(PPSSSH-74) - (2-6 Porter Road, Engadine)

(DA21/0354)

ASSESSMENT REPORT APPENDICES

Appendix	A	Conditions of Consent
	B	PAD Meeting Minutes
	C	Report and Recommendation of the Design Review Forum Panel
	D	Rural Fire Service Response (06 August 2021)
	E	Clause 4.6 Variation Request
	F	Architectural Plans

CONDITIONS OF CONSENT

1. Approved Plans and Documents

The development must be undertaken substantially in accordance with the details and specifications set out on the following approved plans:

Plan number	Reference	Prepared by	Date
EHS_2709 / 0101 / I	Coversheet	Webber Architects	15.03.2021
EHS_2709 / 0202 / L	Site Plan	Webber Architects	06.04.2021
EHS_2709 / 0300 / K	Demolition Plan	Webber Architects	07.04.2021
EHS_2709 / 0301 / Q	Floor Plan - Ground	Webber Architects	15.07.2021
EHS_2709 / 0330 / H	Roof Plan - Lower Roof	Webber Architects	15.03.2021
EHS_2709 / 0331 / H	Roof Plan - Upper Roof	Webber Architects	15.03.2021
EHS_2709 / 0401 / P	Elevations - Sheet 1	Webber Architects	09.08.2021
EHS_2709 / 0401 / P	Elevations - Sheet 2	Webber Architects	09.08.2021
EHS_2709 / 0501 / J	Sections - Sheet 1	Webber Architects	15.03.2021
EHS_2709 / 1001 / K	Materials Palette - Sheet 1	Webber Architects	09.08.2021
L01 Issue E	Landscape Concept Plan	Green Space Planning Co	August 2021
L02 Issue E	Plant Schedule	Green Space Planning Co	August 2021
EHS-C100 Rev B	Cover, Notes and Legends Sheet	Enstruct Group	12/03/21
EHS-C101 Rev B	Erosion and Sediment Control Plan and Detail	Enstruct Group	12/03/21
EHS-C111 Rev B	Bulk Earthworks Plan	Enstruct Group	12/03/21
EHS-C201 Rev C	Siteworks Plan	Enstruct Group	15/03/21
EHS-C211 Rev A	Details Sheet 1	Enstruct Group	09/12/20
EHS-C212 Rev A	Details Sheet 2	Enstruct Group	09/12/20
EHS-C221 Rev B	Sections Sheet 1	Enstruct Group	12/03/21

and any details on the application form and on any supporting information received with the application except as amended by the following conditions.

Note: A Crown Certificate is required to be obtained prior to the commencement of any building works. Council requests notification of the commencement of building works with a minimum of 2 days' notice of such commencement.

2. Integrated Development Approval - Requirements of Rural Fire Service

A. General Terms of Approval from Rural Fire Service

The development must be undertaken in accordance with all General Terms of Approval (GTA) from the Rural Fire Service issued under Section 4.46 of the Environmental Planning and Assessment Act 1979:

A copy of the GTA dated 6 August 2021 and any further requirements are attached to this development consent.

3. Public Place Environmental, Damage & Performance Security Bond

A. Before Works

Prior to the commencement of any works on site, , the person acting on this consent must provide security to Sutherland Shire Council against damage that may be caused to any Council property and/or the environment as a consequence of the implementation of this consent. The security may be provided by way of a deposit with Council or a bank guarantee. A non-refundable inspection/administration fee is included in the bond value.

It is the responsibility of the person acting on this consent to notify Sutherland Shire Council of any existing damage to public areas in the vicinity of the development site by the submission of a current dilapidation report supported by photographs. This information must be submitted to Council at least 2 days prior to the commencement of works.

In the event that the dilapidation report is not submitted 2 days prior to commencement and the public area sustains damage the person acting on this consent may be held liable.

Should any public property and/or the environment sustain damage as a result of the works associated with this consent, or if the works put Council's assets or the environment at risk, Council may carry out any works necessary to repair the damage and/or remove the risk. The costs incurred must be deducted from the bond.

The value of the bond is *$10,500.00*

Note: Bond amount includes a non-refundable administration fee, specified in Council's Schedule of Fees and Charges, which must be paid separately if security is provided by way of a deposit with Council or a bank guarantee.

Use of Bank Guarantee: As bond releases may occur under different timeframes only one bond amount/bond purpose is permitted on a Bank Guarantee. Multiple bonds will require multiple bank guarantees to be lodged.

A Bank Guarantee may only be used where the minimum bond amount is $50,000.

The Bank Guarantee must also:

- Note Council as the interested party
- Have NO expiry date
- Describe the type of development using the description on the consent
- Include both the address of the development site and the application number
- NOT include the non-refundable administration fee; this must be paid separately.

B. After Occupation

A request for release of the bond may be made to Sutherland Shire Council after all works relating to this consent have been completed. Such a request must be submitted to Council on the 'Bond Release Request Form' signed by the owner or any person entitled to act on the consent and must be accompanied by a current dilapidation report including photographs.

4. Approvals Required under Roads Act or Local Government Act

A. Before Construction

No occupation or works are to be carried out on public land (including a road or footpath) or access provided over a public reserve adjacent to the development site without approval being obtained from Sutherland Shire Council and the necessary fee paid under the Roads Act 1993 and/or the Local Government Act 1993. These approvals must be to the satisfaction of Council for the required development works and may include but are not limited to the following:

- Frontage works including construction of a driveway, footpath, etc.
- Road openings and restoration to provide services to the development.
- Work Zones and hoardings.
- Skip bins.
- Shoring / anchoring.
- Standing of cranes, concrete pumps, etc.

Note: All Plans and Permits are required to be on site, at all times and may be requested by Council officers at any time.

Note: Approval under the Roads Act or Local Government Act cannot be granted by a Principal Certifying Authority or by a Private Certifier. Failure to obtain approval may result in fines or prosecution.

B. During Works

There must be no occupation or works on public land (including a road or footpath) or access provided over a public reserve adjacent to the development site without approval being obtained from Sutherland Shire Council. Any work on public land must be undertaken strictly in accordance with the relevant approval issued under the Roads Act 1993 and/or the Local Government Act 1993 by Sutherland Shire Council.

5. Site Management Plan

A. Before Commencement of Works including Demolition

Environmental Site Management Plan - This Plan must satisfy the Objectives and Controls of Sutherland Shire Development Control Plan 2015 relating to environmental site management and must incorporate the following throughout demolition and construction:

i) Safe access to and from the site during construction and demolition.

ii) Safety and security of the site, road and footpath area including details of proposed fencing, hoarding and lighting.

iii) Method of loading and unloading excavation machines, building materials.

iv) How and where, construction materials, excavated and waste materials will be stored.

v) Methods to prevent material being tracked off the site onto surrounding roadways.

vi) Erosion and sediment control measures.

vii) All trees and their protection zones on and around the site identified for retention are to be protected according to Australian Standard AS 4970 - 2009 Protection of Trees on Development Sites using the methods outlined in that Standard.

B. During Works

The site management measures set out in the above plan must remain in place and be maintained throughout the period of works and until the site has been stabilised and landscaped.

C. Before Occupation

Before occupation, all foundations / materials associated with construction works (that do not form part of the approved works) must be removed. This includes but is not limited to foundations for tower cranes, vehicle access ways, stockpiles, building waste etc.

6. Supervising Engineer

A. Before Construction

The applicant must engage an Accredited Certifier in civil engineering works or a Chartered Civil Engineer to supervise construction of any:

i) Road frontage works (where required).

ii) Construction / installation of stormwater drainage.

B. During Construction

The engineer must supervise the works as listed above to ensure compliance with:

i) All relevant conditions of development consent.

ii) Any Consent issued under the Roads Act for this development.

C. Before Occupation

The supervising engineer must certify the works required in A. above were undertaken and completed in accordance with the requirements of this Development Consent and to their satisfaction.

7. Pre-commencement Inspection

A. Before Works

A Pre-commencement Inspection/meeting is to be convened by the Applicant on-site a minimum 5 days prior to any demolition and/or construction activity and between the hours of 8.00 am and 4.30 pm Monday to Friday. The meeting must be attended by a representative of Council's Public Domain Assets Branch, the builder/site manager of

the building/civil construction company and where necessary the supervising engineer.

The purpose of the meeting is to:

i) Ensure safe passage for pedestrians, Work and Hoarded Zones are maintained in accordance with Council requirements.

ii) Check the installation and adequacy of all traffic management devices.

iii) Confirm that the supervising engineer has a copy of Council's Specification for Civil Works Associated with Subdivisions and Developments.

Note: An inspection fee must be paid to Council prior to the lodgement of the Notice of Commencement. Please refer to Sutherland Shire Councils Adopted Schedule of Fees and Charges.

8. Drainage Design - Detailed Requirements

A. Design

The stormwater drainage system must be designed in accordance with the approved stormwater drainage design drawing; Australian Standard AS3500.3:2015; Sutherland Shire Environmental Specification - Stormwater Management.

B. Before Occupation

i) A Works-As-Executed drawing (WAED) of the stormwater drainage system must be prepared by a Registered Surveyor. This drawing must detail the alignment of pipelines, pits, the rainwater tanks and the detention facilities. An original or a colour copy must be submitted to Sutherland Shire Council.

ii) The supervising engineer must certify the WAED of the stormwater drainage system that the stormwater drainage works, rainwater harvesting facility and rainwater reuse systems were constructed to their satisfaction and in accordance with the Development Consent, and Public Domain Technical Manual. Prior to the occupation or use of the building the Applicant / Owner must submit to Council a copy of the aforementioned letter of certification.

D. Ongoing

i) The operation of all devices or appliances installed within the development approved by this consent as required by conditions pertinent to rainwater harvesting and rainwater reuse must be maintained in good operating order at all times.

ii) The stormwater detention facility must be:

- Kept clean and free from silt, rubbish and debris.
- Be maintained so that it functions in a safe and efficient manner.
- Not be altered without prior consent in writing of the Council.

Note: Upon submission of the Works-As-Executed drawing for the stormwater drainage system a notation will be added to the Section 10.7 certificate advising future owners that their property is burdened by a stormwater detention facility

9. Stormwater Treatment

A. Before Construction

Appropriate stormwater treatment measures, selected and designed in accordance with Engineers Australia (2006) Australian Runoff Quality - A guide to Water Sensitive Urban Design, Argue J R (2013) WSUD: Basic Procedures for 'Source Control' of Stormwater - A Handbook for Australian practice, or other relevant industry design guidelines, must be provided as part of the permanent site stormwater quality management system. Details of the design, construction and maintenance must accompany the Crown Certificate.

B. Before Occupation

The work required by A. above must be completed to the satisfaction of the supervising engineer before occupation of the site.

C. Ongoing

The stormwater treatment measure must be maintained in accordance with the manufacturers' or designer's specification for the life of the development.

Note: Upon approval of the stormwater management designs a notation will be added to the Section 10.7 certificate in relation to any required stormwater treatment device.

10. Flood Requirements

A. Design

The development must be undertaken in accordance with the flood study report prepared by Enstruct Group Pty Ltd dated July 2021 and in accordance with the following:

i) A suitably qualified engineer must certify that the structure can withstand the forces of floodwater, scour, debris and buoyancy up to and including the FPL.
ii) All electrical and mechanical components susceptible to flood damages must be located at or above the FPL

11. Landscaping Works

A. Design

The landscaping works must be designed in accordance with the approved Landscape Plan except where modified by the following:

i) The tree planting proposed for the hall is to be changed in the following manner: The four Cupaniopsis - Tuckeroo trees to be planted on the embankment facing Porter Road are to be replaced with two Corymbia gummifera, one Angophora costata and two Banksia serrata. The four Tristaniopsis - Water Gum on the Birok Avenue side are to be replaced with four Angophora bakeri trees, and, the four Waterhousia planted along the internal road of the development shall be interplanted with three Banksia serrata trees to reinstate the locally endemic tree cover of the Greenweb corridor.

ii) The low shrub Planting Mix 03 is to be swapped out for species that are representative of the local forest types.

iii) Clearly show on plan existing trees to be removed /retained including tree numbering in accordance with the arborist report OR provide a separate existing tree plan and schedule.

iv) Tree Protection Zones (TPZ) / the location of tree protective fencing must be shown on plan for all existing trees and/or natural site features to be retained and protected.

v) All landscape retaining walls and planter boxes must be constructed in masonry, stone or gabions. Timber is not acceptable.

vi) To improve coverage and reduce weeds and maintenance, planting densities in all planting areas including planter boxes must achieve a minimum of 4 plants per square metre.

vii) To reduce long term maintenance of planting beds turf species must be native grass such as *Zoysia macrantha* 'Nara' or Buffalo grass varieties.

viii) As the subject site is identified as being within a Greenweb Restoration area, all new tree plantings must be indigenous species and 50% of understorey plants must be indigenous species. All indigenous species must be selected from Council's 'Native Plant Selector' available on Council's website (www.sutherlandshire.nsw.gov.au and search for Native Plant Selector).

The applicant must engage a suitably qualified Landscape Designer or Landscape Architect to oversee any design changes to the approved Landscape Plan and amendments required above. Details of these design changes must be included in the documentation for the contract Landscaper to construct these works.

Notes:
A Landscape Designer is a person eligible for membership of the Australian Landscape Designers and Managers and a Landscape Architect is a person eligible for membership of the Australian Institute of Landscape Architects as a Registered Landscape Architect.

Tree protection measures must be installed prior to commencement of demolition.

B. Prior to Occupation

The landscape works must be completed in accordance with the approved Landscape Plan and amendments required by 'A' above by persons with a minimum AQF Level III certification in Horticulture or Landscape Construction.

A Final Landscape Inspection must be carried out and a certificate issued by Council's landscape officer at the completion of the Landscape works and prior to the start of the maintenance period. This certificate is required to ensure that all tree protection measures, landscaping works, replacement tree planting and the deep soil percentage requirements have been carried out in accordance with 'A' above and other conditions within this consent, that all new indigenous plants on the site and within the road reserve are the correct species and that all trees planted within the road reserve are in accordance with the detailed road frontage design where it forms part of the Roads Act Consent.

To arrange a Final Landscape Inspection please phone 9710-0333 a minimum of 48 hours prior to the required inspection date. An inspection fee will be charged in accordance with the current schedule of rates listed on Council's website. Any secondary inspections will incur a reinspection fee.

C. Ongoing

All landscaping works required by 'A' above must be maintained for 12 months following the final landscape inspection date. Trees required by this condition must be maintained and protected until they are covered by Council's Controls for Preservation of Trees and Bushland Vegetation (SSCDCP 2015 Chapter 39).

Any plants found faulty, damaged, diseased or dead shall be replaced with the same species in the same sized container within one month with all costs borne by the owner.

Note: If difficulty is experienced sourcing suitable indigenous plants from other suppliers, plants grown from locally provenance seed may be available from:

Sutherland Shire Council Nursery
345 The Boulevarde, Gymea
Ph: 02 9524 5672

12. Trees on Private Land

A. Tree Removal

The removal of the following trees is approved:

i) Trees identified on the approved Landscape Plan as "existing tree to be removed"

ii) Trees growing within the 3 metres of the building footprint of the approved structures.

iii) Any declared noxious plant. The applicant is to ensure that all noxious plants are properly identified and controlled/removed.

iv) Any tree species exempted by the Sutherland Shire Local Environmental Plan 2015.

All other vegetation that would require approval to be removed must be protected

13. Tree Retention and Protection

The following condition applies to all trees on the subject site, trees on the adjoining sites (which are potentially affected by the development works), as well as trees on the adjoining Council land that are not approved for removal.

A. Before Works

Prior to the commencement of any demolition, excavation or construction works on site, the following tree protection measures must be put in place and maintained during the course of construction to prevent damage to trees.

i) Protective fencing constructed of 1.8m high chain wire mesh supported by robust

posts must be installed at the distance required by Australian Standards AS4970-Protection of Trees on Development Sites. Signage must be erected on the fence with the following words clearly displayed “TREE PROTECTION ZONE, DO NOT ENTER”.

ii) The tree protection zone within the protective fencing must be mulched with a maximum depth 75mm of suitable organic mulch (woodchips or composted leaf chip mulch) and kept regularly watered for the duration of the works subject to this consent.

iii) No development or associated activity is permitted within the fenced tree protection zone for the duration of works subject to this consent. This includes vehicular or pedestrian access, sheds, washout areas, excavations, backfilling, installation of services (including stormwater), removal of top soil, stockpiling of soil or building materials.

iv) Where site access/egress is required over the roots of trees identified for retention and protection, provide hardwood rumble boards over a 200mm thick layer of wood chip.

B. During Construction

i) The tree protection measures detailed in ‘A’ above must be maintained during construction.

ii) A supervising Arborist must be present during any approved hand excavation or under boring works within the Tree Protection Zone (TPZ) of any tree identified for retention and protection and have the authority to direct works to ensure the trees long term preservation;

iii) A supervising Arborist must strictly supervise that there is no disturbance or severing of roots greater than 30mm diameter and to cleanly cut those roots between 10-30mm in diameter.

iv) If the tree/s identified for retention in ‘A’ above are damaged or destabilised during construction then works in the vicinity of the tree/s must cease and Council’s Tree Assessment Officer (ph. 9710 0333) must be contacted to assess the tree/s and recommend action to be taken.

14. Management of Site Soil / Fill Material

A. During Works

i) Disposal of site soils

Any soils to be excavated and disposed of from the site must be analysed and classified by an appropriately qualified, skilled and experienced environmental consultant, in accordance with relevant NSW EPA guidelines including the “Waste Classification Guidelines” 2014, prior to off-site disposal.

Excavated material is to be transported to an appropriately licensed waste facility by an EPA licensed waste contractor in accordance with relevant NSW EPA guidelines.

- **Note:** With respect to fill material classified as special waste (asbestos); the waste facility must be licensed to accept asbestos waste.

ii) Reused soils

Any existing soils excavated to be reused on the site must be assessed by an appropriately qualified, skilled and experienced environmental consultant in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (amended 2013) and any relevant guidelines approved under *the Contaminated Land Management Act 1997;* to verify that the material is suitable for the intended land use, prior to reuse.

Any soils not suitable for the intended land use must be removed from site and disposed of in accordance with i) above.

iii) Importation of fill material

Any fill material that is imported onto the site must comprise Virgin Excavated Natural Material (VENM), Excavated Natural Material (ENM) or other suitable material in accordance with the relevant Resource Recovery Exemption issued under the *Protection of the Environment Operations (Waste) Regulation 2014.*

Prior to placing any fill material on the site, appropriate waste classification/ certification documentation that verifies the material is VENM or complies with the requirements of the relevant Resource Recovery Exemption, including ENM, must be provided to the satisfaction of the Sutherland Shire Council, Manager Environmental Science.

Note: An appropriately qualified and experienced environmental consultant must be certified by one of the following certification schemes, or demonstrate an equivalent standard acceptable to Sutherland Shire Council, Manager Environmental Science.

· EIANZ 'Certified Environmental Practitioner' - General or Site Contamination scheme (CEnvP or CEnvP SC).

· Soil Science Australia 'Certified Professional Soil Scientist - Contaminated Site Assessment & Management' scheme (SSA CPSS CSAM).

15. Management of Unexpected Soil Contamination - Unexpected Finds Protocol

A. Before Commencement of Works

An Unexpected Finds Protocol (UFP) must be prepared by an appropriately qualified, experienced and certified environmental consultant to manage the discovery of unexpected contaminants which may be encountered during excavation and/or construction works.

The Unexpected Finds Protocol must be submitted to the satisfaction of Sutherland Shire Council, Manager Environmental Science prior to the commencement of any works.

Note: The environmental consultant must be certified by one of the following certification schemes, or demonstrate an equivalent standard acceptable to Sutherland Shire Council, Manager Environmental Science:

- EIANZ ‘Certified Environmental Practitioner - Site Contamination’ scheme (CEnvP SC).

- Soil Science Australia ‘Certified Professional Soil Scientist - Contaminated Site Assessment & Management’ scheme (SSA CPSS CSAM).

B. During Works

If unexpected contamination is encountered during any works, the situation is to be assessed and managed in accordance with the Council endorsed Unexpected Find Protocol under the supervision of the supervising environmental consultant.

16. Flora and fauna protection measures

·A. Prior to Works commencing

i) Areas of vegetation outside the development footprint are to be clearly demarcated with high visibility tape to prevent accidental clearing during the construction phase.

B. During Works

i) Vegetation should be cleared in a way that will allow fauna species living in the clearing site (if any) enough time to move out of the area without additional human intervention.

ii) No clearing should occur during the early evening or at night, when nocturnal fauna species are most likely to be active.

iii) The direction of clearing should also ensure that fauna species are directed away from threats such as roads, developed areas or disturbed areas.

iv) An appropriately qualified ecologist should undertake an inspection of trees, buildings, and structures prior to demolition, so that any roosting microbats or other fauna may be detected and appropriately managed prior to construction. This may involve putting works on hold until fauna is no longer roosting or breeding.

v) Should any injured fauna species be found during the construction period, construction must stop immediately so that the injured animal can be taken to a vet or wildlife carer. All handling of fauna species should be conducted by a qualified ecologist or wildlife carer.

17. Protection for a Potential Item of Aboriginal Heritage

A. During Construction

Development consent from Council does not imply consent to destroy an Aboriginal site or Aboriginal object as defined under the National Parks and Wildlife Act.

Should any Aboriginal objects be unearthed/exposed during the project, works must temporarily cease within the immediate vicinity and Heritage NSW be contacted to advise on the appropriate course of action.

Requirements of National Parks and Wildlife Act 1974

The National Parks and Wildlife Act is the primary legislation for the protection of Aboriginal cultural heritage in NSW. Under the National Parks and Wildlife Act 1974 it is

an offence to desecrate or harm an Aboriginal object without having obtained an Aboriginal Heritage Impact Permit (AHIP) under section 90 or without having exercised due diligence in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (NSW Department of Environment, Climate Change & Water (DECCW)).

18. External Lighting - (Amenity)

To ensure that any lighting on the site does not cause a nuisance to neighbours or motorists on nearby roads:

A. Design

All lighting must be designed in accordance with Australian Standard AS4282 - Control of the Obtrusive Effects of Outdoor Lighting.

B. Ongoing

All lighting must be operated and maintained in accordance with the Standard above.

19. Acoustic Report

A. Design & Ongoing

The development shall comply with the acoustic report and its conclusions and recommendations submitted as part of this application (prepared by Spectrum Acoustics dated February 2021).

20. Noise Control - Design and Operation (General Use)

To minimise the impact of noise from the development, the use of the premises and all sound producing plant, equipment, machinery, mechanical ventilation system or refrigeration systems:

A. Design

The use of the premises and all plant and equipment must be designed and / or located so that the noise emitted does not exceed an LAeq sound pressure level of 5dB above the ambient background level when measured at the most affected point on or within any residential property boundary.

Note: The method of measurement of sound must be carried out in accordance with Australian Standard 1055.1.

B. Before Occupation

Prior to the occupation of the development certification must be provided to the Principal Contractor by a qualified acoustic engineer that all work associated with the installation of the acoustic measures has been carried out in accordance with ‘A’ above.

C. Ongoing

All plant and equipment must be operated and maintained in accordance with ‘A’ above.

21. Demolition Work

To ensure that demolition of structures is carried out in an environmentally acceptable and safe manner:

A. Before Commencement

If works involve the removal of more than 10 square metres of asbestos material, a bonded asbestos licence is required. A friable asbestos licence is required to remove, repair or disturb any amount of friable asbestos. For further information contact SafeWork NSW.

B. During Works

i) The demolition of the existing building must be carried out strictly in accordance with Australian Standard 2601 - The Demolition of Structures.

ii) The applicant must ensure that the demolition contractor has a current public risk insurance coverage for a minimum of $5 million. A copy of the Policy must be submitted to the Council prior to demolition.

To ensure that the removal and transportation of any asbestos material, regardless of the quantity, is carried out in an environmentally acceptable and safe manner, all work must comply with the following:

a) Work Health and Safety Act 2011;
b) Work Health and Safety Regulation 2017;
c) Safe Work Australia Code of Practice - How to Manage and Control Asbestos in the Workplace;
d) Safe Work Australia Code of Practice - How to Safely Remove Asbestos;
e) Protection of the Environment Operations Act 1997; and
f) Protection of the Environment Operations (Waste) Regulation 2014.

Asbestos waste in any form must be disposed of at a waste facility licensed by the NSW EPA to accept asbestos waste. Any asbestos waste load over 100kg (including asbestos contaminated soil) or 10m² or more of asbestos sheeting must be registered with the EPA on-line reporting tool WasteLocate. More information can be found at <https://wastelocate.epa.nsw.gov.au>.

22. Sydney Water Requirements & Section 73 Compliance Certificate

A. Before Any Works

Prior to the commencement of any works on site, including demolition or excavation, the plans approved as part of the Crown Certificate must also be approved by Sydney Water. This allows Sydney Water to determine if sewer, water or stormwater mains or easements will be affected by any part of your development. Customers will receive an approval receipt which must be included in the Crown Certificate documentation.

Please refer to the web site www.sydneywater.com.au.

B. Before Occupation

Prior to occupation a Compliance Certificate under Section 73 of the Sydney Water Act, 1994, must be submitted to Council. Sydney Water may require the construction of works and/or the payment of developer charges. This assessment will determine the availability of water and sewer services, which may require extension, adjustment or connection to the mains.

Sydney Water Advice on Compliance Certificates:

Sydney Water will assess the development and if required will issue a Notice of Requirements letter detailing all requirements that must be met. Applications can be made either directly to Sydney Water or through a Sydney Water accredited Water Servicing Coordinator. Please make early contact with the Coordinator, since building of water / sewer extensions can be time-consuming and may impact on other services as well as building, driveway or landscaping design.

Go to www.sydneywater.com.au/section73 or call 1300 082 746 to learn more about applying through an authorised WSC or Sydney Water.

23. Dial Before You Dig

A. Before Construction

Underground assets may exist in the area that is subject to your application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial Before You Dig at www.1100.com.au or telephone on 1100 before excavating or erecting structures (this is the law in NSW).

It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial before you dig service in advance of any construction or planning activities.

24. Noise Control and Permitted Hours for Building and Demolition Work

A. General

To manage noise impacts upon the surrounding properties and occupants, demolition, excavation, or construction activities must be managed in accordance with the NSW Department of Environment and Climate Change (now Environment Protection Authority). Interim Construction Noise Guideline (ICNG) 2009 and Australian Standard 2436 - 2010 Guide to Noise Control on Construction, Maintenance and Demolition Sites.

B. Before Excavation

Prior to any excavation works involving rock breakers and similar earthmoving equipment, the builder must notify in writing all property owners/tenants within a minimum of 20m of all boundaries of the development site of the works being undertaken, a minimum of 7 days prior to the commencement of such works. The notification must provide details of the type of work being carried out, the time of day, its anticipated duration and a contact number to log any complaints or to make enquiries.

C. During Works

To minimise the noise impact on the surrounding environment, all building and demolition work must be carried out only between the hours of 7.00am and 6.00pm Monday to Friday inclusive, 8.00am and 3.00pm Saturdays. No work is permitted on Sundays and Public Holidays.

PRESCRIBED CONDITIONS

Division 8A Prescribed conditions of development consent

Clause 98 Compliance with Building Code of Australia and insurance requirements under the Home Building Act 1989

(cf clauses 78 and 78A of EP&A Regulation 1994)

(1) For the purposes of Section 4.17(11) of the Act, the following conditions are prescribed in relation to a development consent for development that involves any building work:
   (a) that the work must be carried out in accordance with the requirements of the Building Code of Australia,
   (b) in the case of residential building work for which the Home Building Act 1989 requires there to be a contract of insurance in force in accordance with Part 6 of that Act, that such a contract of insurance is in force before any building work authorised to be carried out by the consent commences.

(1A) For the purposes of Section 4.17(11) of the Act, it is prescribed as a condition of a development consent for a temporary structure that is used as an entertainment venue, that the temporary structure must comply with Part B1 and NSW Part H102 of Volume One of the Building Code of Australia.

(2) This clause does not apply:
   (a) to the extent to which an exemption is in force under clause 164B, 187 or 188, subject to the terms of any condition or requirement referred to in clause 164B(4), 187(6) or 188(4), or
   (b) to the erection of a temporary building, other than a temporary structure to which subclause (1A) applies.

(3) In this clause, a reference to the Building Code of Australia is a reference to that Code as in force on the date the application is made for the relevant:
   (a) development consent, in the case of a temporary structure that is an entertainment venue, or
   (b) construction certificate, in every other case.

Note. There are no relevant provisions in the *Building Code of Australia* in respect of temporary structures that are not entertainment venues.

