

29 May, 2019

Amity College
c/o Gran Associates
Attn: Peter Reed

Dear Peter,

RE: FLOOD ENGINEERING WORKS FOR STATE SIGNIFICANT DEVELOPMENT APPLICATION: 85 BYRON ROAD, LEPPINGTON, NSW

OVERVIEW

Martens & Associates Pty Ltd (MA) have prepared this flood letter to support a state significant development application (SDDA) for a proposed college at 85 Byron Road, Leppington, NSW (the site). Refer to Attachment A for site survey and Attachment B for proposed development layout. This document has been prepared to address comments from Camden Council and the Secretary's Environmental Assessment Requirements (SEARs) with respect to flooding which are provided in Attachment C.

EXISTING DEVELOPMENT

The site is located at Lots 1 and 2, DP 525996, is zoned R3 – Medium Density Residential, R2 – Low Density Residential and SP2 – Infrastructure: Educational Establishment, and has an approximate site area of 2.27 ha. There are two existing houses onsite with sheds, and the remainder of the site is grassed. The site grades approximately 6% in the NW aspect, with elevations of 102.5 mAH in the southern corner of the site, and 94.1 mAH along the north western site boundary.

PROPOSED DEVELOPMENT

Architectural drawings prepared by Gran Associates Australia (Attachment B) indicate that the proposed development will include:

- Establishment of a college, including playground and playfield.
- Construction of a basement carpark.
- Construction of roadworks along the site boundary.

PREVIOUS FLOOD STUDIES

A review of previous flood investigations was undertaken to assess likely local flood behaviour and characteristics for the site and the local catchment. Review identified one previous flood studies which would be relevant to this assessment.

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Head Office

Suite 201, 20 George St
Hornsby NSW 2077, Australia
Ph 02 9476 9999 Fax 02 9476 8767

> mail@martens.com.au
www.martens.com.au
MARTENS & ASSOCIATES P/L
ABN 85 070 240 890 ACN 070 240 890

WMA Water conducted a flood assessment for this catchment on behalf of Camden Council, and summarised the assessment in the report *Upper South Creek Flood Study* (2011), hereafter referred to as the 'WMA flood study'. The WMA flood report figures over the site are provided in Attachment D.

SITE FLOOD CHARACTERISTICS

We note the following regarding the modelled flood behaviour in the existing condition:

- The primary source of site flooding is overland flow from the local catchment, which is approximately 4.7 ha.
- The 1% annual exceedance probability (AEP) flood extents slightly encroaches the site along the north western boundary.
- The 1% AEP flood level is approximately 94.5 mAHD based on the WMA mapping and available LIDAR data (LPI 2011).
- The increased rainfall intensity associated with climate change will likely raise 1% AEP levels by 100-200 mm, to a level of 94.6 – 94.7 mAHD.
- The probable maximum flood (PMF) level is approximately 95.5 mAHD.

We note that the adjoining site currently has a dam along the site boundary, which would likely cause water levels to pond and back up within the dam extents. It is likely that this dam will be filled/removed as part of future development, which would cause flood extents within the local area to decrease, as there would be less localised ponding and instead water would drain directly downstream.

We note that the upstream catchment is subject to future development which may alter the flood regime at the site. However, any future developments will be subject to Council's controls with respect to stormwater discharge, and the location of outlets will likely be consistent with existing drainage depressions. We therefore do not expect that future development will materially affect site flood conditions, rather, peak flows are likely to be maintained due to attenuation through on-site detention (OSD) systems.

Further, as the site is proposed to be raised to approximately 97.5 mAHD along the north western boundary, the site will be well above the PMF level of 95.5 mAHD as well as the 1% AEP flood level + freeboard (95.1 mAHD). The impact of raising the site is considered negligible, as the adjoining site is zoned as RE1 – Public Recreation. Site drainage design will ensure flows are diverted to the same location as for the existing conditions, and basins are proposed to ensure site discharges do not increase for flood extents up to and including the 1% AEP event. Refer to MA planset P1806493PS01 for drainage design plans, which include details of stormwater collection, treatment and detention facilities.

COMPLIANCE ASSESSMENT

The Camden Council Flood Risk Management Policy (2006) provides development guidelines for flood prone land. The controls defined by the development guidelines matrix table for the proposed development are outlined and addressed in Table 1. We note that:

- The developed site can be classified as 'outer floodplain' which is defined as areas above the 1% AEP flood level to the PMF level.
- The proposed development is a college/education centre which is not explicitly defined in Council's policy, but for the purposes of this assessment is categorised as a commercial land use.

This assessment demonstrates that the proposed development complies with the Council flood requirements.

Table 1: Compliance with Camden Council Flood Risk Management Policy (2006) development matrix guidelines (Section 6.3).

Camden Council Flood Risk Management Policy Requirement	Compliance Assessment
Floor Level	
1. Habitable floor levels are to be equal to or greater than the FPL. The FPL is the 1% AEP flood event level plus a freeboard of 600mm. See glossary for definitions of habitable rooms for residential/industrial/commercial situations.	1) The 1% AEP peak flood level is approximately 94.50 mAHd and the development is proposed to be filled to 97.50 mAHd, which exceeds Council's 600 mm minimum freeboard requirement.
3. Notwithstanding the provisions of (1), Council may approve additions to existing flood liable industrial/commercial buildings, allowing habitable floor levels below the FPL. The applicant must demonstrate that all practical measures will be taken to minimise the impact of flooding. In determining such an application, Council will assess the application on a merits-based approach with consideration to nature of business, frequency and depth of flooding and whether the raising of floor levels will be out of character with adjacent land uses or streetscapes.	2) As the site is filled above the approximate flood planning level (FPL), this control does not apply.
Structural Soundness	
1. Engineers report required to prove that any portion of a structure can withstand the force of flood water, debris and buoyancy, up to and including the PMF flood event.	3) The proposed fill renders the site flood free in the PMF, hence this control does not apply.
Evacuation and Access	
1. Reliable safe access for pedestrians and vehicles required during the PMF flood event.	4) The proposed site is raised above the PMF level, hence safe access is available.
2. Consideration required regarding an appropriate flood evacuation strategy and pedestrian/vehicular access route during a flood event up to the PMF. In the case of amenities building, which are not used for any storage or which will not have any valuable chattels permanently located in them, this consideration will not apply.	5) Buildings on site will not be affected by the PMF, and road access remains available through Byron Road and Ingleburn Road in the PMF event.

