additional morning arrival trips and 2 additional afternoon departure trips generated from the additional staff.

Therefore, the total traffic generation increase from the development would be:

- AM Peak: 34 trips (19 arrivals / 15 departures)
- PM Peak: 32 trips (14 arrivals / 18 departures)

**Traffic impact on key intersection**

The operation of the key intersection further to the introduction of the Proposal's additional traffic flows has again been assessed using the SIDRA model. Key intersection assessed include:

- Raw Square /Redmyre Road
- The Boulevarde /Morwick Road /Margaret Road
- Margaret Street /Redmyre Road

The SIDRA analysis illustrates minimal increases to 'degree of saturation' and 'average delay' in the AM peak and PM peak hours. Notwithstanding, the existing intersection network would be capable of accommodating the trips generated by the Proposal.

Furthermore, 10-year horizon modelling has been undertaken to assess the development's future traffic impacts at the key roads and intersection at the 10 years mark. This sensitivity traffic assessment adopts a typical 3% background traffic growth for all existing traffic flows.

Ason Group has defined two combination of traffic scenario for the sensitivity assessment:

- 2029 Baseline Traffic – which consists of 2019 existing (surveyed) traffic plus 10 years' traffic growth
- 2029 Baseline plus Development – which consists of 2019 existing (surveyed) traffic plus 10 years' traffic growth plus the forecast additional traffic generated by the Proposal

The operation of the key intersection further to the introduction of the Proposal's traffic flows and the ten year traffic growth was then assessed using the SIDRA model. The results of the assessment are summary below:

**Table 15: Base 2029 + Development Intersection Performance Comparison**

| Intersection | Scenario | Period | Degree of Saturation | Average Delay | LOS |
|---|---|---|---|---|---|
| Raw Square / Redmyre Road | 2029 Baseline | AM | 1.010 | 60.5 | E |
| | | PM | 0.858 | 32.5 | C |
| | With Dev | AM | 1.015 | 63.3 | E |
| | | PM | 0.888 | 33.7 | C |
| The Boulevarde / Morwick Road / Margaret Road | 2029 Baseline | AM | 1.149 | 26.9 | C |
| | | PM | 3.239 | 176.9 | F |
| | With Dev | AM | 1.149 | 27.0 | C |
| | | PM | 3.239 | 176.8 | F |
| Margaret Street / Redmyre Road | 2029 Baseline | AM | 0.667 | 30.9 | D |
| | | PM | 0.306 | 13.6 | B |
| | With Dev | AM | 0.677 | 31.8 | D |
| | | PM | 0.321 | 13.9 | B |

The above results demonstrate that as a result of the 10-years of traffic growth, all key intersections are expected to be approaching, or exceeding, capacity in 2029 in the baseline assessment. However, the impact of the additional traffic generated by the Proposal is expected to be marginal. The LOS under the 'with development' scenario remaining consistent with the baseline scenario, with very similar Average Delays under the two scenarios.

SIDRA Intersection analysis indicates that the key intersections assessed would continue to operate with consistent Degree of Saturation, Average Vehicle Delay, and – importantly – Level of Service would remain unchanged.

The analysis demonstrates that the net traffic generation volumes are of a sufficiently low order that once distributed across the three campuses and on to the surrounding road network, the impacts of these volumes at the key intersections would be negligible and the intersections would operate as currently occurs. The 10-year horizon modelling demonstrated that the proposal has marginal impact on key intersection, and additional traffic impact is likely resulted by background traffic generation.

Therefore, no infrastructure upgrades or mitigation measures are required as a result of the Proposal, and the Proposal can be supportable from a traffic impact perspective.

**Car Parking**

Strathfield Council's DCP does not provide specific requirements for educational uses. Parking requirements for the School are based on balancing the operational demand whilst also not overproviding for parking.

Based on the results of the Travel Surveys, some 11 students and 72 staff currently park within School grounds. Existing parking currently provided onsite includes 98 spaces with an additional 8 spaces being provided following completion of construction for the Stage 1 Lingwood Campus development (under DA 2017/159). Currently, there are a surplus of 15 spaces across all three campus.

With an increase of two (2) additional staff members, an increase of two parking spaces could be required as a result of the SSDA. Further, it is expected that there would be a maximum of additional two Senior School students driving to School. Therefore, under the worst-case scenario, the maximum estimated parking demand would be a total of four (4) parking spaces.

Currently, there are a surplus of 23 spaces on-site (including the additional 8 spaces from Stage 1 Lingwood Campus Development) and as such, the additional parking demand would be satisfied by the existing car parking spaces within the campuses.

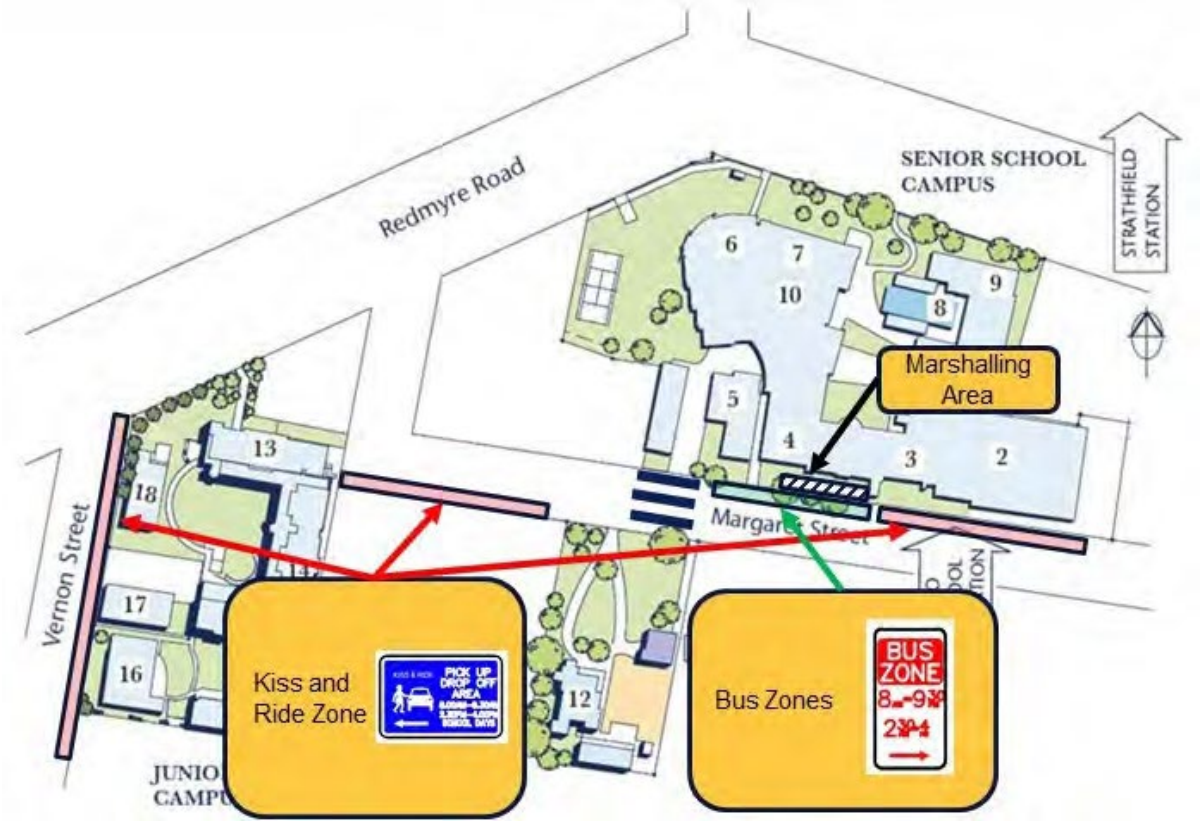
To summarise, the Travel Surveys concludes that the School can accommodates the required parking demand. Given that there would be two additional staff and a nominal number of additional students driving

to school, the resulting 4 additional parking spaces demand can be accommodated within the existing school campuses, by the future surplus of 23 spaces. Therefore, it is concluded that the SSDA will not require additional car parking spaces.

**Drop Off and Pick Up Management**

Figure 22 demonstrates the existing pick-up / drop-off zones and the bus zone. School personnel manage the mid-block pedestrian crossing along Margaret Street to ensure students have the right of way and pedestrian safety. School personnel also manage the Kiss and Ride Zone for the Junior Campus to ensure students head straight into School grounds on arrival.

Figure 22 – Existing pick-up / drop-off zones and the bus zone




*Source: Ason Group*

Morning drop off

Meriden private school buses arrive at the School between 8:00am to 8:20am. The buses first drop off Senior Campus students at Margaret Street at the bus zone, before continuing towards Vernon Street for Junior Campus students to disembark at the Kiss and Ride zone along Vernon Street.

Kiss and Drop students are to arrive via The Boulevarde to access the Margaret Street Kiss and Drop zones or to access the Vernon Street Kiss and Drop zones via Redmyre Road. Students will be able to walk directly to their respective campuses along the footpaths.

Afternoon Pick-up

During afternoon pick-up periods, traffic and pedestrian activities intensify between 2:50PM to 3:30PM.

Four buses would be waiting at the bus zone at the start of the afternoon peak period. Junior Campus students catching buses will be escorted from their campus, across the pedestrian crossing, to the marshalling zone at the Senior School Campus. Students at the marshalling zone would then board their respective buses and buses will leave promptly at 3:20PM. The remaining buses would arrive immediately, and students would board these buses by 3:30PM before the bus departs.

Afternoon Kiss and Ride student management operates from within the School Campus and are intended for Pre-School and Junior School students. Students would wait within School boundaries and wait for staff stationed at the roadside to communicate back to the school grounds via radio, when the parents have

arrived at the Kiss and Ride zone. The student is then escorted out to their respective vehicle. Parents are to display their child's name on their dashboard to increase the efficiency of the pick-up operation.

Pre-school and Junior Campus afternoon pick-up times are staggered to reduce the peak afternoon traffic around Meriden School.

Traffic Impact

Although managed efficiently, vehicle queuing for pick-ups often spills onto Redmyre Road and The Boulevarde. The pick-up queues along Redmyre Road can often block through traffic flows due to the provision of a single lane in both direction on Redmyre Road. On site observations noted that the arrival of the 3:20PM School Buses at Margaret Street can cause significant standstill and queuing along Margaret Street and Redmyre Road for approximately 2 to 3 minutes.

Nevertheless, the peak pick-up period only last for a short period of time from 3.05pm to 3.20pm and traffic conditions quickly clear and return to free flow.