Clause 98E Condition relating to shoring and adequacy of adjoining property

(1) For the purposes of Section 4.17(11) of the Act, it is a prescribed condition of development consent that if the development involves an excavation that extends below the level of the base of the footings of a building, structure or work (including any

structure or work within a road or rail corridor) on adjoining land, the person having the benefit of the development consent must, at the person's own expense:

(a) protect and support the building, structure or work from possible damage from the excavation, and

(b) where necessary, underpin the building, structure or work to prevent any such damage.

(2) The condition referred to in subclause (1) does not apply if the person having the benefit of the development consent owns the adjoining land or the owner of the adjoining land has given consent in writing to that condition not applying.

Please be advised if this consent is for an entertainment venue, then there are further prescribed conditions that apply under clauses 98C and 98D of the Environmental Planning and Assessment Regulation.

Evan Phillips - 9710 0569
File Ref: PAD21/0003

17 March 2021

Minister For Education And Training
C/- Dfp Planning Pty Ltd
PO BOX 230
PENNANT HILLS NSW 1715

Dear Sir/Madam

Pre-Application Discussion No. PAD21/0003
Proposal: A proposed new hall and associated works at Engadine High School
Property: 2-6 Porter Road, Engadine

Council is committed to achieving quality built outcomes for the benefit of residents and the broader community. The Pre-Application (PAD) process is intended to assist in this goal and I appreciate you taking the time to attend.

The PAD held on 24 February 2021 regarding the above development proposal was attended by Evan Phillips (development assessment officer) and Peter Brooker (Architect) who attended the meeting on behalf of Council.

The purpose of this letter is to provide a summary of the issues discussed at the meeting and provide information that will assist you complete a development application (DA). Council cannot provide you with certainty on the determination of the proposal until a DA has been lodged and assessed.

Your DA will need to be supported by a Statement of Environmental Effects addressing all relevant Environmental Planning Instruments, and the detailed planning controls contained in Council's Draft Development Control Plan.

<u>The Site and Proposal:</u>
The site accommodates Engadine High School and is located at 2-6 Porter Road, Engadine on the southern side of the road reserve. The site is also bound by Anzac Avenue to the south, Birok Avenue to the west and Princes Highway to the west.

The land is irregular in shape and accommodates numerous educational buildings along with associated external open spaces / sport fields for students use and car parking areas. There are substantial tracts of natural vegetation mainly provided along the site peripheries with a large concentration within the south eastern site portion. The land drains and falls in a northerly direction.

The streetscape in vicinity to the site is characterised by a mix of low density residential detached single dwellings and multi dwelling development set within an urban bushland setting.

The proposal is for the construction of a new hall located on the northern portion of the site on the corner of Birok Avenue and Porter Road. The hall is to accommodate a large multi-purpose area/basketball court, fixed stage, change rooms and amenities, associated storage and service rooms. Tree removal is proposed in conjunction with the development.

Comments on the Proposal:

1. Environmental Planning Instruments

The property is within Zone SP2 – Educational Establishment under the provisions of Sutherland Shire Local Environmental Plan 2015 (SSLEP2015). Further, State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 (EESEPP) indicates that the development is within a "prescribed zone" and the proposed development is permitted with development consent.

The EESEPP has been developed to facilitate the effective delivery of educational establishments and early education and care facilities across the State. The EESEPP also contains certain "complying development" provisions. These cannot currently be utilised as the site is identified as environmentally sensitive land "Biodiversity" on the Terrestrial Biodiversity Map of SSLEP2015. The environmental site constraints, characteristics and opportunities are discussed in more detail below.

2. General Urban Design

Schedule 4 of the EESEPP contains the 7 design quality principles which align to this development typology and are directly applicable to the proposal. SSLEP 2015 and Council's Sutherland Shire Development Control Plan 2015 (DCP) also set design quality requirements and certain matters of consideration relating to urban design.

The proposals complies with the primary development standard contained within SSLEP2015 for Building Height (i.e 12m). There is an absence of applicable development controls contained within Council's DCP for this building typology in the zone. Notwithstanding this, the basic approach to site planning, building footprint / envelope and setbacks should be informed by examples of similar developments and the schools interface with the streetscape and adjacent land uses.

3. Site Planning & Urban Design

The location of the building within a site portion currently devoid of built form and disconnected somewhat from the primary external areas of the school for student use is considered to be appropriate. The topography of this site portion is generally more conducive to a larger development than other available areas within the school grounds. Whilst this approach is understood, it was discussed as to the nature of existing adjoining buildings (including existing hall) and as to whether the building could be better integrated with either the removal of / or retention of these structures so as to better respond to the setback and streetscape concerns raised.

The built form which incorporates a wing roof design and high quality material finishes (when compared to the existing built form within the school grounds) will be architectural statement identifying the educational establishment. The building is highly visible from the public domain and adjoining residential development and several concerns are raised in relation to the setbacks proposed and the height out of ground, particularly as the ground floor level is elevated and surrounding subfloor and egress/ stair routes visually exposed.

Development within the existing school grounds is characterised by deep open frontages with landscaping. Whilst not directly applicable, Council DCP and the EESEPP contains certain provisions with respect to building setbacks as measured to the closest extent of built form. These are considered to be reasonable guidelines for the proposal so as to ensure the

development reinforces the established desired streetscape character. The EESEPP nominates a setback of:

a) that is not less than the average distance of the front setbacks of all existing development that is located within 70m of the building, or
(b) if there is no development located within 70m of the building—of at least 5m.

The main façade of the building is proposed to be setback 5m to Birok Avenue and 10m to Porter Road. The building is set forward of existing development from the Porter Road frontage. Further, the surrounding pathways and egress/ stair routes encroach substantially within the proposed setback. The height 'out of ground' of the ground level and resulting subfloor wall results in an actual and visually perceived, reduced setback than proposed. This presents ramifications in terms integrating with the character of the streetscape along with opportunities for tree retention and planting and an increased setback / resolution of the building design is recommended.

Further, as the orientation of the entry portal and forecourt is internal and towards the school grounds (which is appropriate for general wayfinding, connectivity to existing infrastructure and surveillance) this has resulted in the remaining building elevation presenting as more defensive and visually plain as 'back of house' areas, rather than an engaging and activating presence in the streetscape.

Care must also be given with the blending of old and new architectural styles and building typologies. The building being of a bulk / scale notably of a more modern aesthetic requires resolution to integrate contextually with the prevailing low density urban and bushland character. The proposal will be considered by a Design Review Forum (DRF) as part of the development assessment process. Sutherland Shire Council engages the DRF to guide refinement of applications and to ensure deign quality is achieved. The EESEPP design principles will form the baseline for the urban design considerations and discussions with the DRF.

4. Environmental Impact

Clause 6.5 of SSLEP2015 requires Council to consider the impact of the development on flora; fauna; vegetation; biodiversity and habitat and any appropriate mitigation measures. Certain matters prior to development consent being granted. These matters include the design of the development to avoid or minimise impact; management to minimise the impact if it cannot be avoided and mitigation if the impact cannot be minimised.

The site is mapped as accommodating OEH Urban Exotic/Native Forest as well as Coastal Sandstone Gully Forest. The species represented on the area directly affected by the works are all native tree species but are not endemic to the area except for one. The species on site are: 2x Corymbia citriodora – Lemon scented Gums, 8x Casuarina glauca – Swamp Oak, 1x Tristaniopsis laurina – Dwarf Water Gum, 1x Callistemon viminalis – Weeping Bottlebrush, 1x Ficus rubignosa – Port Jackson Fig, and, 1x endemic Corymbia gummifera – Red Bloodwood. The specimens will be either in the edge of the building envelope or within the changed level areas that surround the building that will provide pedestrian access and will most likely necessitate removal.

An arborist report is required where trees are to be retained within this portion of the school site. Deeper frontages are encouraged to support some form of retention and to enable further tree plantings that will be viable in the long term given increased distances to the building.

Trees approved for removal will require replacement planting at a ratio of 8:1 in line with Council's adopted Policy (136 Trees to be replanted) and a detailed site / landscape plan should be prepared detailing such replacement and landscaping works. Tree replacement should occur to both street frontages, as the proposed building will be visually prominent.

The following landscaping works should also be considered when pursuing the development scheme:

- Provide planting forward of the building in an increased setback (mix of major canopy / understorey) at regular intervals.
- Develop a comprehensive landscape scheme which unifies the school grounds and extend across the sites frontages.
- Planting selection is to be based on Councils Greenweb "Restoration" planting guides, utilising endemic canopy trees as a framework (refer to Council's Native Plant Selector tool).
- Balance bush fire considerations (discussed below)

Care should also be taken in the final selection of plant species in order to maintain sight lines and general surveillance / observation opportunities of the public / student areas.

5. Bushfire Prone Land

The site is identified on Council's mapping as on bushfire prone land. Whilst the location of the proposed works do not extend within the buffer zone, any future application will need to address the environmental risk and be accompanied by a detailed bushfire assessment prepared by a suitably qualified bushfire consultant. Further, as a school is identified as a 'special fire protection purpose', under 100B of the Rural Fires Act, referral to the Rural Fire Service will be required when the application is lodged to obtain relevant bush fire safety authority before the granting of any consent.

6. Stormwater and Flood Planning

Detailed drainage plans are to accompany any future development application and are to be prepared by a Chartered Professional Engineering. Details of OSD and treatment along with connection to the existing drainage system is required.

A flood impact assessment should accompany any development application addressing Council's flood planning considerations and controls due to the location of the flood boundaries in proximity to the development.

7. Traffic Impact

The proposal is not indicated to result in any increase student capacity and staff at the school therefore not 'traffic-generating development' under Part 7 – Clause 57 of the EESEPP. Notwithstanding the above, there is an existing known strain on the surrounding road network which is significantly observed during pick-up and drop-off times. A future application should be supported by a detailed Traffic Report to demonstrate that the development will not result in any adverse traffic, safety or amenity impacts to the locality.

8. Determination Pathway

A detailed cost report will need to accompany any future development application. In accordance with the EP&A Act and State Environmental Planning Policy (State and Regional Development) 2011 should the cost of development exceed $5 million, the DA is a regional development and the Sydney South Planning Panel (SSPP) is the consent authority. The assessment and reporting timeframes are generally set out by the SSPP.

9. Development Contributions

Under Council's current s7.12 contributions plans, development that is exempted from paying the levy by Direction of the Minister for Planning, under section 7.17 of the EP&A Act includes applications by a Public Authority for services and community infrastructure. In this instance s7.12 will not apply.

10. Utilities and Infrastructure

You are advised to make enquiry early with the various infrastructure and utility providers to ensure relevant considerations for the provision of services have been taken into account early in the building design. Urban infrastructure and utilities are reaching, or have reached maximum capacity in some localities. Electricity substations are required on occasion to ensure sufficient power to buildings and NSW Fire have required substantial water tanks in some instances to meet flow requirements for sprinkler systems.

Infrastructure to support these requirements in the front boundary set back at the expense of landscaping or parking requirements is not likely to be acceptable. So you are encouraged to make enquiries and plan in advance.

Conclusion:

Council supports quality, well considered development and the comments provided are intended to help you work toward this outcome.

Council is largely supportive of a high quality learning / educational environment and the provision of additional facilitates for student education within the locality. The proposal is in a prominent and highly visible location when viewed from the public way and adjoining properties and care must be undertaken in the final design to ensure appropriate streetscape / landscape presentation and that reasonable neighbourhood amenity can be maintained. A pre-appointment with the DRF is recommended prior to finalising the building design.

The list of supporting documentation listed in the submitted Pre DA Statement is appropriate. Reference is made to the Development Application and supporting information checklists for the detailed submission requirements.

It is important to note that the information provided in this letter is based on the planning instruments applicable at the time of writing. You should make yourself aware of any subsequent changes to legislation or local planning controls before lodging your development application.

Council strongly recommends that you distribute this letter to all professionals within your design team including architects, landscape architects and engineers.

For detailed information about how to prepare and lodge a development application, please refer to the "Development" section of Council's website (www.sutherlandshire.nsw.gov.au). A “DA Guide” is available and an online tool called “Development Enquirer”, which searches the applicable planning instruments for the planning controls relevant to your site and development.Development applications can only be lodged through the NSW Planning Portal. When you are ready you will be required to set up a one-off registration in the Portal – go to www.planningportal.nsw.gov.au/user/login

Please contact Council if you believe any of the above information to be incorrect or if you need clarification of the advice provided. Your initial point of contact should be Evan Phillips (9710 0569) as this is Council’s development assessment officer who will most likely be responsible for the assessment of your DA.

Yours faithfully

Mark Adamson
Manager – Projects and Development Assessment

Report and Recommendations of the Design Review Forum Panel
Sutherland Shire Council 10th June, 2021

Panel Members: John Dimopoulos, Harry Levine, Peter Brooker
Council Staff: Evan Phillips & Ben Buchanan (ROFFs); Annette Birchall (Team Leader)

Applicant Team:	Martin Mende, Senior Project Director, School Infrastructure NSW Neil Hogan, Project Director, School Infrastructure NSW Leonardo Baca Storni, Assistant Project Director, School Infrastructure NSW Tom Keeler, Senior Project Manager, RPS Tom Short, Assistant Project Manager, RPS Jon Webber, Director, Webber Architects Sandra Hinchey, Director, Webber Architects Trent Russell, Project Architect, Webber Architects Amy Cropley, Urban Designer / Principal Planner, DFP Planning
DA No:	DA21/0354
PAD No:	PAD21/0003
Project Address:	2-6 Porter Road, Engadine
Proposal:	Construction of a multi-purpose hall

PREAMBLE

A proposal for the site has not previously been reviewed the Design Review Forum.

A proposal for the site was previously reviewed by Council on the 24 February, 2021 and the comments made have been taken into account in framing this report.

The site was viewed by the Panel members prior to the meeting.

The proposal has been considered in relation to the Design Quality Principles of the State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 as being recognised minimum standards for the attainment of good design. Detailed matters relating to Landscape are not covered by the Panel and will be separately reported by Council Officers.

Issues considered relevant to the proposal are noted below.

COMMENTS

1. Wayfinding and general exterior circulation seem circuitous and awkward. For instance, the first stair adjacent the control room, forces those approaching from the Porter's Road entry to zigzag and double back on their forward path which is unnecessary. A better solution would be to remove this stair and introduce steps between grids A and D, which has a smaller level change compared to the current stair, which in turn will serve access to the outdoor storeroom better, entering directly onto the covered entry forecourt, as well as consolidating with the descending stairs and strengthen the sense of arrival and improve wayfinding.

2. The above change will also allow the front low planters to extend another 13.5m or so, creating a more aesthetic and linear approach to the new stairs/forecourt and which would further improve the green base upon which the building is sitting, as well as further reduce the sense of bulk and the issue of height non-compliance at the part of the building.

3. The submission generally has inadequate documentation to allow the Panel to assess quality and impacts as it does not show the context adequately and fails to inform via key contextual data such as clear site analysis drawings, showing fine grain context, street and neighbourhood context etc.

4. As a part-time public community building, it disappoints in this role by its lack of ease of entry access, which could be improved with the above comments.

5. The 3.6m ceiling height over amenities, flanking the stage area, seems redundant and better use of this area could be achieved by lowering the roof form between grids D and E, and H and J, thereby achieving 2 improvements, providing scale, bulk reduction, and articulation to the Birok Avenue Residential elevational experience, and also allow for new glazed highlight returns on either side of the stage, granting improved northern illumination into the hall.

RECOMMENDATIONS

Further detailed design development is recommended to respond to the issues noted above to refine and improve the proposal.

John Dimopoulos
DRP Chair

1.0 Design

1.1 Design Review Forum

Table 1 provides a response to each of the Design Review Forum (DRF) recommendations.

Table 1: Response to Design Review Forum Recommendations

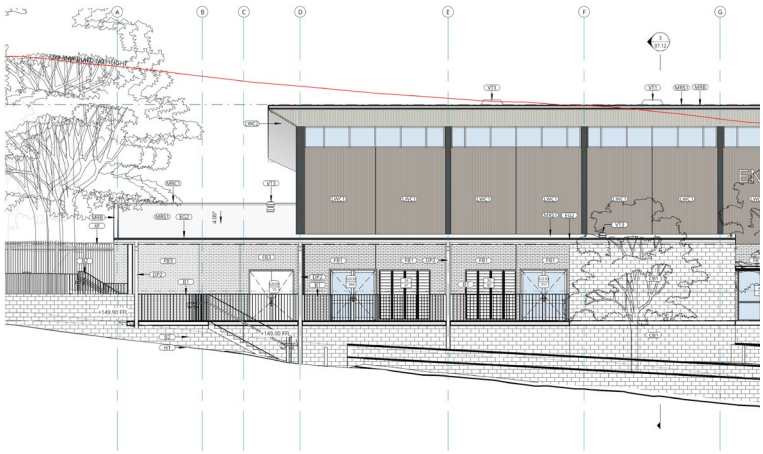
Recommendation	Response
1. Wayfinding and general exterior circulation seem circuitous and awkward. For instance, the first stair adjacent the control room, forces those approaching from the Porter's Road entry to zigzag and double back on their forward path which is unnecessary. A better solution would be to remove this stair and introduce steps between grids A and D, which has a smaller level change compared to the current stair, which in turn will serve access to the outdoor storeroom better, entering directly onto the covered entry forecourt, as well as consolidating with the descending stairs and strengthen the sense of arrival and improve wayfinding.	The first stair located adjacent to the control room has been relocated and re-orientated as shown on the updated ground floor plan and east elevation (**Figure 1**).  *Figure 1 Extract of East Elevation of multi-purpose hall showing new location of stairs and extension to planters*
2. The above change will also allow the front low planters to extend another 13.5m or so, creating a more aesthetic and linear approach to the new stairs/forecourt and which would further improve the green base upon which the building is sitting, as well as further reduce the sense of bulk and the issue of height non-compliance at the part of the building.	The relocation of the stairs has resulted in the extension to the low height planters along the eastern elevation of the building (**Figure 1**).
3. The submission generally has inadequate documentation to allow the Panel to assess quality and impacts as it does not show the context adequately and fails to inform via key contextual data such as clear site analysis drawings, showing fine grain context, street and neighbourhood context etc.	As noted in **Section 1.2** of this letter, an additional site analysis plan has been prepared by Project Architect, Webber Architects that provides a streetscape and street setback analysis of surrounding development on Porter Road and Birok Avenue.
4. As a part-time public community building, it disappoints in this role by its lack of ease of entry access, which could be improved with the above comments.	The principle use of the building is as an educational facility for the use of students. However, the building has been designed to have a strong street presence to Porter Road and may have some community use, at the discretion of the school when not been utilised by the school. It is also noted that the stair access has been rotated 180 degrees to provide improved and more direct access from Porter Road.
5. The 3.6m ceiling height over amenities, flanking the stage area, seems redundant and better use of this area could be achieved by	Webber Architects have reviewed recommendation no. 5 and have provided the following comments in relation to maintaining the existing roof form:

Table 1: Response to Design Review Forum Recommendations

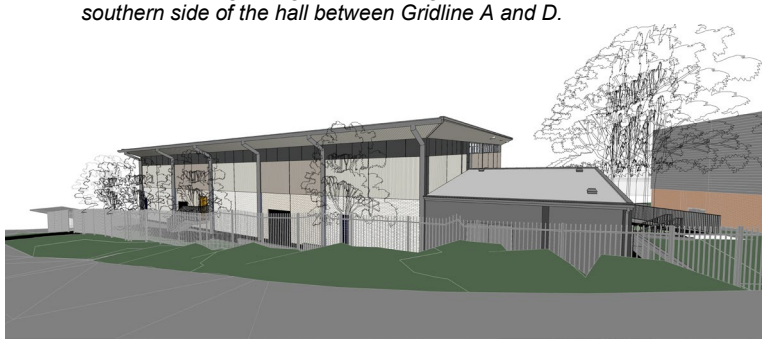
Recommendation	Response
lowering the roof form between grids D and E, and H and J, thereby achieving 2 improvements, providing scale, bulk reduction, and articulation to the Birok Avenue Residential elevational experience, and also allow for new glazed highlight returns on either side of the stage, granting improved northern illumination into the hall.	1. *It was recognised that the context of the school being, large scale buildings and the surrounding dwellings being 1 and 2 storey buildings. It was with this in mind that the new proposed school hall roof was orientated to fall from a higher level within the school to the lower level scaling down toward the side boundary on the western side. This allowed the minimum school hall height to be achieved within the hall and then again over the stage. This resulted with the lower roof levels being over the hall amenities areas closest to the boundary.* 2. *The school hall was conceived as a simplistic form to fit within the surrounding residential context. The idea of lowering the roof height over the amenities areas was investigated during design development however it was found that the angular line of the hall, with a lower roof to amenities areas adjacent realised into an awkward junction of higher and lower forms. This resulted in an alien form which Webber felt did not fit with the surrounding context and was detrimental to the existing context. It was with this in mind, and after further discussions with the Quantity Surveyor and the Engineering team that it was agreed the roof should remain as shown on the current design. As a part of this process it was decided to aid in the reduction of scale on the southern elevation by the selection of materials in both scale and texture. The proposed elevation as outlined on sheet 04 _04 shows the western façade broken horizontally by a mix of masonry and light weight cladding. On the lower level is the masonry brickwork where there is a further mix of light and medium coloured brickwork with further brickwork panels to the southern part of this elevation being a darker colour brickwork. Above this masonry is a further coordinated sequence of light and medium custom orb lightweight cladding. The horizontal break between brickwork and lightweight material aligns with the lover roof level on the southern side of the hall between Gridline A and D.*  *Figure 2 3D view of the proposed multi-purpose hall from Birok Avenue* 3. *Further, it is noted there are a cluster of existing trees on Birok Avenue which will shield part of the proposal. In addition to this there is a series of trees proposed in the landscape between the school hall and Birok Avenue which further reduces the scale on the western elevation. There has been a great deal of effort made to maintaining 2 trees (refer Arborist Report Trees 8 and Tree 9) within the site on the corner of Birok Avenue and Porter Road which will break the elevational experience to the corner. Additional trees are proposed under this project to the northern elevation facing Porter Road which help break the scale of this elevation.* 4. *As shown further on sheet 04_04 Birok Avenue rises dramatically towards the South reducing the scale of the School Hall as it rises. With relation to the context of the neighbours on Birok Avenue, sheet 04_03 shows and elevational study of the Hall in context with the lowest building on Birok Avenue. This elevation shows the building on the corner of Birok Avenue and Porter Road having a roof higher than that of the roof on the western façade of the proposed school hall. With this in mind the roof on this side of the hall fits within the local context.* 5. *We note the higher portion of the roof facing northeast and south have highlight windows giving ample light into the proposed school hall. If further highlights were located on the western side of the building this would provide unnecessary heat load to the building and result in glare*

Table 1: Response to Design Review Forum Recommendations	
Recommendation	**Response**
	to patrons attending functions with a performance on the school hall stage. *6. The proposed single pitch skillion roof form has considered and responded to SINSW requirement for low risk designs in terms of waterproofing, reduced maintenance as well as unsightly fixed roof safety access (ladders, rails and cages).*

1.2 Streetscape / Setbacks

A streetscape and setback analysis has been undertaken by Webber Architects showing the setbacks along Porter Road and Birok Avenue (Drawing Number SK-14). Existing front setbacks along Porter Road range from a minimum of 5.2m to a maximum of 9.9m. Existing front setbacks along Birok Avenue range from 3.3m to 16.2m. The proposed multi-purpose hall has a setback of 9.2m to Porter Road and of 5.8m to Birok Avenue, which is consistent with the prevailing setbacks on Porter Road.

The proposed multi-purpose hall has been deliberately sited to provide a street presence and address for the school (**Figure 3**).

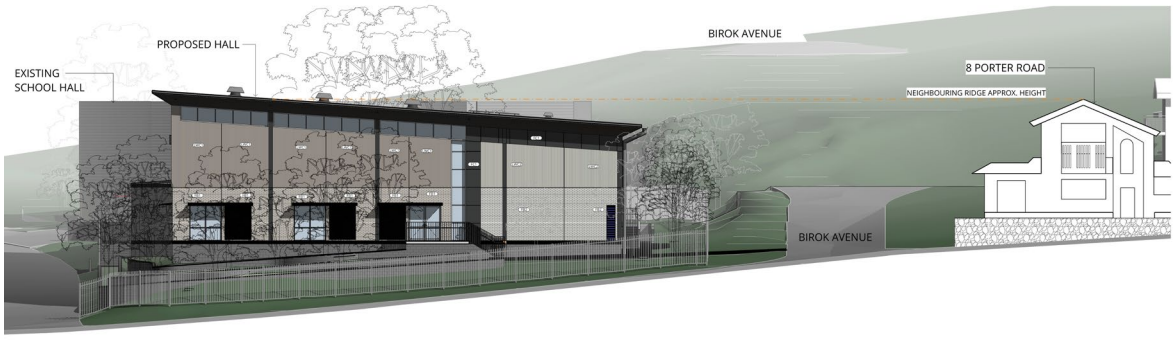


Figure 3 Porter Road elevation of the proposed multi-purpose hall

1.3 Hydrant Infrastructure

A Technical Memorandum has been prepared by Project Fire Services Engineer, Cardno in relation to the fire services design for the proposed multi-purpose hall. The Technical Memorandum notes that based on advice from Sydney Water, only a single fire hydrant is required to be installed. As a result, a hydrant booster assembly and hardstand area for Fire & Rescue NSW emergency vehicles is not required to be provided as part of the development.

A copy of the Technical Memorandum is submitted with this response letter.

2.0 Flood Planning

Project Civil Engineer, Enstruct has undertaken a stormwater overland flow path depth analysis of the precinct adjacent to the proposed multi-purpose hall to address the issues raised in Council's Request for Additional Information letter. The Enstruct analysis has also considered the requirements of Chapter 40 of the Sutherland Shire Development Control Plan 2015 (the DCP) and Sutherland Shire Council Environmental Specification Stormwater Management 2009.

Sutherland Shire Council
Locked Bag 17
SUTHERLAND NSW 1499

Your reference: DA21/0354 (CNR-23324)
Our reference: DA20210611002409-Original-1

ATTENTION: Sutherland Shire Council

Date: Friday 6 August 2021

Dear Sir/Madam,

Integrated Development Application
s100B – SFPP – School
2-6 Porter Road Engadine NSW 2233, 2//DP230525

I refer to your correspondence dated 10/06/2021 seeking general terms of approval for the above Integrated Development Application.

The New South Wales Rural Fire Service (NSW RFS) has considered the information submitted. General Terms of Approval, under Division 4.8 of the *Environmental Planning and Assessment Act 1979*, and a Bush Fire Safety Authority, under section 100B of the *Rural Fires Act 1997*, are now issued subject to the following conditions:

Asset Protection Zones
The intent of measures is to provide suitable building design, construction and sufficient space to ensure that radiant heat levels do not exceed critical limits for firefighters and other emergency services personnel undertaking operations, including supporting or evacuating occupants. To achieve this, the following conditions shall apply:

1. From the start of building works, the property around the proposed Multipurpose Hall must be managed as an inner protection area (IPA) for a distance of 100 metres on the southern and southeastern aspects in accordance with the requirements of Appendix 4 of *Planning for Bush Fire Protection 2019*. When establishing and maintaining an IPA the following requirements apply:

- tree canopy cover should be less than 15% at maturity;
- trees at maturity should not touch or overhang the building;
- lower limbs should be removed up to a height of 2 metres above the ground;
- tree canopies should be separated by 2 to 5 metres;
- preference should be given to smooth barked and evergreen trees;
- large discontinuities or gaps in vegetation should be provided to slow down or break the progress of fire towards buildings;
- shrubs should not be located under trees;
- shrubs should not form more than 10% ground cover;

Postal address
NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

Street address
NSW Rural Fire Service
4 Murray Rose Ave
SYDNEY OLYMPIC PARK NSW 2127

T (02) 8741 5555
F (02) 8741 5550
www.rfs.nsw.gov.au

- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.
- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
- leaves and vegetation debris should be removed.

Landscaping Assessment
The intent of measures is for landscaping. To achieve this, the following conditions shall apply:

2. Landscaping within the required asset protection zone must comply with Appendix 4 of *Planning for Bush Fire Protection 2019*. In this regard, the following principles are to be incorporated:

- A minimum 1 metre wide area, suitable for pedestrian traffic, must be provided around the immediate curtilage of the building;
- Planting is limited in the immediate vicinity of the building;
- Planting does not provide a continuous canopy to the building (i.e. trees or shrubs are isolated or located in small clusters);
- Landscape species are chosen to ensure tree canopy cover is less than 15% (IPA), and less than 30% (OPA) at maturity and trees do no touch or overhang buildings;
- Avoid species with rough fibrous bark, or which retain/shed bark in long strips or retain dead material in their canopies;
- Use smooth bark species of trees species which generally do not carry a fire up the bark into the crown;
- Avoid planting of deciduous species that may increase fuel at surface/ ground level (i.e. leaf litter);
- Avoid climbing species to walls and pergolas;
- Locate combustible materials such as woodchips/mulch, flammable fuel stores away from the building;
- Locate combustible structures such as garden sheds, pergolas and materials such as timber garden furniture away from the building; and
- Low flammability vegetation species are used.