Camden Council Flood Risk Management Policy Requirement	Compliance Assessment
3. The evacuation route from land above the 1% AEP flood level in each proposed allotment in future subdivisions must be contiguous to land not lower than the PMF flood level so as to allow evacuation in extreme events.	6) As in (5).
Flood Affection	
2. The impact of the proposed development on flooding elsewhere is to be considered.	7) While there is filling proposed within the site, it is highly unlikely that the development would have a material impact on the flood storage of the area due to the majority of the site being outside the mapped flood extents.
Flood Awareness	
1. Restrictions to be placed on title advising of flood planning levels (floor level) required relative to the 1% AEP flood level.	8) As the site is being filled to 67.5 mAHD, it is expected that all development floor levels will be above the flood planning level of 65.1 mAHD. A restriction will be placed on the title to this effect.
2. S149 certificates to notify affectionation by the PMF flood.	9) The developed site will not be affected by the PMF.
Building Management	
4. Applicant to demonstrate that potential development as a consequence of a subdivision proposal can be undertaken in accordance with this policy.	10) Subdivision is not proposed as part of this development.

SUMMARY

The WMA report was relied upon to assess flood conditions in the 1% AEP and PMF events. We note:

1. The proposed flood characteristics will likely be largely consistent with the existing conditions, and differences due to the proposed development are likely to be negligible.
2. There will be minor flood storage loss as a result of filling the site. However, this is expected to be of immaterial significance due to development occurring primarily outside of extents, the likely future removal of the downstream dam, as well as the connecting watercourse downstream of the site.
3. The site is to be raised above the FPL and PMF level, which will prevent the ingress of flood water.
4. The proposed development is compatible with the flood behaviour at the site.
5. Compliance with Council flooding controls are achieved.
6. Flooding comments raised by Council and in the SEARs have been addressed as part of this assessment.

The proposed development has been designed to ensure compatibility with the existing floodplain environment. As the proposed development has been designed to achieve Council requirements, no further recommendations are considered necessary.

If you require any further information, please do not hesitate to contact the undersigned.

For and on behalf of

MARTENS & ASSOCIATES PTY LTD

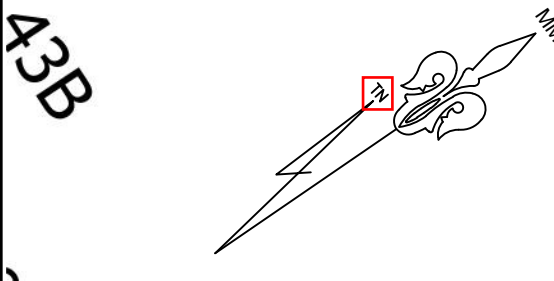
A handwritten signature in blue ink, appearing to read 'Paul Dinh', is written over a faint, light blue circular stamp or watermark.

PAUL DINH

Civil Design Engineer

ATTACHMENT A – SITE SURVEY

NOTE:
THIS DETAIL SURVEY IS NOT A "LAND SURVEY" AS DEFINED BY THE SURVEYING AND SPATIAL INFORMATION ACT, 2002. IF ANY CONSTRUCTION OR DESIGN WORK, WHICH RELIES ON CRITICAL SETBACKS FROM THE STREET OR BOUNDARIES IS PLANNED, IT WOULD BE IMPERATIVE TO CARRY OUT FURTHER SURVEY WORK TO DETERMINE THE BOUNDARY DIMENSIONS.
BOUNDARIES HAVE BEEN DETERMINED BY SURVEY ON 11/11/2016.
PRIOR TO ANY CONSTRUCTION WORK, SURVEY MARKS SHOULD BE PLACED TO DEFINE THE PROPERTY BOUNDARIES.
SERVICES SHOWN ARE INDICATIVE ONLY. POSITIONS ARE BASED ON SURFACE INDICATORS LOCATED DURING FIELD SURVEY. CONFIRMATION OF THE EXACT POSITION SHOULD BE MADE PRIOR TO ANY EXCAVATION WORK. OTHER SERVICES MAY EXIST WHICH ARE NOT SHOWN.
LEVELS ARE BASED ON AUSTRALIAN HEIGHT DATUM (AHD) USING SSM XXXX WITH RL XXXX (AHD).
RIDGE & GUTTER HEIGHTS HAVE BEEN OBTAINED BY INDIRECT METHOD AND ARE ACCURATE TO ± 0.05m.
CONTOURS SHOWN DEPICT THE TOPOGRAPHY EXCEPT AT SPOT LEVELS SHOWN THEY DO NOT REPRESENT THE EXACT LEVEL AT ANY PARTICULAR POINT. THE SPOT LEVELS ARE TRUE FOR THEIR POSITION, AND ARE INTENDED TO BE USEFUL TO REPRESENT THE GENERAL TERRAIN. CARE SHOULD BE TAKEN IF EXTRAPOLATING.
(C) RIGHT OF CARRIAGEWAY 5 WIDE (DP 773104)
BASEMENT FOR SERVICES 5 WIDE (DP 773104)
(D) RIGHT OF CARRIAGEWAY 5 WIDE, 8 WIDE & VAR EASEMENT FOR SERVICES 5 WIDE, 8 WIDE, & VAR EASEMENT TO DRAIN WATER 5 WIDE, 8 WIDE, & VAR (R) RESTRICTION ON USE OF LAND



LEGEND	
BENCH MARK	▲ TEL
TELSTRA PIT	⬢ TEL
ELECTRIC LIGHT POLE	⬢ LP
POWER POLE	⬢ PP
SIGN POST	⬢ SP
SEWER INSPECTION PIT	⬢ SIP
SEWER VENT	⬢ SEWER
MANHOLE	⬢ MH
SEWER MANHOLE	⬢ SMH
STOP VALVE	⬢ SV
WATER HYDRANT	⬢ HYD
WATER METER	⬢ WM
GAS METER	⬢ G
STATE SURVEY MARK	⬢ SSM



