



CIVIL ENGINEERING REPORT: SOIL & WATER MANAGEMENT
PLAN

Galungara Primary School – Stage 2

Lot 4 DP1208329 & Lot 121 DP1203646

PREPARED FOR
Richard Crookes Constructions
Level 3, 4 Broadcast Way

Ref: S182535-01-CR03
Rev: 5
Date: 18.08.2022

Artarmon NSW 2064
Tel: (02) 9902 4700

Civil Engineering Report: Soil & Water Management Plan

Revision Schedule

Date	Revision	Issue	Prepared By	Approved By
28.05.19	1	For Review	J. Grinsell	J. Gilligan
11.11.19	2	For Review	J. Grinsell	J. Gilligan
24.07.20	3	For Review	J. Gilligan	J. Gilligan
22.02.22	4	Stage 2	J. Grinsell	J. Gilligan
31.08.22	5	Stage 2	J. Grinsell	J. Gilligan

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Galungara Public School (SSD 9368): Submission of Construction Soil and Water Management Plan in accordance with Condition B13 and B19

Condition	Condition requirements	Document reference
B19	<p>The Applicant must prepare a Construction Soil and Water Management Plan (CSWMSP) and the plan must address, but not be limited to the following:</p> <p>(a) be prepared by a suitably qualified expert, in consultation with Council;</p>	<p>Appendix I, CEMP rev2 – 03/0620: SSD 9368 - B19 - CSWMP - Northrop - 3 – 200516</p> <p>Appendix E, CV, p16</p> <p>Appendix D, Council Consultation, p15</p>
	<p>(b) describe all erosion and sediment controls to be implemented during construction;</p>	<p>Section 2.2, Sediment and Erosion Control Measures, p7 – to be read in conjunction with civil engineering plans</p>
	<p>(c) provide a plan of how all construction works will be managed in a wet-weather events (i.e. storage of equipment, stabilisation of the Site);</p>	<p>Appendix C, Wet Weather Management Plan</p>
	<p>(d) detail all off-Site flows from the Site; and</p>	<p>Appendix A: Soil and Water Management Plans, p12</p>
	<p>(e) describe the measures that must be implemented to manage stormwater and flood flows for small and large sized events,</p>	<p>Northrop Commentary, p10</p>

	including, but not limited to 1 in 1-year ARI, 1 in 5-year ARI.	
B13	(a) detailed baseline data;	Northrop Commentary, p8 Richard Crookes Construction, CEMP, Section 9
	(b) details of: (i) the relevant statutory requirements (including any relevant approval, license or lease conditions);	Northrop Commentary, p9 Richard Crookes Construction CEMP, Section 4
	(ii) any relevant limits or performance measures and criteria; and	Northrop Commentary, p9 Richard Crookes Construction CEMP, Section 9 and Section 10
	(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	Northrop Commentary, p9 Richard Crookes Construction CEMP, Section 9 and Section 10
	(c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	Northrop Commentary, p9 Richard Crookes Construction CEMP, Section 9 and Section 10
	(d) a program to monitor and report on the: (i) impacts and environmental performance of the development;	Northrop Commentary, p9 Richard Crookes Construction CEMP, Table 7 and Section 10, Table 8

<p>(ii) effectiveness of the management measures set out pursuant to paragraph (c) above;</p>	<p>Northrop Commentary, p9 Richard Crookes Construction CEMP, Section 9, Table 7 and Section 10, Table 8</p>
<p>(e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;</p>	<p>Appendix C, RCC Wet Weather Management Plan, p19</p>
<p>(f) a program to investigate and implement ways to improve the environmental performance of the development over time;</p>	<p>Northrop Commentary (e), p8</p>
<p>(g) a protocol for managing and reporting any: (i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);</p>	<p>Northrop Commentary, p9 Richard Crookes Construction CEMP, Section 20.1</p>
<p>(ii) complaint;</p>	<p>Northrop Commentary, p9 Richard Crookes Construction CEMP, Section 17.2</p>
<p>(iii) failure to comply with statutory requirements; and</p>	<p>Northrop Commentary, p9 Richard Crookes Construction CEMP, Section 20.1</p>
<p>(h) a protocol for periodic review of the plan.</p>	<p>Northrop Commentary, p10</p>



1. General

1.1 Introduction

Northrop Consulting Engineers Pty Ltd (Northrop) have been engaged by Richard Crookes Constructions to prepare the Civil Engineering design and documentation in support of a Construction Certificate for Stage 2 of Galungara Primary School development at Proposed Lots 1 & 2 Being part of Lot 4 DP1208329 & Lot 121 DP1203646, Farmland Drive, Schofields.

This report covers the works shown as the Northrop Drawing Package required for the development of the site including:

- Erosion and Sediment control.

1.2 Related Reports and Documents

This report is to be read in conjunction with the following reports and documents:

1. Detailed Design Phase Civil Documentation prepared by Northrop:
 - C02.01 [N] Sediment and Soil Erosion Control Plan
2. NSW Department of Housing Manual, "Managing Urban Stormwater Soil & Construction" 2004 (Blue Book)
3. Blacktown Development Control Plan 2006 Part R Soil Erosion and Sediment Control Guidelines

1.3 The Development

1.3.1 Precinct and Surrounds

The site is located within the suburb of Schofields in the Blacktown City Council (Council) Local Government Area (LGA). The site is approximately two (2) hectares, bound by Farmland Drive to the north, the proposed Pelican Road extension to the west and existing developments to the south and east.

The existing site accommodates Stage 1 of Galungara Primary School including a number of Teaching Facilities (Buildings), footpaths, landscaping and carparking areas.