Emergency and Evacuation Planning Assessment
The intent of measures is to provide suitable emergency and evacuation (and relocation) arrangements for occupants of special fire protection purpose developments. To achieve this, the following conditions shall apply:

3. The existing Bush Fire Emergency Management and Evacuation Plan is updated to include the proposed Multipurpose Hall, and be consistent with the:

- NSW RFS document: *A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*; and,
- NSW RFS Schools Program Guide and/or Australian Standard *AS 3745:2010 Planning for emergencies in facilities.*

The Bush Fire Emergency Management and Evacuation Plan should include planning for the early relocation of occupants.

Note: A copy of the Bush Fire Emergency Management and Evacuation Plan should be provided to the Local Emergency Management Committee for its information prior to occupation of the development. An Emergency Planning Committee needs to be established to consult with residents (and their families in the case of schools) and staff in developing and implementing an Emergency Procedures Manual. Detailed plans of all emergency assembly areas including on-site and off-site arrangements as stated in *AS 3745:2010* are to be clearly displayed, and an annual emergency evacuation exercise is to be conducted.

For any queries regarding this correspondence, please contact Rohini Belapurkar on 1300 NSW RFS.

Yours sincerely,

Kalpana Varghese
Supervisor Development Assessment & Plan

NSW RURAL FIRE SERVICE

BUSH FIRE SAFETY AUTHORITY

SFPP – School
2-6 Porter Road Engadine NSW 2233, 2//DP230525
RFS Reference: DA20210611002409-Original-1
Your Reference: DA21/0354 (CNR-23324)

This Bush Fire Safety Authority is issued on behalf of the Commissioner of the NSW Rural Fire Service under s100b of the Rural Fires Act (1997) subject to the attached General Terms of Approval.

This authority confirms that, subject to the General Terms of Approval being met, the proposed development will meet the NSW Rural Fire Service requirements for Bush Fire Safety under *s100b of the Rural Fires Act 1997.*

Kalpana Varghese
Supervisor Development Assessment & Plan
Built & Natural Environment

Friday 6 August 2021

planning consultants

Clause 4.6 Variation Request to the Height of Building Development Standard under Clause 4.3 of Sutherland Shire LEP 2015

Proposed Construction of a new Multi-purpose Hall

Engadine High School

2-6 Porter Road, Engadine

Prepared for: School Infrastructure NSW
April 2021

PO Box 230 Pennant Hills NSW 1715 | P 02 9980 6933 | www.dfpplanning.com.au

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Project Manager:	A Cropley
Client:	School Infrastructure NSW
Project Number:	21193A

Document Control

Version	Prepared By	Reviewed By	Issued To	Date
Draft	C. Tregenza	S. Earp	SINSW + RPS	26 March 2021
Final	A Cropley	S Earp	Council	7 April 2021

Contents

Contents

Figures

Tables

1 Introduction

1.1 Commission

DFP has been commissioned by School Infrastructure NSW (SINSW) to prepare a written request ("Variation Request") pursuant to cl4.6 of *Sutherland Shire Local Environmental Plan2015* (the LEP) for the proposed development of a new multi-purpose hall at Engadine High School.

The Proposal is described in detail in Section 4 of the SEE and comprises:

- Removal of ten (10) trees;
- Construction of new multi-purpose sports hall;
- New entry forecourt; and
- Associated landscaping.

The Proposal exceeds the height of building development standard under cl4.3 of the LEP having a maximum height of 13.56 metres above the existing ground level at the northern end of the proposed multi-purpose hall. This exceeds the height of building development standard of 12m by 1.56m, which is equivalent to a variation of 13%.

Notwithstanding the contravention of the development standard, the Proposal is considered to be consistent with the objectives of the development standard and the objectives of the zone within which the development is to be carried out and there are sufficient environmental planning grounds to justify the contravention in this instance including the minimal extent of the variation and the absence of any discernible environmental impacts associated with the variation.

This written request has been prepared to provide a detailed assessment in accordance with the statutory requirements of cl4.6 so that the consent authority can exercise its power to grant development consent, notwithstanding the contravention to the height of building development standard.

1.2 Material Relied Upon

This Variation Request has been prepared by DFP based on the Architectural Drawings prepared by Webber Architects and other supporting drawings and reports which are appended to the Statement of Environmental Effects (SEE) report prepared DFP.

This Variation Request should be read in conjunction with the detailed environmental planning assessment contained in the SEE and documents appended thereto.

2 The Relevant LEP Provisions

2.1 Sutherland Shire Local Environmental Plan 2015

2.1.1 Clauses 2.2-2.3 – Zoning and Permissibility

Clause 2.2 and the Land Zoning Map of LEP LNZ_001D provide that the Site is zoned Infrastructure – Educational Establishment (SP2 Zone) and the Land Use Table to Clause 2.3 specifies the objectives of this zone as follows:

- *To provide for infrastructure and related uses.*
- *To prevent development that is not compatible with or that may detract from the provision of infrastructure.*

The proposed development being for the purpose of an educational establishment is permissible with development consent in the SP2 Zone pursuant to the LEP.

2.1.2 Clause 4.3 – Building Height

Clause 4.3 of the LEP sets out the height of buildings development standard as follows:

(1) the objectives of this clause are as follows-
- *(a) to ensure that the scale of buildings-*
  - *(i) is compatible with adjoining development, and*
  - *(ii) is consistent with the desired scale and character of the street and locality in which the buildings are located or the desired future scale and character, and*
  - *(iii) complements any natural landscape setting of the buildings,*
- *(b) to allow reasonable daylight access to all buildings and the public domain,*
- *(c) to minimise the impacts of new buildings on adjoining or nearby properties from loss of views, loss of privacy, overshadowing or visual intrusion,*
- *(d) to ensure that the visual impact of billings is minimised when viewed from adjoining properties, the street, waterways and public reserves,*
- *(e) to ensure, where possible, that the height of non-residential buildings in residential zones is compatible with the scale of residential buildings in those zones,*
- *(f) to achieve transitions in building scale from higher intensity employment and retail centres to surrounding residential areas*

The Height of Buildings Map designates a maximum building height of 12 metres for the Site. The site is outlined in blue (see **Figure 1**).

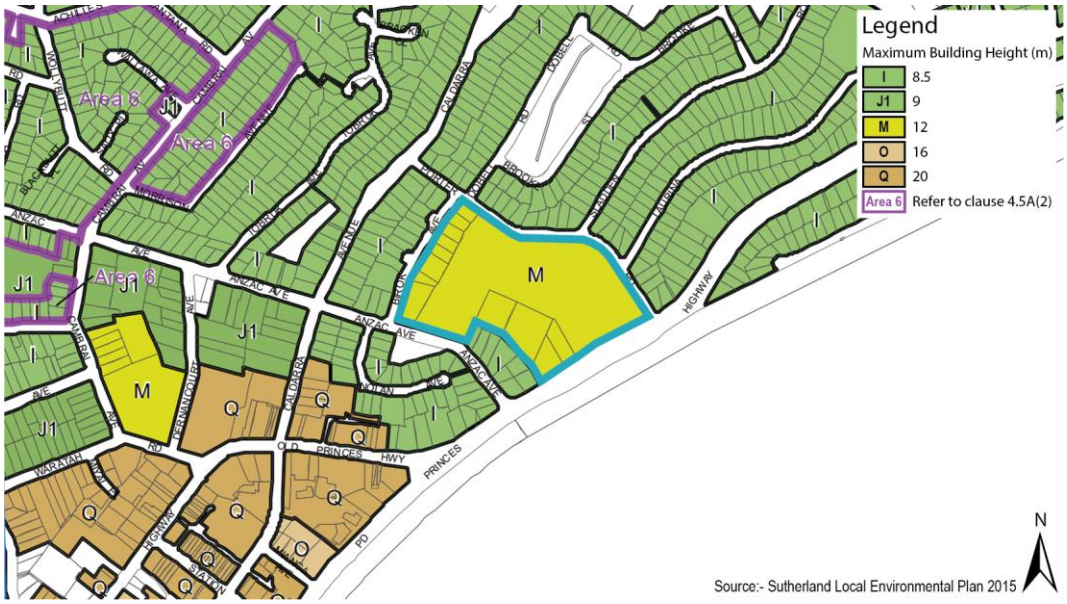


Figure 1 Extract of Height of Building Map (Sutherland Shire LEP 2015)

The LEP defines ***building height*** as:

(a) In relation to the height of a building in metres- the vertical distance from ground level (existing) to the highest point of the building, or

2 The Relevant LEP Provisions

(b) In relation to the RL of a building- the vertical distance from the Australian Height Datum to the highest point of the building,

Including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

2.1.3 Clause 4.6 – Exceptions to Development Standards

Clause 4.6(1) of the LEP states the objectives of the clause as follows:

(a) to provide an appropriate degree of flexibility in applying certain development standards to particular development,

(b) to achieve better outcomes for and from development by allowing flexibility in particular circumstances.

In the Judgment of *Initial Action Pty Ltd v Woollahra Municipal Council [2018] NSWLEC 118* ("Initial Action") (see Section 4.7), Preston CJ ruled that there is no provision that requires the applicant to demonstrate compliance with these objectives or that the consent authority be satisfied that the development achieves these objectives. Furthermore, neither cl4.6(3) nor cl4.6(4) expressly or impliedly requires that development that contravenes a development standard "*achieve better outcomes for and from development*".

Accordingly, the remaining subclauses of cl4.6 provide the operable provisions and preconditions which must be satisfied before a consent authority may grant development consent to a development that contravenes a development standard imposed by an environmental planning instrument.

Clause 4.6(2) provides that:

(2) Development consent may, subject to this clause, be granted for development even though the development would contravene a development standard imposed by this or any other environmental planning instrument. However, this clause does not apply to a development standard that is expressly excluded from the operation of this clause. The height of building development standard is not expressly excluded from the operation of cl4.6 and accordingly, consent may be granted.

Clause 4.6(3) relates to the making of a written request to justify an exception to a development standard and states:

(3) Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating—

(a) that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and

(b) that there are sufficient environmental planning grounds to justify contravening the development standard.

The proposed development does not comply with the Height of Buildings development standard pursuant to cl4.3 of the LEP however, strict compliance is considered to be unreasonable and unnecessary in the circumstances of this case as detailed in **Section 5.2.1**.

In addition, there are considered to be sufficient environmental planning grounds to justify contravening the development standard as detailed in **Section 5.2.2**.

Clause 4.6(4) provides that consent must not be granted for development that contravenes a development standard unless:

(4) Development consent must not be granted for development that contravenes a development standard unless—

(a) the consent authority is satisfied that—

(i) the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and

2 The Relevant LEP Provisions

(ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and

(b) the concurrence of the Planning Secretary has been obtained.

Sections 5.2 and **5.3** of this written request address the matters required under cl4.6(4)(a) of the LEP and Section 5.4 addresses cl4.6(4)(b).

Clause 4.6(5) provides that:

(5) In deciding whether to grant concurrence, the Planning Secretary must consider—

(a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and

(b) the public benefit of maintaining the development standard, and

(c) any other matters required to be taken into consideration by the Planning Secretary before granting concurrence.

Section 5.5 of this written request addresses the matters required under cl4.6(5) of the LEP.

Clauses 4.6(6) and (8) are not relevant to the proposed development and cl4.6(7) is an administrative clause requiring the consent authority to keep a record of its assessment under this clause after determining a development application.

3 The Nature of the Variation

The proposed development requires a variation to the height of buildings development standard under clause 4.3 of the Sutherland Shire LEP 2015. The multi-purpose hall has a maximum height of 13.56 metres. The roof exceeds the height limit on the northern end of the hall by 1.56 metres, which is the equivalent to a variation of 13%. The non-compliance is the result of the sloping terrain towards the internal driveway and Porter Road. The non-compliance is considered minor.

The extent of the non-compliance is shown in extracts of the elevations at **Figure 2** to **5.**

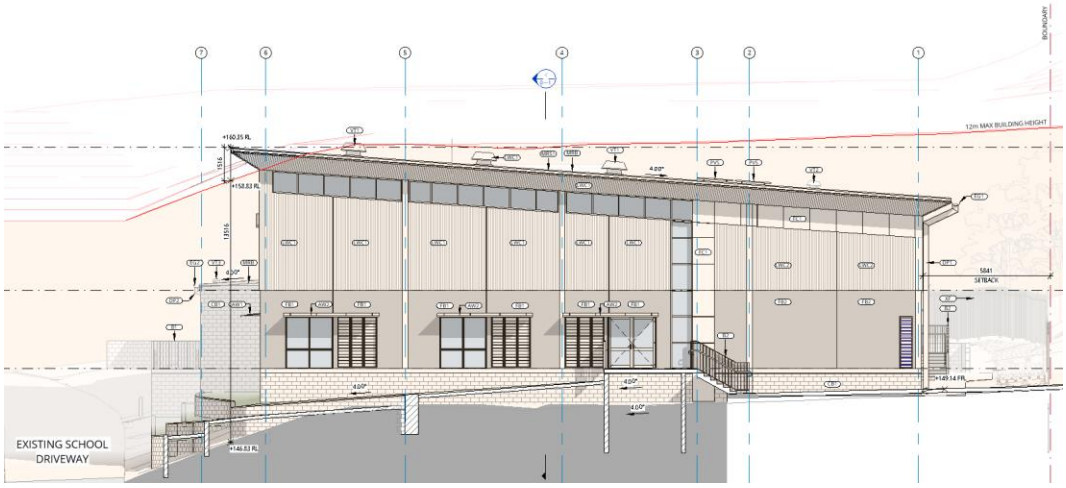


Figure 2 North Elevation of Proposed Multi-purpose Hall

Figure 3 Building Height Plane – showing full extent of height variation limited to north-eastern roof peak

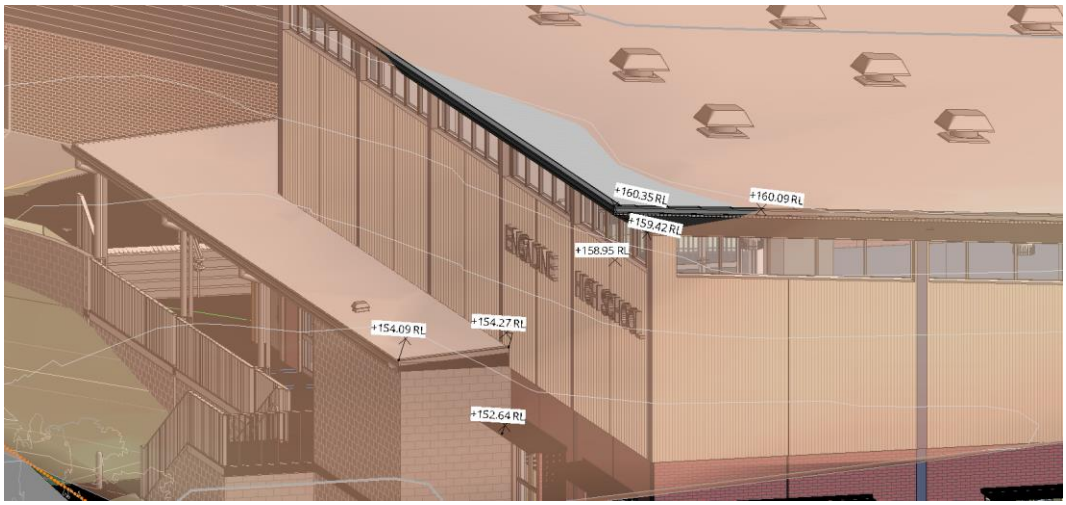


Figure 4 Building Height Plane – close perspective on full extent of height variation

3 The Nature of the Variation

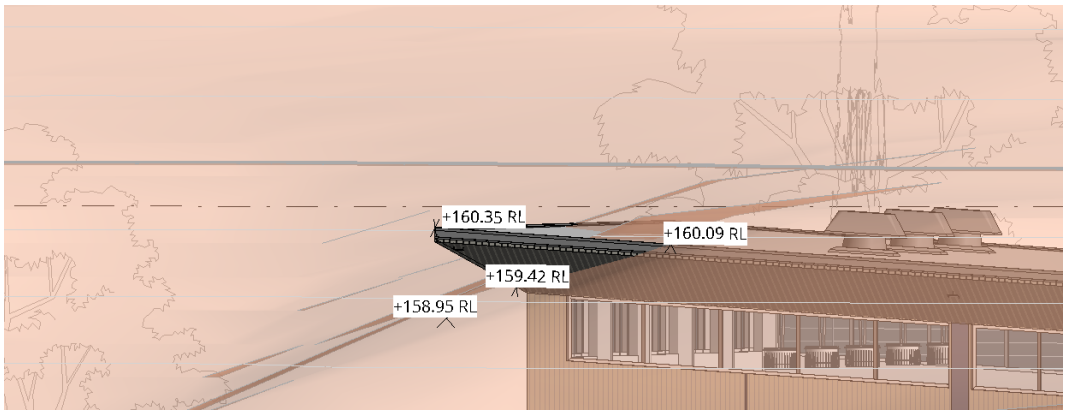


Figure 5 Building Height Plan – detailed view of extent of variation

4 Case Law

4.1 Introduction

The proposed variation to the development standard has been considered in light of the methodology established by the NSW Land & Environment Court (the Court) and the following subsections provide a brief summary of key Judgments regarding variations under the former SEPP 1 and cl4.6 of the *Standard Instrument – Principal Local Environmental Plan* (SILEP).

4.2 Winten Developments Pty Ltd v North Sydney Council [2001]

Through the Judgment in *Winten Developments Pty Ltd v North Sydney Council [2001] NSWLEC 46* ("Winten") the LEC established a '5-part test' for considering whether strict compliance with a development standard is unreasonable or unnecessary in a particular case. The elements of this test can be summarised as:

- Is the planning control a development standard?
- What is the underlying object or purpose of the standard?
- Is compliance with the standard consistent with the aims of the policy, and in particular, does compliance with the standard tend to hinder the attainment of the objects specified in s 5(a)(i) and (ii) of the *Environmental Planning & Assessment Act 1979*?
- Is compliance with the development standard unnecessary or unreasonable in the circumstances of the case?
- Is the objection well founded?

The 1st 'test' continues to be relevant and is a precondition for the application of cl4.6 – see **Section 5.1**.

The 2nd 'test' is required to be demonstrated under cl4.6(4)(a)(ii) – see **Section 5.2.1**.

The 3rd 'test' was specific to cl3 of SEPP 1 and has not been transferred to cl4.6 of the SILEP. Notwithstanding, in Initial Action (see below), Preston CJ indicated that it is reasonable to infer that "environmental planning grounds" as stated in under cl4.6(3)(b), means grounds that relate to the subject matter, scope and purpose of the EPA Act, including the objects in s1.3 of the EP&A Act – see **Section 5.2.2**.

The 4th 'test' is required to be demonstrated under cl4.6(3)(a) - see **Section 5.2.1**.

The 5th 'test' is analogous to cl4.6(4)(a) – see **Section 5.3**.

4.3 Wehbe v Pittwater Council [2007]

The 5-part test under Winten was later supplemented by the Judgment in *Wehbe v Pittwater Council [2007] LEC 827* ("Wehbe") where Chief Justice Preston expressed the view that there are 5 different ways in which an objection to a development standard may be assessed as being well founded and that approval of the objection may be consistent with the aims of SEPP 1. These included:

1. Notwithstanding the non-compliance, is the proposal consistent with the relevant environmental or planning objectives?
2. Is the underlying objective or purpose of the development standard not relevant to the development with the consequence that compliance is unnecessary?
3. Would the underlying objective or purpose of the development standard be defeated or thwarted if compliance was required with the consequence that compliance is unreasonable?
4. Has the development standard been virtually abandoned or destroyed by the consent authority's own actions in granting consents departing from the standard and hence compliance with the standard is unnecessary and unreasonable?

4 Case Law

5. Is the zoning of the particular land unreasonable or inappropriate such that the development standard appropriate for that zoning was also unreasonable or unnecessary as it applied to that land and therefore, compliance with the standard would be unreasonable or unnecessary?

4.4 Four2Five Pty Ltd v Ashfield Council [2015]

In the Judgment of *Four2Five Pty Ltd v Ashfield Council [2015] NSWLEC 1009* ("Four2Five") Pearson C expanded on the earlier Judgments of Winten and Wehbe, indicating that whilst consistency with zoning and standard objectives of the development standard is addressed specifically in cl4.6(4)(a)(ii), there remains an onus of also demonstrating that there are "*sufficient environmental planning grounds"* such that compliance with the development standard is unreasonable or unnecessary. Furthermore, that the environmental planning grounds must be particular to the circumstances of the proposed development rather than public benefits that could reasonably arise from a similar development on other land.

The environmental planning grounds that support the proposed variation to the building height development standard in this circumstance are detailed in the SEE, supported by the Architectural Plans and Architectural Design Statement. **Section 5.2.2** of this variation request includes a summary of these environmental planning grounds.

4.5 Randwick City Council v Micaul Holdings Pty Ltd [2016]

In his Judgment of *Randwick City Council v Micaul Holdings Pty Ltd [2016] NSWLEC 7* ('Micaul') Preston CJ made it clear that development consent cannot be granted for a development that contravenes a development standard unless the consent authority:

(a) has considered a written cl4.6 objection seeking to vary the development standard as required by cl4.6(3) of the SILEP;

(b) is satisfied that the cl4.6 objection adequately addresses the matters required to be demonstrated by cl4.6(3) (as required by cl4.6(4)(a)(i));

(c) is satisfied that the development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out as required by cl4.6(4)(a)(ii).

In addition, Preston CJ elucidated that the consent authority does not have to be directly satisfied that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case – only that it be indirectly satisfied that the applicant's written request adequately addresses the matters in cl4.6(3) that compliance with the development standard is unreasonable or unnecessary.

Furthermore, Preston CJ confirmed that an established means of demonstrating that compliance with a development standard is unreasonable or unnecessary is to establish that a development would not cause environmental harm and is consistent with the objectives of the development standard.

4.6 Moskovich v Waverley Council [2016]

Providing further guidance on the interpretation of cl4.6 compared to its predecessor SEPP 1, the Judgment in *Moskovich v Waverley Council [2016] NSWLEC 1015* ('Moskovich') outlines that cl4.6(3)(a) is similar to cl 6 of SEPP 1 and the ways of establishing that contravention of a development standard is well founded expressed in Wehbe (e.g. "achieving" the objectives of the development standard) are equally appropriate for the consideration of cl4.6(3)(a).

However, cl4.6(4)(a)(ii) has different wording to SEPP 1 and requires the consent authority to be satisfied that the proposed development is in the public interest because it is "consistent" with objectives of the development standard and objectives for the zone rather than "achieving" the objectives. Consequently, the considerations of cl4.6(3)(a) and cl4.6(4)(a)(ii)

are different with the achievement test being more onerous and requiring justification in 'ways' such as those expressed in Wehbe.

Accordingly, whilst the Judgments in Winten and Wehbe related to variation requests under SEPP 1, the methodology and reasoning expressed in those Judgments continues to be the accepted basis upon which to assess variation requests pursuant to cl4.6 with minor areas of differing interpretation.

4.7 Initial Action Pty Ltd v Woollahra Municipal Council [2018]

In the Judgment of *Initial Action Pty Ltd v Woollahra Municipal Council [2018] NSWLEC 118* ('Initial Action'), Preston CJ indicated that cl4.6 does not directly or indirectly establish a test that a non-compliant development should have a neutral or beneficial effect relative to a compliant development. For example, a building that exceeds a development standard that has adverse amenity impacts should not be assessed on the basis of whether a complying development will have no adverse impacts. Rather, the non-compliance should be assessed with regard to whether the impacts are reasonable in the context of achieving consistency with the objectives of the zone and the objectives of the development standard.

In addition, Preston CJ ruled that cl4.6 does not directly or indirectly establish a "test" that a development which contravenes a development standard results in a "*better environmental planning outcome*" relative to a development that complies with the development standard. In fact, there is no provision in SILEP that gives substantive effect to the objectives of cl4.6 stated in cl4.6(1)(a) and (b). That is to say, neither cl4.6(3) nor (4) expressly or impliedly requires that development that contravenes a development standard "*achieve better outcomes for and from development*".

Furthermore, Preston CJ ruled that it is incorrect to hold that the lack of adverse amenity impacts on adjoining properties is not a sufficient ground justifying the development contravening the development standard, when one way of demonstrating consistency with the objectives of a development standard is to show a lack of adverse amenity impacts.

4.8 Al Maha Pty Ltd v Huajun Investments Pty Ltd [2018]

The Judgment of *Al Maha Pty Ltd v Huajun Investments Pty Ltd [2018] NSWCA 245* ('Al Maha') makes it clear that a consent authority or the Court must, in determining a development application subject to request under cl4.6, clearly enunciate that it has satisfied itself of the matters in of cl4.6(4).

In the case of a consent authority, this might be by way of a statement in the reasons for approval authored by the consent authority or alternatively, a statement in the Orders or Judgment of the Court.

4.9 Summary of the Case Law Methodology and Tests

The collective methodology and tests described above has been applied to the assessment at Section 5 and can be summarised in the following steps:

1. Step 1 - Is the planning control that the applicant seeks to contravene a development standard?
2. Step 2 - Is the consent authority satisfied that the applicant's written request seeking to justify the contravention of the development standard has adequately addressed the matters required by cl4.6(3) by demonstrating that:
   (a) compliance is unreasonable or unnecessary; and
   (b) there are sufficient environmental planning grounds to justify contravening the development standard?

4 Case Law

3. Step 3 - Is the consent authority satisfied that the proposed development will be in the public interest because it is consistent with the objectives of the particular development standard that is contravened and the objectives for development for the zone in which the development is proposed to be carried out?
4. Step 4 - Has the concurrence of the Secretary of the Department of Planning and Environment been obtained?
5. Step 5 - Where the consent authority is the Court, has the Court considered the matters in cl4.6(5) when exercising the power to grant development consent for development that contravenes a development standard.
6. Step 6 – In determining the development application, has the consent authority or the Court clearly enunciated that it is has formed the necessary opinions of satisfaction under cl 4.6(4) of the LEP.

5 Assessment of the Variation

5.1 Step 1 - Is the planning control a development standard?

This question is the 1st 'test' in Winten. The height of buildings control in cl4.3 of the Sutherland Shire LEP 2015 is a development standard, defined in Section 1.4 of the EP&A Act as follows:

> *"**development standards** means provisions of an environmental planning instrument or the regulations in relation to the carrying out of development, being provisions by or under which requirements are specified or standards are fixed in respect of any aspect of that development, including, but without limiting the generality of the foregoing, requirements or standards in respect of:*
>
> *(a) the area, shape or frontage of any land, the dimensions of any land, buildings or works, or the distance of any land, building or work from any specified point,*
>
> *…*
>
> *(c) the character, location, siting, bulk, scale, shape, size, height, density, design or external appearance of a building or work,*

The height of buildings development standard is not expressly excluded from the operation of cl4.6 and accordingly, consent may be granted.

5.2 Step 2 – Pursuant to cl4.6(4)(a), is the consent authority satisfied that the written request adequately addresses the matters in Clause 4.6(3)?

5.2.1 Clause 4.6(3)(a) – compliance is unreasonable or unnecessary in the circumstances of the case

To demonstrate that compliance with the Height of Building development standard is unreasonable or unnecessary, this written request relies upon the 2nd 'test' in Winten and the 1st and 2nd 'ways' in Wehbe – i.e. the underlying objectives or purpose of the standard is satisfied or the objectives are not relevant. These aspects are discussed in the following paragraphs.

The underlying objectives or purpose of the standard

Table 1 provides an assessment of the proposed development against the objectives of the height of buildings development standard under cl4.3 of the Sutherland Shire LEP 2015.

Table 1 Assessment against the objectives of the height of buildings development standard

Objective	Assessment
(a) to ensure that the scale of buildings— *(i) is compatible with adjoining development, and* *(ii) is consistent with the desired scale and character of the street and locality in which the buildings are located or the desired future scale and character, and* *(iii) complements any natural landscape setting of the buildings,*	The extent of the variation the subject of this assessment is limited to a small portion of the peak of the roof form in the north-eastern corner of the building. The variation results from the floor levels, floor to ceiling heights, roof pitch and falling topography of the land. The hall remains of a size and nature that is compatible with adjoining development, is generally two (2) storeys in height thus being generally consistent with the desired scale and character of the locality,and integrates with the landscape setting of the surrounds.
(b) to allow reasonable daylight access to all buildings and the public domain,	The Architectural Plans provide details shadow diagrams which confirm that all overshadowing generated by the proposed hall, including the overshadowing generated by the portion of the roof that is above the building height development standard, will allow reasonable daylight access to all buildings and the public domain. The proposal does not generate any overshadowing of adjoining properties or the public domain.

