

RESPONSE TO SUBMISSIONS

PHASES 2 AND 3 OF LINDFIELD LEARNING VILLAGE SSD 16_8114

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FINAL
PREPARED FOR NSW DEPARTMENT OF EDUCATION

URBIS

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1. EXECUTIVE SUMMARY

On 24 October 2018, the Minister for Planning and Environment granted partial consent to SSD 16_8114 for Phase 1 construction and operation of a new school for 350 students (Lindfield Learning Village).

Partial consent for Phase 1 was granted to enable the Applicant to undertake works and operate a K to 12 school for up to 350 students and associated technical support and staff administration spaces on the northern part of the building, including the gymnasium and auditorium. Partial consent was granted while the bushfire measures required to support Phase 2(b) (700 additional students) and Phase 3 (950 additional students) are resolved in consultation with the RFS and OEH. Phase 2(a) (35 additional students within the Phase 1 area) requires no additional bushfire measures as these are already in place.

To support the Phase 1 works, the Minister imposed a suite of conditions to ensure suitable APZs and bushfire and traffic management measures were in place to facilitate the safe operation of the school. These conditions have been satisfied and school operations are managed to ensure the required management for bushfire, vegetation and traffic are always implemented.

A Response to Submissions (RtS) has been prepared to identify the additional bushfire management measures required to support the Phase 2(b) and 3 works. The Applicant has worked closely with Rural Fire Service (RFS), the Office of Environment, Energy and Science (formerly the Office of Environment and Heritage and Transport for New South Wales (and formerly RMS) to ensure a total of 2,000 students and 312 staff can be accommodated on the site.

In order to facilitate the Phase 2(b) and 3 works and school operations, updated bushfire management and mitigation measures as outlined in the Bushfire Hazard Assessment and Fire Engineering Brief (submitted with this RtS) are proposed to be implemented. The updated bushfire measures are summarised as follows:

- All new and existing external facades and roofs of the school buildings are to comply with AS 3959-2009 Amendment 3 for BAL Flame Zone.
- A Bushfire Management Plan, including a Vegetation Management Plan, setting out how the proposal will provide for the ongoing management of asset protection zones (APZ) in accordance with Planning for Bushfire Protection 2006 (PBP 2006) will be prepared.
- Prior to occupation and in perpetuity, an APZ shall be established and maintained, as agreed in consultation with RFS and Office of Environment, Energy and Science (OEE&S).
- The APZ shall be established and maintained as an inner protection area as outlined within PBP and the NSW RFS document 'Standards for Asset Protection Zones' except where an Outer Protection Area of a maximum of 30m is provided from the outer most extent of the APZ boundary.
- The areas adjacent to buildings and between the private access road will be managed as open space above APZ Standards to provide an outcome that is in keeping with a highly managed parkland environment.
- Implement the updated Blackash Bushfire Consulting Bushfire Emergency Management and Evacuation Plan.
- A loop road is proposed on site from Dunstan Grove connecting along the south to the school car park for emergency access and bus/car drop off and pick up. The proposed loop road is to comply with the requirements of PBP 2006.
- Gates will be provided in the proposed fence to permit access for emergency service to the southern and western APZs.

The Phase 1 Landscape Management Plan works for bushfire mitigation (vegetation modification for APZ) have been completed to the extent of the Lindfield Learning Village site boundaries. The Phase 1 Landscape Management Plan adequately supports Phase 2 and 3 with respect to land management works, monitoring and maintenance associated with APZs weed management and soil erosion and sediment control.

The loop road requires additional vegetation clearing (the removal of 10 trees). The Phase 1 Biodiversity Assessment Report considered the potential impacts of vegetation clearing on the threatened species across the whole site. This assessment concluded Dwarf Apple - Broad-leaved Scribbly Gum (PCT1782) and Smooth-barked Apple – Red Bloodwood open forest (PCT1776) are located in the clearing area. Neither of

these species are listed as threatened ecological communities (TEC) under the former provisions of the *Threatened Species Conservation Act 1995* (TSC) Act or the *Environmental Protection and Biodiversity Conservation Act 1999*. It is important to note that as the assessment of the Phase 1 proposal was substantially complete prior to the commencement of the *Biodiversity Conservation Act 2016*, the Biodiversity Conservation (Savings and Transitional) Regulation 2017 applies to the proposal, meaning the provisions of the TSC Act continue to apply to the assessment of phases 2 and 3.

To offset the proposed removal of 10 trees, the Biodiversity Assessment Report for Phases 2(b) and 3 concludes 16 ecosystem credits are required to be retired and offset through payment to the Biodiversity Conservation Fund (BCF). The 10 trees proposed to be removed will also be replaced by an additional 10 trees (of a similar value) at other locations around the site.

To address traffic, transport and access for Phases 2 and 3, the management and mitigation measures outlined in the updated Traffic and Transport Assessment are proposed to be implemented. These management and mitigation measures include the extension of the right turn bay on Pacific Highway at the Grosvenor Street intersection by 120 m within the existing road reserve. These measures have been developed in consultation with TfNSW (which now includes RMS) and Ku ring gai Council. The extension is possible within the existing road reserve.

A link road is now proposed from the southern extent of Dunstan Grove, along the southern side of the building extending to the carpark to the east of the building. The loop road will keep all bus and car queues contained within the site, operating in a simple one-way system during the school morning and afternoon peak. The loop road will be handed over to play space outside of drop off and pick up times. The loop road has the support of RFS as it provides improved accessibility for emergency vehicles and equipment.

The RtS also seeks to update all management plans approved under the partial consent for the Phase 1 works to ensure a single set of management plans apply to the site. Should these measures be supported by the Minister for Planning, the Applicant proposes to lodge a subsequent modification to the partial consent to reference the whole of site management plans.

A staging plan will be prepared post approval to ensure all relevant bushfire and traffic management measures/plans will remain in place until the upgrades identified in Traffic and Transport Assessment and the Bushfire Hazard Assessment prepared to support the Phase 2 and 3 works/operations are implemented.

The Applicant has worked closely with the relevant agencies to address the key issues for the full school (Phases 2 and 3). In principle agreement has been reached on the management and mitigation measures to address the key issues of bushfire, traffic and access. This collaboration is important to the success of the project, which is in the public interest for the following reasons:

- It provides for the adaptive and sustainable use of the existing educational facilities. The Phase 2(b) and 3 works have been designed in consultation with the project's heritage consultant. The works proposed are supported in that they complete a suite of works which will see the entirety of the former William Balmain Teachers College utilised for education. This is consistent with the policies within the Conservation Management Plan (CMP). The conservation methods adopted for Phase 1 building have been carried through the design and construction methodologies for Phases 2 and 3 to retain the same value. While the link road intervenes into the landscape, to retain the natural character as much as possible the landscaping works have been designed using natural materials and minimal physical works.
- The Phase 1 school is operating successfully and is attracting positive attention for its unique education model. There are waiting lists for enrolments as there is enthusiasm for the learning environment Lindfield Learning Village has created. Phases 2 and 3 will expand this to more students, and ease pressure on surrounding schools that are at capacity.
- The proposal will take substantial pressure off existing public schools within the surrounding locality and ensure more children have access to new state of the art school facilities, learning spaces and equipment.
- The proposal will also create temporary job opportunities in manufacturing, construction and construction management during the project's construction phase of works, and significant job opportunities in teaching and administration at the project's completion.
- Subject to the various mitigation measures recommended by the specialist consultants and conditions of consent, the proposal will not have any unacceptable impacts on adjoining or surrounding properties or the public domain in terms of bushfire, traffic, heritage, social and environmental impacts.

The proposal for Phases 2 and 3 is in the public interest and Minister’s approval is therefore requested.

2. INTRODUCTION

2.1. OVERVIEW

This Response to Submissions Report (**RtS**) has been prepared for School Infrastructure NSW acting on behalf of the Department of Education (the **Applicant**) in support of State Significant Development Application SSD 16_8114 for the Lindfield Learning Village (the **School**).

On 24 October 2018 the Minister for Planning granted partial development consent to SSD 16_8114 for Phase 1 construction and operation of a new school for 350 students. The remainder of SSD 8114 (as originally proposed) has not yet been granted consent and has been subject to further investigation, assessment and engagement with the relevant agencies (DPIE, RFS, OEE&S, RMS, TfNSW) and Council.

The RtS and supporting documents seek approval for the remainder of SSD 8114, being the construction and operation of phases 2 and 3 of the development which comprise:

Phase 2(a):

- Minor internal works within the approved Phase 1 area to accommodate an additional 35 students.
- The additional 35 students (a total of 385 enrolled students) is needed for Day 1 Term 1 2020, prior to Phase 2(b) being completed.

Phase 2(b):

- Works to accommodate 1,050 students (including the approved 350 and 35 in Phase 2a).
- Repurposing of the Phase 1 area.
- A loop road around the southern portion of the site for emergency vehicles, buses and drop off and pick up vehicles.

Phase 3:

- Works to accommodate an additional 950 students in the western wing of the building.

Phase 2(a) will occur immediately on approval to allow the additional students for Day 1 Term 1 2020. Phase 2(b) and Phase 3 will likely be constructed at the same time under one contract. They are separated in this RtS to allow flexibility.

At completion, the school will accommodate 2,000 students and 312 staff and ensure:

- Enrolment pressure is taken off the existing school which is currently exceeding design capacity.
- Enrolment pressure is taken off surrounding schools within the locality that are currently exceeding design capacity.
- New state of the art facilities and spaces are provided for students and teachers into the future.

Vegetation management will be required to achieve the necessary APZ. The SSD does not seek approval for vegetation management outside the site boundary. Any vegetation management outside the site boundary is subject to a separate approval under Part 5 of the EP&A Act issued by OEE&S.

A detailed assessment of the proposal is provided within the following sections of this RtS and within each of the attached appendices. Architectural Plans of the proposal are provided within **Appendix A - U**.

2.2. SUBMISSIONS

Consistent with the recommendations of the Secretary's Environmental Assessment Report (October 2018) each of the residual issues raised during the exhibition of the original proposal (bushfire, traffic, ecological and heritage) have been considered and addressed in the context of Phases 2 and 3 of the proposal within the next section of this RtS report. Notwithstanding this, it is understood that SSD 16_8114 will need to be re-notified to exhibit the proposal contained to this RtS. Each of the submissions that are received in response to the proposal will be considered and addressed as required.

2.3. RESPONSE TO SUBMISSIONS

This RtS has considered the issues raised by agencies during the exhibition of SSD 16_8114 and the subsequent Response to Submissions for Phase 1 (such as bushfire, biodiversity, transport and heritage). These include submissions from:

- NSW Department of Planning, Industry and Environment (**DPIE**);
- Ku-ring-gai Council (**Council**);
- NSW Environment Protection Authority (**EPA**);
- Rural Fire Service (**RFS**);
- NSW Roads and Maritime Services (**RMS**);
- Sydney Water (**SW**);
- NSW Office of Environment and Heritage (**OEH**), now the Office of Environment, Energy and Science (OEE&S);
- Heritage Council of NSW (**HC**); and
- Transport for NSW (**TfNSW**).

A number of public submissions were also received during these exhibition phases that have been considered and addressed as appropriate within this RtS.

2.4. REPORT STRUCTURE

This RtS has been structured as follows:

- **Section 1:** Introduction
- **Section 2:** Project background
- **Section 3:** Overview of the proposal
- **Section 4:** Consistency with concept approval
- **Section 5:** Assessment of the proposal
- **Section 6:** Response to submissions
- **Section 7:** Conclusion

2.5. PROJECT TEAM

A range of specialist consultants were engaged to assist in the preparation of this RtS, comprising:

Table 1 – Project Team

Deliverable	Consultant	Appendix
Site Survey	Usher	Appendix A
Architectural Plans	Design Inc	Appendix B
Landscape Plans	Kleinfelder	Appendix C
Infrastructure and Services Plans	Erbas	Appendix D
Consultation Outcomes Report	Urbis and Elton Consulting	Appendix E

Deliverable	Consultant	Appendix
Heritage Impact Assessment	Urbis	Appendix F
Aboriginal Cultural Heritage Assessment	Urbis	Appendix G
Site Audit Statement	NSW EPA	Appendix H
Noise Impact Assessment	White Noise	Appendix I
Traffic Impact Assessment	ARUP	Appendix J
Green Travel Plan	ARUP	Appendix K
Flood Assessment Report	EWFW	Appendix L
Flood Emergency Management Plan	EWFW	Appendix M
Biodiversity Assessment Report	Eco Planning	Appendix N
Bushfire Hazard Assessment	Blackash	Appendix O
Evacuation Management Plan	Blackash	Appendix P
Construction Management Plan	Taylor	Appendix Q
ESD Report	Umow Lai	Appendix R
Operational and Construction Waste Management Plan	Foresight Environmental	Appendix S
Stormwater Management (incl. sediment control)	Birzulus	Appendix T
Arboricultural Assessment	McArdle	Appendix U
Statement of Commitments MP06_0130	Urbis Pty Ltd	Appendix V
Response to Submissions Table	Urbis Pty Ltd	Appendix W
Response to Public Submissions	Urbis Pty Ltd	Appendix X

3. PROJECT BACKGROUND

3.1. SSD 16_8114 – LINDFIELD LEARNING VILLAGE

3.1.1. Original Proposal

On 16 December 2016, Secretary's Environmental Assessment Requirements (**SEARs**) were issued by the DPE for SSD 16_8114 'Lindfield Learning Village'. The Environmental Impact Statement (**EIS**) to respond to each of the project SEARs was submitted on 8 June 2017.

