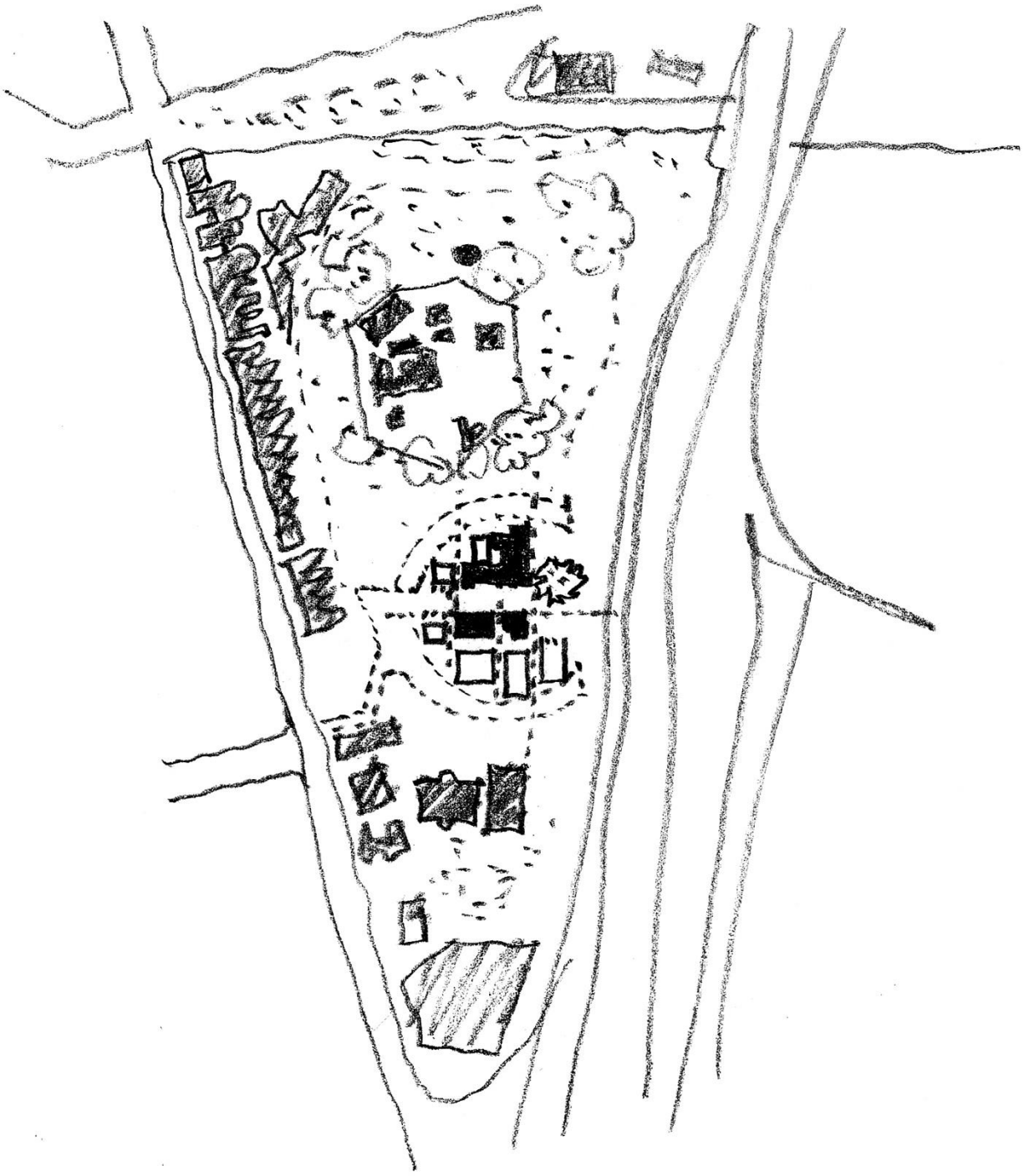
Fort Street Public School
Environmental Impact Statement

SSD 10340
Prepared by Ethos Urban
For School Infrastructure NSW
19 March 2020



ETHOS URBAN

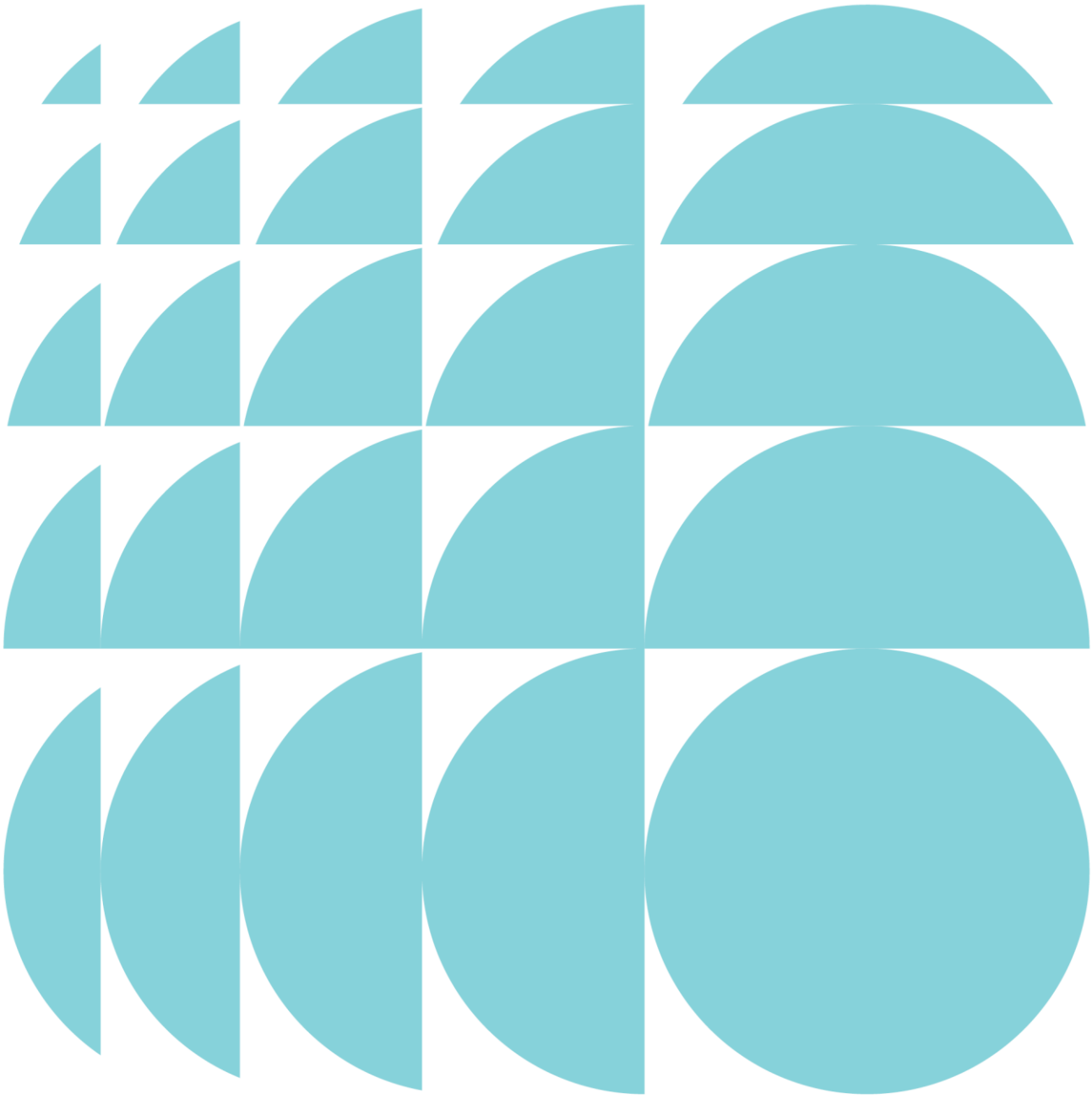
Environmental Impact Statement

Upper Fort Street, Millers Point
Fort Street Public School

Submitted to the Department of Planning, Industry and Environment

On behalf of NSW Department of Education - School Infrastructure NSW

March 2019 | 218945



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Submitted Under Separate Cover

Statement of Validity

Development Application Details	
Applicant name	School Infrastructure NSW
Applicant address	Level 8, 259 George Street, SYDNEY
Land to be developed	Fort Street Public School Upper Fort Street, Millers Point
Proposed development	Redevelopment of Fort Street Public School as described in Section 3 of this Environmental Impact Statement
Prepared by	
Name	Kate Tudehope
Qualifications	B(Plan) Hons
Address	173 Sussex Street, Sydney
In respect of	State Significant Development - Development Application
Certification	
	I certify that I have prepared the content of this EIS and to the best of my knowledge: it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000; all available information that is relevant to the environmental assessment of the development to which the statement relates; and the information contained in the statement is neither false nor misleading.
Signature	
Name	Kate Tudehope
Date	19/03/2020

Executive Summary

Purpose of this Report

This submission to the Department of Planning, Industry and Environment (the Department) comprises an Environmental Impact Statement (EIS) for a Development Application under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It relates to the redevelopment of Fort Street Public School (FSPS).

The redevelopment of FSPS is identified as State Significant Development (SSD) in accordance with Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP). Development of educational establishments for the purposes of alterations or additions to an existing school with a capital investment value of more than $20 million is SSD for the purposes of the EP&A Act. As the proposed development will have a capital investment value exceeding $20 million it is SSD. A QS Report is provided under separate cover.

A request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was sought in May 2019. Accordingly, the SEARs were issued on 28 June 2019. Revised SEARs were issued for the project on 22 November 2019. This submission is in accordance with the Department's guidelines for SSD applications lodged under Part 4 of the EP&A Act, and addresses the issues raised in the SEARs.

Overview of the Project

The Development Application (DA) seeks approval for the expansion of FSPS to accommodate a total of 550 primary school students. In the future, the site could cater for a maximum capacity of 600 students through the construction of an additional building to the west of the existing FSPS building, however this is beyond the remit of this SSD DA and is currently unfunded.

A detailed description of the development is provided in **Section 3**. In summary, approval is sought for:

- Site preparation works including remediation, demolition and excavation;
- Refurbishment of existing buildings;
- Construction of new buildings;
- Landscaping; and
- Other works including widening of the existing entrance road and modifications to existing pick-up and drop-off arrangements.

An image of the proposed development is provided at **Figure 1**.

The Site

The site is located in the north of the Sydney CBD within the City of Sydney Local Government Area (LGA).

The site is located south west of the southern landing of the Sydney Harbour Bridge and adjacent to the Sydney Observatory. The site is surrounded on all sides by the Cahill Expressway as it becomes the on-ramp to the Bradfield Highway.

Planning Context

Section 5 of the EIS considers all applicable legislation in detail. The proposal is consistent with the requirements of all relevant State Environmental Planning Policies. The site is zoned B8 Metropolitan Centre, in which a broad range of uses, including educational establishments, are permitted with consent. The site is not affected by any height or floor space ratio development standards.

Environmental Impacts and Mitigation Measures

This EIS provides an assessment of the environmental impacts of the project in accordance with the SEARs and sets out the undertakings made by NSW Department of Education - School Infrastructure NSW (SINSW) to manage and minimise potential impacts arising from the development.

Conclusion and Justification

The EIS addresses the SEARs, and the proposal provides for the redevelopment of FSPS with modern and improved facilities. It will also enable the upgrade and reuse of significant heritage buildings on the site. The upgrades to FSPS to increase the capacity of the school will increase the quantity and range of enrolment opportunities for existing families and children living in the area. This will contribute to meeting forecast demand for education facilities in the City of Sydney LGA.

Increased capacity at Fort Street Public School will enable local students to be educated close to their homes, social networks and connections, preventing displacement of children from their local communities in order to access education opportunities. The potential impacts of the development are acceptable and are able to be managed. Given the planning merits of the proposal, the proposed development warrants approval by the Minister for Planning and Public Spaces.

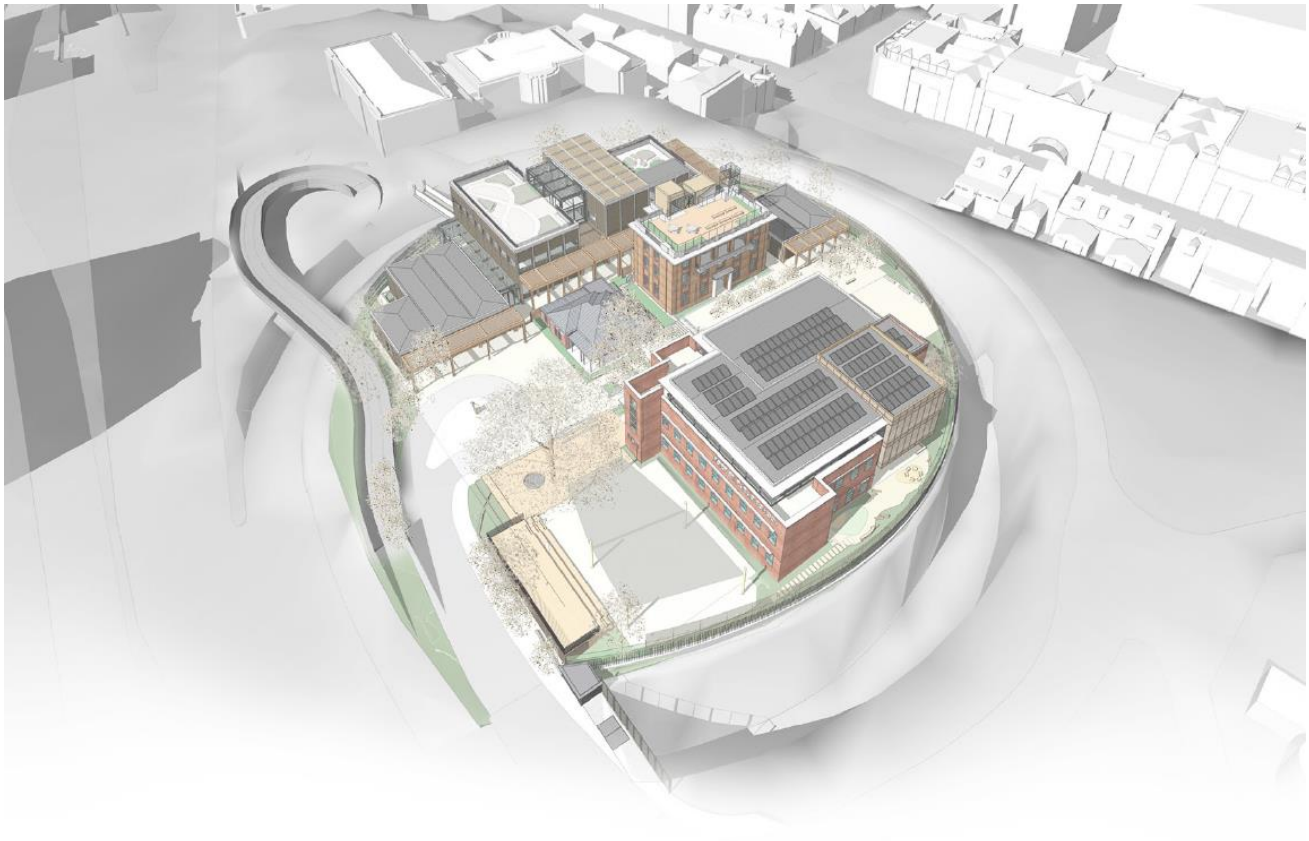

Figure 1 Aerial view of the proposed Fort Street Public School

Source: FJMT

1.0 Introduction

This Environmental Impact Statement (EIS) is submitted to the Department of Planning, Industry and Environment (the Department) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) in support of an application for State Significant Development (SSD).

The redevelopment of Fort Street Public School (FSPS) is identified as SSD in accordance with Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP). Development of educational establishments for the purposes of alterations or additions to an existing school with a capital investment value of more than $20 million is SSD for the purposes of the EP&A Act. As the proposed development will have a capital investment value exceeding $20 million it is SSD. A QS Report is provided under separate cover.

The report has been prepared by Ethos Urban on behalf of NSW Department of Education - School Infrastructure NSW (SINSW), and is based on the Architectural Drawings provided by FJMT (see **Appendix A**) and other supporting technical information appended to the report (see Table of Contents).

This EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), and the SEARs for the preparation of the EIS, which are included at **Appendix B.** This EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report.

1.1 Overview of Proposed Development

Approval is sought for the expansion of FSPS to accommodate a total of 550 primary school students. Specifically:

- **Site preparation, demolition and excavation**
  - Site remediation.
  - Demolition of the southernmost school building, the garage and storage shed west and east of the Bureau of Meteorology Building (the Met/the Met Building), and the toilet block adjoining the main school building.
  - Selective removal of various elements of the main school building, as well as minor and insignificant elements of the Met Building and the Messenger's Cottage to facilitate refurbishment and future use of these buildings.
  - Bulk excavation works to facilitate the new southern buildings and western addition to the main school building.
  - Tree removal.
  - Installation of hydraulic and electrical services.
- **Land use**
  - Use of all buildings for the purpose of a school.
- **Existing buildings**
  - Retention, refurbishment and extension of the existing FSPS, including construction of a new roof and rooftop additions.
  - Retention and refurbishment of the Met Building and internal alterations and additions.
  - Retention and minor alterations and additions to the Messenger's Cottage.
- **Construction of new buildings**
  - Construction of one new building on the western part of the site for a staff room.
  - Construction of two new, interconnected school buildings on the southern third of the site.
  - Construction of a new communal hall and canteen building.
- **Landscaping**
  - Retention of the existing large fig tree.

- Landscaping works throughout the site, including construction of a new amphitheatre, new central plaza, and a multi-purpose forecourt.
- Landscaping of roof gardens on top of the new southern buildings and the existing Met Building.

- **Other works**
  - Works to the existing entrance road, including alterations to the existing Bradfield Tunnel Services Building.
  - Modifications to existing pick-up/drop-off arrangements.
  - Identification of signage zones.
  - Installation of on-site detention tanks.
  - Lot consolidation

1.2 Background to the Development

Fort Street Public School (formerly Fort Street Model School) was established in 1849 at the old military hospital (now part of the National Trust Headquarters). It was one of the first public schools in Australia. In the 1850s, the school was known for setting the standard for public education in NSW.

In 1881 Fort Street Model School evolved to be Fort Street Superior Public School, which introduced secondary education for older students. In 1911, three schools were formed from Fort Street Superior Public School, being Fort Street Boys High School, Fort Street Girls High School and Fort Street Public School which all co-existed on the one campus.

In 1916, Fort Street Boys High School relocated to its present site on Parramatta Road, Petersham. In 1942, Fort Street Public School was rehoused to its present building in The Rocks/Millers Point district, which has since been heritage listed. Throughout the 1970s, Fort Street Girls High School amalgamated with the boys to become Fort Street High School.

Today, the public school caters for up to 220 primary school students. School enrolments continue to grow each year due to the growing number of families living within the inner-city areas.

Redevelopment of Fort Street has been considered by the NSW Government for a number of years, in response to three key drivers:

- **Service need**: There is a 26% increase in demand projected to 2036 for schools in the area, being driven by construction of 18,300 new dwellings during that period. FSPS remains one of the best candidates to accommodate growth in demand, given the constraints on other school sites. FSPS is also one of the most well-located schools in terms of public transport and walkability, making it suitable to accommodate additional student capacity.
- **Asset condition**: Generally, the buildings are not compatible with modern teaching practices and significant works are required to the Met Building to make it functional and safe for students. Further, the buildings do not meet the Department of Education's cooler classrooms policy or modern energy efficiency standards. Open space is also dysfunctional and below desired areas.
- **Precinct opportunities**: The site is relatively isolated due to the Cahill Expressway. There is an opportunity to better integrate the school with the surrounding Observatory Hill Precinct, to acknowledge its history by using its unique location and context to enhance environmental teaching.

These drivers have led to the current proposal to increase the capacity of FSPS from 220 to a maximum of 600 students under the Master Plan, and 550 students within the scope of this SSD DA. The project has been supported by a strong intent from the NSW Government to redevelop the site, given the increasing student demand and the prominence of the site, which led to the preparation of several Business Cases, and ultimately, a decision to further progress the upgrade and redevelopment of FSPS.

1.3 Objectives of the Development

The objectives of the FSPS redevelopment are to:

- Support flexible learning and the ability to meet the Educational Facilities Standards and Guidelines (EFSG);
- Meet the educational needs of existing students and cater for future student population growth;
- Strengthen the identity of FSPS and the education role in the greater Observatory Hill Precinct;
- Positively address the historical context of the site within the historic Observatory Hill Precinct;
- Allow opportunities for the shared use of facilities in order to encourage and support engagement with the local community;
- Respond to the site's environmental opportunities;
- Improve safety, accessibility and amenity for FSPS and other users;
- Support future school expansion and development beyond 2036; and
- Allow for ease of buildability.

1.4 Analysis of Alternatives

1.4.1 Strategic Need for the Proposal

As noted in **Section 1.2**, there are three key drivers for the redevelopment of FSPS, being:

- Service need;
- Existing asset and site condition; and
- Precinct opportunities.

These are addressed in-turn, below.

Service Need

The most significant issue that has contributed to the strategic need for the proposal is the current and future increase in student demand, both within the catchment of FSPS and the broader Inner-Sydney Primary School Community Group (SCG). This significant increase in demand of FSPS and across the school group has primarily driven the need to increase the capacity at this site.

Classrooms at FSPS are currently below the size required under the EFSG, leaving little room to compensate for the shortage in home bases or address modern pedagogical approaches. Further, across the Inner-Sydney SCG, there is a current and projected shortage in home bases to 2036. Fort Street represents one of the best-connected schools from a public transport/walkability perspective, being within walking distance of multiple heavy rail, future Sydney Metro, light rail, bus and ferry transportation options. It therefore presents an opportunity for increased student capacity in an accessible location, and provides SINSW with flexibility for student enrolments in both the FSPS catchment as well as the broader School Community Group until such time as it is required solely for use of the immediate catchment.

FSPS is uniquely placed in a location surrounded by a variety of early childhood facilities that support residents and the City of Sydney working population. There has traditionally been a strong demand for this community group to remain in this location and progress through to primary school. This demand may also be addressed by this development.

Existing Asset and Site Condition

FSPS is ageing – the newest building on the site is almost 70 years old. As such, the current buildings are not fit-for-purpose. In particular:

- Home bases and other teaching areas are not compatible with modern teaching practices, being smaller than the standard classroom sizes required under the EFSG;

- The Met Building has exceptional heritage significance and is currently in a state of disrepair and requires significant refurbishment to make it safe and habitable;
- The current configuration of buildings does not allow for effective use of open space on the site – there is an opportunity to significantly improve the amount and efficiency of open space;
- The current buildings do not meet the Department of Education's cooler classrooms policy; and
- The current buildings do not meet modern energy efficiency standards.

Precinct Integration Opportunities

The current site is physically constrained by the Cahill Expressway, which creates a defined boundary and limits opportunities for the site to interact with the broader Observatory Hill precinct, including the National Trust Centre, Observatory Hill Park, and the Museum of Applied Arts and Sciences (Sydney Observatory).

The proposal will improve pedestrian access to the site, and does not preclude further integration with Observatory Hill in the future, with potential for improved pedestrian connections and the covering of the Cahill Expressway.

Conclusion

These three factors point to an opportunity for the redevelopment of FSPS to:

- Assist in meeting future student demand;
- Address limitations with the existing school's ability to support modern educational outcomes;
- Showcase FSPS's exceptional heritage buildings;
- Provide improved opportunities for community access to the site;
- Improve student and staff safety, security and well-being; and
- Better integrate with the surrounding area.

1.4.2 Alternative Options

A range of development options have been explored in responding to the identified strategic need for the project. Overall, approximately 18 options were explored, with the final design being based on Option 16. The options explored various built form configurations, as well as various site configurations, including both remaining within the current site boundaries, and expanding the site boundaries to integrate with the broader Observatory Hill.

The resulting options that were progressed and considered in detail are known as the Base Case, Option 1 and Option 3a. These options are described in more detail below.

Do Nothing/Base Case

A do nothing/base case was explored, whereby the existing buildings and open space are retained, and any excess student demand is either accommodated within the existing school, or by sending students to other schools within the School Community Group.

While the do nothing/base case had a low capital cost, it would not meet demand and would result in reduced learning outcomes due to overcrowding and not being able to utilise modern teaching practices. Further, it would result in reduced amenity, safety and accessibility, as well as increased maintenance costs. This option has been discounted.

Alternative Option/FSPS Master Plan Option (Option 1)

An alternative option was explored, whereby the school would be expanded to accommodate 26 home bases for 600 students. This option maximised the ability of the site to contribute to meeting demand across the School Community Group, was generally contained within the existing boundary of the school, preserved future expansion opportunities, provided a dedicated Environmental Education Centre (EEC) classroom, and was of a scale and massing that was supported by the State Design Review Panel. However, Option 1 could not be delivered within the project budget and so has been discounted.

The FSPS Master Plan reflects Option 1. The current proposal makes provision for the Master Plan to be delivered, should funding become available.

Proposal (Option 3a)

The preferred option (being the option that is reflected in this EIS) meets the majority of the key drivers for the project and continues to make a significant contribution to meeting the demand across the School Community Group.

Under Option 3a, the school will be expanded to accommodate 17 home base units (391 students) in the first instance, with an additional 7 cold shell home base units. The cold shell home base units will be fitted out as required by School Infrastructure, to cater for up to 550 students.

The advantages of this option are reduced costs, simple buildability, potential to accommodate additional growth on-site, and increased open play space on a per student basis (given the lower capacity).

1.5 Secretary's Requirements

In accordance with Section 4.39 of the EP&A Act, the Secretary of the Department of Planning, Industry and Environment issued the requirements for the preparation of the EIS on 28 June 2019. The SEARs were updated in November 2019 to include a requirement to address air quality impacts. A copy of the Secretary's Environmental Assessment Requirements (SEARs) is included at **Appendix B**.

Table 1 provides a detailed summary of the individual matters listed in the SEARs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 1 Secretary's Requirements

Requirement	**Location in Environmental Assessment**	
General		
The Environmental Impact Statement (EIS) must address the *Environmental Planning and Assessment Act 1979* and meet the minimum form and content requirements in Clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000.	Environmental Impact Statement	
Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	**Section 6**	
Where relevant, the assessment of key issues below, and any other significant issues identified in the risk assessment, must include: • adequate baseline data • consideration of the potential cumulative impacts due to other developments in the vicinity (completed, underway or proposed); and • measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment	**Section 6** **Section 7**	
The EIS must also 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 Regulation) of the proposal, including details of all assumptions and components from which the CIV calculation is derived. The report shall be prepared on company letterhead and indicate applicable GST component of the CIV; • an estimate of jobs that will be created during the construction and operational phases of the proposed development; and • certification that the information provided is accurate at the date of preparation.	Submitted under separate cover	
Key Issues	**Report / EIS**	**Technical Study**
Statutory and Strategic Context		
Address the statutory provisions applying to the development contained in all relevant environmental planning instruments, including: • Biodiversity Conservation Act 2016	**Section 5.1** **Section 5.2** **Section 5.3**	**Appendix C** **Appendix D** **Appendix E**

Requirement	Location in Environmental Assessment	
• State Environmental Planning Policy (State & Regional Development) 2011 • State Environmental Planning Policy (Infrastructure 2007) • State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 • State Environmental Planning Policy No. 64 – Advertising and Signage • State Environmental Planning Policy No.55 – Remediation of Land • Draft State Environmental Planning Policy (Remediation of Land) • Draft State Environmental Planning Policy (Environment) and • Sydney Local Environmental Plan 2012.		**Appendix F**
Permissibility Detail the nature and extent of any prohibitions that apply to the development.	**Section 5.3**	-
Development Standards Identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards.	**Section 5.3**	-
Provisions Adequately demonstrate and document in the EIS how each of the provisions in the listed instruments are addressed, including reference to necessary technical documents.	**Section 5.3**	-
Policies		
Address the relevant planning provisions, goals and strategic planning objectives in the following: • NSW State Priorities • The Greater Sydney Regional Plan, A Metropolis of three cities • Future Transport Strategy 2056 • State Infrastructure Strategy 2018 – 2038 Building the Momentum • Sydney's Cycling Future 2013 • Sydney's Walking Future 2013 • Sydney's Bus Future 2013 • Crime Prevention Through Environmental Design (CPTED) Principles • Better Placed: An integrated design policy for the built environment of New South Wales (GANSW, 2017) • Eastern City District Plan • Sustainable Sydney 2030 • Sydney Development Control Plan 2012 • Council's Section 7.11/7.12 Plans/planning agreements • Harbour Village North Public Domain Plan (includes Observatory Hill Masterplan Study) • Legible Sydney • City Centre Access Strategy	**Section 5.1** **Section 5.2** **Section 5.3** **Section 3.24**	**Appendix M**
Operation		
Provide details of the existing and proposed school operations, including staff and student numbers, school hours of operation, and operational details of any proposed before/after school care services and/or community use of school facilities.	**Section 3.22**	**Appendix R**
Provide a detailed justification of suitability of the site to accommodate the proposal.	**Section 3.22** **Section 5.22**	**-**
Provide details of how the school will continue to operate during construction activities of the new primary and secondary school, including proposed mitigation measures.	**Section 3.21** **Section 3.22** **Section 5.18**	**Appendix Q**
Provide details regarding management of student safety in accessing and departing the school site in the peak periods, beyond the limits of the school grounds, and in particular how that traffic will be separated from cycle traffic associated with the cycle path.	**Section 3.17** **Section 3.21** **Section 5.5**	**Appendix M**

Requirement	Location in Environmental Assessment	
Provide detail regarding impact of construction on events including weddings that held in Observatory Hill Park. Include details of arrangements to prevent impacts on events with consideration given to the impact of construction. Provide evidence of liaison and agreement with the City of Sydney and the Observatory in relation to this issue.	**Section 3.22** **Section 5.5** **Section 5.18** **Section 5.19**	**Appendix M** **Appendix AA**
Built Form and Urban Design		
Prepare an assessment of the constraints and opportunities within the site and within the wider Precinct containing the adjoining lands.	**Section 5.4**	**Appendix D**
Address the height, density, bulk and scale, setbacks and interface of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces.	**Section 5.4**	**Appendix D**
Address design quality and built form, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials and colours.	**Section 5.4**	**Appendix D**
Address the NSW and ACT Governments Regional Climate Modelling (NARCliM) climate change projects development for the Sydney Metropolitan area to inform the building design and asset life of the project. Incorporate a green roof, cool roof and/or green wall into the design.	**Section 5.4**	**Appendix D**
Provide details of any digital signage boards, including size/dimensions, location and finishes.	**Section 3.15**	**Appendix D**
Clearly demonstrate how design quality will be achieved in accordance with Schedule 4 Schools – Design Quality Principles of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 and the GANSW Design Guide for Schools.	**Section 5.2**	**Appendix D**
Address the Design Guide for Heritage Implementing the Better Placed policy for Heritage buildings, Sites and Precincts.	-	**Appendix D**
Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development.	**Section 3.17**	**Appendix D** **Appendix M**
Provide detailed site and context analysis to justify the proposed site planning and design approach including massing options and preferred strategy for future development.	**Section 5.4**	**Appendix D**
Provide a detailed site-wide landscape strategy, including consideration of equity and amenity of outdoor play spaces, and integration with built form, security, shade, topography and existing vegetation.	**Section 3.13**	**Appendix D**
Provide a detailed analysis of the open space provision within the school and compliance with Department of Education standards. Provide details of any open spaces outside the boundary of the site that may be used for school activities from time to time, or on a permanent basis.	**Section 3.14**	**Appendix D** **Appendix K**
Provide details of any temporary or permanent alterations to Observatory Hill Park or Upper Fort Street, including circulation paths, signage, planting or trees.	**Section 3.17**	**Appendix D** **Appendix M**
Provide a visual impact assessment that identifies any potential impacts on the surrounding built environment and landscape including views to and from the site and any adjoining heritage items. Provide views to the development from key vantage points in the surrounding context.	**Section 5.9**	**Appendix X**
Address CPTED Principles.	**Section 5.12**	**Appendix D**
Demonstrate good environmental amenity including access to natural daylight and ventilation, acoustic separation, access to landscape and outdoor spaces and future flexibility.	**Section 3.14** **Section 5.4** **Section 5.11**	**Appendix D**
Provide an air quality assessment that demonstrates that there would be satisfactory conditions for students and staff in consideration of the immediacy of the Cahill cut and the Sydney Harbour Bridge locations. This should have regard to precedent studies (including longitudinal studies) and benchmarking including relevant NSW Health guidelines.	**Section 5.15**	**Appendix II**
Environmental Amenity		
Assess amenity impacts on the surrounding locality, including solar access, visual privacy, visual amenity, overshadowing and acoustic impacts.	**Section 5.9** **Section 5.10** **Section 5.11**	**Appendix A** **Appendix D** **Appendix X**

Requirement	Location in Environmental Assessment	
	Section 5.14 **Section 5.15**	**Appendix Z**
Conduct a view analysis to the site from key vantage points and streetscape locations (photomontages or perspectives should be provided showing the building envelope and likely future development).	**Section 5.9**	**Appendix X**
Include the future cycleway arrangements in the view analysis.	**Section 5.9**	**Appendix X**
Include a lighting strategy and measures to reduce spill into the surrounding sensitive receivers.	**Section 5.21**	**Appendix L**
Identify any proposed use of the school outside of school hours (including weekends) and assess any resultant amenity impacts on the immediate locality and proposed mitigation measures.	**Section 3.22**	**Appendix R**
Detailed outline of the nature and extent of the intensification of use associated with the increased floor space, particularly in relation to the proposed increase in staff and student numbers.	**Section 3.13** **Section 3.17** **Section 5.5**	**Appendix X** **Appendix M**
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.	**Section 5.9** **Section 5.10** **Section 5.11** **Section 5.14** **Section 5.15**	**Appendix A** **Appendix D** **Appendix X** **Appendix Z**
Identify any changes to access to Observatory Hill Park or the Observatory that may arise during construction. Provide details of any existing trees or areas of grass or planting that would be affected.	**Section 3.17**	**Appendix A**
Staging		
Provide details regarding the staging of the proposed development (if any).	**Section 3.17**	**Appendix D**
Provide details of any staging works to occur outside the boundary of the school, on Upper Fort Street, or in Observatory Hill Park.	**Section 2.1**	**Appendix A**
Traffic, Transport and Accessibility (construction and operation)		
Include a transport and accessibility impact assessment, which details, but not limited to the following:		
Provide details of proposed walking routes to/from the school entry gate, specifically from Kent Street and from the Argyle Street bus stop. Address proposals regarding this contained within in the Harbour Village North Public Domain Plan, including a lift from Kent Street.	**Section 3.17** **Section 5.5**	**Appendix M**
Provide details of vehicular drop off points at the school, including kerb arrangements, signage, traffic movement and numbers.	**Section 3.17** **Section 5.5**	**Appendix M**
Provide details regarding continued vehicular access to the National Trust at any time, including at locations where school entry or exit gates are located, and school vehicular access will be located.	**Section 3.17** **Section 5.5**	**Appendix M**
Provide current daily and future peak hour vehicle traffic generation (light and heavy vehicles), current and future public transport current and future pedestrian and cycle movements existing traffic and transport facilities located within the vicinity of the proposed development.	**Section 3.17** **Section 5.5**	**Appendix M**
Details of estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, school bus, pedestrian and bicycle trips.	**Section 3.17** **Section 5.5**	**Appendix M**
Details of school bus/coach pick up and drop off location estimated daily school/coach movements and access arrangement for students to and from bus drop off and pick up.	**Section 3.17** **Section 5.5**	**Appendix M**
Access to, from and within the site from the road and active transport networks, including (but not limited to) intersection locations, design and sight distances (for example turning lanes, swept paths, sight distance requirements).	**Section 3.17** **Section 5.5**	**Appendix M**
Details on how the proposed development interfaces with the Sydney Harbour Bridge cycleway access proposals and how the development will impact on these.	**Section 3.17** **Section 5.5**	**Appendix M**