It is intended that all drop off and pick up management operations will remain the same following construction of the proposed buildings. As discussed, the increase in trips associated with the SSDA are of a sufficiently low order that they would not materially impact the operation of the existing pick-up and drop-off zones.

Noting that the SSDA would improve existing facilities and the SSDA will only result in 50 additional students across all three campuses, the proposed school facilities are unlikely to require any additional changes to the current drop off and pick up management operation. No significant additional delay will be caused along Margaret Street and Redmyre Road as a result of the SSDA and the peak period of future drop-off and pick-up. Therefore, no additional measures are required to facilitate drop off and pick up management.

**Construction traffic management**

Appendix A of the Transport Assessment report contains preliminary Construction Traffic and Pedestrian Management Plan (CPTMP).

The Preliminary CPTMP has been prepared to ensure appropriate pedestrian, cyclist and traffic management is undertaken during construction of the proposed alterations and renovations at the School.

The CPTMP has been prepared with regard to the principles outlined in the RMS Traffic Control at Worksites Manual (2010) and AS1742.3 and to inform the preparation of a full CPTMP prior to construction.

Construction traffic access

It is estimated that the total duration for the completion of all developments within three campuses will take approximately 2 years from the commencement date. It is currently envisaged that the main works will be delivered in two stages:

- Stage 1: Lingwood Campus A & S Centre and Junior Campus Playground; and
- Stage 2: Senior School CMD.

It is expected that construction would commence on Stage 1 in January 2020 and be complete by December 2020. Construction on Stage 2 would commence in January 2021 and is expected to be complete by April 2022.

During construction, it is proposed that there will be four (4) site accesses:

Table 5: Construction Site Access

| Development | Site Access | Site Egress |
|---|---|---|
| Music & Drama Centre | Existing crossover (with minor modifications) on Margaret Street (north) | Separate crossover on Margaret Street (north) |
| Lingwood Stage 2 | Temporary crossover on Margaret Street (south) | Existing crossover on Margaret Street (south) |
| 4 Vernon Street | Existing crossover (with minor modifications) on at 4 Vernon Street, and Work Zone | Existing crossover on at 4 Vernon Street, and Work Zone |

Note: Work Zone to be outlined within Section 2.5

All construction vehicles would enter and exit the Site via designated routes. The routes are to be utilised by all construction vehicles travelling to and from the site and represents the shortest route available, minimising the impacts to surrounding road network from the construction process.

Pedestrians attempting to cross the Site's heavy vehicle accesses are to be managed through signage, pedestrian barriers and Traffic Controllers.

Construction traffic generation

The peak period for construction would be during Stage 1, where it is estimated that there would be a combined peak of 120 truck movements a day and a peak of 16 truck movements per hour during the peak periods (8 in and 8 out).

It is proposed to restrict truck-heavy activities during school and traffic peak hours. Truck movements will be maximised to occur outside of peak-hours and on Saturdays. It should however be noted that 16 truck movements during the AM and PM peak periods are required (as noted above) for more intense construction activities, such as concrete pours, which will only occur during a short period of time.

In relation to light vehicle movements, it is anticipated that a maximum of 110 workers could be on-site at any one time during the peak construction periods. A maximum of 70 workers would typically on-site at any other times.

Given the constraints of each of the respective construction sites, no Contractor parking will be provided. All builders are encouraged to travel via the readily available public transport services in the area. Strathfield Train Station and ancillary bus stops are less than 800m from the Site.

Any light vehicle traffic generation would be generally associated with movements to and from the construction sites. Due to the lack of on-site parking, only a small number of private vehicles would be used by higher level staff such as project managers. The workforce arrival and departure periods (6.30-7.00AM and 5.00-5.30PM) represent the peak construction traffic generation periods, which is outside the existing network peaks. It is anticipated that the contractor traffic generation would be of a low order due to the lack of parking options and staff would also be encouraged to car share or use public transport.

The Builder would give consideration to include as part of the Employee Agreement signed by all contractors, the requirement for employees to utilise public transport facilities in lieu of driving to the School, to minimise parking demand and the impact of construction activities on on-street parking.

Cumulative traffic impact

There are three (3) construction projects within the close proximity to the Sites, which will most likely coincide with the proposed construction works. These projects include 26 Parnell Street, 1 Lyons Street and 70 Railway Parade. It is expected that these construction work would be complete by January 2020. While the construction at the School campuses is intended to start January 2020.

The location of the construction sites at 26 Parnell Street and 1 Lyons Street indicates that construction vehicles would enter southbound on Raw Square and head eastbound along Redmyre Road before turning north into The Boulevarde, to exit right into Parnell Street to reach their respective sites.

Vehicles leaving those sites would need to use Wentworth Road to head north back onto the Great Western Highway.

The construction site at 70 Railway Parade could potentially be using Raw Square, Redmyre Road and Morwick Street for their haulage route to and from the 70 Railway Parade.

It is noted that all the above mentioned three sites are nearing completion and it is expected that construction at these sites would be completed by January 2020. Cumulative construction traffic generation from those sites would be minimal to modest, as later stage of the construction works require less heavy truck movements.

Given the above, by the time construction commence at each of the school campuses, the current construction activities around the site will be close to completion. It is unlikely that the SSDA will result in cumulative construction traffic impacts to key intersections and surrounding road network.

Notwithstanding, the CPTMP will be updated closer to commencement of construction to reflect other construction projects occurring around the site during this time.

Construction impact on Pedestrians access and Drop Off and Pick Up Management

The majority of construction activities would occur off-street with exception of a temporary Work Zone for concrete pours that would be located at the street frontage of 4 Vernon Street. Although construction activities occur off-road, the pedestrian and cycle connections across Site access points would be managed by traffic controllers and boom gates during construction activities.

An on-Site waiting bay and stopping location is proposed for all Heavy Vehicle exiting movements. This will allow co-ordination and management of pedestrian/cyclist right of Way and interaction with traffic controllers. In addition, it will provide Traffic Controllers the ability to advise drivers the appropriate time to approach the Site's boundary.

An application for the Work Zone at the street frontage of 4 Vernon Street would be submitted to Council prior to it being required and the CPTMP would be updated (in consultation with Council) to address any impacts to the existing Kiss & Ride facilities.

Nevertheless, it is expected at this stage, that the Work Zone would be a maximum of 12m long, which equates to 2 car spaces. The temporary suspension of these spaces would not materially impact the operation of the Kiss & Ride zone.

It is expected that the Kiss & Ride zones on Margaret Street would be unaffected by construction activities. Although this would be confirmed once the access strategy has been refined for the implemented CPTMP.

Mitigation measures

The following measures should be undertaken to minimise the impacts across each construction phase:

- Traffic control would be required to manage and regulate construction vehicle traffic movements into and out of the site during construction.
- All vehicles transporting loose materials will have the load covered and/or secured to prevent and items depositing onto the roadway during travel to and from the Site.
- All vehicles to enter and exit the site in a forward direction with reverse movements to occur only within the property boundary as necessary, prior approval and subject to supervision.
- Construction and delivery vehicles would be limited to the use of surrounding arterial roads and the necessary local roads.
- The CPTMP should reconsider any construction sites in the vicinity of the School at an appropriate time and would be updated as necessary. Coordination between each of the respective Project Contractors will be necessary for any major construction activities.
- The Preliminary CPTMP should be further developed at construction stage in consultation with the Project Contractor and relevant authorities.

**Green travel plan and Workplace Travel Plan**

Appendix B of the Transport Assessment report contains **Green Travel Plan** and **Workplace Travel Plan.**

Green Travel Plan

The primary objectives of this Green Travel Plan are to:

- Reduce the environmental footprint of the development
- Promote the use of 'sustainable transport' modes such walking and cycling, particularly for short medium distance journeys and public transport
- Reduce reliance on the use of private vehicles for all journeys
- Encourage higher vehicle occupancy rates
- Create a safe and healthy environment during pick up and drop off times
- Encourage a healthier, happier and more active social culture

The Green Travel Plan wishes to maintain the current Junior student car occupancy of 1.4 students per vehicle and encourage Senior School students to continue to develop their independence to travel to and from the School campuses using public transport or walking, without parental assistance.

The following specific actions have been identified to aid achievement of the objective target above. The School will undertake a review of the Action Plan and implement as best they can to achieve each action item.

**Table 8: Green Travel Action Plan Measures**

| Item No. | Action / Description | Responsibility |
|---|---|---|
| **1. General** | | |
| 1.1 | Establish a campus transport coordinator which is to manage student transport demands for their respective campuses | School |
| 1.2 | Preparation and maintenance of a Green Travel Plan | School |
| 1.3 | Provide 'Travel Welcome Pack' for new students and their parents via emails and newsletter, highlighting alternate modes of transport other than use of a private vehicle. | School |
| 1.4 | Review of GTP as a regular item on the agenda for the School. | School |
| **2. Walking and Cycling** | | |
| 2.1 | Improve cycle connectivity on surrounding roads | Council |
| 2.2 | Promote participation in the Ride to School Day activity | School |
| 2.3 | Provide clearly signposted cycle parking within the Site | School |
| 2.4 | Provision of footpaths on local roads in accordance with Strathfield Council DCP | Council |
| 2.5 | In accordance with the 1% cycling mode share target, appropriate cycle parking shall be provided within the Site | School |
| 2.6 | Walking buses to provide drop-off in the immediate vicinity of the school in safe locations. | School |
| 2.7 | School challenges that reward students for taking active transport to and from school. | School |
| 2.8 | Free active travel breakfast for students who choose to cycle or walk to school as part of an event or club. | School |
| 2.9 | Running a cycling training course to promote and teach cycling skills. | School |
| **3. Public Transport** | | |
| 3.1 | Provide increased public transport services in response to increased development within the surrounding area | TfNSW / Council |
| 3.2 | Update the GTP to reflect changes to any train and bus routes and service times | School |
| 3.3 | Travel information and maps on notice boards | School |
| 3.4 | Promote responsible behavior and anti-bullying policies for public transport | School |
| 3.3 | Undertake a review to promote initiatives for students using public transport. | School |

Workplace Travel Plan

The primary objectives of this Workplace Travel Plan are to:

- Reduce the environmental footprint of the development
- Promote the use of 'sustainable transport' modes such walking and cycling, particularly for short/medium distance journeys and public transport

- Reduce reliance on the use of private vehicles for all journeys
- Encourage higher vehicle occupancy rates
- Create a safe and healthy environment during pick up and drop off times
- Encourage a healthier, happier and more active social culture

The Workplace Travel Plan wishes to achieve a target of an average vehicle occupancy of 1.08 persons per car

The following specific actions have been identified to aid achievement of the objective target above. The School will undertake a review of the Action Plan and implement as best they can to achieve each action item.

