



planning consultants

Environmental Impact Statement

State Significant Development

Penshurst Public School Redevelopment

510 Forest Road, Penshurst

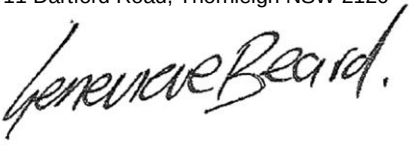
(Cnr Forest Road and Arcadia Street)



Prepared for: NSW Department of Education
April 2018

DECLARATION

ENVIRONMENTAL IMPACT STATEMENT

Applicant Name: Applicant Address: Land to be developed: Proposed development:	New South Wales Department of Education Level 4, 35 Bridge Street, Sydney NSW 2000 510 Forest Road, Penshurst (Lots 3-15 DP 8713) Expansion of an existing public school (Penshurst Public School) and as detailed in Section 4 of this Environmental Impact Statement.
ENVIRONMENTAL IMPACT STATEMENT	This report is an Environmental Impact Statement which addresses all relevant matters required by Section 4.12(8) (formerly s.78A) of the <i>Environmental Planning and Assessment Act 1979</i> and Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> .
DECLARATION	The undersigned certify that we have prepared the contents of this Environmental Impact Statement and to the best of our knowledge it: - addresses all relevant matters listed under Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>; - contains all available information that is relevant to the environmental assessment of the development to which the EIS relates; and - is not, by its presentation or omission of information, false nor misleading.
PREPARED BY Name: Qualifications: Address: Signature: Name: Qualifications: Address: Signature: Date:	Genevieve Beard B.SC, Grad Cert URP 11 Dartford Road, Thornleigh NSW 2120  Stephen Earp B. Planning (Hons) MPIA 11 Dartford Road, Thornleigh NSW 2120  30 April 2018

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9. Asbestos Register (*NSW Department of Education*)
10. Architectural Plans (*Perumal Pedavoli Architects*)
11. Design Analysis Report (*Perumal Pedavoli Architects*)
12. Landscape Plan (*Lorna Harrison Landscape Architects*)
13. Arborist Report (*Glenyss Laws Consulting Arborist*)
14. Stormwater Management Report (*Woolacotts Consulting Engineers*)
15. Stormwater Management Plan + Erosion & Sediment Control Plan (*Woolacotts Consulting Engineers*)
16. Statement of Heritage Impact (*Perumal Murphy Alessi*)
17. Traffic Report including Preliminary Construction Traffic Management Plan (*TTM Group*)
18. Consultation Report (*Root Partnerships*)
19. Hydraulic Services Brief (*Woolacotts Consulting Engineers*)
20. Infrastructure and Services Brief (*JHA Consulting Engineers*)
21. Mechanical Services Brief (*JHA Consulting Engineers*)
22. Structural Design Statement (*Woolacotts Consulting Engineers*)
23. BCA Capability Statement (*Group DLA*)
24. Accessibility Report (*du Chateau Chun*)
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Abbreviations

AADT	annual average daily vehicle trips
AEP	Annual Exceedance Probability
AHIP	Aboriginal Heritage Impact Permit
AIA	aquifer interference approval
AS	Australian Standard
ASS	acid sulfate soils
BCA	Building Code of Australia
BC Act	<i>Biodiversity Conservation Act 2017</i>
CAA	controlled activity approval
CC	construction certificate
CIV	capital investment value
CMP	construction management plan
COLA	covered outdoor learning area
Council	Georges River Council
CPTED	crime prevention through environmental design
DA	development application
DBYD	Dial Before You Dig
DCP	development control plan
DDA	<i>Disability Discrimination Act 1992 (Cth)</i>
DFP	DFP Planning Pty Limited
DoT	NSW Department of Transport
DP	Deposited Plan
DPE	NSW Department of Planning and Environment
EEC	endangered ecological community
EFSG	Educational Facilities Standards and Guidelines
EIS	Environmental Impact Statement
EMP	environmental management plan
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPA	NSW Environmental Protection Authority
EPBC	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
EPI	environmental planning instrument
ESCP	erosion and sedimentation control plan
ESD	ecologically sustainable development
FTE	full time equivalent
GFA	gross floor area
ILP	Indicative Layout Plan
JRPP	Joint Regional Planning Panel
LEP	local environmental plan
LGA	local government area
NDA	net developable area
NPW Act	<i>National Parks and Wildlife Act 1974</i>
NPWS	NSW National Parks and Wildlife Service
OEH	NSW Office of Environment and Heritage
PA	planning agreement
PAD	potential archaeological deposit
PRG	project reference group
RAP	remedial action plan
REP	regional environmental plan
RL	reduced level

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Abbreviations

RMS	NSW Roads and Maritime Services
RTA	former Roads and Traffic Authority of NSW
SEPP	state environmental planning policy
SEARs	Secretary's Environmental Assessment Requirements
SIC	special infrastructure contribution
SIS	species impact statement
SRD SEPP	<i>State Environmental Planning Policy (State and Regional Development) 2011</i>
SSD	State Significant Development
TSC Act	<i>Threatened Species Conservation Act 1995</i>
VENM	Virgin Excavated Natural Material
VMP	vegetation management plan
WELS	water efficiency labelling scheme
WM Act	<i>Water Management Act 2000</i>
WSUD	water sensitive urban design

Executive Summary

The NSW Department of Education proposes the demolition of the existing Penshurst Public School facilities and construction of new facilities to cater for an increase of up to 1,012 students at 510 Forest Road, Penshurst (the Site). The Site is located within the Local Government Area of Georges River Council and has a total area of 10,605m². The surrounding area is a mixture of low and medium density residential, education and local centre shops.

The proposed development comprises the following works:

- Site preparation works including:
 - Demolition of all structures within Lots 8-11 DP 8173, including the heritage-listed school building of local significance (demolition of non-heritage structures on Lots 3-7 and Lots 12-15 DP 8173 to proceed under a separate planning pathway);
 - Removal of 25 trees;
 - Excavation works to accommodate new buildings;
- Construction of a new three (3) storey building comprising:
 - Ground floor comprising three (3) separate buildings linked by an undercroft created by the levels above with associated external play area, including;
 - Ground Level Administration/ Learning/ Library: New main school entry to Arcadia Street, offices, administration areas, staff facilities, One (1) home base (HB) room containing three (3) HB groups, One (1) Hearing Support Unit (HSU) room with dedicated outdoor play space, student facilities, two (2) special program rooms, library, store rooms, mechanical rooms, waste rooms, breeze-way, and internal vertical circulation including stairs and lift;
 - Ground Level Learning: One (1) HB room containing three (3) HB groups, store rooms, mechanical rooms, and internal vertical circulation including stairs; and
 - Ground Level Communal Hall/ Canteen/ Out of School Hours (OOSH): Internal multi-purpose sports court with operable walls leading to external spill-out area, raised stage, external sports court, student amenities, canteen, canteen office, OOSH store, OOSH kitchen, OOSH office, storage rooms (chairs, sports equipment, performance, staff bike and general storage) and internal stair circulation;
 - First Floor internal and external spaces, including;
 - First Floor Learning: Five (5) HB rooms each containing three (3) HB groups, One (1) HSU room, student facilities, two (2) special program rooms, mechanical plant and communication rooms, internal vertical circulation including three (3) sets of stairs, lift and covered balcony; and
 - First Floor Outdoor: Outdoor learning spaces and vegetable garden;
 - Second floor, including;
 - Second Floor Learning: Five (5) HB rooms each containing three (3) HB groups, two (2) HB rooms each containing four (4) HB groups, one (1) HSU room, student facilities, mechanical plant and communication rooms, internal vertical circulation including three (3) sets of stairs, lift and covered balcony; and
 - Third floor roof top playground, including;
 - Third Floor Outdoor/ Learning: COLA and uncovered play areas, shade structures, student amenities, palisade fencing, internal vertical circulation including three (3) sets of stairs, lift and covered balcony.
 - New palisade fencing 2.1m in height along portion of Arcadia Street adjacent to new buildings, and 1.5m high palisade fencing to property interior;

Executive Summary

- At grade staff car park with 15 parking spaces (including one (1) accessible parking space) accessed off Arcadia Street;
- Student bicycle parking along Arcadia Street; and
- Roof top photo-voltaic panels above COLA.
- Landscaping works including the planting of 82 new trees, various shrubs, clumping plants and ground covers, concrete pattern finishes and evergreen climbers over roof-top metal shade structures;
- Installation of new supporting infrastructure, including power substation; and
- Removal of the existing stormwater connections to kerb and gutter and collection of all stormwater drainage in a new system incorporating a 240m³ on-site detention (OSD) tank, a new rainwater tank and a new connection to the Council pit in Arcadia Street.

The proposal has a capital investment value exceeding \$20 million and therefore must be assessed as State Significant Development, pursuant to *State Environmental Planning Policy (State and Regional Development) 2011*.

This Environmental Impact Statement report has been prepared in accordance with the Secretary's Environmental Assessment Requirements issued by the NSW Department of Planning and Environment, Part 4 of the *Environmental Planning and Assessment Act 1979* and Schedule 2 of the *Environmental Planning and Assessment Regulations 2000*. This report provides the NSW Department of Planning and Environment and relevant NSW State Government Agencies with all relevant information necessary to assess the proposed development and for the Minister to determine the Development Application in accordance with Section 4.38 (previously s.89E) of the *Environmental Planning and Assessment Act 1979*.

The project team has carried out consultation with a wide range of stakeholders, including State government departments, local government, community and experts in the design of schools. The advice received throughout the consultation process has informed the consideration of heritage significance and has been incorporated into the current proposal where possible, reflecting a commitment to provide a quality and objective-driven outcome.

In response to the opportunities and constraints of the site, the requirements of the Educational Facilities Guidelines and Standards and the design requirements of the NSW Department of Education, the proposal has been designed to meet the current and future education demands for residents of Penshurst and surrounds by providing 47 teaching spaces and over 9,000m² of play space in a three (3) storey built form with high quality design features, materials and finishes. This has been the result of a prolonged process of consultation, options analysis and design development.

In addition, the proposed building works will provide high quality learning and teaching spaces with flexible layout arrangements and durable finishes ensuring the proposal operates as a long-life, high utility and low-maintenance educational establishment.

The loss of the heritage building represents the progression of contemporary education facilities, designed to meet current-era objectives and design standards, such as Future Focussed Learning. The cultural significance of the Site, owing to its continual use as an educational establishment for over 100 years, will be retained and ensured to continue for decades to come.

The development proposes to provide a total of 15 car parking spaces on the site, due to area restrictions and in line with the Department of Education policy to promote sustainable travel initiatives. The car parking outcomes for the proposal have been assessed having regard to the adoption of a Green Travel Plan and availability of on-street car parking spaces and are considered supportable in the circumstances of the subject development.

The proposal achieves acceptable environmental amenity outcomes, including desirable outcomes for acoustic amenity (both internal and external to the site), stormwater drainage, and waste management. Furthermore, the proposal will incorporate ESD initiatives equivalent to a Green Star – Education v1

Executive Summary

Design & As Built 5 Star rating, which is considered to be best practice within the Australian building industry.

The works proposed under this DA will be subject to the recommendations of specialist reports so as to ensure appropriate heritage, geotechnical, contamination, archaeological, traffic and acoustic outcomes are achieved.

The proposed works have been designed to, and will be carried out in, the interests of the public. The Development Application will meet the project objectives to provide additional primary school accommodation in a high-quality built form which has safe and efficient access for children, teachers, visitors and service personnel.

Accordingly, it is recommended that the Minister for Planning and Environment grant approval to the proposed State Significant Development application as set out in this report.

1 Introduction

1.1 Purpose of this Report

DFP Planning Pty Ltd (DFP) has been commissioned by Perumal Pedavoli Architects (PPA), acting on instructions from the NSW Department of Education, to prepare an Environmental Impact Statement (EIS) to accompany a development application (DA) to the NSW Department of Planning and Environment (DPE) for the proposed redevelopment of Penshurst Public School at 510 Forest Road, Penshurst (the Site).

The proposed development is for an educational establishment with a Capital Investment Value (CIV) of more than \$20 million (see cost summary report at **Appendix 1**) and accordingly, is deemed to be State Significant Development (SSD) pursuant to Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (the SRD SEPP).

On 19 April 2017, the Secretary of the DPE issued Secretary's Environmental Assessment Requirements (the SEARs) (see **Section 1.4** and **Appendix 1**), which were reissued again on 29 October 2017.

This report has been prepared in accordance with the SEARs, Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation) to provide the DPE and relevant NSW State Government Agencies with all relevant information necessary to assess the proposed development and for the Minister to determine the DA in accordance with Section 4.38 (previously s.89E) of the EP&A Act.

1.2 Project Objectives and Summary

Penshurst Public School was established in 1925 with 50 students and has grown in enrolments as the population in the surrounding suburbs (and in particular, Hurstville) has increased.

The Penshurst Public School project is planned to address the New South Wales Department of Education's need to provide suitable teaching spaces that meet increased demand in the area. The Department proposes to increase the capacity of Penshurst Public School and cater for the future demand in the Hurstville LGA. Current enrolments at the school total approximately 506 and existing accommodation includes 20 permanent teaching spaces, 2 demountable teaching spaces and associated core facilities. The proposed upgrade of Penshurst Public School will result in 27 additional permanent teaching spaces (total of 47 teaching spaces), accommodating 506 additional students, bringing the total student number to approximately 1,012.

The project will also provide appropriate core facilities and replace existing demountable classrooms with permanent facilities in line with the Department's Education Facilities Standards and Guidelines (EFSG) and to facilitate 21st Century and Future Focused learning objectives. The project also provides a significant improvement to the existing outdoor space with a rooftop terrace and a substantial outdoor play space area.

The NSW Department of Education proposes to provide a new school building including a new multi-purpose hall, library, learning and administration areas to cater for the increased student population. The proposed development is intended to be completed and operational 2021.

The Project Objectives are as follows:

- To provide additional primary school spaces for a total of 1,012 students to cater for forecast demand;
- To provide a high quality built form and open spaces that are adaptable and flexible to cater for future educational needs;
- Endeavour to provide 10m² of play space per student over the site; and

1 Introduction

- To provide safe and efficient access for children, teachers, visitors and service personnel.

The Project is detailed in **Section 4** of this EIS report and can be summarised as follows:

- Demolition of the existing Penshurst Public School and erection of new buildings;
- Construction of a new three (3) storey school building comprising 47 teaching spaces, core facilities and roof-top play areas;
- Landscaping works including the removal of 25 trees and planting of 82 new trees; and
- Associated stormwater management works and site works, including new substation.

1.3 Development Design and Alternatives Analysis

From the inception of the project the Head Design Consultant (HDC), Perumal Pedavoli Architects, is required to develop a range of options to be considered by the NSW Department of Education as a business case for the proposed expansion of facilities. This process is generally the earliest stage at which the design of the proposal is developed, and generally requires (at least) three (3) options to be prepared.

The project brief and purpose of the project is to provide:

- Enrolments to total approximately 1,000 students;
- Removal of demountable teaching spaces, and addition of 27 permanent new teaching spaces to a total of 47 teaching spaces;
- Upgrade and add core facilities;
- Upgrade outdoor spaces and endeavour to provide 10m² of play space per student over the site; and
- Allow the school to be operational during expansion and upgrade.

In the case of Penshurst Public School, the HDC was required to develop many options due to the unique considerations for this site (in addition to the project brief above), namely:

- Limited total area (and road frontage) of the site;
- Presence of a locally heritage-listed building;
- Limitations on earthworks and built form;
- Design options to be based on Future Focused learning;
- Requirement to consider staging of construction works to (if possible) enable students and staff to remain on site or only partially be decanted off-site while works were carried out; and
- Retention (if possible) of built form.

A range of options were prepared at the business case stage of the project for consideration by the Project Reference Group (PRG), including scenarios which ranged in cost and also in the quality of teaching facilities. For example, options ranged from the construction of only demountable classrooms to meet the required demand, to full demolition of all facilities to provide a new school layout.

Key to the design development at this early stage was the investigation, consultation and design analysis associated with consideration of the retention, adaptation/reuse or demolition of the heritage listed building. This is discussed in detail further in **Section 1.3.1**.

Following the initial concept development process, the HDC and the PRG resolved the following conclusions:

1 Introduction

- Any proposal which introduced additional demountable buildings to the site was contrary to the objectives of the project brief and would not be in the interests of the Department of Education or the school community;
- The objective to seek to provide 10m² play space per student over the site was not only difficult to achieve on such a small site, but was of the highest level of importance to the Department of Education and school community; and
- In order to achieve desirable site relationships and accommodation schedules (9,400m² of floor space), the project would need to consider multiple options of varying scale and site coverage in tandem with feedback from Georges River Council.

Three (3) general options were prepared by Perumal Pedavoli Architects, as shown in **Figure 1**, which involved the following basic concepts:

- Option 1: Retention of all existing buildings and addition of one new medium to high-rise building in the open southern section of the Site;
- Option 2: Retention of just the 1925 heritage building (Building A) and construction of two new medium to high-rise buildings at the northern and southern ends of the site; and
- Option 3: Removal of all buildings and construction of a whole new school development.

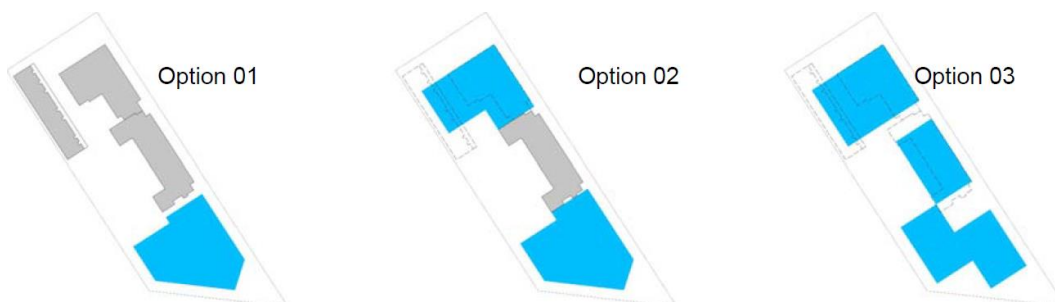


Figure 1 Diagram showing the basic options (prepared by Perumal Pedavoli Architects)

These general options were each developed into a total of 11 concepts to enable further consideration and consultation, prior to the PRG resolving to proceed with the final scheme. Five (5) of the 11 concept options prepared by the HDC are discussed from **Section 1.3.2**.

1.3.1 Consideration of Heritage Significance in Design Development

The heritage significance of the 1925 Penshurst Public School building has been a central consideration of the design development process from the beginning of the project, including input from/consultation with specialist heritage consultant Perumal Murphy Alessi, the Department of Education Heritage Advisor, Georges River Council (and its Heritage Advisor) and NSW Office of Environment and Heritage.

The timeline set out at **Table 1** details the range of steps taken by the project team in the design development process to properly consider the significance of the heritage building prior to a final scheme being resolved.

Table 1 Timeline of Design Development and Heritage Considerations		
Date	Consideration	Outcomes
Jan 2017	Initial business case options prepared by HDC.	Design development continued.
9 Mar 2017	Specialist heritage consultant provides initial advice/feedback on early concepts and significance of heritage building.	PRG consider early stage concepts and seek to commence request for SEARs to get planning process underway.

1 Introduction

Table 1 Timeline of Design Development and Heritage Considerations

Date	Consideration	Outcomes
29 Mar 2017	Request for SEARs submitted to DPE based on concept plans as “worst case scenario”. Analysis of design options continued.	Ongoing design development and consultation continued.
21 April 2017	SEARs issued by DPE.	Design development continues pursuant to SEARs.
7 June 2017	Perumal Murphy Alessi circulates preliminary draft of Statement of Heritage Impact (SoHI) for consideration and feedback. Includes historical overview, description of the site and assessment of significance only.	Initial heritage feedback incorporated into design development discussions and consultations.
20 June 2017	Meeting with Dept. of Education Heritage Advisor and project team to discuss early concepts, heritage advice and receive feedback from the Department.	Advice collated for discussion with Council staff.
23 June 2017	Meeting with Georges River Council Director of Environment and Planning and Manager of Strategic Planning to discuss three (3) main options, including heritage and urban design matters. Meeting was informed by draft SoHI, concept plans and other supporting material. Council’s Heritage Advisor provided feedback for consideration at the meeting.	Council feedback required credible justification as to why the heritage item cannot form part of the redevelopment of the site, and further comparable analysis in the SoHI. Feedback also confirmed that Council did not support high-rise building on the Site. Outcomes of this meeting led to further design development and heritage impact assessment, as well as the preparation of a detailed comparable analysis. Minutes of the meeting and a copy of the advice provided by Council’s Heritage Advisor are provided at Appendix 4.
21 Aug 2017	Updated SoHI circulated by Perumal Murphy Alessi, containing detailed comparative analysis, as requested by Georges River Council.	Document used by project team to further understand heritage context, and for consultation.
30 Aug 2017	Follow up meeting held with Department of Education Heritage Advisor to discuss progress in design development and updated SoHI.	Advice informed further progress of heritage assessment and heritage impact assessment.
5 Sept 2017	Updated SoHI forwarded to Georges River Council for further comment.	N/A
20 Sept 2017	Response received from Council’s Heritage Advisor (copy provided at Appendix 4), addressing the three options (full retention, partial retention and full demolition).	Outcomes of Council’s advice incorporated into SoHI. In particular, Council advice that in order for the option to demolish the heritage “to be supported, sound argument for not implementing the other options would need to be included in the SoHI”.
5 Oct 2017	Email enquiry submitted to Heritage Officer at NSW Office of Environment and Heritage (OEH), including details of all consultation carried out to date, a copy of the concept plan and comments provided by the Georges River Council Heritage Advisor.	N/A
12 Oct 2017	Response provided by OEH outlining that “it would be great if the item could be restored and used in some way”.	Comments noted in light of consultations and assessment carried out to date.

Ultimately, the PRG endorsed Option 3, being the option to demolish all structures including the heritage item and construction of an entirely new school facility, as discussed in **Section 1.3.4**.

1 Introduction

1.3.2 Option 1 – Retain All Buildings

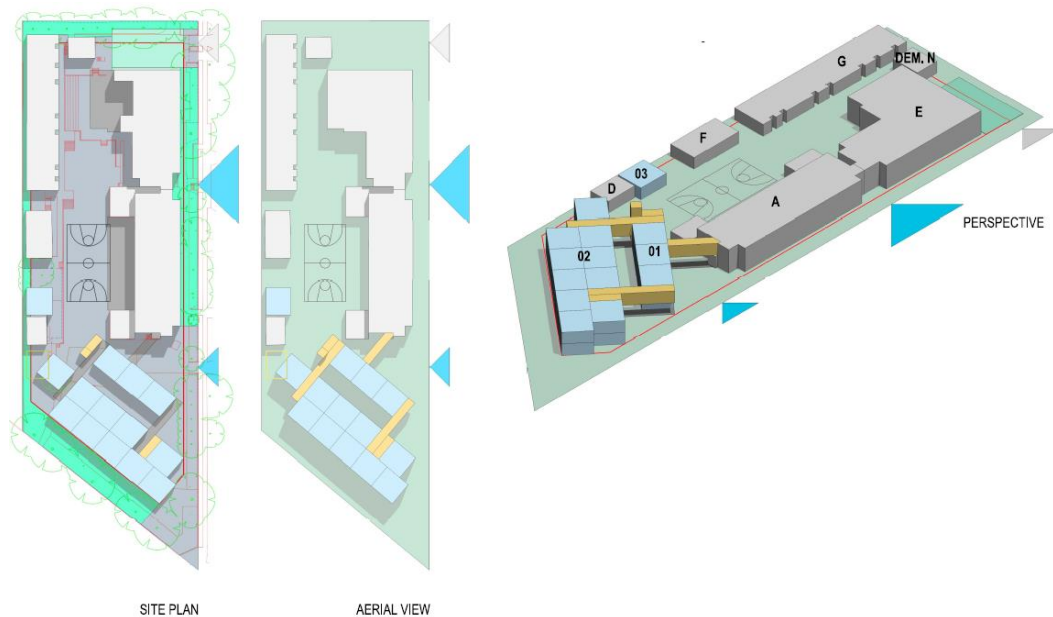


Figure 2 Extract of Option 1 Concept – Retain All Buildings

Table 2 Option 1 Area Schedule					
New Built Area	Total Built Area	Total Play Space	Play Space Ratio (m ² /Student)	Total Soft Landscape Area	Car Park Area
2,732m ²	6,256m ²	4,399m ²	4.35m ² (Well below desired level of 10m ² /student)	1,733m ²	350m ²

The only viable option which allowed for the retention of all buildings involved the erection of an array of two (2) storey demountable buildings to provide the required supply of teaching space. Aside from the undesirable built form and temporary nature of the accommodation, Option 1 would not achieve even half of the desired supply of play space per child (**Table 2**).