Requirement	Location in Environmental Assessment	
The adequacy of existing public transport or any future public transport infrastructure within the vicinity of the site, including the Sydney Light Rail and Sydney Metro City and Southwest metro, pedestrian and bicycle networks and associated infrastructure to meet the likely future demand of the proposed development.	**Section 3.17** **Section 5.5**	**Appendix M**
Measures to integrate the development with the existing/future public transport network, including the Sydney Light Rail and Sydney Metro City and Southwest metro.	**Section 3.17** **Section 5.5**	**Appendix M**
Assessment of the impact of additional traffic generated by the proposed development on the existing road network, including school bus arrangements, with consideration to the impact of trips generated (motor vehicles, pedestrians, bicycle and public transport) by the development on nearby intersections, the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for, and details of, upgrades or road improvement works, if required (Traffic modelling is to be undertaken using SIDRA network modelling for current and future years).	**Section 3.17** **Section 5.5**	**Appendix M**
The identification of infrastructure required to ameliorate any impacts on traffic efficiency and road safety impacts associated with the proposed development, including details on improvements required to affected intersections, additional school bus routes along bus capable roads (i.e. minimum 3.5 m wide travel lanes), additional bus stops or bus bays.	**Section 3.16** **Section 5.5**	**Appendix M**
Details of travel demand management measures to minimise the impact on general traffic and bus operations, including details of a location-specific sustainable travel plan (Green Travel Plan and specific Workplace travel plan) and the provision of facilities to increase the non-car mode share for travel to and from the site and details of the promotion of these activities.	**Section 3.17** **Section 5.5**	**Appendix M**
The proposed walking and cycling access arrangements and connections to public transport services, including the Sydney Light Rail and Sydney Metro City and Southwest metro.	**Section 3.17** **Section 5.5**	**Appendix M**
The proposed access arrangements, for car and bus pick-up/drop-off facilities, including how peak pick up and drop off times will be managed, how vehicles will manoeuvre and how congestion flow on effects to the surrounding road network will be managed.	**Section 3.17** **Section 5.5**	**Appendix M**
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. Specifically provide detail of how vehicle and pedestrian traffic will be separated from the cycleway traffic in the short and long term.	**Section 3.17** **Section 5.5**	**Appendix M**
Provide detail of school entries and exits, and treatment of Upper Fort Street to prevent unsafe pedestrian conditions including conflict between pedestrians and cars.	**Section 3.17** **Section 5.5**	**Appendix M**
Proposed bicycle parking provision, including end of trip facilities, in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance.	**Section 3.17** **Section 5.5**	**Appendix M**
Proposed number of on-site car parking spaces for teaching staff and visitors and corresponding compliance with existing parking codes and justification for the level of car parking provided on-site. If parking for staff is provided off-site, details of this and the appropriate access and safety arrangements detailed.	**Section 3.17** **Section 5.5**	**Appendix M**
An assessment of the cumulative on-street parking impacts of cars and bus pick-up/drop-off, staff parking and any other parking demands associated with the development.	**Section 3.17** **Section 5.5**	**Appendix M**
An assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures and personal safety in line with CPTED.	**Section 3.17** **Section 5.5**	**Appendix M**
Emergency vehicle access, service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type, routes and the likely arrival and departure times).	**Section 3.17** **Section 5.5**	**Appendix M**
The preparation of a preliminary Construction Traffic and Pedestrian Management Plan to demonstrate the proposed management of the impact in relation to construction traffic addressing the following:	**Section 5.19**	**Appendix U**

Requirement	Location in Environmental Assessment	
• an 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 on-site car parking and 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 any road closures. • details of a consultation strategy for liaison with surrounding stakeholders. • details of the traffic and transport impacts during construction and how these impacts will be mitigated for any impacts to traffic, • pedestrians, cyclists, parking, and public transport. • details of vehicle size, truck routes, truck movements, hours of construction, access arrangements, parking arrangements and traffic control measures for all demolition/construction activities.		
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). • City Centre Access Strategy • City of Sydney Cycling Strategy and Action Plan 2018-2030	**Section 5.1**	**Appendix M**
Ecologically Sustainable Development (ESD)		
Detail how ESD principles (as defined in Clause 7(4) of Schedule 2 of the Regulation) will be incorporated in the design and ongoing operation phases of the development.	**Section 3.18** **Section 5.16**	**Appendix N**
Include a framework for how the future development will be designed to consider and reflect national best practice sustainable building principles to improve environmental performance and reduce ecological impact. This should be based on a materiality assessment and include waste reduction design measures, future proofing, use of sustainable and low-carbon materials, energy and water efficient design (including water sensitive urban design) and technology and use of renewable energy.	**Section 3.18** **Section 5.16**	**Appendix N**
Demonstrate how environmental design will be achieved in accordance with the GANSW Environmental Design in Schools Manual (https://www.governmentarchitect.nsw.gov.au/guidance/environmental-design-in-schools)	**Section 3.18** **Section 5.16**	**Appendix N**
Include preliminary consideration of building performance and mitigation of climate change, including consideration of Green Star Performance. Include an assessment against an accredited ESD rating system or an equivalent program of ESD performance. This should include a minimum rating scheme target level.	**Section 3.18** **Section 5.16**	**Appendix N**
Provide a statement regarding how the design of the future development is responsive to the CSIRO projected impacts of climate change, specifically: • hotter days and more frequent heatwave events • extended drought periods • more extreme rainfall events • gustier wind conditions • how these will inform landscape design, material selection and social equity aspects (respite/shelter areas).	**Section 3.18** **Section 5.16**	**Appendix N**

Requirement	Location in Environmental Assessment	
Relevant Policies and Guidelines: • NSW and ACT Government Regional Climate Modelling (NARCliM) climate change projections.	-	**Appendix N**
Heritage		
A heritage impact statement that addresses the heritage impact of the proposal on the significance and setting of the items on the site (including Fort Street Public School, Meteorological Building, 1830s Heritage Wall, the Messenger Building and Fig trees), as well as on the significance and setting of nearby heritage items (including the National Trust Centre, Sydney Observatory, and Observatory Hill Park) on views to and from the site and Observatory Hill, and on the significance and setting of the State listed Millers Point and Dawes Point Precinct (which includes Observatory Hill).	**Section 5.6** **Section 5.7**	**Appendix T**
The heritage impact statement is to: • be in accordance with the relevant NSW Heritage Council guidelines. • be prepared by a suitably qualified and experienced heritage consultant. • include compliance with the conservation policies of any conservation management plan that applies to the site, including the Fort Street Public School and Environs CMP, prepared by TDK Architects in October 2016, and justification for any non-compliances. • outline measures to mitigate any adverse impacts identified • include recommendations to enhance the significance and setting of the site and its environment.	**Section 5.6** **Section 5.7**	**Appendix T**
Provide a statement of significance and an assessment of the impact on the heritage significance of the heritage items on the site in accordance with the guidelines in the NSW Heritage Manual.	**Section 5.6** **Section 5.7**	**Appendix T**
Address the historical archaeological and potential significance of the site, the impacts the development may have on this significance and recommended measures to manage the archaeological resource. This is to be prepared in accordance with the relevant NSW Heritage Council Guidelines by a suitably qualified historical archaeologist.	**Section 5.6** **Section 5.7**	**Appendix T**
Social Impacts		
Prepare a social impact assessment, which:		
Identifies and analyses the potential social impacts of the development, from the points of view of the affected community/ies, other relevant stakeholders and stakeholders within the Precinct, i.e. how they expect to experience the project.	**Section 5.20**	**Appendix BB**
Considers how potential environmental changes in the locality may affect people's: way of life; community; access to and use of infrastructure, services, and facilities; culture; health and wellbeing; surroundings; personal and property rights; decision-making systems; and fears and aspirations, as relevant and considering how different groups may be disproportionately affected.	**Section 5.20**	**Appendix BB**
Assesses the significance of positive, negative, and cumulative social impacts considering likelihood, extent, duration, severity/scale, sensitivity/importance, and level of concern/interest.	**Section 5.20**	**Appendix BB**
Includes mitigation measures for likely negative social impacts, and any proposed enhancement measures.	**Section 5.20**	**Appendix BB**
Aboriginal Heritage		
Identify and describe the Aboriginal cultural heritage values that exist across the site and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation.	**Section 5.8**	**Appendix H**
Identify and address the Aboriginal cultural heritage values in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) and Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH, 2010).	**Section 5.8**	**Appendix H**
Undertake consultation with Aboriginal people and document in accordance with Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). The significance of cultural heritage values of Aboriginal people who have a cultural association with the land are to be documented in the ACHAR.	**Section 5.8**	**Appendix H**

Requirement	Location in Environmental Assessment	
Identify, assess and document all impacts on the Aboriginal cultural heritage values in the ACHAR.	**Section 5.8**	**Appendix H**
The EIS and the supporting ACHAR must demonstrate attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR and EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.	**Section 5.8**	**Appendix H**
Noise and Vibration		
Identify and provide a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation, construction. Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land.	**Section 5.14**	**Appendix Z**
Identify and assess operational noise, including consideration of any public-address system, school bell, mechanical services (e.g. air conditioning plant), use of any school hall for concerts etc. (both during and outside school hours) and any out of hours community use of school facilities, and outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land.	**Section 5.14**	**Appendix Z**
Provide details of acoustic wall, floor and ceiling finishes for the school campus to ensure appropriate internal noise levels are achieved.	**Section 5.14**	**Appendix Z**
Relevant Policies and Guidelines: • NSW Noise Policy for Industry 2017 (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) • Australian Standard 2363:1999 Acoustics – Measurement of noise from helicopter operations.	**Section 5.14**	**Appendix Z**
Contamination		
Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55.	**Section 5.13**	**Appendix E** **Appendix F**
Undertake a hazardous materials survey of all existing structures and infrastructure prior to any demolition or site preparation works.	**Section 5.13**	**Appendix E** **Appendix F**
Relevant Policies and Guidelines: • Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP).	**Section 5.2** **Section 5.13**	**Appendix E** **Appendix F**
Utilities		
Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation and easement requirements of the development for the provision of utilities including staging of infrastructure.	**Section 3.19**	**Appendix O**
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 3.20**	**Appendix P**
Contributions		
Address Council's 'Central Sydney Development Contribution Plan 2013' and/or details of any Voluntary Planning Agreement, which may be required to be amended because of the proposed development.	**Section 3.24**	-
Drainage		
Detail measures to minimise operational water quality impacts on surface waters and groundwater.	**Section 3.19** **Section 3.20**	**Appendix P**
Stormwater plans detailing the proposed methods of drainage without impacting on the downstream properties.	**Section 3.20** **Section 5.21**	**Appendix P**
Relevant Policies and Guidelines:	-	**Appendix P**

Requirement	Location in Environmental Assessment	
• Guidelines for development adjoining land and water managed by DECCW (OEH, 2013).		
Flooding		
Identify flood risk on-site (detailing the most recent flood studies for the project area) and consideration of any relevant provisions of the NSW Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity. If there is a material flood risk, include design solutions for mitigation.	**Section 2.2** **Section 3.20**	-
Biodiversity Assessment		
Biodiversity impacts related to the proposed development (SSD 10340) are to be assessed in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the Biodiversity Conservation Act 2016 (s6.12), Biodiversity Conservation Regulation 2017 (s6.8) and Biodiversity Assessment Method.	**Section 5.17**	**Appendix C**
The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method.		**Appendix C**
The BDAR must include details of the measures proposed to address the offset obligation as follows: • the total number and classes of biodiversity credits required to be retired for the development/project • the number and classes of like-for-like biodiversity credits proposed to be retired • the number and classes of biodiversity credits proposed to be retired • in accordance with the variation rules • any proposal to fund a biodiversity conservation action • any proposal to make a payment to the Biodiversity Conservation Fund. • If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits.	**Section 5.17**	**Appendix C**
The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the Biodiversity Conservation Act 2016.	**Section 5.17**	**Appendix C**
Where a Biodiversity Assessment Report is not required under the BC Act, engage a suitably qualified person to assess and document the flora and fauna impacts related to the proposal.	**Section 5.17**	**Appendix C**
Note: Notwithstanding these requirements, the Biodiversity Conservation Act 2016 requires that State Significant Development Applications be accompanied by a Biodiversity Development Assessment Report unless otherwise specified under the Act.	**Section 5.17**	**Appendix C**
Sediment, Erosion and Dust Controls		
Detail measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles, during demolition, site preparation, bulk excavation and construction phase.	**Section 5.21**	**Appendix W**
Relevant Policies and Guidelines: • Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Landcom) • Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA) • Guidelines for development adjoining land and water managed by DECCW (OEH, 2013).	**-**	
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	**Section 5.21**	**Appendix EE**

Requirement	Location in Environmental Assessment	
arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.		
Construction Hours		
Identify proposed construction hours and provide details of the instances where it is expected that works will be required to be carried out outside the standard construction hours.	**Section 3.21**	**Appendix Q**
Consultation		
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, special interest groups. In particular, you must consult with: • City of Sydney Council • Government Architect NSW (through the NSW State Design Review Panel process) • Sydney Coordination Office within Transport for NSW • Roads and Maritime Services and • Heritage Division Consultation should commence as soon as practicable to agree the scope of investigation. 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 4**	**Appendix S**
Plans and Documents		
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents.		
In addition, the EIS must include the following:		
A section 10.7(2) and (5) Planning Certificates (previously Section 149(2) and (5) Planning Certificate)	-	**Appendix HH**
Architectural drawings showing key dimensions, RLs, scale bar and north point, including: • plans, sections and elevation of the proposal at no less than 1:200 showing indicative furniture layouts and program • illustrated materials schedule including physical or digital samples board with correct proportional representation of materials, nominated colours and finishes • details of proposed signage, including size, location and finishes • detailed annotated wall sections at 1:20 scale that demonstrate typical cladding, window and floor details, including materials and general construction quality • site plans and operations statement demonstrating the after hours and community use strategy	-	**Appendix A**
Site Survey Plan, showing existing levels, location and height of existing and adjacent structures/buildings and site boundaries	-	**Appendix G**
Site Analysis Plan including: • site and context plans that demonstrate principles for future development and expansion, built form character and open space network • active transport linkages with existing, proposed and potential footpaths and bicycle paths and public transport links • site and context plans that demonstrate principles for future network, active transport linkages with existing, proposed and potential footpaths and bicycle paths and public transport links	-	**Appendix A** **Appendix D**
Sediment and Erosion Control Plan	-	**Appendix W**
Shadow Diagrams	-	**Appendix A**
View analysis, photomontages and architectural renders, including from those from public vantage points	-	**Appendix X**

Requirement	Location in Environmental Assessment	
Landscape architectural drawings showing key dimensions, RLs, scale bar and north point, including: • integrated landscape plans at appropriate scale, with detail of new and retained planting, shade structures, materials and finishes proposed including articulation of playground spaces • plan identifying significant trees, trees to be removed and trees to be retained or transplanted	-	**Appendix A** **Appendix K**
Stormwater Concept Plan	-	**Appendix P**
Design report to demonstrate how design quality will be achieved in accordance with the above Key Issues including: • architectural design statement • diagrams, structure plan, illustrations and drawings to clarify the design intent of the proposal • detailed site and context analysis • analysis of options considered including building envelope study to justify the proposed site planning and design approach • visual impact assessment identifying potential impacts on the surrounding built environment and adjoining heritage items • summary of feedback provided by GANSW and NSW State Design Review Panel and responses to this advice. Including how the design responds to and integrates with the requirements of the public domain, Sydney Harbour Bridge cycleway and surrounding buildings (Museum of Applied Arts and National Trust) at Observatory Hill. • summary report of consultation with the community and response to any feedback provided	-	**Appendix D**
Geotechnical	-	**Appendix Y**
Structural Report	-	**Appendix GG**
Accessibility Report	-	**Appendix D**
Arborist Report - detailing all likely impacts of the development for all trees within and adjacent to the site, including trees to be retained, removed or replaced (in accordance with Schedule 8 of the Sydney DCP 2012).	-	**Appendix J**
Arborist Report	-	**Appendix J**
Acoustic Report	-	**Appendix Z**
Salinity Investigation Report	**Section 5.13**	-
Acid Sulfate Soils Management Plan	**Section 5.13**	-
Schedule of materials and finishes	-	**Appendix D**
Physical and 3D model as per Council requirements	-	Submitted under separate cover

2.0 Site Analysis

2.1 Site Location and Context

The site is located at Upper Fort Street, in the north of the Sydney CBD within the City of Sydney Local Government Area (LGA). The site is located south west of the southern landing of the Sydney Harbour Bridge and adjacent to the Sydney Observatory. The site is surrounded on all sides by the Cahill Expressway as it becomes the on-ramp to the Bradfield Highway. The site is connected to the surrounding areas by one road bridge and two pedestrian bridges.

A site context map is provided at **Figure 2** and an aerial photograph of the site is shown at **Figure 3**.

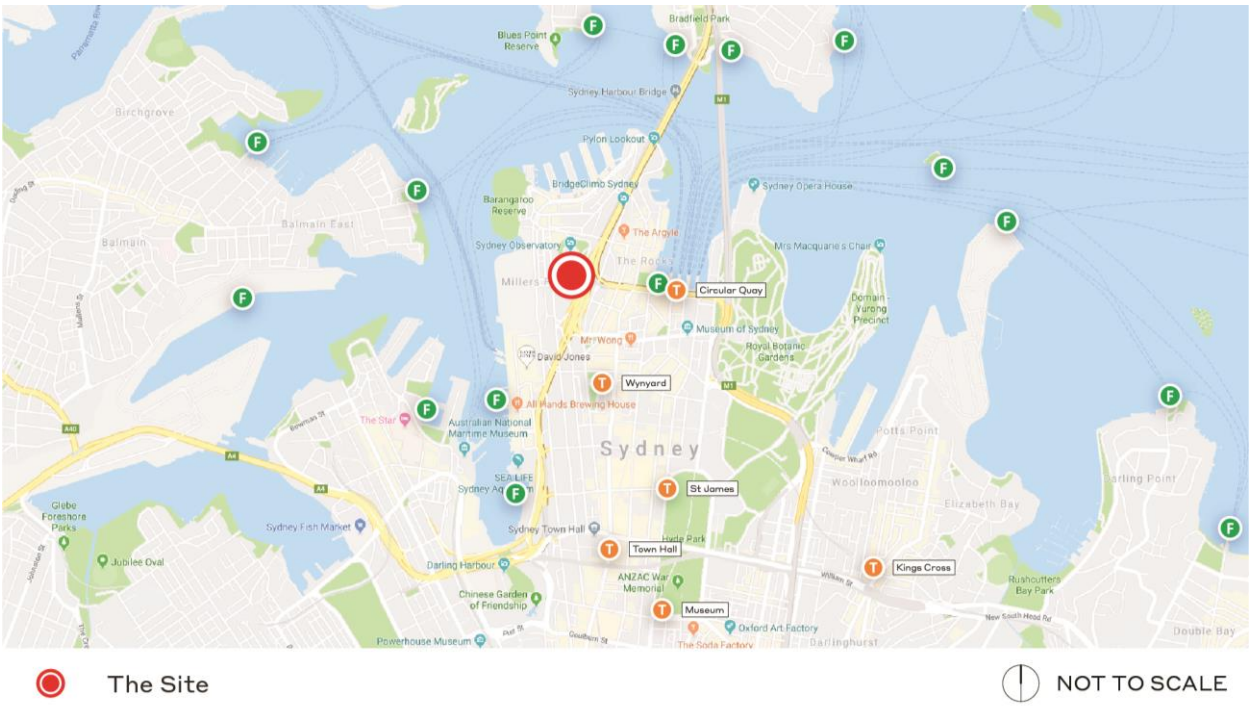

Figure 2 Site context map

Source: Google Maps + Ethos Urban

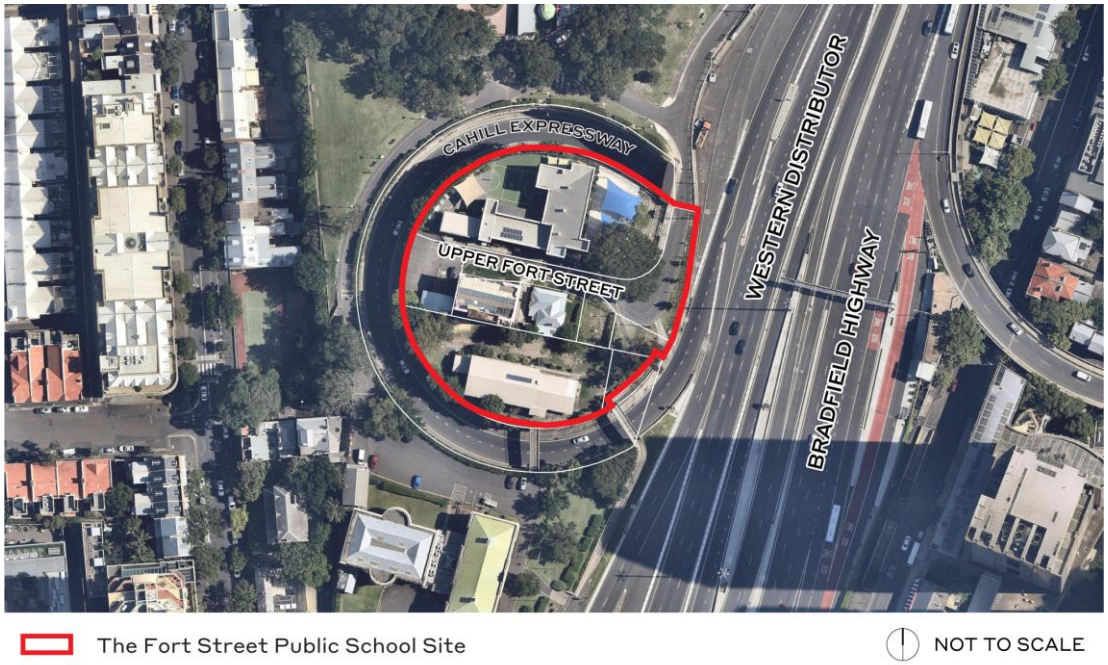

Figure 3 Site aerial photograph

Source: Nearmap + Ethos Urban

The site is subject to *Sydney Local Environmental Plan 2012* (SLEP 2012), however is located outside of Central Sydney (as designated by SLEP 2012). It is not affected by the Sydney Cove Redevelopment Authority (SCRA) Scheme.

The site is zoned B8 Metropolitan Centre. A broad range of uses, including educational establishments, are permitted with consent in the zone. The site is not affected by any height or floor space ratio development standards.

2.2 Site Description

The FSPS site is currently made up of nine (9) lots and has an area of 6,192m^2, as outlined below in **Table 2** and in the Survey Plan prepared by RPS at **Appendix G**. However, the proposal also includes the widening of the Upper Fort Street access road, which sits outside the site. The development site is shown at **Figure 4**.

All lots within the school site are owned by either the Department of Education or the Minister for Education. It is proposed to consolidate eight (8) of the lots as part of this application. Lot 5 in DP 258013 is owned by the Minister for Education and will not be consolidated as part of this process (refer to **Section 3.23**).

Table 2 Site Area

Lot	Area (m^2)
Lot 106 DP 748340	342.3
Lot 107 DP 748340	152.6
Lot 108 DP 748340	876.2
Lot 2 DP 732592	2,280
Lot 3 DP 732592	386.7
Lot 4 DP 732592	260.8
Lot 9 DP 732592	155.6
Lot 2 DP 244444	135
Lot 5 DP 258013	1,603
Total	***6,192.2***

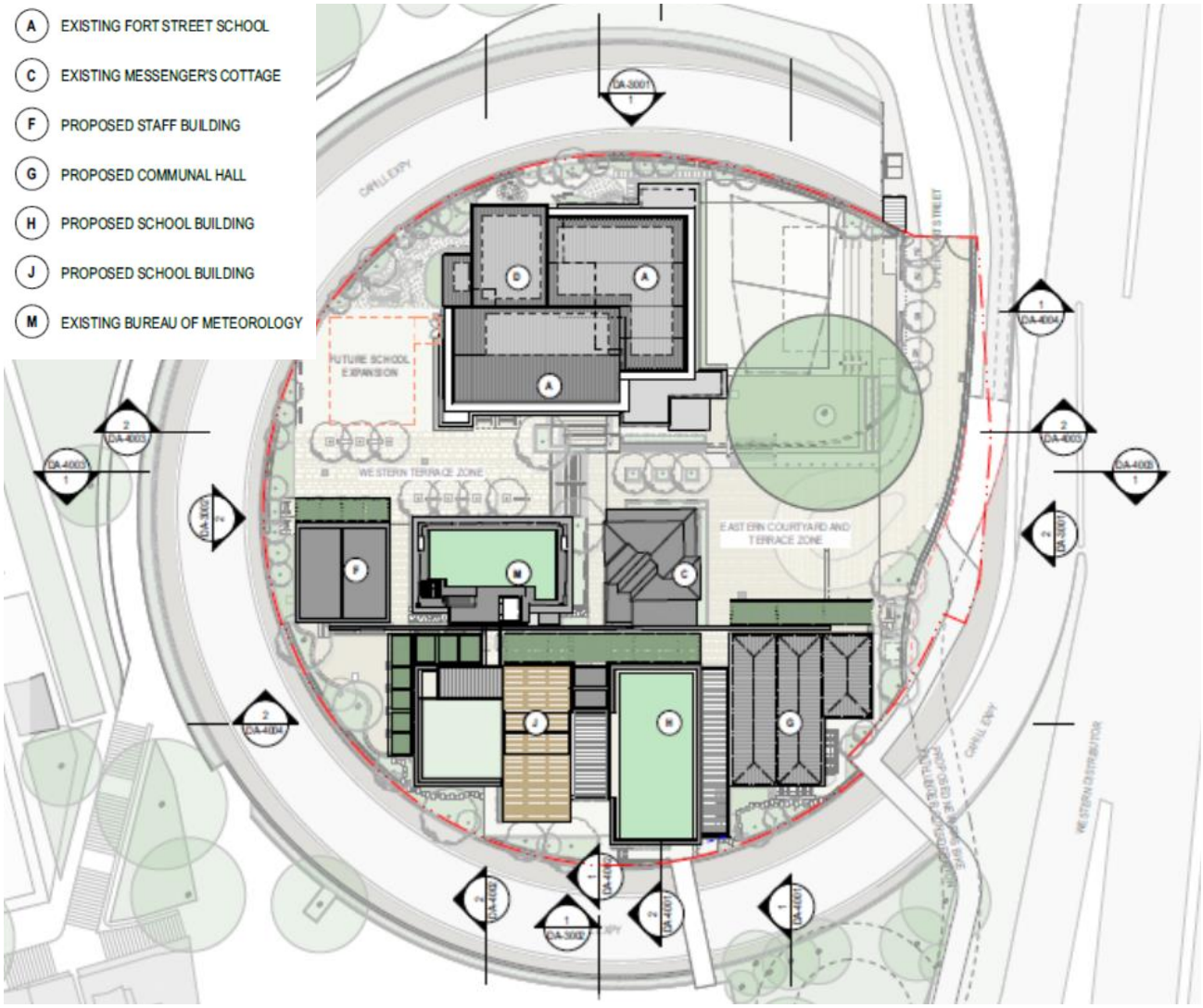

Figure 4 Development site (outlined in red)

Source: FJMT

2.2.1 Existing Development

The site contains a number of existing buildings that were constructed over time between the 1862 and 1949. The location of existing buildings and significant landscape features on the site are shown at **Figure 5** and include:

- **Messenger's Cottage** (**Figure 6**): The Messenger's Cottage is a single-storey brick building with a hipped corrugated iron roof, originally constructed in 1862. It is the oldest building on the site, and currently provides administration/office space for school staff. The Messenger's Cottage is listed as a heritage item in SLEP 2012.
- **Bureau of Meteorology Building** (**Figure 6**): The Met Building is a three-storey brick building, originally constructed in 1922. The building originally housed equipment for meteorological observations, before being recently transferred to the Department of Education. The building is currently vacant, disused and in a state of disrepair. The Met Building is listed as a heritage item in SLEP 2012.
- **Environmental Education Centre Building** (**Figure 7**): The EEC Building was constructed in 1949, and is the most recent building on the site. It is a 1-2 storey brick building that currently houses staff facilities and home base units, as well as the EEC itself.
- **Fort Street School Building** (**Figure 8**): The FSPS Building was constructed in 1940 - 1941, and comprises a two-storey classroom block, a single-storey hall block, and an attached amenity block. The building is constructed of face brick with a parapeted roof. The Building is listed as a heritage item in SLEP 2012.

Other important site features include the Cahill Expressway (and Cahill Cut) which surrounds the site (**Figure 9**), the 1830s heritage wall which runs east-west across the site adjacent to the Met Building and Messenger's Cottage, and the large fig tree in the east of the site.

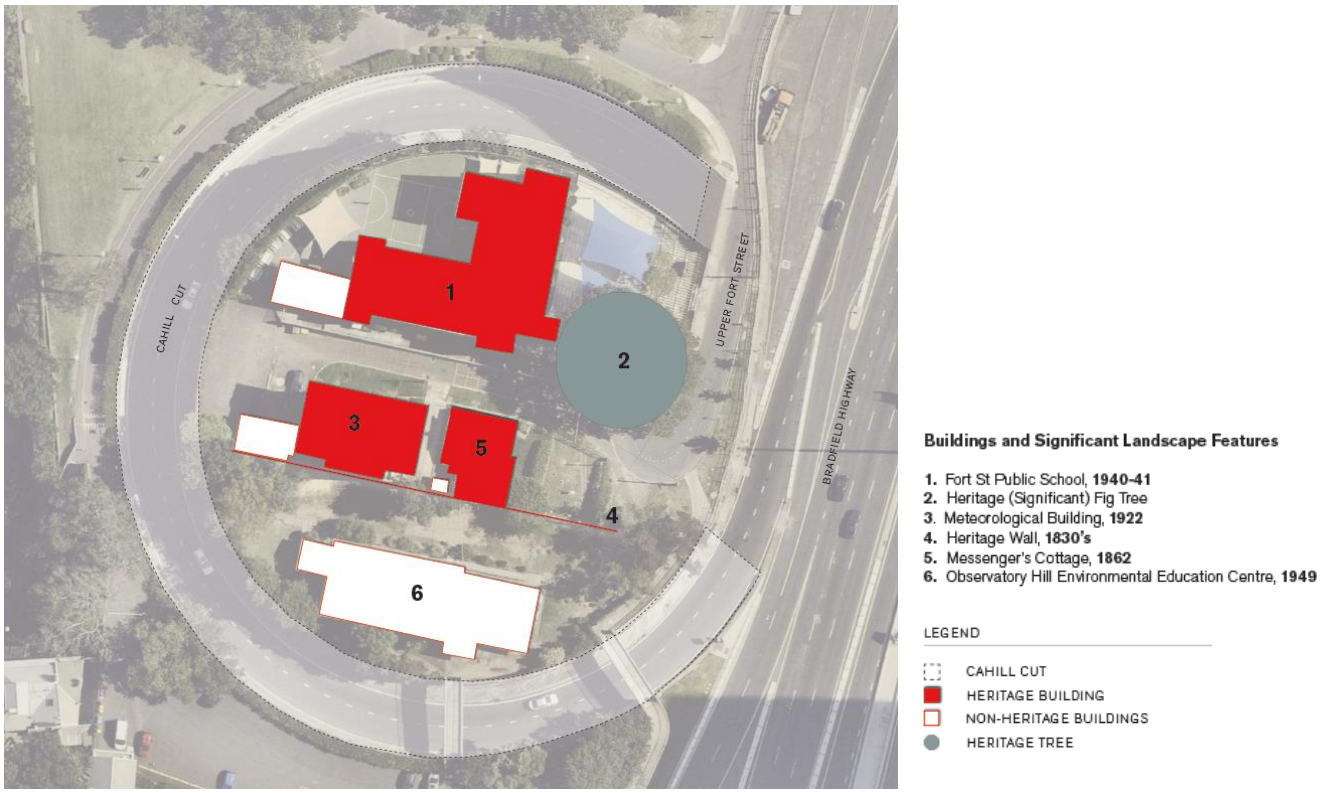

Figure 5 Location of existing buildings and significant landscape features

Source: FJMT

Figure 6 Messenger's Cottage (fore) and Met Building (behind)

Figure 7 Environmental Education Centre Building

Figure 8 FSPS Building and outdoor play area

Figure 9 View of the Cahill cut (facing west)

2.2.2 Pedestrian, Vehicular and Bicycle Access

Existing vehicular, bicycle and pedestrian access arrangements are shown at **Figure 10** and are described below.

Pedestrian Access

There are currently three pedestrian access points into the FSPS site as shown at **Figure 10**, comprising:

- An existing pedestrian footpath on the western side of Upper Fort Street that links the site to Observatory Hill, Watson Street and Argyle Street to the north. The site can also be accessed from Kent Street and the Agar Steps to the west of the site, but pedestrians must currently walk around the northern side of the Cahill Cut and into the school via Upper Fort Street.
- A shared pedestrian/bicycle bridge connection to the south, linking the site to Kent Street and other areas to the south.
- A bridge linking the site to the National Trust to the south. This bridge is not suitable for wheelchair users or people pushing strollers or other wheeled objects, as access to this bridge relies on a set of stairs from the south.

Vehicular Access

Vehicular access is currently only available via Upper Fort Street, via the bridge across the Cahill Expressway. This bridge is a ‘pinch-point’ for the school, as it is only wide enough to accommodate a single vehicle. Upper Fort Street connects to Watson Street and Argyle Street to the north.

Bicycle Access

The Sydney Harbour Bridge Cycleway currently runs through the eastern side of the site. The cycleway provides access from Kent Street to the south, to the Harbour Bridge to the north. Cyclists can also access the site from Upper Fort Street via Watson Street and Argyle Street.

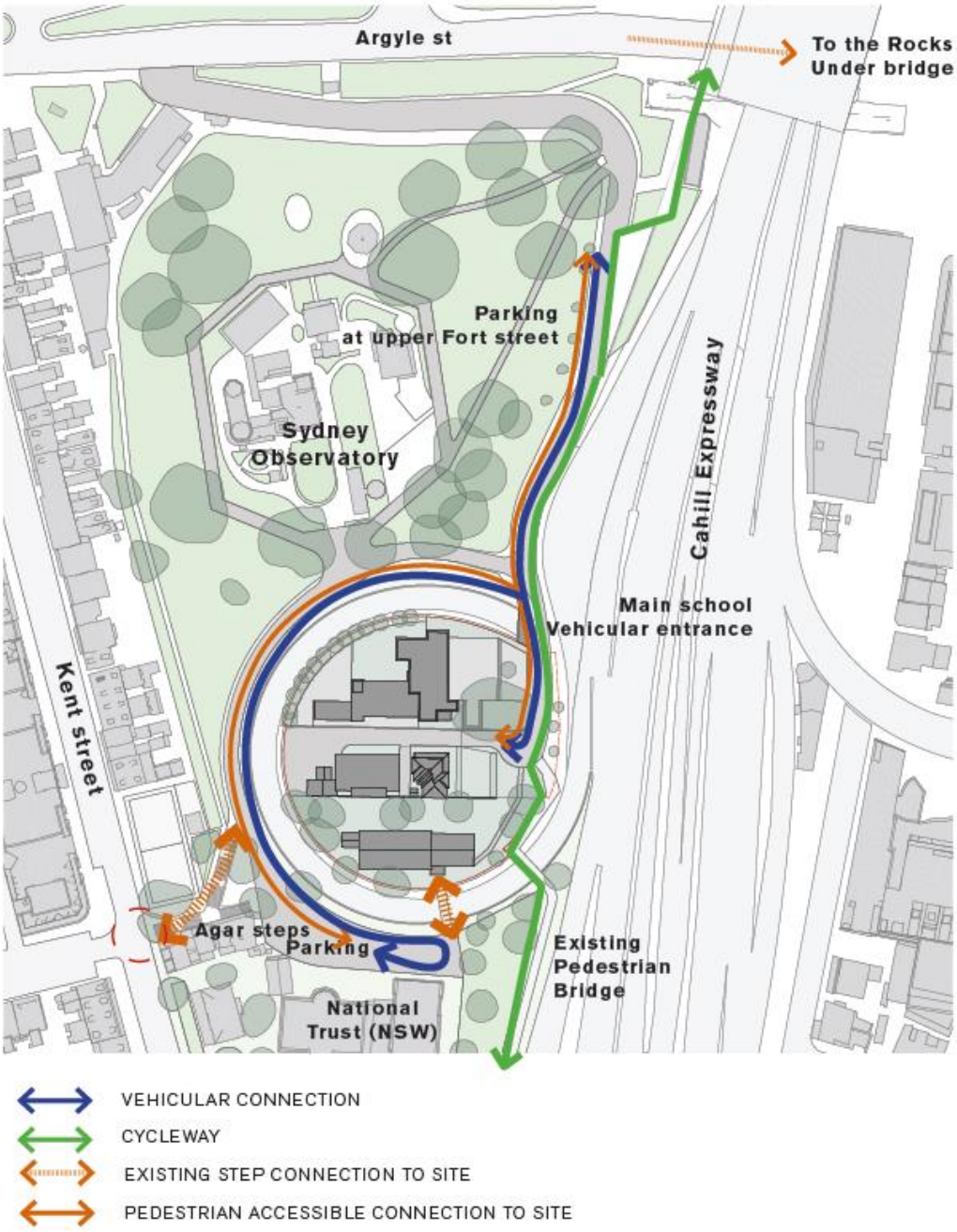

Figure 10 Existing pedestrian and vehicular access

Source: FJMT

Proposed changes to Sydney Harbour Bridge Cycleway

There are plans to modify the alignment of the Sydney Harbour Bridge Cycleway as it approaches and passes FSPS from Kent Street. The cycleway would effectively separate bicycle traffic from Upper Fort Street. A Review of Environmental Factors (REF) was exhibited by RMS in November 2017.

There were several options tested as part of the REF, some of which are shown in **Figure 11**.