3.1.2. Amended Proposal

In response to a range of agency and community submissions received during exhibition, a Response to Submissions (**RtS**) was submitted on 14 June 2018, which amended the proposed development. The amended application comprised the following changes:

- *“Removal of childcare centre from the SSD application; and*
- *New phasing within Construction Stage 1:*
 - *Phase 1: School for 350 students accommodating a 100m Asset Protection Zone (APZ).*
 - *Phase 2a: The remaining area of Construction Stage 1 as previously proposed (minus the childcare centre).*
 - *Phase 2b: Repurposing of the Phase 1 area.”*

Whilst this RtS requested full approval for the construction of Phase 1 and Phase 2, an alternative approvals pathway was also put forward to ensure Phase 1 could be constructed and opened for Day 1, Term 1, 2019.

A Supplementary RtS was submitted on 30 August 2018 to respond to further agency submissions received on the amended proposal. The Supplementary RtS confirmed that the proposal would only be seeking approval for Phase 1 of the development (development of a school for 350 students accommodating a 100m APZ) to ensure part of the school could be open for Day 1, Term 1, 2019. The remaining Phases of the development would be subject to further consultation with the relevant agencies and approval through lodgement of a future RtS.

3.1.3. Partial Development Consent

On 24 October 2018, partial development consent was granted by the DPE for Stage 1 (Phase 1) of the development. This comprised the following works:

“Phase 1 construction and operation of a new school for 350 students, (Lindfield Learning Village), comprising:

- *adaptive re-use of part of the existing building to construction one home-base for 350 students;*
- *construction of all administrative and technical spaces to support a full primary and secondary curriculum for 350 students;*
- *construction of a fire trail for bushfire management purposes;*
- *traffic and transport infrastructure; and*
- *tree removal to establish a 100 metre Asset Protection Zone around the home-base on the site.”*

Phase 1 has been constructed and the school opened Day 1 Term 1 2019. This RtS has been lodged to obtain development consent for Phases 2 and 3 to ensure the entire school can be constructed to service the surrounding locality into the future.

LEGEND:

- PHASE 1
- PHASE 2 & 3
- 100M APZ
- SITE SECURITY FENCE

Site Plan Details:

- Boundaries:** BOUNDARY, BOUNDARY, BOUNDARY, BOUNDARY
- Access Points:** PEDESTRIAN ENTRANCE GATES, PEDESTRIAN CROSSING, REMOTE CONTROL SLIDING SECURITY GATE TO ROUNDABOUT, SWING SECURITY GATE TO CARPARK, ROADWAY MAY REQUIRE WIDENING (T.B.A.), 2 TREES TO BE REMOVED TO ACCOMMODATE FOOTPATH WIDENED TO 2M, 10 DROP OFF BAYS, 4 ACCESSIBLE CAR SPACES, PEDESTRIAN ENTRANCE GATES, WIDEN EXISTING FOOTPATH TO 2M, REFER TO BUSHFIRE TRUCK TURNING ANALYSIS, NEW LINE MARKING TO EXISTING PARKING BAYS, TEMPORARY GATE FOR PHASE 1
- Security Features:** EXISTING SECURITY OFFICE TO BE REMOVED (T.B.A.), PEDESTRIAN ENTRANCE GATES, PEDESTRIAN CROSSING, 7 TREES SHOWN DASHED IN RED TO BE REMOVED TO ACCOMMODATE PROPOSED WIDENING OF PEDESTRIAN PATH TO 2M, REMOTE CONTROL SLIDING SECURITY GATE TO ROUNDABOUT, SWING SECURITY GATE TO CARPARK, ROADWAY MAY REQUIRE WIDENING (T.B.A.), 2 TREES TO BE REMOVED TO ACCOMMODATE FOOTPATH WIDENED TO 2M, 10 DROP OFF BAYS, 4 ACCESSIBLE CAR SPACES, PEDESTRIAN ENTRANCE GATES, WIDEN EXISTING FOOTPATH TO 2M, REFER TO BUSHFIRE TRUCK TURNING ANALYSIS, NEW LINE MARKING TO EXISTING PARKING BAYS, TEMPORARY GATE FOR PHASE 1
- Other Features:** EXISTING BUS BAY, PEDESTRIAN PATH WIDENED TO 2M, EXISTING BUILDING - EX. CARETAKER'S RESIDENCE, SIGNAGE PLAN INDICATING BUSHFIRE TRAIL ACCESS & TURNING BAYS, PEDESTRIAN PATH WIDENED TO 2M, SP90969, CHARLES BEAN OVAL 7 / DP270770, 9 / DP270770, 8 / DP270770, P1 / DP1151638, P1&2 / DP1151638, P2 / DP1151638, SP90970, VEHICULAR SECURITY GATE TO LOADING DOCK, REFER TO BUSHFIRE TRUCK TURNING ANALYSIS, 3 / DP1151638, TURNING BAY FOR CAT 1 TANKER - REFER TO BUSHFIRE TRUCK TURNING ANALYSIS, 11 TREES TO BE REMOVED TO ALLOW FOR FIRE TRAIL, 1 TREE TO BE REMOVED TO ALLOW FOR FIRE TRAIL, 4M WIDE FIRE TRAIL FOR CAT 1 TANKER, 1 TREE TO BE REMOVED TO ALLOW FOR FIRE TRAIL, 4 / DP1151638, MAIN BUILDING, GYM, POWER OFFICE, EXISTING OFFICE

3.2. NATIONAL PARKS REVIEW OF ENVIRONMENTAL FACTORS (REF)

A concurrent licence agreement will also be provided under clause 151(1)(a)(v) of the *National Parks and Wildlife Act* 1974 to enable the following:

It should be noted the APZ is also capable of supporting phases 2 and 3 of the development. Accordingly, this RtS does not seek approval for vegetation management outside the site boundary.

4. PHASE 2 AND 3 RTS

As previously outlined, partial consent of SSD 16_8114 has been granted for Phase 1 of the development only. The remainder of SSD 16_8114 (known as Phases 2 and 3) has not yet been granted consent and requires the submission of an RtS to address the residual matters identified in the agency and public submissions, submitted prior to the determination of SSD 8114 (Phase 1).

This RtS and supporting documents seek approval for the remainder of SSD 16_8114, being:

Phase 2(a):

- Minor internal works within the approved Phase 1 area to accommodate an additional 35 students.
- The additional 35 students (a total of 385 enrolled students) is needed for Day 1 Term 1 2020, prior to Phase 2(b) being completed.

Phase 2(b):

- Works to accommodate 1,050 students (including the approved 350 and 35 in Phase 2a)).
- Repurposing of the Phase 1 area.
- A loop road around the southern portion of the site for emergency vehicles, buses and drop off and pick up vehicles.

Phase 3:

- Works to accommodate an additional 950 students in the western wing of the building.

Phase 2(a) will occur immediately on approval to allow the additional students for Day 1 Term 1 2020. Phase 2(b) and Phase 3 will likely be constructed at the same time under one contract. They are separated in this RtS to allow flexibility.

An overview of each of the works proposed is provided within the subsections below. Architectural Plans of the proposal are provided at **Appendix B**.

4.1. PHASE 2(A)

Phase 2(a) of the development seeks to accommodate 35 additional students within the approved Phase 1 area. Growth in enrolments has necessitated the need to accommodate additional students on Day 1 Term 2020, prior to the remainder of Phase 2 and 3 being completed. The works to accommodate this are minor and could be subject to a separate planning pathway. The specific works proposed under Phase 2(a) are outlined in **Table 2** below. As the works are limited to furniture, fixtures and equipment no plan is provided.

Table 2 – Phase 2(a) Works

Floor Level	Proposed Works
Level 0	<ul style="list-style-type: none">• N/A
Level 1	<ul style="list-style-type: none">• N/A
Level 2	<ul style="list-style-type: none">• N/A
Level 3	<ul style="list-style-type: none">• N/A
Level 4	<ul style="list-style-type: none">• Current Music Rooms to become Year 9 + 10 General Learning Spaces (GLS). FFE and tech works only to facilitate this.• Existing green room adjacent to the Auditorium to become the new music room. FFE and tech works only to facilitate this.

Floor Level	Proposed Works
	<ul style="list-style-type: none"> Gymnasium to become new Out of School Care Hours (OHSC). OHSC currently operates from Level 5 and takes advantage of the outdoor play area. This relocation means the gymnasium itself will be the play area.
Level 5	<ul style="list-style-type: none"> Staff office to become Student space. The current staff offices will be combined by way of a wall being removed. FFE and tech works only to facilitate this. Current OHSC to become Staff space. FFE and tech works only to facilitate this.
Level 6	<ul style="list-style-type: none"> Year 3 to become Year 11 GLS. FFE and tech works to facilitate this.
Roof	<ul style="list-style-type: none"> N/A

4.2. PHASE 2(B)

Phase 2(b) of the development seeks to accommodate 700 additional students (a total of 1,050 including the previously approved 350). The specific works proposed under Phase 2(b) are outlined in **Table 3** below.

Table 3 – Phase 2(b) Works

Floor Level	Proposed Works
Level 0	<ul style="list-style-type: none"> N/A
Level 1	<ul style="list-style-type: none"> Fit out works to facilitate visual arts classrooms and associated facilities. Construction of new stairs. Construction of a new lift. Construction of a new COLA structure.
Level 2	<ul style="list-style-type: none"> Fit out works to facilitate classrooms for K-10 and associated facilities, including maker spaces, science spaces, common spaces and courtyards. Fit out works to facilitate wood and metal workshops and associated facilities. Construction of new stairs (including new COLA stairs). Construction of a new lift. Construction of a new COLA structure. Fit out works to facilitate multiple plant and services rooms. Construction of a 2-hour fire wall between Homebase 5 and the Wood and Metal workshops.
Level 3	<ul style="list-style-type: none"> Fit out works to facilitate classrooms for K-10 and associated facilities, including collaborative classroom, shared maker spaces, shared science spaces, common spaces and an outdoor play area. Fit out works to facilitate multiple shared science labs and associated facilities. Fit out works to facilitate a staff lounge. Construction of a new light void as part of a shared maker space.

Floor Level	Proposed Works
	<ul style="list-style-type: none"> • Construction of new stairs. • Fit out works to facilitate multiple plant and services rooms. • Construction of a 2-hour fire wall between Homebase 4 and the shared science labs.
Level 4	<ul style="list-style-type: none"> • Re-purposing of the existing 'Phase 1' areas to facilitate new workstations, new studios, a new office, a new broadcast studio and new workstations. • Fit out works to facilitate classrooms for K-10 and associated facilities, including common spaces and various outdoor courtyards. • Fit out works to facilitate multiple shared science labs and associated facilities. • Fit out works to facilitate librarian rooms. • Fit out works to facilitate a staff lounge and admin. • Fit out works to facilitate a dedicated music room and drama room. • Fit out works to facilitate multiple plant and services rooms. • Construction of a 2-hour fire wall between Homebase 4 and the shared science labs.
Level 5	<ul style="list-style-type: none"> • Re-purposing of the existing 'Phase 1' areas to facilitate new storerooms, new Out of School Hours (OOSH) area, new staff meeting room and a new extension to the cafeteria and dining area. • Fit out works to facilitate multiple learning areas, a new music room and a new drama room. • Fit out works to facilitate new clinic and recovery rooms, new VET kitchens, and a new staff lounge. • Fit out works to facilitate multiple plant and services rooms.
Level 6	<ul style="list-style-type: none"> • Re-purposing of the existing 'Phase 1' areas to facilitate new health learning areas, new staff lounge and facilities, new administration offices, new staff study areas, new kitchenette, new staff collaboration rooms and a new extension to the cafeteria and dining area. • Fit out works to facilitate multiple plant and services rooms. • Construction of a new skylight.
Roof	<ul style="list-style-type: none"> • Installation of new P/V solar panels and AHU units.

4.2.1. Loop Road

A loop road is proposed to be constructed around the perimeter of the southern portion of the site during Phase 2(b). The proposed loop road will contain a range of set-down and pick-up zones to facilitate school drop off and pick up and it will also provide perimeter access for firefighting purposes for most of the site. It is envisaged that up to 5 buses could drop-off or pick-up at any one time, with room for a further 3 buses able to queue. A pedestrian fence will be located along the northern side of the road to control where students

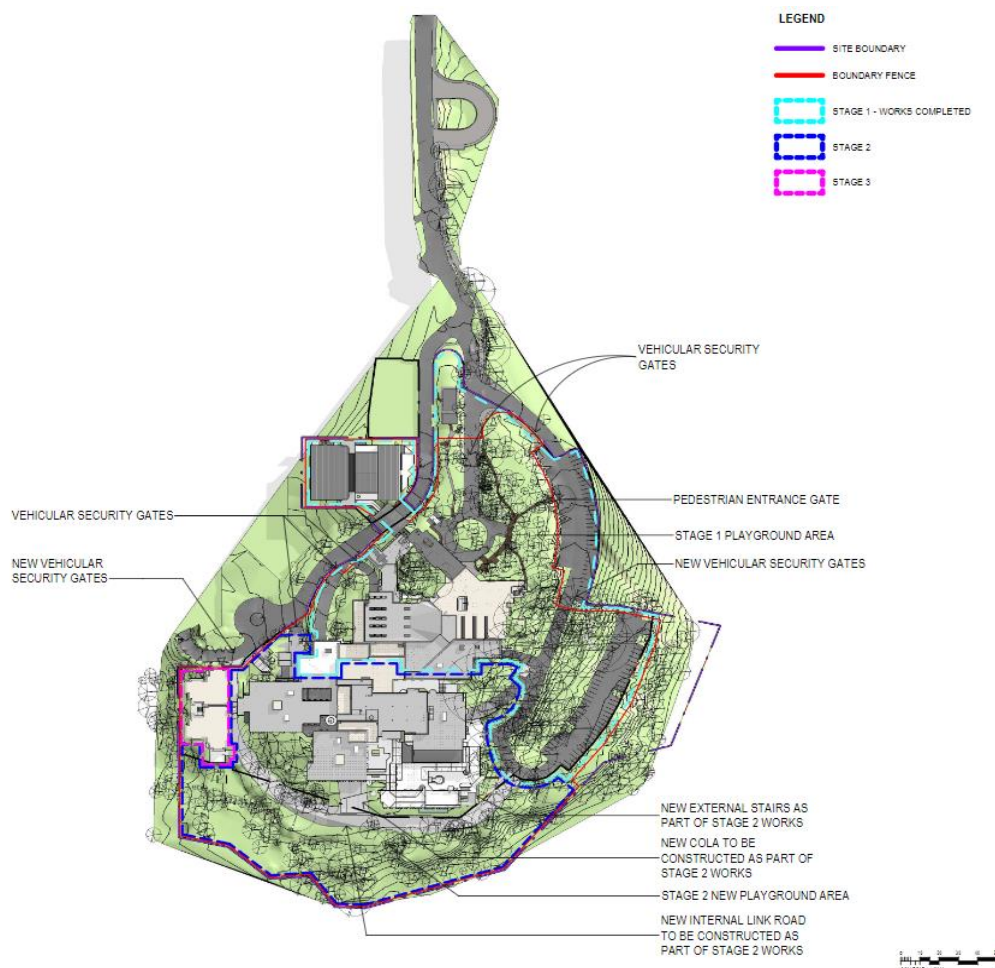
wait. A waiting area utilising the COLA provides covered protection for students that are waiting. A series of gates will enable students to access the bus loading area.