**Table 5: Workplace Travel Action Plan Measures**

| Item No. | Action / Description | Responsibility |
|---|---|---|
| **1. General** | | |
| 1.1 | Establish a campus transport coordinator which is to manage staff transport demands for their respective campuses | School |
| 1.2 | Preparation and maintenance of Workplace Travel Plan | School |
| 1.3 | Provide 'Travel Welcome Pack' for newly employed staff, highlighting alternate modes of transport other than use of a private vehicle. | School |
| 1.4 | Review of WTP as a regular item on the agenda for the School. | School |
| **2. Walking and Cycling** | | |
| 2.1 | Improve cycle connectivity on surrounding roads | Council |
| 2.2 | Promote participation in the National Ride2Work Day activity | School |
| 2.3 | Provide clearly signposted cycle parking within the Site | School |
| 2.4 | Provision of footpaths on local roads in accordance with Strathfield Council DCP | Council |
| 2.5 | In accordance with the 1% cycling mode share target, ensure that appropriate bicycle parking spaces and End of Trip Facilities are provided within the Site | School |
| 2.6 | Running a cycling skills course to promote and teach cycling skills. | School |
| **3. Public Transport** | | |
| 3.1 | Provide increased public transport services in response to increased development within the surrounding area | TfNSW / Council |
| 3.2 | Update the WTP to reflect changes to any train and bus routes and service times | School |
| 3.3 | Undertake a review to promote initiatives for staff using public transport. | School |
| 3.4 | Provision of Opal Cards with Credit for a period of free rides to increase public transport travel. | School |
| 3.5 | Public transport for School business travel to promote the mode as the first preference for staff travel. | School |
| **4. Car Share** | | |
| 4.1 | Review initiatives for staff using car sharing services. This may include (but not limited to) the provision of 'pods' provided in closer proximity to the School | School |
| 4.2 | Facilitate engagement between staff with a view to encourage ride sharing for those staff that do require the use of private vehicles | School |
| 4.3 | Establish a car-pooling program to help staff find someone to share in their daily drive to School | School |

## 6.4. ENVIRONMENTALLY SUSTAINABLE DEVELOPMENT

An Ecologically Sustainable Development (ESD) report has been prepared by Norman Disney & Young and is attached at Appendix K. The proposal will include the following ESD initiatives (amongst others):

- Passive design elements to reduce the energy demand of the building in operation and improve indoor environment quality and thermal comfort for students and staff, including a high-performance building envelope in the Administration and Student Centre and natural ventilation or mixed-mode ventilation in the Centre for Music and Drama building;
- High performance glazing, efficient lighting and lighting zoning, solar PV, solar hot water, selection of appliances with high energy efficiency ratings, and solar skylights for reduced energy consumption, good daylighting and visual comfort;
- Preliminary consideration of the building designs and their resilience to climate change impacts;
- Acoustic design in both buildings to support their functions as training and teaching spaces and private staff areas, and best practice waste management principles for the demolition of the existing music centre to avoid waste to landfill; and,
- Enhanced greening (e.g. green walls and planters) to improve air quality and reduce the urban heat island effect, water efficient fixtures and fittings (high WELS ratings), and rainwater collected from the roof and stored for use on-site.

The ESD principles adopted will contribute to the conservation of resources and future resilience, across the whole life cycle of the project; from construction, through to the operation phase.

The proposed development has been benchmarked against a 5 Star Green Star Design & As Built v1.2 'in principle' rating as it is considered the most widely-adopted sustainability framework in Australia, covering the broadest range of sustainability initiatives.

A Climate Change Resilience Statement and a Sustainability - Natural Ventilation Feasibility have also been prepared by Norman Disney & Young and are attached at Appendix L and Appendix M respectively.

## 6.5. HERITAGE

As indicated previously at Section 2.3 of this report, each of the three campuses has its own heritage context, both the Senior School Campus and Lingwood Prep School are listed as individual heritage items under the Strathfield Local Environmental Plan (LEP) 2012 (Items 187 and 176 respectively), and parts of the Junior School are located within two adjoining Heritage Conservation Areas (HCAs).

As such, a Heritage Impact Statement (HIS) is required to assess the impact of the proposed works on the identified heritage significance of the site and is attached at Appendix G.

The Statement states that the proposed works have been designed to be as respectful and responsive as possible with regard to the inherent heritage values of the place. The following discussion details the impacts and mitigation measures applied to reduce the potential heritage impact of the works, while ensuring that the school can achieve the additional floor space and outdoor play area it needs for its students and staff.

**Senior School**

The proposed demolished buildings are typical examples of mid century education buildings and are not required to be retained on heritage grounds. The buildings are of a typical education building design for the period, are not formative examples of their typology and do not contribute to the significance of the heritage item. Their removal will have no impact on the significance or setting of the principal significant elements on the site. The demolition of these two buildings is therefore considered acceptable and will have no adverse heritage impacts.

**Lingwood Prep School**

The existing administration building proposed to be demolished presents as a mid-century building of no particular architectural distinction. The building is potentially an earlier outbuilding which has been substantially reconstructed, and this is evident in the earlier bricks and timber roof struts. However, the original form and design of the building has been lost and the existing building does not contribute to the

significance or understanding of the Lingwood heritage item and is therefore not required to be retained on heritage grounds.

The new Admin + Student Centre building will be located within the curtilage of the Lingwood heritage item, and forward of the existing Lingwood building line, the nature of the Meriden School in this urbanised location means that new development to accommodate the growing and changing needs of the school, needs to be located in the heritage curtilage as this is the only space available.

The overall form of the building has been designed to have the least amount of visual or physical impact to the Lingwood heritage item as possible and presents an extension to the recently constructed classroom buildings located along the eastern and southern boundaries of the place.

It is also proposed to remove a number of mature trees along the eastern boundary of the site, in front of the existing administration building. The removal of the mature trees will have an acknowledged impact on the existing landscape setting of the Lingwood heritage item.

However, these trees are located in an already modified section of the site (containing the existing administration building) and have not been identified as having a high retention value.

The removal of a small number of trees is required to facilitate the proposed building footprint (which is replacing the existing later administration centre), and that the potential heritage impact of this removal can be generally mitigated through a considered replanting scheme.

Notwithstanding the above, the significant landscape setting of the Lingwood homestead building will be generally retained and conserved through the retention and interpretation of the tear-drop carriage loop, and the retention of the mature trees along the Margaret Street frontage and along the western portion of the site.

Overall the proposed new building will have a degree of heritage impact, however this is considered acceptable given the constrained nature of the overall Meriden School property, the need for improved facilities for the students and staff, and the numerous design approaches which have sought to minimise the visual impact of the new building on the identified heritage significance of the Lingwood heritage item.

Potential heritage impacts of the proposed new building can be mitigated through the design measure outlined in Section 9 of this report and is summarised below:

- The potential visual impact of the overall height of the new two storey building can be mitigated by setting the form of the building into the natural topography of the site as much as possible, meaning that the rear (south) of the ground floor of the new building sits down into the slope of the site and this reduces the overall appearance of bulk, and negates the need to lift the building in order to achieve a level floor.
- To mitigate potential visual impacts of the proposal and provide the homestead with breathing space, the north-south of the proposed hipped roof form should be aligned to the eastern portion of the building, to result in an asymmetrical form.
- The design of the new building should generally use recessive colour palette of greys and neutral tones for the building materiality including roof and walls. This colour palette allows for the building to be recessive in terms of details and design in comparison with the ornate and traditional form and detailing of the Lingwood homestead.
- Additional embellishments and variation on the building façades should face the playground areas. Multi-coloured louvres should limit to the northern and western facades of the new building.
- The building should not be accessed via the main central garden and playground area, and should be accessed only from Margaret Street, through an existing fence opening to the north east corner of the property. This separate access allows the new building to demonstrate a separateness and distinctness from the significant built fabric and landscape of the Lingwood heritage item, and prevents additional intervention into the Lingwood forecourt area.
- The impact of tree removal can be mitigated over time through the selective replanting of trees in close proximity to this location.

Junior School

The dwelling at 4 Vernon Street is located within the Vernon Street Heritage Conservation Area. While it is not usual to demolish buildings within Heritage Conservation Areas, this proposal should be considered on its site-specific merits for the following reasons:

- *While retaining some of its original features including internal joinery and plasterwork, the existing dwelling at 4 Vernon Street is a typical example of a dwelling of the period and is not an exemplar example. The building has been substantially altered including later additions and extensions and internal structural reconfiguration. Internally the original ceiling detailing has been replaced in part with later cornicing and the property is not in an original state throughout.*

  *The building is typical of the period and does not contain any fabric or features, which are not evident in other examples of the typology throughout the Strathfield LGA and throughout other more intact heritage conservation areas. The dwelling does not warrant retention on heritage grounds on the basis of its individual architectural merit, its intactness or its integrity.*

- *The contributory value of the existing dwelling to the Vernon Street Heritage Conservation Area is questionable when the quality and integrity of the northern portion of the Heritage Conservation Area is considered. The Heritage Conservation Area is architecturally varied along the whole length of Vernon Street, however the dominant significant typology is Victorian villas. The existing Statement of Significance for this Heritage Conservation Area states that the significance is founded in its 'many buildings from the late Nineteenth Century'.*

  *However, there are a range of other periods and styles existing. This is the most evident north of Carrington Avenue, where the Heritage Conservation Area comprises the subject property (a later Federation period dwelling), 2 Vernon Street (a typical later interwar bungalow), a Russian Orthodox Church and adjoining modern building, a contemporary school auditorium building, and two separately isolated Federation dwellings. This portion of the Heritage Conservation Area is compromised, and does not include any Victorian period properties – the formative period which defines the significance of the Heritage Conservation Area.*

  *The subject dwelling, being a highly modified typical example of a Federation dwelling, does not form part of a significant group or row of buildings, is not located within a streetscape of consistent character buildings, and is not of the formative period of significance for the area. The subject dwelling is isolated from the majority of the Heritage Conservation Area by contemporary development to the immediate south. The loss of the subject dwelling would not have any adverse heritage impact on the subject Heritage Conservation Area as it would not remove a dwelling which contributes to the Victorian villa typology and thus the identified significance of the Heritage Conservation Area.*

Overall, the proposed demolition of the existing dwelling at 4 Vernon Street is considered to have an acceptable heritage impact, as the building does not warrant retention on its individual merit and its removal will not adversely affect the Heritage Conservation Area's identified significance. An archival recording would be sufficient to mitigate any potential heritage impact of the building's removal.