The benefits of retaining all existing buildings were significantly outweighed by the shortcomings of the Option 1 concept. There are insufficient grounds on which this Option is considered to be suitable to pursue further than a concept, as it achieves few of the project objectives and addresses none of the unique considerations of the site.

As a result, the HDC was required to consider the demolition of existing buildings to enable a reconfiguration of site relationships and accommodation schedules. This included options which proposed both the retention and demolition of the heritage item, as discussed below.

1 Introduction

1.3.3 Option 2 – Retain Heritage Building Only

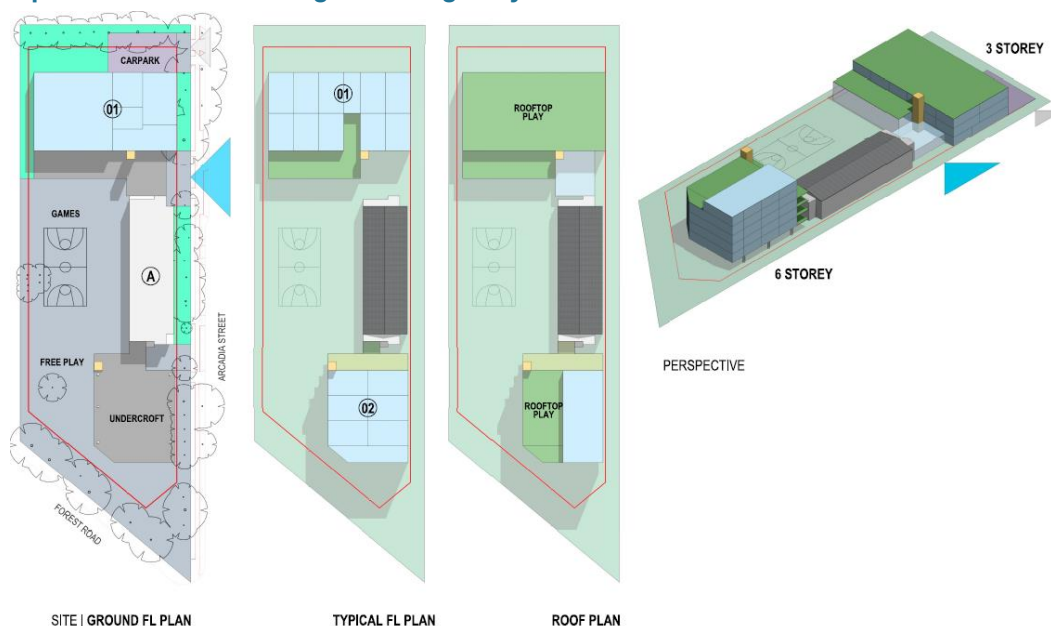


Figure 3 Extract of Option 2 Concept – Retain Heritage Building Only

Table 3 Option 2 Area Schedule					
New Built Area	Total Built Area	Total Play Space	Play Space Ratio (m ² /Student)	Total Soft Landscape Area	Car Park Area
7,194m ²	9,264m ²	8,695m ²	8.59m ² (Below desired level of 10m ² /student)	1,240m ²	420m ²

With the requirement to provide some 9,400m² of floor space, and with limited site area available over which new facilities could be located, Option 2 proposed the retention of the heritage building and demolition of all other buildings, and the construction of two (2) new medium/high-rise buildings, including:

- **Building 1:** Three (3) storey building at the northern end of the site, including multi-purpose hall and roof-top play area, and single storey administration building linking the new building to the retained heritage building; and
- **Building 2:** Six (6) storey building at the southern end of the site presenting to the corner of Arcadia Street and Forest Road, with ground-floor under croft and roof-top playing area.

Option 2 required an urban design analysis of the locality to ascertain the suitability of a six (6) storey built form at the southern corner of the site. This included a review of zoning, density and height controls for the surrounding area, understanding the relationship of the Site to Penshurst Railway Station and the built form between, and streetscape/built form of development along Forest Road (in particular from east to west out of Hurstville).

In addition, it was evident that built form of this height would have an impact on the curtilage of the retained heritage item. Preliminary heritage advice from Perumal Murphy Alessi was that the likely impacts would not be consistent with the heritage conservation objectives of the relevant guidelines.

Discussions with Georges River Council included a review of the suitability of the built form proposed under Option 2 (refer to meeting minutes at **Appendix 4**). The following minutes are noted from the meeting:

“Council acknowledged that meeting the brief and other DoE requirements would either impact the heritage building and/or impact the height of the new constructed building.

1 Introduction

Due to the surrounding buildings being no taller than 12m and the majority being single storey Council envisages building a 6 storey tower an urban design issue and was not supported. Council noted that a 3 storey development fitted in with the surrounding context."

Therefore, on both heritage conservation and urban design grounds, Option 2 was not considered supportable.

In addition to this, feedback from the PRG was that Option 2 would present a range of issues in meeting the objective for future focussed and equitable learning spaces and achieving desirable internal site connectivity. This is in part due to the need for monitoring and supervision throughout the site and the disconnection which would result from having two separate lifts on buildings separated by the retained heritage item. Ultimately this layout was not considered functional as a permanent solution which warranted the retention of the heritage item.

The ratio of play space for each student in Option 2 was almost double that of Option 1, achieved by utilising a combination of ground floor and new roof-top play spaces. However, given the heritage, urban design and site connectivity issues, Option 2 was not aligned with the approved business case and therefore was not endorsed.

Two (2) further design options were considered under Option 2, involving the retention of the front bay the heritage building, being designed in consultation with engineering advice from Woolacotts and costing estimations by WT Partnership. However, beyond the issues discussed above, the design challenges in marrying up floor levels of the old and new buildings while achieving the educational objectives of future focussed, equitable learning spaces and achieving desirable outcomes in terms of heritage curtilage resulted in these options also not being endorsed.

1.3.4 Option 3 – Remove All Buildings and Construct New School

Multiple scenarios were considered under Option 3, as detailed below.

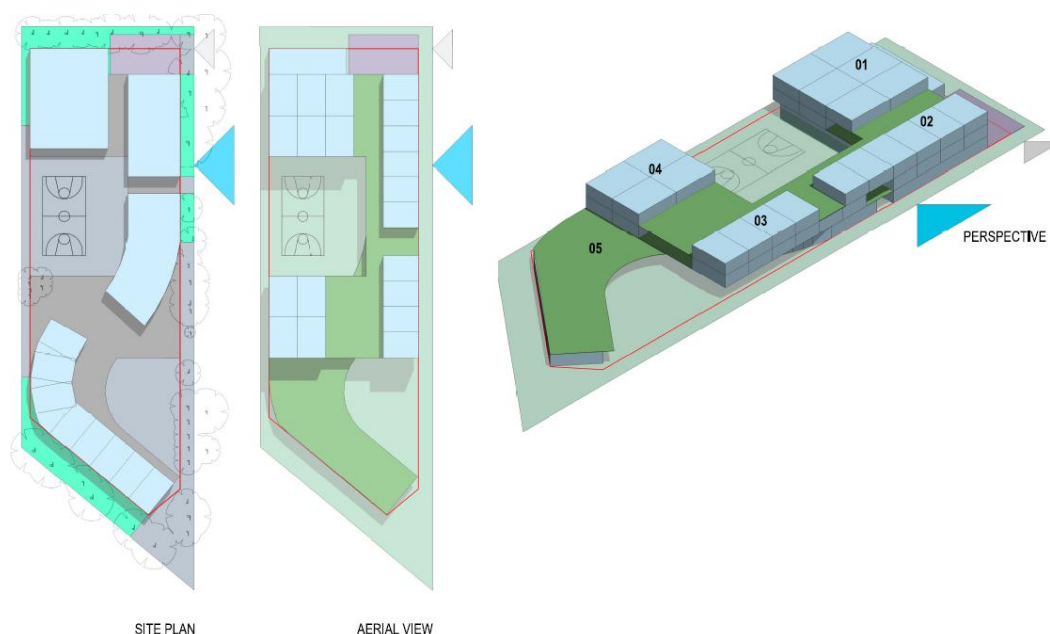


Figure 4 Extract of Option 3A – Remove All Buildings and Construct New School (Over 3 or 4 Stages)

Table 4 Option 3A Area Schedule					
New Built Area	Total Built Area	Total Play Space	Play Space Ratio (m ² /Student)	Total Soft Landscape Area	Car Park Area
9,264m ²	9,264m ²	9,251m ²	9.14m ² (Close to desired level of 10m ² /student)	1,287m ²	350m ²

1 Introduction



Figure 5 Extract of Option 3B – Remove All Buildings and Construct New School (Over Single Stage)

Table 5 Option 3B Area Schedule					
New Built Area	Total Built Area	Total Play Space	Play Space Ratio (m ² /Student)	Total Soft Landscape Area	Car Park Area
9,264m ²	9,264m ²	9,765m ²	9.64m ² (Close to desired level of 10m ² /student)	1,230m ²	420m ²

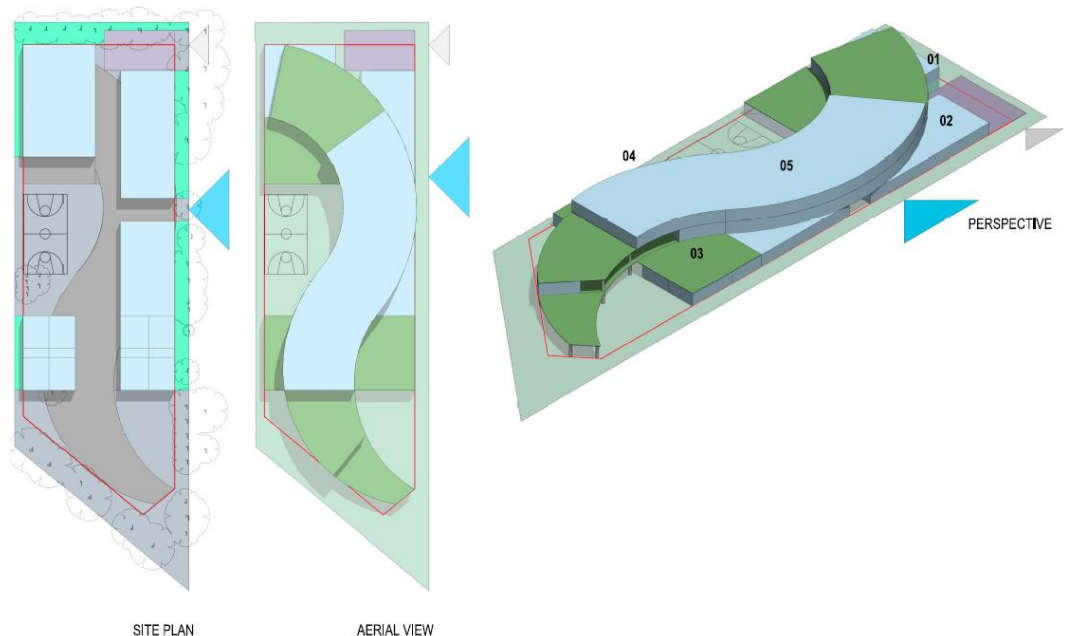


Figure 6 Extract of Option 3C – Remove All Buildings and Construct New School (In Single Stage)

Table 6 Option 3C Area Schedule					
New Built Area	Total Built Area	Total Play Space	Play Space Ratio (m ² /Student)	Total Soft Landscape Area	Car Park Area
9,264m ²	9,264m ²	9,278m ²	9.16m ² (Close to desired level of 10m ² /student)	1,048m ²	420m ²

1 Introduction

The retention of the heritage item was investigated in the original business case scenarios, and tested further (in consultation with heritage advice from the Department of Education, Georges River Council and Perumal Murphy Alessi) over multiple scenarios, however on balance, Option 1 and Option 2 were not found to be supportable, as discussed above.

Option 3 scenarios considered the redevelopment of the whole site including the demolition of all school buildings (including the heritage building) and construction of all new facilities. An early objective was to design a proposal which would enable the staged construction of the development so that students and staff could remain on the site throughout the carrying out of works (refer to Option 3A at **Figure 4**).

Two staging scenarios were developed for Option 3A, including a three (3) stage and four (4) stage scenario. The three (3) stage scenario enabled the school to remain operational on Site with only partial capacity, requiring partial decanting of students to an off-site location. The four (4) stage scenario enabled the school to remain operation on Site with the current enrolment capacity.

However, when investigated from a construction management and operational management perspective, the staged construction scenarios were found to be unfavourable due to several issues, primarily the constant ongoing disruption of student activities throughout the course of each day, either through the noise generated by the construction works or the conflict of construction vehicles and school traffic on a daily basis. By reducing the exposure of school traffic to the construction traffic, the construction programme would be significantly impacted such that adverse impacts on school and neighbour amenity would be prolonged and result in undesirable outcomes. In this regard, Option 3A (and the 3 and 4 stage scenarios) was not considered favourable.

Design consideration then turned to the design objectives of the school and desired future focussed and accessible learning space outcomes. Option 3B was a scenario which maximised play space, but achieved this at the cost of not meeting future focussed learning spaces due to the conventional building design. Further, Option 3B comprised a large floorplate with an elongated building frontage to Arcadia Street. The design required considerable level changes to the topography of the site and would result in built form outcomes which are not consistent with the Department of Education's vision to provide new facilities of high quality design, as well as resulting in undesirable solar access outcomes for adjoining properties.

The curvilinear built form proposed under Option 3C achieves desirable height, response to site topography, internal and external relationships, an acceptable ratio of play space for each student, and introduces design elements which create visual interest and reduce the perceived bulk and scale. Perumal Pedavoli Architects has provided a detailed analysis of the proposed school design in the Design Analysis Report (**Appendix 11**).

The above assessment has discussed the development of the currently proposed design, and provides an analysis of the alternatives considered in particular having regard to the heritage significance of the 1925 school building. The proposed development is the product of a long consultation process with relevant experts and the proposed demolition of the heritage building has been considered in light of a wide range of factors, including built form outcomes, costs and benefits to retaining the building. The proposal is supported having regard to the range of matters discussed above, and pursuant to the assessment carried out in the EIS below.

1.4 Response to SEARs

Table 7 provides a summary of where a response to the SEARs reissued by the Department of Planning and Environment on 29 September 2017 (**Appendix 1**) can be found within this EIS report or accompanying documentation.

1 Introduction

Table 7 Location of Response to SEARs within this EIS

Requirement	Response within this Report	Relevant Supporting Documentation
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). Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	-	-
Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include: - adequate baseline data; - consideration of potential cumulative impacts due to other development in the vicinity (completed, underway or proposed); and - measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment.	Section 8	Multiple Appendices
The EIS must be accompanied by a report from a qualified quantity surveyor providing: - a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Environmental Planning and Assessment Regulation 2000) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; - an estimate of the jobs that will be created by the future development during the construction and operational phases of the development; and - certification that the information provided is accurate at the date of preparation.	Section 6.4.1	Provided under separate cover
Key Issues The EIS must address the following specific matters: 1. Statutory and Strategic Context – including: Address the statutory provisions contained in all relevant environmental planning instruments, including: - State Environmental Planning Policy (State & Regional Development) 2011; - State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017; - State Environmental Planning Policy (Infrastructure) 2007; - State Environmental Planning Policy No.55 – Remediation of Land; and - Hurstville Local Environmental Plan 2012. <i>Permissibility</i> Detail the nature and extent of any prohibitions that apply to the development. <i>Development Standards</i> Identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards.	Section 6.4	Multiple Appendices
2. Policies Address the relevant planning provisions, goals and strategic planning objectives in the following: - NSW State Priorities; - A Plan for Growing Sydney; - NSW Long Term Transport Master Plan 2012; - Sydney's Cycling Future 2013; - Sydney's Walking Future 2013; - Sydney's Bus Future 2013; - Healthy Urban Development Checklist, NSW Health; - Great Sydney Commission's Draft South District Plan; and	Section 6.5	N/A

1 Introduction

Table 7 Location of Response to SEARs within this EIS

Requirement	Response within this Report	Relevant Supporting Documentation
Hurstville Development Control Plan 1.		
3. Built Form and Urban Design - Address the height, density, bulk and scale, setbacks of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces. - Address design quality, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials, colours and Crime Prevention Through Environmental Design Principles. - Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development.	Section 6.6.1	Appendix 9 Appendix 11 and Appendix 28
4. Environmental Amenity - Detail amenity impacts including solar access, acoustic impacts, visual privacy, view loss, overshadowing and wind impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated. - Detail any proposed use of the school grounds out of school hours (including weekends) and any resultant amenity impacts on the immediate locality and proposed mitigation measures.	Section 6.6.3	Appendix 11 and Appendix 17
5. Transport and Accessibility (Construction and Operation) Include a transport and accessibility impact assessment, which details, but not limited to the following: - accurate details of the current daily and peak hour vehicle, public transport, pedestrian and cycle movement and existing traffic and transport facilities provided on the road network located adjacent to the proposed development; - an assessment of the operation of existing and future transport networks including the bus network and their ability to accommodate the forecast number of trips to and from the development; - details of estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and cycle trips; - the adequacy of public transport, pedestrian and bicycle networks and infrastructure to meet the likely future demand of the proposed development; - the impact of the proposed development on existing and future public transport infrastructure within the vicinity of the site in consultation with Roads and Maritime Services and Transport for NSW and identify measures to integrate the development with the transport network; - details of any upgrading or road improvement works required to accommodate the proposed development; - the preparation of a Green Travel Plan that outlines proposals to encourage sustainable travel choices and details programs for implementation; - the impact of trips generated by the development on nearby intersections, with consideration of the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for upgrading or road improvement works if required (note: traffic modelling is to be undertaken with scope to be agreed by TfNSW and RMS in advance); - the proposed active transport access arrangements and connections to public transport services; - the proposed access arrangements, including car and bus pickup/drop-off facilities, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones; - measures to maintain road and personal safety in line with CPTED principles; - the proposed car and bicycle parking provision, including end of trip facilities, which must be taken into consideration of the	Section 6.6.4	Appendix 17

1 Introduction

Table 7 Location of Response to SEARs within this EIS

Requirement	Response within this Report	Relevant Supporting Documentation
availability of public transport and the requirements of Council's relevant parking codes and Australian Standards; - proposed bicycle parking facilities in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance; - details of the proposed number of car parking spaces and compliance with appropriate parking codes and justify the level of car parking provided on-site; - details of emergency vehicle access arrangements; - an assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures; - service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times); - In relation to construction traffic: - Assessment of cumulative impacts associated with other construction activities (if any); - an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity; - details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process; - details of anticipated peak hour and daily construction vehicle movements to and from the site; - details of access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle; - details of temporary cycling and pedestrian access during construction - details of proposed construction vehicle access arrangements at all stages of construction; and - traffic and transport impacts during construction, including cumulative impacts associated with other construction activities, and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport, including the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact. → Relevant Policies and Guidelines: - Guide to Traffic Generating Developments (Roads and Maritime Services) - EIS Guidelines – Road and Related Facilities (DoPI) - Cycling Aspects of Austroads Guides - NSW Planning Guidelines for Walking and Cycling - Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development - Standards Australia AS2890.3 (Bicycle Parking Facilities)		
6. Ecologically Sustainable Development (ESD) - Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000) will be incorporated in the design and ongoing operation phases of the development. - Demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice. - Include a description of the measures that would be implemented to minimise consumption of resources, water (including water sensitive urban design) and energy.	Section 6.6.5	Appendix 26
7. Social Impacts Include an assessment of the social consequences of the schools' relative location and decanting activities if proposed.	Section 6.6.6	Multiple Appendices
8. Biodiversity	Section 6.3	N/A

1 Introduction

Table 7 Location of Response to SEARs within this EIS

Requirement	Response within this Report	Relevant Supporting Documentation
Biodiversity impacts related to the proposed development are to be assessed and documented in accordance with the Framework for Biodiversity Assessment, unless where otherwise agreed by the OEH, by a person accredited in accordance with s142B(1)(c) of the Threatened Species Conservation Act 1995.		
9. Heritage Include a Statement of Heritage Impact that addresses the significance of, and provides an assessment of the impact on the heritage significance of any heritage items on the site and in the vicinity, and/or conservation areas and/or potentially archaeologically significant areas, in accordance with the NSW Heritage Manual.	Section 6.6.2	Appendix 16
10. Aboriginal Heritage Where relevant, address Aboriginal Cultural Heritage in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011) and Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW).	Section 7.3.2	Appendix 5
11. Noise and Vibration Identify and provide a quantitative assessment of the main noise and vibration generating sources during construction and operation, including consideration of any public address system, school bell and use of the school hall for concerts etc. (both during and outside school hours), and outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land. → Relevant Policies and Guidelines: • NSW Industrial Noise Policy (EPA) • Interim Construction Noise Guideline (DECC) • Assessing Vibration: A Technical Guideline 2006 • Development Near Rail Corridors and Busy Roads – Interim Guideline (Department of Planning 2008)	Section 6.6.7	Appendix 25
12. Contamination Demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. → Relevant Policies and Guidelines: • Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP)	Sections 6.4.4 and 6.7.1	Appendix 7 and Appendix 8
13. Utilities • Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure and the likely need to underground existing above ground services. • Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.	Section 6.7.3	Appendix 14, Appendix 19 and Appendix 20
14. Contributions Address Council's Section 94A Contribution Plan and/or details of any Voluntary Planning Agreement.	Section 6.6.10	N/A
15. Drainage Detail drainage associated with the proposal, including stormwater and drainage infrastructure.	Section 6.6.8	Appendix 14 and Appendix 15
16. Flooding Assess any 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 Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity.	Section 6.6.8	Appendix 14
17. 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. Identify appropriate servicing arrangements (including but not	Section 6.6.9	Appendix 28

1 Introduction

Table 7 Location of Response to SEARs within this EIS

Requirement	Response within this Report	Relevant Supporting Documentation
limited to, waste management, loading zones, mechanical plant) for the site.		
Plans and Documents The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. Provide these as part of the EIS rather than as separate documents. In addition, the EIS must include the following: - Architectural drawings (dimensioned and including RLs); - Site Survey Plan, showing existing levels, location and height of existing and adjacent structures / buildings and boundaries; - Site Analysis Plan; - Stormwater Concept Plan; - Sediment and Erosion Control Plan; - Shadow Diagrams; - View Analysis / Photomontages; - Landscape Plan (identifying any trees to be removed and trees to be retained or transplanted); - Preliminary Construction Management Plan, inclusive of a Preliminary Construction Traffic Management Plan detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures; - Geotechnical and Structural Report; - Accessibility Report; - Arborist Report; - Acid Sulphate Soils Management Plan (if required); and - Schedule of materials and finishes.	Section 4 Section 3.2 Section 4.3.2 Section 4.5 Section 4.7.2 Section 6.6.1 Section 6.6.1 Section 4.5 Section 6.6.3 Section 4.2 and Section 6.7.1 Section 6.7.4 Section 4.2 Section 6.4.6 Section 4	Appendix 9 Appendix 2 Appendix 11 Appendix 15 Appendix 15 Appendix 11 Appendix 11 Appendix 12 Appendix 27 Appendix 6 and Appendix 22 Appendix 24 Appendix 13 N/A Appendix 11
Consultation During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with: - Georges River Council; - Transport for NSW; and - Roads and Maritime Services. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	Section 5	Appendix 4 and Appendix 18
Further Consultation after 2 Years If you do not lodge a development application and EIS for the development within two years of the issue date of these SEARs, you must consult further with the Secretary in relation to the preparation of the EIS.	N/A	N/A
References The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified.	See Above	See Above

2 Background

2.1 Site History

In 1914 “Fernlands Estate Penshurst” was created with Lots 3-15 inclusively transferred to His Most Gracious Majesty King George V in 1919 for the purposes of the Public Instruction Act 1880. The lots comprised an area of over 2 acres which were subsequently developed as the Penshurst Public School which was established in 1925.

The original building plans dated 1924 show the northern “half” of what is now referred to as Block A with subsequent drawings dated 1927 documenting the construction of the southern half of the existing building.

A parcel of land opposite the school on Arcadia St was acquired in circa 1928 which was utilised as a car park.

In 1985, new facilities were added to the north western and south-western corners of the main building and the previous detached facilities demolished. Around this time detached classrooms were also built on the Site with the original building now known as Block A and the additional buildings known as Blocks B, C and D.

In 1997 the land on the opposite side of Arcadia St previously used as a school car park, was sold to fund the redevelopment of the school.

In 2000 the redevelopment was completed and included refurbishment of the existing main Block A with a large library to be accommodated in part of the old assembly hall and improvements to the existing classrooms and facilities with a new hall and covered outdoor learning area (COLA). The works also created a car parking area to the north of the buildings accessed from Arcadia Street.