The bus loop will only be open for use during school drop-off and pick-up times in accordance with the following schedule:

- **Loop road open during drop-off/pick-up:**
 - 7.30 am to 9.30am
 - 2.30pm to 5.00pm
- **Loop road closed during school hours and after hours:**
 - 9.30am – 2.30pm
 - 5.00pm to 7.30am

The roadway will be closed during school hours and after hours to allow students to fully utilise the lower campus grounds for play. Signage will be located on the Eton Road entry to inform drivers whether the loop road is open to traffic or not. An image of the proposed loop road is provided in **Figure 2** below.

Figure 2 – Proposed Loop Road



Source: DesignInc

4.2.2. Landscaping

Various landscaping works are proposed at the southern portion of the site during Phase 2(b), in accordance with the Landscape Plans attached at **Appendix C**. The proposed landscape concept includes the following:

- Sandstone log amphitheatre;
- Open lawns and shelters;
- Parkour trail;
- Running loops;
- Informal outdoor learning plazas with sandstone steps;
- In-ground trampolines;
- Viewing deck and learning platform into national park; and
- Vegetable gardens.

All new flora species proposed to be planted have been specifically chosen to ensure they are suitable for the site and safe within a school environment.

4.3. PHASE 3

Phase 3 of the development seeks to accommodate an additional 950 students in the west wing of the building (total 2000 students). The specific works proposed under Phase 3 to facilitate this are outlined in **Table 4** below.

Table 4 – Phase 3 Works

Floor Level	Proposed Works
Level 0	<ul style="list-style-type: none">• Fit out works to facilitate Kinder and associated facilities, including toilets, storeroom, plantroom and an outdoor terrace area.
Level 1	<ul style="list-style-type: none">• Fit out works to facilitate primary classrooms and associated facilities, including a dedicated common space.• Fit out works to facilitate a café.• Fit out works to facilitate a dedicated plant and services room.
Level 2	<ul style="list-style-type: none">• Fit out works to facilitate secondary school classrooms and associated facilities, including dedicated collaboration rooms.
Level 3	<ul style="list-style-type: none">• Fit out works to facilitate secondary school classrooms and associated facilities, including dedicated collaboration rooms.
Level 4	<ul style="list-style-type: none">• Fit out works to facilitate primary classrooms and associated facilities, including dedicated collaboration rooms.
Level 5	<ul style="list-style-type: none">• N/A
Level 6	<ul style="list-style-type: none">• N/A

5. OPERATIONAL MANAGEMENT

This RtS also seeks to update all management plans approved under the partial consent for the Phase 1 works to ensure a single set of management plans apply to the site. Should these measures be supported by the Minister for Planning, the Applicant proposes to lodge a subsequent modification to the partial consent to reference the whole of site management plans.

5.1.1. Traffic Management

Traffic management procedures for the site are contained with Appendices J, K and Q (as outlined below) and are discussed at section 7.6 of this report. These will provide suitable traffic management procedures for both the construction and operation stages of the expanded school. Management procedures have been updated to account for the following:

- Construction traffic and site access (Appendix Q);
- Operation of the proposed Loop Road as well as Pick-up/Drop-off (Appendix J);
- Emergency vehicle access (Appendix J); and
- Green Travel Strategies (Appendix K)

5.1.2. Bushfire Management

Given the level of bushfire protection required for the site, several mitigation and management procedures have been implemented within Phases 2 and 3, in addition to further detailed risk analysis within the Bushfire Hazard Report at Appendix O. These procedures are contained within the Bushfire Emergency Management Plan (and supporting documents) prepared by Blackash at Appendix P and include the following procedures:

- Asset protection zone (APZ) management;
- Evacuation process and procedure;
- Off and on-site evacuation procedures;

Please refer to section 7 of this report for further discussion on the bushfire protection measures proposed for the site.

5.1.3. Landscape Management

An addendum Landscape Management Plan (LMP) has been prepared by Kleinfelder and is attached at Appendix C. The addendum report determines that the Phase 1 LMP prepared in 2018 adequately supports Phases 2 and 3 with respect to land management works, monitoring and maintenance associated with the APZ, weed management and soil erosion and sediment control. The plans management procedures have been outlined at Section 7.2 of this report.

5.1.4. Stormwater Management

A Stormwater Management Strategy (with supporting documents) has been prepared by EFWF for Phases 2 and 3 of the development and are attached at **Appendix T**. The combined stormwater reports conclude that drainage design and water quality modelling will meet all relevant criteria without adversely impacting on the downstream water quality (refer to section 6.11 of this report for further discussion on the sites stormwater measures).

5.1.5. Flood Management

A Flood Impact Assessment and Flood Emergency Plan have been prepared by EFWF and are attached at **Appendix L** and **M** and are discussed in detail in section 6.10 of this report. The plans address the additional run off due to the land clearing and increase of impervious areas for Phases 2 and 3 of the development.

5.1.6. Waste Management

Construction and Operational waste management plans have been prepared by Foresight Environmental at Appendix S. The contractor will comply with any future conditions of consent and the above plans to ensure all waste is carefully removed, packaged and transported from the site to an appropriate waste facility.

5.1.7. Noise Management

Noise Impact Assessment was prepared by White Noise and is attached at **Appendix I**. This plan considers the construction and operational noise control requirements for Phases 2 and 3 of the site. The mitigation measures outlined in the plan ensure that noise emissions from the site will be acoustically acceptable at all surrounding receivers and that construction impacts can be appropriately managed.

6. CONSISTENCY WITH THE STATUTORY CONTEXT

6.1. OVERVIEW

The following statutory planning policies have been considered in the assessment of the proposal:

- *State Environmental Planning Policy (State and Regional Development) 2011*;
- *State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017*;
- *Ku-ring-gai Local Environmental Plan 2015*; and
- *Ku-ring-gai Development Control Plan 2015*

6.2. STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

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. As the proposal relates to the construction and operation of Phases 2 and 3 of a new school, it remains SSD under Clause 15 (D) of Schedule 1 of the State and Regional Development SEPP.

6.3. STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

At the time of lodgement of the original SSD application, schools were legislated under *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP). The school was permitted with consent under the ISEPP. As this is an RtS and not a new application, the Phases 2 and 3 proposal remains permissible with consent as at the time of lodgement of the SSD application.

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

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 (ESEPP) now supersedes the education establishment provisions previously contained in the ISEPP. The relevant provisions of the ESEPP relate to design quality of schools and traffic generating development.

6.4.1. Schedule 4 – Design Quality Principles

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

- Principle 1: Context, built form and landscape

The existing built form and scale of the building will be maintained. An additional ten trees are proposed for removal for the loop road. This is balanced with 10 replacement trees to ensure no net loss and an updated landscape concept for the southern portion of the site that is appropriate for the school use and bushland setting.

- Principle 2: Sustainable, efficient and durable

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

- Principle 3: Accessible and inclusive

The proposal is capable of complying with relevant provisions for accessibility.

- Principle 4: Health and safety

CPTED measures have been incorporated into the design and management of the site to ensure a high level of safety and security for students and staff, such as appropriate fencing, access control measures, adequate lighting and wayfinding signage as well as the use of resistant and durable building materials. A range of play spaces and activity areas are proposed for students to encourage active recreation.

- Principle 5: Amenity

The proposal will provide high quality facilities, spaces and equipment for use by students and staff. These areas will provide students with an enhanced learning environment.

- Principle 6: Whole of life, flexible and adaptive

The building is being adaptively re-used for a school ensuring its preservation and longevity.

- Principle 7: Aesthetics

The proposal will have high quality finishes that respect the heritage significance of the building. The materials finishes and methods of construction for Phase 1 are being carried through for Phases 2 and 3.

6.4.2. Clause 57 – Traffic Generating Development

Clause 57 stipulates that development for the purposes of an 'educational establishment' that will accommodate 50 or more students requires referral to the RMS. RMS has been extensively consulted during the preparation of this RtS. This consultation is documented in the Traffic Impact Assessment at Appendix J and the Consultation Outcomes Report at Appendix E. A referral to the RMS will be made during the assessment of the RtS in accordance with Clause 57 of the Education SEPP.

6.5. OTHER NSW LEGISLATION

Table 5 – Assessment of NSW Legislation

Consideration	Response	Satisfied
<i>Rural Fires Act 1997</i>	The site is identified as bushfire prone land on the Ku-ring-gai LGA Bush Fire Prone Land Map. A Bushfire Hazard Assessment has been prepared by Blackash Bushfire Consulting and is attached at Appendix O . Consultation with RFS has been ongoing throughout the life of the development.	Yes.
<i>Threatened Species Act 1995</i>	A Biodiversity Assessment Report which responds to the issues raised during the Phase 2 and 3 RtS has been attached at Appendix N .	N/A
<i>Water Management Act 2000</i>	N/A	N/A
<i>Contaminated Land Management Act 1997</i>	N/A	N/A
<i>Heritage Act 1977</i>	The site is identified as an item of local heritage significance. The Phases 2 and 3 works have carefully considered the significance of the building. The heritage conservation measures approved for Phase 1 will be used in Phases 2 and 3	Yes

Consideration	Response	Satisfied
	<p>ensuring minimal impact on the heritage item. Council will be notified of the RtS proposal.</p> <p>The landscape setting created by Phase 1 will generally be maintained. Ten additional trees are proposed to be removed to accommodate the loop road, which will be replaced via planting across the site. The impact of this is assessed as minimal as it facilitates full use of the site for an educational establishment.</p> <p>Aboriginal heritage impacts of the loop road have also been assessed. The proposed works can proceed within the proposed Impact Area in line with the recommendations adopted from the Phase 1 Aboriginal cultural Heritage Assessment Report (ACHAR).</p> <p>Heritage is discussed in further detail in Section 6 of this RtS.</p>	
Roads Act 1993	N/A	N/A

6.6. KU-RING-GAI LOCAL ENVIRONMENTAL PLAN 2015 (KLEP)

The *Ku-ring-gai Local Environmental Plan 2015* (KLEP) is the principal environmental planning instrument governing development at the subject site. An assessment against the relevant controls of the KLEP has been undertaken in the subsections below. Overall, the proposal complies with all relevant provisions.

6.6.1. Zoning and Permissibility

The majority of the Phase 2 and 3 built form within the site is zoned B4 Mixed Use, with the balance of the larger site zoned R1 General Residential and E3 Environmental Management.

B4 Mixed Use Zone

Within the B4 Zone, 'educational establishments' are permitted with consent. An educational establishment is defined under the KLEP as:

"a building or place used for education (including teaching), being:

(a) a school, or

(b) a tertiary institution, including a university or a TAFE establishment, that provides formal education and is constituted by or under an Act."

The proposed school is therefore permitted with consent.

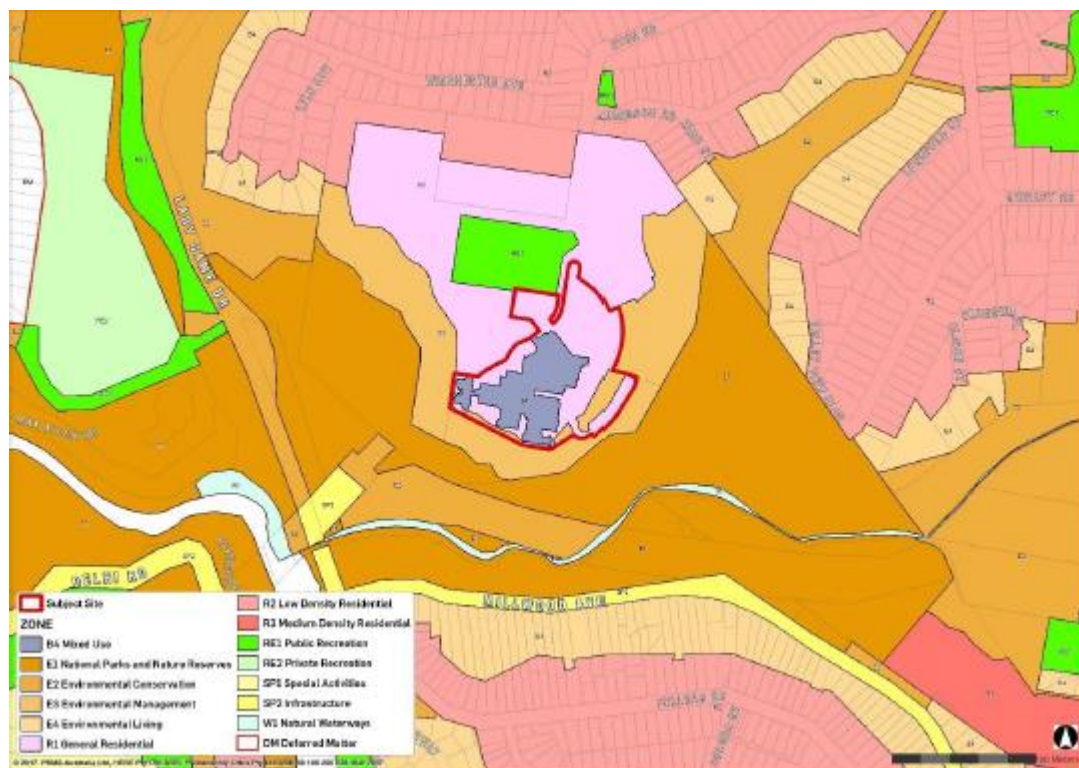
R1 General Residential

Educational establishments are prohibited in the R1 Zone under the KLEP. However, the proposal was permitted with consent under the ISEPP at the time of lodgement and remains permitted with consent as this is a RtS, not a new application. The proposal would be permitted with consent under the ESEPP regardless as the B4 and R1 zones are prescribed zones that permit educational establishments.