**Historic Archaeology**

The subject property is not an identified archaeological item. The sites have limited historic archaeological potential. Subsurface deposits (if there are any) are unlikely to be of heritage significance and are unlikely to yield new or significant information. All three sites are highly disturbed as a result of building works associated with the school over the last 100 years. Notwithstanding the above, the provisions of the *Heritage Act 1977* prevail in relation to unexpected finds. Should a detailed historical archaeological assessment be required, this can be prepared as a separate stand-alone assessment.

Overall the proposed works have been assessed to have an acceptable degree of heritage impact on the subject heritage items, the vicinity heritage items, and the heritage conservation areas across the site and throughout the immediate locality.

Having regard to the long-term benefits of the proposal for students and staff members of Meriden School, and the assessed acceptable degree of heritage impact as outlined herein, the proposal is therefore recommended for approval from a heritage perspective.

Archival recordings of the buildings proposed to be demolished should be undertaken to ensure an accurate record of site development is maintained, and mitigate potential heritage impacts.

## 6.6. SOCIAL AND ECONOMIC IMPACTS

The proposal will generate numerous beneficial social and economic impacts for Strathfield and the wider Strathfield LGA. The anticipated social and economic impacts include:

- The proposal will create temporary job opportunities during the demolition and construction phase of the development;
- Redevelopment of the school will provide modern, state-of-the art learning and play spaces for its students, which will still preserve the heritage and character of the School and environment and enable the School to continue to make a significant contribution to Australian education;
- The potential disruption to the education environment during construction can be mitigated through effective communication and implementation of a construction management plan (CMP). Intensification of use on the site is expected to be mitigated through the improved school design;
- The proposal will result in additional area for outdoor recreation to improve the health and welling of future students;
- The design will create a series of high quality and modern teaching spaces which are flexible and promote increased social interaction among students and teachers;
- The proposed built form has been designed to ensure residential amenity will be maintained to nearby residential dwellings;
- The proposal will help ease student enrolment pressure on the existing Meriden School and take enrolment pressure off other schools within the surrounding area;
- The external materials and finishes to be used complement the surrounding built and natural environment of Strathfield. Accordingly, no negative environmental amenity impacts will result from the proposal; and
- The proposal has been designed in accordance with CPTED design principles to deter crime. Accordingly, the proposal will positively activate the site and provides opportunities for passive surveillance.

## 6.7. ABORIGINAL HERITAGE

Aboriginal Cultural Heritage Assessment (ACHA) prepared by Eco Logical (refer to Appendix H) has been undertaken to identify any potential Aboriginal objects and other cultural heritage values within the study area.

Aboriginal community consultation was undertaken for the project following the *Department of Environment, Climate Change and Water's Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010). The consultation registration process resulted in the registration of 11 different Registered Aboriginal Parties (RAPs) for the project.

An archaeological survey was conducted in order to identify any previously unregistered sites, areas of disturbance and the archaeological potential of the previously identified PAD. No previously unregistered sites were recorded as a result of the survey.

Site inspection identified all three study areas as being heavily disturbed due to the high-density development of the three school campuses. Surface areas that had not been concreted over consisted of either manicured lawns or the garden beds / fill soils, many of which contained young growth, exotic vegetation.

The ACHA has identified that **zero Aboriginal heritage sites will be harmed** by the proposed development. No archaeological mitigation measures are required.

Based on the findings of this ACHA and the archaeological investigation the following is recommended:

> *"Recommendation 1 – Works may proceed with caution*
>
> *General measures will need to be undertaken to ensure unexpected finds of Aboriginal sites or objects are not harmed. These general measures include:*
>
> *Aboriginal objects are protected under the NPW Act regardless if they are registered on AHIMS or not. If suspected Aboriginal objects, such as stone artefacts are located during future works, works must cease in the affected area and an archaeologist called in to assess the finds.*
>
> *If the finds are found to be Aboriginal objects, the OEH must be notified under section 89A of the NPW Act. Appropriate management and avoidance or approval under a section 90 AHIP should then be sought if Aboriginal objects are to be moved or harmed.*
>
> *In the extremely unlikely event that human remains are found, works should immediately cease and the NSW Police should be contacted. If the remains are suspected to be Aboriginal, the OEH may also be contacted at this time to assist in determining appropriate management*
>
> *Recommendation 2 – Submit ACHA to AHIMS*
>
> *In accordance with Chapter 3 of the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011) the ACHA should be submitted for registration on the AHIMS register within three months of completion."*

# 6.8. ACOUSTIC

Noise Impact Assessment attached at Appendix R assess the noise and vibration generated during demolition of the buildings and operational phase of the new school buildings. The Assessment also includes mitigation measures to minimise the potential noise impacts on surrounding dwellings.

Sensible noise receiver surrounding the site include:

- 15 Margaret Street
- 12-14 Margaret Street
- 2 Vernon Street

## 6.8.1. Construction

Noise modelling has been conducted for each of construction scenarios outlined below:

- Demolition
- Building Construction
- Facade / Fitout
- Earthworks and Landscaping

The modelling assumes a "typical worst-case" scenario whereby all plant, is running continuously. As such, the modelling represents likely noise levels that would occur during intensive periods of construction. Therefore, the presented noise levels can be considered in the upper range of noise levels that can be expected at surrounding receivers when the various construction scenarios occur.

Overall, noise levels from construction at the Senior school and Prep school sites exceeds of up to 16dBA, **noting that the maximum construction limit of 75dBA is not exceeded**.

In the case of residences to the west at 15 Margaret Street, noise levels are expected to be lower due to shielding by the existing intervening school building.

Noise levels from construction at the Junior school site will be greatest for residences at 2 Vernon street, where exceedances of up to 13dBA can be expected during construction and demolition activities, **noting that the maximum construction limit of 75dBA is not exceeded.**

It is not envisaged that any vibration intensive equipment will be associated with the construction of any of the proposed facilities and as such vibration should not be an issue.

**Mitigation measures**

Careful management will be required to minimise acoustic and vibration impacts during construction. These measures will be accurately determined in detail when a contractor has been engaged. Notwithstanding this, the following project-specific mitigation measures are recommended during construction:

- Installation a 2.4 metre plywood hoarding around the construction site;
- Selection of quietest feasible construction equipment;
- Localised treatment such as barriers, shrouds, and the like around fixed plant, such as pumps, generators, and concrete pumps.
- Closing of classroom windows;
- Relocating classes during busy construction periods; and
- Scheduling works during school holidays.
- A Construction Noise & Vibration Management Plan for the site is recommended which should be prepared by the successful contractor.
- An effective community relations programme should be put in place to keep the community up to date, including neighbouring dwellings that has been identified as being potentially affected by the proposed works.

In addition, the following measures should be included in a Noise & Vibration Management Plan.

- Plant Noise Audit – Noise emission levels of all critical items of mobile plant and equipment should be checked for compliance with noise limits appropriate to those items prior to the equipment going into regular service. To this end, testing should be established with the contractor.
- Operator Instruction – Operators should be trained in order to raise their awareness of potential noise problems and to increase their use of techniques to minimise noise emission.
- Equipment Selection – All fixed plant at the work sites should be appropriately selected, and where necessary, fitted with silencers, acoustical enclosures, and other noise attenuation measures in order to ensure that the total noise emission from each work site complies with EPA guidelines.
- Site Noise Planning – Where practical, the layout and positioning of noise-producing plant and activities on each work site should be optimised to minimise noise emission levels.

Noise and vibration levels from construction are likely to be at similar predicted levels for school student and staff within the site. Accordingly, measures that will be adopted to manage the acoustic impact within the school should be detailed in a Construction Management Plan. Measures that can be adopted to manage noise and vibration impacts at the school could include:

- Closing of classroom windows;
- Relocating classes during busy construction periods; and
- Scheduling works during school holidays.

## 6.8.2. Operational

Operational noise from the proposed CMD and the Administration and Student Centre will be from activities associated with the new building, as well as mechanical plant located predominantly on the roofs of the buidlings.

The project noise trigger level represents the level that, if exceeded, may indicate a potential noise impact upon a community. The amenity and intrusiveness noise levels to nearby sensible receivers and resulting project trigger levels (shown in bold) applicable to sources of continuous operational noise associated with the development (i.e. mechanical plant and equipment) is shown below. The Sleep Disturbance Trigger Levels are also shown below:

**Table 5-2 Project Noise Trigger Levels**

| Receiver | Period | Intrusiveness Noise Level[1] $L_{Aeq,15min}$ (dBA) | Project Amenity Noise Level[2] $L_{Aeq,15min}$ (dBA) |
|---|---|---|---|
| 15 Margaret Street | Day | **51** | 58 |
| | Evening | 48 | 48 |
| | Night | 42 | 43 |
| 12-14 Margaret Street[2] | Day | **48** | 58 |
| | Evening | 45 | 48 |
| | Night | 41 | 43 |

Note 1: Project amenity noise level (ANL) is suburban ANL minus 5dBA plus 3dBA to convert from a period level to a 15-minute level.

Note 2: Applied to Vernon Street Playground.

**Table 5-3 Sleep Disturbance Trigger Levels (10 pm to 7am)**

| Receiver | $L_{Aeq,15min}$ | $L_{AFmax}$ |
|---|---|---|
| 15 Margaret Street | 47 | 57 |
| 12-14 Margaret Street | 46 | 56 |

Source: Wilkinson Murray

**Mechanical Services**

The major mechanical noise sources associated with the development will be exhaust fans and plant located on the roof of the new buildings. These will consist of roof mounted condensers and/or exhaust fans.

Based on the preliminary specifications for mechanical services equipment, the following indicative resultant noise levels at nearby residences have been predicted:

• 15 Margaret Street 36 dBA; and

• 12-14 Margaret Street (Upper Level) 37 dBA.

The predicted noise levels indicate compliance will be achieved with the site specific noise criteria presented in Table 5-2.

For 15 Margaret Street, no additional acoustic treatment is likely to be required. For 12-14 Margaret Street, a solid barrier on three sides of the roof top plant room would be required. Determination of the specific treatment design details will be required when plant selection has been finalised.