In 2010 another school building was constructed along the north-western boundary and a contemporary COLA and modern steel palisade fencing was installed.

Copies of all development consents on file for Penshurst Public School have been provided by Georges River Council, including the following;

- DA 110/96 dated 2 July 1996 for “administration/ staff building and hall/canteen”; and
- CDC No. 291119 dated 22 December 2009 for “construction of covered outdoor learning area”.

The Site history is discussed in greater detail in the Statement of Heritage Impact prepared by Perumal Murphy Alessi (**Appendix 16**).

2.2 Relevant Development Applications in the Locality

Hurstville City Council (now Georges River Council) approved the Penshurst Park Master Plan in 2015. Stage one for an indoor cricket centre has development approval and construction is expected to commence shortly. A DA for Stages 2 and 3 was lodged on 7 September 2017 by Georges River Council and is pending approval by the South Sydney Planning Panel.

Stage 2 of the Master Plan, will include a synthetic soccer field and cricket pitches, a walking track, new exercise station, public amenities, a 275-seat grandstand, medical rooms, storage facilities, a youth centre and a playground (which is to be relocated from within the park). Additional parking spaces (327) will be provided on Percival Street as part of stormwater and kerb realignment works with a total of 38 spaces to be provided on the street.

Stage 3 of the Master Plan will consist of an extension to the existing Hurstville Aquatic Leisure Centre facilities to include a new internal grandstand and two additional mixed-use courts to accommodate basketball and futsal.

2 Background



Figure 7 Extract of Penshurst Park Master Plan (Georges River Council)

On 9 February 2018, DA2018/0039 was submitted with Georges River Council for a temporary relocation of Penshurst Public School (staff and students) to Peakhurst West Public School for a period of 2 years. This application seeks consent for the interim intensification of the use of Peakhurst West Public School to accommodate Penshurst Public School for the duration of the construction of the proposed new school buildings.

3 Site Context

3.1 Location

The Site is located within the Georges River Local Government Area (LGA). The Site is within 300m of the Penshurst Railway Station and Penshurst Town Centre Shops (see **Figure 8**).

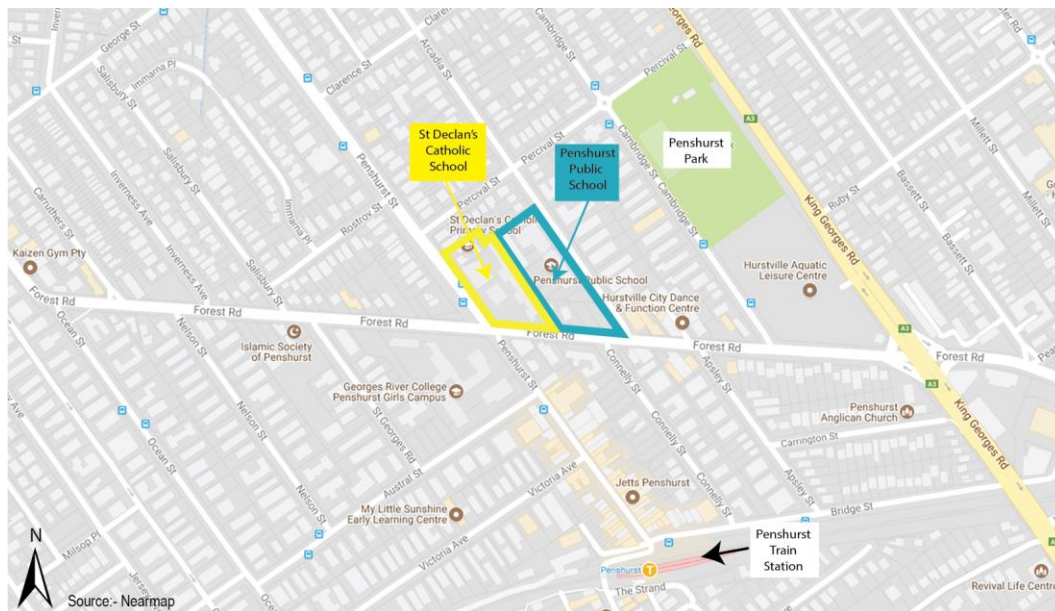


Figure 8 Site Location

3.2 Site Description

The Site is legally described as Lots 3-15 in Deposited Plan (DP) 8713 and is also known as 510 Forest Road, Penshurst, Post Code 2222 (see **Figure 9** and Site Survey at **Appendix 2**).

The Site has two road frontages, including a 199.09-meter eastern frontage to Arcadia Street (being the main frontage) with existing buildings oriented towards Arcadia Street, and a secondary frontage to Forest Road measuring 79.02 metres. The site has a total area of 10,605m².

The Site contains numerous buildings that have been constructed at various stages since 1925, including classrooms, administration facilities, amenities, multi-purpose hall and recreation facilities. The layout of the site is analysed in detail in the Design Analysis Report (**Appendix 11**) and a detailed history of all buildings on the site is provided in the Statement of Heritage Impact (**Appendix 16**).

Photos of the Site and surrounds are provided in the Photo Sheets at **Appendix 3**.

3 Site Context

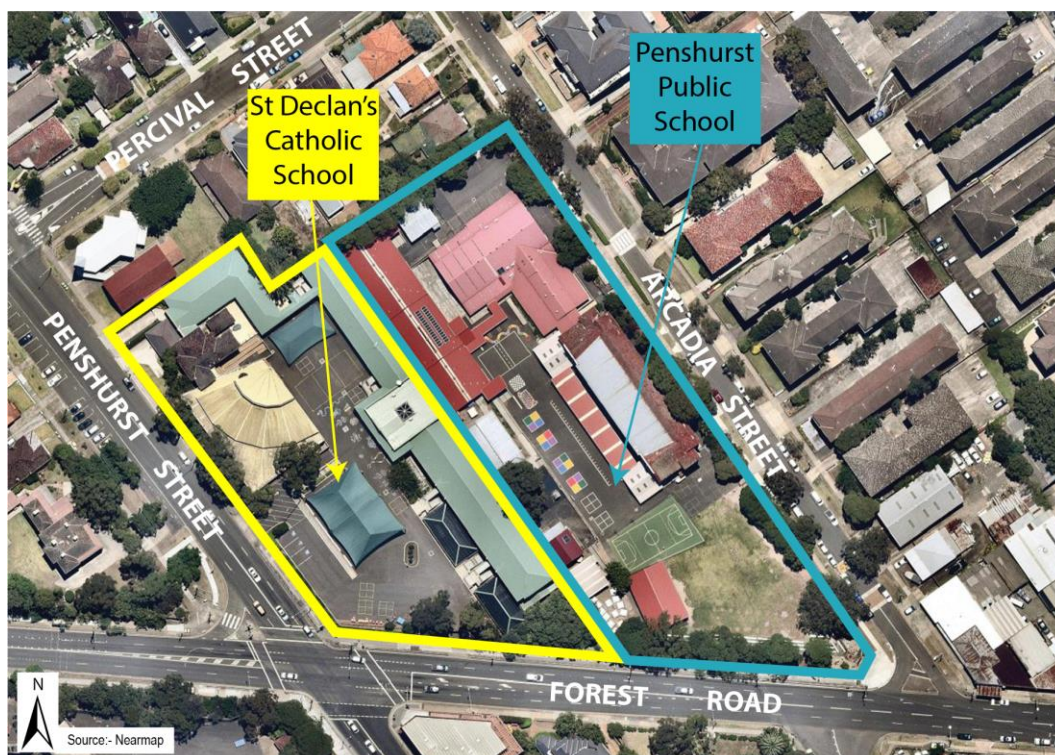


Figure 9 Aerial Photograph of the Site

3.3 Surrounding Development

The Site is situated within an established urban locality, comprising a mixture of public open space, residential, education, public worship, light industrial, retail and commercial land uses. The typical scale of built form within the locality is of a low to medium density, with buildings generally having a rise of one (1) to three (3) storeys.

To the north, the Site adjoins low density residential dwellings. Medium density residential buildings are located to the east of the Site on the opposite side of Acadia Street and to the south of the Site on the opposite side of Forest Road.

To the south-east on both sides of Forrest Road are small areas of light industrial development consisting of typical uses including automobile repair shops, a petrol station and truck rental premises.

To the west directly adjacent to the Site is St Declan's Catholic Primary School and Church. St Declan's Catholic Primary School is a two (2) stream school with a current enrolment of 420 students¹, and is accessed from Penshurst Street.

To the south-west of the Site on the opposite corner of Forest Road and Penshurst Road is Georges River College Penshurst Girls Campus, a public school which is accessed from Austral Street (southern side of the property).

A public recreation area known as Penshurst Park is located 200m east of the Site which comprises playing fields, bowling greens, netball courts and play equipment. Adjacent to this is Hurstville Aquatic Leisure centre. Details of the future development of this site are provided at **Section 2.2** above.

Approximately 300m to the south of the Site is Penshurst village centre, comprising a strip of retail and commercial premises in close proximity to the Penshurst Train Station.

Hurstville Private Hospital and associated medical precinct is located 800m east of the Site.

¹ <https://sites.google.com/a/syd.catholic.edu.au/stdpenshurst/about-us>

3 Site Context



Figure 10 Surrounding Development.

Photos of the Site and surrounds are provided at **Appendix 3**.

3.4 Surrounding Road Network

The Site has frontage to Forrest Road and Arcadia Street. As Arcadia Street is the primary entrance for students and vehicles, all school traffic utilises either Forest Road or the local road network north of the Site. An extract of the Penshurst Public School catchment and its relationship with the surrounding road network is provided at **Figure 11**.



Figure 11 *Penshurst Public School catchment*

Arcadia Street is an undivided local road with a width of two (2) lands under the authority of Georges River Council (shown in **Figure 12**). Arcadia Street runs parallel with King Georges Road and Penshurst Street, which are orientated north-east / south-west. The local road network north of the Site comprises a number of perpendicular connections from Arcadia Street which connect to King Georges Road and Penshurst Street, providing a high level of

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connectivity and distribution throughout the locality both north and south of the Forest Road corridor.



Figure 12 View of Arcadia Street north of the School Site

Forest Road is a divided local road with a width of four (4) lanes under the authority of Georges River Council (shown in **Figure 13**). Forest Road generally runs east / west from Hurstville (in the east) to Peakhurst (in the west), and provides connectivity to a number of local and regional roads, including King Georges Road and Penshurst Street.



Figure 13 View of Forest Road south of the School Site (looking west)

TTM has prepared a Traffic Assessment (**Appendix 17**) which provides a detailed discussion of the transport infrastructure surrounding the Site, including discussion regarding the road network, public transport, walking and cycling infrastructure, and parking facilities.

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4.1 Project Summary

The proposed development comprises the construction of new school buildings to increase the capacity of the school from 439 to 1,012 students, providing a total of 47 teaching spaces. This involves the following work:

- Site preparation works including:
 - Demolition of all structures within Lots 8-11 DP 8173, including the heritage-listed school building of local significance (demolition of non-heritage structures on Lots 3-7 and Lots 12-15 DP 8173 to proceed under a separate planning pathway);
 - Removal of 25 trees;
 - Excavation works to accommodate new buildings;
- Construction of a new three (3) storey building comprising:
 - Ground floor comprising three (3) separate buildings linked by an undercroft created by the levels above with associated external play area, including;
 - Ground Level Administration/ Learning/ Library: New main school entry to Arcadia Street, offices, administration areas, staff facilities, One (1) home base (HB) room containing three (3) HB groups, One (1) Hearing Support Unit (HSU) room with dedicated outdoor play space, student facilities, two (2) special program rooms, library, store rooms, mechanical rooms, waste rooms, breeze-way, and internal vertical circulation including stairs and lift;
 - Ground Level Learning: One (1) HB room containing three (3) HB groups, store rooms, mechanical rooms, and internal vertical circulation including stairs; and
 - Ground Level Communal Hall/ Canteen/ Out of School Hours (OOSH): Internal multi-purpose sports court with operable walls leading to external spill-out area, raised stage, external sports court, student amenities, canteen, canteen office, OOSH store, OOSH kitchen, OOSH office, storage rooms (chairs, sports equipment, performance, staff bike and general storage) and internal stair circulation;
 - First Floor internal and external spaces, including;
 - First Floor Learning: Five (5) HB rooms each containing three (3) HB groups, One (1) HSU room, student facilities, two (2) special program rooms, mechanical plant and communication rooms, internal vertical circulation including three (3) sets of stairs, lift and covered balcony; and
 - First Floor Outdoor: Outdoor learning spaces and vegetable garden;
 - Second floor, including;
 - Second Floor Learning: Five (5) HB rooms each containing three (3) HB groups, two (2) HB rooms each containing four (4) HB groups, one (1) HSU room, student facilities, mechanical plant and communication rooms, internal vertical circulation including three (3) sets of stairs, lift and covered balcony; and

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- Third floor roof top playground, including;
 - Third Floor Outdoor/ Learning: COLA and uncovered play areas, shade structures, student amenities, palisade fencing, internal vertical circulation including three (3) sets of stairs, lift and covered balcony.
- New palisade fencing 2.1m in height along portion of Arcadia Street adjacent to new buildings, and 1.5m high palisade fencing to property interior;
- At grade staff car park with 15 parking spaces (including one (1) accessible parking space) accessed off Arcadia Street;
- Student bicycle parking along Arcadia Street; and
- Roof top photo-voltaic panels above COLA.
- Landscaping works including the planting of 82 new trees, various shrubs, clumping plants and ground covers, concrete pattern finishes and evergreen climbers over roof-top metal shade structures; and
- Removal of the existing stormwater connections to kerb and gutter and collection of all stormwater drainage in a new system incorporating a 240m³ on-site detention (OSD) tank, a new rainwater tank and a new connection to the Council pit in Arcadia Street.

The project timeframe is such that demolition of some buildings (not including the heritage building) could take place under a separate planning pathway, separate to this DA.

The key development statistics of the development are detailed in **Table 8**.

Site Area	10,605m ²
Existing Primary School GFA	3,601.97m ²
Proposed Primary School GFA	6,617.81m ²
Building Height (Maximum)	Approximately 17m
Play Areas	9,051.48m ² (8.94m ² /student)
Existing Car Parking	16 spaces
Proposed Car Parking	15 spaces
Site Coverage	2,921.88m ² (27.55%)
Landscaped Areas	3,623.87m ² (34.17%)
Hardscape Areas	6,981.13m ² (65.83%)

Perumal Pedavoli Architects has prepared a suite of Architectural Plans (**Appendix 9**) which detail the works proposed under this application. An extract of the Site Plan is provided at **Figure 14**.

4 Project Description

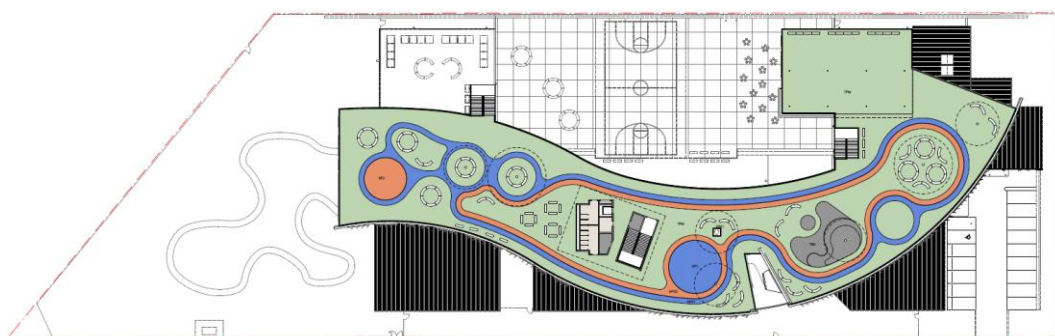


Figure 14 Extract of Site Plan - Roof Top Plan (prepared by Perumal Pedavoli Architects)

The following subsections provide a more detailed description of the proposed development.

4.2 Demolition and Site Preparation

The proposed development will involve the demolition of all existing structures and school buildings within Lots 8-11 DP 8173 to accommodate the construction of the new school building (see **Figure 15**).

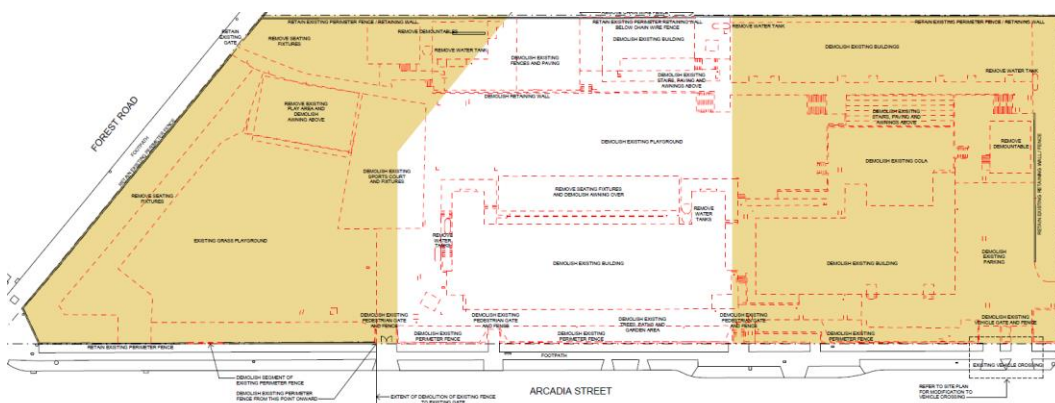


Figure 15 Extract of Demolition Site Plan (prepared by Perumal Pedavoli Architects)

Site preparation will involve earthworks to provide for all new building platforms, site access, landscaped areas and stormwater drainage features.

The Site has a fall from the north-east down to the south-west and therefore the large floorplate of the proposed three-storey academic building and the northern sports courts will necessitate some earthworks to prepare the Site. The design of these facilities has taken into account the topography of the site, and in particular, the finished floor levels of the library, administration and learning building front Arcadia Street provide acceptable level change across the site while minimising the extent of earthworks proposed.

JK Geotechnics prepared a Geotechnical Investigation Report (**Appendix 6**) which establishes excavation conditions, footing requirements and ensures appropriate earthworks are undertaken to support the proposed structures. Generally, geotechnical investigations established the Site is composed of a shallow to moderate depth cover of fill over natural silty clays which grade into shale bedrock at variable depths ranging from 1.0m to 4.5m below existing ground surface levels.

The natural clay profile comprised silty clays, with ironstone gravel and shale inclusions and were assessed to be highly plastic and generally of very stiff to hard strength. Shale bedrock was encountered at depths between 0.6m below ground surface in the northern portion of the site to 4.5m below ground surface at the southern end of the site. The point load strength index laboratory test results correlated with the field strength assessments, showing the shale to have a medium to high strength shale.

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Environmental Investigation Services has carried out contamination investigations including a Preliminary Environmental Site Assessment (PSI) (**Appendix 7**) and a Phase 2 Contamination Assessment (DSI) with attached Remediation Action Plan (RAP) (**Appendix 8**).

The PSI identified that the Site was very unlikely to have been used for any potentially contaminating activities including those activities listed in Table 1 of the Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land (1998). Preliminary testing and observations of surface conditions indicated the presence of fill on the Site which was found to contain asbestos containing materials (ACM) and other contaminants above the site assessment criteria (SAC) which prompted the commission of the DSI and RAP.

The DSI comprised more extensive testing of the subject Site and found:

- An absence of visible fibre cement/ACM in the bulk samples screened for the preliminary Stage 2 investigation, an absence of asbestos in the laboratory samples analysed, and an absence of other indicators such as building and demolition waste in fill. Concluding that the potential for asbestos fibres and subsequent risk to human health is low. Some bonded ACM was found in materials on the surface during the PSI but the potential for asbestos fibres to be generated from bonded asbestos is relatively low provided the materials are managed appropriately;
- PAHs and TRHs (benzo(a)pyrene) were identified above human health-based SACs at TP103 at low levels. This is believed to be attributed to ash/slag and therefore not bioavailable or a high risk to human health; and that
- A RAP is required to reduce the risks to an acceptable level.

The remediation extent of the RAP includes the fill in the garden bed at the TP103 location (impacted by PAHs/benzo(a)pyrene) and the entire site for surficial ACM impacts. The following sequence of works is recommended for the implementation of this RAP:

- Remediation of the TP103 area;
- Demolition of the site structures;
- Remediation of any observed ACM at the surface; and
- Data gap investigation (to ensure no further risks are present after demolition of buildings).

Glenyss Laws Consulting Arborist has prepared an Arboricultural Impact Assessment (**Appendix 13**) which provides an assessment of all potentially impacted trees on the Site using the Useful Life Expectancy (ULE) rating methodology. The Assessment provides an appraisal of the likely impacts arising from the scope of works proposed, and sets out proposals to mitigate any impacts where possible.

The Arboricultural Impact Assessment summarises that a total of 25 trees will be removed as a result of the proposed development. The Landscape Plans identify the trees being retained/removed as shown at **Figure 16**.

4 Project Description

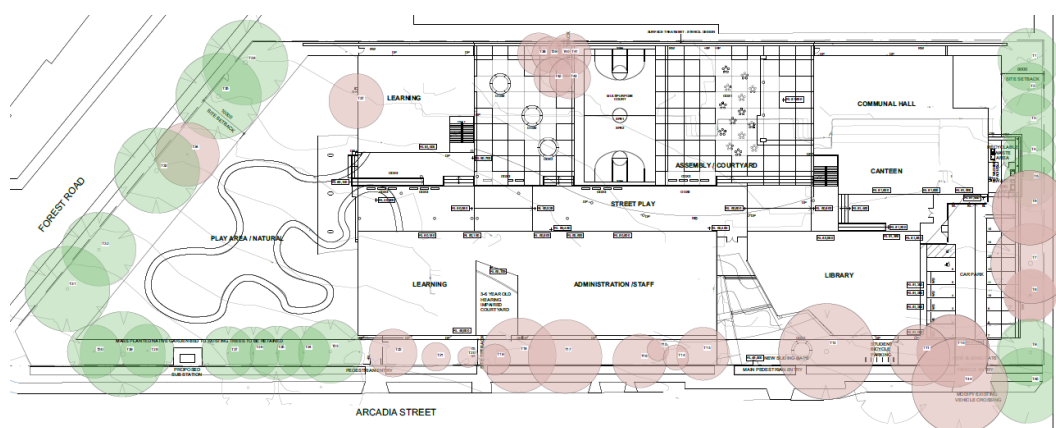


Figure 16 Extract of Landscape Site Plan – Trees Retained/Removed (Prepared by Lorna Harrison)

The project is predicated on the demolition of all buildings and therefore it is recognised that in order to meet desired project timeframes, the demolition of non-heritage buildings could take place detached to this DA under a separate planning pathway. The recommendations of the Statement of Heritage Impact (**Appendix 16**) would be considered before any demolition works were to proceed under a separate planning pathway.

4.3 Construction of New School Buildings

The proposed Penshurst Public School has been designed to provide accommodation for 1,012 students (an increase of 567 students from the existing 445 students) and 59 full time equivalent (FTE) staff (an increase of 28 FTE staff from the existing 31 FTE staff), plus up to 31 additional staff required by the school as needs arise (an increase of 13 additional staff from the existing allowance of up to 18 additional staff). In general terms, the project is required to provide a total of 47 teaching spaces to meet the forecast student demand.

The proposed development comprises the redevelopment of the Penshurst Public School to provide improved facilities designed to cater to the current and projected growth in the catchment area. It is proposed to construct a 3-storey building with ground floor and roof top open space areas. The structure will have a footprint measuring approximately 50m width by 130m length with the ground floor being rectangular in floorplate whilst the two upper floors are designed with a curvilinear layout.

In general terms, all core facilities (including administration/staff facilities, library, hall, assembly area etc.) are located on the ground floor with accessible and covered pathways connecting all facilities. Some HB units (classrooms) are also located on the ground floor level, and will generally cater for the younger age groups. The first and second floors of the building then comprise only learning spaces, as well as roof top play areas which are treated with a metal palisade fence along the eastern/northern sides of the parapet. The development will be fully air conditioned.

In regard to the topography of the site, with a fall of 3.8% the new building footprints were positioned and designed to respond to the slope of the site to achieve the most level access arrangements between facilities whilst minimising the extent of earthworks required to accommodate the buildings.

A prominent student entry has been located on the Arcadia Street frontage, providing a high degree of way-finding for students and parents to the student gate and adjacent administration facilities.

A car park will be reinstated in the same location as the existing car park, however in a new arrangement to accommodate the new building footprints. A net loss of one (1) car parking space will result from the proposed design, and access will change from separate crossovers to a single combined crossover (modified from existing). Waste storage areas for general

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waste and recycling is located adjacent to the car parking area, in close proximity to the canteen/kitchen facilities as per the existing arrangements.