E3 Environmental Management

Educational establishments are prohibited within the E3 Environmental Management zone. No works are proposed or will be permitted in this zone.

Figure 3 - Extract from KLEP Zoning Map



Source: KLEP and Urbis

6.7. CONCEPT APPROVAL MP06_0130

6.7.1. Original Concept Approval (MP06_0130)

On 11 June 2008, the Minister for Planning approved Concept Plan MP 06_130 and gazetted an amendment to Schedule 3 of the then *State Environmental Planning Policy (Major Projects) 2005* for the redevelopment of the UTS Ku-ring-gai campus at Lindfield.

The approved Concept Plan permits the retention and adaptive reuse of the main campus building for education uses.. The Concept Plan also permits a broader range of land uses on land adjacent to the Lindfield Learning Village site, including residential and educational uses. The Concept Approval has been modified five times. A summary of the approved modifications is provided in Table 5 below.

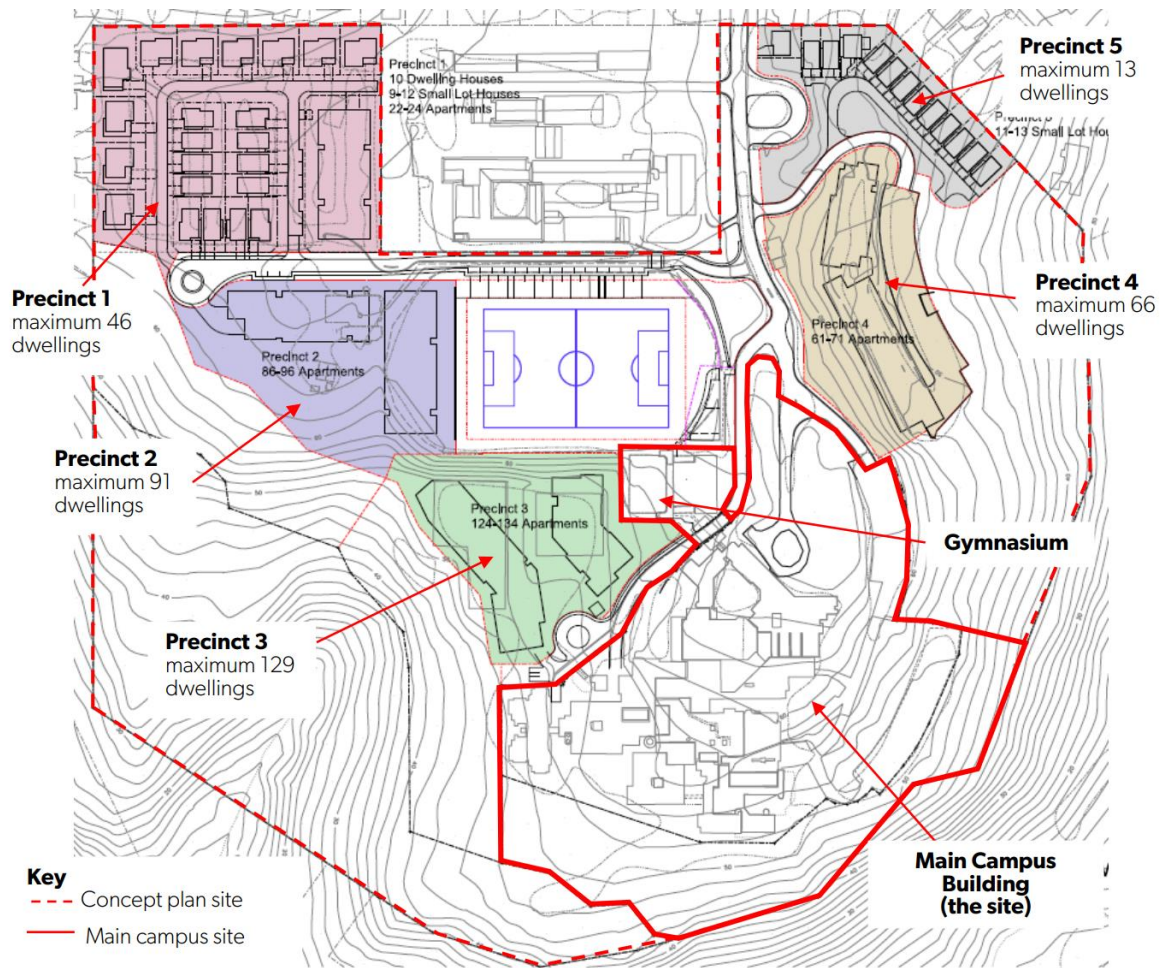
The approved Concept Plan, as modified, is also provided below.

Table 6 – Concept Approval Modification Summary

Modification	Approved Changes	Determination Date
1.	Correction of minor typographical errors and clarification of contribution requirements	November 2008
2.	<ul style="list-style-type: none"> Retention of existing gymnasium previously approved for demolition Reconfiguration of Precinct 2 to reduce dwelling yield setback 	May 2010

Modification	Approved Changes	Determination Date
	<p>requirements associated with the consolidation of blocks B, C and D into a single building</p> <ul style="list-style-type: none"> Reconfiguration of Precinct 3 to delete block F (where the existing gymnasium is located), and enlarge Block E to incorporate dwellings approved in Block F 	
3.	<ul style="list-style-type: none"> Adding community facilities, subdivision and demolition as a permissible use in the RE1 Public Recreation zone Removal of the height control in the recreation zone 	19 December 2011
4.	<ul style="list-style-type: none"> Modifications to identify the maximum number of dwellings permitted in each development precinct Concurrent amendment to schedule 3 of the major development SEPP to permit an interim sales office in the RE1 public recreation zone 	21 May 2012
5.	Updates to Terms A2, B2, B7, B8, B9 and B10 to require future developments to be undertaken in accordance with revised, landscape, stormwater, bushfire, transport and travel demand management plans	23 October 2018

Figure 4 - Extract from Approved Concept Plan



Source: DEM ARCHITECTS (2012)

7. LIKELY IMPACTS OF THE DEVELOPMENT

7.1. BUSHFIRE PROTECTION MEASURES

Several issues in relation to Bushfire Management were raised in the agency submissions received in response to the original proposal. These are summarised below:

- The use of APZs outside the site boundaries and on slopes greater than 18 degrees.
- The previous Bushfire Assessment Report referenced an outdated traffic study that did not consider the proposed school.
- 'Compliance with the Acceptable Solutions for Internal Roads' cannot be achieved due to the location of the site.
- The bushfire attack level (BAL) should be upgraded.

Blackash has confirmed in **Appendix O** that the works that have already been put in place for the Phase 1 works provide the required Bushfire Protection Measures for Phase 2(a). The Bushfire Emergency Management and Evacuation Plan provides the required information and actions for the Stage 2(a).

An array of revisions and mitigation and management procedures have been implemented within Phases 2(b) and 3 to respond to the above, these include the following:

- A whole of government approach has been taken to mitigate the impact of bushfire on the site and to reduce the modelled radiant heat to the SFPP requirements for 10kW at the buildings. The agreed APZ extents are shown in Figure 9 and 10 of Appendix P.
- Mutually beneficial APZs are provided on adjoining land that are associated with Defence Housing approved developments and small areas of NPWS lands. Arrangements that are legally binding will be entered into with adjoining landowners where mutually beneficial APZs are required.
- As Phase 1 is constructed to BAL-FZ requirements, it has been agreed between the RFS, SGA & Blackash that the most suitable bushfire protection to be implemented for Phases 2 and 3 is also BAL-FZ which will mean the entire facility is constructed to BAL-FZ specification in accordance with AS3959-2019.
- The adopted and signed off Bushfire Evacuation Plan and procedures have been completed in accordance with RFS Guide to Developing A Bushfire Emergency Management Plan and meet the requirements of Australian Standard AS 3745-2010 – Planning for Emergencies in facilities. On-site and off-site evacuation procedures are included and will be re-worked through with key stakeholders (emergency services and staff) prior to occupation of Phase 2(b) and 3 opening. A proposed Evacuation Management Plan has been prepared by Blackash and is contained within the Bushfire Hazard Assessment attached at Appendix O of the RtS.
- APZ clearance zone within the National Park have been be agreed between OEE&S, RFS and the applicant and are permitted under a separate Part 5 Activity Approval (Review of Environmental Factors). This largely follows the rock shelf with the area on the south west of the site.

As stated above, a Bushfire Assessment Report was prepared for Phases 2 and 3 by Blackash and is attached at **Appendix O**. Given the complexity of the project, The requirements of PBP 2006 (currently in force) and the new version *Planning for Bushfire Protection 2018* (PBP 2018) which is in draft form and due to be adopted in late 2019, has been used in the assessment to ensure best practice is applied to the proposal.

On Friday 31 May 2019, the LLV Project and design team met with the RFS. At the meeting, the RFS concluded that the school is not a change of use but is a change of purpose. As a result, the LLV is considered 'Special Fire Protection Purpose (SFPP) infill development'. This provides options for the implementation of a range of mechanisms to provide an acceptable level of bushfire risk to the site, in accordance with proposed Planning for Bushfire Protection 2019 (PBP 2019).

For SFPP development, PBP has designated the appropriate fire areas and corresponding Fire Danger Rating (FDI). The FDI for Ku-ring-gai local government area is 100.

The report provides the following comments in regard to the Phase 2(b) and 3 works:

7.1.1. APZ Management

APZ Extent

The definition of an APZ is provided at section 11.7 of **Appendix O**:

“An APZ is a buffer zone between a bushfire hazard and buildings, which is managed progressively to minimise fuel loads and reduce potential radiant heat levels, flame, ember and smoke attack. The appropriate APZ is based on vegetation type, slope and levels of construction (and for SFPPs the nature of development)”.

There are a mix of vegetation types within a 140m radius of the site, including Dry Sclerophyll Forests, which have been used as a basis to determine APZ and radiant heat loads within the site.

A whole of government approach has been taken to mitigating the impact of bushfire on the site and to reduce the modelled radiant heat to the SFPP requirements for 10kW at the buildings. Outputs of the bushfire modelling undertaken by Grubits and Associates are included at Figure 9 of **Appendix O** and show that radiant heat levels at or below 10kW can be achieved at the existing buildings. The resulting APZ extents are shown in Figure 3 below.

The existing road and proposed loop road will form part of the APZ and is required to provide a separation between the SFPP and the boundary of the bushfire hazard. The new fencing around the site, will be coated tubular security fencing to allow for suppression activities through the fence if required. Gates will be provided around the perimeter to ensure access to all roads, pedestrian walkways and to provide access into the APZ for management and fire suppression activities.

Mutually beneficial APZs are provided on adjoining land that are associated with Defence Housing approved developments and small areas of NPWS lands. Arrangements that are legally binding will be entered into with adjoining landowners where mutually beneficial APZs are required.

Management of APZ's

Management of APZs will be provided for under a separate Fire Management Program and Vegetation Management Plan (VMP) which will be completed upon consent for the opening of the next phases of the school. All asset protection zones provided within the site will be the responsibility of the Department of Education.

7.1.2. Access Requirements

As a condition of consent for the Phase 1 works, the road network within the school was significantly modified and upgraded to comply with PBP 2006. As such, all roads within the site provide 8m carriage width for fire fighting vehicles.

The proposed Loop Road will provide perimeter access for firefighting purposes for most of the site. The loop road will include hydrants for firefighting purposes and is 8m kerb to kerb for its length, except a short constriction between the two buildings where it drops to 5m. this constriction will allow the passage of buses which is above the requirement for fire fighting vehicles within PBP 2018. Gates will be provided in the proposed fence to permit access for emergency service vehicles to the southern and western APZs.