TSS TOTAL SURVEYING SOLUTIONS

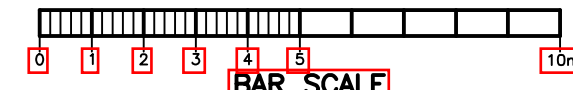
ARTARMON | CAMDEN | MANLY VALE

NOTE:
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REVISION No.	REVISION DATE:	COMMENT:

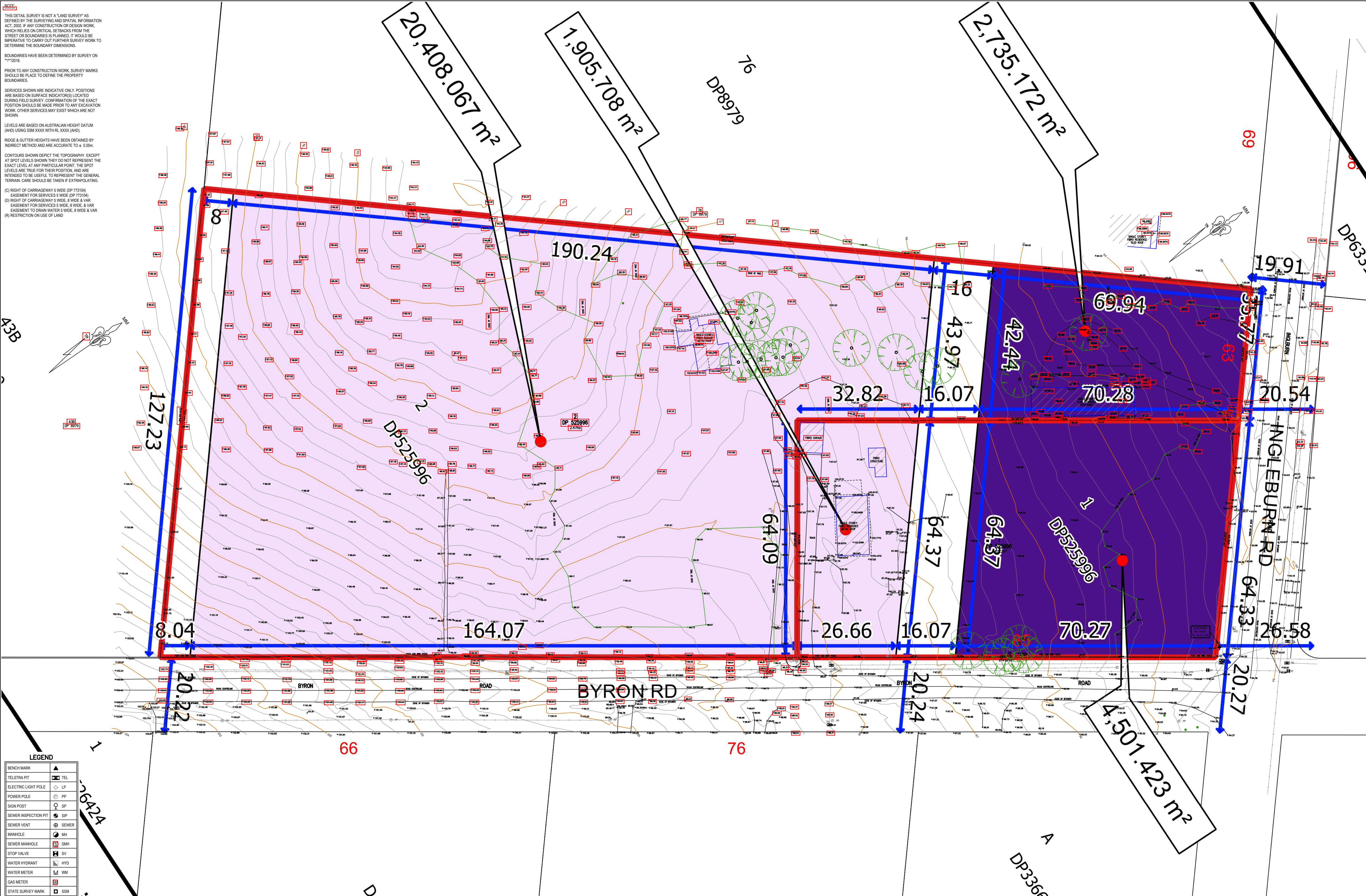
LEGEND:
EB - EDGE OF BITUMEN
TB - TOP OF BANK
BB - BOTTOM OF BANK
WT - TOP OF WINDOW
WB - BOTTOM OF WINDOW

TG - TOP OF GUTTER
TR - ROOF RIDGE
FL - FLOOR LEVEL
INV - INVERT LEVEL
ELEC - ELECTRICAL PIT
Ø 4/5/10/H16 - DIAMETER/SPREAD/HEIGHT