Specific treatment design should be incorporated and confirmed prior to the issue of construction certificate, to ensure operational noise resulting from the mechanical plant is deemed acceptable.

**CMD Building Noise Emissions**

Potentially significant noise emanating from the new CMD building is likely to be associated with music practice in the large ground level classrooms and the level 2 common staff area, which maybe used for functions and small performances.

The likely noise levels at the nearest residence, being the 15 Margaret Street residence has been predicated with the assumptions that the glazing is least 6.38mm laminated glass:

**Table 5-4 Predicted Operational CMD Noise at 15 Margaret Street – $L_{Aeq(15min)}$ dBA**

| Activity | Façade Condition | | | Noise Criteria |
|---|---|---|---|---|
| | Northern & Western Windows Open | Western Closed | All Windows & Doors Closed | |
| 80 Persons | 41 | 16 | >10 | 51 Day |
| Small Band | 45 | 34 | 45 | 48 Evening |
| Band Rehearshal | 56 | 45 | 32 | 42 Night |

Based on the above noise predictions the following conclusions are made:

- Functions in the common staff area with and without a small band are predicted to comply with noise criteria during proposed hours of operation.

The following recommendations are made to minimise noise impact:

- Western windows to the large classrooms when band rehearsal / performance may occur should be closed during these activities. In addition, during weekend and evening it may necessary to close the Western doors of classroom 1 when band activities occur.

**Administration and Student centre**

Operations of the proposed building is to consist typical classroom and administration activities. Therefore there are no “acoustically significant” activities proposed, apart from mechanical services noise. Noise generated can be adequately contained by the building facade.

**Playground**

In the case of the proposed Playground Area in the Junior school, noise will be associated with children playing, which will be typical of existing school operations that already occur in the play area to the north of Vernon Street. Play activities in the new playground will be during normal school hours.

Indicative continuous noise levels during play are based on 10 persons speaking on a raised voice (68 dBA at 1 m) and a provision of a 1.8 m continuous fence on the boundary of the site. An indicative noise level of 49 dBA can be expected in the playground area. This compares with a day criterion of 48 dBA.

Given that play will occur for only part of the day, a marginal exceedance of the noise criterion of 1 dBA is considered acoustically insignificant.

To further minimise acoustic impact, the a continuous 1.8 metre fence should be installed between 2 Vernon Street and the new Playground area.

**School Announcements & Bells**

Announcements and school bells are typical activities associated with school operations. Noise from any new bells and announcements will be managed by design and adjustment techniques, including:

- Speakers should be located and orientated to provide good coverage of the school areas whilst being directed away from residences. The coverage of the system should be subject of the detail design of the system.

- The volume of the system should be adjusted on site so that announcements and bells are clearly audible on the school site without being excessive. The system should initially be set so that noise at surrounding residences does not exceed the ambient noise levels by more than 5dBA.
- Once the appropriate level has been determined on site, the system should be limited to the acceptable level so that staff cannot increase noise levels.
- The bell system should be set so that it only occurs on school days.

Acoustic mitigation measures during the construction and operational phase of the proposal have been included in the Noise Impact Assessment and is included in Section 9 of the report.

# 6.9. CONTAMINATION

Detailed contamination assessment is provided in Section 5.6 of this report.

As discussed in Section 5.6 of this report, the Senior Campus is suitable for the proposed development based on the finding of the PSI, subject to the implementation of the following recommendations prior to or after building demolition:

- Further testing will need to be undertaken (post-demolition) to confirm the classifications for soil and rock that will be excavated for the proposed basement and disposed (or re-used) off-site.
- A hazardous building materials survey should be undertaken (if not already completed) for demolition of the existing building.

A hazardous building materials survey has been prepared for the demolition of the existing building on all three campuses and is attached at Appendix Q.

The following recommendations should be implemented prior and after building demolition to ensure that the hazardous building materials is not exposed to students.

**Junior Campus**

The PSI has identified that the site has potential exceedance of lead, TRH and PAH contamination. On this basis, all fill at the site is subject to the requirements and strategies of a RAP.

A RAP has been prepared with remediation programme outlined to render the site suitable for the proposed development (attached at Appendix DD). The selected (preferred) remediation strategy is as follows:

- Excavation of fill from the site and off-site disposal; and
- Validation of the removal of all fill.

The detailed procedures and sequence for the remediation work has been outlined in the RAP.

It is concluded that the site can be rendered suitable for the proposed development subject to proper implementation of the remediation procedures, unexpected finds protocols and completion of the validation assessment detailed in the RAP.

**Prep School**

In keeping with the investigation outcomes outlined in a Soil Contamination Screening assessment, the extent of remediation at the site is to remediate PAH, TRH and Zinc Impacted Fill Area. On this basis, all fill at the site is subject to the requirements and strategies of a RAP. A RAP has been prepared and is attached at Appendix DD).

The selected (preferred) remediation strategy is the removal of contaminated material to an appropriate facility and reinstatement with clean material where required.

The detailed procedures and sequence for the remediation work has been outlined in the RAP. It is concluded that the site can be made suitable for the proposed development provided the RAP

# 6.10. UTILITIES

**An Electrical Services Infrastructure Statement** has been prepared by Shelmerdines Consulting Engineers and is attached at Appendix V. The following section summarise utilities capacity at each campus.

**Senior School:**

Supply to the Senior Campus of the School is derived by means of an underground service from Ausgrid kiosk substation no. S35764 located on the Redmeyre Road. The service is connected to a Main Switchboard housed in a free standing masonry building adjacent to the substation.

The switchboard is rated to accept an incoming supply of 1250 amps per phase and the Service Protection Device is set at 1187 amps per phase. The switchboard has spare capacity for the installation of additional circuit breakers to control new outgoing submains.

Electricity supply to the new building will be derived from the existing Main Switchboard of the Senior Campus. From the maximum demand indicator on the switchboard, the load on the existing supply is approximately 333 amps per phase and the spare capacity on the supply system is approximately 850 amps per phase.

There is therefore adequate capacity in the existing supply system to serve the estimated 250 amps per phase load of the new Centre for Music and Drama.

New fibre optic data cabling will be installed from the existing Campus Distributor to serve the data network in the new building. A new Communications Room is to be constructed on Level 0.

The new centre will be equipped with a solar power generation system with a nominal capacity of 12kW. The panel array will be installed on the roof and the inverter in a distribution cupboard on Level 2.A

**Prep School**

Supply to the site is derived by means of an aerial service from the existing Ausgrid reticulation system in Margaret Street. The service is rated at 200 amps per phase and currently has approval for connection of a load of 150 amps per phase. The Main Switchboard has recently been installed and comprises amsheetmetal cubicle complete with miniature circuit breakers for the control of outgoing submains and subcircuits.

The switchboard has capacity and spare space to enable control of a new submain to serve the proposed new Administration and Student Centre building.

A solar power generation system with an output capacity of 6.5kW is installed on the roof of the K1 Building and will be retained.

The Campus Distributor for the Prep school Campus is located in Lingwood House. New data backbone cabling will be installed to the new Server Room to be constructed in the Administration and Student Centre building.

**A Hydraulic Site Services Statement** has been prepared by Harris Page and Associates and is also attached at Appendix V.

**Senior school**

Music and Drama Centre hydraulics services will connect to the school internal potable cold water, fire services and gas services mains for the building hydraulic demands.

The potable cold water and fire services internal water mains has sufficient capacity to meet the propose development demands.

The sewer system will require a new connection to Authority sewer located inside the school property in accordance with the relevant *Australian Standard and Sydney Water Guidelines.*

Approximately 791sqm of the roof shall reticulate to the rainwater reuse tank for the development. Once the rainwater reuse tank is full, the overflow from the tank will discharge in stormwater line through the detention tank. The installation of a new rainwater reuse tank sized at 30KL is to serve the proposed Centre of Music and Drama building's irrigation and sanitary fixtures. Potable cold water will top up the rainwater tank in periods when there is no rainfall.

**Junior school**

The new landscaped playground hydraulics services will connect to the school internal potable cold water for hydraulic demands. The potable cold water internal water mains has sufficient capacity to meet the propose development demands.

**Prep school**

Administration and Student Centre hydraulics services will connect to the school internal potable cold water, fire services and rainwater reuse for the building hydraulic demands.

The potable cold water and fire services internal water mains has sufficient capacity to meet the propose development demands.

An existing rainwater reuse tank sized at 30KL was installed in the Campus to serve the existing and proposed development irrigation and sanitary fixtures. The new Administration and Student Centre was included in the design development of this rainwater reuse tank. And the tank has the capacity to serve the sanitary fixtures inside the building. Potable cold water will top up the rainwater tank in periods when there is no rainfall.

In conclusion, both statements conclude that there appears to be sufficient capacity in the surrounding water, gas, sewer, and electrical infrastructure to proposal without the need for major augmentation or diversion of the surrounding supplies available to the main school campuses.

## 6.11. STORMWATER MANAGEMENT AND FLOODING

A Civil Engineering Report has been prepared by TTW and is enclosed at Appendix AA. This report assessed the flood risk on site, and a summary of the proposed concept civil engineering and stormwater management measures for all three campuses.

The site is located within the Powells Creek catchment area which has been the subject of a Flood Study undertaken by Strathfield Council. The flood study confirms that the development sites are not within a Flood Planning Area.

The proposal does not appear to propose any obstruction to natural overland flow paths through the site. Should this occur, overland flows will be diverted around any proposed buildings.

The three sites do not increase the building footprint by more than 50% therefore no water quality treatment has been proposed.

In general, all new roof stormwater will be collected in roof gutters and downpipes and conveyed to the inground pipe system. Surface stormwater will be collected through site grading and collected in surface inlet pits. This in-ground stormwater will be connected to water quality treatment measures and onsite stormwater detention (OSD) as required.

As the site is developed, water quality modelling will be conducted using the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) in accordance with Strathfield Council WSUD Reference Guideline to determine that the site has been designed in accordance with Council's water quality requirements. It is likely that water quality treatment will include a combination of Water Sensitive Urban Design practices (such as grassed swales and rainwater re-use) and proprietary products (such as pit inserts and gross pollutant trap units).

**Senior School**

The New Centre for Music and Drama proposes to marginally increase its impervious area from 66% to 70%. The site proposes to collect stormwater through an inground pit and pipe network that then discharges into the existing stormwater system within the school and a downstream OSD. As a result, no OSD has been proposed.