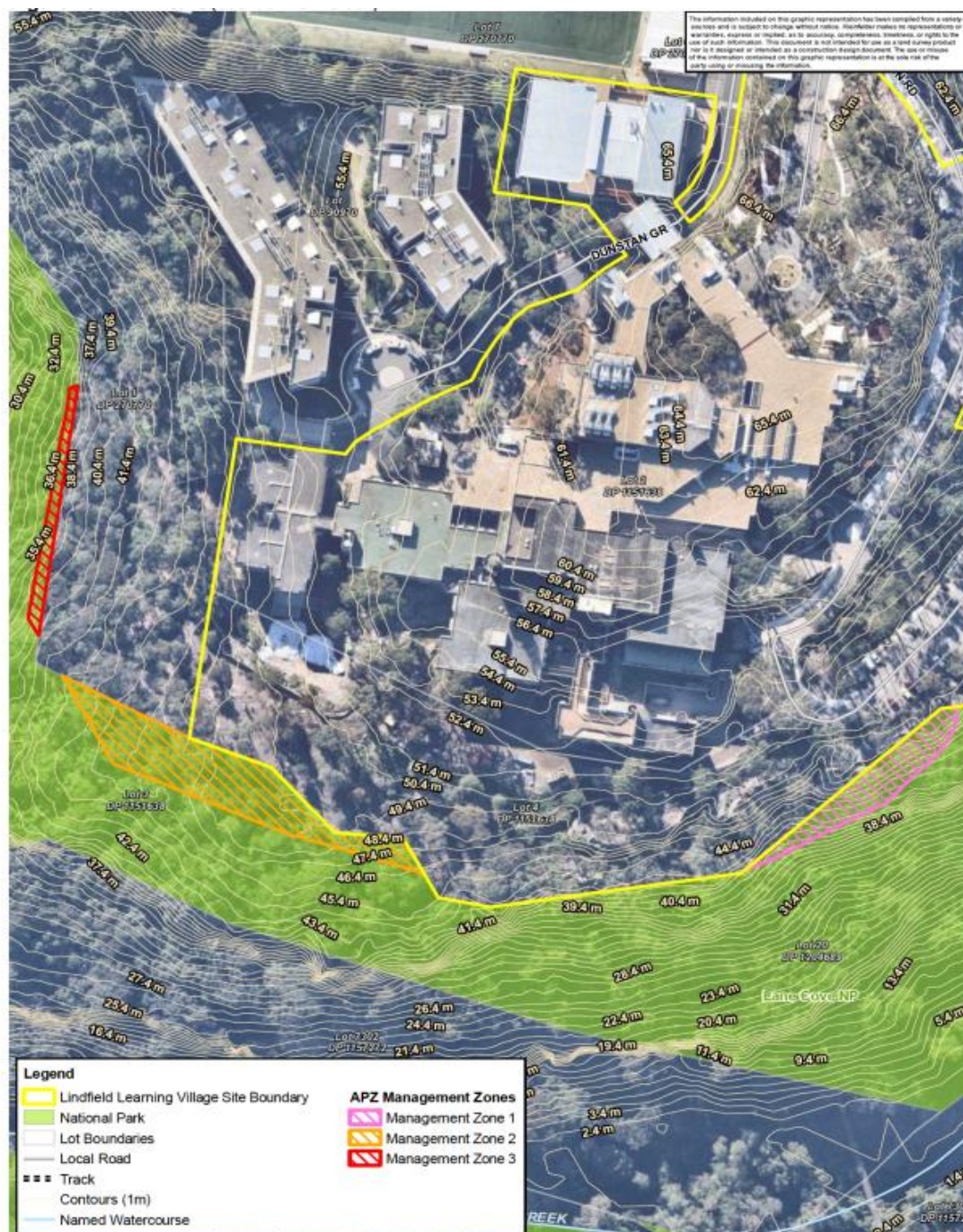
The access to the site meets the Fire Brigade requirements in terms of provision of egress width and turning areas in accordance with Planning for Bushfire Protection 2018. A fire trail is currently constructed to provide access to the south and west of the site. This will be upgraded as part of the Phase 2(b) and 3 works to provide a loop road capable of carrying buses.

7.1.3. Services, Gas and Electrical

As part of the Phase 1 works, a new ring mains system was provided on the site, with a 150,000L tank dedicated for firefighting purposes at the entrance to the school. The fire hydrant system (incorporating internal and external hydrant connections) has been designed to ensure coverage in accordance with AS 2419.1:2005 and NCC Clause E1.3.

The existing electricity supply for the site will be utilised and will comply with PBP.

Figure 5 – APZ Extent



Source: Blackash, 2019

7.1.4. Building Protection and Construction Measures

The existing buildings will be upgraded, where relevant, as described in the RFS Building Best Practice Guideline – Upgrading Existing Buildings to meet BAL Flame Zone in accordance with AS3959.

The BAL FZ construction requirements are well above the BAL 12.5 construction that is required as a result of the radiant heat modelling. In working through issues with the RFS, considerable redundancy has been provided that will provide BAL FZ construction to the external façade of the buildings for Phase 2(b) and 3 that will complement works already completed for Phase 1.

Refer to sections 17 and 18 of **Appendix O** for further details of the NCC and AS construction requirements.

Existing mitigation and management measures identified in the Phase 1 consent will remain in place until the new mitigation measures are constructed and a whole of site operational management plan is approved.

7.1.5. Emergency and Evacuation Planning

A Bushfire Emergency Management and Evacuation Plan has been prepared by Blackash (attached at **Appendix P**) and reflects the proposed capacity at the site at conclusion of Phase 2. This plan outlines updated procedures for Phases 2 and 3 relating to the OOSH, Vacation Care and Auditorium and Gymnasium for internal and external users. These procedures have been completed in accordance with NSW Rural Fire Service Guide to Developing A Bushfire Emergency Management Plan and with consideration of *Australian Standard AS 3745-2010 – Planning for Emergencies in facilities* and *NSW Government Evacuation Management Guidelines* (March 2014).

The decision when to evacuate is to be determined by the likelihood that a bushfire may impact the school in a manner that may cause injury, undue stress or other significant adverse effects e.g. smoke induced medical problems.

The plan is based on the following assumptions:

- On Total Fire Ban days and above, the Principal will determine the operation of the school in line with local decision-making provisions
- On days of Total Fire Ban the NSW RFS will liaise with the School Principal should the need arise to evacuate or limit occupation.
- Leaving a high-risk bushfire location is the safest action and evacuating before a bushfire threatens is always safer than remaining until a bushfire starts. Leaving early becomes increasingly appropriate with higher Fire Danger Ratings.
- DoE policy require schools on the Bush Fire Register to temporarily cease operations on days when a Catastrophic Fire Danger Rating (FDR) is issued in their NSW Fire Area.
- A 'Shelter in place' point is to be considered in line with PBP 2006 as an alternative when the risk associated with evacuation is seen as being greater than that of sheltering in place. The report highlights the following as designated refuge areas:
 - BAL FZ Auditorium (that interconnects from level 4 to 6) and
 - Level 5 BAL FZ areas (cafeteria and office area).
 - Occupants of the gym are expected to evacuate into the main building via the external bridge when necessary. Occupants in the gymnasium will require confirmation from a fire warden that it is safe to cross the external bridge when fire in the vicinity.
- An outcome of the fire engineering assessment by Grubits and Associates demonstrated that 2520 occupants are expected to move into the refuge area within the auditorium and surrounding compartment. The maximum permissible number of occupants in a refuge area has been summarised below:
 - Level 4 BAL FZ areas – 1,010
 - Level 5 BAL FZ areas – 1,310
 - Level 6 BAL FZ areas - 200

Off-Site Evacuation

The Evacuation Plan highlights the walking routes to be taken to Lindfield Public School (the Off-site Evacuation Point). Walking evacuation is preferred via Grosvenor Road as the evacuees can use upgraded footpaths adjacent to the road. The approximate egress times for bushfire evacuation are calculated as 16 minutes to the corner of Eton Road, and 33.5 minutes to Lindfield Public School.

One short term option is Assembly Area 1, inside the entry to main building, outside the Auditorium. This area has been separated from the rest of the school by 2-hour fire walls.

The loop road to be provided with Phases 2 and 3 may be used by buses to assist evacuating students from the site. However, the loop road is between the school buildings and the bushfire prone land. Loading of students or staff is not permitted on or within the area known as the loop road as this will be subject to high degrees of radiant during bushfire impact.

Charles Bean Oval

Immediately to the north of the proposed school buildings are large public open playing fields, known as Charles Bean Oval. Due to its use of synthetic (and potentially hazardous) nature of material used in the oval it is recommended that Charles Bean Oval only be utilised as part of the evacuation/emergency planning for Lindfield Learning Village as short-term assembly / evacuation as part of the bus collection procedures when fire is not within 1 hour of the site and or embers are not observed dropping in the vicinity. If fire is within 1 hour of the site or embers are observed, Charles Bean Oval is not to be used in any capacity.

Defend in Place

In the unlikely event that the school is not closed on a high-risk day or evacuation is not initiated in time for safe egress of all occupants, the buildings has been designed to permit "Defend in Place" as a fall-back position. During Defend-in-Place, students and staff will shelter within the buildings (with help from fire services) until the immediate fire danger is passed and safe evacuation is possible. The provisions for "Defend in Place" will consist of:

- BAL- FZ construction of building envelope (façade and roofs as a minimum) including bushfire shutters;
- Compartmentation within buildings to allow horizontal evacuation in the event of failure of the external protection in bushfire; and
- Provision of internal sprinklers.

7.1.6. Conclusion

The proposed construction and operational management and mitigation measures have been prepared in accordance with PBP 2006 and the draft PBP 2018 as assessed by Blackash and Grubits. The assessment reports provide the following recommendations for bushfire protection measures on-site:

- All new and existing external facades and roofs of the school buildings are to comply with AS 3959- 2009 Amendment 3 for BAL Flame Zone.
- Prior to the issue of a Construction Certificate for the Phase 2(b) and 3 School, the Department of Education shall prepare a Bushfire Management Plan, including Vegetation Management Plan setting out how it will comply with the provision and ongoing management of Asset Protection Zones in accordance with PBP 2006 and proposed PBP2018.
- Prior to occupation and in perpetuity, an Asset Protection Zone shall be established and maintained in accordance with Figure 10.
 - 3.1. The APZ shall be established and maintained as an inner protection area as outlined within PBP and the NSW RFS document 'Standards for Asset Protection Zones' except where an Outer Protection Area of a maximum of 30m is provided from the outer most extent of the APZ boundary.
 - 3.2. The areas adjacent to buildings and between the private access road will be managed as open space above APZ Standards to provide an outcome that is in keeping with a highly managed parkland environment.
- Prior to the issue of a Crown Certificate for the Phase 2(b) and 3 School, the Department of Education shall update the Blackash Bushfire Consulting Bushfire Emergency Management and Evacuation Plan that is locally relevant and tailored with key stakeholders to a range of scenarios.
- The proposed loop road is to comply with the requirements of PBP2006 and proposed PBP 2018.
- Gates will be provided in the proposed fence to permit access for emergency service to the southern and western APZs.

The report concludes that the framework provided by PBP 2006 and PBP 2018 and the required BPM for the school have been achieved to ensure the school meets modern bushfire safety requirements and in many areas is above that required by PBP 2006 and 2018. The Phase 2 and 3 school will meet the aim, objectives and Standards within PBP 2006 and 2018 for SFPP.

7.2. LANDSCAPE MANAGEMENT

An addendum Landscape Management Plan (LMP) has been prepared by Kleinfelder and is attached at **Appendix C**. The addendum report determines that the Phase 1 LMP prepared in 2018 adequately supports Phases 2 and 3 with respect to land management works, monitoring and maintenance associated with Asset Protection Zone (APZ), weed management and soil erosion and sediment control.

The Phase 1 landscape management works for bushfire mitigation (vegetation modification for APZ) have been completed to the extent of the LLV site boundaries (confirmed completion January 2019).

The report provides the following comments regarding the proposed vegetated and bioretention swales to manage the stormwater and overland flow for the site:

The proposed WSUD will:

- Meet the performance criteria set out under NSW RFS published documentation for APZ management;
- Optimise ecological functionality of the APZ and surrounding native vegetation in perpetuity;
- Continue to manage weed and erosion sedimentation issues;
- Consider fauna species interaction management during construction; and
- Be supported with a works, monitoring and maintenance schedule to ensure the site meets its performance criteria in perpetuity.

The area proposed for the swales currently meets APZ standards and will continue to meet these standards, inclusive of the planted vegetation within the swales.

The management actions specific to the construction of the swales are outlined in Table 1 of the addendum letter.

7.3. BIODIVERSITY

Several biodiversity matters were previously raised in the agency and community submissions received during exhibition of the original proposal; these are summarised below.

- Threatened species identified on the site via previous flora and fauna investigations.
- The previous BAR did not recognise the loss of habitat for these species or apply species credits for these impacts.
- The previous Arborist Report was inconsistent with the proposed complete tree removal and is inadequate for assessment purposes.
- Tree removal was inconsistent with the Concept Approval and Statement of Commitments that apply to the site.
- The adequacy of the landscape plans.

An addendum Biodiversity Assessment and Biodiversity Offset Policy has been prepared by Ecoplaning (refer **Appendix N**). The report provides the following comments regarding the impacts of the phase 2(b) and 3 works:

- Phase 2(b) and 3 of construction involves additional vegetation clearing (including the removal of 10 trees) across a small area of the subject site to allow for the construction of a loop road around the southern portion of the site for emergency vehicles, buses and drop off and pick up vehicles, and modification to the ground layer due to landscaping.
- As identified in the Phase 1 BDAR, most native vegetation within the subject site is consistent with the description of Dwarf Apple - Broad-leaved Scribbly Gum (PCT1782) and Smooth-barked Apple – Red Bloodwood open forest (PCT1776). The total area of each vegetation types being impacted as a result of Phase 2 and 3 is approximately 0.47 ha and 0.22ha respectively. Complete clearance for these areas is proposed to accommodate the Phases 2 and 3 works.