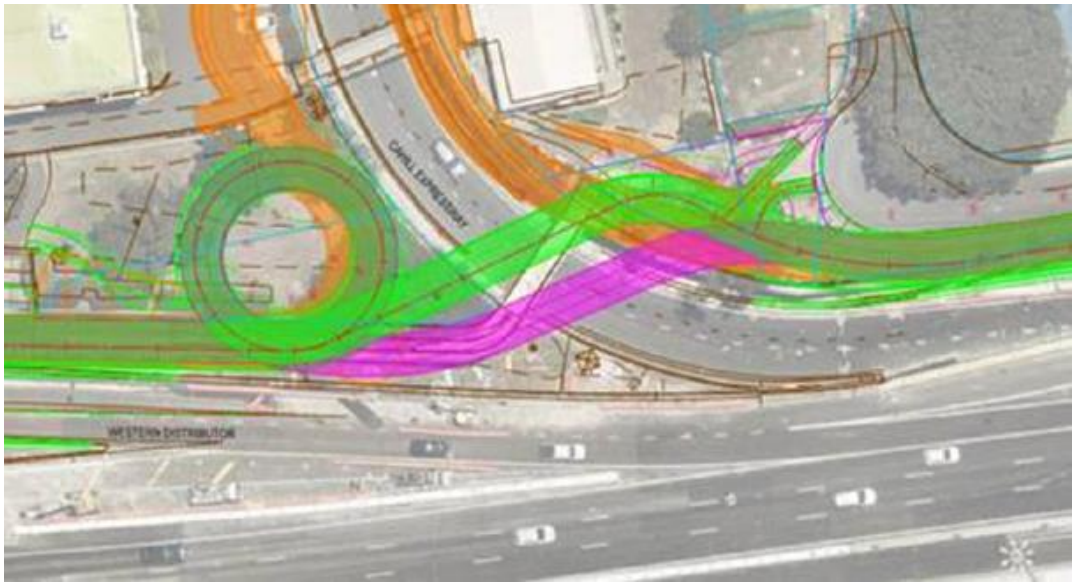

Figure 11 Sydney Harbour Bridge Cycleway alignment options

Source: Arup

The pink alignment is currently preferred by SINSW, with the least impact on FSPS. It has been used as the basis for site planning. However, funding and timing of these works is currently unknown, and SINSW is not responsible for the delivery of the cycleway. It is likely that construction works on FSPS will proceed ahead of the cycleway, however, there may be a period of concurrent construction.

To account for this uncertainty, this EIS proposes construction phasing that takes into account the construction of the new cycleway – this phasing is further detailed in **Section 3.17.1**.

2.2.3 Heritage

The whole of the site is included within the State significant Millers Point/Dawes Point Heritage Conservation Area (C35). The site also contains various locally significant heritage items under Schedule 5 of SLEP 2012, comprising the following items, as shown at **Figure 5** above:

- I936 – Bureau of Meteorology including interior;
- I937 – Messenger's Cottage for Sydney Observatory including interior; and
- I938 – Fort Street Primary School site including buildings and their interiors, fig trees and grounds.

An assessment of heritage impacts is provided in the Heritage Impact Statement at **Appendix T** and at **Section 5.6**.

2.2.4 European Archaeology

The FSPS site has been identified as having high potential for significant archaeological resources.

Historical archaeological test excavation has confirmed the presence of substantial archaeological evidence of the former Surgeon's House (c. 1820s) in the south of the site, beneath the existing EEC Building (refer to **Figure 12**). This archaeological resource has been assessed to be of State significance.

An assessment of European archaeology is provided in the Heritage Impact Statement at **Appendix T** and at **Section 5.7**

Figure 12 Overlay of Surgeon's Cottage plan and existing EEC Building

Source: FJMT

2.2.5 Aboriginal Archaeology

The site generally has low potential for Aboriginal archaeological deposits due to high levels of historical disturbance. However, some areas in the south-east of the site have potential to retain remnant natural soil profiles. Should an Aboriginal archaeological deposit be found within the site, it may have moderate scientific significance.

An assessment of Aboriginal Cultural Heritage is provided in the Aboriginal Cultural Heritage Assessment Report at **Appendix H** and at **Section 5.8**.

2.2.6 Vegetation and Flora and Fauna

Native trees and ground cover species are present within part of the site. Horticultural plantings and weeds are also present throughout the development site. Vegetated areas of the development site are subject to regular mowing and garden maintenance activities.

2.2.7 Soils and Geotechnical

Based on the Sydney Geological Maps, the site is in the vicinity of the Triassic aged Hawkesbury Sandstone. The investigation encountered a generalised profile consisting of a shallow to moderate depth of granular fill directly overlying sandstone bedrock. Some residual clayey sand was encountered between the base of the fill and the top of the sandstone bedrock. Observations of the exposed geology of the Cahill Expressway cutting indicate that sandstone is present at relatively shallow depths beneath the site surface (i.e. within 2m below ground surface).

A Detailed Site Investigation has identified heavy metals, polycyclic aromatic hydrocarbons (PAHs) and petroleum hydrocarbons (TRH) impacts to soils at the site which pose a potentially unacceptable risks to human health under the proposed redevelopment and associated land uses. Existing contaminants are being managed in accordance with the recommendations of JBS&G, until the site is remediated as part of the redevelopment. Contamination and remediation are discussed at **Section 5.13**.

2.2.8 Flooding

Based on the City of Sydney's 'City Area Catchment Flood Study' prepared by BMT WBM and dated October 2014, the FSPS site is not subject to flood inundation during the 100 ARI event (refer to **Figure 13**).

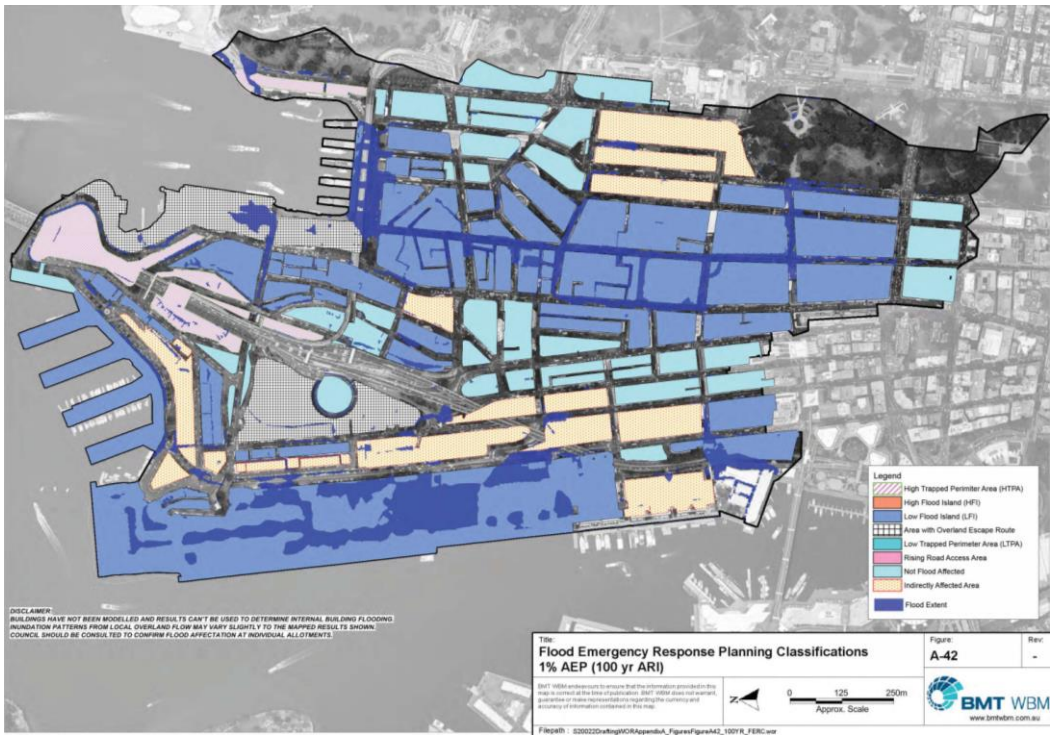

Figure 13 Flood map, from City Area Catchment Study dated October 2014

Source: BMT WBM

2.3 Surrounding Development

The site generally sits within the low-scale context of Observatory Hill. However, from a macro perspective, the site is very close to the broader Sydney CBD and Barangaroo, which provide a high-density backdrop to the site when viewed from the north and east.

Observatory Hill

The site is part of a series of buildings and spaces that comprise Observatory Hill. The collection of buildings on Observatory Hill are shown in **Figure 14** and include:

- **The Museum of Applied Arts and Sciences (Sydney Observatory)** (**Figure 15** and **Figure 16**) is located immediately north of FSPS beyond the Cahill Expressway, and comprises a collection of low-scale heritage-listed buildings, including the Sydney Observatory itself.
- **The National Trust Centre** (**Figure 17**) is located immediately south of FSPS beyond the Cahill Expressway. The buildings are two-storeys in scale and are heritage-listed. The National Trust Centre was the original location of FSPS, but is currently the headquarters of the NSW branch of the National Trust.
- **Observatory Hill Park** (**Figure 18**) is located immediately north and west of FSPS, beyond the Cahill Expressway. The park is Crown Land, however is managed by the City of Sydney. The park is open to the public throughout the year.

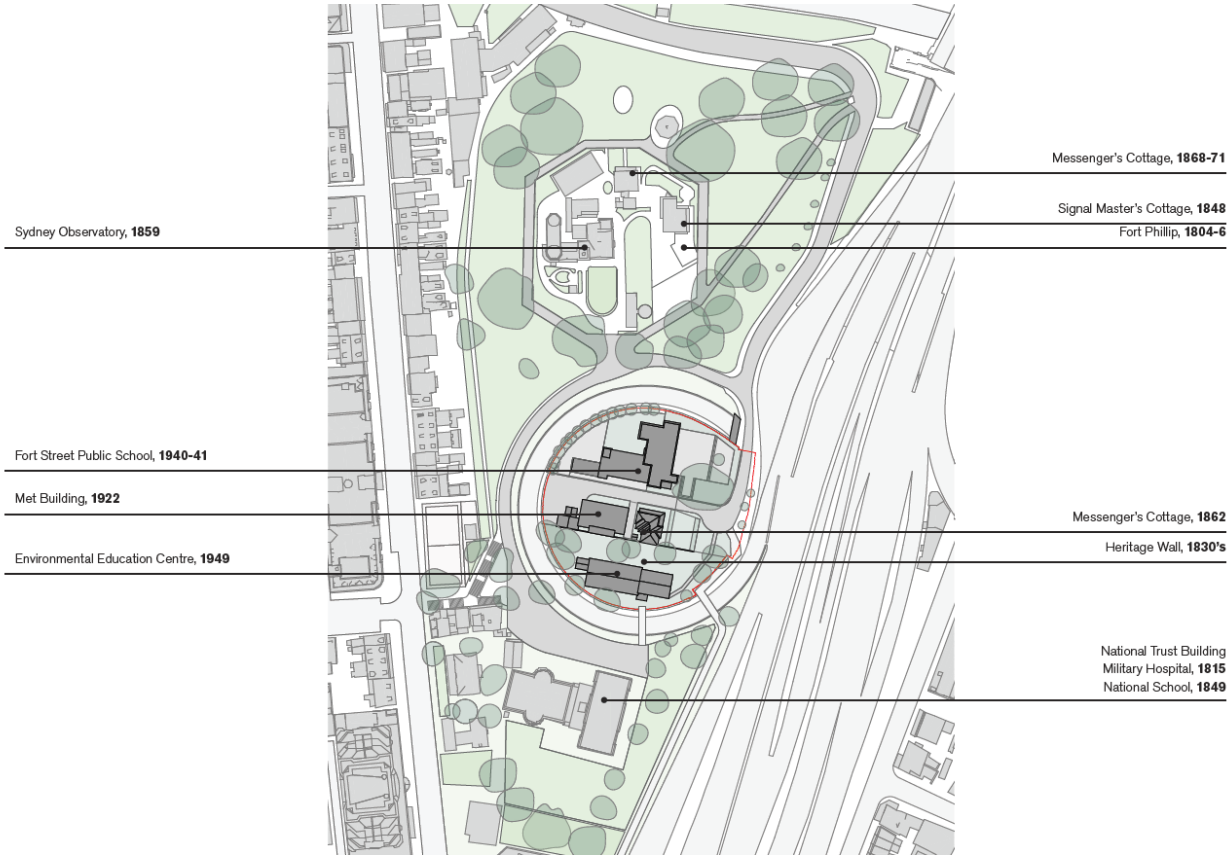

Figure 14 Observatory Hill buildings

Source: FJMT

Cahill Expressway

The site is surrounded by the Cahill Expressway, and has been dubbed the 'Cahill Cut' for the purposes of this application. The Cahill Expressway opened in 1958, and has effectively isolated FSPS from the surrounding Observatory Hill. The Cahill Expressway is cut into Observatory Hill and acts as an impassable physical barrier, preventing both pedestrian and vehicle access into and out of the site, other than via the existing access road and pedestrian/shared bridge. The Cahill Cut is shown at **Figure 19**.

Broader Context

- To the north of the site, beyond Observatory Hill, is Millers Point and Dawes Point, and the Walsh Bay piers. To the north west is Barangaroo Reserve (**Figure 20**).
- To the east of the site is the Cahill Expressway, a multi-lane freeway linking to the Harbour Bridge. Beyond the Cahill Expressway is The Rocks and the broader northern CBD, and Circular Quay train station and ferry wharves.
- To the south of the site, beyond the National Trust Centre, is the northern edge of the CBD. Wynyard Station is also located approximately 650m south of the site (**Figure 21**).
- To the west of the site, beyond the Cahill Expressway, are the Agar Steps, which lead down to Kent Street. The Kent Street tennis courts are also located west, on Kent Street (**Figure 22**). Located beyond Kent Street is Barangaroo South and Central, and the future Barangaroo Metro Station.

There are no known large scale developments planned within the immediate Observatory Hill precinct.

Figure 15 The Museum of Applied Arts and Sciences (Sydney Observatory)

Figure 16 The Museum of Applied Arts and Sciences (Sydney Observatory)

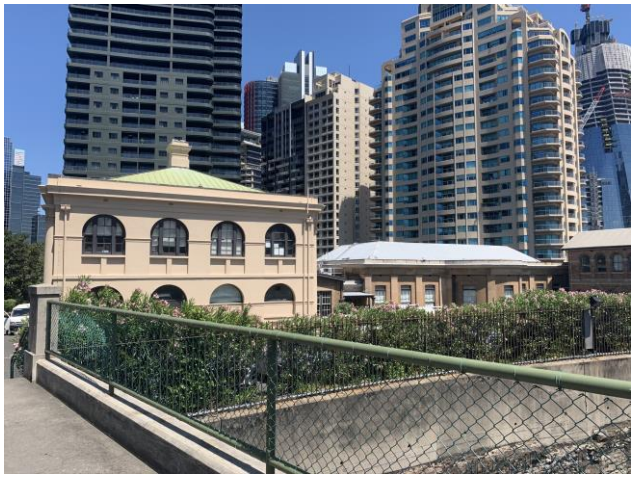

Figure 17 The National Trust Centre

Figure 18 Observatory Hill Park

Figure 19 The Cahill Cut

Figure 20 Development to the north

Figure 21 CBD development to the south of the site

Figure 22 Existing tennis court and development to the west along Kent Street

3.0 Description of the Development

This Section of the report provides a detailed description of the proposed development. Architectural Drawings prepared by FJMT are included at **Appendix D**.

Approval is sought for the expansion of FSPS to accommodate a total of 550 primary school students. Specifically:

- **Site preparation, demolition and excavation**
  - Site remediation.
  - Demolition of the southernmost school building, the garage and storage shed west and east of the Bureau of Meteorology Building (the Met/the Met Building), and the toilet block adjoining the main school building.
  - Selective removal of various elements of the main school building, as well as minor and insignificant elements of the Met Building and the Messenger's Cottage to facilitate refurbishment and future use of these buildings.
  - Bulk excavation works to facilitate the new southern buildings and western addition to the main school building.
  - Tree removal.
  - Installation of hydraulic and electrical services.
- **Land use**
  - Use of all buildings for the purpose of a school.
- **Existing buildings**
  - Retention, refurbishment and extension of the existing FSPS, including construction of a new roof and rooftop additions.
  - Retention and refurbishment of the Met Building and internal alterations and additions.
  - Retention and minor alterations and additions to the Messenger's Cottage.
- **Construction of new buildings**
  - Construction of one new building on the western part of the site for a staff room.
  - Construction of two new, interconnected school buildings on the southern third of the site.
  - Construction of a new communal hall and canteen building.
- **Landscaping**
  - Retention of the existing large fig tree.
  - Landscaping works throughout the site, including construction of a new amphitheatre, new central plaza, and a multi-purpose forecourt.
  - Landscaping of roof gardens on top of the new southern buildings and the existing Met Building.
- **Other works**
  - Works to the existing entrance road, including alterations to the existing Bradfield Tunnel Services Building.
  - Modifications to existing pick-up/drop-off arrangements.
  - Identification of signage zones.
  - Installation of on-site detention tanks.
  - Lot consolidation

An image of the proposed development is shown at **Figure 23**. The proposed site layout, including building names, is shown at **Figure 24**.

Figure 23 Image of proposed development, looking south-west from within the site

Source: FJMT

Figure 24 Proposed site plan showing building names

Source: FJMT

3.1 Development and Urban Design Principles

A set of development and urban design principles have been prepared by FJMT to guide development at the site. The principles have considered the Design Quality Principles of the Education SEPP, the FSPS Educational Space Planning Principles, and the requirements of the Department of Education's EFSG. The planning and design principles adopted for the proposed development of the site are as follows:

- **The child comes first:** Creating a diverse, collaborative learning environment incorporating the spatial implications of specific needs;
- **Identity and Inclusion:** Creating a strong identity and address for FSPS;
- **Campus heart:** Creating a clear campus centre;
- **Community engagement:** Providing connections between the campus and the community;
- **Orientation and wayfinding:** Providing a collective and connected campus;
- **Safety and security:** Ensuring pedestrian priority;
- **Heritage and archaeology:** Ensuring a sensitive and appropriate heritage and archaeology design outcome;
- **Transparency and showcase:** Creating an engaging, welcoming and vibrant campus;
- **A sustainable, protective and contemporary environment:** Creating a nurturing and safe campus;
- **Amenity and wellbeing**: Creating a welcoming, amiable, healthy campus;
- **Flexibility and multi-purpose:** Embedding potential for reconfigurability, and multi-purpose use over time; and
- **Buildability and economy:** Delivering a sensible and considered development.

3.2 Numerical Overview

The key numeric development information is summarised in **Table 3**.

Table 3 Key development information

Component	Proposal
Site area	6,192.2m^2
GFA	4,023m^2 (existing GFA is 2,073.9m^2)
Maximum Height	14.39m (to top of the Met Building lift overrun)
Car spaces	0
Number of Students	550
Number of Staff	37 (approx. based on a ratio of 1:15 staff per students)
Core Hours of Operation	9am – 3pm (with extra-curricular activities from 8am and until 4pm)
Before and After School Hours of Operation	Morning: 7am – 8:30am (teachers on-duty from 8:30am) Evening: 3pm – 6pm

3.3 Site Remediation, Demolition and Excavation

3.3.1 Site Remediation

A Detailed Site Investigation has identified heavy metals, polycyclic aromatic hydrocarbons (PAHs) and petroleum hydrocarbons (TRH) impacts to soils at the site which pose a potentially unacceptable risks to human health under the proposed redevelopment and associated land uses (refer to **Appendix E** and **Section 5.13** for further assessment). Existing contaminants are being managed in accordance with the recommendations of JBS&G, until the site is remediated as part of the redevelopment.

Given that the site is listed as a heritage item, the works to be conducted to contain and mitigate the identified contamination on the site are classified as Category 1 remediation work under *State Environmental Planning Policy No 55—Remediation of Land* and so require development consent. This application therefore seeks consent for the remediation works.

A Remediation Action Plan (RAP) has been prepared by JBS&G, outlining the required remediation and management to enable the site to be considered suitable for the proposed primary school facility (refer to **Appendix F**).

Remediation options available under the *National Environmental Protection Measure* have been considered and JBS&G has identified on-site in-situ management of the soil by physical separation, and ongoing management, as the most appropriate method for remediating the site. The proposed remediation scope of works is as follows:

- Site establishment;
- In-situ/ongoing soils management (physical separation remedial strategy);
- Excavation and off-site removal of site fill materials;
- Asbestos management (if required);
- Materials importation; and
- Site disestablishment.

The RAP includes a Validation Plan to verify the effectiveness of the remedial works and a Contingency Plan to ensure that the objectives of the RAP are met.

3.3.2 Demolition

The following demolition works are proposed:

- Demolition of the southernmost school building (the EEC Building), retaining the archaeological footprint below;
- Demolition of the garage and storage shed east and west of the Met Building;
- Demolition of the toilet block adjoining the main school building to the west; and
- Selective removal of various elements of the main school building, as well as minor and insignificant elements of the Met Building and the Messenger's Cottage to facilitate refurbishment and future use of these buildings.

Refer to the Demolition Plans provided at **Appendix A** for further detail.

3.3.3 Excavation

Bulk earthworks comprising cut and fill are proposed, as detailed in the Bulk Earthworks Plans prepared by Bonacci at **Appendix I**. Excavation is mostly limited to site preparation to allow for foundation works for the proposed new buildings. In the south-eastern corner of the site, a basement level is proposed to accommodate plant, servicing and storage (Lower Ground Level). Deeper excavation into high-strength rock is proposed in this part of the site. A shoring wall is potentially required to the south, adjacent to the Cahill Cut. The detailed excavation requirements will be confirmed during the design development stage.

3.3.4 Tree removal

19 trees are proposed to be removed in order to accommodate the development. Further discussion of tree removal and ecological impacts is provided at **Section 5.17** and in the Arboricultural Development Impact Assessment Report prepared by Birds Tree Consultants (**Appendix J**) and the Biodiversity Development Assessment Report prepared by Eco Logical Australia (**Appendix C**).

3.4 Refurbishment of Existing Buildings

Due to their heritage value and significance to the site, it is proposed that several of the existing school buildings be retained and modified as part of the school redevelopment. A summary of the proposed alterations and additions to each of the existing buildings to be retained is provided below. The site layout plan at **Figure 24** shows the name and location of each building.

Fort Street Boys and Girls Primary School Building (Building A)

The majority of Building A will be retained, including the northern, eastern and southern facades, with only the western-most portion proposed to be demolished. A new addition is proposed to the north (Building D), comprising a COLA at ground level and a home base classroom at Level 2. Minor internal alterations are proposed to improve the current education offering within the main FSPS Building. The proposed level-by-level use of Building A is (including the Building D addition):

- **Ground Level:** Open/informal and formal learning spaces, presentation areas, teacher's areas, amenities, a COLA adjoining the building in the north-western corner, Practical Activities Area, circulation space, internal vertical circulation stairs, fire stairs and a lift. Access is provided via the south at the existing school entrance, with a new entrance proposed to the north.
- **Level 1:** Open/informal and formal learning spaces, presentation areas, teacher's areas, amenities, Practical Activities Area, circulation space, internal vertical circulation stairs, fire stairs and a lift.
- **Level 2:** Open/informal and formal learning spaces, presentation areas, teacher's areas, amenities, Practical Activities Area, circulation space, inaccessible outdoor terraces along the eastern elevation, internal vertical circulation stairs, fire stairs and a lift.
- **Roof:** Allowance for solar panels.

Bureau of Meteorology Building (Building M)

Alterations and additions are proposed to the existing Met Building (Building M) to accommodate the following uses:

- **Ground Level:** Library, office/workroom, circulation area, stairs and a lift;
- **Level 1:** Library, resource store, circulation area, stairs and a lift;
- **Level 2:** Programs space, covered outdoor terrace on the northern elevation, circulation area, stairs and a lift; and
- **Roof:** Outdoor roof area, accessible via lift and stairs at the southern side of the building.

The Met Building has a pedestrian connection to the new Building J to the south on both Level 1 and Level 2.

Messenger's Cottage (Building C)

The Messenger's Cottage, which serves as the existing administration building including the Principal's office, will remain mostly unchanged. Equitable access will be provided through a management solution. A small addition is proposed to the south-west of the Messenger's Cottage to accommodate an interview room.

Bradfield Services Building

As noted at **Section 2.2.2**, there is currently a pinch-point on Upper Fort Street at the access point to the school. To allow for widening of the pinch-point, works to the existing Bradfield Services Building are required. Consultation with RMS is underway to determine appropriate ventilation arrangements.

3.5 Construction of New Buildings

In addition to the retention of existing buildings described above, four (4) new buildings are proposed. The new buildings are located in the west and south of the site. Each proposed new building is described below. Elevations of the proposed new and refurbished buildings are provided at **Appendix A** and **Figure 25** and **Figure 26**.

3.6 Building F

Building F is a single-storey building located to the west of the existing Met Building. Building F comprises staff facilities including a staff room, as well as student amenities.

3.7 Buildings J and H

Buildings J and H are both new two-storey buildings located in the southern portion of the site. While the buildings have been designed as separate volumes, they are connected centrally and shared a staircase and circulation space. Building J has pedestrian connections to the Met Building on Level 1 and Level 2, so that each of the three buildings can be accessed internally. Buildings J and H comprise the following uses:

- **Ground Level:** Collaborative/informal and formal teaching areas, a presentation space, teacher's area, two stair cases, student amenities, a central circulation area, clerical/administration areas (such as sick bay and an interview room), and storage rooms (for sport, school and OSHS);
- **Level 1:** Collaborative/informal and formal teaching areas, Practical Activities Area, presentation space, teacher's area, two stair cases, student amenities, a central circulation area, and connection to the Met Building to the north; and
- **Level 2 (roof):** Two rooftop outdoor play areas accessible via the Building J/H stairs or the lift in the Met Building, mechanical plant, pedestrian access to Building M to the north.

It is noted that some parts of the Buildings J and H are proposed to be constructed as cold shell in the first instance, with these spaces to be fitted out in the future to allow for additional students, subject to SI NSW requirements and funding.

3.8 Building G

Building G is a single-story building comprising a community hall, canteen and OSHS kitchen. A covered circulation area is proposed to the west connecting to Building H, with another covered area to the north including the canteen servery. The hall has capacity for 250 people. Access to the hall is provided on the northern and western sides of the building.

A basement level is also proposed (Lower Ground), which is mostly located beneath Building G and the eastern portion of Building H. The basement level comprises plant, servicing and storage uses and is accessed via stairs at the southern end of the circulation area between Buildings G and H or from outside of Building G in the south-eastern corner of the site.

Figure 25 Proposed Eastern Elevation

Source: FJMT

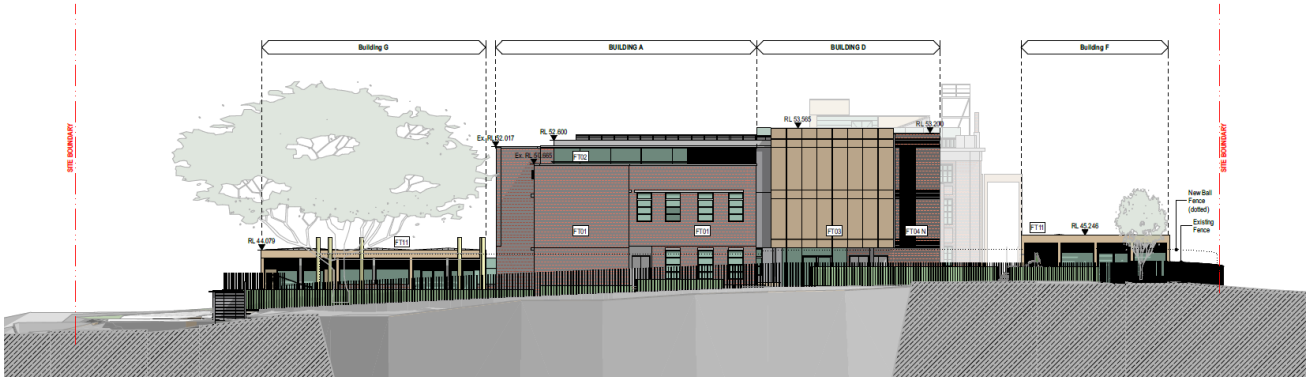

Figure 26 Proposed Northern Elevation

Source: FJMT

3.9 Future Building

The FSPS Master Plan caters to a maximum student capacity of 600 students, however, the buildings proposed in this SSDA cater to 550 students. There is potential for the construction of an additional building (Building E), to the west of the Fort Street Public School building (Buildings A and D). Site infrastructure has been designed to cater to the eventual Master Plan design (including Building E). However, Building E is currently beyond the remit of this SSD DA and is currently unfunded.

3.10 Building Heights

The maximum height of each building is provided in **Table 4** below.

Table 4 Proposed building heights

Building	Height
Existing Fort Street School Building (Building A)	11.77m (existing) 12.25m (proposed – top of rooftop extension)
Messenger's Cottage (Building C)	5.86m (existing)
Northern addition to FSPS (Building D)	12.35m
Building F	4.22m
Met Building (Building M)	11.72m (existing) 14.39m (proposed – top of lift overrun)
Building J	11.89m
Building H	8.3m
Building G (communal hall and canteen)	4.6m

3.11 Building Setbacks

Due to the physical constraints of the site, particularly its circular nature and being bound on all sides by the Cahill Expressway, there is no existing streetscape character or consistent arrangement of setbacks and built form. The existing buildings are scattered throughout the site, generally organised orthogonally.

The proposal retains three existing heritage listed buildings, with new buildings being designed with appropriate internal building separations/connections. The new buildings continue the generally orthogonal arrangement of the existing site and are built approximately to the site boundary on the southern and western sides of the site, with perimeter landscaping along the site boundary. An assessment of the built form and urban design is provided at **Section 5.4**.

3.12 External Materials and Finishes

A schedule of external materials and finishes is shown at **Figure 27**. The materials have been selected to be economical, functional, durable, sustainable and complementary to the existing palette of masonry (rendered and face brickwork), sandstone and painted timber. The selected colours reference both the existing built forms and the landscape, ideally colours are integral with the materials to provide a low maintenance solution.

The selected colours reference both the existing built form and the landscape. Preliminary façade types have been indicated at **Appendix A**, which explain the character of the proposal. The articulation of the facades has referenced the scale and proportions of the heritage fabric, particularly the Met Building and the 1940's FSPS Building. The proposed new fabric has been designed to be visually 'quiet' and allow the materiality of these two existing buildings to remain prominent.

Figure 27 Proposed materials and finishes

Source: FJMT

3.13 Landscaping

FJMT has prepared a Landscape Plans and Landscape Report (refer to **Appendix A** and **Appendix K**, respectively). FJMT has undertaken a detailed analysis of the site including views, entrances, circulation patterns, fences and barriers, trees and heritage interfaces to create a series of landscape principles and design objectives. The objectives of the landscape design are to:

- Create a diversity of outdoor learning spaces for a range of activities and groups;
- Provide connections between indoor and outdoor spaces;
- Achieve good surveillance to passive onlooking requirements;
- Create multifunctional spaces for maximised use of outdoor open areas;
- Provide enhanced opportunities for outdoor learning and outdoor events, as well as maximising play opportunities;
- Encourage opportunities to learn from the landscape and nature of outdoor spaces;
- Provide opportunities for ceremonial events and after hour uses;
- Create sustainable outdoor environments; and
- Provide amenity, using passive design to provide acoustic and wind protection.

Based on these objectives, a series of ground level courtyards, ground level edges and roof gardens have been designed for the site. Key components of the landscape design include the new multi-purpose forecourt, amphitheatre and the new fig tree deck in the east of the site. The landscape design seeks to improve access to open space and provide more opportunities for outdoor learning.

The location and function of these spaces are shown at **Figure 28** to **Figure 30**.

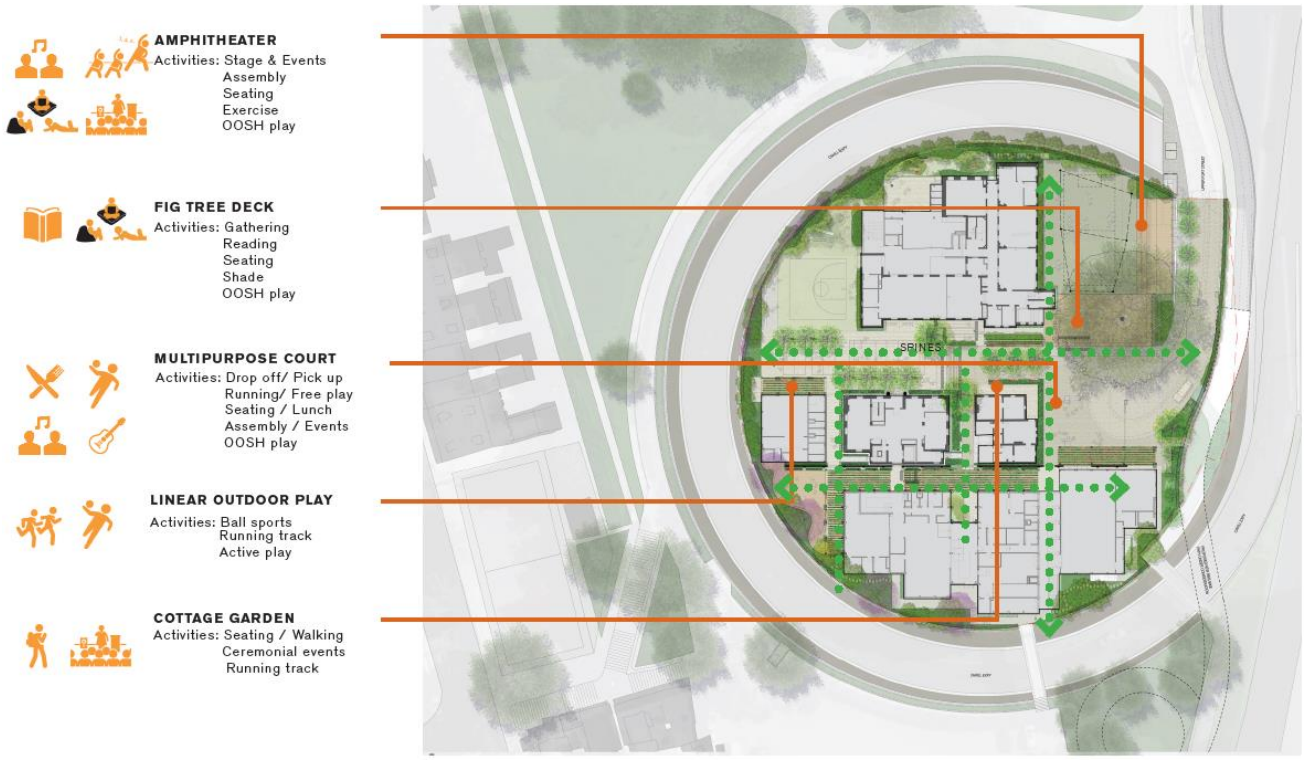

Figure 28 Ground level courtyards

Source: FJMT

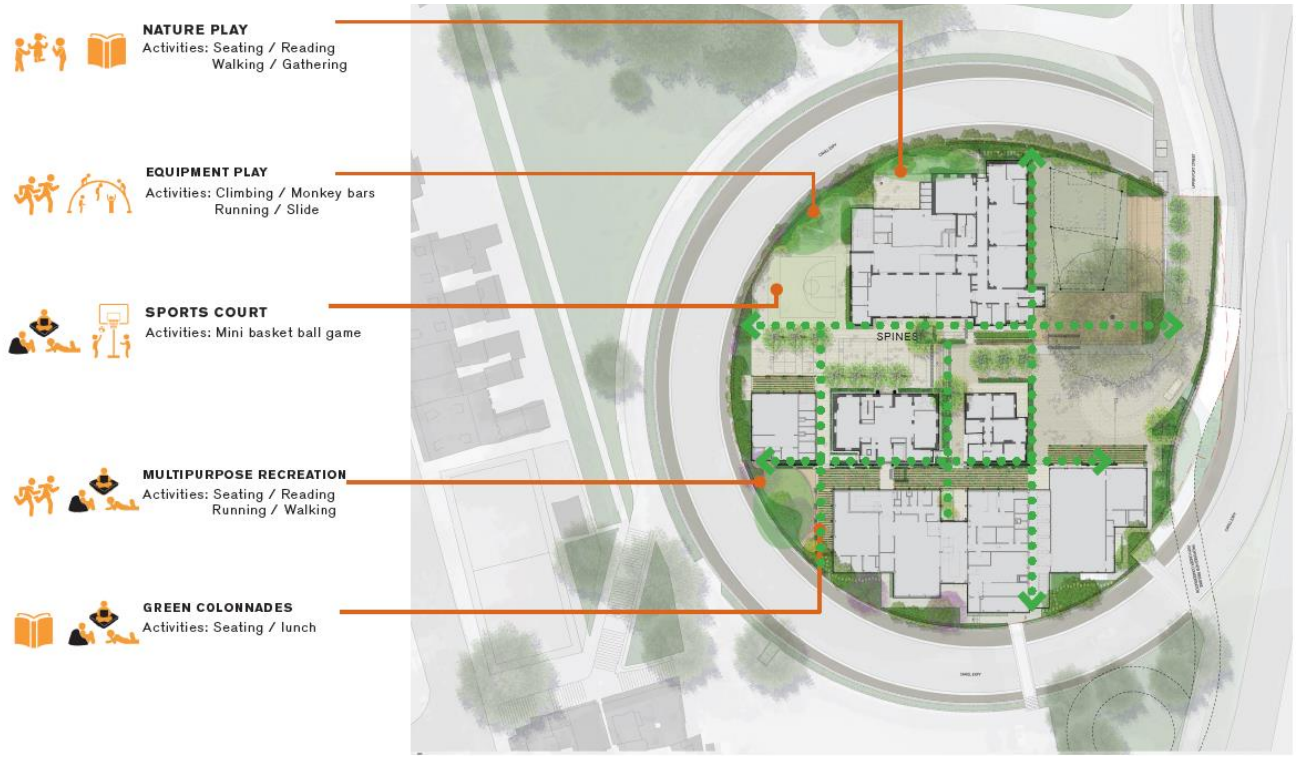

Figure 29 Ground level edges

Source: FJMT

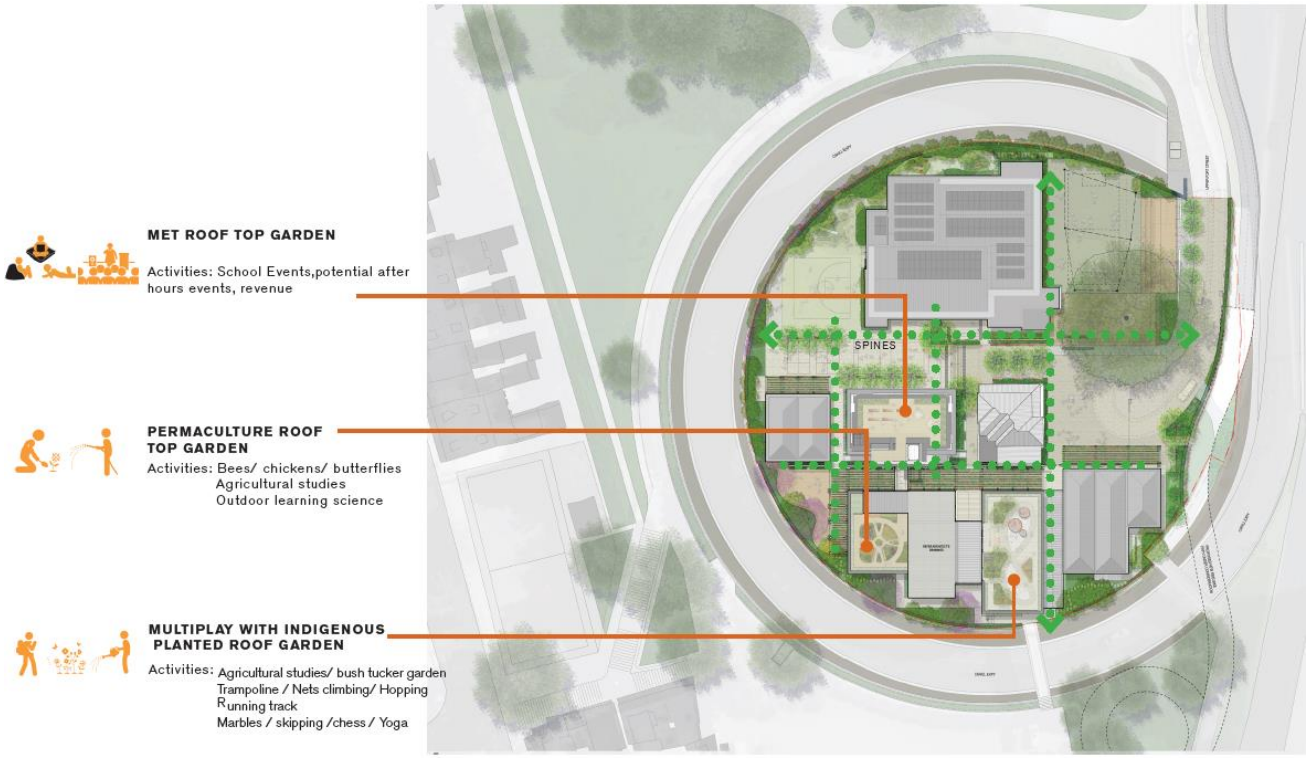

Figure 30 Roof gardens

Source: FJMT

3.14 Outdoor Recreation and Play Space

Typical School Hours

The provision of adequate and functional open space for recreation and learning has been a key consideration. At completion of the new cycleway (i.e. Phase 2 – refer to **Section 3.17.1**), there will be approximately 7.1m^2 of open space per student. This includes use of the communal hall and the roof space of Buildings H and J and the western ball court.