Furthermore, as the development is not increasing the building footprint on the site by more the 50%, no stormwater quality treatment measures/devices have been proposed. Refer to appendix A for Concept Siteworks Plan.

**Prep School**

The New Administration and Student Centre is proposed within the existing Lingwood Prep School Campus. Stormwater on site is captured through downpipes and surface inlet pits and conveyed into an on site stormwater detention tank sized in accordance with Strathfield Council's requirements (12.7m3 of storage). The discharge from the OSD tank is proposed to connect into the existing school drainage system.

Furthermore, as the development is not increasing the building footprint on the site by more the 50%, no stormwater quality treatment measures/devices have been proposed.

**Junior School**

The New Landscaped Playground is proposed within the existing Junior School. The development proposes to increase pervious area through the demolition of the existing residential building and construction of a largely pervious landscaped playground. Site stormwater drainage will discharge to the existing Council pipeline in Vernon Street. Due to the increase in pervious area, no OSD is proposed.

Furthermore, as the development is not increasing the building footprint on the site by more the 50%, no stormwater quality treatment measures/devices have been proposed.

Concept Siteworks Plans have been prepared for Junior and Prep school and is attached within the Civil Engineering Report.

# 6.12. EROSION AND SITE SEDIMENT CONTROL

An Erosion and Site Sediment Control plan has been prepared for each campus and is attached within the Civil Package attached at Appendix AA.

# 6.13. WASTE MANAGEMENT

## 6.13.1. Construction Waste

The Contractor will comply with DOPIE's Conditions of Consent and the Construction Management Plan at Appendix I to ensure all waste is carefully removed, packaged and transported from the site to an appropriate waste facility. This will minimise potential contact with the waste and reduce environmental risk from an accidental release. Where appropriate, waste will be reused or recycled.

## 6.13.2. Ongoing Waste

An Operational Waste Management Plan has been prepared by Elephants Foot and is attached at Appendix T.

For general waste, the three campuses currently share 1x 4.5m$^3$ bulk bin located in the Junior School. At the end of each day, cleaners or school caretakers empty the receptacles for general waste and transport them into the 4.5m$^3$ bulk bin for collection. A private contractor currently collects this bulk bin daily.

For paper recycling, each campus currently has a yellow lid 240L MGBs for the collection of secure document paper and blue lid 240L MGBs for the collection of general paper recycling. The 240L MGBs for general paper recycling and secure document destruction are located within the bin area for each campus. A private contractor is engaged to collect the blue lid 240L MGBs twice weekly and yellow lid 240L MGBs as requested.

The school caretaker is responsible for making arrangements for the disposal and recycling of specialised waste streams, such as chemical waste and eWaste with an appropriate contractor.

The report concludes that the bins currently onsite and the existing waste management measure can accommodate any additional waste generated from the new buildings.

# 6.14. ACCESSIBILITY

An Accessibility Report was prepared by Funktion and is attached at Appendix X. This assessment has addressed compliance with the *Disability (Access to Premises - Buildings) Standards 2010*, Parts D3, E3.6 and F2.4 of the *Building Code of Australia 2016 (BCA*) and *Australian Standards on Access and Mobility*.

The development has been reviewed to ensure that paths of travel, sanitary facilities, vertical links, wayfinding, emergency egress and hearing augmentation comply with relevant statutory guidelines.

The report contains detailed recommendations in order to ensure compliance and is outlined in Section 9 of this report.

The assessment confirms that:

> *"With the development and implementation of the recommended operational management strategies, the provision of access for people with a disability in the proposed SSDA Projects at Meriden School for Girls, can provide continuous accessible paths of travel and the equitable provision of accessible facilities to provide inclusive design to meet the anticipated requirements of staff, students and visitors"*

## 6.15. BCA COMPLIANCE

A Building Code of Australia Report was undertaken by Modern Building Consultants and is enclosed at Appendix Z. The report identifies that subject to detailed design, the proposal is capable of compliance with the BCA.

A fire safety strategy prepared by PGA is also attached at Appendix Z, which review the fire safety of the proposed Centre of Music and Drama, and recommends the following Fire Engineering Performance Solutions:

- *"The voids can be provided within the building and the atrium provisions within the DtS Provisions of the BCA do not need to be applied based upon the building being sprinkler protected throughout and fire separated by 2 hour construction at Level 2 (void and internal stairway) whilst maintaining egress from Level 2.*
- *The new glazed roof above Level 1 adjacent to the Hope Turner Building can be provided even though it is not setback 3.0m from the fire wall.*
- *The main non fire-isolated stairway within the building can connect 4 storeys based upon the building bbeing sprinkler protected throughout and fire separated by 2 hour construction at Level 2.*
- *The fire wall does not need to extend vertically through each storey and can rely upon the existing solid brick external walls of the adjacent Hope Turner Building, whilst the construction of the fire wall does not need to extend to the roof covering of the higher roof.*
- *Window openings can be provided within the fire wall which separates the Hope Turner and Wallis Buildings subject to the window openings being fixed closed and drencher protected on both sides. The open area between columns along the existing balcony connecting the Wallis Building to the Hope Turner Building does not need to be protected. The window and door openings in the external walls of the new CMD Building and the Hope Turner Building located within 6.0m of each other are to be fixed closed or self-closing and also drencher protected."*

Based upon the size of the fire compartment being less than 2,000m2 or 6000m2, consultation and referral to Fire and Rescue NSW is not a mandatory requirement under Clause 144 of the *Environmental Planning and Assessment Regulation 2000.*

The proposed Administration and Student Centre is capable of achieving compliance with the provisions of the BCA.

## 6.16. CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

The Crime Prevention Through Environmental Design (CPTED) guidelines were prepared by the NSW Police in conjunction with the Department. CPTED provides a clear approach to crime prevention and focuses on the '*planning, design and structure of cities and neighbourhoods'*.

The guidelines provide four key principles to limit crime. A CPTED Assessment has been undertaken by Urbis and attached at Appendix Y. The CPTED Assessment concludes 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.

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. 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.

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 junior campus is located on the perimeter of a crime hotspot for steal from motor vehicle crimes.

The proposed playground incorporates CPTED principles by incorporating walls and gates around the driveway and car space to reduce the potential conflict between vehicles and children.

The CPTED Assessment has also made further recommendations to improve the proposal's performance against CPTED principles and to reduce identified road, pedestrian and personal safety risks. A summary of these recommendations s provided within the subsections below:

**Senior and prep campuses**

- Upgrade the Margaret Street pedestrian crossing 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.
- 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.

# 7. SECTION 4.15 ASSESSMENT SUMMARY

The following assessment has been structured in accordance with section 4.15C(1)(c) of the EP&A Act.

Table 12 – Section 4.15 Assessment

| Consideration | Comment |
|---|---|
| **Environmental Planning Instrument** | State and Local Environmental Planning Instruments have been assessed in Section 5 of this EIS. |
| **Draft Environmental Planning Instruments** | Draft Environmental Planning Instruments are addressed in Section 5 of this EIS. |
| **Development Control Plans** | The proposed development has been assessed against the Strathfield Consolidated Development Control Plan 2005 in Section 5.9.4. Although it is noted that Clause 11 of the SEPP (State and Regional Development) 2011 excludes the application of DCPs to SSD. |
| **Any Matters Prescribed by the Regulations** | This EIS has been prepared in accordance with Sections 6 and 7, Part 3 in Schedule |
| **Likely Impacts of the Development** | This EIS has been prepared in accordance with Sections 6 and 7, Part 3 in Schedule 2 of the Environmental Planning and Assessment Regulation 2000. |
| **Suitability of the Site** | The site is entirely suitable for the development of the proposal as it continues the use of the Strathfield Meriden School as an educational establishment as identified within Schedule 1 of the SRD SEPP.<br><br>Strathfield Meriden has a historical association with the site having been located on the site since 1897. The proposal is therefore highly suitable for the site to maintain the ongoing presence of the School in the area.<br><br>It is acknowledged that the Senior School Campus and Lingwood Prep School are listed as individual heritage items under the Strathfield Local Environmental Plan (LEP) 2012, and parts of the Junior School are located within two adjoining Heritage Conservation Areas (HCAs). Notwithstanding this heritage listing, there are buildings across the site with various degrees of heritage significance. As such it is proposed that the balance of heritage benefits and impacts are considered across the main school campus, and not in isolation for the proposal. This EIS has outlined why the three campuses are entirely suitable for new school buildings and additional outdoor open space, given:<br><br>• The site is capable of accommodating upgraded educational buildings with no undue impacts on surrounding residential properties.<br><br>• Residential amenity and privacy to adjacent properties will be respected through proposed landscaping and fencing. |

| Consideration | Comment |
|---|---|
| | • The proposal has site specific merit as demonstrated by site analysis and various site investigations, including geotechnical, site contamination and flora and fauna.<br>• The site is well serviced by public transport.<br>Accordingly, all 3 campuses are considered entirely suitable for the development for education purpose and can accommodate the proposed increase in students. |
| **Any Submissions made in accordance with the Act or Regulations** | Submissions will be considered following exhibition of the application. |
| **The Public Interest** | The proposal is in the public interest in that:<br>• The development is permissible with consent and has been prepared having regard to the objectives of the Education SEPP;<br>• The design of the proposed development has had regard to relevant applicable statutory and strategic planning policies and generally complies with the objectives of the development controls for the site;<br>• Subject to the various mitigation measures recommended by the specialist consultants, the proposal will not have any unacceptable impacts on adjoining or surrounding properties or the public domain in terms of traffic, social and environmental impacts;<br>• The proposal will result in a high-quality educational environment for staff and students;<br>– The proposal will contribute positively to energy efficiency and environmental sustainability. The design has incorporated many ESD features to reduce energy consumption during the life of the proposed development;<br>– The proposal will result in a modern state-of-art Music and Drama facility, a large area of open space for students; and<br>– Enables an excellent academic programme that supports a fulfilling and diverse extra-curricular experience. . |

# 8. COMMUNITY AND STAKEHOLDER CONSULTATION

To inform the request for SEARS and the preparation of this EIS, the applicant and its consultant team have undertaken pre-lodgement consultation with key stakeholders including:

- Neighbouring land owners and residents
- Meriden school community
- Strathfield Council
- NSW Government Architect's Office (GANSW)
- Transport for NSW (TNSW)
- Roads and Maritime Services (RMS)
- Service provider

The following sections are a summary of the community and stakeholder consultation undertaken to date.

## 8.1. COMMUNITY CONSULTATION

Community consultation have been documented within the Consultation Outcomes Report attached at Appendix W.