- Neither of the two communities are listed as threatened ecological communities (TEC) under the TSC Act or the *Environmental Protection and Biodiversity Conservation Act 1999*.
- For Phases 2 and 3, the proposal requires 16 ecosystem credits to offset the impact of development. There are no species credits required for the proposal.
- Due to no credits of these types (PCT-1782 and 1776) currently being available in the NSW BioBanking credit market, the proponent intends to retire the offset obligation through payment to the Biodiversity Conservation Fund (BCF).
- On-site APZ management will be conducted to reduce impacts, with hollow bearing trees maintained (Kleinfelder 2018), and limited clearing of the mid-storey.

The Arboricultural report prepared by McArdle Arboricultural Consultancy at Appendix U was prepared to assess the health, status, potential hazards and risks of one hundred and thirteen (113) trees on site. This report confirms that a total of 81 trees are proposed to be retained and protected for Phases 2 and 3 of the proposal. The 10 trees proposed to be removed will be replaced by the following at other locations around the site:

- Three (3) 30 litre Eucalyptus resinifera Red Mahogany;
- three (3) 30 litre Eucalyptus saligna Sydney Blue Gum;
- Two (2) 30 litre Casuarina glauca She Oak; and
- Two (2) 30 litre Elaeocarpus reticulatus Blueberry Ash.

7.4. SITE SERVICES

An Infrastructure and Services Report has been prepared by Erbas and is attached at **Appendix D**. This report outlines the existing services at the site including gas, water and electricity and identifies service augmentations required to facilitate the proposal.

The report concludes that incoming service arrangements and substation are sufficient to utilise for the Phase 2 and 3 works, however, it is anticipated that service renewal will be required to the following systems as a result of the proposed development:

- energy metering & sub monitoring metering system;
- distribution boards and sub-mains;
- earthing;
- surge protection;
- internal and external lighting, including controls;
- telecommunication services; and
- emergency and exit lighting system.

7.5. ECOLOGICALLY SUSTAINABLE DEVELOPMENT

An Ecologically Sustainable Development (ESD) Report has been prepared by Umow Lai and is attached at **Appendix R**. The proposal will include the following ESD initiatives (amongst others):

- Establishment of ongoing environmental performance targets relating to the consumption of energy and water, production and recycling of waste, and the ongoing maintenance and improvement of good indoor environmental quality;
- Building services will include metering on all major energy and water-consuming equipment, providing the facility manager with live information on system performance and allowing them to closely manage efficient use of resources on site;
- Facilities for the separation and recycling of waste streams;

- A rainwater harvest and re-use system;
- A high percentage of timber, pipes, flooring, blinds and cables used in the proposal will be responsibly sourced or have a sustainable supply chain;
- Wherever possible, teaching and learning spaces will be naturally daylight;
- P/V solar panels to offset daytime energy demand and reduce ongoing operating costs;
- Building services, lighting and equipment to be used will be highly energy efficient wherever possible;
- All bathroom fixtures will meet minimum WELS ratings; and
- Chosen landscaping will have a low demand for water consumption.

By incorporating the ESD indicatives listed above plus those specified within the attached ESD Report, the proposed development will achieve an equivalent standard of performance to a four star Green Star rated building.

7.6. TRAFFIC, TRANSPORT AND ACCESS

7.6.1. Traffic

The Transport Statement and Traffic and Transport Assessment prepared by Arup (refer **Appendix J**) assesses the traffic impact of Phases 2 and 3 of the proposal on the surrounding road network and has been prepared to respond to the issues raised during exhibition of the original proposal, including:

- 'No parking' restrictions should be limited to the southern side of the road on a part-time basis only.
- Request for footpath upgrades and an improved pedestrian crossing.
- A transport strategy/travel plan should be implemented prior to commencement of operation.
- A Pedestrian Access Management Plan (PAMP) should be prepared to address safe access to the school.
- Concern regarding alternative public bus routes travelling on private roads.
- A Green Travel Plan should be submitted.

The responses to these matters are summarised as follows:

- The small increase in students to 385 in 2020 (35 additional to that approved for Phase 1) is not expected to place pressure on the local road system, the on-site private vehicle pick-up zone or bus access arrangements.
- The modelling results for the Pacific Highway / Grosvenor Road / Burleigh Street intersection show that for Phase 1 of the school the intersection is operating satisfactorily at level of service C in the road peaks and B for the afternoon school peak. The 70m right turn bay from Pacific Highway into Grosvenor Road is fully utilised for the 95% quartile queue in the morning and afternoon school peaks. In the evening road peak, the modelling shows a 95-percentile queue slightly longer than the bay length indicating occasional spill out into the adjacent traffic lane.
- The right turn bay on Pacific Highway at the Grosvenor Street intersection needs to be extended to at least 100m to accommodate the predicted 95 percentile queue outlined above. The existing right turn bay is 70m, but to allow for future growth it is recommended that the right turn bay be extended to 120m. The extension is possible within the existing road reserve by utilising a partial lane along the western kerb line. There is a bus zone in this location which has no bus poles, wayfinding or bus shelter. There is no visual indication of a bus stop existing and as a result is likely underutilised as indicated by Arup's review of available Opal data. In discussion with Transport for NSW it has been agreed that the bus zone can remain as an in-lane stop given the low frequency of use. The proposed upgrades of the right turn bay to 120m would not affect the potential Strickland Avenue upgrades proposed by Council.

- The estimated traffic generated by the school in Phases 2 and 3 during the morning peak are 307veh/hr and 549veh/hr respectively. This is a minor increase over RMS capacity guidelines for local collector roads, which sets a standard of between 300 and 500 veh/hour. As a result, some local streets such as Bent Street and Eton Road will see increases.
- The traffic modelling for the Pacific Highway / Grosvenor Road / Burleigh Street intersection has been undertaken for Phase 2(b) and 3 by adding the additional traffic to the existing situation modelled for Phase 1. The right turn bay from the north was extended to 100m in the SIDRA model to accommodate the 95th percentile queue lengths. The modelling results for the increased traffic at the intersection indicate that for Phases 2(b) and 3 are that the intersection continues to operate satisfactorily at level of service C in the road peaks and B for the afternoon school peak.
- Under current traffic conditions the Grosvenor Road / Lady Game Drive roundabout was found to be operating close to capacity during the AM peak. For the remainder of the day the roundabout operates satisfactorily.
- Some 15% of drop-off and pick-up traffic is expected to approach the site on Lady Game Drive. In the morning peak there are 450 southbound vehicles/hour on Lady Game Drive approaching the Grosvenor Road intersection. At Phase 3 there is predicted to be 322 vehicles accessing the school in the morning peak with 48 (15%) expected to use Lady Game Drive. Many of these 48 vehicles may already be traveling on Lady Game Drive as a journey to work trip and hence would be classified as a diverted trip into the school to undertake the student drop-off. The level of increase is therefore expected to be much less at around 25 vehicles which is a 5% increase in southbound traffic. The roundabout can accommodate the additional cars however they will find themselves in the long vehicle queue before exiting into Grosvenor Road. RMS improvement works on the Pacific Highway to improve through-traffic capacity may attract traffic away from Lady Game Drive and onto the arterial road system.
- The busiest period for both Phases 2 and 3 will continue to be during the daily drop-off/pick up periods, from 8:45am to 9:10am then again from 2:50pm-3:10pm. With increased bus services on route 565, for Phase 2 there is predicted to be only a minor increase in car activity with 106 drop-off cars in the morning peak and 84 pick-up cars in the afternoon peak, compared to 82 and 69 cars respectively for the Phase 1 school. For Phase 3, There is a doubling of car activity with 227 drop-off cars in the morning peak and 165 pick-up cars in the afternoon peak.
- To accommodate the increase in bus travellers for Phases 2(b) and 3, 7 new school buses are required to service Phase 2(b) travellers, whilst 14 new buses are needed for Phase 3. It is recommended that bus frequencies are increased in each direction to increase bus reliability and encourage usage early on. Discussions with TfNSW are ongoing to improve bus access.

7.6.2. Parking

The Traffic and Transport Assessment makes the following assessment on parking for Phases 2(b) and 3:

- No new car parking is to be provided on the site. This is due to the following:
 - The sites topography means it is difficult to provide suitable at-grade carparking spaces;
 - The construction of additional carparking spaces would require the utilisation of sensitive bushland space; and
 - Providing additional on-site carparking is unsustainable both in the short and long term, as:
 - It will greatly incentivise the use of private vehicles to access the site, which will inevitably increase congestion, pollution and noise on surrounding residential streets;
 - It will discourage staff members from accessing the site by walking, cycling or catching public transport; and
 - It is counterproductive to the Green Travel Plan that have been developed for the proposal.
- There are currently 166 marked car parking bays on the site. Allocation for pick-up/drop-off parking for Phase 2 (10 spaces) will leave 127 spaces for 164 staff (an 85% car mode), whilst Phase 3 (with an allocation of 20 pick-up/drop-off spaces) will leave 117 spaces for 312 staff. These staff car modes are achievable via the alternate travel strategies identified for the site.

- 166 spaces will be available for use after hours. For larger events, additional spaces can be found throughout the site, for example at loading dock areas. There may also be some overflow onto local streets. An overflow of 30 cars equates to approximately 10% of on-street capacity in nearby streets. After hours parking demand to the Greenhalgh Auditorium can be mitigated through several measures such as providing a shuttle bus during operational hours or restricting the maximum patronage.
- Alternative travel strategies (as opposed to private vehicle usage) have been outlined within the Green Travel Plan prepared by Arup at **Appendix J**.

7.6.3. Green Travel Plan

Arup have prepared a Green Travel Plan (**Appendix K**) to encourage the use of sustainable transport modes within the school environment. The Plan seeks to ensure suitable measures are in place to accommodate Phases 2 and 3 of the development and is intended to replace the GTP approved under the Phase 1 development consent. A range of alternate travel methods have been recommended within the report as well as incentives to change school travel behaviour in the short and medium term. Transport strategies which can be implemented by the school include:

7.6.4. The Loop Road

A link road is proposed from the southern extent of Dunstan Grove, along the southern side of the building extending to the carpark to the east of the building. A portion of the link between the buildings will be removed to facilitate this road.

The proposed bus loop enters the school grounds at the end of Dunstan Grove and traverses the lower portion of the site where the set-down / pick-up zone will be located. It is envisaged that up to 5 buses could drop-off or pick-up at one time with room for a further 3 buses to queue to wait. A pedestrian fence will be located along the northern side of the road to control where students wait. A waiting area utilising the COLA provides covered protection for students that are waiting. A series of gates will enable students to access the bus loading area.

The bus loop will only be open for use during school drop-off and pick-up times and will operate on the following schedule:

Loop road open during drop-off / pick-up:

- 7.30 am to 9.30am
- 2.30pm to 5.00pm

Loop road closed during school hours and after hours:

- 9.30am – 2.30pm
- 5.00pm to 7.30am

The roadway will be closed during the school day to allow students to fully utilise the lower campus grounds. When the loop road is open the school road system will operate as one-way for the full extent. When the loop road is closed, the school road system operates as two-way, shared between buses and cars. Signage will be located on the Eton Road entry to inform drivers of the operation modes at key times during the day.

The Traffic and Transport Assessment concludes that the outcome provided by the loop road is containment of all bus and car queues on the site operating in a simple one-way system.

7.6.5. Emergency Vehicles

The proposed loop road has been endorsed by RFS as a suitable access route for fire appliances. Emergency vehicle swept paths have been carried out for different areas of the site using MRV Fire Ladder 7.8 metre truck. The swept path analysis has indicated multiple opportunities for the truck to turnaround efficiently.

- Subsidised public transport travel;
- Carpooling;
- Promotion of green travel strategies; and
- Active travel (i.e. walking or cycling).

7.6.6. Pedestrian Access

Pedestrian infrastructure upgrades have been carried out for Phase 1 within the vicinity of the school boundary. This has included pedestrian access gates, crossings and footpath widening. The commitments regarding bushfire egress for Phase 1 of the development will not be affected by Phases 2 and 3 of the development.

Upgrades to the wider local road network have also been undertaken by Ku-ring-gai Council to improve walkability to the school. A continuous footpath route from Lindfield Learning Village to Lindfield Public School and the Pacific Highway has been installed as a good spine route.

7.7. BUILT HERITAGE

As outlined in the original submission, the former UTS Ku-ring-gai Campus is a local heritage item (I422) under *Ku-ring-gai Local Environmental Plan 2015*. The heritage listing includes the main building, the gymnasium and footbridge. The setting of the site is the Lane Cove National Park, which surrounds the campus with native vegetation.

Given the heritage significance of the site, a Conservation Management Plan (CMP) was previously prepared by Urbis Heritage. Key policies that are contained to the CMP for the site comprise the following:

- **Policy 22:** The site should preferably retain its use as an educational facility (tertiary, secondary or primary).
- **Policy 24:** Any proposed use of the complex must include a whole of site approach. It is not acceptable for only part of the site to be adapted to future use.
- **Policy 27:** New works impacting highly significant fabric should be designed to be reversible in the future. This includes the ability to reinstate elements in the future which have been removed.
- **Policy 29:** New works must not diminish the interpretation of the significant form, scale general configuration and principal elevations of the place.
- **Policy 36:** Any vertical additions are not to impact on the existing response of the built form to the topography i.e. retaining the stepped and modulated response characteristic of the Sydney Style, and the lower levels to the southern side of the building.
- **Policy 37:** Alterations to the existing fenestration of highly significant stages must be minimal and designed carefully with regard for the pattern of fenestration on the respective elevation. Additions are not to disrupt the significant rhythm of the fenestration of the primary elevations, particularly the southern elevation of Phase 1. Alterations should be limited to those required by condition or compliance, and where the latter is required, designed in conjunction with heritage advice.
- **Policy 44:** The planter beds should be retained and conserved.
- **Policy 51:** Materials for new additions should be identifiably new but of a robust nature in response to the brutalist character of the building. Design of future additions should also consider the material applied to the previous additions to avoid an ad hoc approach.
- **Policy 60:** Retain and conserve all off-board concrete and pre-cast concrete. Minor penetrations for services or access must be designed in consultation with the heritage consultant and subject to the appropriate approvals.
- **Policy 80:** If the timber batten ceilings must be removed for the installation of services, a methodology should be prepared for the removal and salvage of the ceiling and its reinstatement after the installation of services. If services are proposed to be installed through the ceiling a methodology should be prepared to ensure minimal removal and impact on fabric.
- **Policy 82:** The original timber parquet flooring in the Cafeteria in Phase 2 building should be retained and conserved. Parquet which is required to be removed to allow for any required fire solution is to be stored on site and reinstated as soon as is practicable. Removal of parquet must be the minimum required to facilitate the chosen fire solution. Any new parquet must match the original in size, species, finish etc.