To further optimise the amount of outdoor play space available, FSPS is currently reviewing their timetable to consider options such as staggered lunch and recess times to effectively double the apparent quantity of outdoor space per student.

Further, Observatory Hill is currently used for a number of school activities including the school's annual cross-country carnival, a weekly running club, touch football training and music performances in the Rotunda (booked through Council). There are no plans to expand these activities as part of the proposed redevelopment of FSPS.

Out of School Hours Care

As outlined in **Section 3.22**, the number of students to be accommodated in out of hours care is still under review, however the maximum number of children able to be accommodated in before and after school care at FSPS would be 250 students, or approximately 45% of school students.

At completion of the new cycleway (i.e. Phase 2 – refer to **Section 3.17.1**), there will be approximately 1,787m^2 of open space available for students in out of hours care, or 7.15m^2 per student. The open space is located in the east of the site, as show in blue at **Figure 31**.

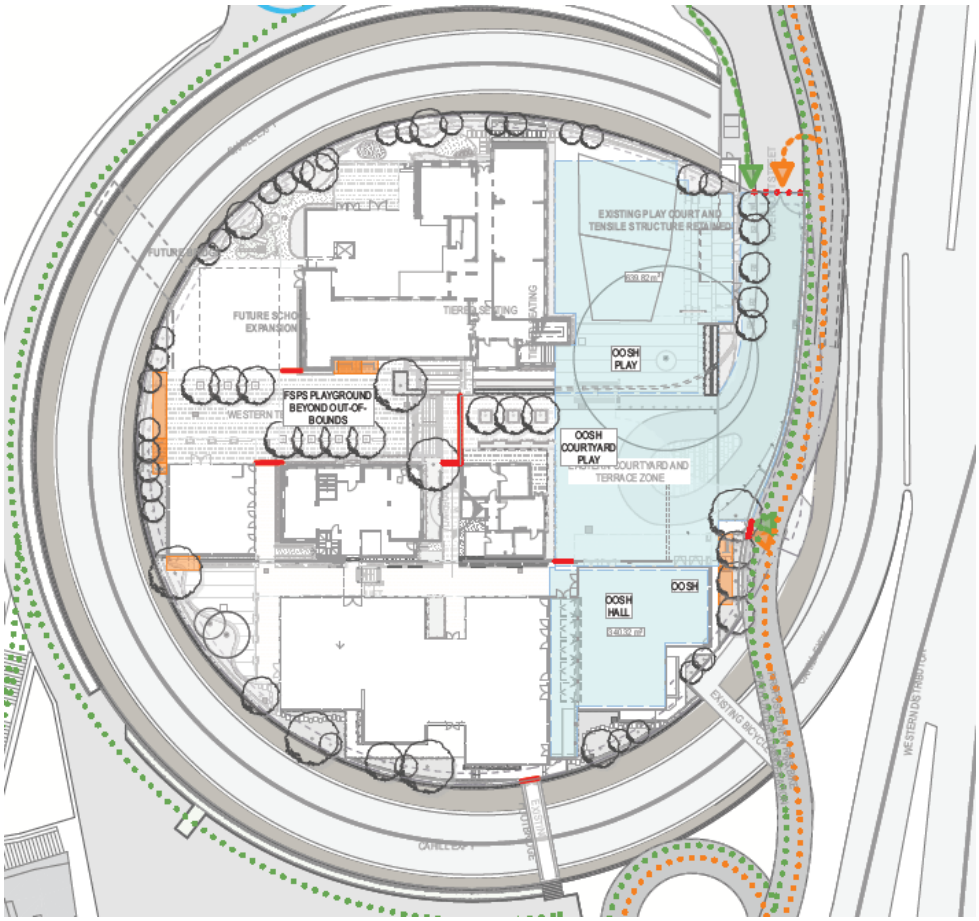

Figure 31 Phase 2 out of school hours care open space (shown in blue)

Source: FJMT

3.15 Signage Locations

No formal approval is sought for signage as part of this application, however a number of potential signage locations have been identified around the site, as shown in **Figure 32** and at **Appendix A**. Future signage will likely comprise:

- Wayfinding signage for pedestrians at key entry points to direct visitors and staff to different zones within the school;
- Vehicular signage to direct staff vehicles movements;
- Interpretive heritage signage;
- Emergency services directional signage in accordance with statutory requirements; and
- Building entry signs.

The existing white façade sign on the eastern elevation of the FSPS Building (Building A) will also be retained/replaced.

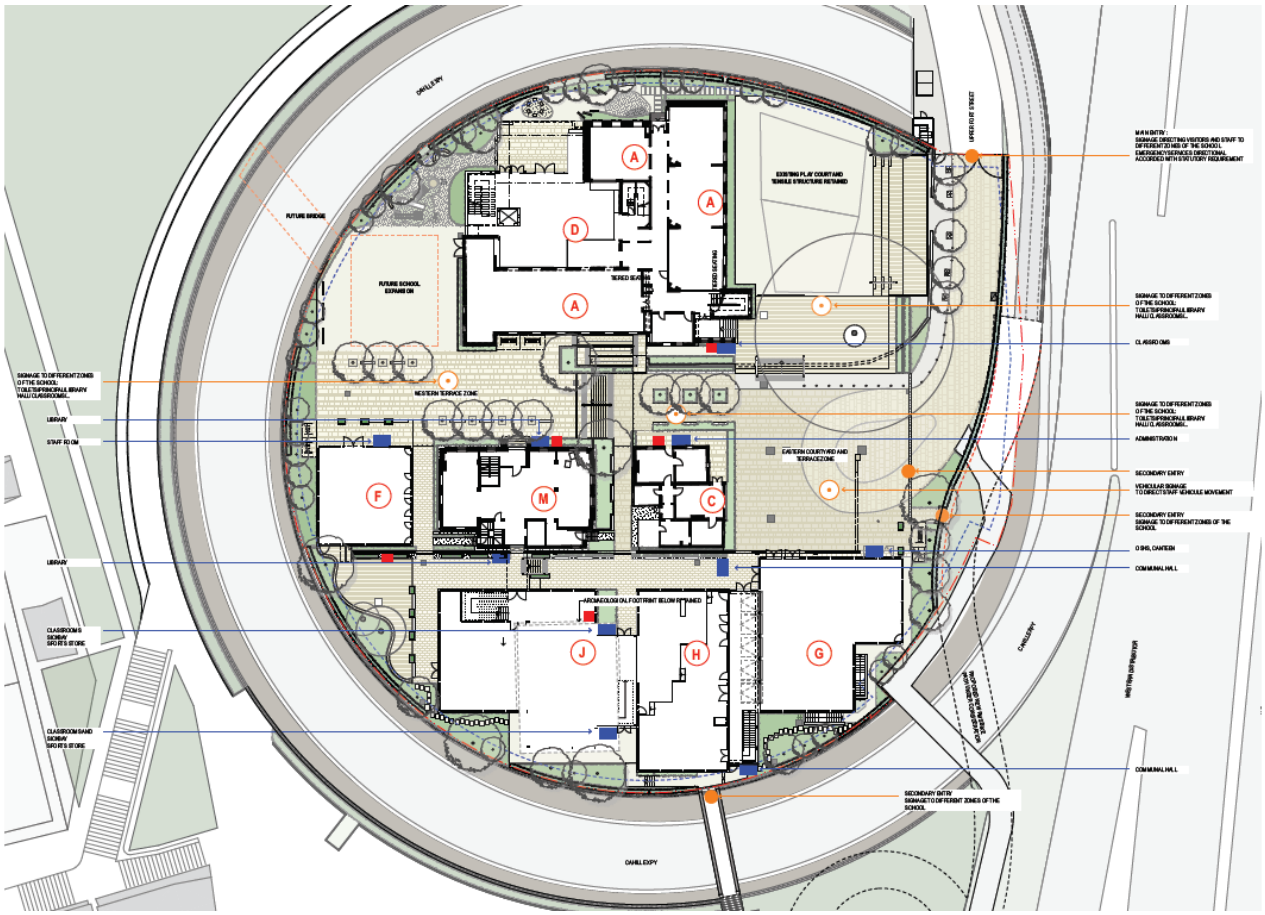

Figure 32 Signage locations

Source: FJMT

3.16 Lighting

FJMT has developed a lighting strategy for the proposal, as shown in **Figure 33** and at **Appendix D**. The proposed lighting will consist of a range of sensitively placed fittings around the site that provide a combination of soft architectural accent lighting and the required levels of low-level spatial lighting. The intent of the lighting strategy is to address the safety and functionality needs of the school, whilst minimising impacts on the operations of the Sydney Observatory.

The lighting strategy includes the following lighting types:

- Low level bollard lights;
- Accent wall mounted lights;
- Accent architectural up lights;
- Access lights to vertical columns;
- Campus street spatial lights;
- LED strip lights;
- Lights to low platers, balustrades and walls; and
- Sight gateway lighting to suit CCTV cameras.

Light spill impacts are discussed at **Section 5.21** and **Appendix L**.

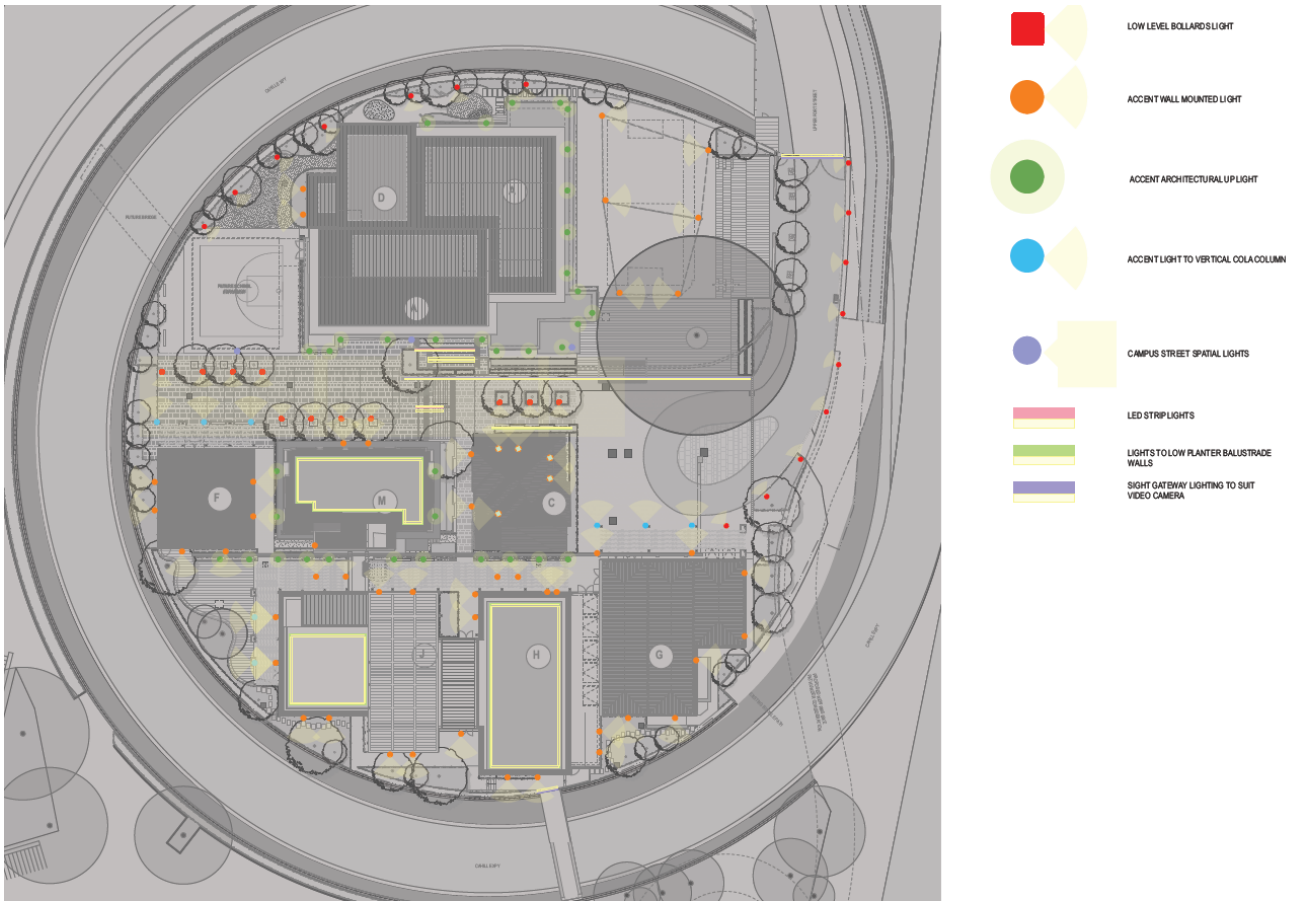

Figure 33 Lighting strategy

Source: FJMT

3.17 Pedestrian and Vehicular Access and Parking

The proposed vehicular, pedestrian and bicycle accessways to the site are shown in the diagrams in the Traffic and Transport Assessment at **Appendix M**. In summary, the FSPS campus is designed to be pedestrian only, with no internal vehicular access or on-site parking. A controlled drop-off/pick-up zone is proposed to be located at the east of the site adjacent to Upper Fort Street, as described below.

The changes to the Sydney Harbour Bridge Cycleway, being progressed separately by RMS, are key to the operation of the vehicular access arrangements. As timing of these works is not yet known, a phased approach has been developed as described in **Section 3.17.1**.

3.17.1 Phasing

Proposed changes to the Sydney Harbour Bridge Cycleway, being undertaken separately by RMS, will potentially impact the proposed development. The existing cycleway is located to the east of the site within the amalgamated northern lot owned by SI, and cyclists currently exit the dedicated cycleway onto Upper Fort Street. The proposed shared path and cycleway will comprise a dedicated cycleway running adjacent to Upper Fort Street (to the west). SINSW has been working closely with RMS to ensure that the plans for the proposed cycleway align with the design for FSPS.

Since works within the school may be completed prior to the cycleway upgrade works (timing is not yet certain), a phasing strategy has been developed so that the school can function under both scenarios (prior to and after construction of the cycleway). In summary:

- During construction works at FSPS, as well as during construction of the new cycleway, it is anticipated that the cycleway will be redirected via a temporary ramp on the Sydney Harbour Bridge stairs and onto Watson Road, Argyle Street and Kent Street, connecting to the Kent Street cycleway (refer to **Section 5.18**).
- After construction of FSPS but prior to construction of the new cycleway, cyclists will continue to use Upper Fort Street to access the Harbour Bridge. As shown in **Figure 34** (left – Phase 1), under this scenario the school entry gate is located within the school site to allow cyclist passage along Upper Fort Street.
- Once the dedicated cycleway is complete and cyclists no longer need to use Upper Fort Street, the school entry gate will be relocated to the northern FSPS boundary on Upper Fort Street, as the road passes over the Cahill Cut, as shown in **Figure 34** (right – Phase 2).

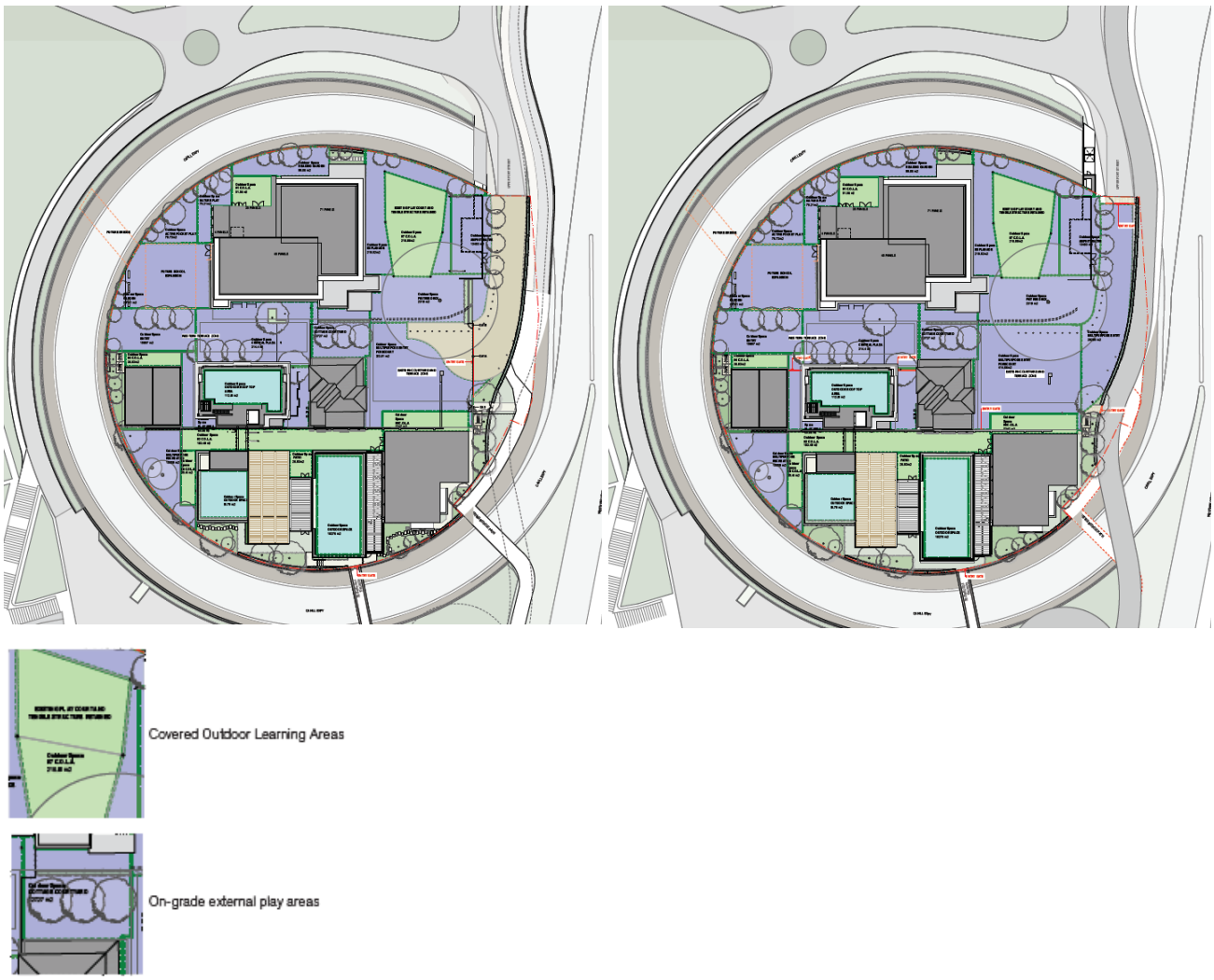

Figure 34 Phasing plan: Phase 1 prior to cycleway upgrade (left) and Phase 2 after cycleway upgrade (right)
Source: FJMT

3.17.2 Drop-off and Pick-up Arrangements

A formalised drop-off and pick-up area is proposed in the east of the site, within the new entry plaza located off Upper Fort Street. The proposed arrangements include modified kerbside arrangements along Upper Fort Street and Watson Road. Queuing for up to 30 vehicles will be accommodated along Upper Fort Street with an additional 18 in an overflow queue along Watson Road. No Stopping zones are proposed at the bend between Watson Road and Upper Fort Street and midway along Upper Fort Street in front of the access gate to the incident response area, to enable vehicle passing to occur. Refer to Section 10.1 of the Traffic and Transport Assessment provided at **Appendix M** for further details and assessment.

There is currently a pinch-point on Upper Fort Street at the access point to the school. It is proposed that the road be widened to 6m (kerb to kerb) at the pinch-point, to enable two-way traffic flow and to facilitate a smooth flowing car line during drop-off and pick-up periods. To allow for widening of the pinch-point, works to the existing Cahill Expressway ventilation building are required. Consultation with RMS is underway to determine appropriate ventilation arrangements.

Drop-off and pick-up for both out of school hours care and standard school hours will occur within the new entry plaza. A ‘cul-de-sac’ arrangement is proposed within the eastern entry plaza where vehicles will be able to enter the school to drop-off and pick-up students. Pick-up and drop-off will be carefully managed by school staff, and students/pedestrians will be separated from vehicles through the provision of bollards and landscaping, as shown at **Figure 35**.

The proposed access arrangements are summarised at **Section 3.17.8**.

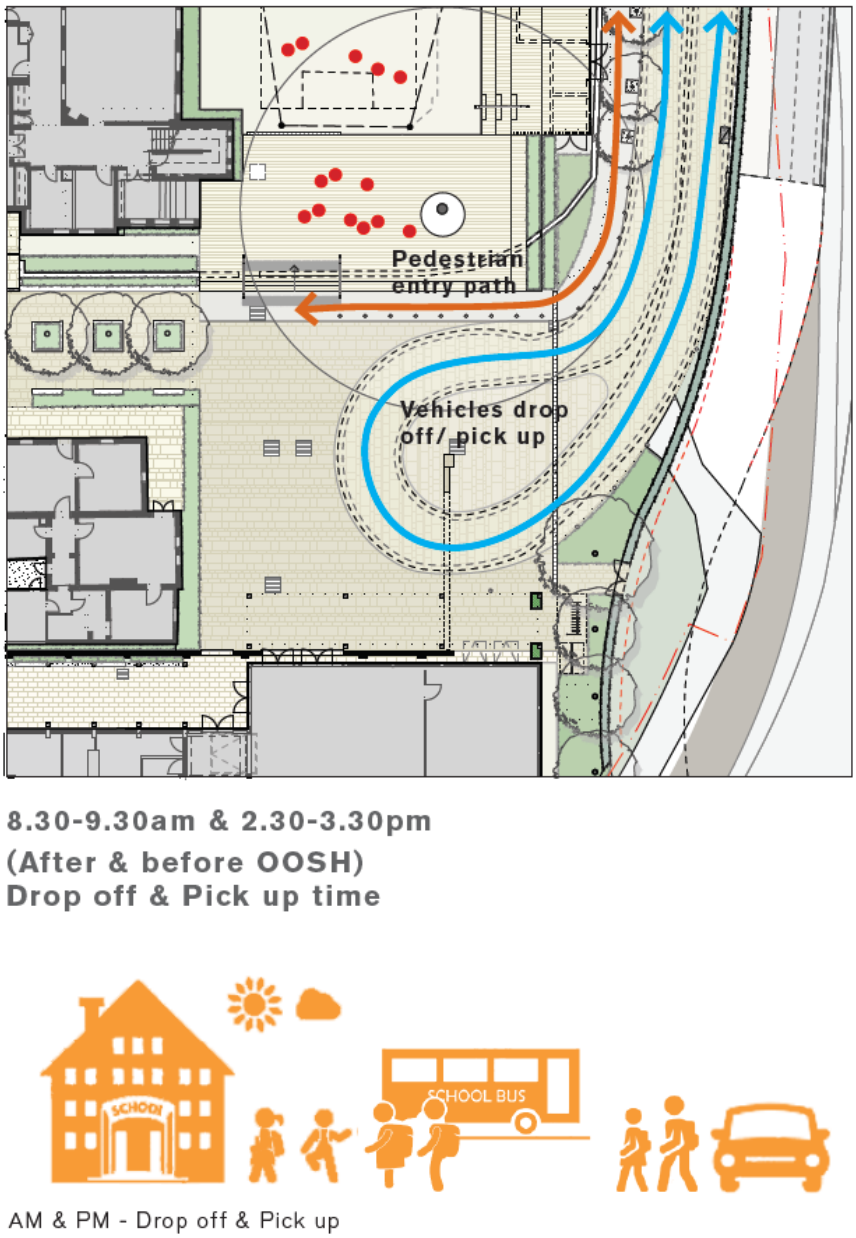

Figure 35 Drop-off and pick-up arrangements

Source: FJMT

3.17.3 Vehicular Parking

No vehicle parking is proposed to be provided. Visitors will utilise nearby on-street car parking.

3.17.4 Scooter and Bicycle Parking

Five (5) secure staff bicycle spaces are proposed to be provided. Staff will have access to shower and locker facilities. Under-cover spaces will also be provided for up to 30 student bikes and 30 scooters.

3.17.5 Bus Access

Existing excursion bus access will be retained, with students being picked-up and dropped-off on Argyle Street, using the footpaths along Watson Road and Upper Fort Street for access to the school.

3.17.6 Deliveries and Waste Management

All deliveries will enter via Upper Fort Street and will use the entry plaza area within the school grounds at a time when the grounds are not being used for school play activity.

Waste will be stored in a central room located on Ground Level under the amphitheatre, adjacent to Upper Fort Street. General waste and recycling will be collected five (5) times per week, and less frequently for other waste streams. There are two routes available for the collection vehicles to access the collection point to allow for flexibility of collection:

1. The waste collection vehicle will drive into Upper Fort Street, through the first school gate and through the second school gate where the vehicle will complete a three-point turn at the dead end. Then the vehicle will exit the second gate and drive forward to stop at the collection point on Upper Fort Street before exiting the first gate; or
2. The waste collection vehicle will complete a turning manoeuvre before the school gate outside of the site boundary and reverse into the collection point. Then the vehicle will exit driving forward.

Waste vehicles will drive into the school, turn around, and then will drive to the collection point. Collection will occur outside of school hours.

Reversing has been minimised as much as possible but is unavoidable due to the site constraints. The traffic implications of reversing the truck are that this operation can only occur outside of school pick-up and drop-off times. Prior to completion of the new Sydney Harbour Bridge Cycleway, cyclists and pedestrians will need to be managed along this section of Upper Fort Street.

3.17.7 Pedestrian and Bicycle Access

The three existing pedestrian access routes to the school will be retained, as follows:

- The western distributor footpath between Kent Street and Upper Fort Street, which is currently shared with bicycles accessing the Sydney Harbour Bridge Cycleway. This route will be upgraded as part of the Sydney Harbour Bridge Cycleway project (by others) which will provide segregation between cyclists and pedestrians.
- The footpath along Upper Fort Street, which connects to Watson Road and the pedestrian connection to the east under the Sydney Harbour Bridge approach roadway.
- The Agar Steps from Kent Street to Observatory Hill.

The primary school catchment is predominantly to the south of the site. This will result in the majority of the walk-in catchment using Kent Street either via the Agar Steps or the Western Distributor on-ramp. The later route will be upgraded to a separate pedestrian facility adjacent to the proposed Sydney Harbour Bridge Cycleway.

Public transport connections are also focused to the south of the site, with the predominant route being via the Sydney Harbour Bridge on-ramp.

The Agar Steps provide an attractive and safe route from the key north-south spine of Kent Street. Students arrive at Observatory Hill and follow the footpath around to the school entry on Upper Fort Street.

Ultimately, the FSPS Master Plan for the site contemplates construction of a new pedestrian bridge on the north-western side of the site, which would link the site to the broader Observatory Hill to provide easier access to the National Trust, the Agar Steps and Kent Street. However, these are currently unfunded and are not subject to this SSD DA.

3.17.8 Summary of Proposed Access Arrangements

The following diagrams summarise the proposed access arrangements described above.

Prior to opening of the new cycleway:

- The school grounds will be closed overnight and during the school day;
- The gate will be located within the FSPS site (shown by the red line at **Figure 36**) to enable cyclists and pedestrians to continue to use Upper Fort Street;
- Vehicle access to the school grounds will be limited to between 8.30am – 9.00am and 3.00pm – 3.30pm for drop-off and pick-up; and
- During pick-up and drop-off, cyclists and pedestrians will be managed to avoid conflicts with vehicles on Upper Fort Street as they access the school.

These arrangements are shown in **Figures 36** and **37**.

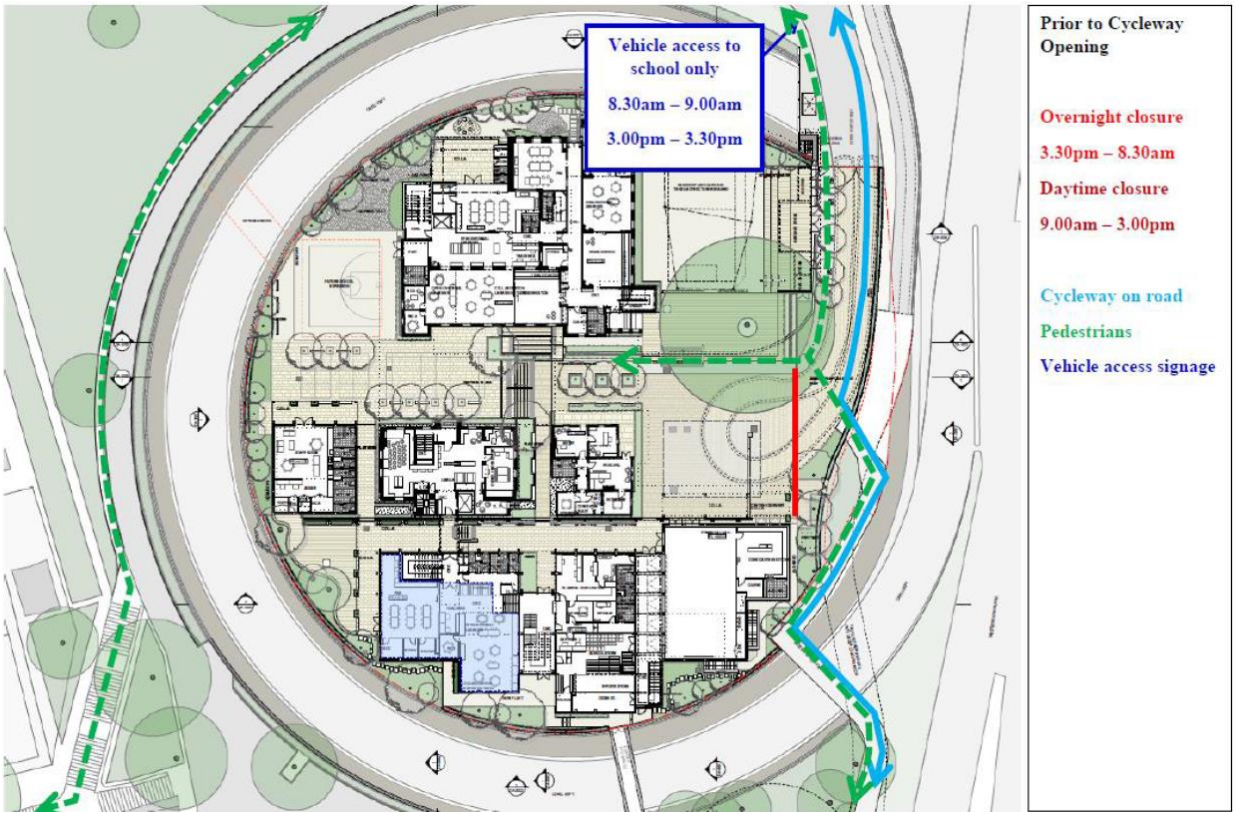

Figure 36 Prior to cycleway - overnight and during school hours access

Source: Arup

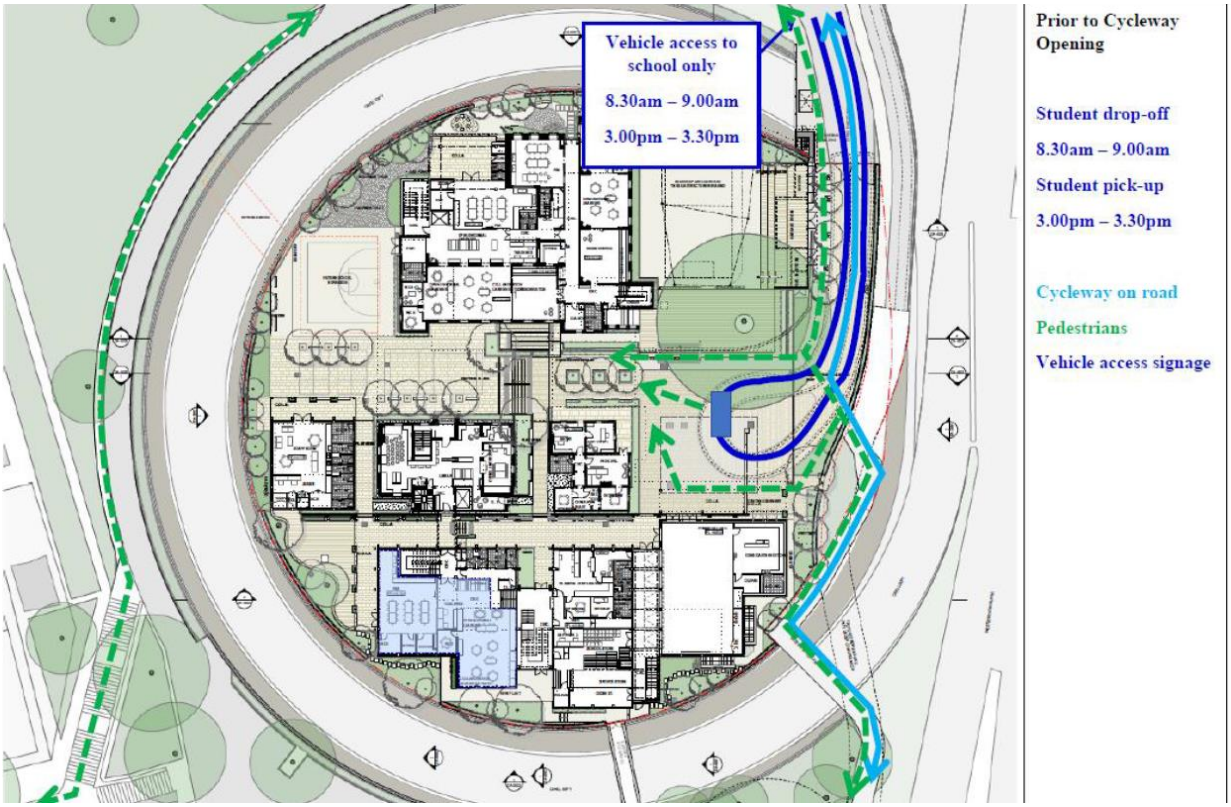

Figure 37 Prior to cycleway – drop-off and pick-up access

Source: Arup

After completion of the new cycleway:

- The school grounds will be closed overnight and during the school day;
- The gate will be located at the northern boundary of the FSPS site (shown by the red line at **Figure 38**);
- Vehicle access to the school grounds will be limited to between 8.30am – 9.00am and 3.00pm – 3.30pm for drop-off and pick-up;
- Cyclists and pedestrians will use dedicated paths on the eastern and western sides of Upper Fort Street; and
- There will be no interaction between pedestrians/cyclists and vehicles.