5 Assessment of the Variation

Table 1 Assessment against the objectives of the height of buildings development standard	
Objective	**Assessment**
(c) to minimise the impacts of new buildings on adjoining or nearby properties from loss of views, loss of privacy, overshadowing or visual intrusion,	The proposed hall is located within the Engadine High School property which is not within a view corridor or position capable of impacting on views, privacy, overshadowing or visual intrusion. In particular, the extent of the roof above the building height development standard does not allow for any additional floor space, windows or storeys to the building. The extent of the variation is considered minor and impacts on adjoining properties are mitigated through the design approach.
(d) to ensure that the visual impact of buildings is minimised when viewed from adjoining properties, the street, waterways and public reserves,	The proposed hall is positioned on the site to ensure it has a connection with the community and serves as a frontage of the school. The visual impact of the building is minimised within its context as far as possible through the use of architectural façade treatments, materiality and roof form. The extent of the roof form that exceeds the development standard does not contribute to any significant adverse visual impacts and will not be readily discernible from adjoining properties, the street, waterways or public reserves, due to the minor extent of the variation.
(e) to ensure, where possible, that the height of non-residential buildings in residential zones is compatible with the scale of residential buildings in those zones,	N/A – the proposed development is not in a residential zone.
(f) to achieve transitions in building scale from higher intensity employment and retail centres to surrounding residential areas.	N/A – the proposed works are wholly contained within an existing school

5.2.2 Clause 4.6(3)(b) – There are sufficient environmental planning grounds to justify contravening the development standard

As set out in Four2Five, when a development standard is sought to be varied, there is an onus on the Applicant to demonstrate that there are "*sufficient environmental planning grounds"* such that compliance with the development standard is unreasonable or unnecessary and these environmental planning grounds must be particular to the circumstances of the proposed development rather than grounds that could reasonably apply a similar development on any other land.

The site-specific environmental planning grounds that support the proposed variation to the height of buildings development standard in this circumstance are detailed in the SEE, supported by the Architectural Plans and Architectural Design Statement and include:

- Topography: The topography of the land is sloping and falls away towards the road from the existing school facilities to which the hall connects to the south. To accommodate the floor plate of a multi-purpose hall, the topography of the land requires retaining and earthworks. This then dictates the 'existing ground level' RL taken for the purposes of measuring the maximum building height. There is no other way to reduce height in response to the topography of the land.
- Floor Levels: The proposal provides connection to the Block G (existing school hall) to the south of the new multi-purpose hall. In achieving these connections, the finished floor levels of the building must match with the existing with reasonable consideration being given to accessibility between existing and new. The proposal factors in a level change to reduce the floor level of the new hall thus requiring stairs and ramps, however this difference is maximised and cannot be reduced any further without introducing significant access issues through the difference in floor levels.
- Floor to Ceiling Requirements: The function of the multi-purpose hall will include performance and sport uses, which therefore dictate the minimum floor to ceiling requirements for the building. The lowest height is accommodated on the western side of the hall where stage, storage, change room and related facilities are provided (which

do not require a greater floor to ceiling height). The floor to ceiling height then only increases to its maximum above the multi-purpose court area. Therefore there is no way through which the floor to ceiling heights can be modified to reduce the building height which would still achieve a suitable design outcome.

- Roof Form and Pitch: The roof form has adopted a single sloped skillion roof form with the pitch adopting the minimum permitted under the SINSW design guidelines (EFSG), being 4%. The roof form is therefore minimised and extends to accommodate the required floor to ceiling heights as discussed above. There are no changes to the roof form and pitch which would enable a reduction to the building height.
- Siting and Impacts on Adjoining Properties: The proposal is located on the site to ensure a direct connection with community together with a connection to the existing school facilities (Block G). Due to the orientation and positioning of the multi-purpose hall in relation to the surrounding residential properties and roads, the external impacts associated with new development (such as privacy, overshadowing, view loss etc) are avoided or minimised such that the outcome will not result in unacceptable amenity outcomes for surrounding private or public land.

  The extent of the roof form which breaches the building height development standard is located in the north-eastern side of the building and will not result in any direct impacts on adjoining land owners, and will not be readily discernible when viewed from the public domain due to the minor extent of the variation being part of the roof form.

In addition to the above grounds, in Micaul and Initial Action, Preston CJ clarified that sufficient environmental planning grounds may also include demonstrating a lack of adverse amenity impacts.

As outlined in **Section 5.2.1**, there is considered to be a lack of adverse amenity impacts arising from the proposal as it will not result in adverse overshadowing, overlooking or view loss.

In summary, the site conditions and form of development contribute to the contravention of the height of buildings development standard and notwithstanding the contravention, the proposal minimises significant adverse amenity impacts.

5.3 Step 3 - Pursuant to cl4.6(4)(b), is the consent authority satisfied that the development will be in the public interest because it is consistent with the objectives of the development standard and the objectives of the zone?

As outlined in **Section 5.2.1**, the Proposal achieves and is therefore consistent with the relevant objectives of the height of buildings development standard.

However, the consent authority must also be satisfied that the development will be consistent with the objectives of the SP2 Infrastructure Zone within which the development is to be carried out.

Table 2 provides an assessment of the proposed development against the objectives of the SP2 Infrastructure Zone expressed in the Land Use Table to cl2.3 of the Sutherland Shire LEP 2015.

Table 2 Assessment against the objectives of the SP2 Infrastructure Zone

Objective	Assessment
(a) *To provide for infrastructure and related uses*	The proposed development of a multi-purpose hall is a related use to the operation of the site for an educational establishment.
(b) *To prevent development that is not compatible with or that may detract from the provision of infrastructure*	The proposed development is consistent with the existing use of a school and will have a wide range of benefits to the school and surrounding community.

5 Assessment of the Variation

Accordingly, it follows that the proposed development is in the public interest because it is consistent with the objectives of the height of buildings development standard under the Sutherland Shire LEP 2015 and the objectives of the SP2 Infrastructure Zone under the Sutherland Shire LEP 2015.

5.4 Step 4 - Clause 4.6(4)(b) – The Concurrence of the Secretary has been obtained

On 21 February 2018, the Secretary of the Department of Planning and Environment issued a Notice ('the Notice') under cl64 of the *Environmental Planning and Assessment Regulation 2000* (the EP&A Regulation) providing that consent authorities may assume the Secretary's concurrence for exceptions to development standards for applications made under cl4.6 of the SILEP or SEPP 1 subject to certain conditions.

The conditions of the Notice identify that for "*development that contravenes a numerical development standard by more than 10%*", concurrence may not be assumed by a delegate of the consent authority. As the extent of the variation to the building height development standard is greater than 10%, Council may not assume the concurrence of the Department.

5.5 Step 5 - Clause 4.6(5) - Concurrence Considerations

In the event that concurrence cannot be assumed pursuant to the Notice, cl4.6(5) of the LEP provides that in deciding whether to grant concurrence, the Secretary must consider:

> *(a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and*
>
> *(b) the public benefit of maintaining the development standard, and*
>
> *(c) any other matters required to be taken into consideration by the Secretary before granting concurrence.*

Accordingly, the proposed contravention of the building height development standard has been considered in light of cl4.6(5) as follows:

- The proposed non-compliance does not raise any matter of significance for State or regional environmental planning as it is peculiar to the design of the proposed alterations and additions for this particular Site and this design is not directly transferrable to any other site in the immediate locality, wider region or the State and the scale of the proposed development does not trigger any requirement for a higher level of assessment;
- As indicated in **Section 5.3**, the proposed contravention of the building height development standard is considered to be in the public interest because it is consistent with the objectives of the zone and the objectives of the development standard. Accordingly, there would be no significant public benefit in maintaining the development standard in this instance; and
- It is considered that there are no other matters of relevance that need to be taken into consideration by the consent authority.

5.6 Step 6 - Clause 4.6(4) – Statement of Satisfaction

This is a matter for the consent authority or the Court to address in its written reasons for determining the subject development application.

6 Conclusion

The proposed development contravenes the height of buildings development standard under cl4.3 of the Sutherland Shire LEP 2015.

The height of buildings control under cl 4.3 of the Sutherland Shire LEP 2015 is a development standard and is not excluded from the application of cl4.6.

This written request to vary the development standard has been prepared in accordance with cl4.6(3) of the LEP and demonstrates that strict compliance with the development standard is unreasonable and unnecessary for the following reasons:

- Notwithstanding the contravention of the height of buildings development standard, the proposed development is consistent with the relevant objectives of the development standard pursuant to cl4.3 of the Sutherland Shire LEP 2015 and is consistent with the relevant objectives of the SP2 Infrastructure Zone and therefore, the proposed development is in the public interest; and
- Notwithstanding the contravention of the height of buildings development standard, the proposed building height will not result in significant adverse environmental harm in that the environmental amenity of neighbouring properties will be preserved and adverse impacts on the amenity (such as overshadowing, bulk and scale) of the locality will be minimised to a reasonable level.

In addition, this written request outlines sufficient environmental planning grounds to justify the contravention of the height of buildings development standard including:

- The extent of the variation is minor and attributed to a small section of the top-most part of the roof;
- The variation arises due to the characteristics of the site (including topography and floor levels) and the design requirements of the built form necessitated by its use as a multi-purpose hall (including floor level accessibility, floor to ceiling heights, and roof form and pitch);
- The environmental amenity impacts of the proposal are either minor or capable of being mitigated such that the proposal will not impact surrounding private or public land; and
- The characteristics and design requirements cannot be modified any further to reduce the building height, and the extent of the roof that exceeds the height control does contribute to any discernible environmental impact.

Accordingly, this written request can be relied upon by the consent authority when documenting that it has formed the necessary opinions of satisfaction under cl4.6(4) of the LEP.

The consent authority can be satisfied that contravention of the development standard does raise any matter of significance for State or regional environmental planning, there is no public benefit of maintaining the development standard and there are no other relevant matters required to be taken into consideration.

Accordingly, the consent authority can exercise its power pursuant to cl4.6(2) to grant development consent to the proposed development notwithstanding the contravention of the development standard.

ENGADINE HIGH SCHOOL HALL

SCHOOLS INFRASTRUCTURE NEW SOUTH WALES

2 PORTER ROAD, ENGADINE NSW 2233

DA DRAWING LIST

0101	COVERSHEET
0201	SITE ANALYSIS
0202	SITE PLAN
0203	NEIGHBOURHOOD NOTIFICATION - SITE PLAN
0204	NEIGHBOURHOOD NOTIFICATION - ELEVATIONS
0210	SHADOW DIAGRAMS - JUNE 21
0211	SHADOW DIAGRAMS - SEPTEMBER 21
0212	SHADOW DIAGRAMS - DECEMBER 21
0213	SHADOW DIAGRAMS - MARCH 21
0300	DEMOLITION PLAN
0301	FLOOR PLAN - GROUND
0330	ROOF PLAN - LOWER ROOF
0331	ROOF PLAN - UPPER ROOF
0401	ELEVATIONS - SHEET 1
0402	ELEVATIONS - SHEET 2
0501	SECTIONS - SHEET 1
1001	MATERIALS PALETTE - SHEET 1
1002	MATERIALS PALETTE - SHEET 2
1003	MATERIALS PALETTE - SHEET 3

ABBREVIATION LEGEND

AW1	AWNING - TYPE 1
AW2	AWNING - TYPE 2
B1	BALUSTRADE - TYPE 1
B2	BALUSTRADE - TYPE 2
BOL1	BOLLARD - TYPE 1
CB1	CONCRETE BLOCKWORK - TYPE 1
COL1	COLUMN - TYPE 1
COM	COMMUNICATIONS
CON1	CONCRETE - TYPE 1
DB	DISTRIBUTION BOARD
DP1	DOWNPIPE - TYPE 1
DP2	DOWNPIPE - TYPE 2
EG1	EAVES GUTTER - TYPE 1
EG2	EAVES GUTTER - TYPE 2
FB1	FACE BRICK - TYPE 1
FB2	FACE BRICK - TYPE 2
FB3	FACE BRICK - TYPE 3
FC1	FIBRE CEMENT SHEETING - TYPE 1
FC2	FIBRE CEMENT SHEETING - TYPE 2
FHR	FIRE HOSE REEL
GD1	GRATED DRAIN - TYPE 1
GD2	GRATED DRAIN - TYPE 2
H1	HANDRAIL - TYPE 1
H2	HANDRAIL - TYPE 2
H3	HANDRAIL - TYPE 3
LWC1	LIGHT WEIGHT CLADDING - TYPE 1
LWC2	LIGHT WEIGHT CLADDING - TYPE 2
MRB	METAL ROOF BARGE CAPPING
MRC1	METAL ROOF CAPPING - TYPE 1
MRS1	METAL ROOF SHEETING - TYPE 1
MS1	METAL SHEETING - TYPE 1
PIN	PIN BOARD
PPB	PAINTED PLASTERBOARD
PPB1	PAINTED PLASTERBOARD - TYPE 1
PVS	PHOTOVOLTAIC SOLAR PANELS
TCI	TACTILE INDICATORS
TFB1	TIMBER FLOOR BOARDS - TYPE 1
VT1	VENT - TYPE 1
VT2	VENT - TYPE 2
VT3	VENT - TYPE 3
XF	EXISTING FENCE

WALL ASSEMBLIES (DIAGRAMMATICAL ONLY FOR DESIGN INTENT)

EXISTING WALL

PROPOSED WALL

STRUCTURE TO BE DEMOLISHED

SAFETY IN DESIGN LEGEND

	HAZARD DESCRIPTION
A	INDICATES AMENITIES, FACILITIES, AND FIRST AID SERVICES
E	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH LIVE ELECTRICAL HAZARDS
EX	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH EARTHWORKS / EXCAVATION
FE	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH FIRE AND EMERGENCIES
MTS	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH MANUAL TASKS AND/OR MAINTENANCE ACCESS
N	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH NOISE EXPOSURE
P	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH PLANT EQUIPMENT
PMH	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH THE MOVEMENT OF PEOPLE AND/OR MATERIALS
R	INDICATES PROJECT SPECIFIC RISKS - OUTLINED BELOW WHERE APPLICABLE
S	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH HAZARDOUS SUBSTANCES
SW	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH STRUCTURAL SAFETY AND/OR DEMOLITION WORKS
WE	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH WORKING ENVIRONMENT AND/OR CONFINED SPACES
WH	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH WORKING AT HEIGHTS AND/OR FALLING OBJECTS

	PROJECT SPECIFIC RISKS
R1 ASBESTOS	THIS IS A PROJECT SPECIFIC RISK
R2 POWER LINES	THIS IS A PROJECT SPECIFIC RISK
R3 CHEMICALS	THIS IS A PROJECT SPECIFIC RISK

NOTES

REFER TO THE DETAILED SURVEY PLAN FOR EXISTING LEVELS, BOUNDARIES, VEGETATION, SITE SERVICES, SITE EASEMENTS, BUILDINGS & INFRASTRUCTURE.

REFER TO THE BCA CONSULTANT'S REPORTS FOR BCA ASSESSMENT.

REFER TO THE ACCESS CONSULTANT'S REPORTS FOR ACCESS ASSESSMENT.

REFER TO THE BUSHFIRE CONSULTANT'S BUSHFIRE ASSESSMENT REPORT FOR SITE ASSESSMENT, SITE SERVICES, SETBACKS, ATTACK LEVELS, EMERGENCY PROCEDURES & ACCESS .

REFER TO THE ACOUSTIC CONSULTANT'S ACOUSTIC ASSESSMENT REPORT FOR ACOUSTIC ASSESSMENT AND RECOMMENDATIONS.

REFER TO CIVIL ENGINEER'S DOCUMENTATION FOR STORMWATER MANAGEMENT PLAN AND THE PROPOSED PAVEMENT DESIGN.

REFER TO THE CONSULTING ARBORIST'S ARBORICULTURAL IMPACT ASSESSMENT REPORT FOR SITE INVESTIGATIONS, LIMITATIONS, TREE PRESERVATIONS & IMPACTS OF THE DEVELOPMENTS.

REFER TO THE TRAFFIC CONSULTANT'S DOCUMENTATION FOR TRAFFIC IMPACT ASSESSMENT.

REFER TO THE GEOTECHNICAL ENGINEER'S GEOTECHNICAL INVESTIGATION FOR
SITE INVESTIGATIONS, SUBSURFACE CONDITIONS, SITE CLASSIFICATION, LABORATORY TESTS, EARTHWORKS, ACID SULFATE SOILS, AND LIMITATIONS.

REFER TO THE ELECTRICAL ENGINEER'S ELECTRICAL DOCUMENTATION INCLUDING EARTHING, SUBSTATION LOCATION, LIGHTING, POWER SUPPLY, AUTHORITY CONNECTION AND MAXIMUM DEMANDS.

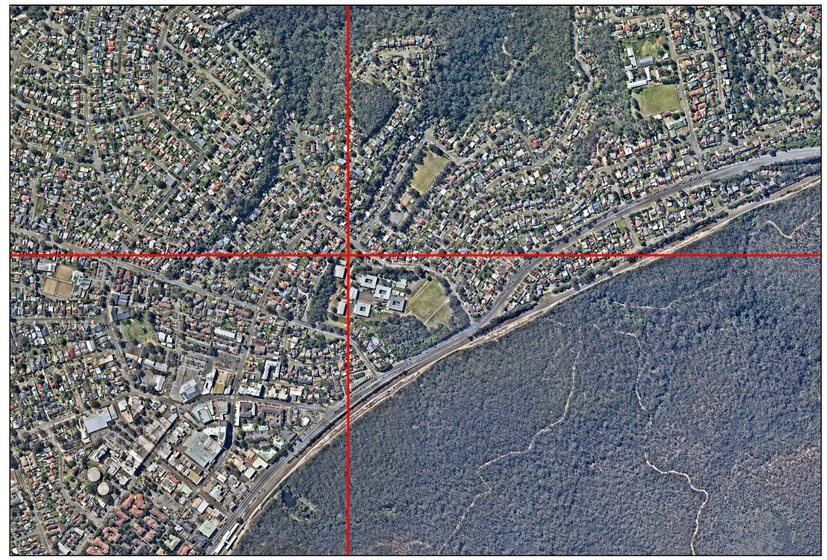
REFER TO THE HYDRAULIC ENGINEER'S HYDRAULIC DOCUMENTATION FOR SITE HYDRAULIC DESIGN, INCLUDING SEWER, WATER, GAS SUPPLY AND WASTE.

REFER TO THE LANDSCAPE ARCHITECT'S DOCUMENTATION FOR LANDSCAPE PLANTING STRATEGY & PLANTING PALETTE.

REFER TO ENVIRONMENTAL ENGINEER'S CONTAMINATION ASSESSMENT & REMEDIATION ACTION PLAN FOR SITE INVESTIGATION, HAZARDOUS MATERIAL AUDIT, GROUNDWATER, ACID SULFATE SOILS AND SOIL ASSESSMENTS.

REFER TO THE FLOOD ENGINEER'S FLOOD RISK & IMPACT ASSESSMENT REPORT

SECTION J STAMP



2 PORTER ROAD, ENGADINE NSW 2233

NOT TO SCALE

3D PERSPECTIVE

NOT TO SCALE - ARCHITECTS IMPRESSION ONLY

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D	15.12.2020	TENDER ADDENDUM - DEC 2020	TR	
E	18.12.2020	TENDER ADDENDUM - DEC 2020	TR	
F	18.01.2021	TENDER ADDENDUM - JAN 21	DF	
G	29.01.2021	FOR QA REVIEW	DF	
H	05.02.2021	FOR SCHEMATIC DESIGN	DF	LS
I	15.03.2021	FOR DA	DF	

DRAWINGS COLOUR CODED
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NSW GOVERNMENT

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Nominated Architect: Jon Webber ARB NSW 6836 | ABN 85 145 910 108

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COVERSHEET
ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020 SCALE

SHEET NUMBER : EHS_2709 / 0101 / I

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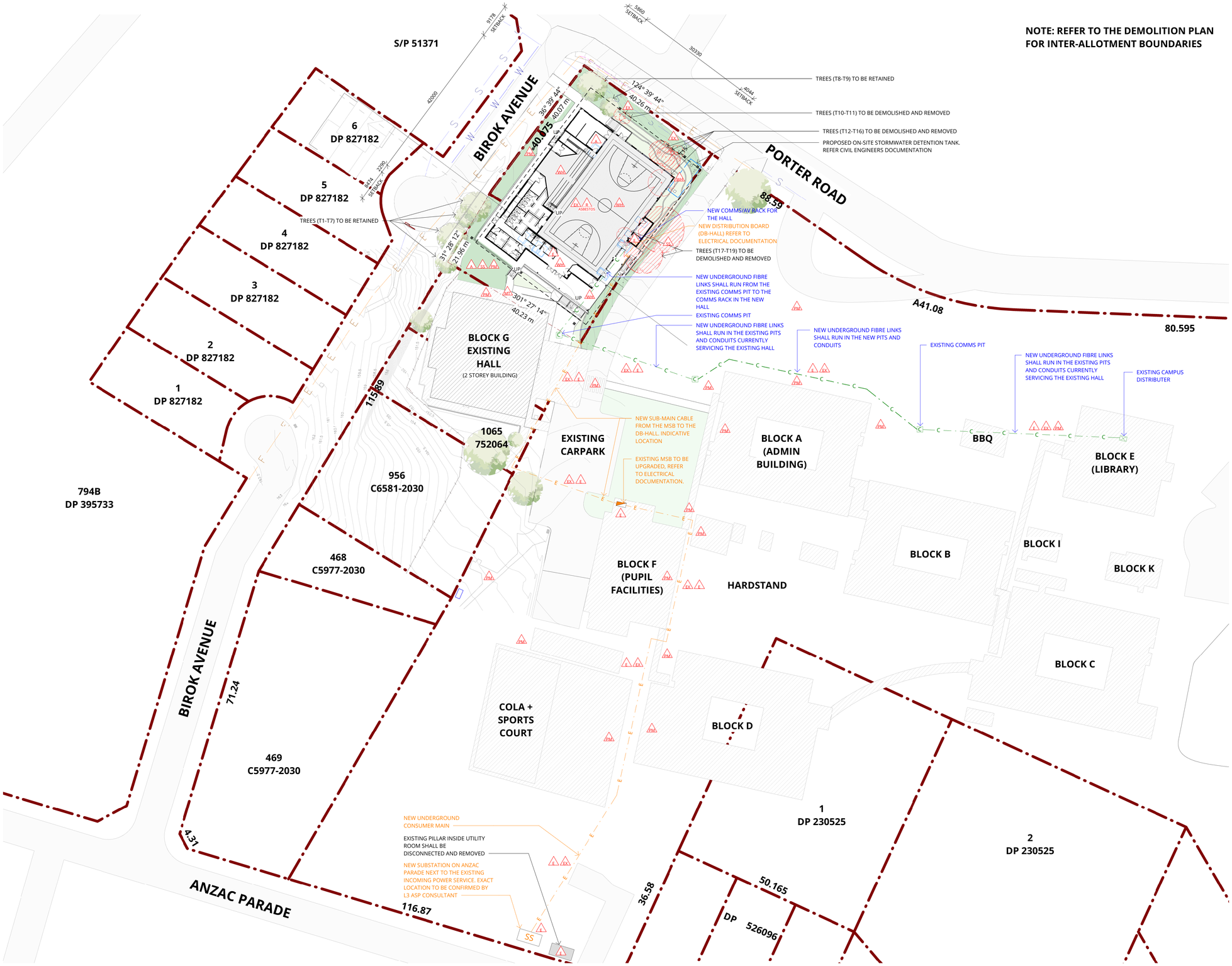

NOTE: REFER TO THE DEMOLITION PLAN FOR INTER-ALLOTMENT BOUNDARIES

SITE PLAN LEGEND

- EXISTING CONCRETE FOOTPATH
- EXISTING SCHOOL BUILDINGS & DEMOUNTABLES
- EXISTING CONCRETE KERB
- EXISTING GARDEN BED
- EXISTING TREES TO BE RETAINED
- EXISTING TREES TO BE DEMOLISHED
- PROPOSED BUILDING
- PROPOSED LANDSCAPING
- S — SEWER
- E — ELECTRICITY
- T — TELSTRA
- W — WATER
- STORMWATER
- SITE BOUNDARY
- C — COMMUNICATIONS CABLING
- EXISTING FENCING & GATES

SAFETY IN DESIGN LEGEND

	HAZARD DESCRIPTION
EX.	INDICATES AMENITIES, FACILITIES, AND FIRST AID SERVICES
E	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH LIVE ELECTRICAL HAZARDS
EX.	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH EARTHWORKS / EXCAVATION
FIRE	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH FIRE AND EMERGENCIES
MMT.	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH MANUAL TASKS AND/OR MAINTENANCE ACCESS
N.	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH NOISE EXPOSURE
P.	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH PLANT EQUIPMENT
PMV.	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH THE MOVEMENT OF PEOPLE AND/OR MATERIALS
S.	INDICATES PROJECT SPECIFIC RISKS - OUTLINED BELOW WHERE APPLICABLE
S.	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH HAZARDOUS SUBSTANCES
ST.	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH STRUCTURAL SAFETY AND/OR DEMOLITION WORKS
CWE.	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH WORKING ENVIRONMENT AND/OR CONFINED SPACES
WAH.	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH WORKING AT HEIGHTS AND/OR FALLING OBJECTS

	PROJECT SPECIFIC RISKS
S. ASBESTOS	THIS IS A PROJECT SPECIFIC RISK
S. POWERLINES	THIS IS A PROJECT SPECIFIC RISK
S. CHEMICALS	THIS IS A PROJECT SPECIFIC RISK

1 SITE PLAN
06.10
SCALE 1 : 500

REV	DATE	DESCRIPTION	BY	CHK
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G	05.02.2021	FOR SCHEMATIC DESIGN	DF	LS
H	15.03.2021	FOR DA	DF	
I	17.03.2021	FOR SCHEMATIC DESIGN REPORT / DA - REVISED	DF	
J	22.03.2021	FOR TENDER CLARIFICATION	DF	
K	23.03.2021	REVISED FOR DA	DF	
L	06.04.2021	REVISED FOR DA	TR	

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Nominated Architect Jon Webber AA NSW ARB No 6826 | ABN 83 145 810 168

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SITE PLAN
ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020
SHEET NUMBER : **EHS_2709 / 0202 / L**
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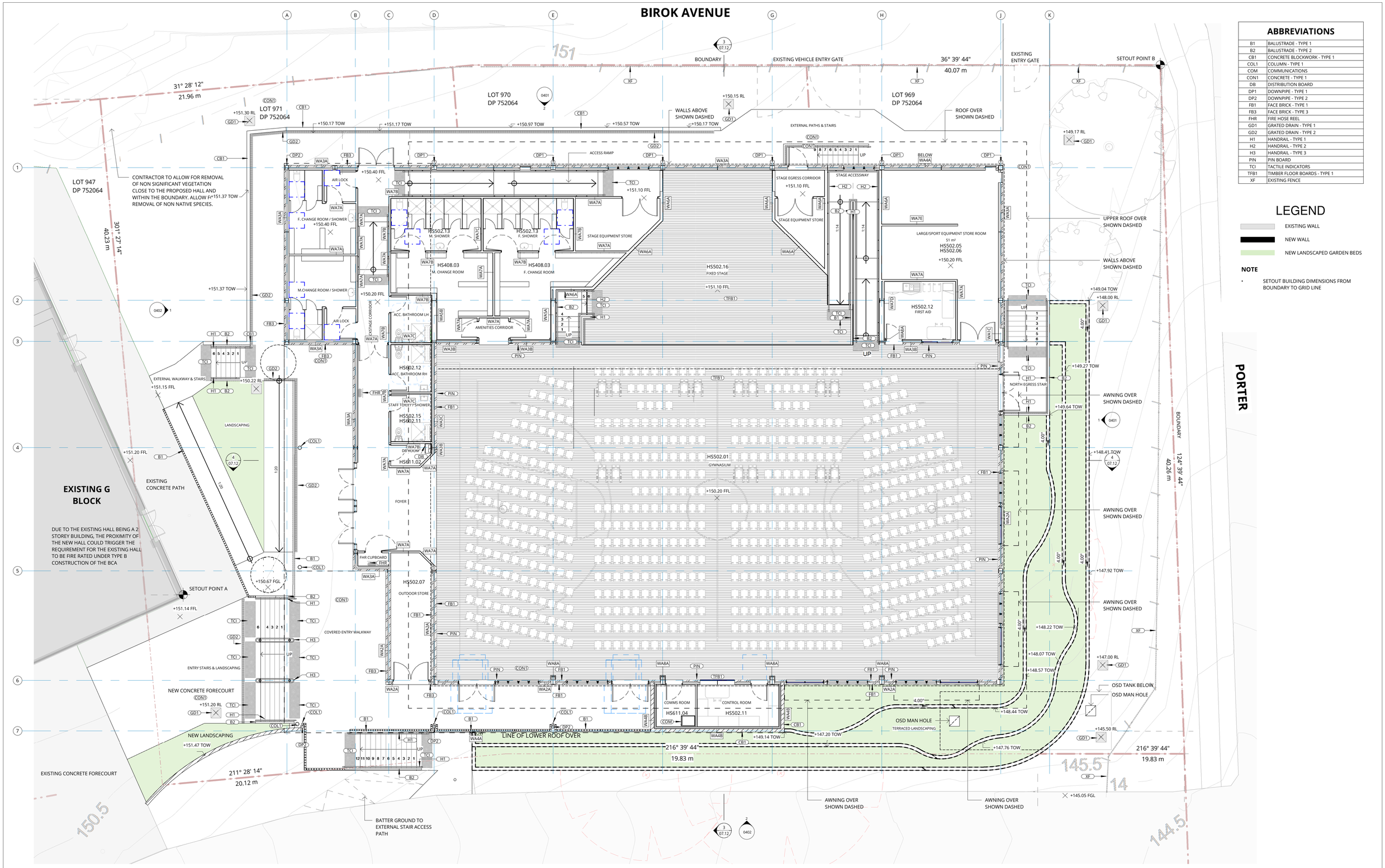