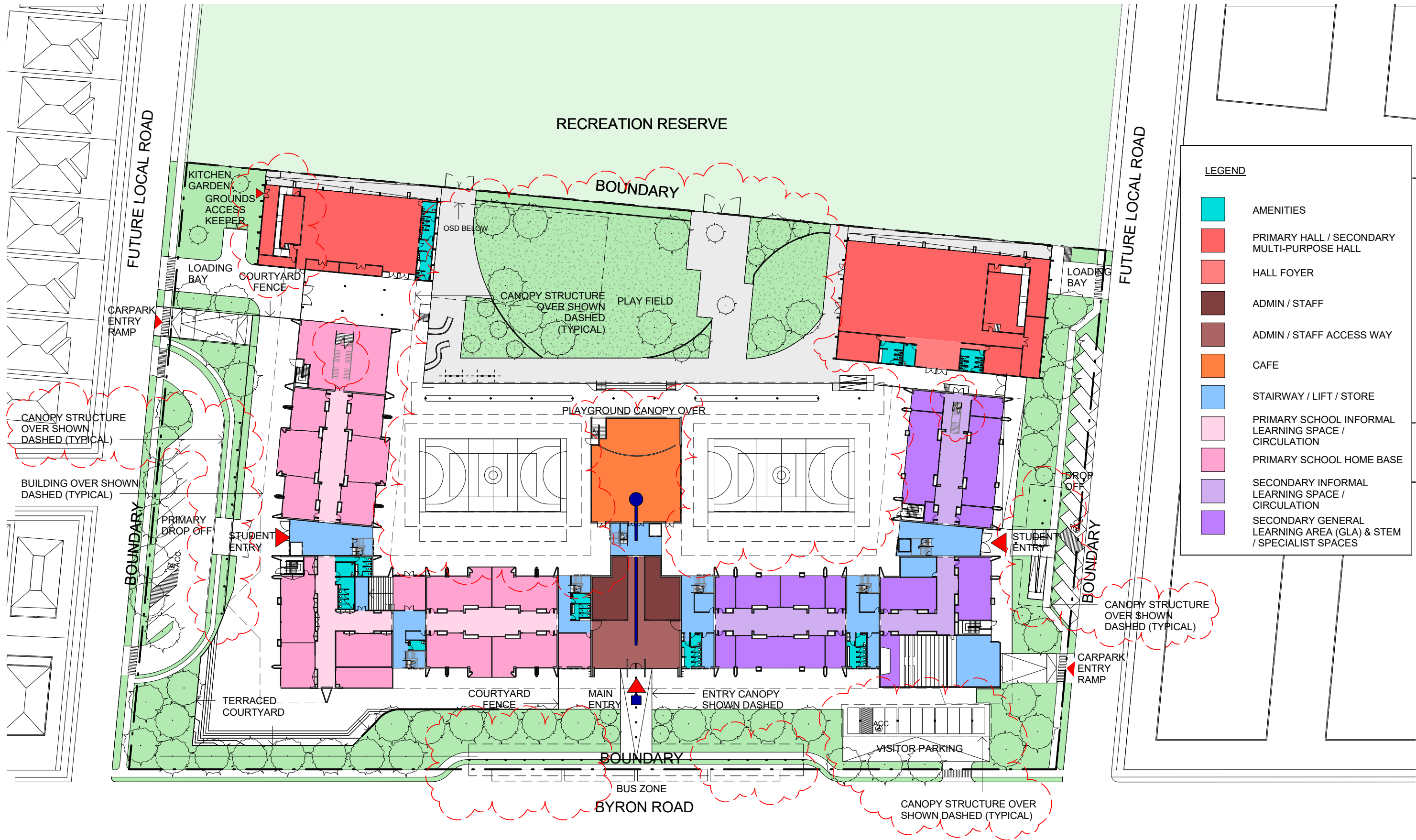


BAR SCALE
PLOTED SCALE 1:100 (A0 SIZE SHEET)

PLAN SHOWING DETAIL & LEVELS OVER LOTS 1&2 IN DP525996		JOB No.: 180370	LGA: CAMDEN
CLIENT: GRAN ASSOCIATES AUSTRALIA		PLAN No.: 180370_A	DATUM: AHD
PROJECT: AMITY COLLEGE LEPPINGTON CAMPUS		DATE: 13/03/2018	SCALE: NOT TO SCALE
ADDRESS: CORNER INGLEBURN ROAD AND BYRON ROAD, LEPPINGTON		DRAWN: MR	CONT. INTERVAL: 0.25m
		CHK: GS	SHEET 1 OF 1



ATTACHMENT B – PROPOSED DEVELOPMENT LAYOUT



0 mm 10 mm 30 mm

ON ORIGINAL SHEET

N°.	DESCRIPTION	DATE
PI	PRELIMINARY ISSUE	16.01.19
P2	PRELIMINARY ISSUE	13.03.19

amity college

SCALE	DRAWN BY	CHECKED BY	DATE
1 : 750 @A3	BM/MC	PR	November 2018

PROJ. No.	DRAWING No.	REV.
A1803	DA - 010	P2

Gran
GRAN ASSOCIATES AUSTRALIA
ARCHITECTS PTY LTD
LEVEL 1, 597 DARLING STREET
ROZELLE NSW 2039
PH: +61 2 9818 8437
FAX: +61 2 9818 8288
PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599

PROJECT
AMITY COLLEGE LEPPINGTON
85 Byron Road, Leppington NSW
TITLE:
SITE PLAN

ATTACHMENT C – AGENCY COMMENTS



Camden Council

70 Central Avenue, Oran Park NSW 2570
PO Box 183, Camden 2570
Telephone: 02 4654 7777
Email: mail@camden.nsw.gov.au

DX 25807
ABN: 31 117 341 764
Fax: 02 4654 7829

20 April 2018

Navdeep Shergill
Department of Planning and Environment
(via e-mail to navdeep.singhshergill@planning.nsw.gov.au)

Dear Sir,

RE: Request for SEARs for Proposed New Amity College, 85 Byron Road and 63 Ingleburn Road (SSD 9227)

**PROPERTY: 85 Byron Road, Leppington
63 Ingleburn Road, Leppington
Lots: 1 and 2, DP: 525996**

I refer to your letter dated 6 April 2018 that provided draft Secretary's Environmental Assessment Requirements for the above project and requested Council feedback.

Council officers raise the following additional matters that should be addressed by the applicant and assessed as part of the State Significant development application (DA).

Planning

1. Off-street car parking for the proposed development must, as a minimum, comply with the Camden Growth Centre Precincts Development Control Plan (DCP). The applicable parking rate is reproduced verbatim in italics below:

- *1 space per staff member, and*
- *1 space per 100 students, and*
- *1 space per 5 students in Year 12 where appropriate.*

A drop off / pick-up area facility of sufficient size to accommodate the forecast demand identified through a traffic and parking report. The resultant layout of the facility is to be to the satisfaction of Council.