These arrangements are shown in **Figures 38** and **39**.

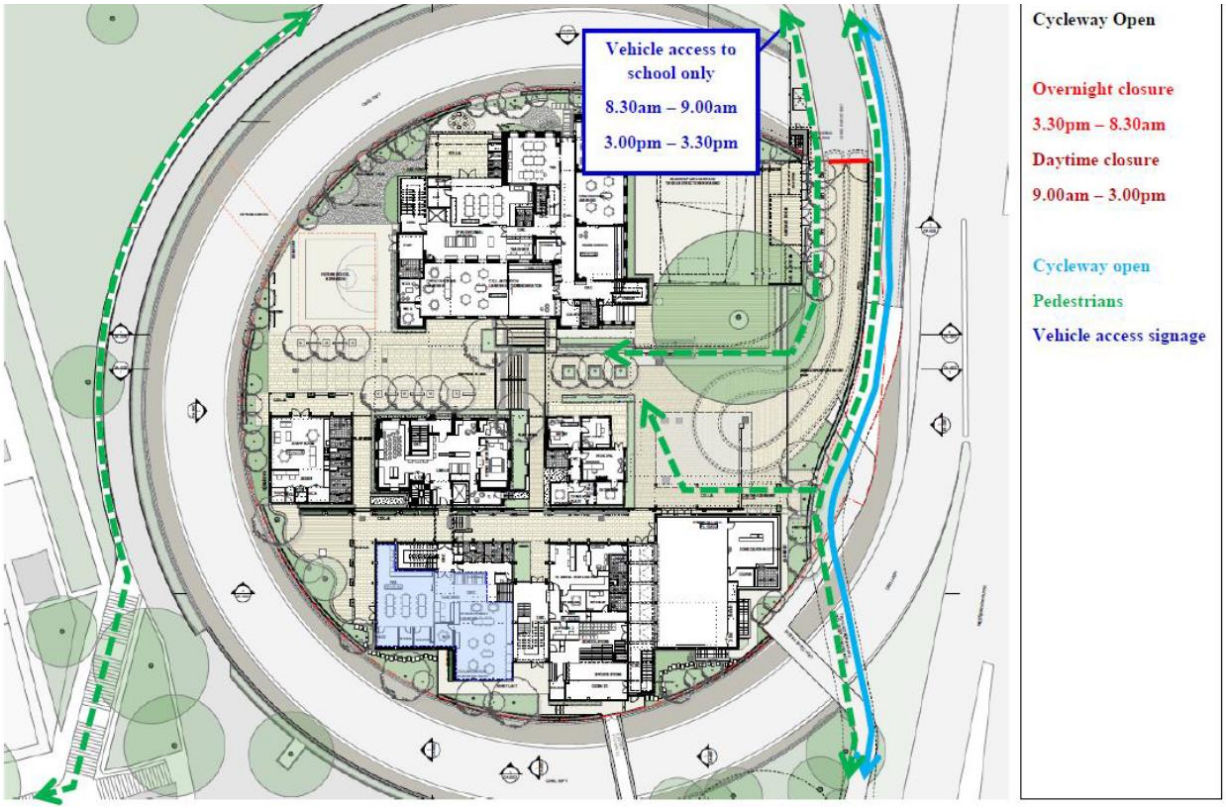

Figure 38 Cycleway open – overnight and during school hours access

Source: Arup

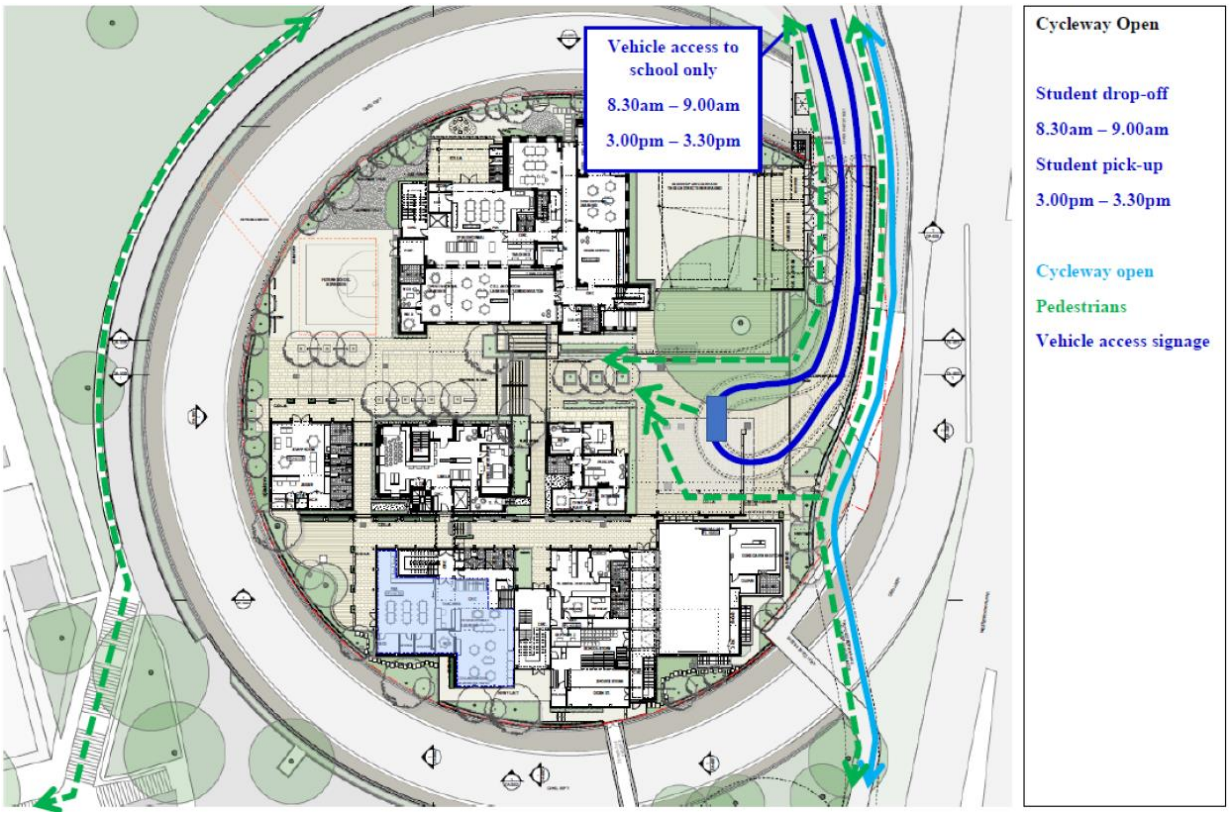

Figure 39 Cycleway open – drop-off and pick-up access

Source: FJMT

3.18 Ecologically Sustainable Development

The proposed development includes a sustainability framework with initiatives and design elements to address the following nine impact categories:

- **Energy and emissions** – use of efficient heating, ventilation and cooling, provision of end of trop facilities, use of high-performance double-glazed windows.
- **Water** – use of water efficient appliances and fittings, metering and monitoring of systems and tank storage/roof water harvesting.
- **Resource and materials** – selection of durable, responsibly sourced and sustainable building materials.
- **Biodiversity** – preservation of habitat and incorporation of indigenous flora, fauna and biodiversity.
- **Improved quality of life** – promoting healthy lifestyle and wellbeing, safe access for walking and cycling and maximising daylight and views.
- **Life-long learning** – including education programs to inform on sustainability initiatives delivered by the project.
- **Clean water and sanitation** – providing access to clean, fresh water for drinking and cooking.
- **Economic growth and job opportunities** – engaging with local organisations and individuals to foster economic growth within surrounding community, diverse and inclusive employment opportunities will be promoted to enhance workforce representation.
- **Inclusive environment** – including solutions for accessibility and Indigenous heritage and community recognition, protection and conservation will be provided in all operations

For a complete list of sustainability initiatives incorporated into the proposal, refer to the ESD Report prepared by Cundall at **Appendix N**. An assessment against the principles of ecological sustainable development is provided at **Section 5.16**.

3.19 Infrastructure and Services

An Infrastructure Management Plan has been prepared by Johnstaff Projects and is provided at **Appendix O**. The report finds the following relating to services for the proposed development.

Electrical

The existing power supply and all electrical infrastructure on site is proposed to be demolished and new infrastructure provided.

A new power supply will be obtained from the substation at the corner of Kent Street and High Street (Ausgrid S.6841). The new power supply will have a 400A capacity and will be terminated at a pillar on the site boundary or at the main switchboard. The new power supply is proposed to follow the existing path to be reticulated up the Agar Steps and around Upper Fort Street. The alternative path is to be reticulated along Argyle Street and Watson Street to the site. The final reticulation pathway is pending final confirmation from Ausgrid.

A new main switchboard will be provided on the site, within the basement of the new Building G. Distribution boards throughout the buildings will receive a power supply from the main switchboard.

Solar photovoltaic power generation will also be provided on the site, the proposed solar system is 40kW. Additional supplementary power may be provided through a battery system, housed in the basement adjacent to the main switchboard.

Water

It is proposed to connect to the Sydney Water DN150 CICL water main in Upper Fort Street. The main has sufficient flows to supply the development and there is no requirement for a 288kL fire buffer tank.

Sewer

There is an existing 150mm diameter Sydney Water vitrified clay (VC) sewer main that extends from Upper Fort Street across the site to a sewer manhole. This service then extends south across the Cahill Expressway as a 225mm diameter VC pipe. A new sewer line will be laid along the eastern border to another new sewer manhole,

which will supply the newly consolidated (northern) lot. For Lot 5, which will not be consolidated, the proposal is to install a new sewer manhole near the southern site boundary to supply this lot and disuse the existing sewer line and manhole north from this point.

Gas

There is an existing 75mm diameter 7kPa Jemena utility main located in Upper Fort Street which extends across the Cahill Expressway where it becomes a 50mm 7kPa service. It is anticipated that there will be sufficient available capacity in the main to service the development.

3.20 Water Cycle Management

An Integrated Water Management Plan has been prepared by Warren Smith & Partners and is included at **Appendix P**. The private systems will comprise potable water services extended from the existing Sydney Water DN150 CICL water main in Upper Fort Street, and non-potable cold water services for irrigation purposes only.

Water usage will be reduced though the use of low flow taps and sanitary fixtures. Rainwater harvesting will be used as an alternative source for non-potable water uses for the school. Implementing a rainwater re-use system will result in the conservation of potable cold water sources and a reduction in the daily water demand.

Sydney Water has advised that an OSD with a minimum volume of 115m^3 is to be placed on the site as part of the proposed development, to limit the peak flows leaving the site to 207 L/s, which would result in post-development flows being less than the existing condition.

3.21 Construction

It is noted that all students and staff will be decanted off site during the construction phase. Construction management measures are discussed in the Preliminary Construction Management Plan prepared by Johnstaff Projects (**Appendix Q**) and at **Section 5.19**.

Construction Program and Staging

The proposal will be constructed in one stage, in accordance with the Preliminary Construction Management Plan. Construction activities associated with the proposed works are expected to occur over approximately 26 months and will include the following activities:

- Site establishment;
- Demolition;
- Excavation;
- Structure;
- Façade;
- Services/finishes;
- External works; and
- Commissioning.

Construction Jobs

The works are expected to create approximately 250 construction jobs.

Construction Hours

The proposed hours of construction are proposed as follows:

- Monday to Friday inclusive: 7.00am to 7.00pm;
- Saturday: 7.00am to 5.00pm; and
- No work on Sundays and Public Holidays.

If required, after hour permits will be sought from the relevant authorities. This may be due to the following reasons:

- To reduce impact on public or nearby residents;
- Emergency event/incident;
- Authority shutdowns or disconnections; and
- Other reasons as required.

3.22 Operation

An Operations Statement has been prepared by Ethos Urban and is provided at **Appendix R**, which provides high-level operational details relating to staff and student numbers, hours of operation (standard and extra-curricular/out of hours), and community use of the school facilities.

3.22.1 Student and Staff Numbers

The maximum capacity of the school under the FSPS Master Plan is 600 students with approximately 40 staff. The SSD design caters for 550 students with approximately 37 staff. The anticipated opening capacity and before and after school care numbers are provided in **Table 5** below. It is noted that there are currently 220 students and 17 staff at the school.

Table 5 School student and staff numbers

Year	Staff	Students
Opening Capacity (2023)	26*	391
Maximum Capacity	37*	550
Before and After School Care	17*	250**

**A ratio of 1:15 staff per student has been applied*

***This is the maximum number of students that could be accommodated for out of school hours care and is subject to receiving a dispensation from minimum area requirements. The actual number may be less. These students will be attending FSPS and are not additional to the maximum student capacity of the school.*

3.22.2 Hours of Operation

The school will operate between the hours of 9am and 3pm, Monday to Friday. Extra-curricular activities will occur between 8am and 9am in the morning and between 3pm and 4pm in the afternoon. Approximately 10% of the school population is expected to participate in extra-curricular activities.

Before and after school care will share the use of the school facilities during the morning period (7:00am - 8.30am) and the evening period (3:00pm - 6:00pm). The operator will also be able to offer holiday care during the 12 weeks of holiday periods, between the hours of 7:00am to 6:00pm, Monday to Friday. Before and after school care will operate on a regular daily (Monday-Friday) basis between 7:00am – 8:30am and 3:00pm - 6:00pm. School teachers will be on-duty between 8:30am – 9:00am. The number of students to be accommodated in out of hours care is still under review, however the maximum number of children able to be accommodated in before and after school care at FSPS would be 250 students, or approximately 45% of school students.

3.22.3 Community Use of School Facilities

Selected facilities, including but not necessarily limited to the communal hall, library and outside areas, may be operated outside of standard school hours on a ‘user pays’ basis. Hours of operation are anticipated to be between 6:00pm – 10:00pm on weekdays and during weekend periods. Weekend usage times are to be determined but could be expected to be within 6:00am – 10:00pm. The communal hall in the east of the site may be available for hire by local sporting groups, the Australian Electoral Commission and local community groups. The hall can cater for up to 300 people. Outdoor areas and the library may also be used outside of hours by community groups.

3.23 Lot Consolidation

As outlined at **Section 2.2** and **Table 2**, the FSPS site is currently made up of nine (9) separate lots. All lots within the school site are owned by either the Department of Education or the Minister for Education. In order to simplify the land titling arrangements, it is proposed to consolidate eight (8) of the property titles as part of this application, as follows:

- Lots 106, 107 and 108 in DP 748340;
- Lots 2, 3, 4 and 9 in DP 73259; and
- Lot 2 in DP 244444.

This will result in two property titles - Lot 5 in DP 258013 (existing) and Lot 10 in DP 732592. A Plan of Consolidation has been prepared by RPS and is included at **Appendix JJ**.

3.24 Contributions

The site is covered by Council's *Central Sydney Development Contributions Plan 2013*. The purpose of the Plan is to raise funds from private, commercially driven developments to be put towards the cost of public facilities and infrastructure which are burdened by those developments. Imposing a levy on the Applicant's own public infrastructure would conflict with the public policy of the Plan, particularly as the proposed development will provide upgraded infrastructure which will relieve pressure on existing public facilities. While Council's Plan does not expressly exclude Crown Developments or educational establishments from the payment of Section 7.11 contributions, an exemption is considered appropriate in this instance. The Applicant is a government agency which relies on government funding to provide new facilities for both the school community, and the public. The levying of a development contribution would divert a portion of these public funds, which have been specifically provided to fund the redevelopment of FSPS, to local services without any direct nexus to the impact on those services. The nature of the development is to support the expansion of a public school, so the development will not generate significant demand for new infrastructure. The redeveloped public school will largely provide the type of infrastructure which Council typically seeks to levy for, for use by staff, students and the public. The future development of the site will also facilitate the Plan by conserving and enhancing the City's heritage assets and providing an accessible, multi-purpose space for use by the broader community.

Crown applications – Department of Planning Circular D6

The Applicant's position is supported by the provisions of Circular D6, which states:

> *"Crown Activities providing a public service or facility lead to significant benefits for the public, in terms of essential community services and employment opportunities. Therefore, it is important that these essential community services are not delayed by unnecessary disputes over conditions of consent. These activities are not likely to require the provision of public services and amenities in the same way as developments undertaken with a commercial objective."*

It is noted that Council does not automatically grant exemptions to Crown Developments. However, the Department of Planning's Circular D6 sets out the reasons why Crown developers can seek exemptions from Section 94 (now Section 7.11) payments. Circular D6 notes that where the applicant is a Crown authority and the development is for Educational Services, no contributions should be collected for open space, community facilities, parking, and general local and main road upgrades.

The exemption from payment of contributions relating to community facilities, public domain and new open space is considered appropriate, as the school will provide areas of accessible open space and facilities for use by the staff and students, and occasionally by the community.

4.0 Consultation

In accordance with the SEARs issued for this project, extensive consultation has been undertaken with key stakeholders, relevant public authorities, the community and Council. A Consultation Summary Report has been prepared by Johnstaff Projects is provided at **Appendix S**.

A summary of the consultation undertaken to-date with key stakeholders, Council, the community and relevant agencies is provided below. Several consultants have undertaken additional consultation with relevant parties during the preparation of their reports.

In preparation of the proposal and the accompanying EIS, the following stakeholders have been consulted:

- Government Architect NSW;
- Department of Planning, Industry and Environment;
- Property NSW;
- City of Sydney;
- Heritage DPC;
- Roads and Maritime Services;
- Transport for NSW;
- Service Providers;
- Museum of Applied Arts and Science (Sydney Observatory);
- National Trust;
- Local Aboriginal Community;
- Local Community
- Millers Point Community Resident Action Group; and
- Bicycle NSW.

In addition to reviews with the above individual stakeholders, a Stakeholder Working Group (SWG) was formed to encourage open dialogue between stakeholders. Eight (8) meetings were held from project inception to lodgement of the SSDA. Members of the SWG included:

- Department of Planning, Industry and Environment;
- Property NSW;
- City of Sydney;
- Heritage DPC;
- Roads and Maritime Services;
- Transport for NSW;
- Museum of Applied Arts and Science (Sydney Observatory); and
- National Trust.

Government Architect NSW

Four (4) separate meetings were held with the State Design Review Panel in accordance with the GANSW requirements, with members of the City of Sydney invited to attend. Issues raised in the meetings were considered and addressed in the final design of the proposal, and included:

- Precinct approach to design;
- Traffic and access including impacts with adjacent cycleway;
- Student amenity (noise, pollution, outdoor play space);

- Visual impacts; and
- Heritage response and massing.

These issues have been given detailed consideration throughout the design process, with careful consideration for the need to balance functional requirements against the challenges posed by the site's heritage significance.

Community Consultation

Consultation with the local and school community has taken place throughout the design phase. The tools and activities used throughout the project to ensure engagement with the local and school community have included:

- Project website, email address and phone number;
- Information sessions and booths;
- Project updates and works notifications;
- Advertisements in local newspapers; and
- A Project Reference Group (PRG) established early in the project with nominated representatives from the school community to ensure input from, and consultation with, impacted stakeholders.

To date, the following activities have taken place:

- Five works notifications distributed to the school community to inform them of work onsite;
- Three project updates have been distributed to the school community and two of these have also been distributed to the local community to inform about the project and upcoming information booth/session;
- An information booth to provide the community an opportunity to ask questions and show the concept design was held on 29 August 2019. The info booth was attended by 23 people; and
- An information session was held on 4 November 2019 to show the design being used for the SSDA lodgement and to get additional feedback from the community. The session was attended by 32 people.

A summary of the key issues raised by the community, and responses to them, are provided in **Table 6** below. Refer to the Consultation Summary Report at **Appendix S** for further detail.

Table 6 Summary of key issues and responses raised during consultation

Theme	Specific Question	Response
Project timeline	When construction will commence	Main construction work is dependent on statutory planning and funding approval. Construction will only commence once the school has been temporarily relocated. More detail will be provided as the project progresses.
	What is the statutory planning approval process?	SINSW requires development approval from the NSW Government to proceed with the project. The Department of Planning, Industry and Environment is responsible for managing the statutory planning approval process for this project. This is because it is a State Significant Development (SSD) project.
School relocation	Will our children be relocated?	Due to restrictions of the FSPS site (small and constrained), it is not possible for students to remain on-site during the proposed construction period. SINSW is working closely with its key stakeholders to investigate the best option for temporarily relocating students to an alternate site.
	Where will our children be relocated and when will be know?	SINSW is working closely with its key stakeholders to investigate the best option for temporarily relocating students to an alternate site. The team hopes to advise parents of the new location as soon as practicable.
	When will our children be relocated?	It is anticipated that children will be relocated in mid-late 2020, however, this timeframe may change subject to the availability of a suitable alternate site.
	Will parking be available at the relocated school site?	Once an alternate site has been determined, further advice will be provided regarding parking availability.
	Will the relocated school site be easily accessible for walking and cycling?	Once an alternate site has been determined, further information will be provided regarding walking and cycling access.

Theme	Specific Question	Response
Construction impacts	Will the adjacent park functions be affected by the development?	The project team appreciates the importance of the adjacent park to the local community and will seek to minimise any disruption to its current functions. Refer to the Construction Management Plan at **Appendix Q** for further detail.
	How will tradies get to the site and will it impact parking in the local area	A head contractor has not yet been appointed to the project and so a detailed strategy for managing the impact of construction on the surrounding area has not yet been developed. However, SINSW will work to minimise impact to the surrounding area during construction. As with other city developments, construction staff will be encouraged to utilise public transport.
Design/features	What will the capacity of the school be?	The master plan provides for a capacity of a maximum of 600 students, while the SSDA design accommodates 550 students.
	Expanding the capacity to 600 students will impact the school culture.	The redevelopment of FSPS will cater for projected enrolment growth in the area and provide students with additional educational facilities that inspire growth and the building of capability and practical skills that last a lifetime. It is expected that the growth will occur organically over a number of years to allow the culture to develop naturally as the student numbers increase.
	What is innovative learning?	Flexible, technology rich teaching spaces that allow for one-to-one, small groups and lecture style teaching. Innovative learning prepares students across all curriculums and learning stages with skills and capabilities to thrive in a rapidly changing world. It connects students and engages their sense of curiosity.
	How are you responding to the historical aspects of the site?	SINSW has engaged specialist archaeological and historical consultants and heritage architects to advise on appropriate development of this important site. The project team has liaised closely with authorities and stakeholders to ensure that the design response is appropriate regarding the heritage value of the site. A Heritage Impact Statement is provided in **Appendix T**.
	Where will the new facilities be located on the current site?	New facilities will be located within the new proposed buildings in the southern and western portions of the site and within the refurbished Met Building. Refer to **Section 3** for a detailed description of the proposed development.
	Is the OOSH (Out Of School Hours) being retained in the new design?	Yes.
	Are any Community Facilities being planned as part of the Redevelopment?	The school facilities will be available for community use outside of school hours. Refer to **Section 3.22** for further detail.
	Will there be sufficient space and turfed areas for children to play?	The school active play space has been maximised within the constraints of the site. This includes rooftop plays pace and improving access to open spaces and outdoor learning opportunities.
	Will the big tree stay?	Yes, the large Fig Tree has been identified as significant and will be retained. Trees that have been identified as significant to the area will be protected during construction and will be maintained. As part of the redevelopment, more trees will be planted.
	Will the height of the building have a visual impact to neighbouring residents?	The new structures on site will be sympathetic to the heights of the existing buildings and have been designed to respect the heritage characteristics of the site and the broader Observatory Hill context.
	Has the wind impact to the surrounding area been considered in the development of the new buildings?	Yes, a study of the site itself and immediate surrounds has analysed the site's topographical features at the top of the Observatory Hill. Based on the landform and the limited change to the profile of the existing buildings, the analysis concludes that the existing wind conditions experienced at surrounding areas will not be adversely affected.
	Is the design of the Fort Street Public School upgrade considering the Harbour Village North Masterplan and	Masterplans produced by the City of Sydney relevant to this site have been considered as part of the proposal. Where these plans are beyond the limits of the scope of the project, it has been considered so as to not preclude future incorporation.

Theme	Specific Question	Response
	Observatory Hill Masterplan produced by the City of Sydney?	
Traffic, Parking and safety	Will there be any changes to the drop off and pick up area?	Part of the proposal is to widen Upper Fort Street to enable two-way traffic to ease traffic movements during pick-up and drop-off times. This is subject to authority approval.
	What is happening to the Sydney Harbour Bridge Cycleway?	The project team has been working closely with the City of Sydney, RMS and TfNSW to support the cycleway realignment project to separate cyclists from the school pick-up and drop-off area at Upper Fort Street. Refer to **Section 3.17** for further detail.
	Will traffic calming measures including a reduction in speed limits be implemented?	Modified kerbside arrangements are proposed to allow for queuing and safe access, particularly during drop off and pick up times. Refer to **Section 3.17** for further detail.
	Will onsite parking for teachers be retained?	Existing staff parking will be removed to make room for the new buildings and improved active play space. A Green Travel Plan is provided at **Appendix U** which encourages the uptake of active and public transport.
	Could short term free parking be provided nearby for pick-up and drop-off?	Pick-up and drop-off arrangements are described in **Section 3.17.2**

The proposed development will be placed on public exhibition for a minimum of 28 days in accordance with Clause 83 of the *Environmental Planning and Assessment Regulation 2000*. During the public exhibition period Council, State agencies and the public will have an opportunity to make submissions on the project.

5.0 Environmental Assessment

This Section of the report assesses and responds to the environmental impacts of the proposed DA. It addresses the matters for consideration set out in the SEARs (see **Section 1.5**). The Mitigation Measures at **Section 7** complement the findings of this section.

5.1 Relevant Strategies, Policies and Guidelines

The relevant strategies, policies and guidelines as set out in the SEARs are addressed in **Table 7**.

Table 7 Summary of consistency with relevant Strategies, Policies and Guidelines

Instrument/Strategy	Comments
Strategic Plans	
NSW State Priorities	NSW State Priorities are twelve high-level priorities for the State, being: • Creating jobs; • Delivering infrastructure; • Driving public sector diversity; • Improving education results; • Improving government services; • Improving service levels in hospitals; • Keeping our environment clean; • Making houses more affordable; • Protecting our kids; • Reducing domestic violence reoffending; • Reducing youth homelessness; and • Tackling childhood obesity. The proposal seeks to redevelop an existing school and create additional educational capacity in central Sydney. The proposal will therefore contribute to the provision of infrastructure, as well as jobs and education, thereby contributing to strengthening the local and regional economy.
The Greater Sydney Regional Plan, A Metropolis of Three Cities	In accordance with the Plan, this proposal will ensure an upgraded school can be delivered to meet Sydney's growing educational needs. The proposal will take enrolment pressure off the existing school and broader School Community Group and ensure that a high-quality educational facility is provided for the future population of the school catchment. The proposal is also consistent with the other wider goals and directions contained within the Plan, including: • The creation of temporary job opportunities in manufacturing, construction and construction management, and on-going jobs in teaching and administration for the wider City of Sydney LGA; • Deliver additional educational infrastructure for the catchment that will take enrolment pressure of the existing school; • Revitalise an aged school to provide contemporary facilities to meet future educational standards, and provide increased jobs and growth; and • Deliver a sustainable, well-designed building that promotes the use of public and active transport. The redevelopment of the site will make a valued contribution to economic growth in Sydney and provide increased learning and employment opportunities.
Future Transport Strategy	The Future Transport Strategy 2056 sets the 40-year vision, directions and outcomes framework for customer mobility in NSW and will guide transport investment over the longer term. This plan aims to place the customer at the centre and with feedback harness the rapid advancement of technology and innovation across the transport system to transform customer experience, improve communities and boost economic performance (TfNSW 2017). The proposal is consistent with the Strategy by delivering increased educational capacity in Sydney's CBD in a highly accessible location. The proposal does not prevent the objectives of the Strategy from being achieved.

Instrument/Strategy	Comments	
State Infrastructure Strategy 2018 – 2038 Building the Momentum	The proposal is consistent with the State Infrastructure Strategy by: • Delivering school infrastructure to keep pace with student numbers; • Providing modern, digitally enabled learning environments; and • Upgrading existing learning spaces.	
Sydney's Cycling Future 2013	The overarching goal of Sydney's Cycling Future (released in 2013) is to make cycling a safe, convenient and enjoyable transport option for short trips. The document outlines how to support and make bicycle riding a feasible transport option for all customer types. SINSW is supportive of students and staff using bikes as a mode of transport. The proposal seeks to support cycling to access the site for both staff and students, whether it be for the last or first mile of their journey or the entire journey. Room has been provided for five (5) staff bikes in a secure location. Up to 30 student bikes and 30 scooters will be allocated space for parking.	
Sydney's Walking Future 2013	Sydney's Walking Future produced by Transport for NSW sets out a strategy to encourage people in Sydney to walk more through actions that make it a more convenient, better connected and safer mode of transport. The proposal supports walking to access the site for both students and staff. This includes introduction of a new pedestrian bridge to provide better access from the west of the site. The school has also been carefully planned to minimise conflict between vehicles, bicycles and pedestrians.	
Crime Prevention Through Environmental Design	Refer to **Section 5.12.**	
Better Placed: An integrated design policy for the built environment of NSW	The objectives of Better Placed have been considered and responded to in the proposed design. The Architectural Design Report at **Appendix D** outlines how each objective has been addressed.	
	Objective 1. Better fit contextual, local and of its place	The proposal has sought to respond to, and enhance, both the existing context of the school campus and the wider context of the surrounding parklands of Observatory Hill. The landscape is integrated with the built form, through courtyards and terraces - both internal and external. Major circulation spines including the staircases connecting each level between the built forms reference the wider context of Observatory Hill either through physical or visual connections.
	Objective 2. Better performance sustainable, adaptable and durable	Embodied in the brief is the aspiration for a positive environmental, social and economic outcome. The functional layouts are efficient with clear way finding and the interstitial spaces enable light to penetrate deep into the interior. The facades are shaded to provide good penetration of daylight yet mitigate thermal gain. The material selection of the new built forms is simple and durable and references the solidity of the existing fabric, such as masonry, brickwork and timber. The structural grid and the location of support facilities such as services risers, amenities, stores and vertical circulation enables future reconfigurations of the layout plans. All services will be designed to sustainable benchmarks
	Objective 3. Better for community inclusive, connected and diverse	The main entrance to the school demonstrates the Department of Education's commitment to the wider school community by providing a shared courtyard which enables a transition between public and private. There is good visibility across the campus so that the students and staff can understand their movement patterns and also have an appreciation of the activities in different parts of the building.

Instrument/Strategy	Comments	
	Objective 4. Better for people safe, comfortable and liveable	Security and safety of pedestrians is fundamental, and the traffic system acknowledges the necessity for a structured system which manages traffic including internal student drop-off and pick-up, maintenance and delivery vehicles, garbage collection and bus parking. The design provides a hierarchy of access from public to private, enabling the students to be safe and secure within their learning hubs, but to still have a connection to their environs. A greater transparency across the learning spaces - both between levels and across the floor plates, will enable a more inclusive learning environment.
	Objective 5. Better working functional, efficient and fit for purpose	The purpose of the proposal is to not only increase the school's population to align with the forecasted demographics but to also refurbish the existing heritage fabric to meet the current and future expectations of the learning methodologies. Important aspects which will be considered in the design are: • A diversity of learning spaces (availability of spaces of differing scale); • Open or enclosed spaces; • Spaces which are interconnected; and • Spaces with a strong connection to the landscape.
	Objective 6. Better value creating and adding value	The new development has carefully considered site-wide strategic and spatial planning to ensure that future development of the site (e.g. increased area enabled by the potential capping of the Cahill Expressway) is not precluded. Because the pedagogy of the school will change over time, it is important that the new buildings are as flexible as possible - clear circulation, good access to daylight, generous floor to floors to provide adequate space for services reticulation and a simple structural grid which is to the perimeter of zones.
	Objective 7. Better look and feel engaging, inviting and attractive	The design has considered the highly significant heritage fabric and rather than providing a new contrasting aesthetic, is developed to be complementary to the proportions, massing, scale and materiality of the existing buildings. The integration of landscape is very important especially in such an urban site and aligns with the pedagogical model.
Easter City District Plan	The Eastern City District Plan sets out the strategic direction for the District, and reflects the priorities outlined in *A Metropolis of Three Cities*. Several planning priorities in the District Plan are relevant to the proposed development: • **Planning Priority E3: Providing services and social infrastructure to meet people's changing needs:** As noted in the District Plan, "the NSW Department of Education estimates that an extra 42,850 students will need to be accommodated in government and non-government schools in the District by 2036". The proposed development will assist in meeting this demand by providing additional primary school places to cater to growing demand within the catchment. The proposed development will also assist in meeting social infrastructure requirements by providing shared facilities that can be used by the local community outside of school hours. • **Planning Priority E4: Fostering healthy, creative, culturally rich and socially connected communities:** The proposed development will assist in community-building efforts by expanding a key social connector that will provide opportunities for people to connect with each other. Further, as noted above, the school will provide shared facilities that will allow the community to congregate and connect. • **Planning Priority E5: Providing housing supply, choice and affordability, with access to jobs, services and public transport:** Although the proposed development does not provide additional housing, it does provide additional school places, which will assist in allowing more families in the catchment to access a school within 30 minutes of their home. • **Planning Priority E6: Creating and renewing great places and local centres, and respecting the District's heritage:** The proposed development will sensitively retain and refurbish the existing heritage buildings on the site, increasing their functionality	

Instrument/Strategy	Comments
	and usability while ensuring that their lifespan is extended. The proposed built form also responds to the important heritage context of Millers Point and the surrounding area. • **Planning Priority E16: Protecting and enhancing scenic and cultural landscapes:** The proposed development has been designed to respond to the important scenic landscape catchment of Millers Point and Observatory Hill. A Visual Impact Assessment has been prepared as part of the EIS, to assess how the proposed development integrates with the view catchment of the area.
Sustainable Sydney 2030	Sustainable Sydney 2030 is a strategic plan underpinned by a vision focussed on sustainability. The vision is to be a sustainable city in terms of the physical environment, economy, society and culture. In response, the proposal for FSPS: • Incorporates ESD initiatives and will be designed and constructed to a standard equivalent to a 4 Star Green Star Design & As Built v1.2 rating; • Will provide improved pedestrian and cyclist facilities; • Will enliven the existing site through the provision of upgraded buildings, new landscaping and reuse of the Met Building; • Provides opportunities for community uses of school facilities for cultural and creative activities; and • Will cater for the growing population both within the catchment for FSPS and the broader Inner-Sydney Primary School Community Group, which is currently over-capacity.
Council's Section 7.11 Contributions Plan	Refer to **Section 3.24**.
Harbour Village North Public Domain Plan (includes Observatory Hill Masterplan Study)	This Study, published in 2012, sets down ideas for improving the public areas of the City which can be used as guidelines for future development. Harbour Village North is a unique historic precinct in the City. The study identifies six guiding directions for long term improvements in the Harbour Village North area: 1. Improve access, connectivity and wayfinding. 2. Create a network of linked parks and upgrade existing open spaces. 3. Respect and celebrate heritage, conserve and restore Observatory Hill. 4. Celebrate landform and harbour views. 5. Support Walsh Bay cultural precinct and improve Cultural Ribbon connections. 6. Strengthen local communities and support local economies. The FSPS redevelopment responds to these directions through: • Improving access to and through the FSPS site; • Improving wayfinding with the site through building layout, landscape design and the introduction of wayfinding signage; • Respecting and responding to the site's heritage, as well as the heritage significance of Observatory Hill more broadly; • Responding to the site's landform and improving access to views, whilst respecting existing public domain views; and • Improving community access to the site and supporting the economy through job creation.
Legible Sydney	Legible Sydney was published in 2012 and seeks to deliver a more legible public domain that encourages people to walk with comfort and confidence around the City of Sydney. The proposal responds to the objectives of Legible Sydney by improving wayfinding both to the site, and within the site. The proposal provides: • A clarity of way finding; • A clear hierarchy of access ways and entrances; • At least one weather protected route to all buildings; • Visible open spaces and access ways that strengthen connections; and • A seamless connection of interior and exterior function.