4.3.1 Hearing Support Unit

Penshurst Public School comprises a Hearing Support Unit (HSU), which provides specialised teaching for deaf or hearing-challenged students aged 3-6 years. The format of the HSU is that they take part-time enrolments for students aged 3-4 years old (pre-school age) to provide an opportunity for them to adjust to the environment of a primary school. The HSU then provides support classes for kindergarten aged students to enable them to enter mainstream classes from Year 1 and above. The HSU caters for a total of nine (9) children with two (2) staff.

It is intended for the proposed development to continue the operation of the HSU, and the proposal incorporates HSU facilities within the new school building, including:

- Ground Floor: HSU room for pre-school aged students, with adjoining outdoor play area;
- First Floor: HSU room for primary school aged students within internal connectivity to HB spaces; and
- Second Floor: HSU room for primary school aged students within internal connectivity to HB spaces.

4.3.2 Design Analysis

Perumal Pedavoli Architects has prepared a Design Analysis Report (**Appendix 11**) which provides an analysis of the Site context, identifies the opportunities and constraints of the Site within an Architectural Design Statement, and details urban design strategies for the Site which support the proposed built form. The Design Analysis Report also provides details of the materials and finishes, landscape treatments, photomontages and other information that provides details of the design analysis which has informed the final design.

Key design features of the proposal include:

- Distinct student entryway: The new entry comprises a three (3) storey angular void in the built form using bold colours which provides a sheltered entry zone to the school and a visual emphasis at the entry point to enable intuitive wayfinding (see photomontage at **Figure 17**). A digital display will be mounted on the wall to display school related information to students and parents, such as announcements, art works or sports carnival arrangements.
- Contrasting Built Form: The proposal incorporates a visual juxtaposition of the rectilinear built form at ground level with the curvilinear layout and external façade treatments of the first and second floors above with roof-top metal palisade parapet fence. The sinuous upper levels are designed to appear to float above the ground floor buildings, with setback distances varying along the frontage to Arcadia Street. Additional articulation through building treatments and the use of varying materials and finishes introduces a visual diversity which presents a high quality design that achieves a landscaped setting and a definitive character within the Arcadia Street streetscape (see aerial photomontage at **Figure 18**).

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Figure 17 Extract of Photomontage of Proposal (Prepared by Perumal Pedavoli)



Figure 18 Extract of Aerial Photomontage of Proposal (Prepared by Perumal Pedavoli Architects)

4.3.3 Signage

The proposed development will involve the erection of two (2) business identification signs, both being wall-mounted signs with the school name “Penshurst Public School”. The first sign will be located at ground floor level on the façade presenting to Arcadia Street, while the second sign will be located at the second-floor level on the façade presenting to Forest Road, as shown on the Architectural Plans prepared by Perumal Pedavoli Architects (**Appendix 10**).

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4.4 Operation of the School – Staff and Students and Hours of Operation

The proposed development will result in a net gain of 27 classrooms, which will enable the school to accommodate up to 567 additional students and 31 additional full time equivalent (FTE) staff, providing a total of approximately 1,012 students and 61 FTE staff.

This development application does not seek any changes to the current hours of operation of the school.

This application considers the potential impacts arising from potential future out-of-hours use of the new school facilities, in particular the use of the multi-purpose hall and associated facilities for school or community events, such as presentation nights, drama or music recitals, or other gatherings of the public (whether one-off or periodic events). Such uses will occur after the core school hours and possibly up to 10pm. The assessment of potential impacts of these uses is included within the body of this Report.

4.5 Landscaping

The proposal includes a range of landscaping works as detailed in the Landscape Plans prepared by Lorna Harrison Landscape Architects (**Appendix 12**) which can be summarised as follows:

- Ground Floor Landscaping
 - 82 new trees including;
 - Deciduous tree planting along Arcadia Street to replace removed trees;
 - Shade tree planting in the open turfed play area, comprising a “paperbark forest”;
 - Deciduous tree planting in paved courtyard;
 - HSU courtyard with artificial turf, raised timber platform and curved bench seating along with interactive play equipment;
 - Street play area with paved and coloured concrete streetscape;
 - Curved bench seating in the front setback near main entrance and adjacent to student bicycle parking;
 - Concrete paving in a chequered flag paving pattern, which provides handball courts; and
 - A total of 3,014m² of deep soil planting area provided at ground floor level.
- First Floor Landscaping
 - Raised timber vegetable gardens on concrete paving.
- Second Floor (Roof) Landscaping
 - Coloured concrete multipurpose playing court with painted linework and mesh surrounds;
 - Spectator seating (adjacent to playing court) under shade structure;
 - Softfall running track meandering around perimeter; and
 - Raised timber decks at different levels to be used as performance space/ imaginative play. This area will be integrated with Shade structures and seating.

An extract of the proposed Landscaping Plan is provided at **Figure 19**.

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Figure 19 Extract of Proposed Landscaping Plan (Prepared by Lorna Harrison Landscape Architecture)

4.6 Vehicular Access, Car Parking and Waste Servicing

In regard to vehicular access, the proposal will retain the existing vehicle crossing from Arcadia Street. In regard to parking, the proposal will result in a loss of one (1) car parking space, providing a total of 15 car parking spaces. In regard to waste servicing, the proposal will not alter the existing waste servicing arrangements whereby a private contractor will reverse into the car park and empty bins while on the school site and then leave in a forward direction back onto Arcadia Street (refer **Appendix 28**).

The Traffic Assessment prepared by TTM (**Appendix 17**) outlines that an extension to the pick-up and drop-off facilities on Arcadia Street is required, and recommends that the unrestricted on-street parking area on the frontage of the site on Arcadia Street be redesigned as a “Kiss and Ride Zone”, accommodating the demand from the future development. The amendments proposed by TTM would provide up to 17 kiss and ride space, as shown at **Figure 20**.

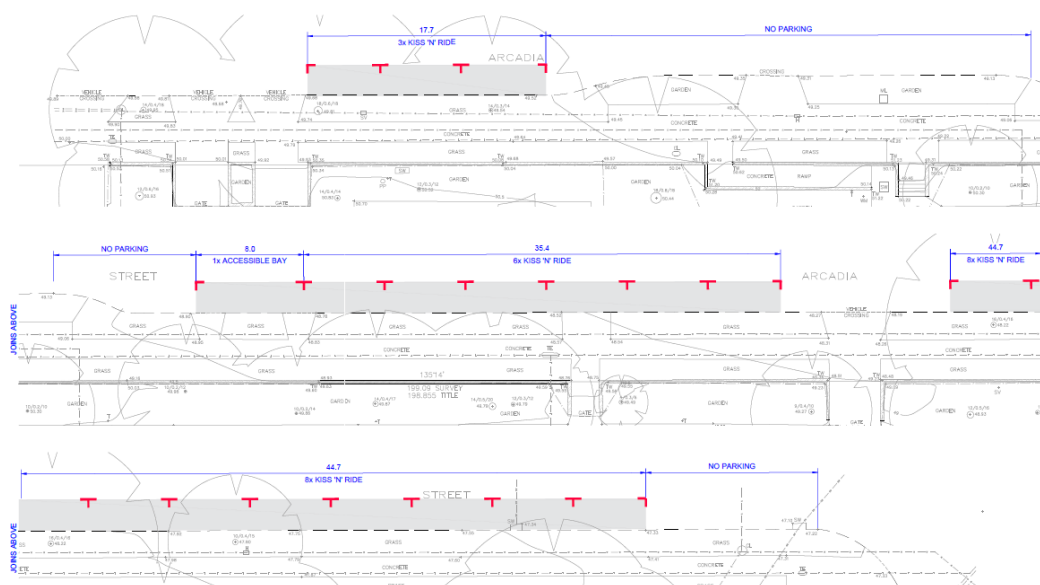


Figure 20 Extract of Kerbside Parking Allocation Plan for Arcadia Street (Prepared by TTM)

4.7 Stormwater Management

Woolacotts has prepared a Stormwater Management Report (incorporating Integrated Water Management) (**Appendix 14**) and associated Stormwater Management Plan (**Appendix 15**).

The existing stormwater drainage system includes a pipe system from the carpark and buildings in the north-east corner which drains directly to the kerb and gutter in Arcadia Street.

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Other buildings on site drain to the south-east corner and then to the Council pipe network in Arcadia Street, approximately 10m from the intersection with Forest Road.

The Hurstville DCP contains controls in relation to stormwater management. These controls do not specifically relate to educational establishments, but Georges River Councils' development engineer has advised that the controls in relation to 'Commercial and Retail' development should be addressed. The DCP does not specifically detail permitted site discharge (PSD) requirements for schools. However, for mixed use and commercial developments, the discharge from the site is not to exceed the discharge from the existing 5 year ARI storm event and pipe systems within developments are required to be designed for a 20-year ARI storm event.

The DCP requires that onsite stormwater detention (OSD) is provided as the site is within the Wolli Creek catchment. Appendix 2 of the DCP details that for Commercial & Retail development the OSD system is to be designed to restrict the peak flow from the developed site in a 100-year average recurrence interval (ARI) storm event back to the peak flow from existing site in a 5 year ARI storm event.

The peak flow from the existing site in a 5 year ARI storm event was calculated as 433 L/s and this flow was adopted as the permitted site discharge (PSD). To reduce the flow from a 100year ARI storm back to the PSD, a detention volume of 240m³ is required. It was not feasible to provide this volume in an above ground basin due to Site constraints and the incompatibility of an open basin with the use of the Site as a school. Instead it is proposed to provide the required volume in a tank located beneath a classroom block, with access into the tank available from outside the building.

A piped drainage system will be provided for the site with the majority of the site draining to the detention tank. The pipe network draining to the tank will be sized for a 100 year ARI storm event as required by Council. This will ensure that all stormwater from the design storm reaches the tank, to allow the tank to restrict flows as designed. Pipes not draining to the detention tank will be sized for the 20year ARI storm event, in accordance with Council's policy.

Currently the site has a number of connections to the street drainage system. It is proposed that the existing connections to the kerb and gutter are removed and a new connection provided to the Council pit in Arcadia Street, located approximately 30m from the corner of Forest Road. The majority of the site will drain to this pit. The existing connection to the pit immediately adjacent to the corner will be maintained and will drain the south-east corner of the site, which is unable to drain to the main system. Details of the location of both pits and the overall proposed site drainage system are shown on Stormwater Management Plan (**Appendix 15**).

4.7.1 Integrated Water Management

Woolacotts detail the following Integrated Water Management measures provided to minimise water usage:

- 50kL rainwater tank to collect stormwater runoff from roofs and the majority of hard paved areas, screened by a gross pollutant trap;
- Collected rainwater will be used to flush toilets and provide irrigation water for nearby landscaped areas;
- Water efficient fixtures and fittings in accordance with the Australian Government's Water Efficiency Labelling Scheme (WELS);
- Student basins will be push button operated and have cold water only, unless required otherwise under the Educational Facilities Standards and Guidelines (EFSG);
- All toilets will be dual flush; and

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- Selected plants within landscaped areas will have low water requirements.

4.7.2 Erosion and Sediment Control Measures

During the construction phase of works, erosion and sediment controls measures will be provided in accordance with the Blue Book, including silt fences, sediment basins and construction exists for vehicles. Woolacotts has prepared an Erosion and Sediment Control Plan to detail these measures (**Appendix 15**).

4.8 Structural Adequacy

Woolacotts has prepared a Structural Design Statement (**Appendix 22**) which confirms that the proposed Penshurst Public School will be designed to comply with relevant provisions of the BCA and relevant Australian Standards. The following description of structural works has been provided by Woolacotts:

The structure for the new school buildings at Penshurst Public school will consist of post tension beams and slabs supported by reinforced shear concrete walls and columns. The columns will be arranged on a regular grid of approximately 9m by 9m. Reinforced concrete shear walls will be placed around the lift and stair shafts. These elements will be used to resist wind and seismic loads.

The typical floor structure will consist of 450mm deep by 1800mm wide band beams spanning in an east-west direction. The band beams support a one way slab spanning in the north-south direction. The slab depth will be typically 180mm deep.

The roof will be predominately a concrete slab to allow for roof top play. The structure of this slab is similar to the typical floors. There will also be some smaller areas of metal clad roofs supported on steel rafters. These roofs will support solar panels.

A new 3.5 to 4.5m high retaining wall will be required near the boundary with the neighbouring primary school. The structure for the retaining wall will consist of bored piles at regular centres with infill shotcrete panels between the piles.

4.9 Waste Management

A Preliminary Waste Management Plan has been prepared by Root Partnerships (**Appendix 28**), which provides details of waste management measures to be adopted during the construction and operational phases of the proposed development. Operational waste management measures are detailed as well as the requirement for waste storage volumes on the site. Further, the Waste Management Plan confirms that the existing waste servicing arrangements will be maintained for the future arrangements, being the servicing of the Site by a private contractor by reversing onto the site from Arcadia Street, and departing the Site in a forward direction. The successful contractor will oversee the preparation and implementation of an active Waste Management Plan prior to the commencement of works.

4.10 Servicing

4.10.1 Hydraulic Services

Woolacotts has prepared a preliminary engineering assessment of the required hydraulic services in their Hydraulic Services Brief (**Appendix 19**), including details of cold water services, hot water services, gas services, sewer/waste water services, trade waste drainage, stormwater drainage, fire hydrant services, and fire hose reel services.

4.10.2 Electrical and Telecommunication Services

JHA has prepared a Services and Infrastructure Brief (**Appendix 20**) detailing the utility services (electrical and communications) required, including existing arrangements and requirements to be incorporated into the design of the proposed new Penshurst Public School.

The existing electrical infrastructure to the site has been deemed insufficient to provide the required calculated electrical demand to the public school. To provide the new school with the required electrical capacity needed for final functioning and any future upgrade considerations,

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a new pad-mount substation will be required for installation on site. Details on the location of the new substation are provided in the Architectural Plans (**Appendix 10**).

An upgrade to the telecommunications is also proposed to increase the number of lines running to the school from one (1) to three (3).

4.10.3 Mechanical Services

JHA has prepared a Mechanical Services Brief (**Appendix 21**), to detail the proposed mechanical systems including but not limited to:

- Natural Ventilation for Passive Cooling;
- Mechanical ventilation where cross ventilation or natural ventilation is not possible;
- Mechanical ventilation system to Toilets/Cleaner room/Store room;
- Air conditioning to all habitable spaces, and service rooms which require active cooling; and
- Heating to all habitable spaces.

4.11 Ecologically Sustainable Development

JHA has prepared an Ecologically Sustainable Development (ESD) Report (**Appendix 26**) which identifies the ESD objectives of the proposed development, provides an assessment of the proposal against the ESD principles set out under the EP&A Regulations, and details all sustainability initiatives, including:

- Energy conservation, comprising:
 - Heat loss/gain modelling and policy;
 - Insulation;
 - Natural light;
 - Sun shading;
 - Ventilation, including natural, cross and mechanical ventilation;
 - Air cooling and heating systems;
 - Period bell light switching system;
 - Electrical lighting, including the use of motion sensors and LED lighting;
 - Appliances and equipment subject to energy efficiency policy;
 - Electricity meters; and
 - Renewable energy generation;
- Water conservation, comprising:
 - Use of products with minimum Water Efficiency Labelling and Standards Scheme (WELS) star ratings, or alternative Smart Approved WaterMark rated products;
 - Taps with timed flows;
 - Toilets with dual flushing cisterns and use of rainwater in the flushing of toilets;
 - Manual flushing or waterless urinals;
 - Rainwater harvesting and reuse; and
 - Closed loop sprinkler system;

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- Other initiatives, comprising:
 - Requirement for all contractors to prepare site-specific Environmental Management Plans (EMPs);
 - Use of recycled timber, engineered products or timber from plantations or sustainably managed regrowth forests; and
 - Design and maintenance of buildings to avoid use of chemicals for termite and other pest controls.

The proposal has been assessed against the Green Star – Education v1 Design & As Built 4 Star rating system, which is considered to be best practice within the Australian building industry, and it achieved the required 60 weighted confirmed points for a Five Star Rating.

4.12 Building Code of Australia

Group DLA has prepared a Building Code of Australia (BCA) Capability Statement (**Appendix 23**) which confirms that the works will be able to achieve compliance with the provisions of the BCA through compliance with deemed-to-satisfy provisions and where necessary, through the documentation of alternative solutions. Full certification of BCA compliance will be provided prior to the commencement of works for the Section 109R certificate and Crown Building Certificate stage.

5 Consultation

5.1 General

In accordance with the SEARs issued by the Department of Planning and Environment, the project team has carried out consultation with the following stakeholders:

- Transport for NSW;
- NSW Roads and Maritime Services;
- Georges River Council;
- Utility Providers;
- New Learning Environments (Education Specialist);
- Penshurst Public School Project Reference Group (PRG);
- Relevant Community Groups.

Details of the consultation carried out by the project team are set out in the following sections.

5.2 Transport for NSW and NSW Roads and Maritime Services

Transport for NSW (TfNSW) issued comments for inclusion in the SEARs for the proposed development. Following issuing of the SEARs, the project team consulted with the Senior Transport Planner at TfNSW to discuss matters relating to the Penshurst Public School redevelopment as well as the operation of the proposed 'pop-up school' at Peakhurst West Public School.

A meeting was held on 15 November 2017 with the project team and officers from TfNSW, NSW Roads and Maritime Services (RMS) and Georges River Council Senior Traffic Engineer. Discussion related to the scope of works being proposed, the provision of car parking, arrangements for an increased "Kiss and Drop Zone" on Arcadia Street and arrangements for construction traffic management.

There were no objections raised by any parties to the proposal, and all matters raised which required further action/information/assessment have been addressed in the body of the documentation supporting this DA. A copy of the meeting minutes is provided at **Appendix 4**.

5.3 Georges River Council

On 23 June 2017, a meeting was held with representatives of the Director of Environment and Planning and Manager of Strategic Planning at Georges River Council, together with members of the project team and the NSW Department of Education (see **Appendix 4** for meeting minutes). Council's Heritage Advisor provided the following recommendations following review of the preliminary SoHI:

Based on a review of the documents provided, there is no support for the demolition of the subject heritage item (including the early two-storey addition) from a heritage point of view. To gain potential support the following additional information is required:

- Credible justification from a community benefit point of view by the Education Department as to why the heritage item (and early addition) cannot form part of the redevelopment of the site.*
- Further comparable analysis in the SoHI to:*
 - *confirm (or otherwise) that Peakhurst Public School (or any other Inter-War P.S. in the Georges River LGA) displays equal or superior Inter-War Free Classical stylistic influence to the subject heritage item, and;*
 - *that there are other institutional buildings in the Georges River LGA with equal or superior Inter-War Free Classical stylistic influence to the subject heritage item.*

5 Consultation

On 5 September 2017, an updated revision of the preliminary SOHI prepared by Perumal Murphy Alessi in response to comments received 23 June 2017 (and containing a detailed comparative analysis) was provided to Council and the following comments were provided by Council's Heritage Advisor on 20 September 2017:

"The preliminary draft Statement of Heritage Impact (SoHI) dated August 2017 for Penshurst Public School has included comparative analysis of contemporary public schools in the Georges River Council area and greater Sydney. A survey of schools designed by the government architect Richard Wells, who designed Penshurst Public School, is also useful.

Three options for redevelopment of the site are noted: retention of the heritage item; partial retention/alteration of the heritage item; and demolition of the heritage item. Based on the information provided and in the knowledge the preliminary draft SoHI is a work-in-progress report, comment on the three options follows:

- **Retention of the heritage item:** *Given its status as an item listed in Schedule 5 of Hurstville LEP 2012, the place should ideally be preserved. There would be opportunity to remove non-significant fabric and potentially adapt the place to suit stakeholder constraints without unduly compromising heritage values. There would also be opportunity to design sympathetic additions to the building without impacting its aesthetic value and contribution to the streetscape, which it should be noted is currently compromised/obscured by mature trees in the front garden.*
- **Partial retention/alteration:** *It would appear the original 1925 building and addition completed a few years later, were conceived as a single building. For that reason the portion of the building fronting Arcadia Street should be preserved. There potentially would be opportunity for some demolition of original fabric, and construction of an appropriately scaled addition to the rear of the place. This would have some adverse impact, but in consideration of more unsympathetic options i.e. total demolition, then the above could potentially be supported.*
- **Demolition of the heritage item:** *The least desirable option from a heritage point of view, which would require credible justification from stakeholders for support. Based on the comparable analysis carried out, there would appear to be other public schools in the Georges River LGA which have comparable heritage values to the subject heritage item with respect to historic, associative and representative significance. None of the schools surveyed would be considered to be rare. With respect to aesthetic (streetscape) and architectural values, there are other equal if not superior examples in the LGA, in particular Hurstville Public School which displays superior stylistic influence and streetscape contribution. For this option to be supported, sound argument for not implementing the other options would need to be included in the SoHI."*

The assessment set out by Perumal Murphy Alessi in the SoHI which accompanies this DA (**Appendix 16**) has responded in detail to the comments provided by George's River Council's Heritage Advisor. Further discussion regarding heritage significance is set out at **Section 6.6.2**.

In addition to consultation with Council regarding heritage matters, the project team has also consulted with Council's Senior Traffic Engineer and it is our understanding that Council provided the following advice:

- There have not been any major traffic issues associated with the current school, compared to others in the area.
- The school has a requirement for access by special needs children accessing the site via buses and parent's cars. Council tried to have signage installed to accommodate this on street but were unsuccessful due to RMS opposition.
- Council would prefer that an on-site drop off and pick up facility is provided for these special needs students with on street parking retained.

5.4 Utility Providers

JHA has consulted with Ausgrid and Telstra as part of the preliminary design process, in order to ensure a complete understanding of the project specific requirements was obtained to

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inform the proposed augmentation of infrastructure, incoming lead-in services capacity and proposed point of entry locations of services from the boundary. Details of the outcomes of these consultations are detailed in the Infrastructure and Services Brief (**Appendix 20**).

5.5 New Learning Environments

NLE is a specialist consultancy which provides advice on the use of spaces as a strategic tool for work, school and other environments. The Project Team engaged the services of NLE to workshop the visions of the Project Reference Groups (PRGs) (see **Section 5.6**) and establish the framework for the layout of the public school development.

This included the arrangement, function and structure of learning/teaching spaces and staff spaces, and introduced contemporary design features which respond directly to the future educational requirements of each PRG - for example the inclusion of 'learning commons' and 'maker spaces', being part of the Future Focussed Learning objectives.

NLE facilitated three (3) workshops in July, August and November 2017 with key outcomes being:

- Establishing the school's educational model;
- Determining desired and required facilities;
- Consolidating key design considerations (e.g. Outdoor green space, play areas, hearing impaired student integration); and
- Furniture and functional room layouts.

5.6 Project Reference Groups

A PRG was formed for the Penshurst Public School project, which comprised the following:

Table 9 Project Reference Group (PRG)

Company	Role	Representative
NSW Department of Education	Director of Education	Anne Ross
NSW Department of Education	Asset Maintenance	Glenn Downie
NSW Department of Education	Program Manager	Jane Hagan
NSW Department of Education	Principal	Jeff Lie
Penshurst Public School - Parent & Citizens Association (P&C)	President	Kylie Jennings
Root Partnerships	Project Manager	Alex Jellie
Root Partnerships	Project Manager	Fiona Larkin
Perumal Pedavoli Architects	Architect	Katherine Longhurst
Perumal Pedavoli Architects	Architect	Carmit Harnik

Each PRG has been consulted with extensively throughout the design development process, including initial design workshops with NLE and fortnightly meetings which provide the PRG with opportunity to have input on the design of the school. The PRG vision is closely tied to the final proposal now submitted for assessment and determination.

Meetings with each PRG will be held monthly after schematic design is completed, to ensure the project is carried out in accordance with the initial visions and objectives of each PRG.

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5.7 Community Groups

A detailed Stakeholder Management Plan was prepared and implemented by Root Partnerships (**Appendix 18**) which identified the key stakeholders as school staff, parent groups (P&C), Georges River Council, the Department of Education/Schools Infrastructure NSW, the PRG and relevant governance groups (RMS, OEH, TfNSW); and the stakeholders associated with the temporary site at Peakhurst West PS (given that PPS is relocated during its construction works).

Root Partnerships carried out multiple community engagement activities through a number of communication strategies to ensure a broad reading of community interest was recorded and fed into the design process. Engagement strategies utilised by Root Projects include:

- Online communication (i.e. via the School Infrastructure NSW project website providing easy access to updates and related information);
- Online survey (Learning Environment Analysis Tool LEAT)
- Printed communication (i.e. community notices, school newsletter and local paper);
- Information booths (i.e. both community and parent information booths);
- Facilitated workshops (i.e. on-site community, teacher workshops comprising Q&A sessions, information/display posts and opportunities to provide feedback);
- Targeted meetings to maximise stakeholder engagement;
- Authority and regulatory consultation; and
- Visioning exercises (i.e. school project with students of the school).