2. The DCP has master planned the site to contain local parts of two local roads. The provision of these roads must form part of the DA for the school.
3. The DA must address the following environmental planning instruments:
 - State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017,





- State Regional Environmental Plan No. 20 - Hawkesbury-Nepean River, and
 - Draft Environment State Environmental Planning Policy.
4. The DA must address the Camden Growth Centre Precincts Development Control Plan.
 5. The site was envisioned to be developed as a public school in accordance with the Camden Growth Areas Contributions Plan (CP). A private school is therefore inconsistent with the CP. In addition, Council notes that the proposed development will not be exempt from the payment of monetary contributions in accordance with the CP.

The applicant must address the CP in preparing the DA.

6. Council strongly recommends that the applicant consult with the Camden Local Area Command (NSW Police Force) in the preparation of the DA.

Traffic

7. Council is undertaking assessment for the upgrade of Ingleburn Road. At this stage Council is provisionally progressing traffic signals at the intersection of Ingleburn Road and Byron Road. The applicant should continue to liaise with Council on this matter as the ultimate road geometry may impact upon access to the site.
8. The applicant should carefully investigate facilities for school drop-off and pick-up on Byron Road and minimise impact on through-traffic.
9. Consideration should be given to staggered start and finish times for different stages of the school to reduce traffic impacts.

Engineering/Flooding

10. A stormwater management report must be submitted with the DA. This plan must demonstrate a satisfactory design for stormwater management, including interim and ultimate quantity and quality control, in accordance with Council's Engineering Specifications, the DCP and the Precinct's Watercycle Management Strategy.
11. The proposed development must be designed in accordance with the Parson Brinckerhoff Water Cycle Master Plan produced in support of Schedule 5 of the Camden Growth Centre Precincts Development Control Plan (DCP). This should also include consideration of the drainage routes going through the surrounding road network and potentially through the site. The DA should also consider where the DCP shows road networks as these are generally in locations that allow drainage to flow.
12. The DA must demonstrate the following:
 - consideration of existing and future flood levels and provision of appropriate freeboard,





- allowance for road widening due to the future upgrade of Byron and Ingleburn Roads and the intersection of Byron and Ingleburn Roads, and
- how the proposed development will function when adjacent levels change due to changes in the surrounding road network.

13. Engineering plans showing existing and proposed levels, the location of all proposed stormwater pipes and pits, road cross sections, temporary roads, temporary turning heads, longitudinal sections, dimensions of all driveways, aisles and car parking spaces, gradients and swept paths, the 1% annual exceedance probability extent and the location of all proposed on-site stormwater detention/quality control facilities must be submitted with the DA.

14. A flood report, prepared in accordance with Council's Flood Risk Management Policy, must be submitted with the DA. The report must consider mainstream flood levels, account for existing and developed external catchments, ensure appropriate freeboards and allow appropriate grades to the drainage outlets.

Environmental/Public Health

15. A salinity assessment must be prepared for the site in accordance with the NSW Environment Protection Authority's Site Investigation for Urban Salinity Booklet. It is important that resistivity is included and that the assessment is undertaken to the maximum depth of the proposed development.

Where aggressive or saline soils are identified a salinity management plan, that addresses construction requirements for all proposed buildings and infrastructure, must be submitted with the DA.

16. The applicant must ensure that the location and layout of any proposed canteen, and any associated bin area/room, can comply with AS 4674 - 2004 - Design, Construction and Fit-Out of Food Premises.

17. Details of how any existing on-site wastewater management systems will be decommissioned must be submitted with the DA.

Waste Management

18. The waste management plan for the proposed development must address, but not necessarily be limited to, the following matters:

- waste management for the demolition, construction and operational stages of the proposed development,
- a separate, secure and controlled waste storage area must be provided within the school grounds. This will need to be located in an area that a waste truck can access and ensure that there are no lips, dips or barriers between the waste storage area and the waste collection area,





- collection arrangements for garbage and recycling and estimates of the amount of waste to be generated for each of these waste streams,
- specifications for where and how green waste will be collected and generation estimates, including whether it will be collected by the waste service or managed by a garden contractor,
- potential special wastes to be collected including waste oils, sanitary or some hazardous or biological waste from science classes or a canteen,
- consideration for a waste collection vehicle to collect waste on the site (potentially from a car park or similar area depending upon the choice of bins to be used),
- the applicant may want to use 240L bins for garbage, as these can be distributed through the yard of the school as litter bins or similar, and use bulk bins or a skip bin for recycling,
- swept path diagrams that demonstrate that a 12.5m long, 2.5m wide HRV Austroads template vehicle can access the waste collection area. This includes side loading for 240L bins, rear loading for bulk 660L and 1,100L bins and front loading for all skip bins, and
- waste servicing times should be outside of core hours for the school and especially outside of pick-up and drop-off times for students.

Heritage

19. Part of the site is identified as being a moderate Aboriginal archaeological sensitivity area. An Aboriginal cultural heritage assessment, prepared in accordance with the relevant Office of Environment and Heritage guidelines, must be submitted with the DA.

Building/Accessibility

20. As the proposed development will likely be a multi-storey construction, the services of an A1 accredited certifier must be engaged to provide a BCA design assessment with particular focus on the requirements of Part D3 Accessibility.

21. An access report, prepared by a suitably qualified access consultant, must be submitted with the DA.

Should you have any enquiries in relation to this matter, please contact Ryan Pritchard, Principal Planner, on (02) 4654 7715 or e-mail ryan.pritchard@camden.nsw.gov.au.