Instrument/Strategy	Comments
City Centre Access Strategy	The City Centre Access Strategy was release in 2013 by Transport for New South Wales. The strategy considers all transport modes and their key networks including rail, bus, walking, cycling, buses and cars. The development of the Access Strategy has balanced the needs of customers for each transport mode in order to deliver a more integrated network that makes the best use of finite space in the Sydney city centre. The different transport modes do not function in isolation, but together as an integrated transport system. For FSPS, sustainable modes are encouraged to access the school to help support the School's growth.

5.2 Relevant State Legislation

The relevant State legislation as set out in the SEARs are addressed in **Table 8**.

Table 8 Consistency with relevant State legislation

<table>
<tr><th>Provision</th><th>Response</th></tr>
<tr><td>Biodiversity Conservation Act 2016</td><td>An assessment of Biodiversity impacts is provided at Section 5.16. A Biodiversity Development Application Report is provided at Appendix C.</td></tr>
<tr><td>EP&A Act</td><td>The proposed development is consistent with the objects of the EP&A Act, in particular:

• It promotes the social welfare of the community;
• It allows for the orderly and economic development of land;
• It promotes the sustainable management of built and cultural heritage (including Aboriginal cultural heritage);
• It promotes good design and amenity of the built environment; and
• It is development for public purposes and will facilitate the delivery of community services.

The proposed development is consistent with Division 4.7 of the EP&A Act, particularly for the following reasons:

• The development promotes education services and stimulates social welfare of the community; and
• The development has been evaluated and assessed against the relevant heads of consideration under Section 4.15(1).</td></tr>
<tr><td>EP&A Regulations</td><td>The EIS has addressed the criteria within Clause 6 and Clause 7 of Schedule 2 of the EP&A Regulation. Similarly, the EIS has addressed the principles of ecologically sustainable development through the precautionary principle (and other considerations), which assesses the threats of any serious or irreversible environmental damage (see Section 5.16).

As required by Clause 7(1)(d)(v) of Schedule 2, the following additional approvals will be required in order to permit the proposed development to occur.
<table>
<tr><th>Act</th><th>Approval Required</th></tr>
<tr><td colspan="2">Legislation that does not apply to State Significant Development</td></tr>
<tr><td>Coastal Protection Act 1979</td><td>N/A</td></tr>
<tr><td>Fisheries Management Act 1994</td><td>N/A</td></tr>
<tr><td>Heritage Act 1977</td><td>N/A</td></tr>
<tr><td>National Parks and Wildlife Act 1974</td><td>N/A</td></tr>
<tr><td>Native Vegetation Act 2003</td><td>N/A</td></tr>
<tr><td>Rural Fires Act 1997</td><td>N/A</td></tr>
<tr><td>Water Management Act 2000</td><td>N/A</td></tr>
<tr><td colspan="2">Legislation that must be applied consistently</td></tr>
<tr><td>Fisheries Management Act 1994</td><td>No</td></tr>
<tr><td>Mine Subsidence Compensation Act 1961</td><td>No</td></tr>
<tr><td>Mining Act 1992</td><td>No</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Provision</th><th>Response</th></tr>
<tr><td></td><td>
<table>
<tr><td>Petroleum (Onshore) Act 1991</td><td>No</td></tr>
<tr><td>Protection of the Environment Operations Act 1997</td><td>No</td></tr>
<tr><td>Roads Act 1993</td><td>Yes
(refer to Section 5.2.1)</td></tr>
<tr><td>Pipelines Act 1967</td><td>No</td></tr>
</table>
</td></tr>
<tr><td>SEPP 55</td><td>A Detailed Site Investigation (DSI) has been prepared by JBS&G (refer to Appendix E). Based on the findings of the DSI, the site was considered to pose potentially unacceptable risks to current and future users of the site in a primary education setting. Existing contaminants are being managed in accordance with the recommendations of JBS&G, until the site is remediated as part of the redevelopment.

For the development and future use, JBS&G has recommended the development of a RAP to guide the required remediation in order for the site to be made suitable for the proposed redevelopment and ongoing primary school land use. Remediation is discussed in Section 5.13.3 below.</td></tr>
<tr><td>SEPP (Infrastructure)</td><td>Provisions of the SEPP (Infrastructure) relating to Education have since been transferred to the Education SEPP as of 2017.</td></tr>
<tr><td>SEPP (State and Regional Development)</td><td>State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) identifies development types that are of State significance, or infrastructure types that are of State or critical significance. Clause 15 of Schedule 1 of the policy provides that the proposed development is SSD, as follows (our emphasis):

15 Educational establishments
(1) Development for the purpose of a new school (regardless of the capital investment value).
(2) Development that has a capital investment value of more than $20 million for the purpose of alterations or additions to an existing school.
(3) Development for the purpose of a tertiary institution (within the meaning of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017), including associated research facilities, that has a capital investment value of more than $30 million.

As the proposal is for the purposes of alterations and additions to an existing school and has a CIV of over $20 million, the development can be declared to be State Significant Development (a QS Report prepared by MBM Quantity Surveyors is submitted under separate cover).</td></tr>
<tr><td>Education SEPP</td><td>Under Clause 35(6) of the Education SEPP, 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 accordance with Clause 35(6)(a), an Architectural Design Report has been prepared by FJMT (Appendix D). The design has been guided by the Design Quality Principles set out in Schedule 4, including:
1 Context, built form and Landscape;
2 Sustainable, Efficient and Durable;
3 Accessible and inclusive;
4 Health and safety;
5 Amenity;
6 Whole of life, flexible and adaptive; and
7 Aesthetics.

Four (4) meetings have also been held with the State Design Review Panel to ensure that these design quality principles have been met.

Community use of school facilities in accordance with Clause 35(6)(b) is described in Section 3.22.</td></tr>
</table>

Provision	Response
SEPP 64	No formal approval is sought for signage as part of this application, however indicative signage locations have been identified in the Architectural Design Report (**Appendix D**). An assessment against SEPP 64 is provided at **Section 5.2.2**.
Draft SEPP (Environment)	The site is identified as 'Urban Bushland'. The proposal requires the removal of 19 trees in order to accommodate the proposal (see **Section 3.3.4**). The design has been located to minimise impact on native vegetation within the school's grounds, wherever possible. The Department can be satisfied that the removal of vegetation is in the public interest and no reasonable alternative is available to the disturbance of vegetation proposed due to the significant site constraints of the school.
Draft SEPP (Remediation of Land)	The proposal remains consistent with the Draft policy as the proposed assessment has been undertaken in accordance with SEPP 55, with contamination assessed as being Category 1 as outlined further at **Sections 3.3** and **5.13**.

5.2.1 Roads Act 1993

In accordance with Section 4.42 of the EP&A Act, the provisions of Section 138 of the *Roads Act 1993* continue to apply to SSD. The development involves works to Upper Fort Street, and so requires approval under Section 138(1)(a) of the *Roads Act 1993*. This application will be referred to City of Sydney Council for approval.

5.2.2 SEPP 64 – Advertising and Signage

No formal approval is sought for signage as part of this application, however a number of signage locations have been identified as part of the development. The detailed design of the proposed signage within these zones will form part of a separate approvals process, where required. Notwithstanding, the proposed signage zones have been considered against the objectives of SEPP 64 and are considered consistent, as follows:

- The indicative signage locations are compatible with the visual character of the area; and
- The indicative signage locations will clearly communicate the future school use and wayfinding into and through the site.

The signage locations are also consistent with the Assessment Criteria outlined at Schedule 1 of SEPP 64 with respect to views and vistas, streetscape and setting and safety.

5.3 Local Planning Instruments and Controls

The relevant local planning instruments and controls as set out in the SEARs are addressed in **Table 9**.

Table 9 Consistency with local planning instruments and controls

Provision	Requirement	Response	Compliance
Sydney Local Environmental Plan 2012			
Zone	B8 – Metropolitan Centre	The development is permitted with consent under the B8 Metropolitan Centre zone.	Complies
Clause 4.3 - Height of buildings	No maximum height control applies	-	N/A
Clause 4.4 - Floor space ratio	No maximum floor space control applies	-	N/A
Clause 5.10 - Heritage conservation	The site is located within the State heritage curtilage of the Millers Point/Dawes Point Heritage Conservation Area (C35). The site also includes the following items of local heritage significance: • I936 – Bureau of Meteorology including interior; • I937 – Messenger's Cottage for Sydney Observatory including interior; and	The following documents are appended: • **Appendix T**: Heritage Impact Statement • **Appendix V**: Conservation Management Plan • **Appendix H**: Aboriginal Cultural Heritage Assessment Report	Complies

Provision	Requirement	Response	Compliance
	• I938 – Fort Street Primary School site including buildings and their interiors, fig trees and grounds.	Heritage and Archaeology are discussed further at **Section 5.6, Section 5.7** and **Section 5.8**.	
Clause 6.21 Design excellence	Development consent must not be granted to the following development unless a competitive design process has been held in relation to the proposed development: *(a) development in respect of a building that has, or will have, a height above ground level (existing) greater than:* *(i) 55 metres on land in Central Sydney, or* *(ii) 25 metres on any other land,* *(b) development having a capital investment value of more than $100,000,000,* *(c) development in respect of which a development control plan is required to be prepared under Clause 7.20,* *(d) development for which the applicant has chosen such a process.*	A competitive design process is not required, as: • a development control plan is not required under Clause 7.20; • the development has a CIV of less than $100 million; and • the development will have a height of less than 25 metres (noting the site is not within Central Sydney). Design excellence and the requirement for a competitive design process are discussed further in **Section 5.3.1**.	Complies (refer to further discussion at **Section 5.3.1**)
Clause 7.2 - Earthworks	Earthworks must not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.	Bulk earthworks comprising cut and fill are proposed, as detailed in the Bulk Earthworks Plans prepared by Bonacci at **Appendix I**. Excavation is mostly limited to site preparation to allow for foundation works for the proposed new buildings. In the south-eastern corner of the site, a basement level is proposed (Lower Ground Level). Deeper excavation into high-strength rock is proposed in this part of the site to accommodate the basement level. A shoring wall is potentially required to the south, adjacent to the Cahill Cut. An Erosion and Sediment Control Plan has been prepared by Bonacci and is submitted at **Appendix W**.	Complies
Clause 7.20 Development requiring or authorising preparation of a development control plan	Development consent must not be granted to development on the following land unless a development control plan has been prepared for the land: … *(b) land (other than land in Central Sydney, in Zone B6 Enterprise Corridor or in Zone IN1 General Industrial), if the site area for the development is more than 5,000 square metres or if the development will result in a building with a height greater than 25 metres above ground level (existing)* …	As per Clause 8(2)(i) of the Education SEPP, Clause 7.20 of Sydney LEP 2012 does not apply to development to which the Education SEPP applies. As such, the preparation of a development control plan is unnecessary in the circumstances. The requirement for a development control plan is discussed further in **Section 5.3.2**.	Complies
Sydney Development Control Plan 2012			

Provision	Requirement	Response	Compliance
Sydney Development Control Plan 2012 (SDCP 2012) provides detailed controls for specific developments types and locations. Most controls in the SDCP relate to character, streetscape and public domain works. However, under Clause 11 of *State Environmental Planning Policy (State and Regional Development) 2011*, the application of Development Control Plans is excluded when assessing SSD projects. Notwithstanding, the proposal has been assessed against the key relevant controls of the SDCP 2012 is provided below.			
2.8 Locality Statement – Millers Point	Retain, conserve and reinforce the historic character and heritage significance of the Millers Point Heritage Conservation Area and individual items on the State Heritage Register.	Heritage buildings and significant trees within the site are being retained and used. The buildings and trees will continue to contribute to the heritage significance of the area. Refer to **Section 5.6** for an assessment of the heritage impacts of the proposal.	
	Ensure new development respects the siting, scale, form, integrity, use of materials, character and significance of the area, heritage items and contributory buildings	The proposed development has been appropriately sited, scaled and design to respond to the existing buildings on the site and in the surrounding area. Refer to **Section 5.4** for a discussion of the built form of the proposal.	
	Maintain existing views and vistas and from the precinct, the water, the Harbour Bridge, Central Sydney, and Observatory Hill Park	A Visual Impact Assessment has been prepared and demonstrates that existing views and vistas to the water, Harbour Bridge, Central Sydney and Observatory Hill Park are retained. Refer to **Section 5.9** for further detail.	
3.2.7 Reflectivity	Generally, light reflectivity from building materials used on facades must not exceed 20%.	Glazing will be selected to have a normal reflectivity not exceeding 20%.	
3.3 Design Excellence and Competitive Design Process	A competitive design process is not required, as: • A development control plan is not required under Clause 7.20 by virtue of Clause 8(2)(i) of the Education SEPP; • The development has a CIV of less than $100 million; and • The development will have a height of less than 25 metres (noting the site is not within Central Sydney). Design excellence and the requirement for a competitive design process is discussed further in **Section 5.3.1**.		
3.6 Ecologically Sustainable Development	Apply principles and processes that contribute to ecologically sustainable development (ESD).	The principles and processes contributing to ESD have been considered and assessed throughout the design of the proposal. An ESD Report is provided at **Appendix N**. Refer to **Section 5.16** for further discussion.	
3.9.1 Heritage Impact Statements	A Heritage Impact Statement is to be submitted as part of the Statement of Environmental Effects for development applications affecting: (a) heritage items identified in the Sydney LEP 2012; or (b) properties within a Heritage Conservation Area identified in Sydney LEP 2012.	The site comprises items of heritage significance under the Sydney LEP and is also within a heritage conservation area. A Heritage Impact Statement has been prepared and is provided at **Appendix T**. Refer to **Section 5.6** for an assessment of the heritage impacts of the proposal.	
3.11.1 Managing Transport Demand	A Transport Impact Study is required to address the potential impact of the development on surrounding movement systems where the proposed development is: (a) a non-residential development equal to or greater than 1,000sqm GFA; (b) car park with more than 200 spaces; (c) for 25 or more dwellings; or (d) in the opinion of the consent authority, likely to generate significant traffic impacts.	A Traffic and Transport Assessment is provided at **Appendix M**. For an assessment of transport and parking impacts of the development, refer to **Section 5.5**. No on-site parking is proposed.	
	Commercial development is to include initiatives to promote walking, cycling and the use of public transport, through the submission of a Green Travel Plan	A Green Travel Plan has been prepared and is provided at **Appendix U**. There is no parking proposed on-site and the school will promote the use of active and public transport.	

Provision	Requirement	Response	Compliance
3.11.3 Bike parking and associated facilities	All development is to provide on-site bike parking designed in accordance with the relevant Australian Standards for the design criteria of bike parking facilities.	35 bicycle parking spaces are provided (5 secure staff spaces and 30 student spaces).	
3.12 Accessible Design	All development must comply with the following: all Australian Standards relevant to accessibility; the Building Code of Australia access requirements; and Disability Discrimination Act 1992. Complex developments where compliance is proposed through alternative solutions must be accompanied by an Access report prepared by a suitably qualified access professional.	Accessibility has been a key consideration for the proposal. The proposed development is capable of complying with the relevant standards and provisions.	

5.3.1 Design Excellence

As noted above, a competitive design process is not required under Clause 6.21(6) of SLEP 2012, as:

- A development control plan is not required under Clause 7.20 by virtue of Clause 8(2)(i) of the Education SEPP (see **Section 5.3.2**);
- The development has a CIV of less than $100 million; and
- The development will have a height of less than 25 metres (noting the site is not within Central Sydney).

Notwithstanding this, the objective of Clause 6.21 of SLEP 2012 is to deliver the highest standard of architectural, urban and landscape design. In considering whether development to which this clause applies exhibits design excellence, the consent authority must have regard to a number of matters under Clause 6.21(4). Those matters and a response to each are provided below in **Table 10**.

Table 10 Consistency with Clause 6.21 of SLEP 2012

Provision	Response
(a) whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved	The proposed design has been developed iteratively over a period of time, with significant input from the State Design Review Panel and other stakeholders. The design is highly contextual and relates strongly to the scale of the precinct and the location of existing buildings on site. Materials will be of a high quality and have been selected to be economical, functional, durable, sustainable and complementary to the existing palette of materials present on site.
(b) whether the form and external appearance of the proposed development will improve the quality and amenity of the public domain	The proposed design significantly improves the functionality and quality of open space on the site, responding to modern teaching standards and the recreation needs of future students.
(c) whether the proposed development detrimentally impacts on view corridors	A Visual Impact Assessment has been prepared and is included at **Appendix X**. Visual impacts are also discussed further in **Section 5.9**. The proposal does not obstruct any important view corridors.
(i) the suitability of the land for development	The site is currently used as a school, and is well-placed to accommodate additional growth in capacity in a location within walking distance of multiple public transport nodes. Further, the assessment in this EIS demonstrates that the site is suitable for the proposed use.
(ii) the existing and proposed uses and use mix	The site is currently used for the purpose of a school and will continue as such, albeit with an increased student capacity.
(iii) any heritage issues and streetscape constraints	A Heritage Impact Statement, Conservation Management Plan and Aboriginal Cultural Heritage Assessment Report have been prepared and are included at **Appendices T**, **V** and **H** respectively. The proposed design is heavily influenced by the location, scale and design of the existing heritage buildings, and has been designed to respect and compliment their materiality and built form. In particular, the new buildings maintain an appropriate curtilage around the heritage items on site, as well as views to and from the heritage items.
(iv) the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers	No towers are proposed.

Provision	Response
(existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form	
(v) the bulk, massing and modulation of buildings	The bulk, massing and modulation of the buildings has been designed to create a campus of smaller buildings and a series of interstitial spaces between the buildings. The scale of the buildings has been set based on the scale of the precinct and existing buildings on site – no building rises above the height of the existing Met Building.
(vi) street frontage heights	The site does not have a street frontage, per se – however, the buildings have been set back from the east to maintain a curtilage established by vegetation on the site and to the north and south. This setback also maintains views to the Messenger's Cottage.
(vii) environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity	Environmental impacts have been assessed in the relevant sections of this EIS and in the appended reports.
(viii) the achievement of the principles of ecologically sustainable development	The FSPS development has been designed to align with the guidelines, regulations and standards, as relevant to the project. The proposal will be designed and constructed to an equivalent of 4 Star Green Star Design and As Built v1.2 rating (although formal certification will not be sought). The proposal is also consistent with the four accepted principles of ESD.
(ix) pedestrian, cycle, vehicular and service access and circulation requirements, including the permeability of any pedestrian network	The proposal improves and rationalises vehicular access to the school by establishing proper two-way traffic flow, a turn-around/drop-off and pick-up area, and proper queuing areas for pick-up.
(x) the impact on, and any proposed improvements to, the public domain	The works are generally confined to the site and will not impact the public domain. However, the proposal is designed to coordinate and integrate with the future Sydney Harbour Bridge Cycleway upgrade to the east.
(xi) the impact on any special character area	The site is not located in Central Sydney and is not subject to any special character area.
(xii) achieving appropriate interfaces at ground level between the building and the public domain	The site appropriately interfaces with the public domain to the east of the site by providing an appropriate setback and a transition in scale. The site is surrounded by the Cahill Cut to the north, south and west.
(xiii) excellence and integration of landscape design	The proposed landscape design has been prepared based on a series of robust landscape design objectives, which were established based on feedback from the State Design Review Panel. This has resulted in a design that creates a series of distinctive landscaped areas, each responding to the surrounding built form and the likely uses of the space.

Accordingly, the proposal delivers a high standard of architectural, urban and landscape design and achieves design excellence pursuant to Clause 6.21 of SLEP 2012.

5.3.2 Requirement to Prepare a Development Control Plan

Under Clause 8(2)(i) of the Education SEPP, Clause 7.20 of SLEP 2012 does not apply to development carried out under the Education SEPP.

Under Clause 35(1) of the Education SEPP, "Development for the purpose of a school may be carried out by any person with development consent on land in a prescribed zone." B8 Metropolitan Centre is a prescribed zone, and therefore, the proposed development is being carried out under the Education SEPP, and Cause 7.20 of SLEP 2012 does not apply.

As such, preparation of a development control plan under Clause 7.20 of SLEP 2012 is not required in this instance.

5.4 Built Form and Urban Design

A detailed analysis of built form and urban design is provided in the Architectural Design Report prepared by FJMT at **Appendix D** and is summarised below.

5.4.1 Site Layout and Building Configuration

The proposed site layout and building configuration have been developed through many rounds of iterative testing, in response to feedback from both the State Design Review Panel and an external Stakeholder Working Group, which included numerous government stakeholders.

An initial options study was prepared by FJMT, which explored a range of potential massing options, typologies and building configurations. These options were reviewed internally and externally before a final option was selected for SSDA – the option that was selected was known as Option 16.

The proposed building layout was driven by several key factors:

- **Archaeology**: It was important that the buildings be able to accommodate any archaeological discoveries on site – as such, the substructure can be relocated or can span over archaeology as required.
- **Views**: Views through the site were considered to be important, including views through and around the buildings – the State Design Review Panel noted the importance of "views from and between the buildings to and from the surrounding hill-top". This has led to the creation of a campus-style development, incorporating a series of interconnected courtyards and interstitial spaces.
- **Heritage**: The State Design Review Panel considered views to the Messenger's Cottage to be important, noting that options should not "diminish the expression, visual prominence and heritage interpretive value of the cottage building, existing trees and the hill line". This led to the area east of the Messenger's Cottage and around the fig tree being kept clear of any significant built form. It is also noted that the buildings acknowledge and respect the scale and layout of the existing Met Building and Messenger's Cottage, and maintain view lines that are created by spaces between the existing buildings.
- **Landscape**: The State Design Review Panel also noted that development should "acknowledge and respond to the curtilage line of existing trees". The proposed building line responds to and respects the notional curtilage created by the trees east of the Observatory, the fig tree on the site, and the landscaping east of the National Trust building.
- **Constructability and access**: Given the constrained site, limiting the sizes of structural members and building elements was considered in the design.

These considerations led the development of a building layout that is best characterised as a series of interconnected buildings and open spaces, creating a campus-style school that simultaneously fosters a sense of openness and connectedness.

A conceptual layout diagram of the development is shown at **Figure 40**.

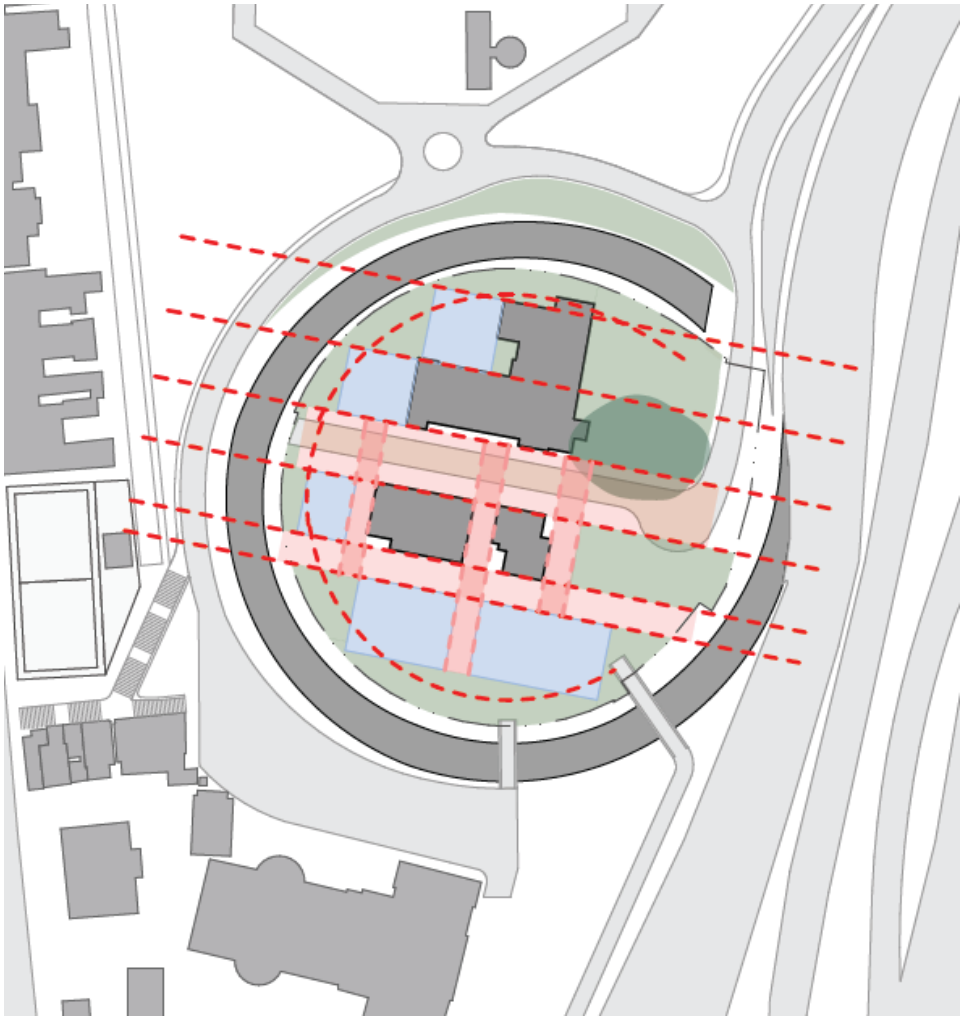

Figure 40 Conceptual layout diagram

Source: FJMT

5.4.2 Height, Density, Bulk and Scale and Setbacks

The bulk, density and scale of the proposal has been informed by the scale of the existing heritage buildings on the site, being the FSPS Building (two storeys), the Met Building (three storeys), and the Messenger's Cottage (single storey).

Key issues that have been considered in the massing of the buildings include:

- Minimising impacts on key views from important vantage points;
- Views through the site, enabling connections to the wider precinct;
- The dimensions and scale of the existing buildings informing the scale of new built form;
- Minimisation of disruption to archaeology; and
- Minimisation of excavation.

During the initial design phase, the site massing height was capped at three storeys, responding to a datum set by the existing Met Building. Although the overall density of the site has increased, the height of the proposed buildings do not fundamentally change the scale of the site – the new school still maintains a low-scale and distributed built form.

The final site layout and building designations are shown in **Figure 41**.

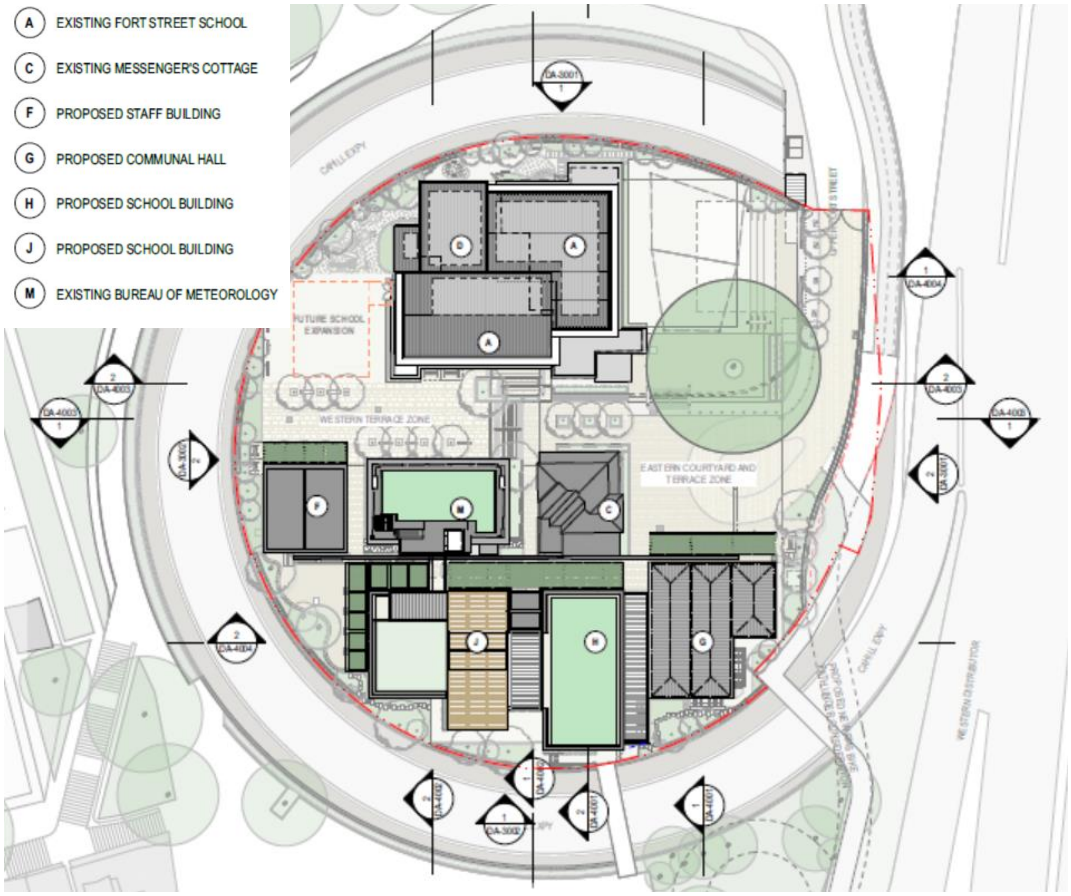

Figure 41 Building designations and site layout

Source: FJMT

With respect to each individual building:

- **Fort Street Public School building (Buildings A and D)**: Some modification to this building is considered acceptable, provided the existing massing and scale is not compromised and can be read with any additions. In response to this, the height of this building has been increased by one storey. This building has also been extended – the height of the extensions responds to a datum set by the main building. The scale of the extension recedes to the west to maintain the dominance of the FSPS Building and the Met Building.
- **Building F** is a single storey building that allows views through to the Met Building.
- **Building G** is a single storey building. Importantly, the building allows views through to the Met Building and does not dominate the scale of the Messenger's Cottage.
- **Buildings J and H** are two and three-storey buildings that respond to the scale and floor levels of the Met Building. These buildings do not overly dominate the southern part of the site, nor do they result in any wholesale change to the scale of the site.
- **Messenger's Cottage (C) and Met Building (M)**: These buildings are existing – it is not proposed to significantly alter their external scale or appearance.

In terms of setbacks, all new buildings respect the curtilage of the existing heritage buildings on site by maintaining a physical gap or lightweight covering structure. Building F is set back from the Met Building, while Buildings J and H are separated from the Met Building and Messenger's Cottage by a covered walkway. Building G sits behind the existing Heritage Wall and is articulated to create a clear delineation between built forms.

With respect to setbacks from the edge of the site, it is noted that the site is already necessarily separated from the surrounding Observatory Hill precinct by virtue of the Cahill Cut. Further, some setback from the Cahill Cut has been maintained to preserve the ability to bridge across in the future. There is no existing street wall or dominant setback character that can or should be maintained on the site, and as such, setbacks from the Cahill Cut are not considered to be of particular importance in this instance.

On the eastern side of the site, buildings have been appropriately set back to maintain visual connections through to the Met Building and Messenger's Cottage, and to maintain a notional landscaped setback established by trees to the east of the Observatory, the fig tree on the site, and trees to the east of the National Trust Building. As such, no built form is located east of the Messenger's Cottage or FSPS Building.

In conclusion:

- The overall bulk and scale of the development is largely reflective of the scale of the existing heritage buildings that have been maintained;
- Each individual building has been carefully designed to respond to any datum set by the existing buildings, as well as any gaps or separation created by the layout of the existing buildings;
- Although there has been a height increase across parts of the site, no building exceeds the height of the existing Met Building, and the development does not represent a significant change to the scale of development on the site; and
- The location of the proposed built form has responded directly to feedback from the State Design Review Panel, including feedback in relation to the eastern setback of buildings.

5.5 Traffic, Transport and Access

A Traffic and Transport Assessment has been prepared by Arup and is included at **Appendix M**. A summary of the findings is provided below.

Assessment

- **Surveys**: Traffic surveys were undertaken in May 2019 during a typical school week. A school travel survey was also conducted of both staff and students attending the school. Cars are the main mode share for both drop-off (33%) and pick-up (38%), followed by walking and then catching the train. Nearly half the students reportedly attend after school care.
- **Observations**: On-site observations were also made during March 2019. Observations showed that during the drop-off period, limited queuing occurs, and traffic flow interacts with high bicycle activity with cyclists accessing the Harbour Bridge Cycleway. However, during the pick-up period, vehicle queueing occurs along Upper Fort Street. Minimal parking along Upper Fort Street allows the queue to form, although the occasional parked vehicle requires the queue to proceed past each of the parked cars.
- **Future activity (550 students)**:
  - **Drop-off mode of travel**: The opening of the light rail and the implementation of the Green Travel Plan (**Appendix U**) is conservatively expected to result in a 25% reduction in car drop-off mode from 191 cars to 147 cars. Based on a car occupancy rate of 1.45 students, the number of vehicles will reduce to 92 (adopting the 25% mode shift).
  - **Pick-up mode of travel**: The introduction of light rail and implementation of the Green Travel Plan will also result in a reduction in pick-up mode of travel. Based on a conservative 25% reduction, there will be a reduction in car pick-up mode from 136 cars to 101 cars. Based on a car occupancy rate of 1.45 students, the number of vehicles will reduce to 60 (adopting the 25% mode shift).
  - **Queue length**: The existing peak queue length is approximately 65% of the total number of vehicles (during pick-up). This would result in a future peak queue of up to 39 cars. A queue of up to 48 vehicles can be accommodated without impacting on Argyle Street traffic. Wet weather would increase this queue by approximately five (5) cars. This can continue to be accommodated.
- **Traffic analysis**:
  - **External access roads**: In all scenarios, the two intersections on Argyle Street continue to operate at a Level of Service A for future traffic flows.
  - **Internal access roads**: No stopping zones will allow vehicles to pass while cars are queued during the afternoon pick-up. At all other times, passing areas allow cars to pass parked cars.

Mitigation Measures

A number of alternative vehicle drop-off and pick-up locations were considered to remove the need for vehicles to enter the school grounds. However, the use of nearby streets (Kent Street and Argyle Street) was considered inappropriate and the use of the Observatory Hill roundabout was unsuitable due to the shorter queue length, loss of open space and limited waiting area. These options are discussed in detail at Section 10.11 of Arup's Traffic and Transport Assessment.

Based on this assessment, the following Mitigation Measures are proposed to manage traffic, transport and access arrangements, including pick-up and drop-off within the school grounds.

- **Queuing zone**: Arup has proposed a possible kerbside arrangement to provide queuing space for up to 48 cars (noting a future peak queue of up to 44 cars during wet weather) without impacting on Argyle Street traffic. This arrangement is shown in **Figure 42**. This arrangement would involve a school zone that would create no parking zones along Upper Fort Street during pick-up and drop-off times, as well as retaining existing no parking zones along Watson Road. It is suggested that 15 minute free parking is provided to permit parents to park for access to the OOSH or at times when the pick-up line is not in operation.

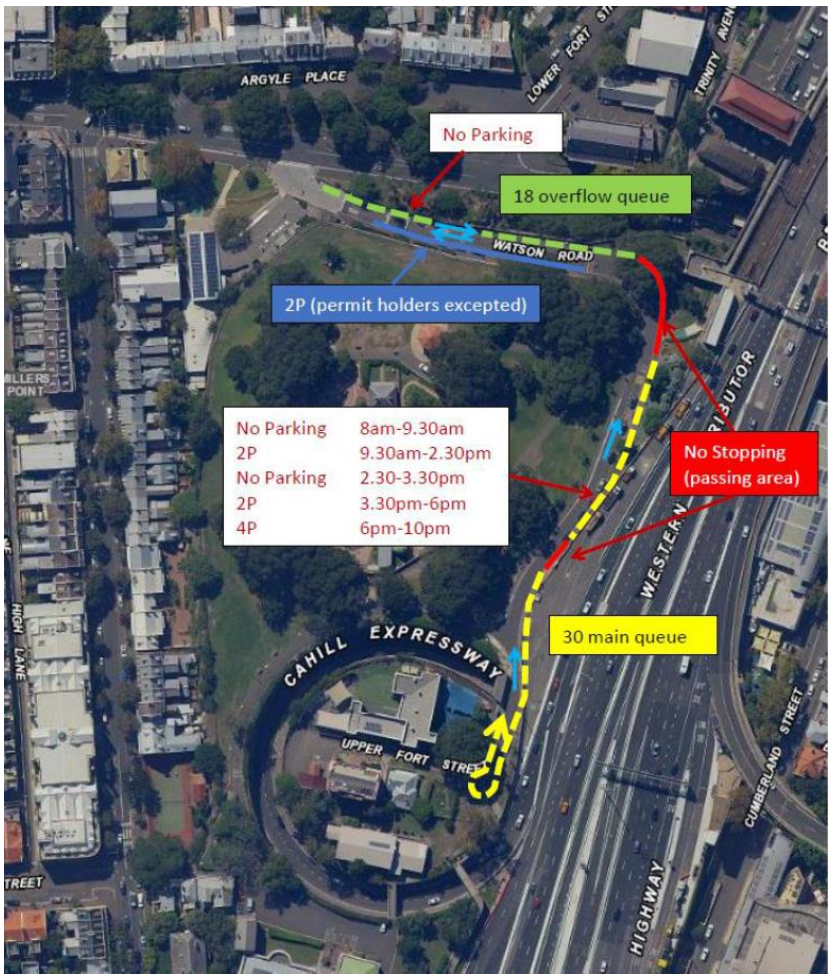

Figure 42 Potential queuing arrangement

Source: Arup

- **Upper Fort Street pinch-point**: It is proposed to widen the pinch point where Upper Fort Street crosses the Cahill Expressway. The road would be widened to a width of 6m kerb to kerb to enable two-way traffic flow. This is enabled by works to the Cahill Expressway ventilation building, which are currently being discussed with RMS.
- **Pedestrian access to the school:** Three pedestrian access routes are currently available as described at **Section 3.17.7**. Ultimately, the Master Plan for the site contemplates construction of a new pedestrian bridge on

the north-western side of the site, which would link the site to the broader Observatory Hill to provide easier access to the National Trust, the Agar Steps and Kent Street.