A total of eleven (11) community information booths have been held by Root Partnerships between the months of July 2017 and January 2018. It is anticipated that these will continue throughout 2018 to provide information on the project and gain further feedback from the community.

To date, feedback from a total of 62 attendees/community members has been received from the information booths as well as 19 community surveys being completed online and two (2) additional surveys submitted by hand. No objections were lodged to the proposal by members of the community, and only one (1) respondent raised queries in regard to the heritage building.

Feedback received through the above communication strategies has been taken into consideration in the design of the proposal and the preparation of this EIS.

Feedback received from public consultation has been taken into consideration in the preparation of this EIS, including steps to address key concerns, as summarised in **Table 10**.

Table 10 Resolution of Key Concerns from Consultation

Key Concern	Resolution	References
How will the Kiss & Drop and traffic congestion at Penshurst Public School be managed?	TTM has reviewed the existing traffic arrangements and has proposed modifications to the Kiss & Drop arrangements on Arcadia Street to cater for the increased demand.	Appendix 17, and Section 6.6.4
Will air conditioning be provided?	Yes. Air conditioning will be provided throughout the new school, save for the multi-purpose hall which will be heated only.	Appendix 21
Need for safety and security across whole site.	The proposal includes new fencing to restrict public access to the main entry only, and a CPTED assessment has been carried out to assess the suitability of the proposal against safety and security objectives,	Appendix 10, and Section 6.6.6.2

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Table 10 Resolution of Key Concerns from Consultation

Key Concern	Resolution	References
Car parking for teachers	Due to the limited site area associated with the provision of basement car parking and the Department of Education's objectives to promote sustainable transport initiatives, the proposal has not incorporated additional car parking for teachers. The parking outcomes of the proposal have been assessed by TTM and are found to be acceptable, subject to the recommendations provided in the Traffic Report.	Appendix 17, and Section 6.6.4
Concern for consideration of heritage building and other existing school buildings.	The development design and alternatives analysis set out at Section 1.3 outlines the challenges and opportunities considered in the preparation of options for the site, including scenarios where all buildings are retained, or where the heritage building is retained in isolation. These outcomes were not supportable and as a result all buildings at the Site must be demolished to enable a high-quality built form which meets the design objectives and learning space requirements, providing a significant public benefit to social infrastructure of the Penshurst locality.	Section 1.3
Will the community have any use of the School?	The school may make the multi-purpose hall available to the community in the future. Assessment of potential impacts associated with the community use of the hall is included in the body of this Report.	Section 6.4.2
Need for adequate green play space.	The EFSG establishes guidelines for school developments, including a philosophy which endeavours to achieve a ratio of 10m² of place space per student. The development design and alternatives analysis set out at Section 1.3 highlighted the importance of adequate place space to the outcomes achieved by this project. At concept stage, selected concept (Option 3) was able to achieve the highest of all ratios for play space, (around 9.6m²/student). This ratio has reduced slightly through the design development process now that more detail is incorporated, however the proposal (which achieves a ratio of 8.94m²/student) is considered to be the highest level that can be obtained for the site while achieving a balance with all other project design objectives	Appendix 10 Appendix 11, and Section 1.3
Details of relocation of students and staff to Peakhurst West Public School.	The arrangements for the relocation of the students and staff of Penshurst Public School to the alternative location at Peakhurst West Public School for the interim construction period are not included as part of this application, and are subject to separate planning pathways. Notwithstanding, the arrangements proposed for the relocation of students and staff are discussed (as required by the SEARs) in the body of this report.	Section 6.6.6.1

6 Environmental Assessment

6.1 General

This section provides an environmental assessment of the proposed development in respect of relevant State policies and matters for consideration under the EP&A Act.

6.2 Environmental Planning and Assessment Act, 1979

6.2.1 Section 1.3 (formerly s.5) - Objects of the EP&A Act

Section 1.3 of the EP&A Act sets out the Objects of the Act and **Table 11** provides an assessment of the proposed development's consistency with these Objects.

Table 11 Proposed Development's Consistency with the Objects of the EP&A Act		
Object of the EP&A Act	Assessment	Consistent
(a) <i>To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,</i>	The proposal will make use of urban zoned land for an educational establishment to service the growing residential population in the locality, will not result in significant adverse water impacts and will improve the social and economic welfare of the community.	Yes
(b) <i>To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,</i>	The proposal includes various measures aimed at minimising energy and water consumption and is considered to be consistent with the objectives of ecologically sustainable development (see ESD Report at Appendix 26).	
(c) <i>To promote the orderly and economic use and development of land,</i>	The Site is zoned for urban development and the proposal will result in the orderly and economic development of the land.	Yes
(d) <i>To promote the delivery and maintenance of affordable housing,</i>	This object is not applicable to the proposal.	N/A
(e) <i>To protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,</i>	The proposal has been assessed has been acceptable regarding its potential impacts on native animals and plants, including threatened species, populations and ecological communities and their habitats (see Section 6.6.5 and Section 7.3 of this Report).	Yes
(f) <i>To promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),</i>	The proposal has been informed by detailed and involved input regarding European heritage (Appendix 16 and Section 6.6.2) and Aboriginal heritage (Appendix 5 and Section 7.3.2).	Yes
(g) <i>To promote good design and amenity of the built environment,</i>	A Design Analysis Report (Appendix 11) has been provided which addresses good design and amenity of the built environment, as set out in Section 6.6.1 .	Yes
(h) <i>To promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,</i>	The building has been designed in accordance with the Building Code of Australia (BCA) (see Appendix 23), Australian Standards and the Disability Discrimination Act (DDA) (see Appendix 24).	Yes
(i) <i>To promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State, and</i>	The proposed development has been assessed against the various Commonwealth and State statutes and local policies and has involved consultation with relevant levels of government.	Yes
(j) <i>To provide increased opportunity for community participation in environmental planning and assessment.</i>	The proponent has actively engaged with relevant government agencies and further consultation will be undertaken during the statutory assessment process.	Yes

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6.2.2 Section 1.7 (formerly s.5AA) – Application of Part 7 of Biodiversity Conservation Act 2016 and Part 7A of Fisheries Management Act 1994

Section 1.7 states that this Act has effect subject to the provisions of Part 7 of the Biodiversity Conservation Act 2016 (we note that the Fisheries Management Act does not apply to the site) that relate to the operation of this Act in connection with the terrestrial and aquatic environment.

The Biodiversity Conservation Act 2016 is addressed in **Section 6.3** of this EIS.

6.2.3 Section 4.33 (formerly s.89) – Determination of Crown Development Applications

The proposed development is submitted by the NSW Department of Education and so is classified as a *Crown development application* under Section 4.32 (formerly s.88). Section 4.33 of the EP&A Act sets out matters to be considered by consent authorities in the determining or imposition of a condition upon a Crown development application.

The NSW Department of Education has provided a letter of commentary prepared by Hunt & Hunt Lawyers (**Appendix 29**) in relation to Part 4 Division 4 of the EP&A Act, and the determination of Crown development applications. This letter is provided in support of this SSD DA to make clear the relevant considerations of the Minister for Planning and Environment in the determination of the Crown development application.

6.3 Biodiversity Conservation Act 2016

Part 7 of the Biodiversity Conservation Act 2016 (BC Act) sets out provisions relevant to biodiversity assessment and approvals under the EP&A Act. Specifically, Clause 7.9 applies to an application for development consent under Part 4 of the EP&A Act for SSD. This includes the proposed development.

Clause 7.9(2) and (3) set out the following requirements:

(2) Any such application is to be accompanied by a biodiversity development assessment report unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.

(3) The environmental impact statement that accompanies any such application is to include the biodiversity assessment required by the environmental assessment requirements of the Planning Agency Head under the Environmental Planning and Assessment Act 1979.

DPE has confirmed that for SSD projects where the SEARs had been issued prior to the commencement of the BC Act (25 August 2017), the SEARs would not be updated to require the BC Act to be addressed as part of those requirements. As the SEARs for Penshurst Public School were first issued on 19 April 2017, DPE has not amended them to include reference to the BC Act and therefore this application has been prepared on the basis that the BC Act was not in force.

6.4 Planning Controls

The following subsections assess the proposal against the relevant provisions of applicable Environmental Planning Instruments (EPIs), Draft EPIs, Development Control Plans (DCPs), Planning Agreements and matters prescribed by the Regulation in accordance with Section 4.15(1)(a) (formerly s.79C) of the EP&A Act, and as required by the SEARs.

6.4.1 State Environmental Planning Policy (State and Regional Development) 2011

Clause 15 of Schedule 1 of the SRD SEPP identifies development for an educational establishment that has a CIV of more than \$20 million as SSD.

WT Partnerships has prepared a Capital Investment Value Report which confirms that the CIV of the proposed development will be greater than \$20 million. For confidentiality purposes, the CIV Report will be submitted to DPE separate to the DA submission.

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Clause 11 of the SRD SEPP outlines that DCPs (whether made before or after the commencement of the SEPP) do not apply to SSD.

6.4.2 State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017

The proposal incorporates a continuation of the Hearing Support Unit (HSU), which includes a program for up to nine (9) pre-school students aged 3-6 (with two (2) staff) to attend the school to begin adjustment to a mainstream primary school environment. This component of the proposal could be defined, in part, as a *centre-based child care* as an ancillary function of an *educational establishment*. Therefore the provisions of Part 3 of the Education SEPP may apply to the proposal and are assessed below.

Part 3 of the Education SEPP sets out the provisions that apply to early childhood care facilities, and switches off some local development controls where these are inconsistent with the National Regulations and consolidates standards and other controls into the Child Care Planning Guideline.

The HSU component of the proposal is defined as a centre-based child care as under the Education SEPP as it is proposed to provide long day care within the dedicated HSU facilities on the ground floor level of the proposal (shown outlined in red at **Figure 21**).

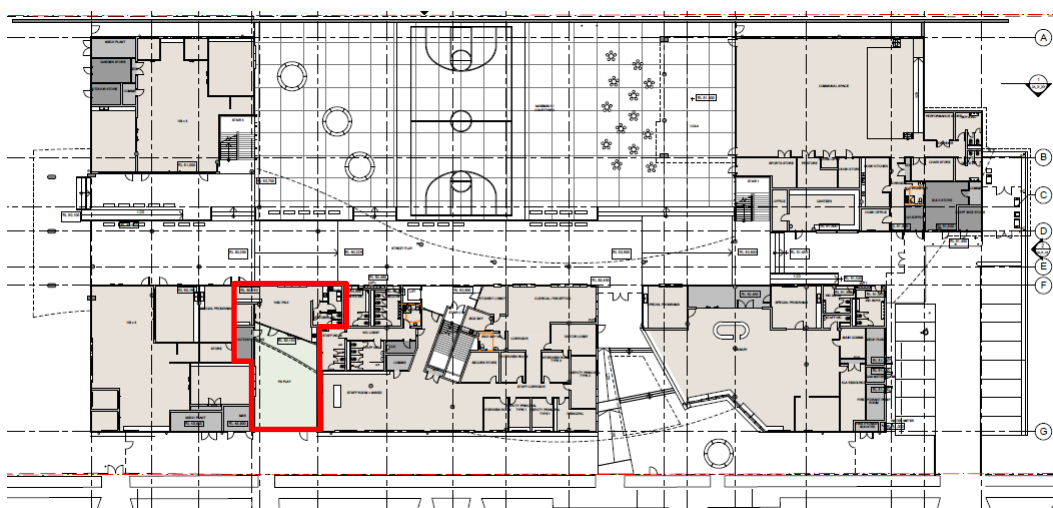


Figure 21 Extract of Ground Floor Plan indicating location of HSU facilities

An assessment of the provisions set out under Part 3 of the Education SEPP is provided at **Table 12**.

Table 12 Assessment against Part 3 of the Education SEPP		
Control	Requirement	Assessment/ Compliance (Yes/No)
Clause 22 - Centre-based childcare facility— concurrence of Regulatory Authority required for certain development	The concurrence of the Secretary of the Department Education is required if: (a) the floor area of the building or place does not comply with clause 107 (indoor unencumbered space requirements – minimum 3.25m² per child) of the Education and Care Services National Regulations, or (b) the outdoor space requirements for the building or place do not comply with clause 108 (outdoor unencumbered space requirements – minimum 7m² per child) of those Regulations	Yes 3.25m² unencumbered indoor space provided per child; and 7m² unencumbered outdoor space per child.

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Table 12 Assessment against Part 3 of the Education SEPP

Control	Requirement	Assessment/ Compliance (Yes/No)
Clause 23 Centre-based childcare—matters for consideration by consent authorities	The consent authority must take into consideration any applicable provisions of the Child Care Planning Guideline in relation to the proposed development.	Yes An assessment of the Childcare Planning Guideline has been conducted and a summary is provided below.
Clause 25 Centre-based childcare—non-discretionary development standards	(a) location—the development may be located at any distance from an existing or proposed early childhood education and care facility, (b) indoor or outdoor space – complies with the National Regulations (c) site area and site dimensions—the development may be located on a site of any size and have any length of street frontage or any allotment depth (d) colour of building materials or shade structures—the development may be of any colour or colour scheme unless it is a heritage item or in a heritage conservation area,	Yes The object of this clause is to prevent consent authorities from requiring more onerous standards for those matters identified.
Clause 26 - Centre-based childcare - development control plans	The following provisions in any DCP (including by reference to ages, age ratios, groupings, numbers or the like, of children) do not apply to proposed centre-based childcare developments: a) operational or management plans or arrangements; b) demonstrated need or demand for childcare services; c) proximity of facility to other early childhood education and care facilities; d) any matter relating to development for the purpose of a centre-based child care facility contained in: i) Part 2 of the Child Care Planning Guideline, or ii) Part 3 or Part 4 of that Guideline (other than those concerning building height, side and rear setbacks or car parking rates)	Chapter 5.3 of Hurstville DCP No. 1 relates to Child Care Centres, and contains controls which will no longer apply to the proposed development, including • outdoor play space requirements, including the location and style of outdoor play areas; • Fencing and gates; • a maximum of 40/60 children in a centre in an R2 or R3 residential zone. These provisions are discussed further at Section 6.5.3.

Clause 23 of the Education SEPP requires the consent authority to take into consideration any applicable provisions of the Child Care Planning Guideline in relation to the proposed development. It is noted that the proposed development is not a conventional centre-based child care development, but rather comprises a continuation of a small ancillary component for specialised services for hearing impaired students as a part of the primary use of the development as an educational establishment.

In this regard, the majority of the matters listed for consideration in the Child Care Planning Guideline are not relevant to the proposed development. Notwithstanding, the following comments are provided in support of the proposal:

- Part 1 of the Child Care Planning Guideline relates to site selection and location. These provisions are largely irrelevant as the HSU component of the proposed development is a minor ancillary component to the overall proposal and has been operating from this Site for decades. The proposal is simply a continuation of the existing uses at the site;

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- Part 2 of the Guideline relates to local character, streetscape and the public domain. The HSU facilities (as shown in **Figure 21**) are integrated within the layout of the new primary school by design, and therefore will be hardly indistinguishable from remainder of the proposal. The impact of the HSU component of the proposal on the local character, streetscape and public domain is considered negligible;
- Part 3 of the Guideline relates to building orientation, envelope and design. The building and associated HSU facilities are orientated towards the east, such that the open space will receive approximately 2-3 hours of direct sunlight between 9am and 12pm. The majority of the built form proposed in this DA relates to the primary school, and therefore the matters relating to overshadowing, scale, height, setbacks and articulation etc. are not relevant to the proposal as it does not constitute a centre-based child care development that can be assessed against these provisions. The proposal is generally compliant with relevant provisions of Part 3;
- Part 4 of the Guideline relates to landscaping. The proposed development incorporates landscaping throughout the entirety of the site and within the roof-top play areas. A landscaped setting is achieved for the site, and in particular for the outlook of the ground-floor HSU room;
- Part 5 of the Guideline relates to visual and acoustic privacy. The proposal comprises a small component of child care centre facilities as part of a large primary school development. The privacy, security and amenity of HSU students are protected where relevant, but are also integrated into the building to allow exposure of students to the mainstream primary school environment;
- Part 6 of the Guideline relates to noise and air pollution. The Acoustic Assessment Report prepared by Day Design (**Appendix 25**) provides an assessment of the proposal against the relevant noise emission and vibration criteria, with recommendations provided where necessary. The acoustic amenity of the classrooms will be maintained at acceptable levels.
- Part 7 of the Guideline relates to hours of operation. The HSU will operate as part of the Penshurst Public School and be subject to the standard hours of operation of the other school students.
- Part 8 of the Guideline relates to traffic, parking and pedestrian circulation, an assessment of which (for an educational establishment) is provided by TTM (**Appendix 17**). The proposal will incorporate arrangements which aim to meet the needs of the students and parents of the HSU.

Part 4 of the Education SEPP sets out specific development controls for schools. Clause 35(6) sets out the following provisions:

- (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:*
 - (a) *the design quality of the development when evaluated in accordance with the design quality principles set out in Schedule 4, and*
 - (b) *whether the development enables the use of school facilities (including recreational facilities) to be shared with the community.*

In response to Clause 35(6)(a), Perumal Pedavoli Architects has prepared a Design Analysis Report as which assesses the proposal against the 7 design quality principles set out under Schedule 4 of the Education SEPP (see **Appendix 11**). The assessment provided by Perumal Pedavoli Architects in regard to the design quality principles is detailed and it is reasonable to conclude that, pursuant to the evaluation of the Design Analysis Report, the proposal represents a high level of design quality, as required by Clause 35(6)(a).

In response to Clause 35(6)(b), the proposed development seeks to enable the use of the school facilities by community groups, including after-hours use. The potential impacts of the

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use of school facilities by the community is addressed in the documentation supporting this EIS, in particular the Acoustic Report (**Appendix 25**).

Part 7 of the Education SEPP sets out general development controls for traffic-generating development as follows:

- (1) *This clause applies to development for the purpose of an educational establishment:*
 - (a) *that will result in the educational establishment being able to accommodate 50 or more additional students, and*
 - (b) *that involves:*
 - (i) *an enlargement or extension of existing premises, or*
 - (ii) *new premises,*

on a site that has direct vehicular or pedestrian access to any road.
- (2) *Before determining a development application for development to which this clause applies, the consent authority must:*
 - (a) *give written notice of the application to Roads and Maritime Services (RMS) within 7 days after the application is made, and*
 - (b) *take into consideration the matters referred to in subclause (3).*

The proposed development involves the construction of new school buildings at Penshurst Public School which will enable accommodate 567 additional students. Accordingly, DPE must give written notice of the application to RMS and take into consideration the matters set out under Clause 57 of the Education SEPP. As discussed at **Section 5.2**, the project team has carried out consultation with RMS and has incorporated that feedback into the body of this DA submission.

6.4.3 State Environmental Planning Policy (Infrastructure) 2007

Clause 102 of the Infrastructure SEPP relates to the impacts of road noise or vibration on non-road development, and is triggered for land which adjoins a road corridor with an annual average daily traffic (AADT) volume of more than 40,000 vehicles. If triggered, it requires the consent authority to consider the potential effects of road noise or vibration on an educational establishment.

No roads surrounding the Site currently experience an AADT volume of more than 40,000 vehicles nor are they likely to in the future as they are local and collector roads, rather than higher order arterial roads.

Notwithstanding, Day Design have prepared a detailed Acoustic Impact Assessment (**Appendix 25**) which includes assessment of the potential for noise intrusion to the school facilities.

6.4.4 State Environmental Planning Policy No.55 – Remediation of Land

SEPP 55 relates to remediation of contaminated land and requires, amongst other things, investigations to be undertaken as part of the development assessment process, to determine whether the subject land is likely to be contaminated and if so, what remediation work is required.

The State Government publication *Managing Land Contamination: Planning Guidelines* sets out the process for consideration of land contamination. Based on an initial consideration of known historical land uses, the guidelines may require, in certain circumstances, one or more of the following steps:

- A Preliminary Investigation – where contamination is likely to be an issue;
- A Detailed investigation – where a Preliminary Investigation highlights the need for further detailed investigations or where it is known that the land is likely to be contaminated and/or that the proposed use would increase the risk of contamination;

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- A Remedial Action Plan (RAP) – to set the objectives and process for remediation;
- Validation and Monitoring – to demonstrate that the objectives of the RAP and any conditions of development consent have been met.

The Site is not identified by Council or any other authority as being subject to or potentially subject to contamination and development consent has previously been granted for the primary school on the Site and it was determined that the Site was suitable for this form of development.

Environmental Investigation Services (EIS) has prepared a Preliminary Site Investigation (PSI) (**Appendix 7**) and Detailed Site Investigation (DSI) with Remediation Action Plan (RAP) (**Appendix 8**) which concludes that;

“EIS are of the opinion that the site can be made suitable for the proposed primary school development provided this RAP is implemented accordingly. A site validation report should be prepared on completion of remediation activities and should be submitted to the consent authority.”

Accordingly, the Site is considered to be suitable for the proposed development subject to the implementation of the recommendations in the PSI, DSI and RAP. For further details see **Section 4.2**. Pursuant to Clause 7 of SEPP 55, DPE can be satisfied that the potential for contamination has been adequately considered and appropriate conditions of consent can be included to ensure the recommendations of the RAP are carried out.

6.4.5 State Environmental Planning Policy No.64 – Advertising and Signage

SEPP 64 applies to all signage that can be displayed with or without development consent and is visible from any public place or public reserve.

The proposal includes two (2) business identification signs comprising the school name located on the eastern and southern facades, as described in **Section 4.3.3** of this EIS. The proposed signage is required to comply with the aims of clause 3(1) of SEPP 64 and the assessment criteria in Schedule 1 to the SEPP.

An assessment of the proposed signage against these objectives and assessment criteria is provided in **Table 13**.

Table 13 Assessment under SEPP No. 64 – Advertising and Signage	
Provision	Assessment
Clause 3 – Aims, Objectives	
(a) to ensure that signage (including advertising): (i) is compatible with the desired amenity and visual character of any area, and (ii) provides effective communication in suitable locations, and (iii) is of high quality design and finish, and	The character of the locality in the vicinity of the Site generally consists of low density residential development with supporting commercial, educational and industrial development, and open space. The proposed signage identifies the name of the new school at the eastern and southern facades, providing effective communication in a suitable location for both the Arcadia Street and Forest Road frontages. The signage is of a high-quality design and will utilise a high-quality metal finish.
(b) to regulate signage (but not content) under Part 4 of the Act	An assessment of the proposed signage in respect to Part 4 of the EP&A Act, in particular the relevant matters for consideration under Section 79C(1) is provided within this EIS.
(c) to provide time-limited consents for the display of advertisements in transport corridors, and	N/A
(d) to regulate the display of advertisements in transport corridors, and	N/A

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Table 13 Assessment under SEPP No. 64 – Advertising and Signage

Provision	Assessment
(e) to ensure that public benefits may be derived from advertising in and adjacent to transport corridors.	N/A
Schedule 1 Criteria	
Character of the Area	The character of the locality in the vicinity of the Site generally consists of low density residential development with supporting commercial, educational and industrial development, and open space. The proposed signage is of a scale which is considered suitable for the length and height of the built form and the size of the Site and will not dominate the streetscape of either Arcadia Street or Forest Road. The proposed sign is simple and provides for important way-finding from the public domain.
Special Areas	The Site is not located in a special area, such as a heritage conservation area or the like.
Views and Vistas	No views or vistas will be adversely affected by the proposed signage.
Streetscape, Setting or Landscape	The proposed signs are of a scale which is considered suitable for the length and height of the building, the size of the Site and the road frontages and will not dominate the streetscape of either Arcadia Street or Forest Road.
Site and Building	The extent of the signage is reasonable having regard to the scale and street-front distribution on the Site. In terms of area, the signage will comprise an almost negligible proportion of the street frontage of the site, in this case to Arcadia Street and Forest Road.
Associated devices and logos with advertisements and advertising structures	No associated devices are proposed.
Illumination	There will be no illumination of the signage and therefore, no adverse impact on road users or surrounding properties.
Safety	The proposed building signage will be of metal construction fixed to the building facade and therefore there will be no adverse public safety concerns for pedestrians, cyclists or motorists. In addition, the proposed signs will not obscure or interfere with road traffic signs and signals.

6.4.6 Hurstville Local Environmental Plan 2012

Table 14 provides a summary assessment of the proposed development against the relevant provisions of the Hurstville Local Environmental Plan 2012 (LEP).