A three-page letter was prepared and distributed to approximately 200 neighbours on 10 April 2019. The letter outlined the details of the proposal and provided a dedicated phone number and email address for people to provide feedback and make queries.

A notification was placed in the Meriden Newsletter and distributed by Meriden on 14 February 2019 to the school community.

A dedicated project email and 1800 number was established as a direct feedback channel. The email and phone number were advertised in the letter on the 10 April 2019 and remain active for the duration of the project.

No feedback has been submitted through Urbis Engagement or Meriden School at the time of writing this report.

Meriden School is continuing to manage an engagement program with stakeholders and the school and broader community to keep them informed about the project and provide opportunities for feedback and queries.

The following activities are scheduled after lodgement of the SSDA:

- A fact sheet will be prepared to outline project key messages and timeframes and distributed to near neighbours, the school community and stakeholders.
- Media release outlining key project facts for the benefit of the broader community.

## 8.2. STRATHFIELD COUNCIL

A meeting was held between representatives of the School and Strathfield Council Diretcor of planning (Stephen Clements ) on 18 October 2018, in order to brief Council about the proposed development and how it will fulfil the School's needs for the future. Council has advised that they will respond formally during the public exhibition process.

## 8.3. NSW GOVERNMENT ARCHITECT'S OFFICE (GANSW)

A meeting was held with the Government Architect's Office (GANSW) on 21 August 2018 to discuss the proposed development, the minutes of which are enclosed at Appendix BB, and reproduced below:

*'There are several aspects of the schemes which the panel either doesn't supportor on which further clarification is sought. These are detailed below along with recommendations to enhance design quality. The panel recommends a second review before lodgement of the EIS (date and time to be confirmed by GANSW).*

The panel's recommendations are summarised below:

> *"1. Refine architectural design strategies:*
>
> - *explore the relationships between the proposed built form of the Senior and Lingwood campuses front and their interface to Margaret Street*
>
> *2. Review access and circulation:*
>
> *Centre for Music and Drama – Senior Campus*
>
> - *provide intuitive and equitable access that clearly distinguishes the entrances*
> - *simplify external stairs and ramps to provide intuitive and direct connections to the undercroft space of the Wallis Auditorium*
> - *provide clear internal circulation which resolves level changes, reduces the number of stairs and provides equitable access Lingwood Preparatory School Stage 2– Lingwood Campus*
> - *address the sense of arrival, clarity of wayfinding, façade and frontage to Margaret Street*
>
> *Vernon Road* (sic) *– Junior Campus*
>
> - *optimise the level changes to avoid open spaces being too disjointed from each other*
>
> *3. Improve amenity and sustainability:*
>
> *Centre for Music and Drama – Senior Campus*
>
> - *undertake daylight analysis to verify natural light levels to the lower ground rooms*
>
> *Vernon Road* (sic) *– Junior Campus*
>
> - *provide different opportunities for active play and articulate these in the open space"*

A second meeting was held with one Panel member late 2019, and GANSW has confirmed that due to smaller scale of the project and the consultation that had occurred, the best way forward was a desktop review of the EIS during exhibition by GANSW and possibly a Design Review Panel member.

A further email correspondence with Emma Kirkman (Manager Design Review - GANSW) dated 8 May 2019 confirmed that GANSW will review the design response and provide feedback to the assessment team as part of the exhibition process. This email correspondence has been included at the back of the meeting minutes.

All of the GANSW's requests have been actioned and incorporated into the EIS package, proposed architectural design and further addressed in the Design Statement attached at Appendix C.

## 8.4. TRANSPORT FOR NSW (TFNSW) AND ROADS AND MARITIME SERVICES (RMS)

Both TfNSW and RMS were consulted with as required during the preparation of the Transport Assessment report prepared by Ason Group (refer to Appendix J). As detailed, both agencies confirmed that they have no further comment following inputs into the SEARs. Once the SSDA package has been reviewed in full, both agencies will provide further input as required through the formal agency consultation process.

## 8.5. SERVICE PROVIDER

The Electrical Services Infrastructure Statement and the Hydraulic Site Services Statement has been prepared in consultation with relevant agencies, such as Sydney Water and Ausgrid, detailing information on

the existing capacity and any augmentation requirements of the development for the provision of utilities. The consultation correspondence has been documented and attached within each report.

A summary with each service provider is provided below:

**Ausgrid:**

Electricity support for the new building at Prep school campus will be connected to the existing Ausgrid reticulation system in Margaret Street. Electricity support for the new CMS will be connected to the Ausgrid kiosk substation no. S35764 located on the Redmyre Road.

An application has been made to Ausgrid for connection of the additional load. We are currently awaiting a response from Ausgrid.

**Sydney Water**

Once this SSDA has received, an application can be made to Sydney Water for “Notice of Requirements “to assess the Authority Sewer Main has sufficient capacity to cope with sanitary drainage flow requirements from the proposed development.

# 9. MITIGATION MEASURES AND ENVIRONMENTAL RISK ASSESSMENT

The SEARs require an environmental risk analysis to identify potential environmental impacts associated with the proposal.

This analysis comprises a qualitative assessment consistent with AS/NZS ISO 31000:2009 *Risk management–Principles and guidelines* (Standards Australia 2009). The level of risk was assessed by considering the potential impacts of the proposed development prior to application of any mitigation or management measures. Comment on residual risk (the remaining level of risk following implementation of mitigation and management measures) is also provided within this section.

Risk comprises the likelihood of an event occurring and the consequences of that event. For the proposal, the following descriptors were adopted for 'likelihood' and 'consequence'.

Table 13 – Risk Descriptors

| **Likelihood** | **Consequence** |
|---|---|
| A Almost certain | 1 Widespread irreversible impact |
| B Likely | 2 Extensive but reversible (within 2 years) impact or irreversible local impact |
| C Possible | 3 Local, reversible (within 2 years) impact |
| D Unlikely | 4 Local, reversible, short term (<3 months) impact |
| E Rare | 5 Local, reversible, short term (<1 month) impact |

The risk levels for likely and potential impacts were derived using the following risk matrix.

Table 14 – Risk Matrix

| | | LIKELIHOOD | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| CONSEQUENCE | 1 | High | High | Medium | Low | Very Low |
| | 2 | High | High | Medium | Low | Very Low |
| | 3 | Medium | Medium | Medium | Low | Very Low |
| | 4 | Low | Low | Low | Low | Very Low |
| | 5 | Very Low | Very Low | Very Low | Very Low | Very Low |

The results of the environmental risk assessment for the proposed development are presented in Table 15 and are based upon the range of technical and specialist consultant reports appended to this EIS.

The table has directly related mitigation measures responding to each impact (satisfying the SEAR for a consolidated summary of all proposed mitigation measures) also based upon the range of technical and specialist consultant reports appended to this EIS.

It is considered that with the mitigation measures required the impacts resulting from the proposal will be acceptable.