ABBREVIATIONS

B1	BALUSTRADE - TYPE 1
B2	BALUSTRADE - TYPE 2
CB1	CONCRETE BLOCKWORK - TYPE 1
COL1	COLUMN - TYPE 1
COM	COMMUNICATIONS
CON1	CONCRETE - TYPE 1
DB	DISTRIBUTION BOARD
DP1	DOWNPIPE - TYPE 1
DP2	DOWNPIPE - TYPE 2
FB1	FACE BRICK - TYPE 1
FB3	FACE BRICK - TYPE 3
FHR	FIRE HOSE REEL
GD1	GRATED DRAIN - TYPE 1
GD2	GRATED DRAIN - TYPE 2
H1	HANDRAIL - TYPE 1
H2	HANDRAIL - TYPE 2
H3	HANDRAIL - TYPE 3
PIN	PIN BOARD
TCI	TACTILE INDICATORS
TFB1	TIMBER FLOOR BOARDS - TYPE 1
XF	EXISTING FENCE

LEGEND

- EXISTING WALL
- NEW WALL
- NEW LANDSCAPED GARDEN BEDS

NOTE

- SETOUT BUILDING DIMENSIONS FROM BOUNDARY TO GRID LINE

1 FLOOR PLAN - GROUND

SCALE 1 : 100

REV	DATE	DESCRIPTION	BY	CHK
K	11.03.2021	FOR CONSULTANT COORDINATION	DF	
L	15.03.2021	FOR DA	DF	
M	17.03.2021	FOR SCHEMATIC DESIGN REPORT / DA - REVISED	DF	
N	22.03.2021	FOR TENDER CLARIFICATION	DF	
O	23.03.2021	REVISED FOR DA	DF	
P	15.07.2021	FOR REVISED DA	DF	
Q	15.07.2021	FOR CONSULTANT COORDINATION	DF	

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Nominated Architect: Jon Webber AIA NSW ARB No 6630 | ABN 83 140 602 188

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FLOOR PLAN - GROUND
ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020

SHEET NUMBER : **EHS_2709 / 0301 / Q**

SCALE 1:100 @ A1

PROJECT NORTH

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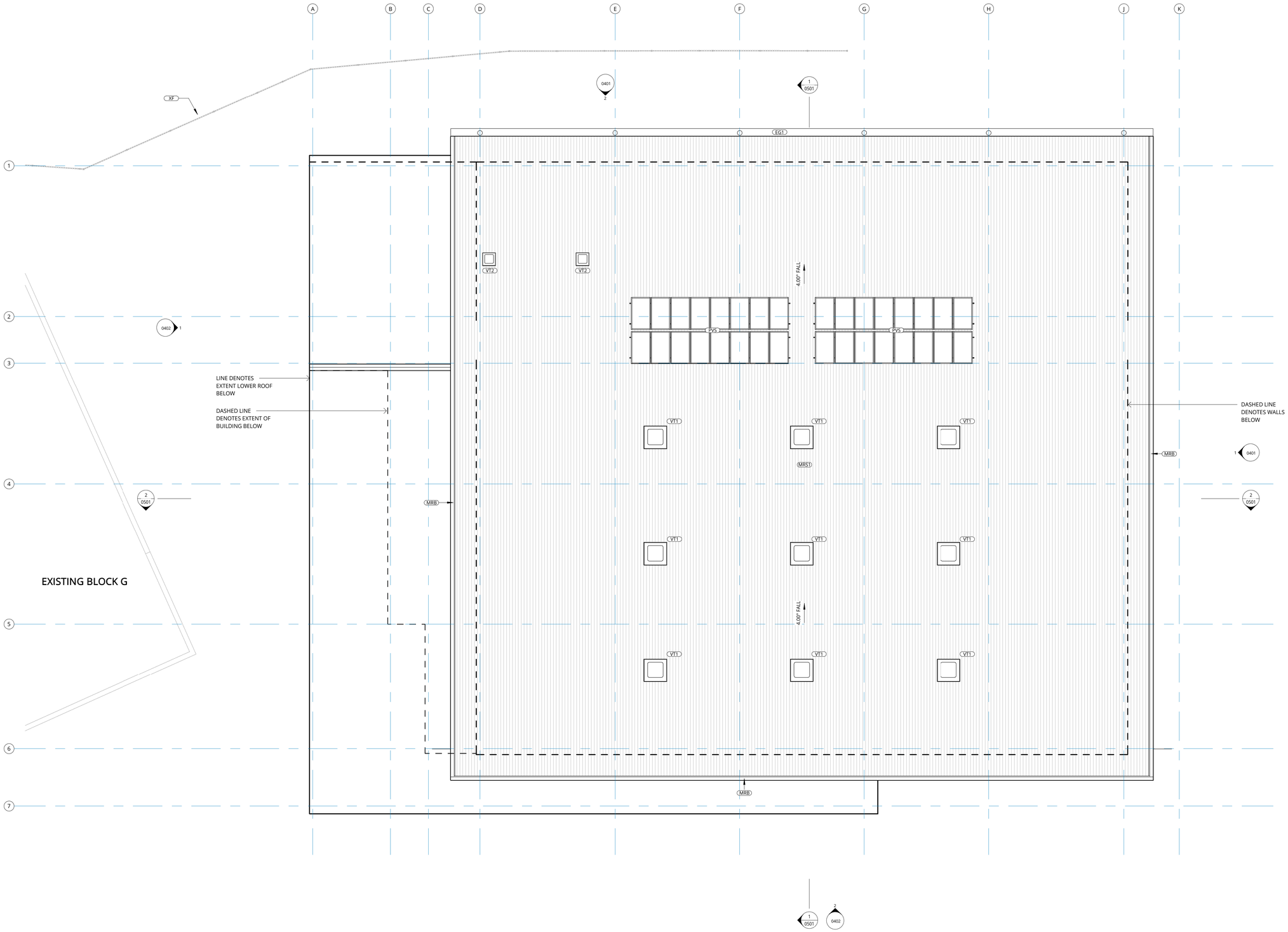

ABBREVIATIONS

EG1	EAVES GUTTER - TYPE 1
MRB	METAL ROOF BARGE CAPPING
MRS1	METAL ROOF SHEETING - TYPE 1
PVS	PHOTOVOLTAIC SOLAR PANELS
VT1	VENT - TYPE 1
VT2	VENT - TYPE 2
XF	EXISTING FENCE

1 ROOF PLAN - UPPER ROOF

SCALE 1 : 100

REV	DATE	DESCRIPTION	BY	CHK
B	24.11.2020	FOR TENDER - NOV 2020	DF	
C	15.12.2020	TENDER ADDENDUM - DEC 2020	TR	
D	18.12.2020	TENDER ADDENDUM - DEC 2020	TR	
E	18.01.2021	TENDER ADDENDUM - JAN 21	DF	
F	05.02.2021	FOR SCHEMATIC DESIGN	DF	LS
G	11.03.2021	FOR CONSULTANT COORDINATION	DF	
H	15.03.2021	FOR DA	DF	

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Nominated Architect Jon Webber AIA NSW ARB No 6820 | ABN 85 145 850 168

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ROOF PLAN - UPPER ROOF
ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020

SHEET NUMBER : EHS_2709 / 0331 / H

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PROJECT NORTH

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ABBREVIATIONS

AW1	AWNING - TYPE 1
AW2	AWNING - TYPE 2
B1	BALUSTRADE - TYPE 1
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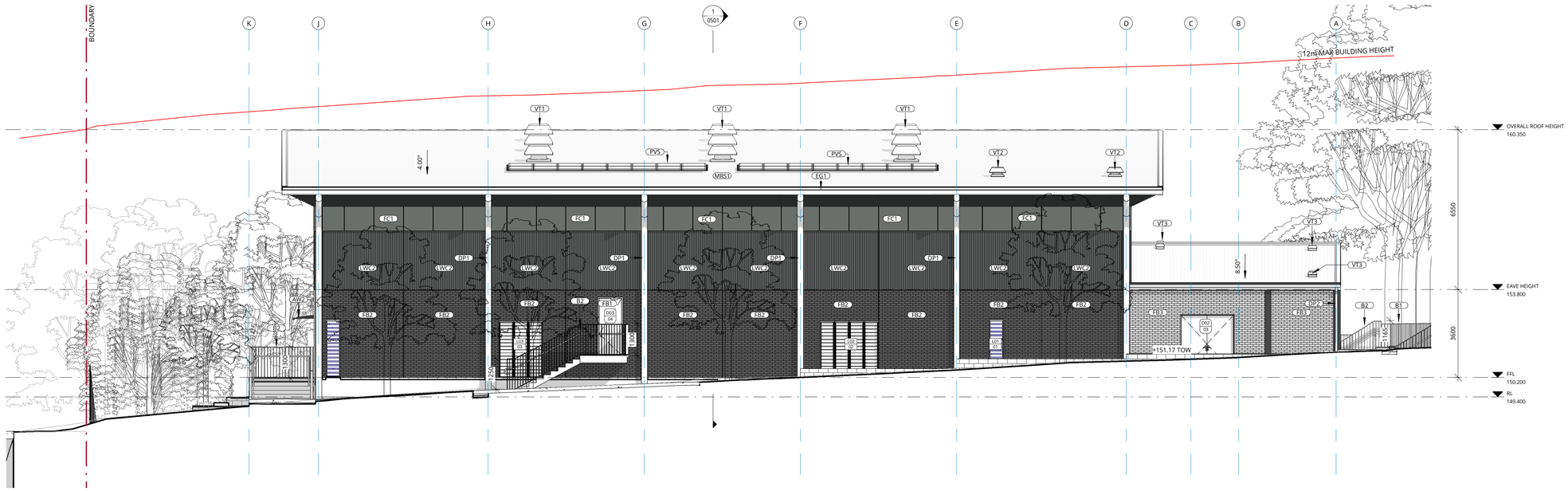
CB1	CONCRETE BLOCKWORK - TYPE 1
DP1	DOWNPIPE - TYPE 1
DP2	DOWNPIPE - TYPE 2
EG1	EAVES GUTTER - TYPE 1
EG2	EAVES GUTTER - TYPE 2
FB1	FACE BRICK - TYPE 1
FB2	FACE BRICK - TYPE 2
FB3	FACE BRICK - TYPE 3
FC1	FIBRE CEMENT SHEETING - TYPE 1
LWC1	LIGHT WEIGHT CLADDING - TYPE 1
LWC2	LIGHT WEIGHT CLADDING - TYPE 2
MRB	METAL ROOF BARGE CAPPING
MRS1	METAL ROOF SHEETING - TYPE 1
PVS	PHOTOVOLTAIC SOLAR PANELS
VT1	VENT - TYPE 1
VT2	VENT - TYPE 2
VT3	VENT - TYPE 3
XF	EXISTING FENCE

1 / 07.04 NORTH ELEVATION
SCALE 1 : 100



2 / 07.04 WEST ELEVATION
SCALE 1 : 100

REV	DATE	DESCRIPTION	BY	CHK
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K	15.03.2021	FOR DA	DF	
L	17.03.2021	FOR SCHEMATIC DESIGN REPORT / DA - REVISED	DF	
M	22.03.2021	FOR TENDER CLARIFICATION	DF	
N	23.03.2021	REVISED FOR DA	DF	
O	15.07.2021	FOR REVISED DA	DF	
P	09.08.2021	REVISED FOR DA	DF	

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Nominated Architect: Jon Webber AIA NSW ARB No 6630 | ABN 85 140 604 188

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ELEVATIONS - SHEET 1

ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020

SHEET NUMBER : EHS_2709 / 0401 / P

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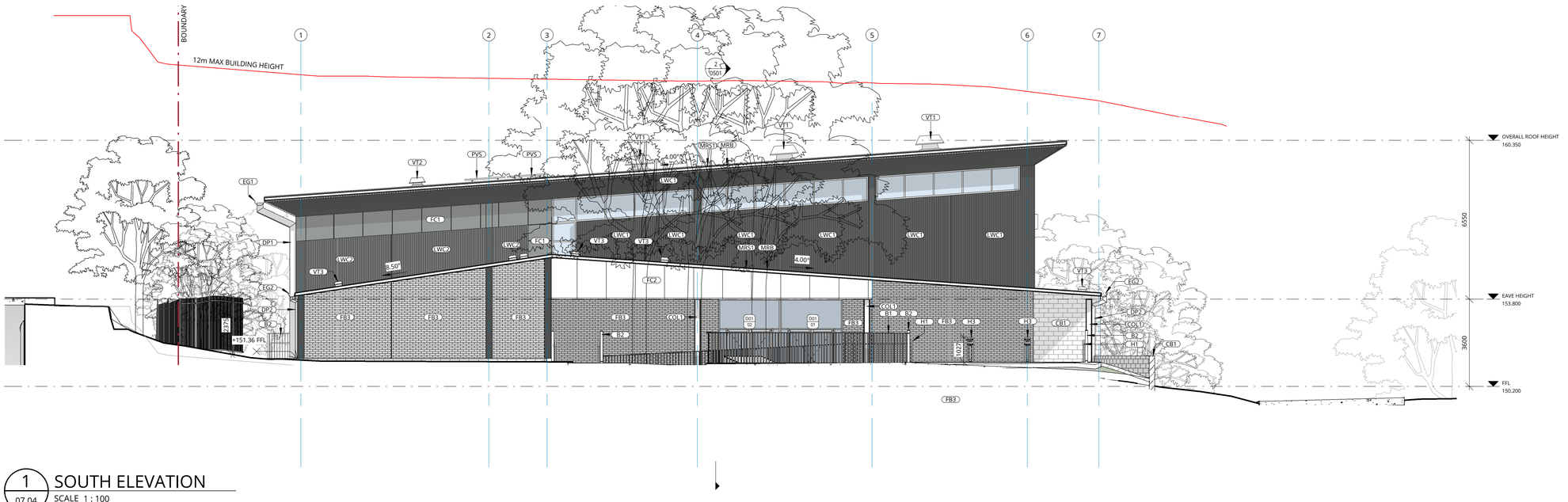

1 SOUTH ELEVATION
07.04 SCALE 1 : 100

ABBREVIATIONS	
AW1	AWNING - TYPE 1
AW2	AWNING - TYPE 2
B1	BALUSTRADE - TYPE 1
B2	BALUSTRADE - TYPE 2
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VT1	VENT - TYPE 1
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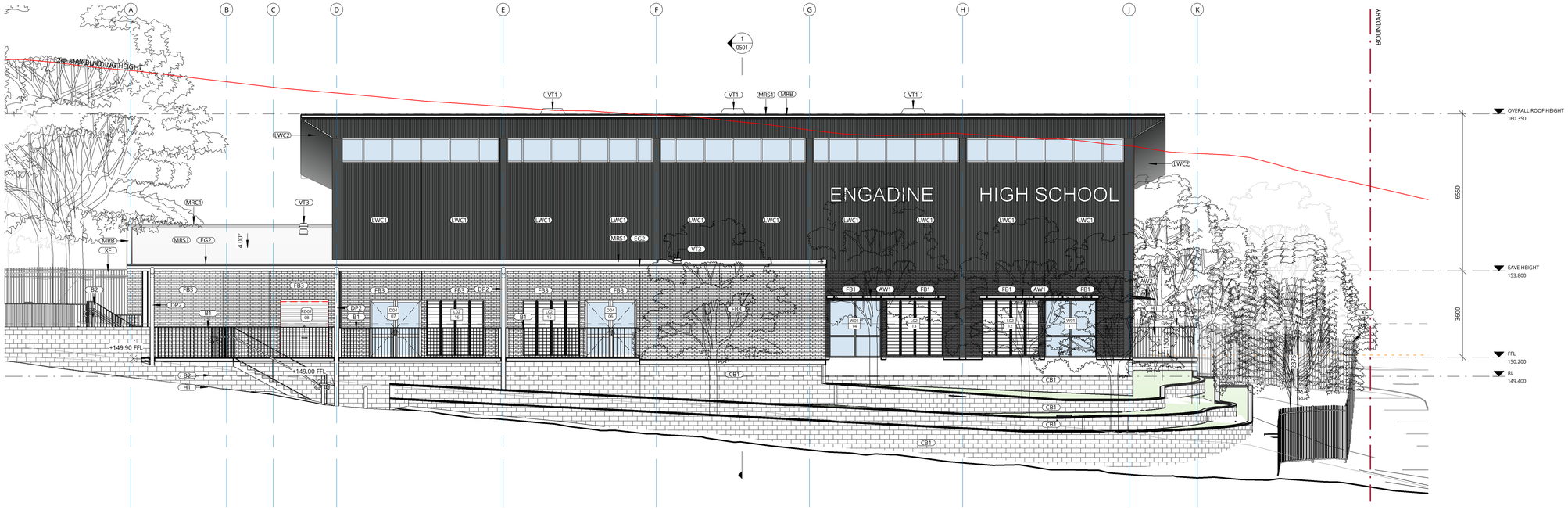
VT3	VENT - TYPE 3
XF	EXISTING FENCE



2 EAST ELEVATION
07.04 SCALE 1 : 100

REV	DATE	DESCRIPTION	BY	CHK
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K	15.03.2021	FOR DA	DF	
L	17.03.2021	FOR SCHEMATIC DESIGN REPORT / DA - REVISED	DF	
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N	23.03.2021	REVISED FOR DA	DF	
O	15.07.2021	FOR REVISED DA	DF	
P	09.08.2021	REVISED FOR DA	DF	

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ELEVATIONS - SHEET 2
ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020

SHEET NUMBER : EHS_2709 / 0402 / P

0 1000 2000 3000 4000 5000 mm
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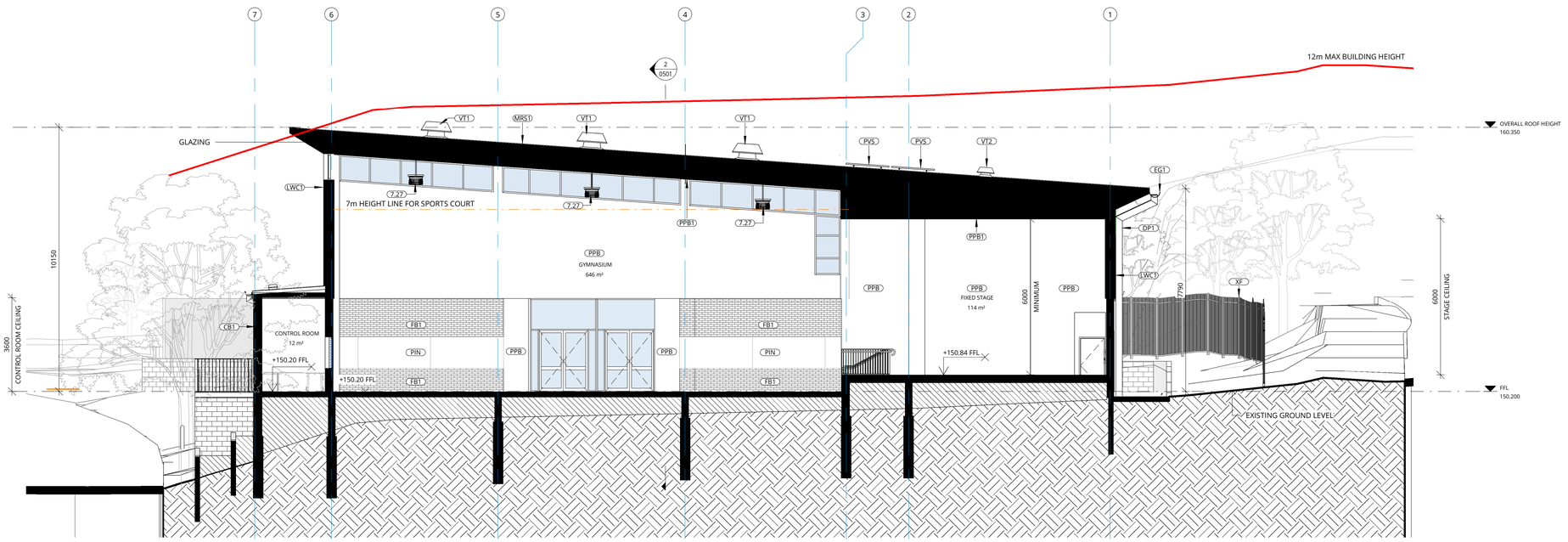
ABBREVIATIONS

B1	BALUSTRADE - TYPE 1
B2	BALUSTRADE - TYPE 2
CB1	CONCRETE BLOCKWORK - TYPE 1
COL1	COLUMN - TYPE 1
DP1	DOWNPIPE - TYPE 1
DP2	DOWNPIPE - TYPE 2
EG1	EAVES GUTTER - TYPE 1
FB1	FACE BRICK - TYPE 1
LWC1	LIGHT WEIGHT CLADDING - TYPE 1
MRB	METAL ROOF BARGE CAPPING
MRS1	METAL ROOF SHEETING - TYPE 1
PIN	PIN BOARD
PPB	PAINTED PLASTERBOARD
PPB1	PAINTED PLASTERBOARD - TYPE 1
PVS	PHOTOVOLTAIC SOLAR PANELS
VT1	VENT - TYPE 1
VT2	VENT - TYPE 2
XF	EXISTING FENCE



1 / 0301 SECTION A
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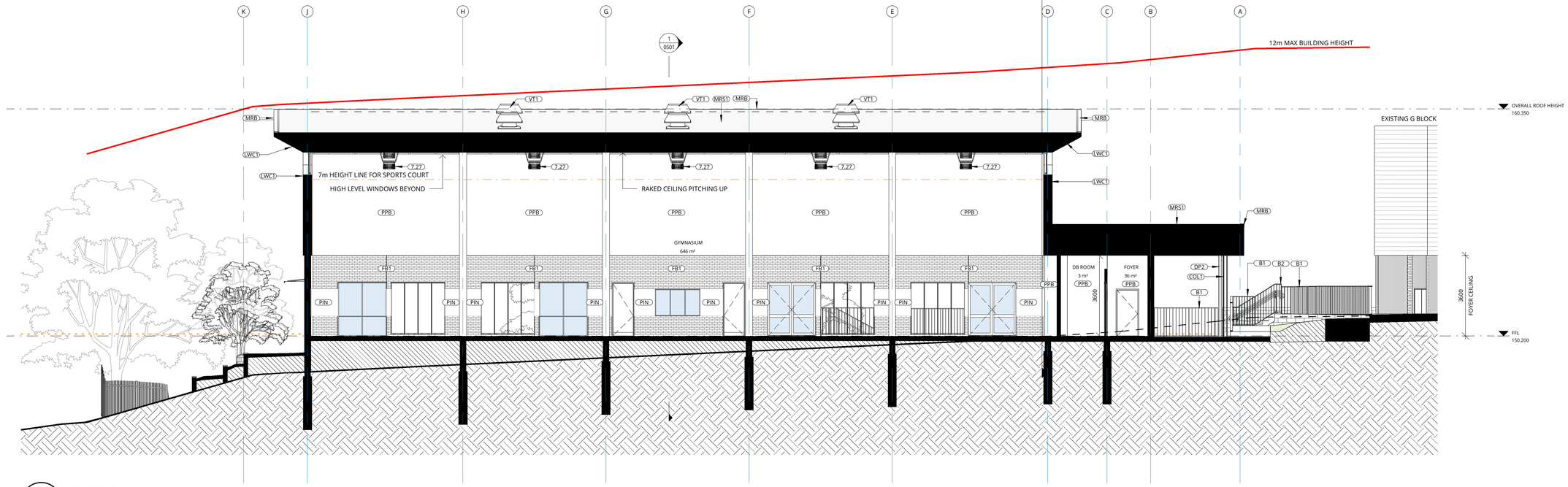

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E	18.12.2020	TENDER ADDENDUM - DEC 2020	TR	
F	21.12.2020	TENDER ADDENDUM - DEC 2020	DF	
G	18.01.2021	TENDER ADDENDUM - JAN 21	DF	
H	05.02.2021	FOR SCHEMATIC DESIGN	DF	LS
I	11.03.2021	FOR CONSULTANT COORDINATION	DF	
J	15.03.2021	FOR DA	DF	

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SECTIONS - SHEET 1
ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020

SHEET NUMBER : EHS_2709 / 0501 / J

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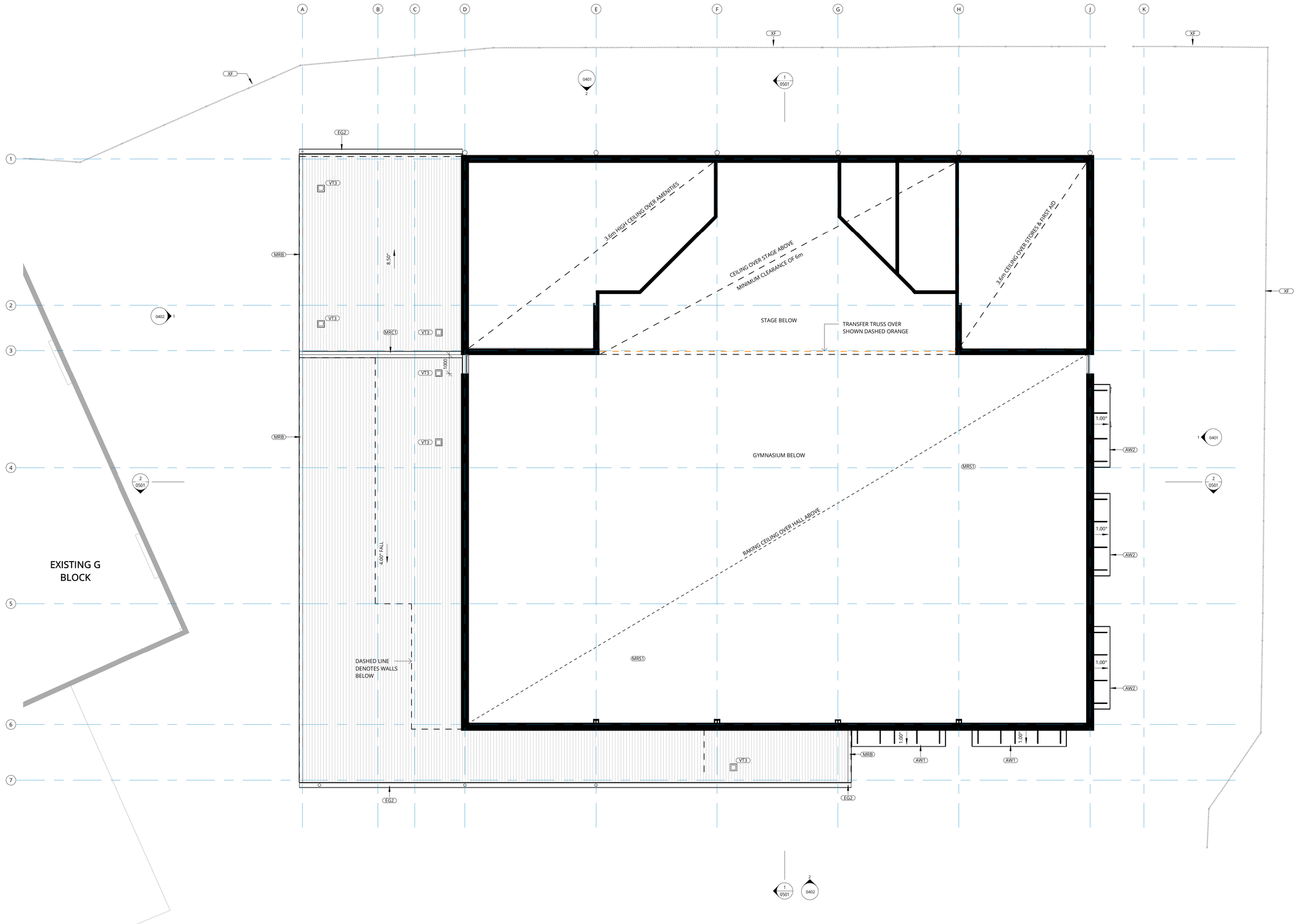
ABBREVIATIONS