Table 14 Assessment against relevant provisions of LEP 2012

Provision	Assessment
Clause 2.3 Zone objectives and Land Use Table Objectives of zone - To provide for infrastructure and related uses. - To prevent development that is not compatible with or that may detract from the provision of infrastructure.	The Site is zoned SP2 Infrastructure and identified on the land zoning map as 'Church and Educational Establishment'. Development for the purpose shown on the <i>Land Zoning Map</i> including any development that is ordinarily incidental or ancillary to development for that purpose is permissible with consent. Therefore, the proposed new Penshurst Public School is permissible with consent. The proposed new primary school is consistent with the objectives of the SP2 Infrastructure - Church and Educational Establishment zone. It will provide increased educational infrastructure to service the growing population within the existing school's catchment.

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Table 14 Assessment against relevant provisions of LEP 2012

Provision	Assessment
Clause 4.3 Height of buildings	The <i>Height of Buildings Map</i> does not identify a height limit for the Site.
Clause 4.4 Floor Space Ratio	The <i>Floor Space Ratio Map</i> does not identify a floor space ratio (FSR) for the Site.
Clause 5.10 Heritage Conservation	The main school building within Lots 8, 9, 10 and 11 is identified on the <i>Heritage Map</i> in Schedule 5 to the LEP as being Heritage Item I106. Heritage Item I106 is the main 2 storey school building constructed circa 1925. A Statement of Heritage Impact (SoHI) has been prepared by Perumal Murphy Alessi (see Appendix 16) which provides an assessment of the proposed development on heritage grounds and addresses the provisions of Clause 5.10 of Hurstville LEP 2012. The SoHI concludes that the proposal has been carefully and long considered, and has found that the significance of the site partly relates to its long standing use as a local educational facility – a use which will continue on the Site. The report recommends the addition of interpretive measures including incorporation of landscape features and elements such as brick walls, historical photographs and signage in publicly accessible areas that will recall the history of the Site. It is also recommended that a Photographic Archival Recording be undertaken to record the 1925 building and other elements on the site, prior to the commencement of any works.
Clause 6.7 Essential Services Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the development are available or that adequate arrangements have been made to make them available when required: (a) the supply of water, (b) the supply of electricity, (c) the disposal and management of sewage, (d) stormwater drainage or on-site conservation, (e) suitable road and vehicular access.	The Site is currently serviced by water, power, sewerage and telecommunications services. Details of the site servicing is provided in the Infrastructure and Services Brief (Appendix 20) and Hydraulic Services Brief (Appendix 19). Woolacotts has prepared a Stormwater Management Report (see Appendix 14) and Stormwater Concept Plans (see Appendix 15). The suitability of the road and vehicular access has been in the Traffic Report (see Appendix 17), which concludes that the current vehicle and pedestrian entries are suitable for the proposed development.

6.4.7 Australian Standard AS2601 – Demolition of Structures

Clause 92 of the EP&A Regulation designates AS 2601-1991: *The Demolition of Structures* as a prescribed matter for consideration in the determination of a development application.

All demolition works will be undertaken in accordance with Australian Standard AS 2601-2001: *The Demolition of Structures*. Further details on demolition practices, identification and management of hazardous substances and recycling of materials can be provided with an application for a construction certificate. This can include a Work Plan and a Hazardous Substances Audit and Management Plan in accordance with AS 2601 and demonstrating compliance with applicable Environmental Protection Agency (EPA) requirements.

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6.5 Policies

6.5.1 State Policies

Table 15 provides a summary assessment of the proposed development against the relevant provisions, goals and objectives of relevant State policies.

Table 15 Response to Provisions, Goals and Objectives of State Policies

State Policy	Response
NSW State Priorities: • Creating Jobs • Building Infrastructure • Reducing Domestic Violence • Improving Service Levels in Hospitals • Tackling Childhood Obesity • Improving Education Results • Protecting our Kids • Reducing Youth Homelessness • Driving Public Sector Diversity • Keeping our Environment Clean • Faster Housing Approvals • Improving Government Services	The proposal will: • Create new jobs for construction workers, teachers, support staff and maintenance workers • Up to 200 jobs will be created over the construction period, including construction personnel and consultant team; • 27 additional staff for Penshurst Public School; • Support growing population in the locality • Provide education to children to help reduce domestic violence now and in the future; • Provide special education opportunities and assistance to students with reduced or no hearing; • Provide intellectual and physical education to children with the aim of reducing reliance on health services in the future; • Provide physical education programmes to children to encourage active living and reduce obesity; • Provide a balanced education in line with prevailing public education curriculum; • Provide a safe learning environment and education regarding personal protection and welfare; • Provide support to our youth and education to enable them to transition to meaningful employment or high education post school; • Provide employment opportunities for people of all backgrounds, races or religion; • Promote, through educational programmes, protection of our environment; and • Provide a high-quality environment to enable a high quality publicly funded education.
A Plan for Growing Sydney • Direction 1.10: Plan for education and health services to meet Sydney's growing needs • Subregional Priorities – Southern District Support planning of Hurstville as Strategic Centre.	The proposal: • Involves new, expanded school facilities to meet the growing residential population in the locality, close to Hurstville; and • Has been designed to ensure an appropriate balance between learning spaces and open spaces is achieved, given the need to accommodate 1,012 students on the site.
NSW Long Term Transport Master Plan 2012	The proposal will support the Actions identified in the NSW Long Term Transport Master Plan by: • Encourage the use of public transport services and public facilities which are connected by an established and efficient network of stops and linkages to other services and facilities; • Adopting green travel initiatives to discourage private car use in favour of more sustainable means.
Sydney's Cycling Future 2013	The proposal will promote cycling to school by provision of new bicycle racks, as well as ensuring integration with the precinct-wide cycle and pedestrian footpath network.
Sydney's Walking Future 2013	The proposal will promote walking to school through the Site's location close to residential areas and through in-school programmes such as walking buses.
Sydney's Bus Future 2013	Sydney's Bus Future 2013 identifies both rapid and suburban bus routes within 400m from the Site.
Crime Prevention Through Environmental Design (CPTED) Principles	This report provides a CPTED assessment of the proposal at Section 6.6.6.2.

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Table 15 Response to Provisions, Goals and Objectives of State Policies

State Policy	Response
Healthy Urban Development Checklist, NSW Health	The proposal will be consistent with the relevant aspects of the Healthy Urban Design Checklist as it will: • Make use of land zoned for infrastructure – educational establishments and not reduce the availability of agricultural land; • Include recreational facilities promoting physical activity; • Promote walking and cycling through provision of appropriate infrastructure within and immediately adjoining the site; • Promote public transport use through provision of minimal car parking; • Be on a site located close to housing and employment thereby reducing trip generation and car dependence; • Include CPTED principles in its design to promote a safe environment for students and visitors to the school; and • Provide equitable access to facilities.

6.5.2 Greater Sydney Commission Draft South District Plan

The draft South District Plan sets out aspirations and proposals for Greater Sydney's South District, which includes the local government areas of Canterbury-Bankstown, Georges River and Sutherland. It has been developed by the Greater Sydney Commission. The proposal is generally consistent with the objectives of the draft South District Plan through the provision of improved social infrastructure supporting the growing population of the area.

6.5.3 Hurstville Development Control Plan No 1

It is noted that Clause 11 of the State and Regional Development SEPP excludes the application of Development Control Plans to SSD DAs. Notwithstanding, **Table 16** provides a summary assessment of the proposed development against the provisions of Hurstville DCP No 1 that may otherwise be deemed relevant.

Table 16 Assessment against Relevant Provisions of Hurstville DCP No 1

Provision	Assessment	Consistent
3.1 Vehicular Access Parking and Manoeuvring	This application is accompanied by a Traffic Report (Appendix 17) which addresses the impact of the proposed development on the local road system and car parking requirements set out under Hurstville DCP No. 1. The DCP states that educational establishments require 1 space per 2 employees. With a total of 59 FTE staff, the DCP would require a total of 30 car parking spaces. The proposal will provide a total of 15 car parking spaces, representing a shortfall of 15 car parking spaces against the DCP. The proposal will result in an inconsistency with the DCP car parking requirements, however this is considered justified having regard to the size of the site, and complications and costs associated with providing car parking to comply with the DCP. Car parking is discussed further at Section 6.6.4.	Justified Inconsistency Refer to Section 6.6.4
3.3 Access & Mobility	du Chateau Chun has prepared an Accessibility Report (Appendix 24) which provides an assessment with reference to the Building Code of Australia (BCA), Disability (Access to Premises – Buildings) Standards 2010, relevant Australian Standards and the spirit and intent of the Disability Discrimination Act 1992.	Yes

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Table 16 Assessment against Relevant Provisions of Hurstville DCP No 1

Provision	Assessment	Consistent
	The proposal has been classified as a class 9b, 7a and 5 building. Access has been provided in accordance with the BCA and relevant Australian Standards. 1 accessible car parking space has been provided in accordance with the DCP requirement for 1 space per 20 car spaces or part thereof.	
3.4 Crime Prevention Through Environmental Design	An assessment of the proposal against the CPTED principles is provided at Section 6.6.6.2 , which concludes that the proposal will achieve appropriate safety and security.	Yes
3.5 Child Care Centres	The majority of the controls set out under Section 3.5 of the DCP do not apply to the proposal as it is for a primary school development that comprises only a small ancillary component that could be defined as a child care centre under planning legislation. Assessment of the proposal against Section 3.5 has found that the development is generally consistent with the relevant controls that may apply. An assessment of the proposal against the Child Care Planning Guideline is provided at Section 6.4.2.	Yes
3.7 Stormwater	Woolacotts has prepared a Stormwater Management Report (Appendix 14) which is supported by Stormwater Management Plans (Appendix 15). Section 3.7 of the DCP does not contain provisions specifically in relation to Educational Establishments, advice from Council's development engineer to Woolacotts Consulting Engineers was that the proposal should address the provisions in relation to "Commercial & Retail" development. These provisions include discharge from the Site not exceeding the discharge occurring from the existing 5 year ARI storm event and the provision of an onsite detention (OSD) designed for a 100 year ARI storm event. OSD has been provided by way of a below ground detention tank located underneath a classroom block with external access. This is the best outcome for the Site due to the incompatibility of an above ground basin with the use of the Site as a school. Drainage to Councils street drainage system will occur via two separate connections sized for a 5-year ARI storm event. In the event of a larger storm event this will flow into the OSD tank sized for a 1 in 100 ARI storm event.	Yes

6.6 Likely Impacts of the Development

The following subsections assess the likely impacts of the development in accordance with Section 4.15(1)(b) of the EP&A Act.

6.6.1 Built Form and Urban Design

A review of design development and analysis of alternatives is set out at **Section 1.3**, providing context to the range of options considered for the Site and how the ultimate built form and urban design layout was selected.

Perumal Pedavoli Architects has set out the approach to the analysis of the site constraints and opportunities, as well as the design response to these matters for the selected concept in

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a Design Analysis Report (**Appendix 11**). The Design Analysis Report identifies the urban context of the Site and surrounds, and sets out the site strategies for the proposed built form, including:

- A clear and well-defined entry for the school which acts as a meeting point;
- Retention of existing entry points, maximising separation between vehicle crossing and pedestrian crossing/the intersection of Arcadia Street and Forest Road;
- Establishing building setbacks so that facades facing the adjacent school are minimised and are separated from the boundary to reduce visual encroachment;
- Align the building volume to the eastern side of the Site, creating a central open play area;
- Building scale to match existing streetscape and neighbouring school;
- Utilise site contours to minimise earthworks; and
- Maximised retained trees.

The resultant built form establishes a presence to the long (and primary) frontage to Arcadia Street, rather than shifting bulk and massing to the corner of the site, providing appropriate separation and scaling to the adjoining buildings to the north and west and providing multiple play areas across all levels of the development with the retention of the existing landscape setting. This is shown in the 3D model perspective at **Figure 22**.



Figure 22 Extract from 3D Model Perspective (prepared by Perumal Pedavoli Architects)

Described plainly, the proposal consists of a three (3) storey building with ground floor roof top open space areas, having a footprint approximately 50m wide by 130m in length with the ground floor being rectangular in floorplate while the two upper floors are designed with a curvilinear layout.

The design incorporates a range of design features which respond to the site context, design brief and relevant guidelines to achieve a sensitive, but unique built form outcome. In particular, the proposal includes the following key design features:

- Distinct student entryway: The new entry comprises a three (3) storey angular void in the built form using bold colours which provides a sheltered entry zone to the school and a visual emphasis at the entry point to enable intuitive wayfinding. A digital display

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will be mounted on the wall to display school related information to students and parents, such as announcements, art works or sports carnival arrangements.

- **Contrasting Built Form:** The proposal incorporates a visual juxtaposition of the rectilinear built form at ground level with the curvilinear layout and external façade treatments of the first and second floors above with roof-top metal palisade parapet fence. The sinuous upper levels are designed to appear to float above the ground floor buildings, with setback distances varying along the frontage to Arcadia Street. Additional articulation through building treatments and the use of varying materials and finishes introduces a visual diversity which presents a high quality design that achieves a landscaped setting and a definitive character within the Arcadia Street streetscape.

In practical and operational terms, the proposal has been developed through a comprehensive consultation process (refer **Section 5**), including input from the current school, PRG, Department of Education and education specialists NLE. Part of the process has included a review of pedagogy for Penshurst Public School, being an opportunity to transition towards Future Focussed and accessible learning spaces, including flexible spaces which enable teaching to occur in a variety of methods.

The proposal has been reviewed against the Department of Education's EFSG requirements and is consistent with the requirements of the guidelines, ensuring the proposed school will meet all necessary design requirements for a primary school within the NSW State system.

The Design Analysis Report includes a Design Statement prepared by Perumal Pedavoli Architects in response to the design quality principles for schools set out in the Education SEPP, as prepared by the NSW Government Architect. The Design Statement confirms that the proposed development is consistent with the design quality principles, achieving a high quality design outcome that is representative of a thought-out and community-led design process.

6.6.2 Heritage Significance

Central to the design development of the proposal has been the consideration of heritage significance, and the opportunities and constraints that arise from the retention or removal of the heritage listed building. This is discussed in detail at **Section 1.3.1**, where a timeline of the range of steps taken by the project team in the design development process shows how consultation played an important role in the resolution of the current proposal.

The assessment of heritage significance and impacts associated with the development (and earlier concept schemes considered at the design development stage) has been informed by specialist heritage consultancy Perumal Murphy Alessi, however input has been sought and incorporated from the NSW Department of Education Heritage Advisor, Georges River Council (and its Heritage Advisor) and the NSW Office of Environment and Heritage.

The consultation process included consideration of multiple options, including the retention of all buildings (Option 1, not supportable) and retention of just the heritage building and construction of a medium and high-rise school (Option 2) (refer to discussion at **Section 1.3**).

Minutes from the meeting with Council (**Appendix 4**) note that the Department of Education requirements would require a floor space such that the design will either impact the heritage building and/or impact the height of the new building. Option 2 was for a three (3) storey building at the northern end of the site and six (6) storey building at the southern corner of the site. Council noted the following:

"Due to the surrounding buildings being no taller than 12m and the majority being single storey Council envisages building a 6 storey tower an urban design issue and was not supported. Council noted that a 3 storey development fitted in with the surrounding context."

As the consultation process was carried out, it became clear based on the design concept options that it was not feasible to retain the heritage building and other non-heritage school buildings, as the impacts/limitations on the resultant design would not meet the objectives of

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the Department of Education or community. Therefore Option 3 was tested further, whereby all buildings would be demolished and a whole new school complex be constructed.

Incorporating the above input, Perumal Murphy Alessi has prepared a comprehensive Statement of Heritage Impact (SoHI) (**Appendix 16**) which provides:

- A historical overview of the Site and the related built form;
- A description of the site including a detailed review of the Penshurst Public School buildings;
- An assessment of significance inclusive of a detailed comparative analysis, review of the Site against the evaluation criteria and provision of a statement of significance;
- Review of constraints, opportunities and requirements;
- Review of the proposed works, including analysis of the project brief and options considered throughout the design development process; and
- Assessment of heritage impact pursuant to Georges River Council controls (Hurstville LEP 2012 and DCP No. 1) and NSW Office of Environment and Heritage criteria.

In regard to the comparative analysis, the SoHI identifies that there are two (2) other schools listed as heritage items under Hurstville LEP 2012 (Hurstville Public School and Peakhurst Public School) and a further three (3) schools listed as heritage items under the Kogarah LEP 2012 (Hurstville South Public School, Mortdale Public School and Sans Souci Public School).

The SoHI provides a detailed review of each of these Schools, and also expands its comparative analysis to review other Public Schools across the Sydney region including Carlton, Beverly Hills, Kingsgrove, Cleveland Street, Albion Street, Waterloo, Bankstown, Abbotsford, Auburn, Bexley, Bellevue Hill, Gardner's Road, Cronulla, Coogee, Cessnock East, Moss Vale, and Leeton Infants Public Schools.

The SoHI outlines that the 1925 Penshurst Public School building is one of six (6) public schools currently listed within the Georges River LGA and one of three (3) with inter-war period buildings. There are also two other School sites with prominent inter-war period buildings (not listed) in the Georges River LGA.

Of the schools in the Georges River LGA, Penshurst Public School exhibits a simpler and comparatively restrained form and detail, while Hurstville Public School stands out primarily due to character and landmark qualities of the two main buildings on the Forest Road frontage. Of other school buildings attributed to the same architect, Penshurst Public School is simple in form and detail. Other schools such as Bankstown and Abbotsford have a greater level of detail and decorative elements.

Perumal Murphy Alessi has prepared the following statement of significance as a conclusion to the assessment against the relevant evaluation criteria:

"The 1925 building at Penshurst Public School is of historic, aesthetic and social significance as a representative example of a two storey Inter-war period public school building constructed in response to local needs and the growth and development of the local area.

The site has had continuous educational use since the 1925 and is associated with School and later Government Architect RMS Wells who designed a number of similar School buildings in the early decades of the 20th century.

The building retains its early character and details including face brick facades, brick and rendered details, pitched roofs and pattern of openings, however, has undergone some changes including additions of amenities wings, alteration of the roof replacement of roof claddings, removal of chimneys and replacement of external windows and doors which have impacted on its original character.

The site has social significance and long association with the local communities of Penshurst and surrounding areas and has also been recognised for its long standing work with students with special needs (particularly Opportunity Deaf classes).

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The 1925 building is a visible feature along the Arcadia Street School frontage and one of a number of Inter-war period public Schools in the Georges River local government area and comparatively is a relatively simple example with restrained details."

In terms of heritage listing status, the SoHI notes that Penshurst Public School is not:

- Listed on the State Heritage Register;
- Classified by the National Trust of Australia (NSW) or any other heritage body or association;
- Located in a conservation area; and
- Visually or physically connected to any other heritage items in the 'vicinity' of the Site.

Perumal Murphy Alessi discuss the requirements of the Department of Education, recognising that its primary aim is to meet the current and anticipated future educational needs of the local area. It is noted that current educational requirements are based on the provision of an appropriate amount of open play space per child in addition to appropriate learning spaces and facilities. The SoHI provides a review of these requirements, outlining the following:

In an attempt to meet the required current and future needs and accommodation on the site it must be recognised that considerable change, alterations and additions will need to occur. Educational philosophies and how they relate to the built context are constantly changing and evolving and it must also be recognised that these philosophies and teaching methods have changed since 1925 when the existing main building was constructed. In addition, issues relating to management of teachers and staff, access and movement of students must be considered.

It is proposed that prior to the commencement of any works, an Archival Photographic Record be undertaken to record all of the existing and especially the 1925 building and elements currently on the site. It is also proposed to add a number of features to interpret the historic use of the site and character of the 1925 building, including:

- Addition of interpretive signage and visual elements such as the use of paving and landscaping to interpret building footprints in publicly accessible areas in and around the school entry; and
- Salvaging and recycling of bricks from the 1925 building for interpretive and landscaping elements around the site.

An assessment of heritage impact is provided against relevant Council and State legislation/guidelines, outlining that the proposed demolition has been carefully considered and is proposed following evaluation and review of a number of options. The demolition *"is proposed in order to meet the optimum requirements for learning and open play area and spaces that will greatly improve on the existing facilities and allow greater levels of flexibility and connectivity in addition to enring a compliant, safe and manageable environment for a much larger student population"*.

In order to retain the existing buildings, new multi-storey buildings would be required to meet learning space and open space requirements, resulting in an arrangement of built form comprising multiple buildings around the curtilage of the heritage building, irregular movement pathways between these buildings, and undesirable arrangements for play space across the site which are difficult to supervise.

The removal of the existing heritage building and construction of a new school building *"will have no adverse impact on any other items in the area due to the distance and separation from the school site. Existing perimeter trees and plantings will also be retained where possible"*.

Perumal Murphy Alessi provide the following conclusions and recommendations:

The proposed demolition of the existing 1925 School building and later buildings and site elements at Penshurst Public School and replacement with a new integrated building and facilities has been carefully and long considered.

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The significance of the site partly relates to its long standing use as a local educational facility. Whilst it is preferable that the 1925 building be retained or partly retained, a primary School use will significantly continue on the site.

The proposed concept will provide for the current educational requirements of the local area and also allows for some future growth. The proposed scheme has been developed in consultation with representatives from the Department of Education, Penshurst Public School and educational specialists and is considered the best possible option by the Department that will provide optimum learning and open play spaces that will cater for the long-term use of the site.

The continuing use of the Arcadia Street frontage with setbacks from the side boundaries and retention of open play spaces and perimeter plantings are considered positive features with retention of the relatively low scale and consideration of the surrounding built context.

Potential heritage impacts will also be reduced by the addition of interpretive measures including incorporation of landscape features and elements such as brick walls, historical photographs and signage in publically accessible areas that will recall the history of the site for past, current and future users and enhance its historic and social significance.

It is also recommended that a Photographic Archival Recording be undertaken to record the 1925 building and other elements currently on the site. This should be completed prior to the commencement of any works. A copy of the record should be held in the School library and in the Local Studies section of Hurstville Library.

The assessment of heritage significance undertaken by Perumal Murphy Alessi has been prepared over a long process of consultation, analysis and review and the findings of the assessment having regard to support for the demolition of the heritage item are supported by this assessment. The comparative analysis requested by Georges River Council has shown that Penshurst Public School is not an exceptional example of inter-war period public school architecture within the immediate locality, Georges River LGA or surrounding Sydney region. The architect who designed the 1925 building has more notable works which are still functioning at other schools within Sydney.

Therefore, the loss of the heritage building represents the progression of contemporary education facilities, designed to meet current-era objectives and design standards, such as Future Focussed Learning. The cultural significance of the Site, owing to its continual use as an educational establishment for over 100 years, will be retained and ensured to continue for decades to come.

It is proposed to incorporate the recommendations of the SoHI into the project and it is anticipated that they will form conditions of consent.

6.6.3 Environmental Amenity

The proposed development has been designed with the objective to uphold and improve the environmental amenity of the site and surrounds as part of the building works and throughout the operation of the school.

During the Carrying Out of Works

With regard to the protection of environmental amenity through construction, appropriate sediment and erosion control measures have been incorporated to ensure that the stormwater runoff and movement of vehicles across and out of the site does not result in unacceptable sedimentation or dust impacts. Details are provided in the Sediment and Erosion Control Plan prepared by Woolacotts (**Appendix 15**).

In addition, the CMP prepared by Root Partnerships (**Appendix 27**) outlines that the head contractor will implement a comprehensive Environmental Management Plan (EMP) to ensure compliance with all relevant statutory requirements and those of the Department of Education.

Environmental Investigation Services has prepared a PSI (**Appendix 7**), DSI and RAP (**Appendix 8**) for the Site. The DSI comprised detailed investigation following the preliminary findings of the PSI, and found:

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- An absence of visible fibre cement/ACM in the bulk samples screened for the preliminary Stage 2 investigation, an absence of asbestos in the laboratory samples analysed, and an absence of other indicators such as building and demolition waste in fill. Concluding that the potential for asbestos fibres and subsequent risk to human health is low. Some bonded ACM was found in materials on the surface during the PSI but the potential for asbestos fibres to be generated from bonded asbestos is relatively low provided the materials are managed appropriately;
- PAHs and TRHs (benzo(a)pyrene) were identified above human health-based SACs at TP103 at low levels. This is believed to be attributed to ash/slag and therefore not bioavailable or a high risk to human health; and that
- A RAP is required to reduce the risks to an acceptable level.

The extent of remediation outlined in the RAP includes the fill in the garden bed at the TP103 location (impacted by PAHs/benzo(a)pyrene) and the entire site for surficial ACM impacts. The following sequence of works is recommended for the implementation of this RAP:

- Remediation of the TP103 area;
- Demolition of the site structures;
- Remediation of any observed ACM at the surface; and
- Data gap investigation (to ensure no further risks are present after demolition of buildings).

Tree removal is proposed for 25 trees, however appropriate protection measures are proposed by Glenyss Laws Consulting Arborist (**Appendix 13**) to ensure the healthy retention of the 20 remaining trees to ensure the existing landscaped setting of the Site is maintained. The relevant protection measures are set out having regard to the requirements of Australian Standard AS4970-2009 Protection of Trees on Development Sites, and involves the following hold points () which require attendance of the Project Arborist to ensure compliance is documented.