Yours Sincerely,

Mr R Pritchard
PRINCIPAL PLANNER
(Planning and Environmental Services)



Secretary's Environmental Assessment Requirements

Section 4.12(8) of the *Environmental Planning and Assessment Act*
Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

Application Number	SSD 9227
Proposal Name	Proposed New Amity College Campus
Location	85 Byron Road & 63 Ingleburn Road, Leppington
Applicant	Amity College
Date of Issue	26 April 2018
General Requirements	<p>The Environmental Impact Statement (EIS) must be prepared in accordance with, and meet the minimum requirements of clauses 6 and 7 of Schedule 2 the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulation).</p> <p>Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.</p> <p>Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include:</p> <ul style="list-style-type: none"> adequate baseline data; consideration of potential cumulative impacts due to other development in the vicinity (completed, underway or proposed); and measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment. <p>The EIS must be accompanied by a report from a qualified quantity surveyor providing:</p> <ul style="list-style-type: none"> a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Environmental Planning and Assessment Regulation 2000) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; an estimate of the jobs that will be created by the future development during the construction and operational phases of the development; and certification that the information provided is accurate at the date of preparation.
Key Issues	<p>The EIS must address the following specific matters:</p> <p>1. Statutory and Strategic Context Address the statutory provisions contained in all relevant environmental planning instruments, including:</p> <ul style="list-style-type: none"> State Environmental Planning Policy (State & Regional Development) 2011; State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017; State Environmental Planning Policy (Infrastructure) 2007; State Environmental Planning Policy No.55 – Remediation of Land; State Environmental Planning Policy No. 64 – Advertising Signage; State Environmental Policy (Sydney Region Growth Centres) 2006;

	<ul style="list-style-type: none"> • State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017; • State Environmental Planning Policy NO. 20 – Hawkesbury-Nepean River; • Draft Environmental State Environmental Planning Policy; • Draft Remediation of Land State Environmental Planning Policy; and • Camden Local Environmental Plan 2010. <p><i>Permissibility</i> Detail the nature and extent of any prohibitions that apply to the development.</p> <p><i>Development Standards</i> Identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards.</p> <p>2. Policies Address the relevant planning provisions, goals and strategic planning objectives in the following:</p> <ul style="list-style-type: none"> • NSW State Priorities; • Greater Sydney Region Plan, A Metropolis of Three Cities; • NSW Future Transport 2056; • State Infrastructure Strategy 2018 – 2038; • Sydney's Cycling Future 2013; • Sydney's Walking Future 2013; • Sydney's Bus Future 2013; • Crime Prevention Through Environmental Design (CPTED) Principles; • Healthy Urban Development Checklist, NSW Health; • Better Placed – an integrated design policy for the built environment of NSW; • Greater Sydney Commission's Western City District Plan; and • Camden Development Control Plan 2011; and • Camden Growth Centre Precincts Development Control Plan. <p>3. Operation</p> <ul style="list-style-type: none"> • Provide details of the existing and proposed school operations, including staff and student numbers, school hours of operation, and operational details of any proposed before/after school care services and/or community use of school facilities. • Provide a detailed justification of suitability of the site to accommodate the proposal. • Provide details of how the school will continue to operate during construction activities of the new primary and secondary school, including proposed mitigation measures. <p>4. Built Form and Urban Design</p> <ul style="list-style-type: none"> • Address the height, density, bulk and scale, setbacks of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces. • Address design quality, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials, colours and Crime Prevention Through Environmental Design Principles. • Develop a design report that includes diagrams, illustrations and drawings to clarify the design intent of the proposal that clearly demonstrates how design quality will be achieved in accordance with Schedule 4 Schools – Design Quality Principles of State Environmental
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	<p>Planning Policy (Educational Establishments and Child Care Facilities) 2017.</p> <ul style="list-style-type: none"> • Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development. • Provide detailed site and context analysis to justify the proposed site planning and design approach. • Provide a detailed site-wide landscape strategy. <p>5. Environmental Amenity</p> <ul style="list-style-type: none"> • Assess amenity impacts on the surrounding locality, including solar access, acoustic impacts, visual privacy, view loss, overshadowing and wind impacts. • Identify any proposed use of the school outside of school hours (including weekends) and assess any resultant amenity impacts on the immediate locality and proposed mitigation measures. • Detailed outline of the nature and extent of the intensification of use associated with the increased floor space. • Detail amenity impacts including acoustic impacts. High level of environmental amenity for any surrounding residential land uses must be demonstrated. • Detail any proposed use of the school grounds out of school hours (including weekends) and any resultant amenity impacts on the immediate locality and proposed mitigation measures. <p>6. Staging</p> <p>Provide details and expected timing regarding the staging of all components of the proposed development.</p> <p>7. Transport and Accessibility</p> <p>The EIS shall include a Traffic Transport and Accessibility Impact Assessment, which details, but is not limited to the following:</p> <ul style="list-style-type: none"> • accurate details of the current daily and peak hour vehicle, public transport, pedestrian and cycle movement and existing traffic and transport facilities provided on the road network located adjacent to the proposed development; • an assessment of the operation of existing and future transport networks including the bus network and their ability to accommodate the forecast number of trips to and from the development; • details of estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips based on surveys of the existing and similar schools within the local area; • details of any proposed school bus routes along bus capable roads (i.e. travel lanes of 3.5 metres minimum) and supporting infrastructure (bus stops, bus bays etc); • the adequacy of public transport, pedestrian and bicycle networks and infrastructure to meet the likely future demand of the proposed development; • comparison of the traffic generated by the proposed development against the alternative of planned housing development for part of the site; • an assessment of road safety at key intersection and locations (including but not limited to the Ingleburn-Byron Road and Ingleburn Road-Camden Valley Way intersections) subject to heavy vehicle construction traffic movements and high pedestrian activity; • identification of suitable infrastructure required to ameliorate any impacts on traffic efficiency and to maximise road safety at affected intersections; • the proposed access arrangements (normal and emergency as well as interim access arrangements during any required upgrade works), including car and bus pick-up/drop-off movements, estimated service
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	<p>vehicle movements, and parking areas for all car user groups (e.g. visitor parking, disabled parking and car share);</p> <ul style="list-style-type: none"> • sustainable travel initiatives for staff, students and visitors, particularly for the provision of a Green Travel Plan and wayfinding strategies; • safe pedestrian and bicycle connections, including pedestrian crossings and refuges and speed control devices and zones; • details of any upgrading or road improvement works required to accommodate the proposed development (including any local road construction that may be required in accordance with Council's DCP); • details of travel demand management measures to minimise the impact on general traffic and bus operations and to encourage sustainable travel choices and details programs for implementation, including the preparation of a Green Travel Plan; • the impact of trips generated by the development on nearby intersections, with consideration of the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for upgrading or road improvement works, if required. Traffic modelling is to be undertaken using, but not limited to, SIDRA network modelling for current and future years; • assess the impact of the proposed variation in planned subdivision pattern and indicative layout plan on the delivery of surrounding network (where applicable); • prioritisation of active transport initiatives through provision of walking and cycling infrastructure) e.g. segregated paths, bicycle parkin, etc) to and within the site, considering connections and availability of public transport; • proposed number of on-site car parking spaces and corresponding compliance with the Camden Growth Centre Precincts Development Control Plan and justification for the level of car parking provided on-site; • proposed bicycle parking provision, including end of trip facilities, in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance; • details of emergency vehicle access arrangements; • an assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures; • an assessment of cumulative on-street parking impacts of car and bus pick-up/drop-off, staff parking and any other parking demands associated with the development during weekdays and special events; • measures to maintain road and personal safety in line with CPTED principles; • in relation to construction traffic: <ul style="list-style-type: none"> ○ an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity; ○ details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process; ○ details of the anticipated daily and peak hour construction vehicle movements to and from the site, so as to not impact current traffic operations on the road network; ○ details of access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle; ○ details of temporary cycling and pedestrian access during construction; ○ details of proposed construction vehicle access arrangements at all stages of construction; and
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- traffic and transport impacts during construction, including cumulative impacts associated with other construction activities, and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport, including the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact.