AW1	AWNING - TYPE 1
AW2	AWNING - TYPE 2
EG2	EAVES GUTTER - TYPE 2
MRB	METAL ROOF BARGE CAPPING
MRC1	METAL ROOF CAPPING - TYPE 1
MRS1	METAL ROOF SHEETING - TYPE 1
VT3	VENT - TYPE 3
XF	EXISTING FENCE



1 ROOF PLAN - LOWER ROOF

SCALE 1 : 100

REV	DATE	DESCRIPTION	BY	CHK
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C	18.01.2021	TENDER ADDENDUM - JAN 21	DF	
D	21.01.2021	FOR CONSULTANT COORDINATION	DF	
E	29.01.2021	FOR QA REVIEW	DF	
F	05.02.2021	FOR SCHEMATIC DESIGN	DF	LS
G	11.03.2021	FOR CONSULTANT COORDINATION	DF	
H	15.03.2021	FOR DA	DF	

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ROOF PLAN - LOWER ROOF

ENGADINE HIGH SCHOOL HALL

2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020

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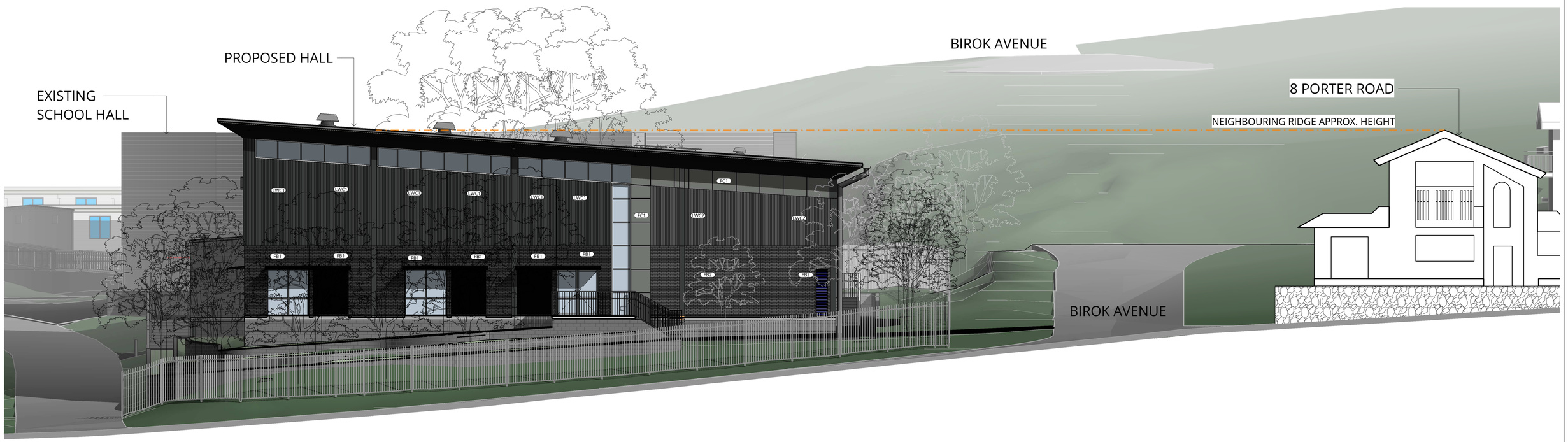

1 EASTERN ELEVATION - FROM PORTER ROAD
SCALE 1 : 100

PORTER ROAD PHOTOS

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ELEVATIONS - SHEET 3
ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020

SHEET NUMBER : EHS_2709 / 0403 / B

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1 / 0202 WESTERN ELEVATION - FROM BIROK AVENUE
SCALE 1 : 100

2 PERSPECTIVE FROM BIROK AVENUE
SCALE

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ELEVATION - SHEET 4
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2 PORTER ROAD, ENGADINE NSW 2233

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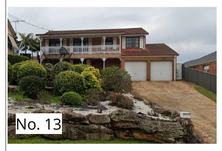
BIROK AVENUE PHOTOS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No. 11

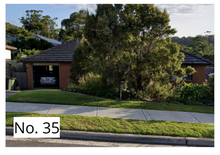

No. 9


No. 7


No. 5


No. 3

PORTER ROAD PHOTOS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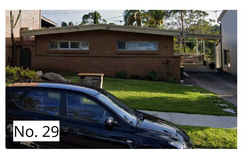
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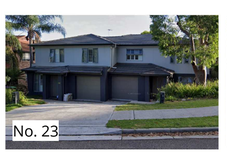
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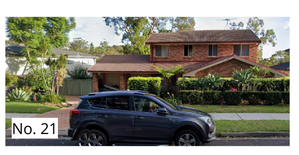
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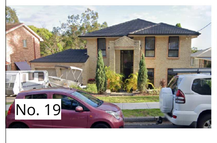
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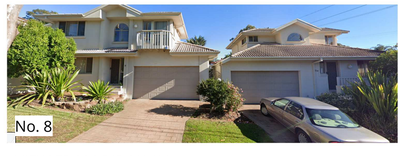
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VIEW FROM BIROK AV.

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SITE CONTEXT STUDY
ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020 SCALE

SHEET NUMBER : **EHS_2709 / SK-14 / A**

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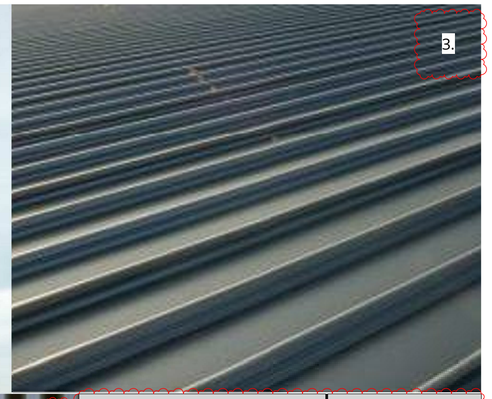
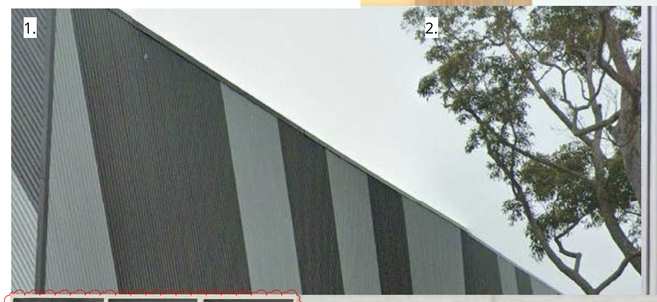
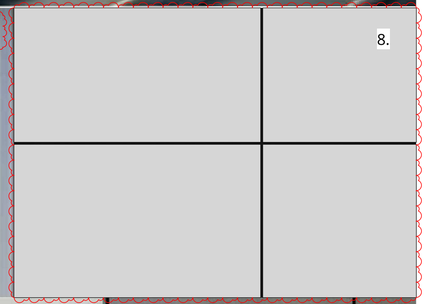
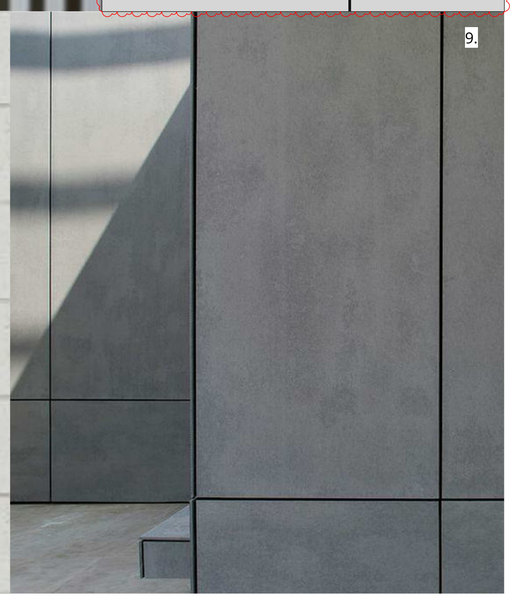
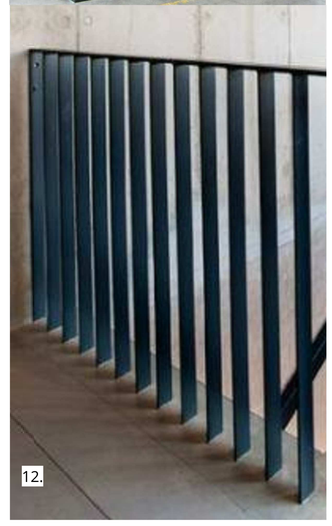








EXTERNAL HALL MATERIAL PALETTE



WINDOWS, LOUVRES AND OPENINGS

EXTERNAL MATERIALS PALETTE

1. Light Weight Cladding - Type 1 (LWC1)
Lysaght Custom Orb 0.48 BMT
Colour: Colorbond Monument

2 Light Weight Cladding - Type 2 (LWC2)
Lysaght Custom Orb 0.48 BMT
Colour: Colorbond Basalt

3. Metal Roof Sheet - Type 1 (MRS1)
Lysaght Klip-lock 700 High Strength 0.48 BMT
Colour: Colorbond Surfmist

4. Face Brick - Type 1 (FB1)
PGH Bricks & Pavers - Morada face brick
Colour: Nero Satin

5. Face Brick - Type 2 (FB2)
PGH Bricks & Pavers - Morada face brick
Colour: Gris

6. Face Brick - Type 3 (FB3)
PGH Bricks & Pavers - Morada face brick
Colour: Bianco

7. Concrete Blockwork (CB1)
Austral masonry GB Honed Blockwork
Non structural 190 blockwork
Colour: Porcelain
Note: Provide anti-graffiti coating

8. Fibre Cement Cladding - Type 1 (FC1)
9-12mm thick fibre cement facade panel system
Square-edge finish for expressed jointing
Colour: Colorbond Windspray
Note: Commercial grade required

9. Fibre Cement Cladding - Type 2 (FC2)
9-12mm thick fibre cement facade panel system
Square-edge finish for expressed jointing
Colour: Colorbond Surfmist
Note: Commercial grade required

WINDOWS, LOUVRES AND OPENINGS

10. Window
Commercial Grade Aluminium Frame with Powdercoat Finish to Match Monument Matt
Glazing to suit Section J requirements

11. Ventilation/Acoustic Louvre Windows
Commercial Grade Aluminium or steel Frame with Powdercoat Finish - Monument Matt
Note: Provide crimsafe mesh screen and dust filters to Section J consultants specifications

12. Balustrade
1300mm High Mild Steel Flatbar Custom Fabricated Balustrade with PUR 5 Corrosion Resistance Paint System
Colour: Colorbond Basalt
Note: To be designed to achieve C5 Crowd Load Rating

All Materials and Finishes To Be Confirmed With School Infrastructure

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G	15.03.2021	FOR DA	DF	
H	17.03.2021	FOR SCHEMATIC DESIGN REPORT / DA - REVISED	DF	
I	22.03.2021	FOR TENDER CLARIFICATION	DF	
J	23.03.2021	REVISED FOR DA	DF	
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MATERIALS PALETTE - SHEET 1
ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020
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BIROK

BOUNDARY

T1 T2 T3 T4 T5 T6 T7

EXISTING TREE (T7) TO BE RETAINED

EXISTING TREE (T6) TO BE RETAINED

EXISTING TREE (T5) TO BE RETAINED

EXISTING TREES (T1-T4) TO BE RETAINED

EXISTING SOFT LANDSCAPING TO BE DEMOLISHED AND REMOVED

EXISTING MODULAR BUILDING/S OWNED BY SCHOOL TO BE RELOCATED WITHIN SCHOOL GROUNDS TO LOCATION APPROVED BY THE SCHOOL AND SINSW. NOT PART OF CONTRACTORS SCOPE.

CONTRACTOR TO ALLOW TO DISCONNECT,CAP AND/OR REMOVE EXISTING SERVICES AFFECTED BY NEW CONSTRUCTION.

LOT 947
DP 752064

EXISTING DEMOUNTABLE

LOT 971
DP 752064

EXISTING G BLOCK

DEMOLISH AND REMOVE EXISTING PAVEMENT AND RAMPS

EXISTING FENCING AND GATES TO BE RETAINED

LOT 970
DP 752064

EXISTING TREE (T8) TO BE RETAINED

EXISTING TREE (T9) TO BE RETAINED

EXISTING TREE (T10) TO BE DEMOLISHED AND REMOVED

EXISTING TREE (T11) TO BE DEMOLISHED AND REMOVED

EXISTING FENCING AND GATES TO BE RETAINED

LOT 969
DP 752064

EXISTING TREE (T12) TO BE DEMOLISHED AND REMOVED

EXISTING TREE (T13) TO BE DEMOLISHED AND REMOVED

EXISTING TREE (T14) TO BE DEMOLISHED AND REMOVED

EXISTING TREE (T15) TO BE DEMOLISHED AND REMOVED

EXISTING TREE (T16) TO BE DEMOLISHED AND REMOVED

EXISTING TREE (T17) TO BE DEMOLISHED AND REMOVED

EXISTING TREE (T18) TO BE DEMOLISHED AND REMOVED

EXISTING TREE (T19) TO BE DEMOLISHED AND REMOVED

BOUNDARY

PORTER

LOT 1111
C9061-2030

EXISTING DRIVEWAY

DEMOLITION PLAN LEGEND

- EXISTING SCHOOL BUILDINGS & DEMOUNTABLES
- S — SEWER
- E — ELECTRICITY
- T — TELSTRA
- W — WATER
- SITE BOUNDARY
- TO BE DEMOLISHED

NOTE: CONTRACTOR TO OBTAIN AND REVIEW DIAL BEFORE YOU DIG (DBYD) INFORMATION PRIOR TO UNDERTAKING WORK ON-SITE

SAFETY IN DESIGN LEGEND

	HAZARD DESCRIPTION
A	INDICATES AMENITIES, FACILITIES, AND FIRST AID SERVICES
E	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH LIVE ELECTRICAL HAZARDS
EX	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH EARTHWORKS / EXCAVATION
FE	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH FIRE AND EMERGENCIES
MH	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH MANUAL TASKS AND/OR MAINTENANCE ACCESS
N	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH NOISE EXPOSURE
P	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH PLANT EQUIPMENT
PM	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH THE MOVEMENT OF PEOPLE AND/OR MATERIALS
R	INDICATES PROJECT SPECIFIC RISKS - OUTLINED BELOW WHERE APPLICABLE
S	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH HAZARDOUS SUBSTANCES
SS	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH STRUCTURAL SAFETY AND/OR DEMOLITION WORKS
WE	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH WORKING ENVIRONMENT AND/OR CONFINED SPACES
WH	INDICATES HIGH RISK ACTIVITIES ASSOCIATED WITH WORKING AT HEIGHTS AND/OR FALLING OBJECTS

	PROJECT SPECIFIC RISKS
R ASBESTOS	THIS IS A PROJECT SPECIFIC RISK
R POWER LINES	THIS IS A PROJECT SPECIFIC RISK
R CHEMICALS	THIS IS A PROJECT SPECIFIC RISK

1 DEMOLITION PLAN
SCALE 1 : 100

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Nominated Architect: Jon Webber AIA NSW ARB No 6630 | ABN 85 140 602 188

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DEMOLITION PLAN
ENGADINE HIGH SCHOOL HALL
2 PORTER ROAD, ENGADINE NSW 2233

COMMENCEMENT DATE : 20.03.2020

SHEET NUMBER : **EHS_2709 / 0300 / K**

0 1000 2000 3000 4000 5000 mm
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PROJECT NORTH

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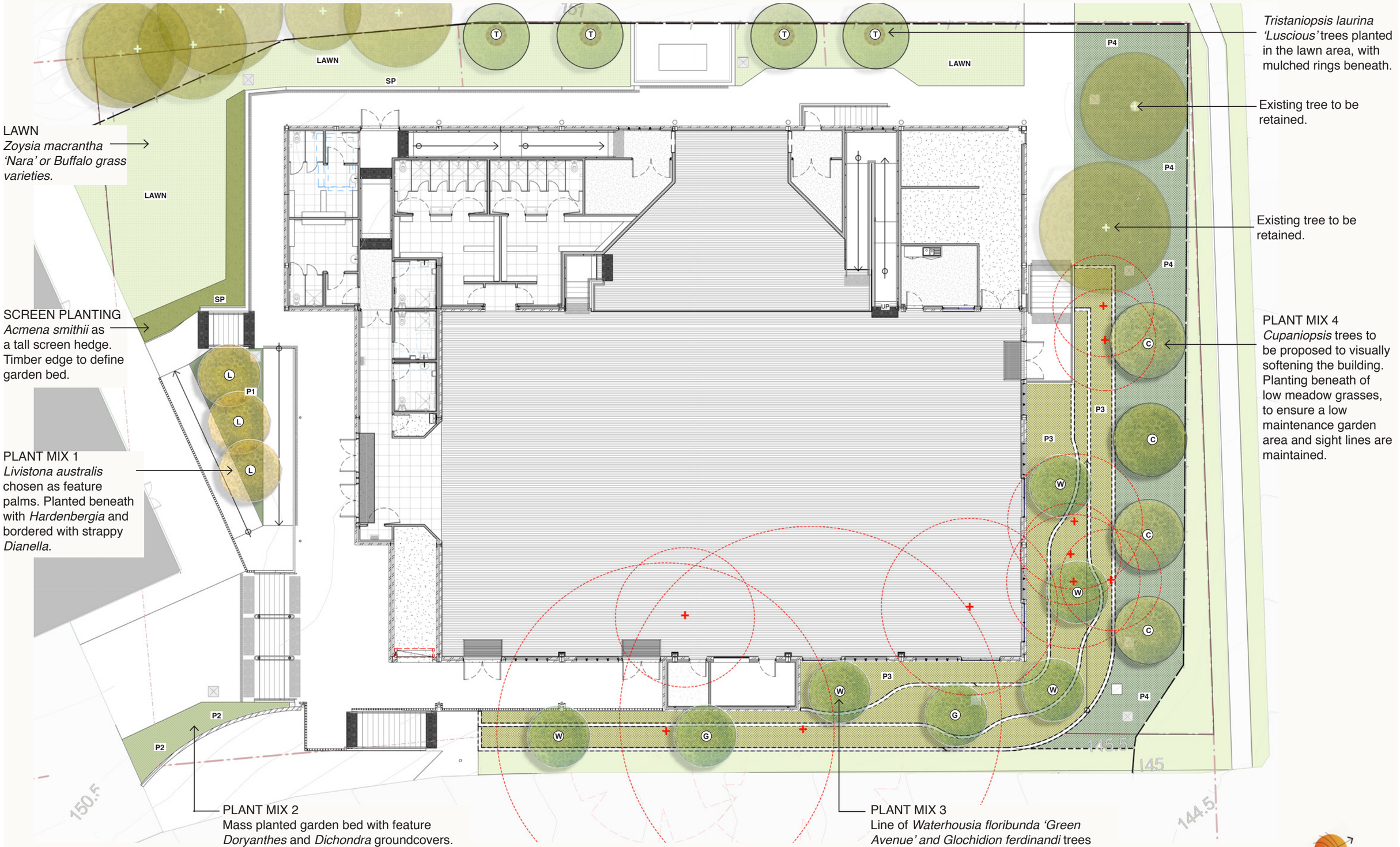


LAWN
Zoysia macrantha 'Nara' or Buffalo grass varieties.

SCREEN PLANTING
Acmena smithii as a tall screen hedge. Timber edge to define garden bed.

PLANT MIX 1
Livistona australis chosen as feature palms. Planted beneath with *Hardenbergia* and bordered with strappy *Dianella*.

Tristaniopsis laurina 'Luscious' trees planted in the lawn area, with mulched rings beneath.

Existing tree to be retained.

Existing tree to be retained.

PLANT MIX 4
Cupaniopsis trees to be proposed to visually softening the building. Planting beneath of low meadow grasses, to ensure a low maintenance garden area and sight lines are maintained.

PLANT MIX 2
Mass planted garden bed with feature *Doryanthes* and *Dichondra* groundcovers. Refer Plant Schedule for plant species details.

PLANT MIX 3
Line of *Waterhousia floribunda 'Green Avenue' and Glochidion ferdinandi* trees to provide a verdant screen. Low planting beneath of shade tolerant *Asplenium* ferns and *Cissus* ground covers.

Scale 1:200 @ A3

L01 Concept Plan

ENGADINE HIGH SCHOOL

DATE: AUGUST 2021

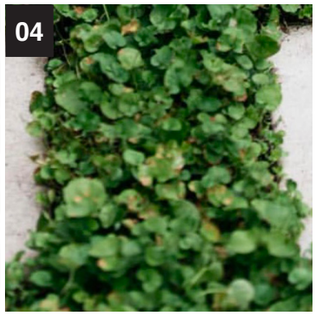
ISSUE: E - FOR SUBMISSION

GREEN SPACE PLANNING Co.
3/19 BOLTON STREET NEWCASTLE NSW 2300
PH 0423 684 382

GSP

SUGGESTED PLANT SCHEDULE

Image	Key	Botanical Name	Common Name	Pot Size	Mature Height	Mature Width
PLANTING MIX 01						
Feature Tree						
01	L	*Livistona australis*	Cabbage Palm	75L	15m	4m
Low Shrubs						
02	Dc	*Dianella caerulea 'Cassa Blue'*	Dianella	140mm	0.5m	0.4m
03	Hv	*Hardenbergia violacea*	Happy Wandere	140mm	0.4m	4m
PLANTING MIX 02						
Low Shrubs						
04	Dr	*Dichondra repens*	Kidney Weed	140mm	0.1m	1m
05	De	*Doryanthes excelsa*	Gymea Lily	140mm	2m	2m
PLANTING MIX 03						
Feature Tree						
06	G	*Glochidion ferdinandi*	Cheese Tree	75L	8m	5m
07	W	*Waterhousea floribunda 'Green Avenue'*	Weeping Lily Pilly	75L	8m	5m
Low Plants						
08	Aa	*Asplenium australasicum*	Birds Nest Fern	140mm	1m	1m
09	Ci	*Cissus antartica*	Kangaroo Vine	140mm	0.3m	2m
PLANTING MIX 04						
Feature Tree						
10	C	*Cupaniopsis anacardioides*	Tuckeroo	75L	8m	5m
Grasses and Groundcovers						
09	Ci	*Cissus antartica*	Kangaroo Vine	140mm	0.3m	2m
11	Ll	*Lomandra longifolia*	Mat Rush	140mm	1.2m	1.2m
12	Pl	*Poa labillardierei*	Common Tussock	140mm	1.2m	0.5m
13	Ta	*Themada australis 'Mingo'*	Kangaroo Grass	140mm	0.3m	0.6m
SCREEN PLANTING						
Tree						
14	T	*Tristaniopsis laurina 'Luscious'*	Kanooka Gum	75L	8m	4m
Screening Shrubs						
15	Er	*Acmena smithii 'Cherry Surprise'*	Lily Pilly	200mm	3m	1.5m



ENGADINE HIGH SCHOOL

enstruct

CIVIL ENGINEERING WORKS

BOUNDARY AND EASEMENT NOTE

The property boundary and easement locations shown on enstruct drawing's have been based from information received from: YSCO GEOTECHNICS
Land Resource Consultants
enstruct makes no guarantees that the boundary or easement information shown is correct. enstruct will accept no liabilities for boundary inaccuracies. The contractor/builder is advised to check/confirm all boundaries in relation to all proposed work prior to the commencement of construction. Boundary inaccuracies found are to be reported to the superintendent prior to construction starting.

CONCRETE FINISHING NOTES

1. All exposed concrete pavements are to be broomed finished.
2. All edges of the concrete pavement including keyed and dowelled joints are to be finished with an edging tool.
3. Concrete pavements with grades greater than 10 % shall be heavily broomed finished.
4. Carborundum to be added to all stair treads and ramped crossings U.N.O.

CIVIL SAFETY IN DESIGN

enstruct (NSW) Pty Ltd operates under Safe Work Australia's code of Conduct for the Safe Design of Structures.
These drawings shall be read in conjunction with the enstruct Transfer of Information Letter and Civil risk and Solutions Register. Under the Code of Conduct it is the Client's responsibility to provide a copy of the Civil Risk and Solutions Register to the Principal Contractor.
It is the Principal Contractor's responsibility to review the hazards and risks identified during the design process to ensure a safe workplace is maintained for the construction, maintenance and eventual demolition of the civil infrastructure.

DBYD SERVICES NOTE

"Public Service Utility information shown on plan has been complied from information received from Dial Before You Dig inquiry, reference Number 20575792, which was obtained on 09/11/2020.
Unless specifically shown otherwise, this location and depth of services shown on this plan have not been verified.

The location of services shown on this drawing have been plotted as accurately as possible from diagrams provided by service authorities and should be confirmed by site inspection."

KERBING NOTES

Includes all kerbs, gutters, dish drains, crossings and edges.

1. All kerbs, gutters, dish drains and crossings to be constructed on minimum 75mm granular basecourse compacted to minimum 98% modified maximum dry density in accordance with AS 1289 5.2.1.
2. Expansion joints (EJ) to be formed from 10mm compressible cork filler board for the full depth of the section and cut to profile. Expansion joints to be located at drainage pits, on tangent points of curves and elsewhere at 12m centres except for integral kerbs where the expansion joints are to match the joint locations in slabs.
3. Weakened plane joints to be min 3mm wide and located at 3m centres except for integral kerbs where weakened plane joints are to match the joint locations in slabs.
4. Broomed finished to all ramped and vehicular crossings, all other kerbing or dish drains to be steel float finished.
5. In the replacement of kerbs -
   Existing road pavement is to be sawcut 900mm from lip of gutter. Upon completion of new kerbs, new basecourse and surface is to be laid 900mm wide to match existing materials and thicknesses.
   Existing allotment drainage pipes are to be built into the new kerb with a 100mm dia hole.
   Existing kerbs are to be completely removed where new kerbs are shown.

GENERAL NOTES

1. Contractor must verify all dimensions and existing levels on site prior to commencement of works. Any discrepancies to be reported to the Engineer
2. Strip all topsoil from the construction area. All stripped topsoil shall be disposed of off-site unless directed otherwise.
3. Make smooth connection with all existing works.
4. Compact subgrade under buildings and pavements to minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1. Compaction under buildings to extend 2m minimum beyond building footprint.
5. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority; the Contractor is to ensure that the drawings used for construction have been approved by all relevant authorities prior to commencement site.
6. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority is to be carried out in accordance with the requirements of the relevant Authority. The Contractor shall obtain these requirements from the Authority. Where the requirements of the Authority are different to the drawings and specifications, the requirements of the Authority shall be applicable.
7. For all temporary batters refer to geotechnical recommendations.

REFERENCE DRAWINGS

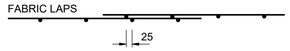
1. These drawings have been based from, and to be read in conjunction with the following Consultants drawings. Any conflict to the drawings must be notified immediately to the Engineer.

Consultant	Dwg Title	Dwg No	Rev	Date
Webber Architects	Site Plan	0202	1	18.11.2020
	Ground Floor	0301	1	18.11.2020
	Roof Plan	0330	1	18.11.2020
	Section	0501	1	18.11.2020

REINFORCEMENT NOTES

1. Fix reinforcement as shown on drawings. The type and grade is indicated by a symbol as shown below. On the drawings this is followed by a numeral which indicates the size in millimetres of the reinforcement.
   N. Hot rolled ribbed bar grade D500N
   R. Plain round bar grade R250N
   SL. Square mesh grade 500L
   RL. Rectangular mesh grade 500L
2. Provide bar supports or spacers to give the following concrete cover to all reinforcement unless otherwise noted on drawings.
   Footings - 50 top, 50 bottom, 50 sides.
   Walls - 40 generally.
   - 40 when cast in forms but later exposed to weather or ground.
   - 50 when cast directly in contact with ground.
3. Cover to reinforcement ends to be 50 mm u.n.o.
4. Provide N12-450 support bars to top reinforcement as required, Lap 500 U.N.O.
5. Maintain cover to all pipes, conduits, reglets, drip grooves etc
6. All cogs to be standard cogs unless noted otherwise.
7. Fabric end and side laps are to be placed strictly in accordance with the manufacturers requirements to achieve a full tensile lap. Fabric shall be laid so that there is a maximum of 3 layers at any location.