- **Car parking**: No car parking will be provided at the school. Visitors will use available nearby on-street car parking. If access is required for people with a disability, access to the entry plaza area will be provided.
- **Interaction with cycleway**: As detailed in **Section 3.17**, prior to the completion of the new cycleway, access to the school vehicle access loop will be restricted using a gate outside of drop-off and pick-up times, but will maintain access to Upper Fort Street for cyclists. Post completion of the new cycleway, the gate will be relocated to the Cahill Expressway bridge, as the cycleway will be separated from the vehicle carriageway of Upper Fort Street.
- **Deliveries**: Deliveries will enter via Upper Fort Street and will use the entry plaza within the school ground, at a time when the grounds are not being used for school play activities.
- **Excursion bus access**: Current excursion bus access will be retained, with students being picked up and dropped off on Argyle Street, using the footpaths along Watson Road and Upper Fort Street for access to the school.
- **Emergency vehicle access**: Fire trucks can access boosters inside the school gate using Upper Fort Street. Other emergency vehicles will be able to utilise the turnaround after gaining access through the school gate. Students using the playground while emergency vehicles are present will need to be managed by school staff.
- **Bicycle and scooter parking and end of trip facilities**: Room for five (5) staff bikes will be provided in a secure location. Up to 30 student bikes and 30 scooters will be allocated space for parking.
- **Green Travel Plan**: A Green Travel Plan (see **Appendix U**) will be implemented, with the view to reducing car mode share by 25%. The Green Travel Plan includes measures such as:
  - Issuing school travel passes;
  - Nominating a Green Travel Plan Coordinator and Management Team;
  - Creating and distributing maps for staff and students on cycle parking and walking routes;
  - Supporting and promoting events, such as National Bike Week, Bike2Work Days, Care Free day and Walk to Work Day;
  - Nominating a cycling champion from the staff;
  - Nominating a scooting champion from the staff;
  - Compiling appropriate public transport information;
  - Promoting carpooling;
  - Developing an information package for new staff;
  - Setting up appropriate consultation with Council, bus operators and other relevant parties; and
  - Organising a travel survey of the school annually.

These mitigation measures are included at **Section 7** of this EIS. Construction traffic, pedestrian and bicycle management is discussed at **Section 5.19**.

5.6 European Heritage

A Heritage Impact Statement has been prepared by Curio Projects and is included at **Appendix T**. A summary of the assessment and the proposed mitigation measures are provided below.

Assessment

As outlined at **Section 2.2**, the whole of the site is included within the State significant Millers Point/Dawes Point Heritage Conservation Area (C35). Further, the site also contains various locally significant heritage items under Schedule 5 of SLEP 2012 including the Met Building, Messenger's Cottage and FSPS Building. The 1830s heritage wall which runs east-west across the site and the large Fig tree have also been identified as having heritage significance.

Generally, physical intervention to the heritage fabric has been reduced as much as possible, with any intervention being necessary to facilitate functional connections with new elements and buildings on the site and to meet the functional requirements of the school.

Demolition and modification works within the 1940s FSPS Building will present physical impact to heritage fabric, however will retain the alignment and readability of the original configuration of the school rooms. Further, the sensitive adaptation of the school building will serve as a heritage best practice example for the evolution of school buildings from this era, ensuring continuity of use as a public school, with facilities capable of delivering modern, high quality education.

Minor demolition works to the Messenger's Cottage will present a minor physical impact to the heritage fabric. However, the adaptation of the heritage item is considered to be an overall positive heritage impact, ensuring the continued use of the building as part of the school.

Restoration and modification works to the Met Building will require some minor impacts to the heritage fabric; however, on balance, the adaptive re-use of the building is considered to have a positive heritage impact by reintroducing use and function to this currently unused and dilapidated building.

New penetrations to the heritage boundary wall will be required to facilitate connections across the site. While this will have a physical impact on the wall, penetrations have been minimised and sensitive modifications are considered possible given that the orientation and dominance of the wall are maintained.

With respect to built form and visual impacts, Curio's notes that:

- New buildings have been set back from the central corridor to conserve the heritage character of the site.
- New buildings have been designed to be appropriate in scale, and will be visually recessive to the existing heritage items.
- The Met Building remains the tallest and most dominant building on the site.
- Visual connections and links between heritage items have been considered through the articulation of breezeways and glazing.
- New development within key heritage view lines has been avoided – i.e. east of the Messenger's Cottage and in the north-east of the site.
- The bulk and massing of new buildings has been restricted to respect the proportions and bulk of existing heritage items, ensuring that they are visually subservient and recessive to the existing heritage buildings.
- The new amphitheatre to the north-east of the site will have a minor impact on views in this location. However, given that it conceals required fire hydrant and safety equipment, the impact is considered to be acceptable.

Curio concludes that the design represents the best possible design option to reduce and/or balance heritage impacts, whilst meeting SINSW's requirements.

The proposal has also been assessed against the updated Conservation Management Plan (CMP) that Curio has prepared for the FSPS site (**Appendix V**). The updated CMP is based on the draft CMP prepared by TKD in 2016. The 2016 draft CMP was never finalised or submitted to the NSW Heritage Council for endorsement. The updated CMP has been prepared to provide a clear foundation and operational policies to guide the function and uses of the

FSPS site, within the context of the site's cultural heritage significance. On advice from Heritage DPC, the draft CMP will not be formally endorsed by the NSW Heritage Council.

Mitigation Measures

- The impact of the Met Building's lift overrun should be minimised through careful detailed design, including use of materials, colour and clever mechanical design to reduce visibility.
- Colours and materials are to be sensitively applies and will be refined as part of the final design in consultation with Curio Projects.
- Appropriate and meaningful heritage interpretation initiatives should be implemented within the FSPS site in order to communicate the heritage significance and history of the site as a way of mitigating the impact to heritage values as posed by the development works.

5.7 European Archaeology

A Heritage Impact Statement has been prepared by Curio Projects and is included at **Appendix T**. A summary of the assessment and the proposed mitigation measures are provided below.

Assessment

Historical archaeology test excavation carried out in July 2019 confirmed the presence of substantial archaeological evidence of the former Surgeon's House (c. 1820s) in the south of the site, below the existing EEC Building. The archaeological resource has been assessed to be of State significance for its potential ability to provide important information from the archaeological evidence for the occupation of an element of a significant Government establishment from the early Colony. Whilst not encountered during the test excavation, the FSPS site retains further un-investigated archaeological potential for occupation deposits and deeper sub-surface features.

Development in the south of the site has the potential to impact this archaeological resource. However, bulk excavation works have been designed to avoid the location of the footings of the Surgeon's House, with bulk excavation works for the new basement for Buildings G and H located further to the east.

Curio concludes that the design has been adapted to avoid the footings as much as possible, with use of discrete piling and bridging techniques applied to allow retention of the archaeology in situ beneath the new development.

Mitigation Measures

- Further historical archaeological investigation and intervention will be required at the site to ensure potential impact to the historical archaeological resource (both known and unknown) will be appropriately managed and/or avoided.
- Historical archaeological investigation should be guided by a Historical Archaeological Research Design and Excavation Methodology (ARD + EM), to be prepared to fulfil the conditions of consent.

5.8 Aboriginal Archaeology

An Aboriginal Cultural Heritage Assessment Report (ACHAR) has been prepared by Curio Projects and is included at **Appendix H**. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

The site generally has low potential for Aboriginal archaeological deposits due to high levels of historical disturbance, as well as the propensity for Gymea soils for erosion following vegetation clearance.

Previous investigations within the study area have shown that many areas across the site have been previously excavated to sandstone bedrock, removing all natural soil profiles. However, some areas, particularly in the south-east of the site, have potential to retain remnant natural soil profiles. Should an Aboriginal archaeological deposit be found within the site, it may have moderate scientific significance.

While the Aboriginal archaeological potential within the FSPS site is considered low, should an Aboriginal archaeological deposit be found within the site, it may have moderate scientific significance for its ability to provide evidence for and insight into Aboriginal occupation and use of the Millers Point/Observatory Hill locality prior to

1788, representative of the FSPS site as part of the wider Aboriginal cultural landscape of the Sydney Harbour Foreshore.

Mitigation Measures

While archaeological potential is low, should an Aboriginal archaeological deposit be present within the FSPS site, it may have moderate to high significance, and therefore management strategies have been developed to mitigate any potential impacts. The following mitigation measures are proposed:

- Following approval of the SSDA, the proposed archaeological investigation (Management Strategy One, refer to Section 6.1 of the ACHAR), including monitoring, and archaeological test excavation (if required based on the results of the monitoring) should be undertaken.
- With regards to Aboriginal intangible heritage values (social and cultural), the FSPS redevelopment has the opportunity for a positive impact to be achieved via interpretation initiatives such as the Indigenous Rooftop Garden, to celebrate and communicate the significance of the site and landscape to the Gadigal (Darug) people through education.
- Continued consultation should be undertaken with the project RAPs through subsequent development stages of the project.
- The Unexpected Aboriginal Finds Protocol (presented in Section 6.4 of the ACHAR) should be implemented during all ground disturbing works within the FSPS site.

5.9 Visual Impacts

A Visual Impact Assessment has been prepared by Ethos Urban and is included at **Appendix X**. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

To determine the visual impact, an assessment was undertaken of a number of matters, including:

- The existing place character of the primary visual catchment and school to establish a baseline;
- Key viewpoints from public places. Due to the proposal's bulk, scale and position, an assessment of private views was not considered necessary;
- Visual impacts based on the sensitivity of the key viewpoints and the magnitude of change resulting from the proposal's insertion into the view;
- Visual impacts against the relevant parts of applicable planning instruments to determine appropriateness;
- Mitigation strategies and measures; and
- Residual impacts once the proposed mitigation strategies and measures have been incorporated.

The site is visually prominent and is located at the northern road entrance to the Sydney CBD. The site sits in a landscape unit which is representative of the inner Sydney landscape. This is dominated by a complex, layered and varied topography and built form with a strong presence of trees. In some instances, water forms part of this visual character which has a high level of scenic amenity. Within this broader whole, the site is most closely linked to the foreshore landscape unit comprising Millers Point and The Rocks.

FSPS is characterised by low rise red brick buildings that individually agglomerate as a collection of parts. Heritage buildings include the Met Building, the Messenger's Cottage and the FSPS Building. Hard paved ground cover and vegetation is scattered throughout the site. Based on scenic amenity criteria, FSPS cannot be regarded as a highly valued visual element within the primary visual catchment.

Based on the consideration of place, the relevant planning instruments and a site inspection, 11 viewpoints were selected in the primary visual catchment upon which to base the visual impact assessment. The location of each viewpoint is shown in **Figure 43**. Photography, surveying and photomontages prepared in accordance with Land and Environment Court Policy was undertaken for each viewpoint. This provided two images – an existing baseline and an indication of the likely proposed future outcome.

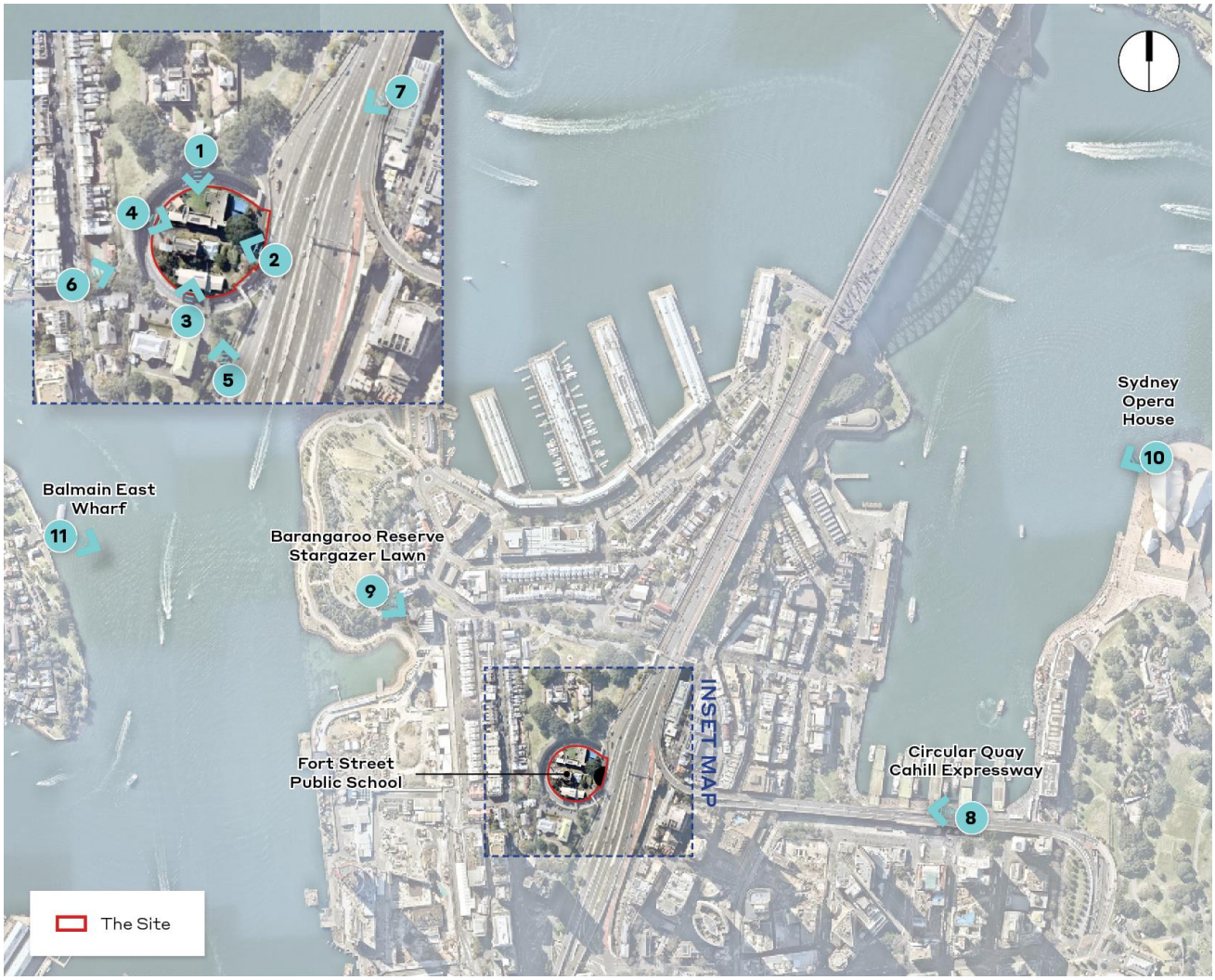

Figure 43 Location of viewpoints and direction

Source: Ethos Urban

Based on consideration of factors such as distance of the proposal from the viewpoint, the composition and dominant features in the view and the purpose of people being at the viewpoint, the sensitivity of all viewpoints ranged from low to high. Based on consideration of factors such as the amount and type of new fabric visible and its relationship to the existing view, the magnitude of change at all viewpoints was also assessed, ranging from negligible to moderate.

The greatest visual impact is likely to occur at Viewpoint 1: Sydney Observatory, Viewpoint 3: National Trust, Viewpoint 4: Agar Steps and Viewpoint 7: Harbour Bridge – Cahill Expressway. These particular views are discussed below.

Viewpoint 1: Sydney Observatory

Overall impact: Moderate

While a prominent contemporary addition to the FSPS Building is visible, it does not fundamentally alter the existing visual composition – in particular, how the buildings read as a collection of low-scale horizontal elements that protrude and recess relative to each other. The CBD skyline in the background mediates the appearance of the school's scale.

Figure 44 Viewpoint 1: existing

Source: Ethos Urban

Figure 45 Viewpoint 1: proposed

Source: Ethos Urban and FJMT

Viewpoint 3: National Trust

Overall impact: Moderate

The magnitude of change is high given the new building is different from the relatively low-scale, flat and horizontal nature of the existing building. However, the magnitude is offset by the low sensitivity of the viewpoint (given it is a private carpark) and no significant elements are present in the background.

Figure 46 Viewpoint 3: existing

Source: Ethos Urban

Figure 47 Viewpoint 3: proposed

Source: Ethos Urban and FJMT

Viewpoint 4: Agar Steps

Overall impact: Moderate

Contemporary additions are prominent in this view, due to the camera looking up at the proposal and the collection of elements ranging in scale. Existing horizontal elements, such as the path, fencing and exposed cliff face, moderate the visual significance of the Met Building from this viewpoint. From a visual perspective, the view does not show an 'intact' building in an 'intact' setting – particularly given the development has the CBD skyline as a backdrop.

Figure 48 Viewpoint 4: existing

Source: Ethos Urban

Figure 49 Viewpoint 4: proposed

Source: Ethos Urban and FJMT

Viewpoint 7: Harbour Bridge – Cahill Expressway

Overall impact: Moderate-Low

This viewpoint is highly cluttered by streetscape elements (traffic and barriers) with the majority of the proposal obscured by a large fig. The eastern vegetation line which has been established by a line of existing Fig trees has been preserved. The proposal does maintain a strong material characteristic such as the contrasting red brick against the CBD skyline resulting in low composition change.

Figure 50 Viewpoint 7: existing

Source: Ethos Urban

Figure 51 Viewpoint 7: proposed

Source: Ethos Urban and FJMT

Overall, the nature of change is derived from the introduction of a collection of low scale horizontal elements that protrude and recess relative to each other. While view composition and prominence are moderate from these key viewpoints, it is consistent with the place character at the viewpoints and does not fundamentally alter the visible nature or the use or meaning of the school.

On this basis, and considering the criteria established by the SEARs, it is concluded that while the nature of visual change is moderate from a small number of viewpoints, the impact of this change is appropriate having regard to the provisions of relevant parts of applicable planning instruments.

In particular, it will not obstruct or fundamentally alter the nature of views obtained from key vantage points as identified in the primary visual catchment and will not result in view loss from locations in the public domain.

The Visual Impact Assessment concludes that in its current form, the proposal has an acceptable visual impact.

Mitigation Measures

The Visual Impact Assessment finds that it is not necessary to implement mitigation strategies and measures to reduce visual impact.

5.10 Visual Privacy

Given the separation between the FSPS site and the nearest residential receivers located on Kent Street to the west and along the Agar Steps to the south-west, there will not be any visual privacy impacts associated with the development

5.11 Solar Access and Overshadowing

Off-Site Impacts

Due to the orientation of the site, the separation afforded by the Cahill Cut, the scale of development proposed and the general absence of any immediate neighbours to the south, there will be limited overshadowing impacts outside of the school grounds.

On the Winter Solstice, there will be additional overshadowing of the National Trust car park to the south of the site between 9am – 11am, however this area will receive full sunlight from 12pm onwards. Other shadows cast in the morning on the Winter Solstice are generally contained within existing shadows or are limited to the Cahill Expressway and the access road to the National Trust. From 3pm on the Winter Solstice, some additional shadows fall on the open space to the east of the National Trust Building and across the Western Distributor. However, impacts on buildings to the east of Cumberland Street are contained within the shadows of existing buildings.

On the Autumn Equinox, there will be additional overshadowing of the National Trust car park and the access road to the south-west of the site between 9am – 10am, however after 10am all shadows will be limited to the Cahill Expressway and the National Trust access road.

On the Summer Solstice and Spring Equinox there will be no overshadowing of surrounding land, with the exception of minor additional shadows on the Cahill Expressway, and minor impacts on the access road to the National Trust in the morning, caused by the new pedestrian bridge.

On-Site Impacts

Within the school site, the building layout and landscape design seeks to balance the need for shade in the summer and solar access in the winter. Whilst large parts of the site will be in shade on the Winter Solstice, areas of sunlight will be available during the key lunchtime period. To increase solar infiltration during winter, the central area is proposed to be planted with deciduous trees.

5.12 Crime Prevention Through Environmental Design

The development implements the principles of Crime Prevention Through Environmental Design (CPTED), as identified in the Department of Planning's guideline titled Crime Prevention and the Assessment of Development Applications (2001) as outlined in **Table 11** and in the Design Report at **Appendix D**.

Table 11 Consistency with CPTED Principles

Principle	Response
Access Control	Circulation around and through educational facilities needs to be clear in the definition of where people can and cannot go and to define boundaries. The use of physical barriers (e.g. fencing, walls and locked doors) and symbolic barriers (e.g. landscaping and changes in level) are important in access control. The following provides an assessment of the proposed facility against the access control principle:

Principle	Response
	• The site's location (an island) and the fencing provisions restrict access. • The three identified entries to the site - Gate 1, Gate 2 and Gate 3 will be controlled with 2,150mm palisade gates. • Fencing to the eastern side of the site, adjacent to the bicycle path, will be 2,150mm palisade and will restrict access to the site. • The site layout presents a clear hierarchy of public to private. • The landscaping design responds to pedestrian movement paths and guides people to entries and public spaces. • Vehicular access is limited to specific hours – drop-off and pick-up only. The vehicular entrance gates will close during school hours to eliminate any conflict between cars and pedestrians. • External and internal way finding signage and after-hours lighting will assist in access legibility and pathways.
Surveillance	Natural and technical surveillance are important and focus on ensuring that people can see what other people are doing - in the case of a school: teachers to students and students to students. Typically, public areas need to be over-viewed by others with clear sight lines from private to public areas, effective lighting of public places and landscaping which does not provide areas for people to hide or entrap victims. The following provides an assessment of the proposed facility against the surveillance principle: • Clear sightlines have been provided between public and functional spaces, e.g. the entrances to all 'public' facilities can be seen from the central courtyard. • Internal and external pathways and circulation areas are wide and open and constrained corridors are minimised. • Terrace access is limited allowing for surveillance from users of the adjacent rooms and roof top access will be managed by the school. • The Learning Hubs are a series of interconnected spaces to assist with surveillance. • Staff areas are located across the site which will assist with an even adult presence around the campus. • The Administration area will provide a secure entry into the school, complying with SINSW requirements. • Approximately 4 - 5 staff will be required for outdoor recreation duty during recess and lunch and additional staff if the roof areas of Building J and H when they are accessed. • After hours external lighting is consistent along pathways with increased lighting at facility entries.
Territorial Reinforcement	Areas that are well-maintained and well-used generate a feeling of 'ownership' and therefore reduce opportunities for criminal activity. Public areas need to clearly define their intended use and encourage community activity. The following provides an assessment of the proposed facility against the territorial reinforcement principle: • The unique location of the school clearly defines its presence on Observatory Hill. • The very visible location of the main entrance gate and the forecourt provides an informal gathering space for the school community. Upon entry into the campus, wayfinding is extremely clear through the hierarchy of external circulation spaces. • The new central courtyard brings together both sides of the campus and reinforces the identity of FSPS.
Space Management	Areas need to be attractive and well-maintained with regular removal of waste, mowing, removal of graffiti, repair of vandalism and the refurbishment of old equipment/furniture. This applies to both public and communal 'private' areas. The following provide an assessment of the proposed facility against the space management principle: • Management methodologies have an emphasis on damage, graffiti and maintenance management to ensure the facility presents a clean, cared-for environment. • Selection of materials, furniture and fittings will have an emphasis on reducing vandalism to assist in space management. • Gathering spaces will be integrated into the design, minimising vandalism.

5.13 Geotechnical, Contamination and Remediation and Acid Sulphate Soils

5.13.1 Geotechnical

A Geotechnical Investigation has been prepared by JK Geotechnics (refer to **Appendix Y**) to assess the subsurface conditions and provide an engineering assessment for the proposal.

Based on the Sydney Geological Maps, the site is in the vicinity of the Triassic aged Hawkesbury Sandstone. The investigation encountered a generalised profile consisting of a shallow to moderate depth of granular fill directly overlying sandstone bedrock. Some residual clayey sand was encountered between the base of the fill and the top of the sandstone bedrock. Observations of the exposed geology of the Cahill Expressway cutting indicate that sandstone is present at relatively shallow depths beneath the site surface (i.e. within 2m below ground surface).

Based on the results of the site investigations, the report provides advice on the geotechnical aspects of the proposed civil and structural design. These recommendations relate to excavation, retention, footings, anchors, pavements and floor slabs and have been considered during the design of the proposal.

5.13.2 Contamination

Assessment

JBS&G has undertaken a Detailed Site Investigation (DSI) at the site (refer to **Appendix E**). The objectives of the DSI were to characterise potential contamination at the site, and to draw conclusions regarding the suitability of the site for the proposed land use, or to make recommendations to enable such conclusions.

The results of the soil analytical data indicate that there are potentially unacceptable risks to human and ecological health at several locations resulting from PAHs, heavy metals and TRH in soil. JBS&G's assessment did not identify potential risks relating to the migration of contamination from the site based on current site conditions.

Based on the findings of the DSI, the site was considered to pose potentially unacceptable risks to current and future users of the site in a primary education setting. Existing contaminants are being managed in accordance with the recommendations of JBS&G, until the site is remediated as part of the redevelopment. JBS&G has recommended an interim environmental management plan (EMP) be developed and implemented to address lead contamination in accessible surface soils such that access to these soils is restricted, either by fencing the area off, or by providing physical separation to soils (for example, utilising artificial turf) to restrict exposure to soil but allow access to the area.

Mitigation Measures

For the development and future use, JBS&G has recommended the development of a RAP to guide the required remediation in order for the site to be made suitable for the proposed redevelopment and ongoing primary school land use. The proposed remediation works are discussed at **Sections 3.3.1** and **Section 5.13.3** and **Appendix F**.

5.13.3 Remediation

As outlined at **Section 3.3.1**, remediation works are proposed to enable the site to be considered suitable for the proposed primary school use.

The RAP prepared by JBS&G (refer to **Appendix F**) outlines the remediation options available under the *National Environmental Protection Measure*. JBS&G have identified on-site in situ management of the soil by physical separation, and ongoing management, as the most appropriate method for remediating the site. The proposed remediation scope of works is as follows:

- Site establishment;
- In-situ/ongoing soils management (physical separation remedial strategy);
- Excavation and off-site removal of site fill materials;
- Asbestos management (if required);
- Materials importation; and

- Site disestablishment.

The RAP includes a Validation Plan to verify the effectiveness of the remedial works and a Contingency Plan to ensure that the objectives of this RAP are met.

The actions outlined in the RAP are consistent with the requirements of the *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd Edition)* since they are:

- Technically feasible;
- Environmentally justifiable; and
- Consistent with the relevant policies and guidelines endorsed by the NSW EPA.

Subject to the successful implementation of the RAP, JBS&G conclude that the site can be made suitable for continued use as a primary educational facility and that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment.

It is also recommended that the measures identified in the RAP be incorporated into the Construction Environmental Management Plan and a Work Health and Safety Plan. Upon completion of the remediation works, a Validation Report is required to be prepared to verify remedial works were completed in accordance with the RAP.

5.13.4 Acid Sulphate Soils

The *1:25 000 scale Prospect Paramatta Acid Sulfate Soil (ASS) Risk Map* (DLWC 19977) indicates that the site is located within an area of 'no known or expected occurrences of acid sulphate soils (ASS) materials'. Based on a review of geology maps, soil maps, site topography and site observations, it is unlikely that actual and/or potential acid sulphate soils would be present on-site.

5.13.5 Groundwater

Groundwater was not encountered during auger drilling of any of the boreholes and therefore during bulk excavation, significant groundwater inflows are not expected

5.14 Construction and Operational Noise and Vibration

An Acoustic Assessment has been prepared by Arup and is located at **Appendix Z**. The Assessment has identified the potential noise and vibration impacts of the development on surrounding receivers. A summary of the assessment and proposed mitigation measures are outlined below.

The existing acoustic environment has been determined using a combination of long-term and short-term noise monitoring throughout the school, as well as short-term noise monitoring in two locations outside the school (refer to **Figure 52**). Based on the background and ambient noise and vibration monitoring carried out within and surrounding the site, Arup has developed a set of project specific noise and vibration criteria (refer to Section 4 of the Acoustic Assessment Report) and mitigation measures to minimise any impacts from noise and vibration.

Figure 52 Noise measurement locations

Source: Arup

5.14.1 Construction Noise Impacts

Assessment

The *NSW Interim Construction Noise Guideline* (ICNG or Guideline) provides recommended noise levels for airborne construction noise at sensitive land uses.

Construction noise management criteria have been established for the surrounding residential uses based on the ICNG management levels and measured noise data obtained at the logger locations.

As outlined in **Section 3.21**, the following construction hours are sought in accordance with the *City of Sydney Code of Practice 1992 Construction Hours/Noise within the Central Business District*.

- Monday to Friday inclusive: 7.00am to 7.00pm;
- Saturday: 7.00am to 5.00pm; and
- No work on Sundays and Public Holidays.

A summary of noise emission goals for both standard hours of construction and outside standard hours is provided at **Table 12** below.

Table 12 Construction noise management criteria for residential premises

Time Period	NML Description	NML Criteria $L_{Aeq(15min)}$
During recommended standard hours	Noise affected	67
	Highly noise affected	75
Outside recommended standard hours	Noise affected	51

The detailed construction methodology is not yet resolved, however given the distance from the site to the nearest sensitive receiver locations, it is expected that activities would comply with the Highly Affected Noise Targets. The development may result in exceedance of the Noise Affected Levels. Accordingly, application of all reasonable and feasible mitigation measures should be adopted for the project. The in-principle management measures are discussed below.

Mitigation Measures

Based on the above assessment, the following mitigation measures are proposed:

- Preparation of a detailed Construction Noise and Vibration Management Plan (CNVMP) including roles and responsibilities, areas of potential impact, monitoring methodology and a community engagement strategy;
- Adherence to the approved working hours as outlined in the project approval;
- Locating stationary plant (concrete pumps, air-compressors, generators etc.) as far away as possible from sensitive receivers;
- Using site sheds and other temporary structures or screens to limit noise exposure where possible;
- Using low-noise construction equipment and/or methods; and
- Carrying out consultation with the community and surrounding building occupants/owners during construction.

5.14.2 Vibration Impacts

Structural vibration as a result of construction activities is typically assessed by the following standards:

- German Standard DIN 4150-3 ‘Structural vibration in buildings – Effects on Structure’; and
- British Standard *BS7385-2*.

Arup concludes that vibration is not expected to impact upon surrounding development, and that no mitigation measures are required.

5.14.3 Operational Impacts – Impacts of the Development

Assessment

Plant and Equipment

The main source of operational noise associated with the school relates to building services equipment, such as air-conditioning and ventilation systems. Currently, the mechanical strategy for the project is to provide a chilled and heated hot water system.

Based on the preliminary equipment selection and proposed location of the chillers on Building J, mitigation and management measures will be required to address potential impacts to surrounding development. Further consideration will also need to be given to noise exposure on the school site, which may warrant mitigation beyond that required to satisfy the environmental assessment requirements.

School Activities

There are no specific regulatory policies or guidelines for noise associated with school activity and it is expected that noise emissions due to this are not likely to change significantly as a result of the development.

Specifically, noise emission from internal areas, such as music rooms, auditoria or sports halls are often required to achieve the same criteria as building services.

Regarding school PA system and bell, these two relate to specific current operational aspects of the school and should not result in any significant changes to the acoustic environment.

Communal Hall Events

The building envelope will be designed to control external noise intrusion and to ensure appropriate internal noise levels are met. Due to the high ambient noise levels in the area it is anticipated that the building envelope will need to achieve a high acoustic performance (refer to discussion below). Therefore, it is anticipated that noise egress from the hall will also be controlled to cause minimal impact on surrounding receivers. This will be reviewed as the design progresses.

Mitigation Measures

To address emissions from plant to surrounding development, consideration should be given to acoustic barriers or attenuation to the equipment. The design incorporates a 3m high acoustic screen around the chillers. Further detailed acoustic design and coordination with mechanical engineers will be required to finalise the mitigation specifications. With these measures in place, the relevant operational criteria can be met.

No mitigation measures are required to mitigate general school activities or use of the communal hall.

5.14.4 Operational Impacts – Impacts upon Development

Assessment

Development near rail corridors and busy roads must address the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP), which is supported by the *Development Near Rail Corridors and Busy Roads – Interim Guideline*, which covers airborne noise, ground borne noise and vibration. The policy is a requirement for educational establishments.

The EFSGs also stipulates that road noise shall be assessed in accordance with the Infrastructure SEPP requirements. However, the EFSGs sets lower internal noise levels for some spaces depending on their use and sensitivity. Internal noise levels for the project have been established in line with the EFSGs.

Regarding ground-borne noise impacts, no train passbys were measurable, and therefore ground-borne noise from rail operations has not been considered further in the assessment.

To be able to predict road traffic noise levels throughout the site with the proposed upgrades to the school, as well as new buildings, a road traffic noise model has been built in SoundPLAN 8.0. Façade noise levels have been extracted from the noise model to determine preliminary façade acoustic performance requirements and indicative build-ups to address the internal noise criteria for the project.

With respect to vibration impacts on the school. Vibration levels from passing trains are well below the preferred value for continuous vibration at schools.

Mitigation Measures

Arup has provided advice around indicative glazing requirements which will be subject to more detailed assessment during the detailed design phase to confirm the acoustic performance requirements of the façade.

It is noted that natural ventilation has not been considered in the design and it is recommended that this is not enabled for teaching and learning spaces. It may be considered for office and back of house areas as the design progresses.

No mitigation measures are required with respect to vibration impacts on the school.

5.15 Air Quality Impacts

Assessment

An Air Quality Assessment has been undertaken by Arup (**Appendix II**) to ensure that the proposed development demonstrates compliance with the NSW *Protection of the Environment Operations Act 1997* and the *Protection of the Environment Operations (Clean Air) Regulation 2010*.

The National Environment Protection (Ambient Air Quality) Measure (NEPM) sets standards to provide adequate protection for human health and wellbeing. The Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (the 'Approved Methods') provide criteria for assessing air pollution impacts. The impact assessment criteria in the Approved Methods have been used to determine if measured pollutant concentrations would have a significant impact on local air quality and subsequently the health of staff and students.

The key pollutants of concern, given the site's sensitivity and local pollution sources (i.e. major roads) are:

- Particulate matter (PM_{10} and $PM_{2.5}$);
- Carbon monoxide (CO);
- Nitrogen dioxide (NO_2); and
- Sulphur dioxide (SO_2).

Some pollutants have criteria expressed as annual average concentrations. Others have criteria expressed as 24-hour, one-hour or 15-minute averaging periods. The pollutants assessed as part of the Assessment have standards expressed in terms of both long-term and short-term concentrations.

Air Quality Monitoring

Real-time on-site air quality monitoring has been undertaken to assist with establishing local air quality conditions and to assess the suitability of these conditions for staff and students.

An AQ Mesh monitoring system was installed on-site at the start of August 2019. It continues to monitor NO_2, PM_{10} and $PM_{2.5}$, CO, and SO_2 at 15-minute intervals. As the AQ Mesh system is not compliant with Australian Standards, AQ Mesh pods were installed at four (4) locations on-site to ensure effective data capture, as shown in **Figure 53**. On-site air quality monitoring will continue until the end of July 2020 to provide a full year of data. This air quality assessment will be updated on completion of a full year of monitoring data as requested by the Department.

Figure 53 AQ Mesh monitoring locations on-site

Source: Arup

On site data has been compared to data from NSW Government monitoring locations closest to the site, including:

- The Bradfield Highway and the Cahill Expressway monitoring station located at a roadside location 2km north of the FSPS site;
- The Rozelle monitoring station located 3.7km south-west of the FSPS site;
- The Cook and Phillip Sydney CBD monitoring station located 1.6km south-east of the FSPS site; and
- The Randwick monitoring station located 8.6km south-east of the FSPS site.

The most recent full year of data (2019) was obtained to provide annual average concentrations for comparison with the Approved Methods impact assessment criteria. Data from the Cook and Phillip Sydney CBD monitoring station is only available from September 2019.