→ Relevant Policies and Guidelines:

- *Guide to Traffic Generating Developments (Roads and Maritime Services)*;
- *EIS Guidelines – Road and Related Facilities (DoPI)*;
- *Cycling Aspects of Austroads Guides*;
- *NSW Planning Guidelines for Walking and Cycling*;
- *Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development*;
- *Standards Australia AS2890.3 (Bicycle Parking Facilities)*.

8. Noise and Vibration

Identify and provide a quantitative assessment of the main noise and vibration generating sources during construction and operation, including consideration of any public-address system, school bell and use of any school hall for concerts etc. (both during and outside school hours). Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land.

→ Relevant Policies and Guidelines:

- *Noise Policy for Industry 2017 (EPA)*;
- *Interim Construction Noise Guideline (DECC)*;
- *Assessing Vibration: A Technical Guideline 2006*;
- *Development Near Rail Corridors and Busy Roads – Interim Guideline (Department of Planning 2008)*.

9. Ecologically Sustainable Development (ESD)

- Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000) will be incorporated in the design and ongoing operation phases of the development.
- Include a description of the measures that would be implemented to minimise consumption of resources, water (including water sensitive urban design) and energy.
- Demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice.

10. Social Impacts

Include an assessment of the social consequences of the school's relative location.

11. Aboriginal Cultural Heritage

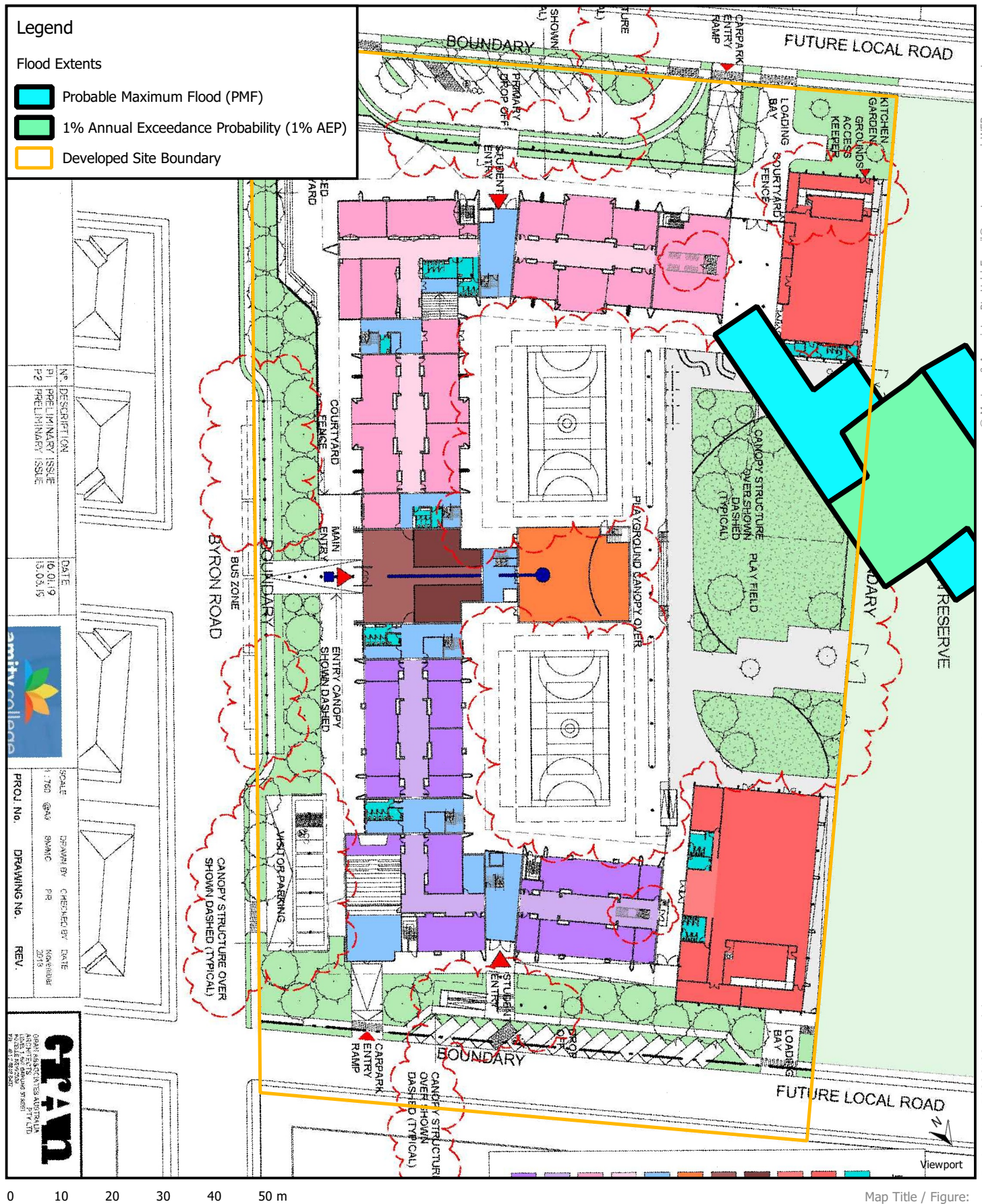
- Identify and describe the Aboriginal cultural heritage values that exist across the whole area that would be affected by the development, which may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the *Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW* (DECCW, 2011).
- Where Aboriginal cultural heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW). Detail the significance of cultural heritage values for Aboriginal people who have a cultural association with the land.