Table 15 – Risk Assessment and Mitigation Measures

| Matter | Potential Impact | Likelihood | Consequence | Risk Level | Proposed Mitigation Measures |
|---|---|---|---|---|---|
| **Visual Impact** | Impact on key views of the site from key public places | B | 4 | Low | As outlined within Section 6.2.2 of the EIS. The proposed building massing has sought to minimise any adverse visual impact to the site and the Lindenwood House from Margaret Street and from the public domain.<br><br>Heritage character of the Prep school is able to be maintained. |
| **Traffic and Parking** | Impacts on road network from construction phase | A | 3 | Medium | • Traffic control should be managed and regulated for construction vehicle traffic movements into and out of the site during construction.<br><br>• All vehicles transporting loose materials will have the load covered and/or secured to prevent any items depositing onto the roadway during travel to and from the Site.<br><br>• All vehicles to enter and exit the site in a forward direction with reverse movements to occur only within the property boundary as necessary, prior approval and subject to supervision.<br><br>• Construction and delivery vehicles should limit to the use of surrounding arterial roads and the necessary local roads.<br><br>• The CPTMP should reconsider any construction sites in the vicinity of the School at an appropriate time and would be updated as necessary. Coordination between each of the respective Project Contractors will be necessary for any major construction activities.<br><br>• Preliminary CPTMP should be further developed prior to construction in consultation with the Project Contractor and relevant authorities. |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | • An application for the Work Zone at the street frontage of 4 Vernon Street should be submitted to Council prior to it being required and the CPTMP needs to be updated (in consultation with Council) to address any impacts to the existing Kiss & Ride facilities. |
| | Maintain and reduce car dependency across all three campuses. | D | 2 | Low | The School should review the Action Plan Green Travel Plan and Workplace Travel Plan and implement the identified actions as best they can. |
| **Pedestrian Safety** | Road, pedestrian and personal safety risks | D | 2 | Low | • Maintain landscaping schedule to ensure sight lines are not impacted between the proposed buildings and the Margaret Street crossing.<br>• Pedestrian walkways from the proposed buildings to Margaret Street should be well-lit to provide safe movement at night.<br>• Formalise an operational plan to manage student safety outside of regular school hours.<br>• Implement access control for spaces used outside of school hours, particularly the senior study/common space, to prevent unauthorised access.<br>• Implement a low speed zone for the shared driveway to reduce potential pedestrian and vehicle conflicts.<br>• Establish appropriate protocols to ensure safe use of the car space and to reduce the potential conflict with playground uses.<br>• 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. |
| **Noise and Vibration** | Noise generation during the construction and on-going operation of the School. | D | 3 | Low | The following project-specific mitigation measures are recommended during construction:<br>• Installation a 2.4 metre plywood hoarding around the construction site;<br>• Selection of quietest feasible construction equipment;<br>• Localised treatment such as barriers, shrouds, and the like around fixed plant, such as pumps, generators, and concrete pumps.<br>• Closing of classroom windows;<br>• Relocating classes during busy construction periods; and<br>• Scheduling works during school holidays.<br>• A Construction Noise & Vibration Management Plan for the site should be prepared<br>• An effective community relations programme should be put in place.<br>The following project-specific mitigation measures are recommended during operation:<br>• A solid barrier on three sides of the roof top plant room at the administration and student centre building would be required.<br>• Specific plant treatment design should be incorporated and confirmed prior to the issue of construction certificate, to ensure operational noise resulting from the mechanical plant is deemed acceptable. |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | • Western windows to the large classrooms when band rehearsal / performance may occur should be closed during these activities. In addition, during weekend and evening it may necessary to close the Western doors of classroom 1 when band activities occur.<br>• A continuous 1.8 metre fence should be installed between 2 Vernon Street and the new Playground area to further minimise noise.<br>• Speakers should be located and orientated to provide good coverage of the school areas whilst being directed away from residences. The coverage of the system should be subject of the detail design of the system.<br>• The bell system should be set so that it only occurs on school days |
| **Heritage** | Adverse impact on the heritage significance of the site<br>Adverse impact on the heritage significance of the locality | C | 3 | Medium | <u>Lingwood Prep School</u><br>• The built form should set into the natural topography of the site as much as possible, meaning that the rear (south) of the ground floor of the new building sit into the slope of the site.<br>• The north-south of the proposed hipped roof form should be aligned to the eastern portion of the building, to result in an asymmetrical form.<br>• The design of the new building should generally use recessive colour palette of greys and neutral tones for the building materiality including roof and walls.<br>• Additional embellishments and variation on the building façades should face the playground areas. Multi-coloured louvres should limit to the northern and western facades of the new building. |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | • The building should not be accessed via the main central garden and playground area, and should be accessed only from Margaret Street through an existing fence opening to the north east corner of the property.<br>• The impact of tree removal should be mitigated over time through the selective replanting of trees in close proximity to this location.<br><br><u>Junior School</u><br>An archival recording should be submitted for the building removal at 4 Vernon street.<br>Archival recordings of the buildings proposed to be demolished should be undertaken to ensure an accurate record of site development is maintained and mitigate potential heritage impacts. |
| **Construction Waste Management** | Disposal of waste generated during demolition and construction | D | 2 | Low | Waste containers will be stored within the site. Site bins will be provided by Bingo bins and construction waste will be dealt with in Bingo Recycling Centres as per the Waste Management Plan. |
| **Trees** | Construction impacts on retained trees at the site. | C | 3 | Medium | • Tree Protection Specification outlined in Appendix 5 of the Arboricultural Impact Assessment report should be complied with.<br>• A Project Arborist shall be engaged prior the commencement of work on-site and monitor compliance with the protection measures.<br>• The Project Arborist shall undertake regular site inspections and certify that the works are being undertaken in accordance with this specification. |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | • Compliance Documentation shall be prepared by the Project Arborist following each site inspection<br>• The trees to be removed shall be removed prior to the establishment of the tree protection measures. Tree removal works shall be undertaken in accordance with the Safe Work Australia Guide for Managing Risks of Tree Trimming and Removal Work (2016).<br>• Tree and vegetation removal shall not damage the trees to be retained.<br>• The trees to be retained shall be protected prior and during construction from activities that may result in an adverse effect on their health or structural condition. The area within the Tree Protection Zone (TPZ) shall exclude the following activities, unless otherwise stated:<br>  ○ Modification of existing soil levels, excavations, trenching or movement or rock<br>  ○ Mechanical removal of vegetation<br>  ○ Storage of materials, plant or equipment or erection of site sheds<br>  ○ Affixing of signage or hoarding to the trees<br>  ○ Preparation of building materials, refuelling or disposal of waste materials and chemicals<br>  ○ Lighting fires<br>  ○ Movement of pedestrian or vehicular traffic<br>  ○ Temporary or permanent location of services, or the works |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | • Tree Protection Fencing shall be installed at the perimeter of TPZ |
| **Biodiversity** | Adverse ecological impacts as a result of the development | D | 2 | Low | Establish a Tree Protection Zone (TPZ) intended to protect the trees identified for retention from development impacts and to maintain their health and vigour during and after development. The TPZ should not be accessed by heavy machinery and care is to be taken to not damage any trees. The calculation for the TPZ radius is as follows:<br>• DBH x 12 where: DBH = Diameter at Breast height (in metres). It is recommended that TPZs are demarcated around trees that would be retained as part of the proposed works.<br>Installation of appropriate measures (i.e. silt fences) around the impact area to limit the spread of sediment and weeds into adjacent waterways and vegetation.<br>Develop a Construction Environmental Management Plan (CEMP) with relevant mitigation measures to ameliorate potential impacts to biodiversity values outside of the development area. The CEMP should include:<br>• Sediment and Erosion Control Plan<br>• the establishment of clearly defined areas, such as the works area and any 'no-go' areas within/adjacent to work site boundaries that are not to be in any way disturbed or damaged by the works<br>• construction fencing pre and during construction to ensure that construction related impacts are contained within the construction areas. |
| **Contamination** | Site contamination. | C | 3 | Medium | Applicable to all sites: |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | • The recommendation within the Hazardous Building Materials Register must be implemented, where the relevant HBM has been identified prior or during construction.<br>• Additional targeted inspection, sampling and analysis for HBM should be considered prior to any work that may result in the disturbance of such HBM.<br><br><u>Senior Campus</u><br><br>• Further testing will need to be undertaken (post-demolition) to confirm the classifications for soil and rock that will be excavated for the proposed basement and disposed (or re-used) off-site.<br><br><u>Junior Campus</u><br><br>To implement remediation programme outlined in the RAP. The selected (preferred) remediation strategy is as follows:<br><br>• Excavation of fill from the site and off-site disposal; and<br>• Validation of the removal of all fill.<br><br>A validation assessment report should be prepared for the site post remediation by an Environmental Consultant.<br><br><u>Prep School</u><br><br>• To implement remediation programme outlined in the RAP:<br>• The selected (preferred) remediation strategy is the removal of contaminated material to an appropriate facility and reinstatement with clean material where required.<br>• A validation assessment report should be prepared for the site post remediation by an Environmental Consultant. |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | • One groundwater monitoring well, as a minimum, should be installed at downgradient of the site once the soil remediation and validation was completed. Groundwater from the well should be sampled and analysed for a range of targeted contaminants. The findings of the groundwater assessment should be included in the site validation report. |
| **Crime and Safety** | To reduce crime risks and satisfy safety of students, staff and visitors | D | 2 | Low | • To provide perimeter fencing between private and private areas.<br>• Employe security guard to patrol during the evening.<br>• The proposed playground to incorporate walls and gates around the driveway and car space to reduce the potential conflict between vehicles and children. |

# 10. CONCLUSION

This EIS has been prepared by Urbis Pty Ltd on behalf of Strathfield Meriden in support of SSD Application (SSD 9692) for the proposed development on each of the three Meriden School campuses. As outlined in this EIS, the site is suitable for the proposed development in that:

- The site is zoned R3 Medium Density which is identified as a 'prescribed zone' under Clause 33 Part 4 of the Education SEPP. Clause 35(1) of the Education SEPP permits development for the purpose of a school to be development with consent within a prescribed zone;
- The proposal is consistent with the objectives of relevant planning controls and achieves a high level of planning policy compliance and design excellence. The height non-compliance at the Centre for Music and Drama is minimal and does not create additional amenity impacts to surrounding developments;
- The proposal appropriately satisfies each item within the SEARs;
- There are no significant environmental constraints limiting development;
- Subject to the various mitigation measures recommended by the specialist consultants, the proposal does not have any unreasonable impacts on adjoining properties or the public domain in terms of traffic, social and environmental impacts;
- The proposal will result in the development of a high-quality educational environment for staff and students that:
  - Enables delivery of an excellent academic programme;
  - Supports a fulfilling and diverse extra-curricular experience;
  - Provides an inclusive, supportive and secure green environment for school students; and
  - Provides efficient and environmentally sustainable facilities.
- The proposal has been designed to make a positive contribution to the overall built form of the sites and the heritage significance. The proposed built form is sympathetic to the character of the surrounding neighbourhood and respects visual privacy, solar amenity and acoustic amenity of neighbouring residential dwellings; and
- The proposal will contribute positively to energy efficiency and environmental sustainability. The design has incorporated many ESD features to reduce energy consumption during the life of the proposed development.

Considering the above and the content contained in this EIS, it is recommended that the Department approve this SSD Application, subject to appropriate conditions.

# DISCLAIMER

This report is dated 16 May 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 School (**Instructing Party**) for the purpose of Environmental Impact Statement (**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.

f

# APPENDIX A SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

# APPENDIX B QUANTITY SURVEYORS COST ASSESSMENT

# APPENDIX C ARCHITECTURAL DESIGN STATEMENT

# APPENDIX D ARCHITECTURAL DRAWINGS

# APPENDIX E LANDSCAPE PLAN

# APPENDIX F ARBORIST REPORT

# APPENDIX G HERITAGE IMPACT STATEMENT

# APPENDIX H ABORIGINAL CULTURAL HERITAGE REPORT

# APPENDIX I CONSTRUCTION PLAN OF MANAGEMENT

# APPENDIX J TRANSPORT ASSESSMENT

# APPENDIX K ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD) ASSESSMENT REPORT

# APPENDIX L CLIMATE CHANGE RESILIENCE STATEMENT

# APPENDIX M SUSTAINABILITY - NATURAL VENTILATION FEASIBILITY

# APPENDIX N FLORA AND FAUNA ASSESSMENT AND BDAR WAIVER CONFIRMATION LETTER

# APPENDIX O BUSHFIRE ASSESSMENT STATEMENT

# APPENDIX P PHASE 1 PRELIMINARY SITE INVESTIGATION REPORT

# APPENDIX Q HAZARDOUS BUILDING MATERIALS (HBM) REGISTER

# APPENDIX R NOISE IMPACT ASSESSMENT REPORT

# APPENDIX S GEOTECHNICAL REPORT

# APPENDIX T OPERATIONAL WASTE MANAGEMENT PLAN

# APPENDIX U STRUCTURAL SCHEMATIC DESIGN REPORT AND STRUCTURAL DESIGN CERTIFICATE

# APPENDIX V INFRASTRUCTURE AND UTILITIES

# APPENDIX W ENGAGEMENT STATEMENT

# APPENDIX X ACCESSIBILITY REPORT

# APPENDIX Y CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED) ASSESSMENT

# APPENDIX Z BUILDING CODE OF AUSTRALIA REPORT AND FIRE SAFETY STRATEGY

# APPENDIX AA CIVIL ENGINEERING REPORT

# APPENDIX BB NSW GOVERNMENT ARCHITECT'S OFFICE MEETING MINUTES

# APPENDIX CC SURVEY

# APPENDIX DD REMEDIATION ACTION PLAN- JUNIOR SCHOOL AND PREP SCHOOL

# APPENDIX EE ACID SULFATE SOIL DESKTOP SCREENING

# APPENDIX FF SOIL CONTAMINATION SCREENING - PREP SCHOOL


**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

**URBIS.COM.AU**