Hold Points	Action	Check Box
Tree Removal	Prior to tree felling, the Project Arborist will inspect that proposed tree removal complies approved documentation.	Inspected, documented & certified by Project Arborist
Tree Protection Zones	The Project Arborist shall inspect the Tree Protection Fencing and any necessary Ground Protection complies with the nominated Tree Protection Zones and Figure 3, page 16 AS4970.	Inspected, documented & certified by Project Arborist
Machinery Access	An access route for machinery shall be determined prior to demolition and construction works. Any temporary ground protection within the Tree Protection Zones shall be undertaken as per Figure 4, page 17 of AS4970.	Inspected, documented & certified by Project Arborist
Demolition Works	The Project Arborist shall be in attendance during the removal of any existing structures within the TPZ of trees to be retained.	Inspected, documented & certified by Project Arborist
Earth Works	The Project Arborist to monitor any earthworks within the TPZ's. Note these works must be undertaken with small hand-held machinery.	Inspected, documented & certified by Project Arborist
Practical Completion	The Project Arborist to inspect and assess the tree/palm condition and provide certification of tree protection at all the above-mentioned Supervision Stages.	Inspected, documented & certified by Project Arborist

Figure 23 Extract of Hold Points from Arboricultural Impact Assessment

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Waste handling and management throughout construction will be carried out in accordance with the Waste Management Plan (**Appendix 28**) which aims to avoid the generation of unnecessary waste, minimise the volume to be collected and recycle, reuse and recover waste which is generated.

The potential impacts of noise during the site preparation, earthworks and construction phases of the development have been considered and addressed at Section 10 of the Acoustic Report (**Appendix 25**). In particular, at Section 11 the Acoustic Report identifies good-practice measures to be adopted on the site, and establishes applicable noise and vibration criteria as well as steps which can be taken for managing noise impacts from construction works and a framework for managing community relations.

During the Operation of the School

With regard to the protection of environmental amenity during the operation of the schools, JHA has prepared an ESD Report (**Appendix 26**) which outlines how the proposal has been designed in accordance with the ESD principles of the EP&A Act and the EFSG, and is in line with the NSW Government Resource Efficiency Policy, which is to reduce Government's operating costs and lead by example by increasing resource productivity.

The ESD Report discusses the various sustainability initiatives incorporated into the proposed development, including energy conservation, water conservation and other initiatives. The Report concludes that, in accordance with the EFSG, the project is expected to be equivalent to a Green Star – Education v1 Design & As-Built 5 Star rating.

The Acoustic Assessment Report prepared by Day Design (**Appendix 25**) demonstrates that the proposal will give rise to acceptable noise, subject to the implementation of a number of recommendations. These recommendations (including building treatments) have been incorporated into the design of the school and are reflected in the proposal submitted in this DA.

Perumal Pedavoli Architects has prepared shadow diagrams (**Appendix 10**) which confirm that the proposed built form will not reduce the solar access of principal living areas or principal private open space areas of surrounding residential development at the winter solstice. Overshadowing resulting from the proposed built form is largely confined to the interior of the school Site. Therefore the proposal will not result in unacceptable impacts upon the solar access of adjoining/surrounding development.

The Stormwater Management Report prepared by Woolacotts (**Appendix 14**) incorporates Integrated Water Management principles into the design to improve environmental amenity through the reuse collection and reuse of rainwater, use of AAA rates fittings and selecting landscaping with low water requirements.

The proposal will not result in adverse impacts relating to visual privacy due to the separation of the Site from surrounding residential zoned land, or adverse impacts relating to view loss or wind impacts as the building height will not block views to/from any significant environmental features and is not of sufficient size to generate wind impacts within the locality.

In summary, the proposed development achieves the objective to uphold and improve the environmental amenity of the Site and surrounds through both the construction and operational phases of the project.

6.6.4 Transport and Accessibility

TTM has prepared a Traffic Report (**Appendix 17**), which provides details of transport and accessibility impacts relating to the proposed Penshurst Public School development, as required by the SEARs.

The Traffic Report outlines the existing transport, parking, traffic and accessibility conditions for the Site and surrounds, including details of current and future peak hour vehicle

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movements and assessment of existing and future transport networks. TTM also carried out surveys of existing student and staff travel, finding:

- In the morning peak:
 - 51.2% of students walked to school;
 - 47.8% of students (unweighted) arrived as a car passenger;
 - 0.5%, 0.3% and 0.3% of students arrived by bus, bicycle and train respectively.
- In the evening peak:
 - 53% of students walked home from school;
 - 45.2% of students (unweighted) departed as a car passenger; and
 - 0.8%, 0.3% and 0.3% of students departed by bus, bicycle and train respectively.
- 83% of staff drove their cars, 15 parking on the Site and 27 parking on-street.

TTM conducted traffic surveys at a number of intersections to determine the existing traffic conditions of the surrounds and included consideration of cumulative impacts from nearby developments including St Declan's Catholic Primary School and Georges River College – Penshurst Girls Campus. The surveys included the intersections of:

- Penshurst Street and Forest Road;
- Arcadia Street, Forest Road and Connelly Street.

The assessment carried out by TTM found the proposal would generate 229 additional vehicle trips during the morning and afternoon school peak hours (being a conservative upper bound). Traffic impacts associated with the increase in trip movements from staff (25 trips) are “*considered insignificant on the surrounding road network*”. The traffic impact assessment included the carrying out of a SIDRA performance test and found that “*the increase in traffic flows does not have a significant impact on the intersection operations. The additional traffic generated from the proposed development is considered acceptable*”.

The Traffic Report identifies that an extension of the Kiss and Ride Zone is required to provide up to 17 Kiss and Ride spaces on Arcadia Street, with a recommendation to make 1 or 2 of those spaces dedicated to parents of special needs students, with a 15min dwell time permitted (shown at **Figure 20**).

In regard to car parking, TTM notes that the current parking requirement for the school is for 17 parking spaces, and this will increase to 30 parking spaces as a result of the proposed development. As a result of design limitations, the Site is unable to accommodate additional car parking without significantly impacting upon building footprints, internal connectivity, building height (to achieve required floor space) and earthworks. The proposal is in line with the Department of Education's objective to promote sustainable transport initiatives as part of new projects, and a parking occupancy survey carried out by TTM found that on-street parking supply is able to accommodate the existing drop off/pick up movements and staff parking requirements.

The only option available to provide the required quantum of car parking is to provide basement parking which, for 30 spaces, is economically and spatially unfeasible noting the design requirements of the Australian Standards and the restrictive site area and access dimensions. The Traffic Report recommends that the school address the car parking deficiency through the implementation of a green travel plan, and through the use of on-street car parking which was observed to contain vacant spaces during school hours. TTM

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concludes that “with the high convenient access to public transport, the proposed parking arrangement can be accommodated on and off street”.

TTM has set out arrangements and recommendations for a Green Travel Plan to be incorporated and administered by Penshurst Public School to encourage travel behaviour change through raising awareness of other alternatives to using a private vehicle. This includes recommendations on measures such as carpooling (and social-network solutions to assist this), information and encouragement to use public transport services and active transport options.

The Traffic Report also includes a Construction Traffic Management Plan, the aim of which is to ensure that the impacts of the construction activities on the public domain and road network are limited and acceptable. This includes considerations for construction traffic including haulage routes, use of permits, management of employee parking and establishing a driver code of conduct.

The Traffic Report provides the following conclusion

“TTM see no traffic engineering reason why the relevant approvals should not be granted.”

The methodology of the assessment carried out by TTM has been considered having regard to the context of the site, the scale of the proposed development and the requirements of the SEARs. The findings of TTM are endorsed and incorporated by the Report. It is anticipated that the recommendations of the Traffic Report will be incorporated into conditions of consent.

6.6.5 Ecologically Sustainable Development

JHA has prepared an ESD Report (**Appendix 26**) which identifies the ESD objectives of the proposed development and details all sustainability initiatives incorporated into the proposal, including:

- Energy conservation, comprising:
 - Heat loss/gain modelling and policy;
 - Insulation;
 - Natural light;
 - Sun shading;
 - Ventilation, including natural, cross and mechanical ventilation;
 - Air cooling and heating systems;
 - Period bell light switching system;
 - Electrical lighting, including the use of motion sensors and LED lighting;
 - Appliances and equipment subject to energy efficiency policy;
 - Electricity meters; and
 - Renewable energy generation;
- Water conservation, comprising:
 - Use of products with minimum Water Efficiency Labelling and Standards Scheme (WELS) star ratings, or alternative Smart Approved WaterMark rated products;
 - Taps with timed flows;
 - Toilets with dual flushing cisterns and use of rainwater in the flushing of toilets;
 - Manual flushing or waterless urinals;
 - Rainwater harvesting and reuse; and

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- Closed loop sprinkler system;
- Other initiatives, comprising:
 - Requirement for all contractors to prepare site-specific EMPs;
 - Use of recycled timber, engineered products or timber from plantations or sustainably managed regrowth forests; and
 - Design and maintenance of buildings to avoid use of chemicals for termite and other pest controls.

It is expected that the adopted sustainability initiatives are equivalent to a Green Star – Education v1 Design & As Built 5 Star rating, which is considered to be best practice within the Australian building industry.

In addition to the assessment carried out by JHA, the principles of ESD (as set out under Clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000) are addressed below:

- **The Precautionary Principle:** The proposal does not present any threat of serious or irreversible environmental damage, as detailed within this assessment. In this regard, the precautionary principle does not need to be exercised in regard to the proposed works.
- **Inter-Generational Equity:** The works proposed as part of this DA will ensure that the health, diversity and productivity of the environment are maintained and enhanced to the benefit of future generations, having regard to the ESD initiatives discussed above and environmental outcomes achieved through architectural and engineering design.
- **Conservation of Biological Diversity and Ecological Integrity:** The Site does not present any issues of biological diversity or ecological integrity as the land is already cleared and developed, and impacts external to the site (such as noise, shadowing, stormwater) have been assessed and the outcomes determined to be supportable.
- **Improved Valuation, Pricing and Incentive Mechanisms:** As discussed above the proposal will achieve an equivalent to a Green Star 5 star rating through the adoption of a number of ESD initiatives. All up front and ongoing costs associated with the environmental performance of the proposed development have been considered in the design of the proposal, and are considered reasonable and acceptable.

6.6.6 Social Impacts

The proposed development will improve the social wellbeing of the Penshurst community and surrounds through the provision of a high volume of high quality public educational facilities which are designed to achieve best practice outcomes pursuant to the EFSG, BCA and other relevant standards and guidelines. As discussed at **Section 5**, community groups have shown a very high need for the expanded primary school facilities, and there is an expectation that a redevelopment of the Site will achieve a quality, fit-for-purpose outcome that enables a focus on future learning methodology.

The proposal will meet this need with a high quality and highly durable outcome that will assist in meeting the educational needs of the wider precinct for the foreseeable future. Accordingly, the proposal will have substantial positive social impacts through the provision of new educational establishment social infrastructure, and through the continuation of the established use of the site for an educational purpose.

6.6.6.1 Temporary Relocation of Penshurst Public School

The redevelopment of Penshurst Public School will warrant the temporary relocation of all students and staff to an alternative Site in the locality which is capable of accommodating the

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whole school and all associated functions with minimal impact on the host school and neighbouring development.

A review was conducted to identify the most suitable location for the temporary relocation, and the following schools were considered:

- Penshurst West Public School;
- Peakhurst Public School;
- Peakhurst West Public School;
- Beverly Hills Public School;
- Mortdale Public School
- Hurstville Public School;
- Lugarno Public School; and
- Kingsgrove Public School.

The key considerations in the identification of a suitable School site for the temporary relocation of Penshurst Public School included:

- Must be proximate to the Penshurst Public School catchment, with maximum of 10-15 minutes of travel required to get to/from the site;
- Must be capable of accommodating temporary structures sufficient for the existing students and staff of Penshurst Public School;
- Must have core facilities which are capable of being shared for the duration of the temporary relocation;
- Must have sufficient open space to cater for occasions when students from both schools might be out of class; and
- Preference to have vehicle access arrangements which enable separation of school traffic, and if possible, parking, on a daily basis.

Following a review of the above schools, it was determined that Peakhurst West Public School was the most suitable location above the other School sites for the following reasons:

- The site is less than 10 minutes travel from the Penshurst Public School site with direct access from Henry Lawson Drive (being the extension of Forest Road);
- The site has a large, level and unused grassed area in the northern end of the site which is adequate for accommodating temporary structures required for the temporary relocation.
- When considered together with the adequate supply of play space in the south-eastern side of the property, this means that there is little to no impact on the existing supply of open space used by the students and staff of Peakhurst West Public School;
- The school is not operating at capacity, and therefore will result in less conflicts between core facilities throughout the temporary use; and
- The site has multiple street frontages, which enables a separation of traffic movements for both the existing Peakhurst West Public School and Penshurst Public School communities.

The works associated with the temporary relocation do not form part of this DA, and they are subject to a separate planning pathway. The arrangements for Peakhurst West Public School have been designed in consultation with Georges River Council Planning and Traffic Engineering staff, and with TfNSW and RMS staff.

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Having regard to the above, the arrangements that are in place to cater for the necessary temporary relocation of the Penshurst Public School community will ensure that the proposal does not result in an adverse social impact, for the Penshurst Public School community and surrounds, and for the Peakhurst West Public School community and surrounds.

6.6.6.2 CPTED Assessment

CPTED consists of four (4) universal design principles which are aimed at assessing crime risk and reducing preventable risk before a development is approved. The proposed development has been designed having regard to the CPTED principles, an assessment of which is provided below:

Territorial Re-enforcement

The Site has considerable frontage to the public domain along Arcadia Street with a secondary frontage to Forest Road. The works relevant for consideration under this assessment relate to the Penshurst Public School works, which have the opportunity to re-enforce public access territory from the public domain (roadways) and the interior of the Site.

Penshurst Public School has pedestrian and vehicular entrances off Arcadia Street, this has the effect of identifying ownership and supervision of the Arcadia Street streetscape.

Fencing, landscaping, street trees, a strong ground floor built form and signage will establish a 'civic' domain, encouraging communal responsibility for the public areas and clearly communicating to people where they should and should not be.

Surveillance

The principles of surveillance relate to spaces in public areas where people can see and interact with others. This is often a deterrent for criminals committing a crime in that place.

The proposal promotes strong natural surveillance of both the public domain (Arcadia Street and Forest Way) and the interior of the Site, through the response of the built form to the design analysis (refer to Design Analysis Report, **Appendix 11**). Particular focus is drawn to the centre of the Arcadia Street frontage with the new distinct entryway,

During periods of high pedestrian movement (i.e. start and finish times) the natural surveillance of these areas is at its highest. During learning/teaching periods, the location and orientation of classroom and administration spaces promotes a connection with the exterior of the Site. In particular, the administration facilities are situated at the central Site entrance off Arcadia Street. This ensures that the main pedestrian thoroughfare has a high degree of natural surveillance before, during and after school hours.

The proposal does not include technical/mechanical surveillance due to the high level of natural surveillance resulting from the use of the site by 1,012 students and 59 staff. Technical surveillance could be employed in the future if considered necessary.

During weekend and after-hours periods, the site will be secured with site fencing and the buildings will be fitted with a Back to Base Alarm System. Further, JHA has prepared an Infrastructure and Services Brief (**Appendix 20**) which notes that external lighting will be designed to the relevant Australian Standard in accordance with BCA and EFSG requirements, and provides recommendations on the specific lighting category that should be adopted for all areas of the school. Lighting of the property will deter criminal activity, in particular through the casual surveillance that is provided from the residential development across Arcadia Street.

The presence of a General Attendant through the week also acts as an ongoing form of active surveillance.

Access Control

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The key goals of the principle of access control are to restrict, channel and encourage people and vehicles into, out of and around the development. Effective access control can be achieved by using physical and symbolic barriers.

The proposed development proposes to primarily utilise physical barriers, including fencing to all boundaries, gates, built form and landscaping to provide access control. Fencing around the boundary of the site will not restrict surveillance opportunities and will be constructed of optically permeable materials in accordance with EFSG.

Symbolic barriers will also be utilised including landscaping (where appropriate), waste servicing areas and natural direction of pedestrian traffic to the administration office. In addition, appropriate directional signage will be installed in and around the car parks and public access points.

Space/Activity Management

CPTED principles promote the adoption of space/activity management strategies as a way to develop and maintain natural community control. The proposed development achieves this through the design of buildings orientated to the exterior of the Site and promotion of interior open spaces not accessible or visible from the public domain. The Site will be maintained by a General Attendant which will discourage criminal behaviour. Graffiti resistant materials will be used wherever practicable, particularly on fences and buildings to assist in removal. External lighting will also be provided to deter the carrying out of anti-social and criminal activities both within and along the boundaries of the Site.

6.6.7 Noise and Vibration

Day Design has prepared an Acoustic Assessment Report (**Appendix 25**) in accordance with the SEARs, seeking to identify the extent of noise emission and noise intrusion and provide recommendations (where relevant) ensure that relevant criteria is complied with, throughout both the construction and operational phases of the development.

The Acoustic Assessment has been carried out having regard to the relevant policies and guidelines identified by the SEARs, and notes that acceptable noise limits are derived from the EPA's *Industrial Noise Policy* for intrusive noise impacts, and the Association of Australasian Acoustical Consultants (AAAC) *Technical Guideline for Child Care Centre Noise Assessment* noise criteria for children in outdoor areas.

The Site is surrounded by residential receptors to the north (immediately adjoining the Site), east (across Arcadia Street) and south (across Forest Road). To the west, the site adjoins St Declan's Catholic Primary School. Accordingly, Day Design has undertaken measurements from both the northern and southern ends of the Penshurst Public School site, which established the ambient noise levels for the assessment throughout seven (7) days of ideal atmospheric conditions.

The Acoustic Assessment Report establishes noise intrusiveness criteria for residential receptors between 7am and 10am, and also lists the amenity criteria for the various types of receivers. The Report also establishes the road traffic noise criteria required for assessment of sensitive development adjoining busy roads. The combination of these criteria enabled the Report to establish project specific noise emission criteria for the purposes of the assessment.

Regarding the assessment of noise emission from outdoor areas, Day Design found that the worst case scenario for noise mission would result from outdoor play on the roof of the building by the total permissible number of students, being 680, engaged in active play. The predicted noise levels of all students were then used as the worst case on the worst affected receptors, finding that the predicted noise level would exceed the amenity noise criteria at 12 Arcadia Street (third floor) and St Declan's Catholic Primary School (second floor). The Report provides the following assessment in support of the proposal:

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With a standard 1.2 metre high balustrade, the noise from outdoor play will likely exceed the acceptable noise criteria by up to 7 dB. However, the noise levels will still be within the residential amenity noise criteria. The amenity criteria for the adjacent school will be exceeded by 7 dB, however are likely to be generating their own noise during recess and lunch breaks when the above is proposed to take place. Given the existing School noise emission, the limited duration of noise from outdoor play, the zoning of the site and expectations of noise from children we are of the opinion that the noise from outdoor play would be considered acceptable.

The Report provides guidance for the location/placement of public address speakers, however the maximum sound pressure level of all speakers should not exceed 80 dBA at 3 metres from each speaker in order to meet the residential noise criteria.

Section 5.3 of the Acoustic Assessment Report reviews the use of the school hall by students and teachers during school hours, and the potential for infrequent use by community groups outside of the school hours or for after-school events. All activities would be within the acceptable noise criteria, except for the predicted noise level at St Declan's Catholic Primary School (second floor) for indoor ball sports during school hours and for concerts after school hours. The Report finds these outcomes acceptable and recommends "that all windows and doors be kept closed during noisy events to meet the acceptable noise criteria when the adjacent St Declan's Primary School is in use".

Regarding the assessment of noise emission from on road traffic, Day Design has found that the predicted level of traffic noise at the most affected residences is within the Road Noise Policy criteria and is therefore considered acceptable.

Regarding the assessment of noise emission from mechanical plant, Day Design has found that (based on assumptions for the locations and model of 33 air conditioning condensers) it is likely that the noise emission will be able to meet the noise criteria. It is recommended that a final assessment should be made of the mechanical plant noise emission once the mechanical plant selection has been finalised.

The Acoustic Assessment Report provides an assessment of acceptable noise intrusion levels pursuant to the NSW Road Noise Policy 2011, Australian Standard AS2107:2016 *Acoustics – Recommended design sound levels and reverberation times for building interiors*, and the EFSG. The assessment of road traffic noise levels identifies required traffic noise reduction levels for all classrooms at the front and rear of the site (from Forest Road), and provides recommendations for acoustical treatments to ensure these levels are achieved, including:

- External walls to be constructed of double brick or brick veneer – where a lightweight wall is proposed, recommendations for cladding, plasterboard and insulation are provided;
- Design for ceiling and roof systems to be concrete slab, minimum 200mm thick; and
- Treatment of glazing for windows and doors, relevant to the distance of that room from Forest Road, with higher specifications required for rooms closer to the southern boundary (see **Figure 24**).

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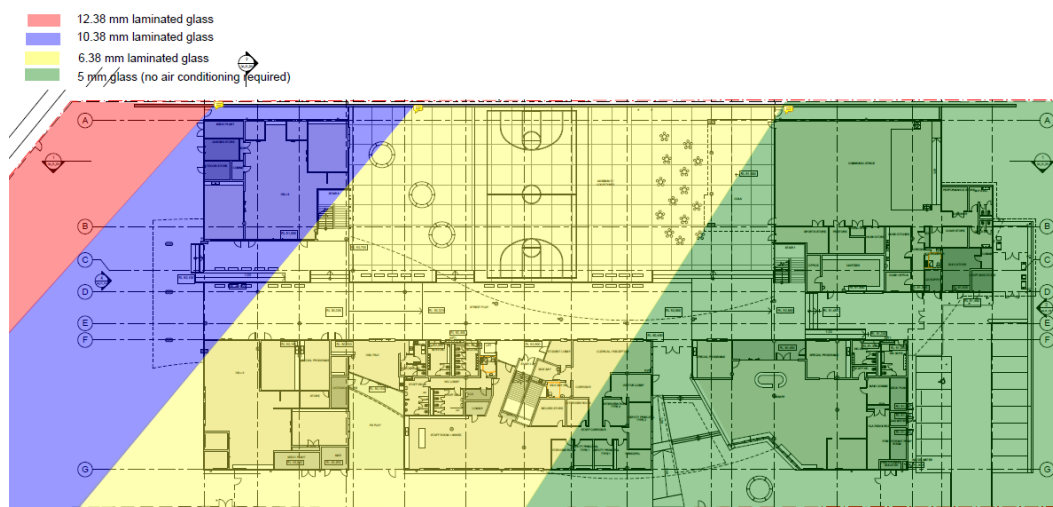


Figure 24 Extract from Acoustic Assessment Report – Recommended Glazing Treatments

In Sections 9, 10 and 11 of their Report, Day Design identifies noise and vibration criteria for construction noise (including review of EPA construction noise and vibration guidelines), provides an assessment of the site preparation, earthworks and construction stages of the development against the criteria, and provides recommendations to address the predicted level of noise and vibration emission resulting from the construction works.

The Acoustic Assessment Report concludes the following:

“Measurements and calculations show that the level of noise emitted by the proposed redevelopment of Penshurst Public School will be able to meet the acceptable noise level requirements of the EPA NSW Industrial Noise Policy as detailed in Section 4 of this report.

The level of road traffic noise intrusion has been assessed and recommendations for façade construction has been provided to meet the recommended internal noise levels as detailed in Section 6 of this report.

The noise impact due to the proposed construction activities have been predicted at all nearby receptor locations. The Noise Management Level is predicted to be exceeded at times and therefore recommendations for noise controls have been provided in Section 11 of this report.”

Day Design’s assessment methodology, findings and recommendations are supported by this Report and it is assumed that these recommendations will be incorporated into the conditions of consent for the proposal once approved.

6.6.8 Stormwater Drainage

Woolacotts has prepared a Stormwater Management Report (incorporating Integrated Water Management) (**Appendix 14**) accompanied by Stormwater Management Plans (**Appendix 15**), as discussed at **Section 4.7**.

Woolacotts has reviewed the extent of the Probable Maximum Flood (PMF) for the area as detailed in Council’s flood maps, concluding that the PMF does not extend into the Site, and therefore the Site is not subject to flooding.

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Figure 25 Georges River Council Flood Map showing extent of PMF

The proposed development consists of the construction of new school buildings on the existing Site replacing all existing buildings. The hard paved area on the development site will be 71%, approximately 300m² less than on the existing site.