FABRIC LAPS

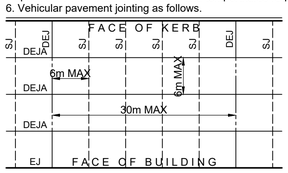


8. Laps in reinforcement shall be made only where shown on the drawings unless otherwise approved. Lap lengths as per table below.

JOINTING NOTES

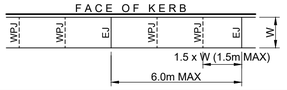
Vehicular Pavement Jointing

1. All vehicular pavements to be jointed as shown on drawings.
2. Keyed construction joints should generally be located at a maximum of 6m centres.
3. Sawn joints should generally be located at a maximum of 6m centres or 1.5 x the spacing of keyed joints, where key joint spacing is less than 4m, with dowelled expansion joints at maximum of 30m centres.
4. Provide 10mm wide full depth expansion joints between buildings and all concrete or unit pavers.
5. The timing of the saw cut is to be confirmed by the contractor on site. Site conditions will determine how many hours after the concrete pour before the saw cuts are commenced. Refer to the specification for weather conditions and temperatures required.
6. Vehicular pavement jointing as follows.



Pedestrian Footpath Jointing

1. Expansion joints are to be located where possible at tangent points of curves and elsewhere at max 6.0m centres.
2. Weakened plane joints are to be located at a max 1.5 x width of the pavement.
3. Where possible joints should be located to match kerbing and / or adjacent pavement joints.
4. All pedestrian footpath jointings as follows (uno).



RETAINING WALLS

1. Drainage shall be provided as shown on the drainage drawings.
2. Backfilling shall be carried out after grout or concrete has reached a minimum strength of 0.85 f'c. Backfilling shall be approved granular material compacted in layers not exceeding 200mm to 95% Standard compaction unless noted otherwise.
3. Provide waterproofing to back of walls as specified or noted.
4. Where retaining walls rely on connecting structural elements for stability, do not backfill against the wall unless it is adequately propped or the elements have been constructed and have sufficient strength to withstand the loads.
5. For all temporary batters obtain geotechnical engineers recommendations.

PIT SCHEDULE

Note: Grate size does not necessarily reflect pit size, refer pit type details, shown on detail sheets - DWGNO
Final internal pit dimensions are to comply with AS3500

Type	Description	Size	Class	Size	Number
B	Surface inlet pit	900 x 900	C	Galvanised mild steel grate hinged to frame	7
B	Junction pit	900 x 900	C	Galvanised mild steel grate hinged to frame	5,6,8,9,10,11
A	OSD Tank Acces	900 x 900	C	Galvanised mild steel grate hinged to frame	2,3,4
E	Existing pit			Grate and Lintel to suit council requirements	1

SURVEY AND SERVICES INFORMATION

SURVEY

Origin of levels :
Datum of levels : A.H.D. AUSTRALIAN HEIGHT DATUM
Coordinate system : MGA
Survey prepared by : YSCO GEOTECHNICS
Setout Points : CONTACT THE SURVEYOR

enstruct does not guarantee that the survey information shown on these drawings is accurate and will accept no liability for any inaccuracies in the survey information provided to us from any cause whatsoever.

UNDERGROUND SERVICES - WARNING

The locations of underground services shown on enstruct drawings have been plotted from diagrams provided by service authorities. This information has been prepared solely for the authorities own use and may not necessarily be updated or accurate.

The position of services as recorded by the authority at the time of installation may not reflect changes in the physical environment subsequent to installation.

enstruct does not guarantee that the services information shown on these drawings shows more than the presence or absence of services, and will accept no liability for inaccuracies in the services information shown from any cause whatsoever.

The Contractor must confirm the exact location and extent of services prior to construction and notify any conflict with the drawings immediately to the Engineer/Superintendent.

The contractor is to get approval from the relevant state survey department, to remove/adjust any survey mark. This includes but is not limited to; State Survey Marks (SSM), Permanent Marks (PM), cadastral reference marks or any other survey mark which is to be removed or adjusted in any way.

enstruct plans do not indicate the presence of any survey mark. The contractor is to undertake their own search.

STORMWATER DRAINAGE NOTES

1 Stormwater Design Criteria :
(A) Average exceedance probability -
1% AEP for roof drainage to first external pit
5% AEP for paved and landscaped areas
(B) Rainfall intensities -
Time of concentration: 5 minutes
1% AEP = 243mm/hr
5% AEP = 187mm/hr
(C) Rainfall losses -
Impervious areas: IL= 1.5 mm , CL= 0 mm/hr
Pervious areas: IL= 33.6mm , CL= 0.88 mm/hr

2. Pipes 300 dia and larger to be reinforced concrete Class "2" approved spigot and socket with rubber ring joints U.N.O.
3. Pipes up to 300 dia may be sewer grade uPVC with solvent welded joints, subject to approval by the engineer
4. Equivalent strength FRP pipes may be used subject to approval.
5. Precast pits may be used external to the building subject to approval by Engineer
6. Enlargers, connections and junctions to be manufactured fittings where pipes are less than 300 dia.
7. Where subsoil drains pass under floor slabs and vehicular pavements, unslotted uPVC sewer grade pipe is to be used.
8. Grates and covers shall conform with AS 3996-2006, and AS 1428.1 for access requirements.
9. Pipes are to be installed in accordance with AS 3725.
All bedding to be type H2 U.N.O.
10. Care is to be taken with invert levels of stormwater lines. Grades shown are not to be reduced without approval.
11. All stormwater pipes to be 150 dia at 1.0% min fall U.N.O.
12. Subsoil drains to be slotted flexible uPVC U.N.O.
13. Adopt invert levels for pipe installation (grades shown are only nominal).

MASONRY NOTES

1. Temporary bracing shall be provided by the contractor to keep the masonry stable at all times.
2. Masonry to be in accordance with AS 3700
3. Masonry units shall comply with AS/NZS 4455 and as follows:

Type of masonry unit	Characteristic unconfined compressive strength (f'uc)	Characteristic lateral modulus of rupture (f'ut)
Clay & Calcium silicate	15 MPa	0.8 MPa
Concrete (used in non-loadbearing internal walls)	4.5 MPa (hollow units) 3.0 MPa (solid or cored units)	0.8 MPa
Concrete (used in unreinforced loadbearing walls, reinforced masonry and non-loadbearing external walls)	15 MPa (hollow units) 10 MPa (solid or cored units)	0.8 MPa

4. Mortar shall consist of the following:
   M3 for general applications
   1 part Type GP cement: 5 parts sand plus water thickener
   M4 for elements in interior environments subject to saline wetting and drying; below a damp-proof course or in contact with ground in aggressive soils; in severe marine environments; in saline or contaminated water including tidal splash zones; and within 1km of an industry producing chemical pollutants.
   1 part Type GP cement: 4 parts sand plus water thickener
5. Other than what is allowed in the specification no chasing or rebates may be made in masonry walls without written approval.
6. The contractor shall provide records that demonstrate all masonry bed joint reinforcement, masonry ties and masonry wall stiffeners have been installed in accordance with the drawings and specification.
7. All load bearing concrete masonry walls shall have all cores filled with grout UNO. Core filling grout shall be thoroughly compacted. Grout to be in accordance with AS3700 and as follows:

Location	f'cg MPa	Specified Slump	Maximum Agg. Size
Grout	20	230	10

8. All core filled blockwalls shall be constructed with "Double U" blocks
9. In core filled blockwalls cleanout openings shall be provided at the bottom of each core and shall be cleaned of mortar protrusions before grouting.
10. All core filled block walls shall have all cores filled with grout UNO. Core filling grout to be in accordance with note 9.
11. Cover to reinforcement to be 50mm to face of block UNO.
12. Provide bed joint reinforcement as follows
    M.E.T. galvanized masonry reo where M3 mortar is used (supplied by DUNSTONE MAZE in NSW)
    Ancon CCL stainless steel where M4 mortar is used and locate as follows
    - in 2 bed joints below and above head and sill flashings to openings
    - in 2 bed joints below and above openings
    - in third bed joint above bottom of wall
    - in second bed joint below top of wall

rev	date	description	drn	ch'k
B	12/03/21	PIT SCHEDULE UPDATED	PAD	KEH
A	09/12/20	ISSUE FOR SCHEMATIC DESIGN	PAD	KEH

rev	date	description	drn	ch'k

NSW GOVERNMENT Education School Infrastructure

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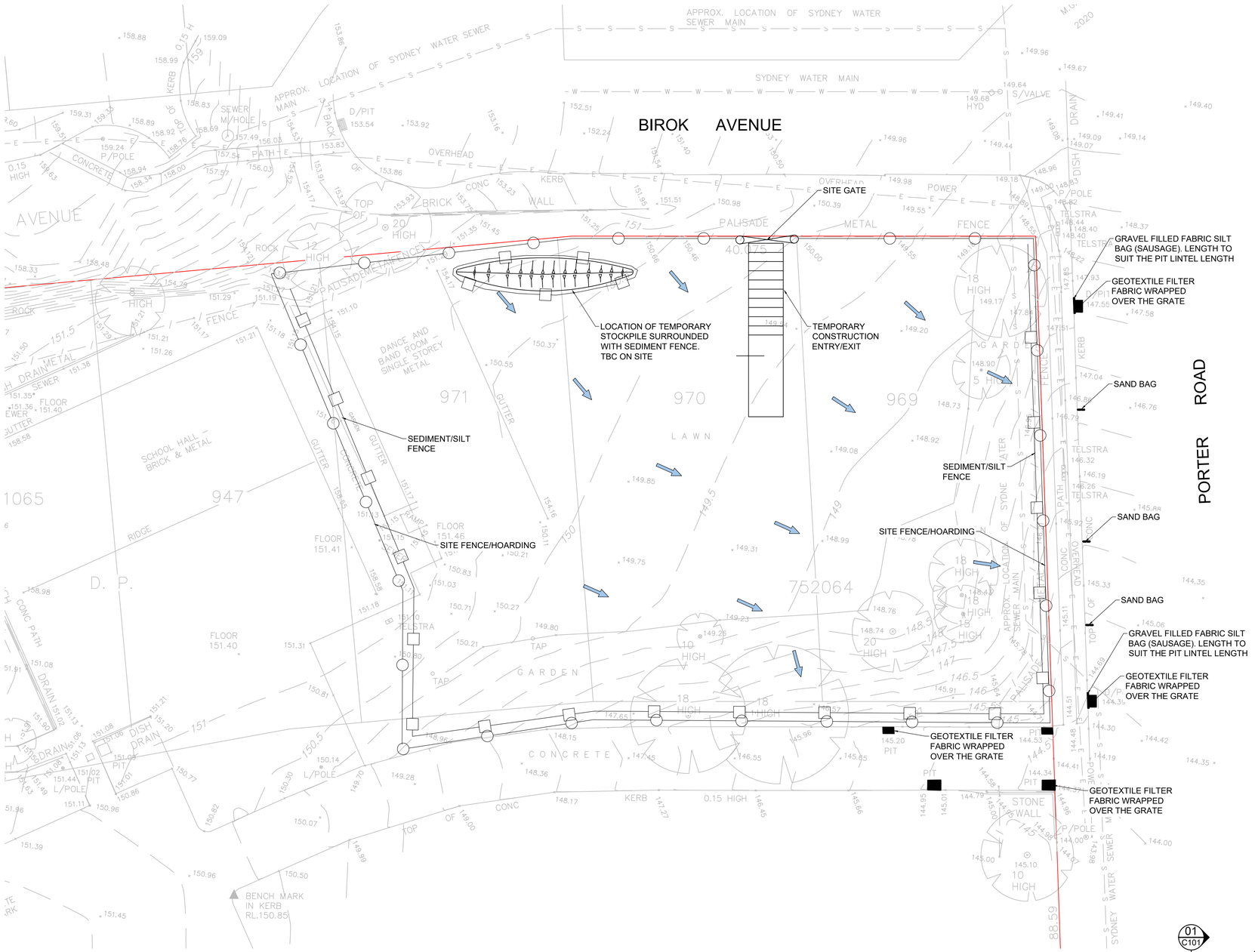
project: Engadine High School Hall

drawing title: Cover, Notes and Legends Sheet

status:

scale at A1: NTS | drawn by: BEJ | checked: KEH

project no.: 6275 | drawing no.: EHS - C100 | rev.: B



EROSION AND SEDIMENT CONTROL NOTES

1. All work shall be generally carried out in accordance with
   (A) Local authority requirements,
   (B) EPA - Pollution control manual for urban stormwater,
   (C) LANDCOM NSW - Managing Urban Stormwater: Soils and Construction ("Blue Book").
2. Erosion and sediment control drawings and notes are provided for the whole of the works. Should the Contractor stage these works then the design may be required to be modified. Variation to these details may require approval by the relevant authorities.
   The erosion and sediment control plan shall be implemented and adapted to meet the varying situations as work on site progresses.
3. Maintain all erosion and sediment control devices to the satisfaction of the superintendent and the local authority.
4. When stormwater pits are constructed prevent site runoff entering the pits unless silt fences are erected around pits.
5. Minimise the area of site being disturbed at any one time.
6. Protect all stockpiles of materials from scour and erosion. Do not stockpile loose material in roadways, near drainage pits or in watercourses.
7. All soil and water control measures are to be put back in place at the end of each working day, and modified to best suit site conditions.
8. Control water from upstream of the site such that it does not enter the disturbed site.
9. All construction vehicles shall enter and exit the site via the temporary construction entry/exit.
10. All vehicles leaving the site shall be cleaned and inspected before leaving.
11. Maintain all stormwater pipes and pits clear of debris and sediment. Inspect stormwater system and clean out after each storm event.
12. Clean out all erosion and sediment control devices after each storm event.

Sequence Of Works

1. Prior to commencement of excavation the following soil management devices must be installed.
1.1. Construct silt fences below the site and across all potential runoff sites.
1.2. Construct temporary construction entry/exit and divert runoff to suitable control systems.
1.3. Construct measures to divert upstream flows into existing stormwater system.
1.4. Construct sedimentation traps/basin including outlet control and overflow.
1.5. Construct turf lined swales.
1.6. Provide sandbag sediment traps upstream of existing pits.
2. Construct geotextile filter pit surround around all proposed pits as they are constructed.
3. On completion of pavement provide sand bag kerb inlet sediment traps around pits.
4. Provide and maintain a strip of turf on both sides of all roads after the construction of kerbs.

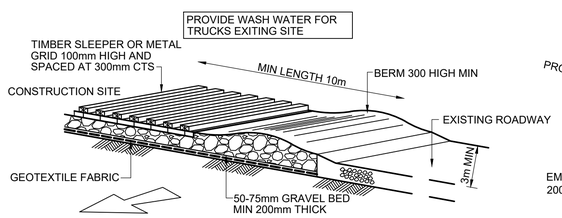
WATER QUALITY TESTING REQUIREMENTS

Prior to discharge of site stormwater, groundwater and seepage water into council's stormwater system, contractors must undertake water quality tests in conjunction with a suitably qualified environment consultant outlining the following:

- Compliance with the criteria of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)
- If required subject to the environmental consultants advice, provide remedial measures to improve the quality of water that is to be discharged into Councils storm water drainage system.This should include comments from a suitably qualified environmental consultant confirming the suitability of these remedial measures to manage the water discharged from the site into Councils storm water drainage system. Outlining the proposed, ongoing monitoring, contingency plans and validation program that will be in place to continually monitor the quality of water discharged from this site. This should outline the frequency of water quality testing that will be undertaken by a suitably qualified environmental consultant.

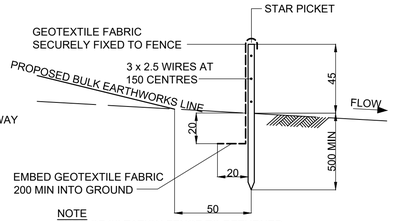
EROSION AND SEDIMENT CONTROL LEGEND

- Site Boundary
- Siltation fence
- Site fence/hoarding
- Stormwater pit with Geotextile filter surround
- Sandbag sediment trap
- Existing Overland flow path



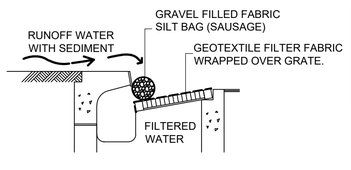
TEMPORARY CONSTRUCTION VEHICLE EXIT

NTS



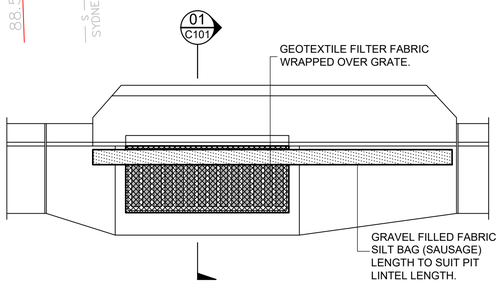
SILTATION FENCE DETAIL

SCALE 1:20



SECTION 01/C101

SCALE 1: 20



KERB INLET SEDIMENT TRAP

SCALE 1:20

rev	date	description	drn	ch'k
B	12/03/21	SITE FENCE/SEDIMENT FENCE UPDATED	PAD	KEH
A	09/12/20	ISSUE FOR SCHEMATIC DESIGN	PAD	KEH

rev	date	description	drn	ch'k

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N

enstruct

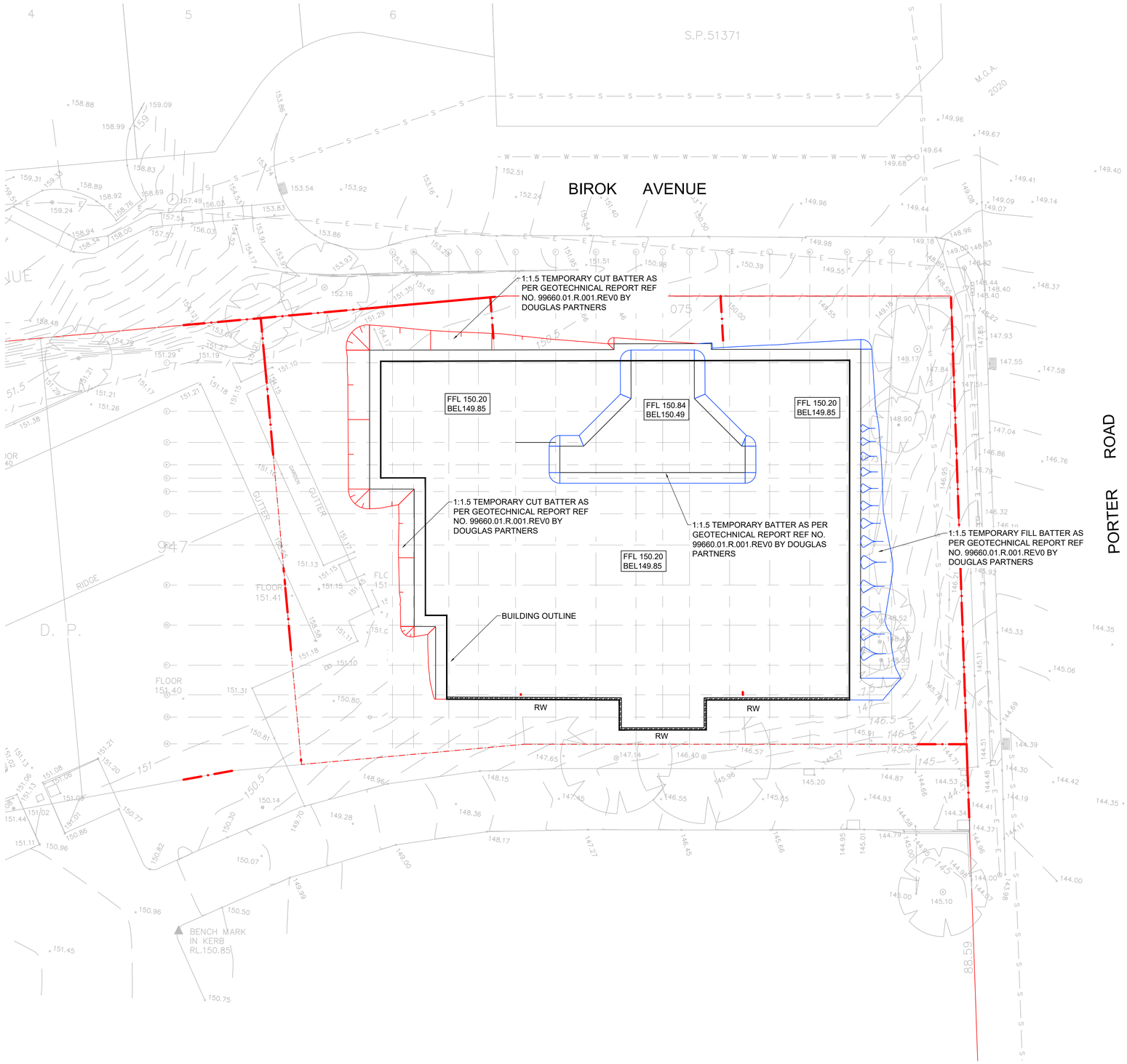
project: Engadine High School Hall

drawing title: Erosion and Sediment Control Plan and Detail

status:

scale at A1	drawn by	checked	
1:200	PAD	KEH	

project no.	drawing no.	rev.
6275	EHS - C101	B



BULK EARTHWORKS NOTES

1. All bulk earthworks setout from grid lines U.N.O.
2. All temporary batters at a slope of 1.5 (H) : 1(V) U.N.O.
3. All permanent batters at a slope of 4 (H) : 1 (V) U.N.O.
4. Excavated material may be used as structural fill provided,
   (i) it complies with the specification requirements for fill material,
   (ii) the placement moisture content complies with the Geotechnical Consultants requirements, and allows filling to be placed and proofrolled in accordance with the specification. Where necessary the Contractor must moisture condition the excavated material to meet these requirements.

4. Compact fill areas and subgrade to not less than:

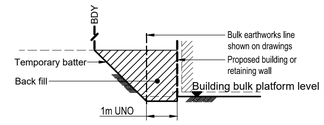
Location	Standard dry density (AS 1289 5.1.1.)	Moisture (OMC)
Under building slabs on ground:	98%	±2%
Under roads and carparks:	98%	±2%
Landscaped areas:	95%	±2%

5. Before placing fill, proof roll exposed subgrade with a 10 tonne minimum roller to test subgrade and then remove soft spots (areas with more than 3mm movement under roller). Soft spots to be replaced with Select fill U.N.O.
6. Contractor shall place safety barriers around excavations in accordance with relevant safety regulations.
7. For interpretation of bulk earthworks foot print line shown on the bulk earthworks drawings refer to the bulk earthworks construction legend.
8. Bulk earthwork drawings are not to be used for detailed excavation.
9. Refer to Geotechnical Report prepared by - Douglas Partners dated May 2020

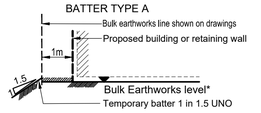
BULK EARTHWORKS LEGEND

- Batter
- B10.00+X B10.00+X / B10.00 X STEP B10.00 — Bulk Earthworks Step (Step from low side to high side)
- ● B22.OO — Bulk earthworks spot level
- B22.OO — Bulk earthworks contour level
- BE 22.00 — Bulk earthworks platform level
- Flat platforms shown with dots

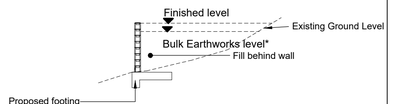
BULK EARTHWORKS CONSTRUCTION LEGEND



BATTER TYPE A



BATTER TYPE B



BATTER TYPE E

NOTE

1. * Bulk Earthworks level = Finish surface - (Slab thickness + base course)
2. Refer architects drawings for building setout
3. Bulk Earthwork drawings are for bulk excavation only. They are not to be used for detailed excavation such as; lift shafts, footings, pits etc.
4. Bulk Earthwork setout refers to bulk excavation only. They are not to be used for building, kerb or any other setout.

PRELIMINARY
BULK VOLUMES 700m³ FILL
250m³ CUT
SITE STRIPPING, TRENCHING, BACKFILL BEHIND THE WALLS, FOOTPATHS AND LANDSCAPING NOT INCLUDED IN BULK VOLUMES

rev	date	description	drn	ch'k
B	12/03/2021	BUILDING EXTENT AND BULK EARTHWORKS UPDATED	PAD	KEH
A	09/12/2020	ISSUE FOR SCHEMATIC DESIGN	PAD	KEH

rev	date	description	drn	ch'k

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N

enstruct

project: Engadine High School Hall

drawing title: Bulk Earthworks Plan

status:

scale at A1	drawn by	checked	
1:100	BEJ	KEH	

project no.	drawing no.	rev.
6275	EHS - C111	B

SITEWORKS LEGEND

- Site Boundary
- SW — SW — Stormwater pit, flow direction and line
- SS — IO — Inspection opening/flushing point with subsoil drainage line (100 dia)
- RW — Retaining wall
- DP — Downpipe with Roof Water line
- GD — Grated drain

General Notes

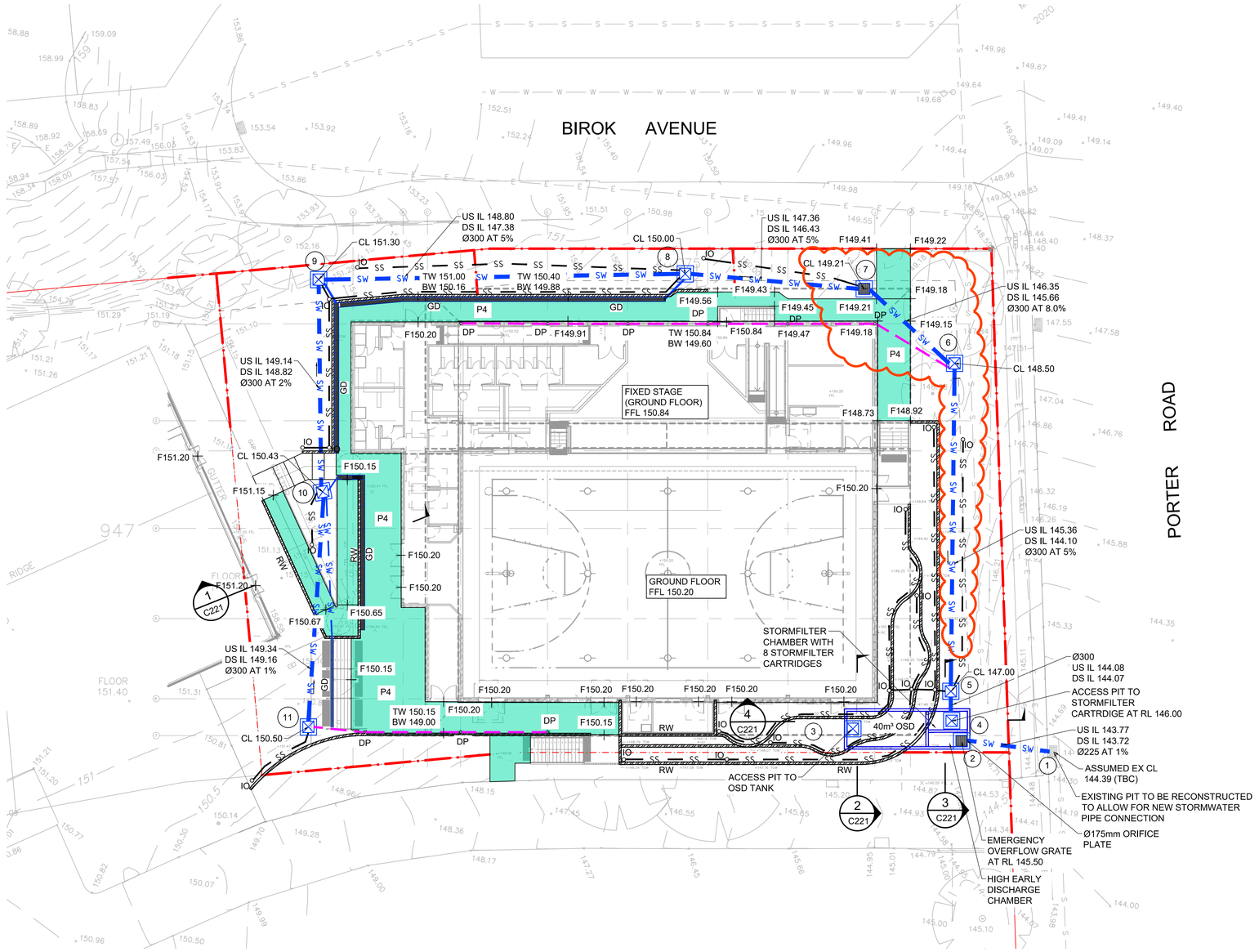
1. Downpipe shown indicatively. Refer to Architect/hydraulics drawings for the location of the downpipes.