Existing Environment – Air Quality and Local Meteorology

The NSW Air Quality Statement 2019 shows that Sydney was greatly affected by the effects of climate change, including the continuing intense drought conditions and impacts from bushfires throughout the year, but particularly in the final quarter of 2019. Air quality was classified as being good for 86% of the time in the Sydney region. However, 55 days were identified as being 'poor', 'very poor' or 'hazardous' in the final quarter of 2019.
The monitored concentrations on-site over a six-month period between August 2019 and January 2020, and the number of daily or hourly exceedances over the monitoring period, are shown in Table 4 of the Air Quality Assessment. The results show the following:

- Elevated $PM_{2.5}$ concentrations, with 15 exceedances of the 24-hour $PM_{2.5}$ standard. All exceedances were recorded between the end of October 2019 and January 2020 when smoke from bushfires was impacting the Sydney airshed. The Air Quality Index for Sydney also recorded 'very poor' to 'hazardous' conditions on the days of these recorded exceedances on-site. The average $PM_{2.5}$ concentration across the monitoring period also exceeded the annual $PM_{2.5}$ standards, however this is not directly comparable as a full year of data is not yet available.
- Elevated PM_{10} concentrations, with six exceedances of the 24-hour PM_{10} standard. These exceedances also occurred between the end of October 2019 and January 2020. The Air Quality Index for Sydney also recorded 'hazardous' conditions on the days of these recorded exceedances.
- Three exceedances of the 1-hour NO_2 standard. This was limited to three consecutive hours on 19 December 2019. These exceedances are reflected in off-site monitoring data recorded at the Bradfield Highway station. The NSW Air Quality Statement notes that while there was likely some contribution from traffic toward this exceedance, the air quality in Sydney on this day was significantly impacted by bushfire smoke.
- For all other pollutants and averaging periods, monitored concentrations are less than 75% of the Approved Methods impact assessment criteria.

A comparison of on-site and off-site data from the Bradfield Highway, Rozelle, Randwick and Cook and Philip monitoring stations shows that:

- Monitored concentrations on-site are comparable with monitored concentrations off-site.
- On-site concentrations of 24-hour PM_{10} and $PM_{2.5}$ are not materially different to those monitored elsewhere in the local airshed. Elevated concentrations are shown from the end of October 2019 onwards. This correlates with impacts from bushfires and dust storms. At times, monitored concentrations on-site are lower than those monitored off-site during the bushfire season.
- Monitored average NO_2 concentrations on-site are higher than at Rozelle, Randwick and Cook and Phillip monitoring stations. This is likely due to the proximity of the proposed development to major roads. However, monitored NO_2 concentrations remain less than 75% of relevant standards except for the anomalous three-hour peak in the middle of December 2019.
- On-site monitored SO_2 and CO concentrations are comparable with off-site concentrations and at all locations. They are all less than 50% of the relevant standards.
- Typical meteorological conditions in the area are favourable for minimising the dispersion of pollutants towards the site from the Cahill Expressway and Western Distributor. This correlates with the comparison of on-site and off-site air quality monitoring that shows no prolonged impact on local air quality due to the proximity of the proposed development site to major roads.

Arup states that existing local air quality is generally good, except for PM_{10} and $PM_{2.5}$ concentrations. These occasionally exceed ambient air quality standards, however these pollutants have been significantly impacted by bushfires and dust storms in the last quarter of 2019 and the start of 2020.

Arup concludes that while local air quality conditions have exceeded standards over the monitoring period, conditions at the proposed development site would be no different to other schools operating within urban areas of Sydney.

Arup's report is accompanied by an Assessment of Potential Health Effects prepared by Enrisks (also at **Appendix II**). Enrisks confirms that there is little difference in the air quality at the school compared to the rest of Sydney, so there are no health concerns that are unique to children attending the school due to air quality at the site, with air quality at FSPS essentially being the same as the rest of Sydney.

Mitigation Measures

Assessment of Operational Impacts

The main design aspects of the proposed development that have the potential to impact exposure of staff and students are:

- Moving class rooms, staff rooms and play spaces closer to/further away from pollution sources, either horizontally or in an upwards direction; and
- Improving the ventilation system to minimise the movement of polluted air into classrooms and work spaces.

The only portion of the site where buildings would be built closer to adjacent roads than at present would be the southern area next to the Cahill Expressway. At this location, the Cahill Expressway is almost level with the proposed development where it joins the Western Distributor.

The closest building façade would be 10m closer to the road. However, there is still a 10m buffer to the Cahill Expressway and a 20m buffer to the main carriageway of the Western Distributor. Therefore, this would not present an unsuitable exposure risk for staff and students.

Outdoor play spaces are also not being moved any closer to adjacent roads. The existing ground level play space will remain. Additional outdoor play space included as part of the proposed development is at roof height which will increase the relative distance between traffic using the Cahill Expressway and Western Distributor and receivers using these play spaces.

The proposed ventilation system has taken account of the exposure of students and staff to air pollutants (primarily PM_{10} and $PM_{2.5}$ concentrations as the key pollutants at risk of exceeding standards). As such, pre-filtered air would be provided to all habitable spaces. This would help improve the indoor air quality.

Filtration systems would require ongoing maintenance to ensure they continue to provide protection and minimise exposure. Any failure of the ventilation system would be short-term, with remedial action carried out as soon as possible. As a result, this would not cause any significant impacts to exposure of staff and students.

Impacts from the Proposed Development

The potential air quality impacts associated with the proposed development are anticipated to be similar to the current situation, as the site already operates as a school. A small increase in vehicle movements is predicted on the local road network as a result of the increased capacity of the school, and a Green Travel Plan will be implemented to encourage students and staff to choose sustainable and active transport modes.

Proposed gas-fired condensing boilers, which can generate local emission to air, are included for back-up purposes only and therefore would not be in operation on a regular basis. Any local air quality impacts associated with the installation and operation of new plant as part of the proposed development would be temporary due to occasional use and where this plant is low-emission, it would not materially affect local air quality.

With the above measures included, no further mitigation is considered to be required to minimise exposure of staff and students at the proposed development site.

5.16 Ecologically Sustainable Development (ESD)

The environmental performance of the development has been assessed by using Clause 7(4) of Schedule 2 of the EP&A Regulations and the EIS is accompanied by a ESD Report prepared by Cundall (**Appendix N**).

Cundall has established sustainable development goals based on the following guidelines, regulations, standards and climate change impacts:

- Educational Facilities Standards and Guidelines (EFSG);
- National Construction Code 2019 Building Code of Australia (NCC);
- NSW Government Resource Efficiency Policy (GREP);
- Government Architect NSW – Environmental Design Guide for Schools (GANSW);

- Green Star Design & As Built v1.3 – equivalent standard only (GSDAB); and
- Commonwealth Scientific and Industrial Research Organisation (CSIRO) projected impacts of climate change.

The FSPS development has been designed to align with the guidelines, regulations and standards, as relevant to the project.

With respect to Green Star, the development will be designed and constructed to a standard equivalent to a 4 Star Green Star Design & As Built v1.2 rating – Industry Best Practice, but formal GBCA full certification will not be sought.

Full certification is not sought due to the cost and administration of an official rating outweighing the benefit given that the EFSG guidelines and SINSW requirements are already achieving a significant environmental improvement for the school. As such, SINSW has developed an unofficial approach which will include a reduced set of documentation and self-certification process to achieve an equivalent and similar environmental outcome to a 4 Star Green Star project.

The Report include a Preliminary Green Star Pathway showing the targeted credits. As the design develops, these may be modified, but will still maintain a minimum score of 45 points – equivalent to 4 Star rating in accordance with the EFSG standards.

The sustainability frameworks outlines initiatives to be implemented in nine (9) key impact categories, as described at **Section 5.16**, including:

- Energy and emissions;
- Water;
- Resource and materials;
- Biodiversity;
- Improved quality of life;
- Life-long learning;
- Clean water and sanitation;
- Economic growth and job opportunities; and
- Inclusive environment.

Furthermore, the proposed development is consistent with the four accepted principles of ESD. The Regulation lists four principles of ecologically sustainable development to be considered in assessing a project. They are:

- The precautionary principle;
- Intergenerational equity;
- Conservation of biological diversity and ecological integrity; and
- Improved valuation and pricing of environmental resources.

An analysis of these principles follows.

- **Precautionary Principle** – The project shall present no threat of serious or irreversible environmental damage. The project will deliver ecological restoration and habitat creation to improve the site, implement climate change adaptation principles, and apply industry best practice ESD initiatives.
- **Inter-Generational Equity** – The buildings will provide healthy internal and external environments for teaching students today and in the future. The landscaping principles of ecological restoration and habitat creation will deliver benefit to current and future generations.
- **Conservation of Biological Diversity and Ecological Integrity** – The site is currently of low ecological value. The landscape design will enhance the biological diversity and ecological integrity of the site.

- **Improved Valuation, Pricing and Incentive Mechanisms** – The design and operation of the school will reduce energy and water consumption and greenhouse gas emissions. Life Cycle Costing will be used throughout the design process to justify capital investment and reduce ongoing impacts.

5.17 Tree Removal and Biodiversity Impacts

5.17.1 Tree Removal

Assessment

Birds Tree Consultancy has prepared an Arboricultural Development Impact Assessment Report to assess the proposed removal of trees and their significance (**Appendix J**). A total of 22 trees are located on or adjacent to the school site. The proposed works will require the removal of 19 trees.

In summary:

- Trees 3, 4, 10 and 14 are identified as being in poor and declining health and are recommended for removal.
- Tree 1, the Fig tree located at the front of the site, is in good health and condition, however there is evidence of decay present in the canopy. This tree is identified as a Significant Tree by City of Sydney and is proposed to be retained. Notwithstanding, further investigation is recommended to determine the structural integrity of several branches.
- All other trees are identified as being in good health and condition.

However, 19 trees are encroached by the proposed construction and will not be viable to be retained and are recommended for removal.

Mitigation Measures

Tree protection measures are proposed in accordance with the *Australian Standard for the Protection of Trees on Development Sites (AS 4970 2009)* for the three trees that will be retained within the development site, being trees 1, 38 and 39.

5.17.2 Biodiversity Impacts

A Biodiversity Development Assessment Report has been prepared by has been prepared by Eco Logical Australia (ELA) to assess the biodiversity values and species habitat present on the site (**Appendix C**). A summary of the assessment and mitigation measures are outlined below.

Assessment

The proposed development site is 0.68 ha. Native trees and ground cover species are present within part of the development site, with horticultural plantings and weeds present throughout the development site. Vegetated areas of the development site are subject to regular mowing and garden maintenance activities. Of significance to the BDAR, the development site also contains the abandoned Met Building.

The proposal will result in the removal of 0.15 ha of native and exotic vegetation, including one plant community type (PCT) PCT 1083 Red Bloodwood - scribbly gum heathy woodland on sandstone plateaux of the Sydney Basin Bioregion and Landscaped Gardens. This PCT does not form part of any threatened ecological communities under the *Biodiversity Conservation Act 2016* (BC Act) or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

A total of 0.09 ha of native vegetation will be directly impacted by the proposal, resulting in the clearing of 0.09 ha of PCT 1083. No ecosystem credits for plant community types are required for the proposed development.

One threatened flora species *Syzygium paniculatum* (Magenta Lilly Pilly) identified within the development site is listed as endangered under the BC Act and vulnerable under the EPBC Act. The species is located outside of its normal distribution. However, ELA has previously received advice from DPIE that threatened species are protected under the BC Act and require assessment of proposed impacts, irrespective of whether they are planted or not.

Subsequently, this species was included as a species credit species and an impact assessment for this species was prepared under the EPBC Act. Species credits are required for this species.

Holes identified in the eaves of the existing Met Building were considered as having the potential to be entrances to cavities suitable as breeding habitat for microchiropteran bats (microbats). Microbat scats and/or markings were not observed around any of these holes. A species polygon was prepared for these species.

Further, the trees within the development site may be used as potential seasonal foraging habitat for microbats and *Pteropus Poliocephalus* (Grey-headed Flying-fox). However, it is considered more likely that suitable breeding habitat would be present outside of the development site. Species credits for threatened microbats assumed to be present within the site were not required by the Biodiversity Assessment Method Calculator.

No other threatened flora or fauna species were recorded within the study area.

Finally, the following three Matters of National Environmental Significance was identified as having potential to be adversely affected by the proposed works:

- *Lathamus discolor* (Swift Parrot);
- *Pteropus poliocephalus* (Grey-headed Flying-fox); and
- *Syzygium paniculatum* (Magenta Lilly Pilly).

An assessment of the Commonwealth Significant Impact Criteria was undertaken for these species and concluded that the development would not result in a significant impact to any of the potentially affected species.

Mitigation Measures

ELA's Report outlines a number of measures to mitigate and manage impacts, including:

- Undertake a pre-clearance survey of the Met Building prior to patching of the holes that represent suitable habitat for threatened species;
- If microbats are observed during the pre-clearance survey of the Met Building, microbat nest boxes should be installed;
- Construction staff to be briefed prior to work commencing to be made aware of any sensitive biodiversity values present and environmental procedures; and
- Landscaping is to use locality derived native species and those found within the PCTs present.

5.18 Construction Management

A Preliminary Construction Management Plan has been prepared by Johnstaff Projects, and is included at **Appendix Q**. Generally, the following measures will be put in place for the duration of construction:

- Hoardings will be established prior commencement of works.
- All necessary temporary facilities will be put in place to ensure the safe and secure performance of the works.
- Works will be subject to the relevant construction noise policies.
- Hours of work will not extend beyond:
  - Monday to Friday inclusive: 7.00am to 7.00pm;
  - Saturday: 7.00am to 5.00pm; and
  - No work on Sundays and Public Holidays.
- Project inductions will be carried out to train workers on specific safety and emergency procedures.
- A detailed cranage analysis will be undertaken to determine handling solutions for materials throughout the project.
- The school will be decanted for the duration of construction.
- The Head Contractor will prepare and implement various management plans, including:

  - Stakeholder Management Plan;
  - Risk Management Plan;
  - Disruptive Works Notification Procedure; and
  - Construction Environmental Management Plan.
- A comprehensive Environmental Management Plan will be developed and implemented.
- Other issues, such as contamination, hazardous materials, archaeology, noise and vibration, vegetation protection, sediment and erosion control, odour control and waste management will be handled in accordance with the recommendations of the relevant report included with this EIS.
- Stakeholder management and dispute resolution procedures will be put in place.
- A Safety Management Plan will be prepared to ensure a safe working environment.

5.19 Construction Traffic Management

A Preliminary Construction and Pedestrian Traffic Management Plan has been prepared by Arup, and is included at **Appendix AA**. A summary of the draft Plan and suggested mitigation measures is provided below.

Assessment

Vehicles that will access the site during construction will generally be medium and heavy rigid vehicles. If articulated vehicles are required, special arrangements would be required, as discussed below.

Construction will indicatively take place from early 2021, over a 26-month period. The workforce on site would be between 40-130 people depending on the phase of the project.

Works are anticipated to generate 25 to 50 truck movements per day. On peak days, around six (6) vehicles per hour may be anticipated.

Truck approach routes will generally use Sussex Street and Kent Street. Further development of suitable routes will occur as project planning develops, in consultation with the Sydney Coordination Office. Construction vehicle access to the site will be via Upper Fort Street, via Watson Road and Argyle Street. During early stages of works, traffic management will be required at the pinch point on Upper Fort Street. All truck turning will occur within the site. Queuing may be required for up to two trucks on Upper Fort Street.

Articulated truck access will be difficult via Watson Road and Upper Fort Street. It may be possible to use the Sydney Harbour Bridge incident response area for special deliveries during non-peak periods, however this would need to be negotiated with RMS.

The Cahill Expressway loop may be able to be used as a craning location, which would require traffic to be merged into a single northbound lane. This would need to be done at night or during low traffic volume periods. Traffic would need to be stopped briefly for each lift of materials off the truck.

Very limited worker vehicle access will be available to the site. Road network impacts will be mitigated by the fact that construction workers generally start earlier and finish earlier than peak periods, and also typically carpool. Overall, traffic generation associated with construction is expected to be less than that assessed for the operational phase of the development, and therefore impacts are anticipated to be minimal.

Mitigation Measures

- A works zone will be established;
- Traffic control will be implemented to control vehicle, pedestrian and cyclist movements in and around the site;
- Traffic control plans will be developed and submitted;
- Truck loads will be covered during transportation off-site;
- Appropriate on-site speed limits will be established;
- Neighbouring properties will be notified of construction work;

- Deliveries and spoil removal will occur during standard construction hours;
- Truck idling will be avoided near sensitive receivers;
- Deliveries will be planned to minimise the number of trucks arriving at any one time;
- Construction vehicle access routes will be focused on the western side of the CBD, using Sussex and Kent Streets;
- Queuing and marshalling of trucks will only occur in designated and agreed locations;
- All vehicles must enter and exit the site in a forward direction; and
- Vehicles will be required to give way to pedestrians at all times.

5.19.1 Pedestrian Management

During construction, pedestrians will be diverted and controlled by traffic controllers as necessary, with diversion routes established as necessary.

5.19.2 Bicycle Management

As outlined in **Section 3.17**, there are plans to modify the alignment of the Sydney Harbour Bridge Cycleway as it approaches and passes FSPS from Kent Street. A Review of Environmental Factors (REF) was exhibited by RMS in November 2017, however the timing of the works is not yet known.

It is anticipated that the cycleway (to be delivered by others) will be redirected during construction of FSPS. A cycle detour was proposed as part of the exhibited REF via a temporary ramp on the Sydney Harbour Bridge stairs and onto Watson Road, Argyle Street and Kent Street, connecting to the Kent Street cycleway. An initial review of the routes has been undertaken and discussed with Council, Bicycle NSW and RMS. More consultation will be undertaken as development progresses.

If the cycleway is not diverted, management between cyclists and construction vehicles will be required.

5.20 Social Impacts

An assessment of the social impact of the school's construction and the impact on the school and broader community has been undertaken by Ethos Urban at **Appendix BB** and is summarised below.

The SIA states that the redevelopment of FSPS will bring a mix of positive and negative impacts – the latter primarily temporary, associated with the construction process.

There are many significant positive benefits arising from the proposal, primarily related to the improved access to education opportunities for students residing in the local area and the broader City of Sydney LGA. Further investigation into the potential use of the school facilities as community assets is recommended and would allow for better integration of the school with the surrounding community.

The proposed development is likely to generate limited negative social impacts, mostly associated with the construction phase, and with increased noise and traffic congestion associated with the operation of the school, due to the increase in the number of children enrolled at the school. However, it is considered that the negative impacts of the proposed development can generally be well mitigated through implementation of a Construction Management Plan and appropriate Plan of Management for the school, including management measures for construction vehicles and local traffic during construction.

It is recommended ongoing communication with the Stakeholder Working Group is maintained throughout the life of the project to ensure a collaborative process which supports the needs and concerns of relevant stakeholders.

On balance, the scheme will generate significant long-term social benefits for the local area and the broader City of Sydney LGA.

5.21 Other Assessment Issues

An assessment of the other impacts of the development have been undertaken by the relevant specialist consultants and are appended to this EIS as set out in **Table 13** below.

Table 13 Summary of technical assessments

Consideration	Consultant	Summary	Reference
Reflectivity	Arup	Arup has conducted an initial high-level review of building and site conditions has highlighted the potential for reflections to exceed limits of glare acceptability under the commonly used methodology by Hassall on the Cahill Expressway heading west, assuming the maximum allowable reflectivity of 20%. The extent of the impact is limited to a small area, as most of the reflections in this direction will be obstructed by surrounding buildings. Glazing will be selected to have a normal reflectivity not exceeding 20% in line with the requirements of the City of Sydney DCP. Reflections potentially causing glare may be controlled by specification of a maximum reflectivity for the glass below 20%. A more in-depth assessment, with detailed geometry modelled, should be carried out to confirm if there is a risk to this location and identify the required mitigation. Reflections towards this area can likely be controlled by positioning of windows and glazing and by adapting glazing reflectivity specifications.	**Appendix CC**
Wind	Arup	Arup has provided qualitative advice regarding the impact of the proposed development on pedestrian wind comfort. The building massing has not changed significantly from the existing conditions and there is a better protective wall of buildings to the south of the site shielding the prevailing winds from this quadrant. The large outdoor area in the north-east quadrant is well located. Arup concludes that from a wind comfort perspective, the wind conditions at the majority of locations around the development would be expected to be classified as suitable for pedestrian standing with locations closer to the buildings suitable for sitting and walking activities. These classifications match the intended use of the site. All locations within the proposed development would meet the safety criterion.	**Appendix DD**
Construction Waste Management	Arup	Waste streams resulting from construction and demolition have been considered. Waste management during construction will be the responsibility of the Principal Contractor and will be undertaken in accordance with a Construction Waste Management Plan, which is yet to be prepared. Suitable areas on site will be allocated for separation and storage of materials and waste. Waste that is unable to be reused or recycled will be disposed off off-site at an EPA-approved waste management facility.	**Appendix EE**
Operational Waste Management	Arup	Modelling has been undertaken to determine waste storage requirements for the proposed development. A waste storage room is proposed to be provided in the north-eastern corner of the site, under the new amphitheatre. The waste collection area has been designed in accordance with the requirements of City of Sydney Council. General waste will be collected five (5) times per week, and less frequently for other waste streams. There are two routes available for the collection vehicles to access the collection point to allow for flexibility of collection. The Operational Waste Management Plan also outlines measures for management of operational waste, including collection point requirements and opportunities to further manage and reduce the impacts of operational waste.	**Appendix EE**
Light Spill	FJMT	The proposed lighting strategy is described at **Section 3.16**. Wood & Grieve Engineers have prepared a Concept Design Strategy to assess the external lighting and outline the measures that have been employed to reduce light spill on surrounding receivers. The concept design lighting layout has been provided to show a proof of concept of an external lighting design which shows compliance with *AS4282:1997 Control of the obtrusive effects of outdoor lighting*.	**Appendix L**

Consideration	Consultant	Summary	Reference
		The Strategy details the measures taken to reduce the spill light into the surrounding sensitive receivers, including positioning, lighting control and the selection of luminaries. The design development stages of the project will detail further design elements to ensure the standards compliance and spill light reduction measures.	
HAZMAT	JBS&G	A Hazardous Materials Management Plan (HMMP) has been prepared by JBS&G. The assessment has identified friable and non-friable asbestos containing materials, lead based paint systems, lead contaminated dusts and synthetic mineral fibres within the existing building fabric. The HMMP outlines the procedures required to: • Minimise the risk of exposure to hazardous building materials for current and future site occupants, visitors, maintenance contractors as well as workers involved in future building redevelopment works (e.g. demolition and construction); and • Manage any maintenance, controls, removal and disposal of hazardous building materials as required. The HMMP will be made available to all persons involved in the management, operation and maintenance of FSPS. The HMMP should be updated on a regular basis by a competent occupational hygienist/asbestos assessor as nominated by the site HMMP manager.	**Appendix FF**
Flooding	-	Based on the City of Sydney's 'City Area Catchment Flood Study' prepared by BMT WBM and dated October 2014, the FSPS site is not subject to flood inundation during the 100 ARI event (refer to **Figure 13**). No further flood assessment is required.	**-**
Stormwater Management	Bonacci	An Infrastructure Management Plan has been prepared by Johnstaff. Sydney Water has advised that an OSD with a minimum volume of 119m^3 is to be placed on the site as part of the proposed development, to limit the peak flows leaving the site to 210 L/s, which would result in post-development flows being less than the existing condition. Most stormwater runoff from the driveway, landscape and hardstand areas will be directed into storm filter cartridges located inside the OSD tank after being treated by Enviropods. A portion of stormwater runoff bypasses the treatment tank. This area will be treated by an Enviropod located in the relevant pit. MUSIC modelling shows that pollutant removal rates will achieve City of Sydney Council's reduction targets. Rainwater tanks will be installed to collect rainwater from the rooftops of the buildings. At least 15kL rainwater is required on site to meet 70% irrigation demand (sprinkler system). It is noted that the tank size may change due to changes in landscape or architectural plans, or roof area draining to the tank. Pits and pipes will capture and convey runoff up to the 20-year ARI. The pits and pipes will likely connect to the existing 300mm VCP stormwater line along the Cahill Expressway.	**Appendix O**
Erosion and Sediment Control	Bonacci	An Erosion and Sediment Control Plan has been prepared by Bonacci. The Plan outlines the management processes to be put in place to maintain the quality of stormwater discharge during construction. Measures include sediment fences and sediment traps, construction vehicle entry/exit sediment traps. geotextile pit filters and catch drains.	**Appendix W**
Access	FJMT	The proposed access network ensures that the whole site, old and new, is connected and level for persons with impaired mobility, ensuring equity of access is achieved for both student population, parents and visitors. A detailed accessibility and NCC analysis will be conducted through subsequent phases of the design to identify any inadequacies and potential alternate or management solutions. Some minor non-conformances associated with the heritage buildings will exist in the final design and will require appropriate assessment to prove any exemptions or alternate management solutions. It is anticipated that elements such as existing	**Appendix D**

Consideration	Consultant	Summary	Reference
		doorways will require assessment for thresholds, door reveal depths, and the like.	
Structural	Bonacci	A Structural Statement has been prepared by Bonacci. The Statement outlines the proposed structural design and design load criteria, and confirms that the development will comply with the relevant Australian Standards including: • AS/NZS 1170.0/2002 – Part 0: Structural design actions • AS/NZS 1170.1/2002 – Part 1: Permanent, imposed and other actions • AS/NZS 1170.2/2011 – Part 2: Wind actions • AS/NZS 1170.4/2007– Part 4: Earthquake loads • AS3600 – 2018: Concrete structures • AS4100 – 1998: Steel structures • AS1720- 2010: Timber Structures • AS3700 – 2018: Masonry Structures • AS2159 – 1995: Piling • AS/NZS4600 – 2001: Cold-formed steel structures • AS/NZS3828 – Guidelines for the erection of building steelwork	**Appendix GG**

5.22 Site Suitability

The site is suitable for the proposed development, as outlined below.

- **Continuation of education uses on the site** – The proposal seeks to continue the use of FSPS, which has been operating since 1849. Whilst the site is constrained, the development has been designed to sit comfortably within the context of the site and its surrounds and will enable the continued provision of education facilities at Fort Street.
- **Utilisation of existing structures and heritage fabric** – Responding to the site's heritage and archaeological significance has been a key design consideration. The design seeks to showcase the layered history of the site and its different uses over time. The design retains and adapts heritage significant fabric, and responds to heritage views and vistas.
- **Consistency with site zoning and relationship with surrounding uses** – The proposed land use is permissible within the zone, being the B8 Metropolitan Centre and is consistent with the objectives of the zone. The proposal responds to the site's context within Observatory Hill and Miller's Point, and will improve connections with the surrounding precinct including immediate neighbours in the National Trust and the Sydney Observatory Museum, as well as providing better connections to the surrounding parklands and also the wider Miller's Point community.
- **Ability to manage environmental impacts** – As detailed throughout **Section 5**, environmental impacts associated with the proposed development are capable of being managed and mitigated. This EIS has demonstrated that heritage, traffic, visual and construction impacts can all be appropriately managed. Further, the site is capable of being remediated to ensure its suitability for the proposed use.
- **Access to public transport** – FSPS is one of the best-connected schools from a public transport and walkability perspective, being within walking distance of multiple heavy rail, future Sydney Metro, light rail, bus and ferry transportation options. This makes the site suitable for increased student capacity, with opportunities for increased non-car mode share to minimise impacts on traffic and parking.

5.23 Public Interest

- **Increased school capacity** – The proposal responds to the immediate and future demand for primary school facilities, providing future capacity for up to 600 students (an increase of 380 students) with 550 students accommodated within the scope of this SSDA. The redevelopment of the site will accommodate demand both within the catchment of FSPS and the broader Inner-Sydney Primary School Community Group, which is currently over-capacity.
- **Improved education facilities and better opportunities for access to open space** – The existing buildings are not compatible with modern teaching practices and significant works are required to the Met Building to

make it safe for students. The development will providing significantly improved education facilities to meet current and future pedagogical methodologies. The proposal also improves access to outdoor space and provides more opportunities for outdoor learning.

- **Adaptive reuse of Bureau of Meteorology** – The heritage listed Met Building is dilapidated and in a state of disrepair. The proposal seeks to adaptively reuse the Met Building for a new library, with an accessible outdoor roof space ensuring that this heritage significant building is able to be used and enjoyed by students and members of the public.
- **Opportunities for community use of school facilities –** A number of the school's facilities, including but not necessarily limited to, the communal hall, library and outside areas (including the rooftop of the Met Building) may be operated outside of standard school hours on a 'user pays' basis by the community, providing significant new facilities for the public.
- **Employment opportunities –** The development will generate approximately 250 construction jobs and 40 operational jobs, and will make a positive contribution to the economy.

6.0 Environmental Risk Assessment

The Environmental Risk Assessment (ERA) establishes a residual risk by reviewing the significance of environmental impacts and the ability to manage those impacts. The ERA for FSPS has been adapted from Australian Standard AS4369.1999 Risk Management and Environmental Risk Tools.

In accordance with the SEARs, the ERA addresses the following significant risk issues:

- The adequacy of baseline data;
- The potential cumulative impacts arising from other developments in the vicinity of the site; and
- Measures to avoid, minimise, offset the predicted impacts where necessary involving the preparation of detailed contingency plans for managing any significant risk to the environment.

Figure 54 indicates the significance of environmental impacts and assigns a value between 1 and 10 based on:

- The receiving environment;
- The level of understanding of the type and extent of impacts; and
- The likely community response to the environmental consequence of the project;

The manageability of environmental impact is assigned a value between 1 and 5 based on:

- The complexity of mitigation measures;
- The known level of performance of the safeguards proposed; and
- The opportunity for adaptive management.

The sum of the values assigned provides an indicative ranking of potential residual impacts after the mitigation measures are implemented.

Significance of impact	Manageability of impact				
	5 Complex	4 Substantial	3 Elementary	2 Standard	1 Simple
1 – Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 – Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 – Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 – High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 – Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

Figure 54 Risk Assessment Matrix

				Risk Assessment		
Item	**Phase**	**Potential Environmental Impact**	**Proposed Mitigation Measures and / or Comment**	**Significance of Impact**	**Manageability of Impact**	**Residual Impact**
Traffic and Parking	C / O	• Increased construction traffic • Increased traffic during operation	• A Preliminary Construction Traffic Management Plan has been prepared detailing measures to minimise any adverse impacts arising from construction traffic. • Mitigation measures proposed within the Traffic and Transport Assessment and Green Travel Plan to manage traffic, pick-up and drop-off are to be implemented during operation of the school.	C = 3 O = 3	C = 2 O = 3	C = 5 (low/medium) O = 6 (medium)
Air Quality	C / O	• Air quality impacts during construction • Environmental impacts on occupants during occupation	• Implementation of erosion and sediment control measures during construction. • Installation of a ventilation system to provide pre-filtered air to all habitable spaces to improve indoor air quality during operation in accordance with the recommendations of the Air Quality Assessment.	C = 1 O = 1	C = 2 O = 2	C = 3 (low) O = 3 (low)
Noise and Vibration	C / O	• Increase in noise and vibration levels during construction activities • Increase in noise levels during operation	• Implementation of Construction Noise and Vibration Measures which considers the construction methodology and details specific mitigation measures in accordance with the DECCW Interim Construction Noise Guideline • Appropriate sound minimisation measures to be incorporated within the plant and mechanical areas. • Glazing will be designed to minimise noise intrusion.	C = 3 O = 1	C = 2 O = 2	C = 5 (low/medium) O = 3 (low)
Heritage and Archaeology	C / O	• Impact on heritage listed buildings on and in the vicinity of the site. • Impact on archaeology during construction.	• The development will be carried out in accordance with the recommendations contained in the Heritage Impact Statement. • The development will be carried out in accordance with the recommendations contained in the Aboriginal Cultural Heritage Assessment Report.	C = 3 O = 2	C = 3 O = 1	O = 6 (medium) O = 3 (low)
Waste Management	C / O	• Increased waste generation during construction. • Increase waste generation during operation.	• A detailed Construction Waste Management Plan will be developed to manage the generation and disposal of construction waste, in accordance with the principles outlined in the Waste Management Plan. • The appropriate infrastructure has been incorporated into the development to accommodate the volumes of waste that will be generated during the operation of FSPS. Management measures will be incorporated in accordance with the Waste Management Plan to ensure that waste is managed appropriately	C = 3 O = 1	C = 2 O = 2	C = 5 (low/medium) O = 3 (low)
View Impacts	O	• Visual Impacts associated with the proposed development	• The buildings have been designed to limit view impacts. • The proposed development is acceptable in terms of visual and view impacts and is considered reasonable. • The Visual Impact Assessment finds that it is not necessary to implement mitigation strategies and measures to reduce visual impact.	O = 3	O = 2	O = 5 (low/medium)

				Risk Assessment		
Reflectivity	O	• Unacceptable reflectivity impacts on pedestrians and vehicles	• Glazing to be limited to 20% reflectivity • Undertake a more in-depth assessment of reflectivity, with detailed geometry modelling to confirm if there is a risk to this location and identify the required mitigation.	O = 3	O = 2	O = 5 (low/medium)

7.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 14** below. These measures have been derived from the previous assessment in **Section 5** and those detailed in appended consultants' reports.

Table 14 Mitigation Measures

Mitigation Measures
Operation • Employ the operational demarcation procedure outlined in the Operations Statement at **Appendix R**, relating to school and community uses
Transport and Accessibility • The proposal will incorporate the recommended measures in the Traffic and Transport Assessment prepared by Arup provided at **Appendix M**. • The proposal will incorporate the recommended measures in the Green Travel Plan prepared by Arup provided at **Appendix U**.
Ecologically Sustainable Development • The detailed design of the development is to incorporate the ESD principles and measures set out in the ESD Report prepared by Cundall at **Appendix N**.
Built, Aboriginal and Historical Archaeological Heritage • The proposed development will be undertaken in accordance with the recommendations of the Heritage Impact Statement prepared by Curio Projects provided at **Appendix T**. • The proposed development will be undertaken in accordance with the recommendations of the Aboriginal Cultural Heritage Report prepared by Curio Projects provided at **Appendix H**.
Waste • Construction and demolition activities will be undertaken in accordance with the Preliminary Construction Management Plan prepared by Johnstaff Projects and provided at **Appendix Q**. • The operation of the proposed development will be carried out in accordance with the Operational Waste Management Plan prepared by Arup and provided at **Appendix EE**.
Construction Impacts • A preliminary Construction Management Plan prepared by Johnstaff Projects is provided at **Appendix Q** and a Preliminary Construction and Pedestrian Traffic Management Plant prepared by Arup is provided at **Appendix AA**. A detailed Construction Environmental Management Plan (CEMP) will be provided by the contractor prior to commencement of works on site. The CEMP will incorporate the recommendations of the CMP and CTMP.
Noise and Vibration • Construction activities will be undertaken in accordance with the recommendations of the Acoustic Assessment prepared by Arup provided at **Appendix Z**.
Air Quality • The operation of the proposed development will be carried out in accordance with the Air Quality Assessment prepared by Arup and provided at **Appendix II**.
Remediation • Remediation works will be carried out in accordance with the recommendations of the Remediation Action Plan prepared by JBS&G provided at **Appendix F**.
Hazardous Materials • Removal of hazardous materials will be undertaken in accordance with the relevant plans and policies as detailed in the Hazardous Management Plan prepared by JBS&G provided at **Appendix FF**.
Tree Protection • Tree protection measures will be incorporated as per the recommendations of the Arboricultural Assessment provided by Birds Tree Consulting provided at **Appendix J**.
Wind • Further modelling will be carried out in accordance with the recommendations of the Environmental Wind Assessment prepared by Arup provided at **Appendix DD**.
Reflectivity

Mitigation Measures

- Further assessment will be carried out in accordance with the recommendations of the Reflectivity Statement prepared by Arup at **Appendix CC**.

8.0 Conclusion and Justification

The Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of the proposed redevelopment of FSPS. The EIS has addressed the issues outlined in the SEARs (**Appendix B**) and accords with Schedule 2 of the EP&A Regulation with regards to consideration of relevant environmental planning instruments, built form, social and environmental impacts including traffic, heritage and construction impacts.

Having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development, the carrying out of the project is justified for the following reasons:

- The assessment of this proposal has demonstrated that the development will not generate any environmental impacts that cannot be appropriately managed and is consistent with the relevant planning controls for the site.
- The development will provide a significant new piece of social and educational infrastructure, providing a redeveloped school with permanent teaching spaces to accommodate 550 students. The provision of an improved teaching and education facility will support and strengthen the availability of education facilities in the region.
- The area and shape of the site allows for the provision of new teaching and education facilities that meet the special design requirements for the proposed uses, whilst not resulting in any significant adverse impacts on surrounding uses.
- The proposal is consistent with the principles of ecological sustainable development as defined by Schedule 2(7)(4) of the EP&A Regulation 2000.
- The proposed development is anticipated to create 40 full time positions at the school. This is anticipated to have additional social benefits for the region in terms of providing additional employment in a growing locality.
- Given the increase in housing development in the region, the proposed redevelopment is anticipated to have positive social outcomes in ensuring that local residents have access to high quality educational facilities.
- The development will not have a significant impact on any threatened flora or fauna species.
- Traffic and parking impacts associated with the proposed development can be appropriately managed.

Given the above it is considered that the SSD application has merit and can be supported by the Department and the Minister for Planning and Public Spaces.