- **Policy 124:** The introduction of new roads within the area identified for development should be reduced to the minimum necessary for the school use, fire compliance and emergency vehicle access.
- **Policy 125:** The existing roads and parking areas, combined with pedestrian pathways and stairways, particularly within the eastern and southern portions of the site should be retained and re-used where possible (although particular significance has not been ascribed to these features, other than the car parks). Any replacement of pathways and stairs should follow the aesthetic of the existing, i.e. meandering and lightly touching the landscape.

An addendum Heritage Impact Statement has been prepared by Urbis Heritage and is attached at **Appendix F**. This report assesses the impact of Phases 2 and 3 of the proposed works on the identified heritage significance of the site. The key changes assessed in this addendum include the following:

- Omission of Rooftop Additions;
- Facilitation of the Link/Loop Road;
- Landscaping works;
- Demolition works; and
- Alterations to COLA.

These additional works have been assessed by Urbis and the following comments provided:

7.7.1. Omission of Rooftop Additions:

- The original proposal for Phases 2 and 3 sought to construct three COLAs on the rooftops of the buildings at the site. The revised proposal for Phase 2 and 3 as outlined within this RtS no longer proposes to construct these three COLAs.
- The omission of the three rooftop COLAs from the Phase 2 and 3 proposal is supported from a heritage perspective, as it is more in-line with Policy 36 of the CMP which acknowledges that any vertical additions are not to impact on the existing response of the built form to the topography.

7.7.2. Alterations to COLA

- The original proposal for Phase 2 and 3 sought to construct a COLA under the height of the exposed slab at level 3. The revised proposal for Phases 2 and 3 as outlined within this RtS continues to propose this COLA. However, it has been shortened and widened to allow it to also function as a bus stop in addition to a shade structure.
- The revised design of the COLA as part of the Phase 2 and 3 proposal is supported from a heritage perspective, as it better responds to Policy 29 and Policy 51 of the CMP. This is because the revised design of the COLA has been specifically undertaken to ensure it does not diminish the interpretation of principle elevations whilst being robust in the nature to respond to the brutalist character of the building.

7.7.3. Loop Road

- The loop road would require the removal of an additional 10 trees. It is acknowledged that this proposed in a landscape which has already been cleared of most of its trees. Although 10 trees are a small number in the context of the surrounding National Park some heritage impact must be acknowledged. To mitigate their removal, 10 trees will be planted elsewhere on the site to retain the landscape character, consistent with the intent of the phase 1 consent. However, as concluded by the Heritage Assessment prepared by Urbis, no significant heritage impacts will result from these landscaping works.
- The loop road would be located in between the building and the surrounding landscape. It would constitute a division between the building and the National Parks albeit it is a division which would be flat to the landscape. Notwithstanding, the loop road provides a solution to a traffic issue which has been an issue throughout the history of the utilisation of the site. The futureproofing of the site will be achieved through comprehensive operational solutions. Therefore, the link road is supportable given the intention for the ongoing use of the building for an education purpose.

7.7.4. Facilitation of the Link Road

- The bulk of fabric to be removed to facilitate this (loop road) addition constitutes the anodised glazing which is attributed little significance in the CMP (Urbis 2018). The works would however require the removal of the slab at Level 1 and the removal of the planter box adjacent to the link (north). The removal of the planter box would have some heritage impact as the planter boxes are part of the original landscape planning of the school and are preferred to be retained in accordance with Policy 44 of the CMP. The subject planter box to be removed is in an area of lesser significance and in the context of what is a service/utilise courtyard. This courtyard includes roller doors and access to carparking. The planter box does not demarcate a major entrance to the building and its removal would facilitate the resolution of a long-established traffic issue associated with the site.
- The facilitation of the loop road is line with Policy 125 of the CMP, which stipulates that new roads into bushland should be restricted to those required for emergency and fire fighting vehicles.

7.7.5. Landscaping Works

- The open area to the southern section of the school will be subject to landscaping works, similar to the Phase 1 landscaped section. It is recognised that the link road represents a significant intervention into the landscape. Therefore, in order to retain the natural landscape character as much as possible the landscaping works have been designed with an intention to use natural materials and minimise works to that required for the school use. Turfed areas have been minimised throughout. Turf is concentrated to the western end. The turf species is proposed to be Nara Zoysia Macrantha which is a native species.

7.7.6. Demolition Works

- A range of demolition works are proposed throughout the site to facilitate the proposal for Phases 2 and 3. These demolition works comprise the following:
 - Partial demolition of link between stage 1 and 5 for link road;
 - Partial demolition of the south façade at level 1;
 - Partial demolition of the floor slab to the south of the level 4 entrance;
 - Partial demolition of the concrete wall at the level 4 primary entrance; and
 - Partial demolition of the concrete wall adjacent to the spiral stairs at the level 4 secondary entrance.
- Each of these proposed demolition works to facilitate the proposal for Phase 2(b) and 3 has been assessed in detail within the attached addendum Heritage Impact Statement. Whilst it is acknowledged that some significant building fabric is to be removed as part of these works, the demolition works have been appropriately designed and are to be carried out in compliance with the policies of the CMP. The proposed demolition works are therefore considered acceptable from a heritage perspective.

7.7.7. Proposed Bushfire Management Solutions

- Two solutions to mitigate the identified bushfire risk are proposed – tree clearing within the national park and the Link Road. Tree clearing within the national park is not the subject of this application.
- In addition to the tree clearing, the Link Road is also proposed as a solution to mitigate the fire risk. The Link Road would be located in between the building and the surrounding landscape. As described in the section above, it would constitute a division between the building and the National Parks albeit it is a division which would be flat to the landscape. The Link Road is supported on the basis that it contributes to the solution for two significant site constraints, bushfire and traffic. It is understood that without a response to these constraints they have the ability to preclude the intended use of the site. Refer to assessment of Link Road above.
- It is understood that discussions with the Rural Fire Service are ongoing regarding changes required to the building to achieve BAL-FZ. Any required additions to the façade must be resolved in consultation with Urbis. This includes provision of opportunity for Urbis to review shop drawings of any solutions.

The Heritage Impact Statement advises that the bulk of the works proposed under this Response to Submissions are supported in that they complete a suite of works which will see the entirety of the former William Balmain Teachers College utilised for education. The report states:

“This is entirely in line with Policy 24 of the CMP which stipulates that it is not acceptable for only part of the site to be adapted for use. It is considered that the proposed works in Stages 2 and 3 retain the same values as those retained in Stage 1”.

7.8. ABORIGINAL HERITAGE

An addendum letter to the original Aboriginal Cultural Heritage Assessment Report (prepared by Urbis Heritage in October 2018) is attached at **Appendix G**. The addendum addresses the design and consequent construction impact changes and consists of a review of the Phase 1 ACHAR and a field survey of the extended impact area, resulting from the addition of the bus loop to the south of the site.

The Phase 1 ACHAR did not identify any Aboriginal archaeological and/or cultural heritage constraints associated with the subject area.

The Archaeological site survey found that, in general, the area of the proposed bus loop is heavily modified and (as it had been already outlined in the Phase 1 ACHAR), the subject area has been the subject of high level of disturbance and there is a low to nil potential for subsurface Aboriginal objects within the Subject Area.

No Aboriginal objects were found, nor any landscape features identified with the potential for comprising any sub surface archaeological deposits.

In line with the above conclusions, the proposed works can proceed for the Impact Area in line with the recommendations adopted from the Phase 1 ACHAR, these being:

Recommendation 5

If Aboriginal object/s are identified in the Study Area during works, then all works in the immediate area must cease and the area cordoned off. The Office of Environment, Energy and Science (former OEH) must be notified via the Enviroline 131 555 so that the site can be adequately assessed and managed.

Recommendation 6

In the event that skeletal remains are uncovered, work must cease immediately in that area and the area cordoned off. The NSW Police must be contact with no further action taken until written advice is provided by the Police. If the remains are determined to be of Aboriginal origin, The Office of Environment, Energy and Science (former OEH) must be notified via the Enviroline 131 555 and a management plan must be developed prior to works re-commencing in consultation with the relevant Aboriginal stakeholders.

In accordance with the phase 1 consultation protocols and following discussions with the Office of Environment, Energy and Science (former) and the Department of Planning, Industry and Environment consultation regarding Phases 2 and 3 has been undertaken with the Metropolitan Local Aboriginal Land Council (MLALC).

7.9. ACOUSTIC

A Noise Impact Assessment was prepared by White Noise and is attached at **Appendix I**. This assessment has considered construction and operational noise associated with Phases 2 and 3 of the proposal. These impacts are described in detail in Sections 7.9.1 and 7.9.2 below.

7.9.1. Construction Noise

The proposed construction and demolition activities to be undertaken on site include the strip out of the existing areas of the existing building and demolition limited areas of the external façade elements. The development will then be constructed using normal construction processes.

The report concludes that construction activities will require a detailed construction noise and vibration management plan to be prepared. The report recommends several measures to mitigate construction noise , including:

- All plant and equipment should be maintained such that it is in good working order.
- A register of complaints is to be recorded. The register will record the location, time of complaint, nature of the complaint and actions resulting from the complaint.

- If required, noise level measurements of noisy plant and/or equipment will be conducted and noise mitigation undertaken to reduce noise levels to within Noise Management levels.
- The use of percussive and concrete sawing should be undertaken behind a closed façade when possible.
- For works undertaken outside of normal day time hours (proposed to include the period 6pm to 6am) the external façade of the building should be closed. In the event there are temporary openings in the façade these should be closed using a solid material such as 6mm FC sheet or 12mm plywood.
- The use of high noise generating equipment including hydraulic hammers, rock cutters or the like should not be undertaken prior to 8am Monday to Friday or 8.30am Saturdays.
- The loading of trucks should be conducted such that there is not a requirement to stack truck on the roadways adjacent to the residences on Dunstan Grove or Tubbs View.
- Where possible, squawkers or the like should be used in place of reversing alarms.

7.9.2. Operational Noise

Operational noise emissions associated with the proposal will be from the following sources:

- *Mechanical Plant and Equipment.*
- *Noise from the use of outdoor play areas.*
- *Noise from the use of the loop road by buses and cars for morning and afternoon drop off/pick up.*
- *Noise from other areas of the site including internal areas of the project.*

The report provides the following mitigation measures for the above noise sources:

Mechanical Plant and Equipment:

As the project is currently in the initial design stages, details of plant and equipment have not yet been finalised and therefore a detailed assessment of the required acoustic treatments cannot be provided. Despite this, the following general mitigation measures can be applied to the expected plant:

- Cooling equipment – acoustic silencers and or louvers may be required to the intake and exhaust of cooling equipment. Equipment will be installed with Variable Speed Devices (VSD) to reduce capacity and noise levels as required.
- Supply fans – supply fans on the site will include acoustic treatments including internally lined ductwork and/or silencers as required to ensure noise emission criteria is achieved.
- Exhaust fans – exhaust fans on the site will include acoustic treatments including internally lined ductwork and/or silencers as required to ensure noise emission criteria is achieved.
- Emergency Equipment – mechanical services equipment associated with the site will be acoustically treated using lined ductwork and/or silencers such that the requirements of AS1668 are complied with.
- Pumps, heaters, boilers and the like – other general equipment such as pumps, heaters, boilers and the like will be housed within the level 6 plantroom or other internal areas. Treatment to the building façade including linings and/or treatment to openings in the building such as acoustic louvers or lined ducting will be included to ensure noise levels comply with the projects noise emission criteria.

The assessment confirms that compliance with the relevant noise emission criteria for the site can be achieved.

Outdoor Play Areas

The report makes the following comments in regard to the sites outdoor play areas:

Based on the predicted possible maximum noise impacts to the surrounding residential receivers ... noise from the use of the outdoor play areas within the Lindfield Learning Village are not significant and would not result in a negative acoustic amenity at the surrounding residential receivers and are therefore acoustically acceptable. The predicted noise levels from

the proposed outdoor play areas are similar to noise levels generated from other schools within the area and are considered to be acoustically acceptable.