	<ul style="list-style-type: none"> Assess impacts on Aboriginal cultural heritage values and demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH. Please note the Due Diligence assessment process is not appropriate to address the requirements for Aboriginal Cultural Heritage assessment. <p>12. Utilities</p> <ul style="list-style-type: none"> Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure. Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design. <p>13. Contributions Address Council's Section 94 Contribution Plan and/or details of any Voluntary Planning Agreement, which may be required to be amended because of the proposed development.</p> <p>14. Contamination Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. → Relevant Policies and Guidelines: <ul style="list-style-type: none"> <i>Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP).</i> </p> <p>15. Salinity Include a salinity report in accordance with the Site Investigation for Urban Salinity Booklet (EPA).</p> <p>16. Construction Hours Identify proposed construction hours and provide details of the instances where it is expected that works will be required to be carried out outside the standard construction hours.</p> <p>17. Drainage Detail drainage associated with the proposal, including springs, stormwater and drainage infrastructure. → Relevant Policies and Guidelines: <ul style="list-style-type: none"> <i>Guidelines for development adjoining land and water managed by DECCW (OEH, 2013).</i> </p> <p>18. Flooding</p> <ul style="list-style-type: none"> Assess any flood risk on site (detailing the most recent flood studies for the project area) and consideration of any relevant provisions of the NSW Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity. The 1% annual exceedance probability extent and the location of all proposed on-site stormwater detention/quality control facilities must be provided. <p>19. Waste</p> <ul style="list-style-type: none"> Identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
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	<ul style="list-style-type: none"> Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site. <p>20. Biodiversity Advise and provide comment on the current status of the existing biodiversity certification on the subject site as identified in the South West Growth Centre - Biodiversity Certification map under section 43 of the Biodiversity Conservation (Savings and Transition) Regulation 2017.</p> <p>21. Sediment, Erosion and Dust Controls Detail measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. → Relevant Policies and Guidelines:</p> <ul style="list-style-type: none"> <i>Managing Urban Stormwater – Soils and Construction Volume 1 2004 (Landcom);</i> <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA);</i> <i>Guidelines for development adjoining land and water managed by DECCW (OEH, 2013).</i>
<p>Plans and Documents</p>	<p>The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. Provide these as part of the EIS rather than as separate documents.</p> <p>In addition, the EIS must include the following:</p> <ul style="list-style-type: none"> Architectural drawings including but not limited to the following requirements: <ul style="list-style-type: none"> dimensioned including RLs; plans, sections and elevation of the proposal at no less than 1:200 showing furniture layouts and program; site and context plans that demonstrate active transport linkages with existing, proposed and potential footpaths and bicycle paths and public transport links; and detailed annotated wall sections at 1:20 scale that demonstrate typical cladding, window and floor details, including materials and general construction quality; Artist impressions/architectural renders of the proposal; Site Survey Plan, showing existing levels, location and height of existing and adjacent structures / buildings and boundaries; Site Plans and operations statement demonstrating the afterhours and community use strategy; Site Analysis Plan; Stormwater Concept Plan and Stormwater Management Plan; Flood report prepared in accordance with Camden Council's Flood Risk Management Policy. Sediment and Erosion Control Plan; Shadow Diagrams; View Analysis / Photomontages, including from public vantage points; An integrated Landscape Plan/Strategy (including identification any trees to be removed and trees to be retained or transplanted); Preliminary Construction Management Plan, inclusive of a Preliminary Construction Traffic Management Plan detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures; Geotechnical and Structural Report; Accessibility Report; Arborist Report; Salinity Investigation Report (if required);

	<ul style="list-style-type: none"> • Acid Sulphate Soils Management Plan (if required); • Schedule of materials and finishes including a physical material sample board (no larger than A3) with correct proportional representation of materials; • Acoustic Report; • Waste Management Plan; • Fire Safety Measures Schedule; • Green Travel Plan; • Draft Construction Environmental Management Plans and relevant sub plans; and • A report tabling how the project responds to and upholds the design guide for schools as stipulated in Schedule 4 Schools – design quality principles of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017.
Consultation	<p>During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular, you must consult with:</p> <ul style="list-style-type: none"> • Camden Council; • Government Architect NSW (through the NSW State Design Review Panel Process) • Transport for NSW (TNSW); and • Roads and Maritime Services (RMS). <p>Consultation with Council, TfNSW, RMS and Government Architect NSW should commence as soon as practicable to agree the scope of investigation.</p> <p>The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>
Further consultation after 2 years	<p>If you do not lodge a development application and EIS for the development within two years of the issue date of these SEARs, you must consult further with the Secretary in relation to the preparation of the EIS.</p>
References	<p>The assessment of the key issues listed above must consider relevant guidelines, policies, and plans as identified.</p>

ATTACHMENT D – WMA (2011) FLOOD MAP AND PROPOSED DEVELOPMENT LAYOUT



Attachment D - WMA (2011) FLOOD MAP AND PROPOSED DEVELOPMENT LAYOUT

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85 Byron Road, Leppington, NSW

Amity College Leppington Campus

Flood Engineering Works for Development Application

Amity College

29/05/2019