PAVEMENT TYPE 4
PEDESTRIAN FOOTPATH

P4

100mm SL72 Thickness concrete (f'c=25MPa) with expansion joints at max 6.0m centres and weakened plane joints at max 1.5m centres

100mm DGB20



rev	date	description	drn	ch'k
C	15/03/21	CLOUDED CHANGES	PAD	KEH
B	12/03/21	BUILDING EXTENT REVISED	PAD	KEH
A	09/12/20	ISSUE FOR SCHEMATIC DESIGN	PAD	KEH

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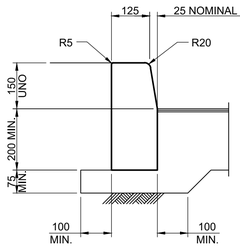
project: Engadine High School Hall

drawing title: Siteworks Plan

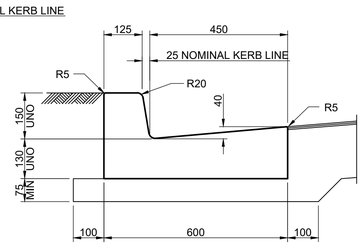
status:

scale at A1	drawn by	checked	
1:200	PAD	KEH	

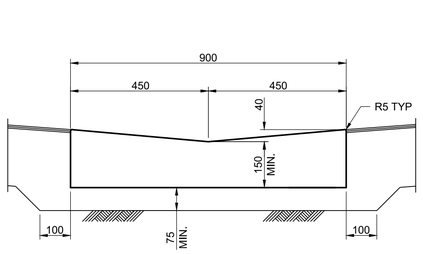
project no.	drawing no.	rev.
6275	EHS - C201	C



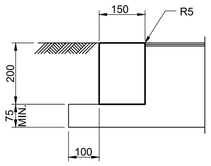
KERB ONLY (KO)
SCALE 1:10



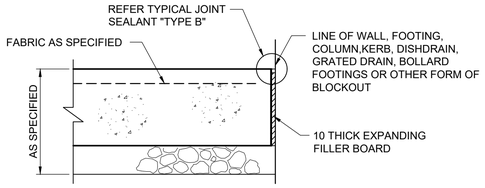
KERB AND GUTTER (K&G)
SCALE 1:10



DISH DRAIN (DD)
SCALE 1:10

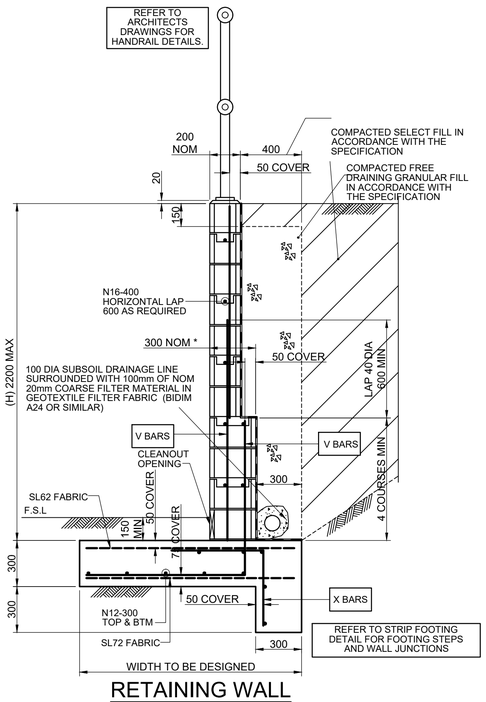


FLUSH KERB (FK)
SCALE 1:10

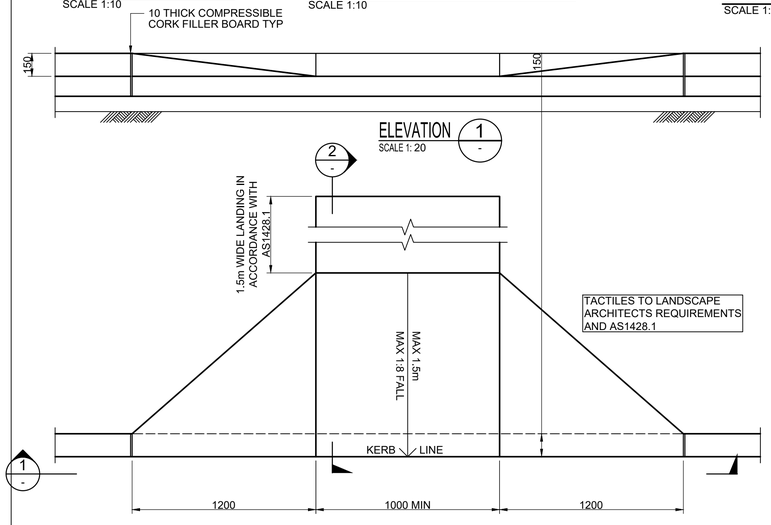


TYPICAL ISOLATION JOINT DETAIL (IJ)
SCALE 1:10

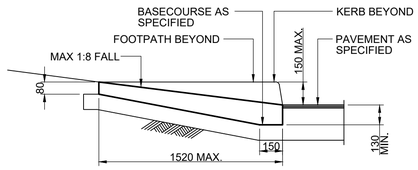
SHOWN AS 'IJ' ON PLAN AND TO ALSO BE CONSTRUCTED IN LOCATIONS WHERE CONCRETE PAVEMENTS ABUT FORMS OF BLOCKOUT AS SPECIFIED BY THIS ISOLATION JOINT DETAIL UNLESS NOTIFIED OTHERWISE.



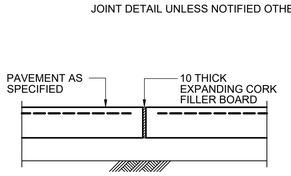
RETAINING WALL
SCALE 1:20



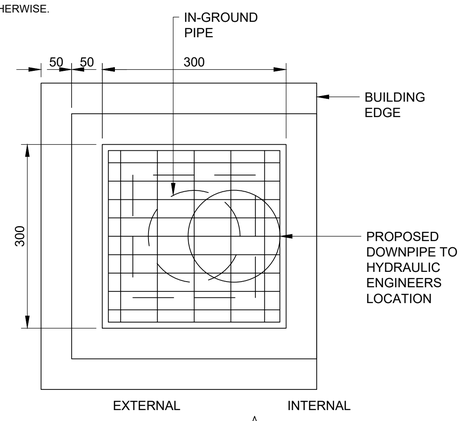
PLAN
KERB RAMP
SCALE 1:20

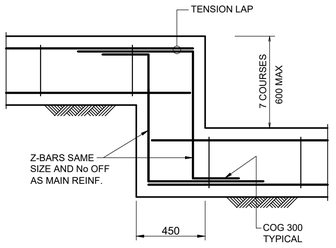


SECTION 2
SCALE 1: 20

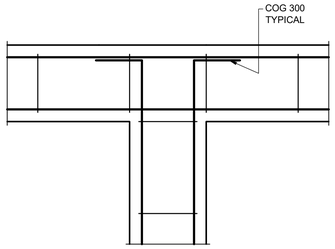


EXPANSION JOINT (EJ)
SCALE 1:20

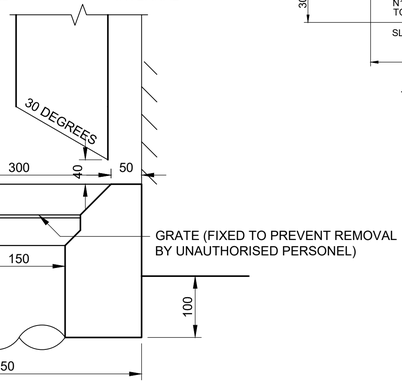




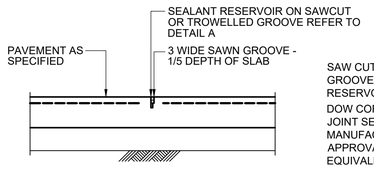
STEP



JUNCTION

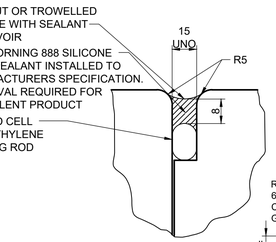


SCHOOL DOWNPIPE DETAIL IN LANDSCAPING

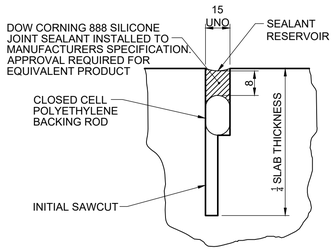


WEAKENED PLANE JOINT (WPJ)
SCALE 1:20

NOTE:REFER TO JOINTING NOTES, POINT 5 FOR TIMING OF SAW CUTS.

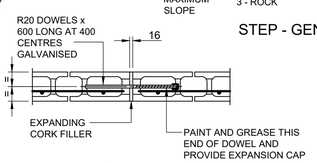


DETAIL B
NTS



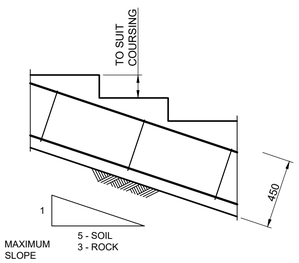
DETAIL A
NTS

NOTE:REFER TO JOINTING NOTES, POINT 5 FOR TIMING OF SAW CUTS.

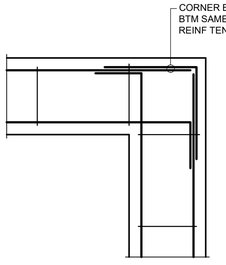


WALL JOINT DETAIL
(8000 MAX. CTS U.N.O.)

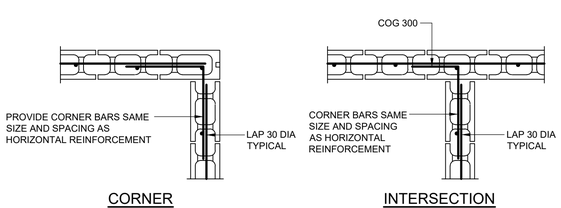
STRIP FOOTING DETAILS



STEP - GENTLE SLOPES

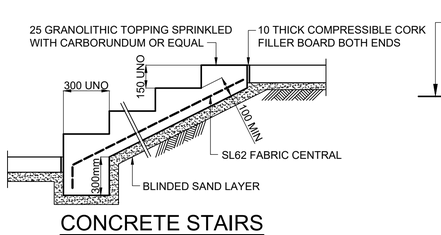


CORNER

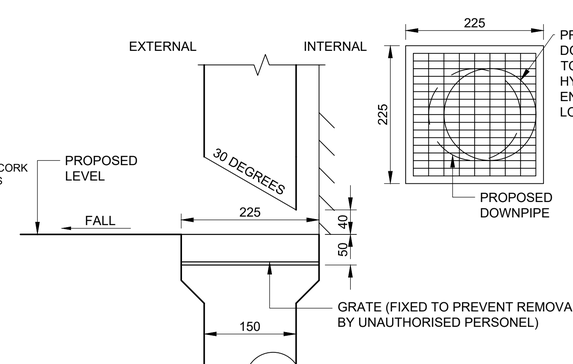


CORNER — INTERSECTION

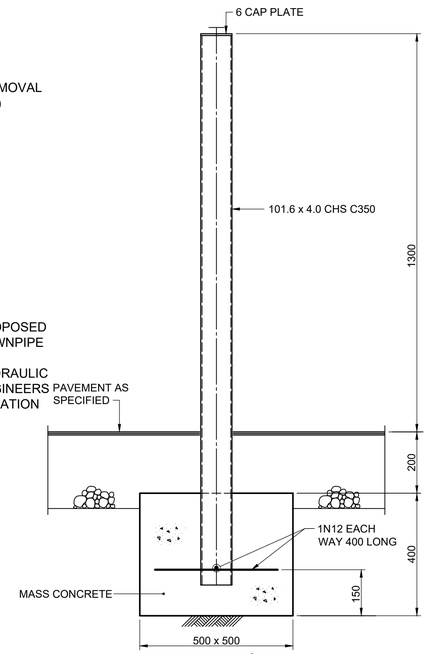
JUNCTION DETAILS
BLOCK WORK WALL JOINTS
SCALE 1:20



CONCRETE STAIRS
SCALE 1:20



SCHOOL DOWNPIPE DETAIL IN PAVEMENT



FIXED BOLLARD TO FLEXIBLE PAVEMENT
SCALE 1:10

rev	date	description	drn	ch'k
A	09/12/20	ISSUE FOR SCHEMATIC DESIGN	PAD	KEH

rev	date	description	drn	ch'k

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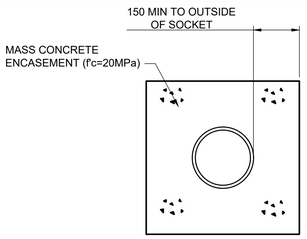
project: Engadine High School Hall

drawing title: Details Sheet 1

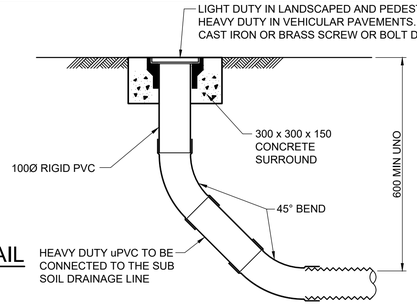
status:

scale at A1: AS SHOWN | drawn by: PAD | checked: KEH

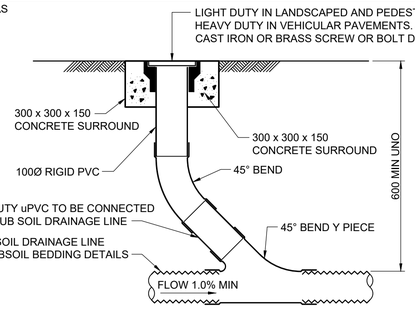
project no.: 6275 | drawing no.: EHS - C211 | rev.: A



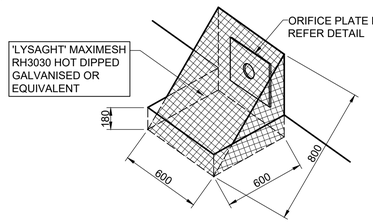
CONCRETE ENCASEMENT DETAIL
SCALE 1:10



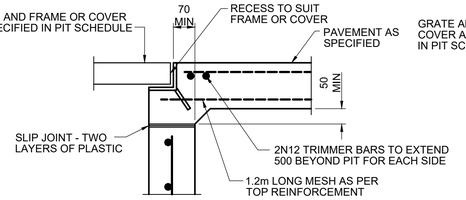
FLUSHING POINT (FP)
SCALE 1:10



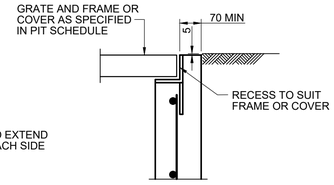
INTERMEDIATE RISER (IR)
SCALE 1:10



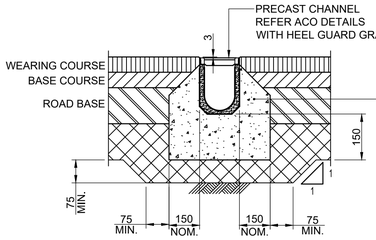
TRASH SCREEN DETAIL
NTS



DETAIL D
SCALE 1:10

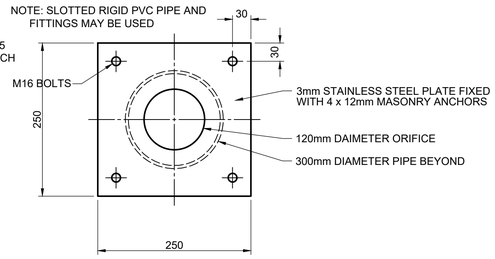


DETAIL F
SCALE 1:10

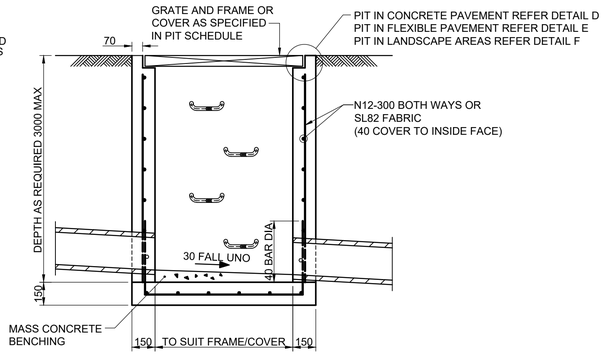


NOTE:
1. THE CHANNEL MUST NOT BE TRAFFICKED UNTIL WEARING COURSE IS LAID

GRATED DRAIN (GD)
SCALE 1:10

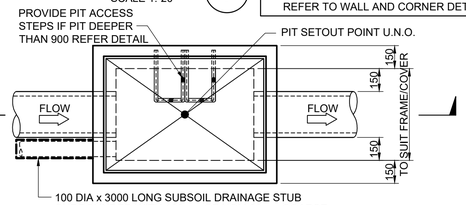


ORIFICE PLATE DETAIL
SCALE 1:5



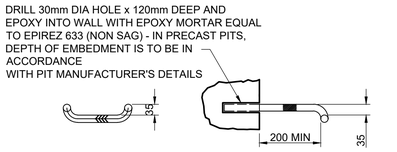
SECTION 1-1
SCALE 1: 20

NOTE:IF REINFORCING FABRIC IS TO BE USED REFER TO WALL AND CORNER DETAILS



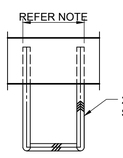
PLAN
SCALE 1:20

PIT TYPE B



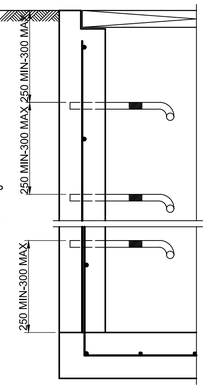
FRONT ELEVATION

SIDE ELEVATION



PLAN

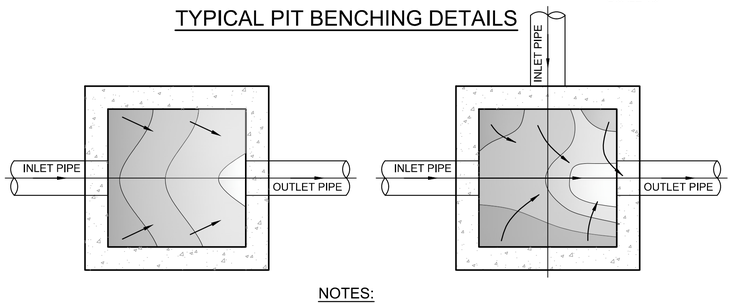
NOTE
1 WHEN POSITIONED IN STRAIGHT ALIGNMENT, STEP TO BE 400 WIDE.
2 STAGGERED STEPS TO BE 200 WIDE, STEPS TO BE STAGGERED 200 CENTRE TO CENTRE FOR ALTERNATE STEPS.
3 SPACING OF STEPS TO BE UNIFORM TO WITHIN ±5mm IN EACH PIT.
24 DIA GALVANISED MILD STEEL



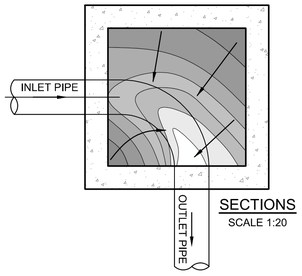
SECTION

PIT ACCESS STEP DETAIL
SCALE 1:10
TO BE PROVIDED FOR PITS DEEPER THAN 900mm

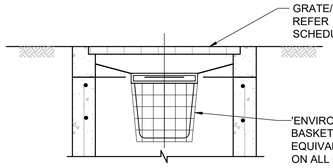
TYPICAL PIT BENCHING DETAILS



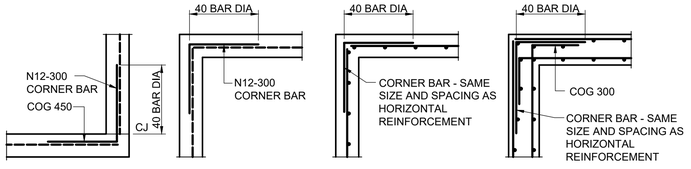
NOTES:
1. MASS CONCRETE BENCHING WITHIN PITS MUST BE FORMED SO AS TO CONVEY WATER FROM INLET(S) TO OUTLET.
2. BENCHING SHOULD BE ACHIEVE MINIMUM CROSS FALLS WITHIN PITS AS REQUIRED BY ENSTRUCT'S PIT DETAILS AND AUSTRALIAN STANDARDS.
3. NO WATER STAND IN PITS WHEN BENCHING IS COMPLETE.



SECTIONS
SCALE 1:20



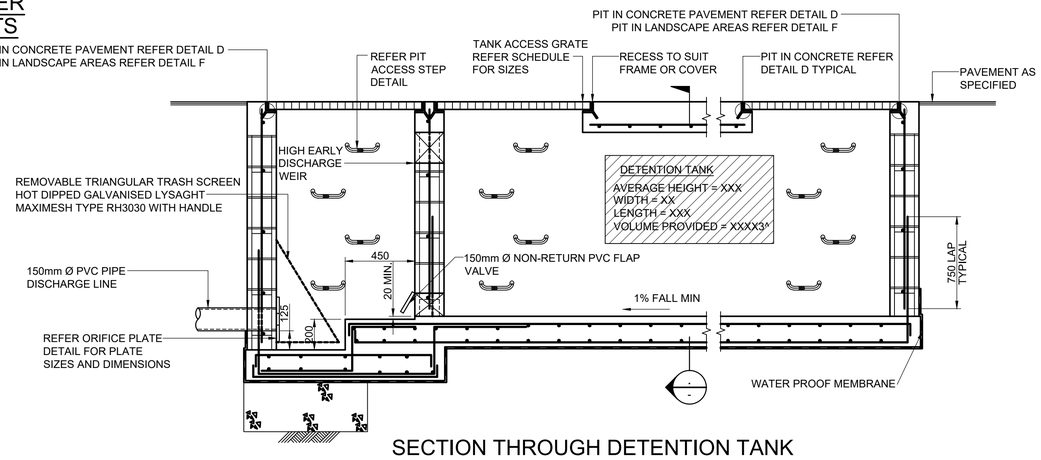
PIT LITTER BASKETS



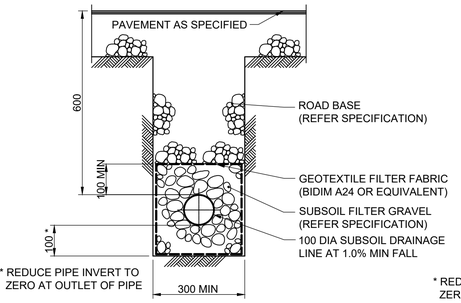
ELEVATION AT BASE PLAN PLAN-SINGLE LAYER PLAN-DOUBLE LAYER

MESH REINFORCEMENT

PIT CORNER DETAILS
SCALE 1:20

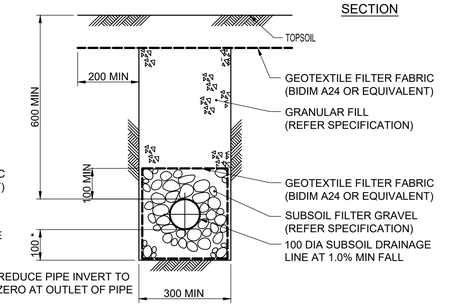


SECTION THROUGH DETENTION TANK
SCALE 1:20



* REDUCE PIPE INVERT TO ZERO AT OUTLET OF PIPE

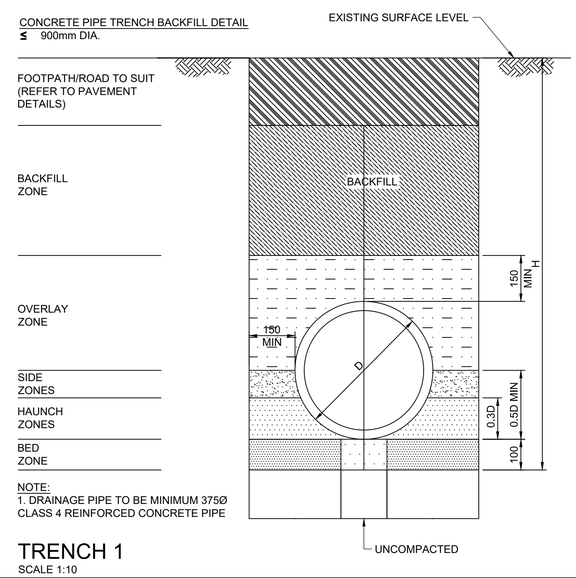
SUBSOIL IN PAVED AREAS
SCALE 1:10



* REDUCE PIPE INVERT TO ZERO AT OUTLET OF PIPE

SUBSOIL IN LANDSCAPED AREAS
SCALE 1:10

CONCRETE PIPE TRENCH BACKFILL DETAIL
≤ 900mm DIA.



NOTE:
1. DRAINAGE PIPE TO BE MINIMUM 375Ø CLASS 4 REINFORCED CONCRETE PIPE

TRENCH 1
SCALE 1:10

rev	date	description	drn	ch'k
A	09/12/20	ISSUE FOR SCHEMATIC DESIGN	PAD	KEH

rev	date	description	drn	ch'k

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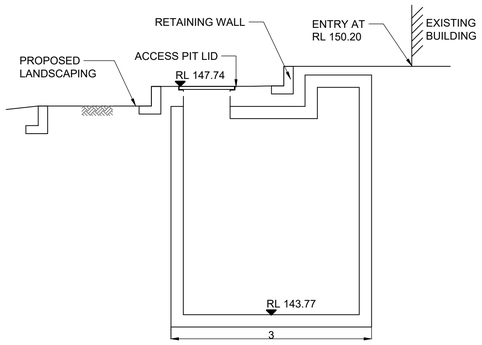
project: Engadine High School Hall

drawing title: Details Sheet 2

status:

scale at A1	drawn by	checked	
AS SHOWN	PAD	KEH	

project no.	drawing no.	rev.
6275	EHS - C212	A



SECTION
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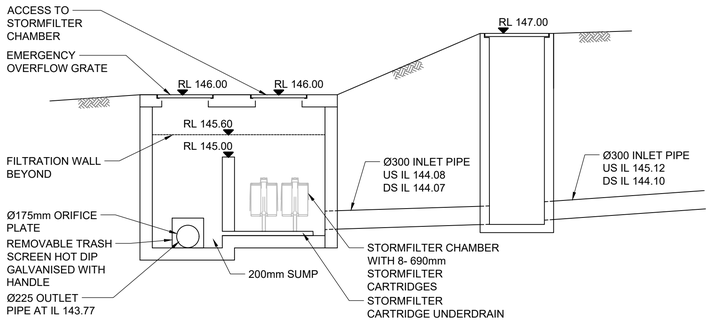

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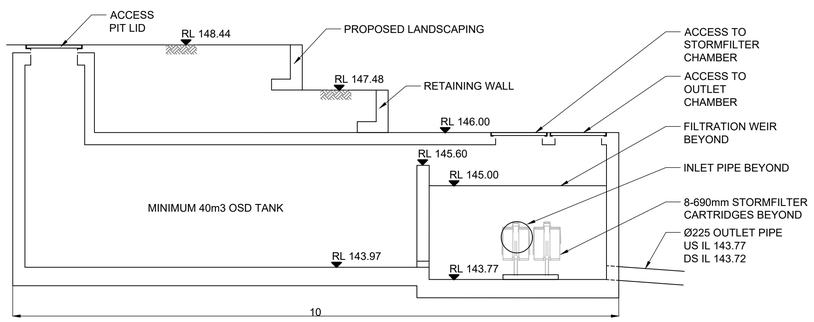

SECTION
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4
C201

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rev	date	description	drn	ch'k
B	12/03/21	OSD SECTIONS REVISED	NKK	KEH
A	09/12/20	ISSUE FOR SCHEMATIC DESIGN	PAD	KEH

rev	date	description	drn	ch'k

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project
Engadine High School Hall

drawing title
Sections Sheet 1

status

scale at A1	drawn by	checked	
AS SHOWN	NKK	KEH	

project no.	drawing no.	rev.
6275	EHS - C221	B