The report recommends the following acoustic measures to further mitigate noise associated with the use of outdoor play spaces:

- *All audible bells and speakers are to be located such that they face away from the residential receivers and set to an appropriate noise level of 70- 75dB(A) @ 3m.*
- *The use of directional speakers should be utilised on the external areas of the site.*
- *No additional acoustic treatments required to the level 2, 3 and 4 external bus coal or terrace areas.*

Loop Road:

Regarding the acoustic treatment for the Loop Road, the report recommends the following mitigation procedures to control noise levels for the surrounding residential receivers:

- All set down and collection points are located directly to the south of the Lindfield Learning Village building.
- All associated gathering areas of students being collected by buses in the afternoon are to be located directly to the south of the Lindfield Learning Village, with a line of site barrier to the residential receivers on Dunstan Grove.
- Buses are not to wait or be stacked on the site or on the local roadways south of the existing pick up location. A no stopping zone is to be sign posted and enforced for the roadways and Loop Road south of the existing pick up location and the future pick up/drop off point located to the south of the Lindfield Learning Village building.
- Buses are to be scheduled to arrive at the site such that there is appropriate period between each arrival.
- The Loop Road is only to be used in a One-Way direction including a counter-clockwise direction around the site.
- The management of the Loop Road for use by cars during morning drop off and afternoon pick up is required to be managed in accordance with the ARUP Traffic Management plan.
- Cars and buses to be limited to a speed limit of no greater than 15km/h when using the Loop Road

Internal and other areas:

Internal and other areas include teaching spaces, gymnasium and auditorium. For Phase 1 White Noise has confirmed that Phase 2(a) is acoustically acceptable and the previous reports undertaken for the project remain true and accurate. For Phase 2(b) and Phase 3:

- Potentially high noise generating sources including the music and drama theatres are located without external opening to the external environment.
- All internal areas of the Lindfield Learning Village will be located within the building envelope including a closable external façade with a minimum acoustic performance of Rw 35.
- External façade openings should be closed during periods which high noise activities are being generated.
- All events are to be contained within the building envelop and management controls are to be included to ensure the use of the gymnasium, squash courts and auditorium will be acoustically acceptable during evening and night-time hours including 6pm to midnight.

If required by DPIE the proposed noise mitigation measures could be incorporated in the conditions of consent for the application. It is assumed that a range of existing noise management conditions that form part of the Phase 1 approval will be repeated in the conditions of consent for Phase 2(a) and 3. No acoustic complaints have been received in relation to the operation of Phase 1 and the noise management of the site is being suitably undertaken.

7.10. FLOODING AND EVACUATION MANAGEMENT

EWFW has prepared a statement that confirms Phase 2(a) will have no impact to the outcomes of the Flood Emergency Management Sub Plan dated 18 October 2018.

A Flood Impact Assessment and Flood Emergency Plan have been prepared by EWFW and are attached at **Appendix L and M**. The reports have assessed the flood behaviour along Eton Road and the additional runoff due to the land clearing and increase of impervious areas associated with Phases 2(b) and 3 of the development.

The reports make the following comments on the current site conditions:

- The School catchment is split into 13 sub catchments within the Eton Road site. These catchments drain into the Lane Cove River via the local drainage network. This drainage network is connected to Council's minor stormwater drainage system which comprises covered channels, pipes, culverts and pits. There are no open channel reaches within the catchment.
- The entire catchment is highly developed with little opportunity for water to infiltrate due to the high degree of impervious surfaces. It has been calculated that the combined area of roofs and roads is in excess of 50% of the catchment area.
- The upper section of the site is relatively flat and primarily comprises of low to high density residences and the Lane Cove National Park. The lower portion consists of bushland and has steeper terrain, which is susceptible to high flooding velocities contained within the roadways.

The flood modelling for Phases 2 and 3 found that:

- Due to the depth and velocity depth product, the North face of the property is defined as a high hydraulic hazard area in the 1%AEP – resulting in a Low Flood Risk Precinct, but with a high hydraulic hazard with flow velocities in excess of 3m/sec.
- The site is impacted (in the lower levels) by up to 610mm of water in the PMF event and evacuation offsite or to nominated refuge points is recommended.

Despite the above, the combined flooding reports conclude that:

- The subject site is not currently susceptible to flooding from Blue Gum Creek & Lane Cove River. The proposed development is situated in a location outside the 1% AEP flood extent and low hazard area in the 1% AEP.
- There was no net increase in the impervious areas in comparison to the phase 1 consent.
- Inundation of the property would be minimal due its location, situated upon the apex of the Ridge.
- The site will be safe from flooding and flood damage associated with the design flood standard as defined in part 24 of the Ku-Ring-Gai DCP part 24r.7 and will not adversely affect any other structures or properties.

On Site Refuge During a Flood Emergency

The lowest floor level at the site has been nominated at RL66.28m AHD which is approximately 500mm above the 1%AEP flood level (66.79m AHD). This is 0.61m below the probable maximum flood (**PMF**) level (66.89 AHD). The second storey of the development has a finished floor level of RL75.43m AHD which is approximately 8.54m above the PMF level (66.89 AHD). Notwithstanding this, an on-site refuge is recommended for this site.

The Auditorium has been nominated as the emergency assembly point for the proposed development. Levels in this area range from approximately 59m AHD to 63m AHD, above the 1% AEP flood level which would be approximately 200 to 250mm above the existing levels. As a result, the most vulnerable students should be positioned at the top of the stairs at the highest point, including kindergarten and students with mobility limitations.

7.11. STORMWATER

A Stormwater Management Strategy (and supporting documents) has been prepared by EFWF for the site (refer **Appendix T**) in response to Council's Stormwater Management policy (Ku-ring-gai Council DCP).

To maintain water quality during the construction stage, erosion and sediment control measures will be installed with the objectives of reducing pollutant loads into the stormwater system. These measures will follow the Ku-ring-gai Council DCP controls.

Water quality management controls for the site will include the following measures:

- Stormwater from the drainage system enters the Lane Cove River downstream. Stormwater will be treated via sediment & Biofiltrations swales prior to discharge into the Lane Cove National Park.
- Retrofitting Eco Sol 1500um screens all pits, prior to the Water quality / sediment control ponds.
- Five (5) On-Site Stormwater / settlement ponds with an overall total capacity of Total capacity of 1257 cubic meters (to collect the sediment runoff once the site has been stabilised by vegetation).
- Post construction - All drainage pits will be retrofitted with a 1500um trash filter screen fitted internally prior to water entering the in-ground drainage system and a 20kL terraced rain garden system is to be installed.

The combined stormwater reports conclude that drainage design and water quality modelling meet all council criteria and state environmental criteria and as a result the site is able to be developed without adversely impacting on the downstream water quality. The impacts of Phase 2 and 3 will be negligible as the proposal will not increase the existing building footprint.

7.12. WASTE

Construction and Operational Waste Management Plans have been prepared by Foresight Environmental at **Appendix S**.

Construction Waste

As outlined in section 5.1.6 above, the contractor will comply with the project conditions of consent and the Construction Waste Management Plan prepared by Foresight Environmental at **Appendix S**. This will minimise potential contact with the waste and reduce environmental risk from an accidental release. Where appropriate, waste will be reused or recycled.

Operational Waste

Based on the information provided and benchmark data from similar developments, the primary waste streams expected to be generated in the ongoing operation of the proposal would be:

- Cardboard/paper recycling;
- Comingled recycling;
- Food organics recycling; and
- General waste.

Additional smaller waste streams may include toner cartridge recycling, fluoro tube/globe recycling and battery recycling. A waste storage area of 38sqm is recommended. Current waste storage areas at the site (comprising an east waste area and a west waste area) provide sufficient capacity for the number the required bins to service the proposal. These comprise the following bins:

- 4 x 1100L MGB Paper/Cardboard Recycling bins;
- 25 x 240L MGB Paper/Cardboard Recycling bins;
- 2 x 660L MGB Comingled Recycling bins; and
- 5 x 1100L MGB General Waste bins.

These bins will be stored throughout the proposal for use at the point of generation. They will be brought to the waste storage/collection area as required for collection.

This will minimise potential contact with the waste and reduce environmental risk from an accidental release. Where appropriate, waste will be reused or recycled.

8. RESPONSE TO SUBMISSIONS

The original EIS for SSD 16_8114 was placed on public exhibition between 22 June 2017 and 7 August 2017. During this exhibition period, government agencies, Ku-ring-gai Council, key infrastructure stakeholders and the community were invited to make written submissions on the Project to DPE.

A total of 25 submissions were received. Of these submissions, eight were provided by government agencies and Council. The remaining submissions were made by community members or organisations, mostly in support or providing comment on the Project.

8.1. AGENCY SUBMISSIONS

Agency submissions relating to SSD 16_8114 were received from:

- NSW Department of Planning and Environment (**DPE**);
- Ku-ring-gai Council (**Council**);
- NSW Environment Protection Authority (**EPA**);
- Rural Fire Service (**RFS**);
- NSW Roads and Maritime Services (**RMS**);
- Sydney Water (**SW**);
- NSW Office of Environment and Heritage (**OEH**);
- Heritage Council of NSW (**HC**); and
- Transport for NSW (**TfNSW**).

Please refer to **Appendix X** for responses to the above agency submissions.

8.2. PUBLIC SUBMISSIONS

The public submissions were reviewed and categorised according to key issues, being:

- Traffic and transport.
- Heritage Impacts.
- Noise.
- Heritage impacts on the existing building.
- Inadequate community consultation.

The key issues raised by the public generally are outlined in **Appendix Y** and aligned with those which were raised by the agencies and addressed within the Phase 1 application package. While the exact wording of the submissions may not be captured in this RtS, the intent and the issues raised have been identified and addressed in this report.

9. CONCLUSION

This RtS has considered the responses received from DPIE, Council, the agencies and the community during the exhibition of SSDA 8114 for the development of the Lindfield Learning Village. Further assessments have been undertaken to respond to comments raised by all stakeholders as they relate to Phases 2 and 3 of the proposal. An extensive engagement strategy has been undertaken to ensure the agencies support the proposal.

9.1. SUITABILITY OF THE SITE

The proposal is considered highly suitable for the site for the following reasons:

- The proposal continues the re-purposing of a former educational establishment and will ensure that the educational use that currently exists at the site continues into the future.
- The proposal is permissible with consent and will lead to the development of a new school that has as greater positive impact on the surrounding built and natural environment.
- The proposal is consistent with the objectives of all relevant planning controls and achieves a high level of planning policy compliance.
- The proposal has been developed in consultation with key Government agencies to address bushfire, biodiversity, traffic, transport and access, ensuring the site is suitable for the development.
- All potential environmental impacts resulting from the proposal are able to be suitability mitigated.

9.2. PUBLIC INTEREST

The proposal is in the public interest because:

- The works are permissible with consent.
- It has been prepared having regard to Council's planning policies and generally complies with the aims and objectives of the controls for the site.
- It is suitable for the site as evidenced by the site analysis and various site investigations, including site contamination, biodiversity and heritage.
- Subject to the various mitigation measures recommended by the specialist consultants, it does not have any unacceptable impacts on adjoining or surrounding properties or the public domain in terms of traffic, heritage, social and environmental impacts.
- The proposal responds to the site conditions and surrounding built and natural character.
- Enrolment pressure is taken off surrounding schools currently exceeding design capacity.
- Enrolment pressure is taken off the current Lindfield Learning Village school at the site, which can currently only accommodate 350 students, notwithstanding a large waiting list.
- The proposal has been developed in consultation with key Government agencies to address bushfire, biodiversity, traffic, transport and access, ensuring the site is in the public interest.

The proposal is considered appropriate for the location and should be supported by the Minister for the following reasons:

- It satisfies the educational needs of students in the area and provides increased employment opportunities. Phases 2 and 3 will deliver a school which caters to the remainder of the students to meet the demand for student enrolments in this area.
- It is suitable for the site as evidenced by the site analysis and various site investigations, including bushfire, traffic, access, site contamination, biodiversity and heritage.

- Subject to the various mitigation measures recommended by the specialist consultants, it does not have any unacceptable impacts on adjoining or surrounding properties or the public domain in terms of traffic, heritage, social and environmental impacts.
- Phases 2 and 3 of the proposal will meet the requirements of Planning for Bushfire Guideline 2006 and 2018.
- The proposed improvements to public transport services to the site, including a dedicated loop road, will reduce dependence on the private car and encourage alternate modes of travel by public transport and walking.
- It will result in a high-quality educational environment for staff and students by:
 - Adopting a collaborative, home base model;
 - Creating adaptable learning spaces that contain state of the art facilities;
 - Providing a range of open spaces for students; and
 - Developing efficient, effective, expressive and environmentally sustainable facilities.
- It will contribute positively to energy efficiency and environmental sustainability. The design has adopted and incorporated many ESD features to reduce energy consumption during the life of the proposal.

The proposal is in the public interest and therefore warrants approval. We therefore request that approval be granted to the proposed development.

DISCLAIMER

This report is dated 16 September 2019 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd's (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of NSW Department of Education (**Instructing Party**) for the purpose of Response to Submissions (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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

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

APPENDIX A SITE SURVEY

APPENDIX B ARCHITECTURAL PLANS

APPENDIX C LANDSCAPE PLANS

APPENDIX D INFRASTRUCTURE AND SERVICES PLANS

APPENDIX E CONSULTATION OUTCOMES REPORT

APPENDIX F HERITAGE IMPACT ASSESSMENT

APPENDIX G ABORIGINAL CULTURAL HERITAGE ASSESSMENT

APPENDIX H SITE AUDIT STATEMENT

APPENDIX I NOISE IMPACT ASSESSMENT

APPENDIX J TRAFFIC IMPACT ASSESSMENT

APPENDIX K GREEN TRAVEL PLAN

APPENDIX L FLOOD ASSESSMENT REPORT

APPENDIX M FLOOD EMERGENCY MANAGEMENT PLAN

APPENDIX N BIODIVERSITY ASSESSMENT REPORT

APPENDIX O BUSHFIRE HAZARD ASSESSMENT

APPENDIX P BUSHFIRE EVACUATION MANAGEMENT PLAN

APPENDIX Q CONSTRUCTION MANAGEMENT PLAN

APPENDIX R ESD REPORT

APPENDIX S

OPERATIONAL AND CONSTRUCTION WASTE MANAGEMENT PLAN

APPENDIX T STORMWATER MANAGEMENT (INCL. SEDIMENT CONTROL)

APPENDIX U ARBORICULTURAL ASSESSMENT

APPENDIX V

STATEMENT OF COMMITMENTS MP06_0130

APPENDIX W RESPONSE TO SUBMISSIONS TABLE

APPENDIX X

RESPONSE TO PUBLIC SUBMISSIONS