On-site stormwater detention (OSD) is required to restrict the peak flow from the developed site in a 1% (100year ARI) storm event back to the peak flow from existing site in a 20% (5 year ARI) storm event. It is proposed to provide the required OSD in a tank, located beneath a classroom block, with access into the tank available from outside the building. Locating the tank in this position minimises excavation, as the ground slope in the area can be used as part of the space and also allows the most efficient use of surface area for playgrounds.

Currently the site has a number of connections to the street drainage system. It is proposed that the existing connections to the kerb and gutter are removed and a new connection provided to the Council pit in Arcadia Street, located approximately 30m from the corner of Forest Road. The majority of the site will drain to this pit. The existing connection to the pit immediately adjacent to the corner will be maintained and will drain the south-east corner of the site, which is unable to drain to the main system.

A rainwater tank will be located adjacent to the OSD tank, with an internal wall separating the rainwater stormwater portion from the detention portion. The pipe system for the main part of the site will drain to the rainwater tank. When water reaches the top of the wall it will overflow into the OSD part. A gross pollutant trap will be provided upstream of the tank, to remove rubbish and leaf litter.

6.6.8.1 Sediment, Erosion and Dust Control

The Stormwater Management Report includes an Erosion and Sediment Control Plan (**Appendix 15**) which details the management strategies to be implemented during the construction phase to minimise the impacts of sedimentation and erosion across the site.

The Preliminary CMP prepared by Root Partnerships (**Appendix 27**) sets out additional considerations for the environment and amenity, including dust mitigation measures, details of which will be set out in the EMP prepared by the head contractor.

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6.6.9 Waste

A Waste Management Plan has been prepared by Root Partnerships (**Appendix 28**) which identifies the likely waste streams to be generated during the construction and operation phases of the development. The Waste Management Plan outlines measures to avoid the generation of unnecessary waste, minimise the volume of waste to be collected, and recycle, reuse and recover waste generated by the proposed works. The Plan includes appropriate servicing arrangements for the site.

6.6.10 Contributions

The proposed development is for social infrastructure by a Crown developer, and therefore is not subject to the levying of development contributions. Consistent with the advice from DPE in Circular D6, a DA for a Crown authority for 'educational services' should not be subject to the levying of contributions for open space, community facilities, parking, or general local and main roads.

6.7 Suitability of the Site for Development

The following subsections assess the suitability of the Site in accordance with Section 4.15(1)(c) of the EP&A Act.

6.7.1 Contamination, Salinity and Acid Sulfate Soils

As discussed in **Section 6.4.4**, the PSI and DSI/RAP prepared by Environmental Investigation Services (see **Appendix 7** and **Appendix 8**) indicate that the Site is subject to minor contamination and requires remediation as outlined in the RAP prior to being suitable for the proposed educational use. It is proposed that site works will be carried out in accordance with the recommendations of the RAP, such that the Site is made suitable for the proposed development.

With respect to salinity no information had been found which indicated a salinity risk that warranted further investigation, however further investigations can be undertaken prior to the commencement of work if DPE deem it necessary.

With respect to acid sulfate soils (ASS), the Site is not located on land identified as under Class 1-5 ASS and is some 2km southwest of the nearest land mapped as Class 5 ASS. In addition, the proposed works will not involve the major excavation of land below 2-3m from existing ground level. Given the separation from land identified as comprising ASS and the limited earthworks proposed, an Acid Sulfate Soils Management Plan is not considered necessary.

6.7.2 Bushfire

No part of the Site is identified as bushfire prone land on Council's Bushfire Prone Land Map nor is the Site in close proximity to Bushfire Prone Land such that a detailed assessment in this regard is warranted.

6.7.3 Utilities

6.7.3.1 Hydraulic Utilities and Services

Woolacotts has prepared a preliminary engineering assessment of hydraulic services (**Appendix 19**), including details of cold water services, hot water services, gas services, sewer/waste water services, trade waste drainage, stormwater drainage, fire hydrant services, and fire hose reel services.

The Site has access to suitable water utilities, will be fitted out with suitable water services and will provide for adequate stormwater drainage servicing. The proposal includes a component of rainwater storage and reuse, as well as rainwater harvesting (**Appendix 14**). As detailed in the ESD Report prepared by JHA (**Appendix 26**), the development will incorporate practical water conservation systems which contribute to Green Star credit WAT-1.

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6.7.3.2 Electrical and Telecommunication Utilities and Services

JHA has prepared an Infrastructure and Services Brief for the expansion of Penshurst Public School (**Appendix 20**), which details the utility services for the Site, including existing and proposed arrangements for electrical and telecommunications services, and includes details of correspondence with service authorities in compiling the requirements in the Brief.

The proposed development is able to achieve access to adequate electrical/telecommunications services required for the expanded public school.

6.7.4 Accessibility

An Accessibility Report has been prepared by du Chateau Chun (**Appendix 24**) which provides a review of all aspects of access to and within the Site with respect to the Building Code of Australia (BCA), *Disability Discrimination Act 1992 (Cth)* (DDA), Universal Guidelines and relevant Australian Standards.

The Accessibility Report concludes as follows:

"It is recommended that a further review be undertaken to identify the gaps in the design between the DDA and Premises Standards, including opportunities for providing accessibility features which extend beyond the scope of Premises Standards.

At this stage, it does not appear that there are non-compliances to the building, which can be addressed under a performance solution.

We have assessed the architecture documentation available to date and have reviewed the proposed works with respect to the Building Code of Australia 2016 and Premises Standards."

Therefore, accessibility to and within the Site is considered to be acceptable at this planning stage of documentation.

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6.8 Public Interest

In accordance with Section 4.15(1)(e) of the EP&A Act, the proposed development is in the public interest as it:

- Will meet the current and future education demands for residents of Penshurst and the surrounds;
- Will ensure the established use of the site as an educational establishment (being of cultural heritage significance) is enhanced and ensured for the long-term;
- Will provide high quality learning and teaching spaces with flexible layout arrangements and durable finishes ensuring the proposal operates as a long-life, high utility and low maintenance educational establishment;
- Has been designed in accordance with the visions, objectives and expectations of the community, the Department of Education and relevant experts;
- Incorporates appropriate design and urban design analysis to ensure the best design outcome is achieved for the Site, students and surrounds, including the use of a 3 storey built form;
- Is permissible in the land use zone and is generally consistent with relevant planning controls and legislation;
- Will minimise the potential for environmental amenity impacts through both the construction and operational phases;
- Will incorporate ESD initiatives which are equivalent to a Green Star – Education v1 Design & As Built 5 Star rating, which is considered to be best practice within the Australian building industry;
- Achieves appropriate environmental performance outcomes in relation to acoustic amenity, stormwater drainage, and waste management;
- Will be provided with adequate connection to necessary infrastructure and servicing to ensure the development operates smoothly at full capacity; and
- Is capable of meeting the deemed-to-satisfy provisions of the BCA and the spirit and intent of the DDA.

7 Other Statutory Approvals

7.1 General

The proposed development may require, or may be construed as requiring, several approvals, consents, licences, permits or permissions from various government departments, pursuant to legislation other than the EP&A Act and accordingly, this section provides a brief assessment of relevant other legislation.

7.2 Commonwealth Department of Environment and Energy

7.2.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

Part 3 Division 1 Subdivision C of the EPBC Act provides, amongst other things, that a person must not take an action that has, will have or is likely to have a significant impact on:

- a listed threatened species included in the extinct in the wild, critically endangered, endangered or vulnerable categories; or
- a listed threatened ecological community included in the critically endangered or endangered categories;

unless a '*controlled action*' approval has been granted under Part 9 Section 133 of the EPBC Act. The Commonwealth Minister for the Environment and Energy is responsible for the decision on such an approval.

Pursuant to section 45 of the EPBC Act, a bi-lateral agreement has been signed between the Commonwealth Department of Environment and Energy and the NSW Office of Environment and Heritage (OEH) which authorises the OEH to undertake the environmental assessment required pursuant to the EPBC Act and to furnish the Commonwealth Minister with an assessment report which may recommend whether approval should be granted and conditions that may be imposed on any approval. The Commonwealth Minister is responsible for the final decision.

The Site does not contain any Endangered Ecological Community (EEC) under the EPBC Act and accordingly, a controlled action approval is not required under section 133.

7.3 NSW Department of Planning and Environment (DPE) – Office of Environment and Heritage (OEH)

7.3.1 Heritage Act 1977

The *Heritage Act 1977* contains provisions relating to the protection of items of State heritage significance or items of potential significance.

Section 57 relates to items listed in the State Heritage Register or to which an interim heritage order applies and development relating to such items triggers the integrated development provision of the EP&A Act. There are no such items on the Site.

Section 139 of the Act requires that an Excavation Permit is required prior to undertaking any development which involves excavation of land where there is reasonable cause to expect that a relic² will be discovered or disturbed. Pursuant to Section 89J(1)(c) of the EP&A Act, granting of development consent to a SSD exempts a proponent from the requirement to obtain a Section 139 permit.

Notwithstanding, the SoHI prepared by Perumal Murphy Alessi (**Appendix 16**) has considered the potential for significant archaeological deposits, and outlines the following:

"The 1925 building appears to be the first to be constructed on the site and archaeological potential is considered to be low with any early sub surface resources likely to have been

² **relic** means any deposit, artefact, object or material evidence that:

(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
(b) is of State or local heritage significance.

7 Other Statutory Approvals

highly disturbed by the clearing of the site, construction of the buildings, alterations and additions to the building and school site.

The 1925 building, other early and later buildings and elements incorporate standard construction materials and details which are not unique or rare and would not reveal any information that is not available elsewhere. Materials on the 1925 building such as the roof cladding and timber framed windows have also been replaced and chimneys have been removed which reduces the likelihood of any significant resources in roof and wall cavities.

However, some bricks from the 1925 building and associated front fence should be retained, recycled and re-used as part of the landscaping, new fencing and proposed interpretive elements on the site."

Having regard to the above, no further assessment of European heritage is considered to be warranted.

7.3.2 National Parks and Wildlife Act 1974 (NPW Act)

The NPW Act contains provisions relating to the protection of native terrestrial fauna, flora and Endangered Ecological Communities (EEC) and contains the primary statutory controls relating to Aboriginal heritage in NSW.

Section 90 of the NPW Act requires an Aboriginal Heritage Impact Permit (AHIP) to be granted by OEH for any works likely to impact on an Aboriginal Place or Aboriginal object³.

Notwithstanding, an Aboriginal Archaeological Assessment (AAA) was undertaken by Apex Archaeology (see **Appendix 5**), which was produced in accordance with the OEH 2010 *Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW* and the OEH 2010 *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*. The AAA was informed by a search of the AHIMS database, site visit and visual inspection of the study.

The investigations found that there two (2) previously recorded sites within a 1km radius of the Site, but no site recorded within the current study area. Further, no newly identified archaeological material was identified during the survey, and no surface archaeological sites or areas of sub-surface potential were identified.

The AAA provided four (4) recommendations as follows:

- *No further Aboriginal archaeological assessment is required prior to the commencement of upgrade works as described in this report.*
- *The results of this assessment fulfil the requirement for Due Diligence in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (Code of Practice). Works may proceed with caution.*
- *The proposed works must be contained to the area assessed during this due diligence assessment, as shown on Figure 2. If the proposed location is amended, further archaeological assessment may be necessary to determine if the proposed works will impact any Aboriginal objects or archaeological deposits.*
- *Should unanticipated archaeological material be encountered during site works, all work must cease and an archaeologist contacted to make an assessment of the find. Further archaeological assessment and Aboriginal community consultation may be required prior to the recommencement of works. Any objects confirmed to be Aboriginal in origin must be reported to the OEH under Division 1, Section 89A of the NPW Act.*

Accordingly, no further assessment of Aboriginal heritage is considered to be warranted.

³ **Aboriginal object** means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

7 Other Statutory Approvals

7.3.3 Threatened Species Conservation Act 1995 (TSC Act)

As discussed at **Section 6.3** in regard to the Biodiversity Conservation Act 2016, the proposal is being assessed under the legislation in force prior to 25 August 2017, which includes the TSC Act (now repealed).

The TSC Act contains provisions requiring the identification of any vulnerable, endangered or critically endangered flora or fauna species, populations or ecological communities associated with a proposed development site.

Section 91 of the TSC Act requires a licence to be issued by OEH before any action may take place which may harm or damage a threatened species, population or ecological community although this does not trigger the Integrated Approval provisions of the EP&A Act.

Furthermore, if a proposal is considered to have a significant impact, the Act requires a Species Impact Statement (SIS) to be prepared and that appropriate recovery and management strategies be implemented.

The proposed development proposes the removal of 25 trees, none of which are listed as vulnerable, endangered or critically endangered flora or ecological communities under the TSC Act, accordingly, the proposal is taken to be “*development that is not likely to significantly affect any threatened species, population or ecological community, or its habitat*”.

7.4 Department of Primary Industries – NSW Office of Water

7.4.1 Water Management Act 2000 (WM Act)

The object of the WM Act is the “*sustainable and integrated management of the State's water for the benefit of both present and future generations*”.

Part 3 of Chapter 3 of the WM Act relates to Approvals and Section 91(2) requires a ‘controlled activity approval’ (CAA) for works at a specified location in, on or under ‘waterfront land’.

Pursuant to Section 89J(1)(g) of the EP&A Act, granting of development consent to a SSD exempts a proponent from the requirement to obtain a CAA.

Section 91(3) requires an ‘aquifer interference approval’ (AIA) for an aquifer interference activity⁴. Granting of development consent to a SSD does not exempt a proponent from the requirement to obtain a AIA.

The Geotechnical Investigation report prepared by JK Geotechnics (see **Appendix 6**) indicates that groundwater was not encountered during or at completion of auger drilling and that long term monitoring of water depths in sample bore holes indicated a water depth of between 7.15 and 7.4m. As the proposed development does not include excavation to these levels it is considered unlikely that the proposal would intersect any aquifer and accordingly, an AIA is not required.

⁴ **aquifer interference activity** means an activity involving any of the following:

- (a) the penetration of an aquifer,
- (b) the interference with water in an aquifer,
- (c) the obstruction of the flow of water in an aquifer,
- (d) the taking of water from an aquifer in the course of carrying out mining, or any other activity prescribed by the regulations,
- (e) the disposal of water taken from an aquifer as referred to in paragraph (d).

7 Other Statutory Approvals

7.5 NSW Department of Transport (DoT) - NSW Roads and Maritime Services (RMS)

7.5.1 Roads Act 1993

Section 138(1) of the *Roads Act 1993* relates to works associated with public roads and provides that a person must not:

- “(a) erect a structure or carry out a work in, on or over a public road, or*
 - (b) dig up or disturb the surface of a public road, or*
 - (c) remove or interfere with a structure, work or tree on a public road, or*
 - (d) pump water into a public road from any land adjoining the road, or*
 - (e) connect a road (whether public or private) to a classified road,*
- otherwise than with the consent of the appropriate roads authority.”*

The Site is situated on the corner of Forest Road and Arcadia Street both of which are public roads. The proposal comprises only a minor modification to the existing vehicle crossing, and does not include any other works to the public domain, only changes to the road signage to accommodate an expanded Kiss and Drop Zone (which is not included under Section 138 of the *Roads Act*).

Council is the relevant roads authority for these roads for the purposes of the *Road Act 1993* and it is expected that the final design for the vehicle crossover and street signage will be resolved with Council as part of the DA consultation process.

In addition, pursuant to Section 89K(1)(f) of the EP&A Act, should development consent be granted to the proposed SSD, consent under s138 cannot be refused if it is necessary for carrying out of the development and must be substantially consistent with the SSD development consent.

8 Environmental Risk Assessment

8.1 Risk Assessment

A risk assessment of the potential environmental impacts associated with the proposed development has been undertaken in **Table 17**, using the matrix in **Figure 26** based on likelihood and consequence to identify the level of risk.

			Likelihood					
			1	2	3	4	5	6
			Remote	Highly unlikely	Unlikely	Possible	Likely	Highly likely
Consequence	A	Catastrophic						
	B	Massive					Critical	
	C	Major				High		
	D	Moderate			Medium			
	E	Minor		Low				
	F	Slight						

Figure 26 Environmental Risk Matrix (Source: INPEX)

Table 17 Risk Assessment				
Potential Impact	Level/Scale of impact	Consequence	Likelihood	Risk
Construction Phase				
Spillage of fuel or oils from or for use in Machinery	Limited to small capacity fuel tanks of on-site machinery	Minor	Unlikely	Low
Excessive noise or vibration resulting from use of construction machinery	Subject to machinery used, level of impact is limited to school site and immediate surrounds.	Moderate	Likely	High
Increase in construction traffic	Limited to roads immediately surrounding the site, including Arcadia Street, Percival Street and Penshurst Stet.	Minor	Likely	Medium
Safety of the public	Personal injury due to construction practices/materials	Moderate	Highly Unlikely	Medium

8 Environmental Risk Assessment

Table 17 Risk Assessment

Potential Impact	Level/Scale of impact	Consequence	Likelihood	Risk
Potential identification of items of archaeological significance during construction phase	Disturbance of archaeological artefacts (unexpected finds) (Appendix 5)	Minor	Unlikely	Medium
Potential identification of acid sulfate soils during construction phase	Potential unknown, if present only likely to be very localised.	Minor	Highly Unlikely	Low
Potential identification of contaminated materials during construction phase	Potential unknown, if present only likely to be very localised. (Appendix 8)	Minor	Unlikely	Medium
Potential for reduced air and water quality during construction phase	Movement of vehicles and construction material (particularly at early stages) will stir up and displace earth/dust, potentially impacting surrounding development.	Moderate	Possible	High
Visual or amenity impacts resulting from new built form	Limited to public domain (of Arcadia Street and Forest road) and surrounding residential development.	Minor	Slight	Low
Operational Phase				
Noise - Traffic	Increase in noise due to vehicular traffic (Appendix 25)	Slight	Unlikely	Medium
Noise – School (Play Spaces)	Increase in noise due to children's use of outdoor play spaces and/or PA systems (Appendix 25)	Moderate	Likely	High
Reduction in solar access	Limited overshadowing of the road reservation (Appendix 10)	Slight	Highly Unlikely	Low
Increase in parking demands on local roads during operation phase	Limited to surrounding road network. (Appendix 17)	Minor	Possible	Medium

8.2 Risk Management

A Risk Management Plan has been prepared in respect of any impacts identified above as carrying Medium, High or Critical environmental risk. **Table 18** sets out these potential impacts, the level of control/s required and a control strategy for each risk.

Table 18 Risk Management Plan

Potential Impact	Level of Control	Control Strategy
Construction Phase		
Excessive noise or vibration resulting from use of construction machinery	Isolation Reduction	- Construction Hours to be limited to: - 7am to 7pm Monday to Friday - 8am to 5pm Saturdays - No work on Sundays or Public Holidays without permission - Site Access and vehicles routes to avoid (as far as possible) residential receptors - Construction vehicles to be parked on-site and workers instructed not to park in surrounding residential streets, if possible. Use of barriers, enclosures and/or silencers where necessary to meet EPA noise limits.

8 Environmental Risk Assessment

Table 18 Risk Management Plan

Potential Impact	Level of Control	Control Strategy
Increase in construction traffic	Engineering controls, Procedures and training	A preliminary CMP, incorporating a Construction Traffic Management Plan, has been prepared (Appendix 27) which details the controls and procedures relevant to the minimising of risk associated with construction traffic movements resulting from the proposed development. These include clear identification of entry/exit crossings, traffic management and awareness of conflict with students, parents and staff of the school.
Safety of the public	Isolation Procedures and Training	1. Site fencing and hoarding to be used. 2. Secure fences/gates to prevent unauthorised site entry 3. Training of workers responsible for use of heavy machinery/cranes or the like.
Potential identification of items of archaeological significance during construction phase	Procedures and Training	1. Where relevant, workers to be trained in unexpected finds protocols. 2. In the event of an unexpected find, work to cease until approval is granted to proceed.
Potential identification of contaminated materials during construction phase	Engineering controls, procedures and training	A Remediation Action Plan (RAP) has been prepared (Appendix 8) which identifies remedial goals, aims and objectives, as well as the sequence of remediation works required to address the findings of the DSI.
Potential for reduced water quality during construction phase	Engineering controls, procedures and training	The development will be the subject of sediment and erosion management practices as detailed in the Plans at Appendix 15 , as well as site preparation works which minimise the disturbance and transport of earth/dust within and outside of the site, including the use of water trucks, wheel wash bays and other measures as appropriate.
Potential for reduced air quality during construction phase	Elimination Reduction Engineering Controls	1. Construction Hours to be limited to: - 7am to 7pm Monday to Friday - 8am to 5pm Saturdays - No work on Sundays or Public Holidays without permission 2. Haulage trucks to be covered 3. Earthworks to be restricted during high wind periods 4. Watering down of exposed soils; 5. Truck shaker grids to be installed at exit points
Operational Phase		
Noise - Traffic	Reduction Engineering Controls Procedures and Training	1. All staff and service vehicles to use designated entry/exit points to the Site. 2. Staff and students to be encouraged to use sustainable transport modes 3. All student drop off/pickup activities be undertaken using the dedicated vehicle and bus laybys.
Noise – School (Play Spaces)	Isolation Reduction Procedures and Training	1. Outdoor activities to be undertaken primarily in the designated play spaces oriented away from the southern and eastern frontages. 2. Acoustic screening will be provided at the roof-top play areas to minimise the impacts of noise on neighbours. 3. Staff and students to be informed regularly of residential neighbours and advised to keep noise to a minimum. 4. Public announcement systems not to be used outside of core school hours.
Increase in parking demands on local roads during operation phase	Reduction Procedures and Training	TTM has prepared a Traffic Assessment (Appendix 17) which provides an assessment of the existing and proposed on-street parking conditions. The Assessment includes a Green Travel Plan and recommends promotion of sustainable travel methods to reduce the dependence on private vehicle transport within the school catchment.

9 Conclusion

The NSW Department of Education proposes the demolition of the existing Penshurst Public School facilities and construction of new facilities to cater for an increase of up to 1,012 students at 510 Forest Road, Penshurst. The proposal has a CIV exceeding \$20 million and therefore must be assessed as SSD, pursuant to the State and Regional Development SEPP.

The NSW Department of Planning and Environment issued the SEARs for the proposed development in April 2017 (reissued 29 September 2017), and the requirements of the SEARs have formed the basis of the design development process as well as the assessment carried out within the body of this EIS Report. A response to all requirements set out in the SEARs has been provided, as referenced at **Section 1.4**.

The project team has carried out consultation with a wide range of stakeholders, including State government departments, local government, community and experts in the design of schools. The advice received throughout the consultation process has informed the consideration of heritage significance and has been incorporated into the current proposal where possible, reflecting a commitment to provide a quality and objective-driven outcome.

The proposed development has been assessed in accordance with the provisions of Section 4.15 of the EP&A Act 1979 and is generally consistent with the relevant objectives and planning controls.

In response to the opportunities and constraints of the site, the requirements of the EFSG and the design requirements of the NSW Department of Education, the proposal has been designed to meet the current and future education demands for residents of Penshurst and surrounds by providing 47 teaching spaces and over 9,000m² of play space in a three (3) storey built form with high quality design features, materials and finishes. This has been the result of a prolonged process of consultation, options analysis and design development.

In addition, the proposed building works will provide high quality learning and teaching spaces with flexible layout arrangements and durable finishes ensuring the proposal operates as a long-life, high utility and low-maintenance educational establishment.

The loss of the heritage building represents the progression of contemporary education facilities, designed to meet current-era objectives and design standards, such as Future Focussed Learning. The cultural significance of the Site, owing to its continual use as an educational establishment for over 100 years, will be retained and ensured to continue for decades to come.

The development proposes to provide a total of 15 car parking spaces on the site, due to area restrictions and in line with the Department of Education policy to promote sustainable travel initiatives. The car parking outcomes for the proposal have been assessed having regard to the adoption of a Green Travel Plan and availability of on-street car parking spaces, and are considered supportable in the circumstances of the subject development.

The proposal achieves acceptable environmental amenity outcomes, including desirable outcomes for acoustic amenity (both internal and external to the site), stormwater drainage, and waste management. Furthermore, the proposal will incorporate ESD initiatives equivalent to a Green Star – Education v1 Design & As Built 4 Star rating, which is considered to be best practice within the Australian building industry.

The works proposed under this DA will be subject to the recommendations of specialist reports so as to ensure appropriate heritage, geotechnical, contamination, archaeological, traffic and acoustic outcomes are achieved.

The proposed works have been designed to, and will be carried out in the interests of the public. The Development Application will meet the project objectives to provide additional primary school accommodation in a high quality built form which has safe and efficient access for children, teachers, visitors and service personnel.

9 Conclusion

Accordingly, it is recommended that the Minister for Planning and Environment approves the proposed SSD DA.