1.3.2 Proposed Development

This development is on Proposed Lots 1 & 2 Being Part of Lot 4 DP1208329 & Lot 121 DP1203646, Schofields NSW, which consists of Stage 2 of Galungara Primary School. The development includes in the construction two (2) teaching blocks, landscaping works and pedestrian access connectivity within the site.

The proposed site grading generally falls to a proposed bio-retention basin at the south-west corner of the site to minimise earthworks where possible. All pavement and landscaping fall away from the buildings to ensure nuisance stormwater runoff is avoided. There are no upstream catchments that are directed through the site.

2. Erosion and Sediment Control

The objectives of the erosion and sediment control for the development site are to ensure:

- Adequate erosion and sediment control measures are applied prior to the commencement of construction and are maintained throughout construction; and
- Construction site runoff is appropriately treated in accordance with Blacktown City Council requirements.

As part of the works, the erosion and sedimentation control will be constructed in accordance with Council requirements and the NSW Department of Housing Manual, "Managing Urban Stormwater Soil & Construction" 2004 (Blue Book) prior to any earthworks commencing on site. The Concept Sediment and erosion control measures are documented in Northrop's detailed design drawing C02.01 [N] Sediment and Soil Erosion Control Plan

2.1 Sediment Basin

Whilst the works cover an area larger than 2500m² (which prompts the requirement for a sediment basin), due to the constraints of the site in placing a basin, the Contractor has proposed to limit disturbed areas less than the prescribed amount as part of the Stage 2 works. As such disturbed areas are to be less than 2,500m² at all times.

Should the disturbed area ever become equal to or greater than 2,500m² a sediment basin will need to be provided with overflows discharging to the existing pit and pipe network within the site.

2.2 Sediment and Erosion Control Measures

Prior to any earthworks commencing on site, sediment and erosion control measure shall be implemented generally in accordance with the Construction Certificate drawings and the “Blue Book”. The measures shown on the drawings are intended to be a minimum treatment only as the contractor will be required to modify and stage the erosion and sedimentation control measures to suit the construction program, sequencing, and techniques. These measures will include:

- A temporary site security/safety fence is to be constructed around the site, the site office area.
- Sediment fencing provided downstream of disturbed areas, including any topsoil stockpiles.
- Dust control measures including regular watering of stockpiles and exposed surfaces to suppress dust, installing fence hessian, and watering exposed areas.
- Placement of hay bales or mesh and gravel inlet filters around and along proposed catch drains and around stormwater inlets pits; and
- Stabilised site access at the construction vehicle entry/exits.

Any stockpiled material, including topsoil, shall be located as far away as possible from any associated natural watercourses or temporary overland flow paths. Sediment fences shall be installed to the downstream side of stockpiles and any embankment formation. All stockpiles and embankment formations shall be stabilised by hydroseeding or hydro mulching on formation.

2.3 Stockpile on Lot 1

RCC has been requested to store excess fill from the Galungara PS site on Lot 1. This material shall be kept clear of any natural watercourses or overland flow paths. The material shall be stabilised by hydroseeding or hydro mulching on formation. Whilst the stockpile is being formed, temporary sediment fencing shall be provided downstream of the stockpile.

3. Further Commentary

3.1 SSD Conditions

The Minister for Planning and Open Spaces has provided Conditions of Consent (Application Number: SSD 9354) for the proposed development at Proposed Lots 1 & 2 Being part of Lot 4 DP1208329 & Lot 121 DP1203646, Farmland Drive, Schofields. Conditions associated with the Construction Soil and Water Management Plan have been provided below with further commentary for consideration by School Infrastructure NSW and the Certifying Authority.

B12. Environmental Management Plan Requirements

Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:

- (a) Detailed baseline data.
- (b) Details of:
 - (i) The relevant statutory requirements (including any relevant approval, license, or lease conditions).
 - (ii) Any relevant limits or performance measures and criteria; and
 - (iii) The specific performance indicators that are proposed to be used to judge the performance of, or guide implementation of, the development or any management measures
- (c) A description of the measures to be implemented to comply with the relevant statutory requirements, limits or performance measures and criteria.
- (d) A program to monitor and report on the:
 - (i) Impacts and environmental performance of the development.
 - (ii) Effectiveness of the management measure set out pursuant to paragraph (c) above.
- (e) A contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible.
- (f) A program to investigate and implement ways to improve the environmental performance of the development over time.
- (g) A protocol for managing and reporting any:
 - (i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);
 - (ii) complaint.
 - (iii) failure to comply with statutory requirements; and
- (h) a protocol for periodic review of the plan

Northrop Commentary

The Construction Environmental Management Plan prepared by Richard Crookes Construction has addressed a number of these items as referenced in the table below.

(a) detailed baseline data;	Richard Crookes Construction, CEMP, Section 9
(b) details of: (i) the relevant statutory requirements (including any relevant approval, license or lease conditions);	Richard Crookes Construction CEMP, Section 4
(ii) any relevant limits or performance measures and criteria; and	Richard Crookes Construction CEMP, Section 9 and Section 10
(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	Richard Crookes Construction CEMP, Section 9 and Section 10
(c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	Richard Crookes Construction CEMP, Section 9 and Section 10
(d) a program to monitor and report on the: (i) impacts and environmental performance of the development;	Richard Crookes Construction CEMP, Table 7 and Section 10, Table 8
(ii) effectiveness of the management measures set out pursuant to paragraph (c) above;	Richard Crookes Construction CEMP, Section 9, Table 7 and Section 10, Table 8
(e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	Refer to Appendix C – RCC Wet Weather Management Plan.
(f) a program to investigate and implement ways to improve the environmental performance of the development over time;	Northrop Commentary (e), p8
(g) a protocol for managing and reporting any: (i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);	Richard Crookes Construction CEMP, Section 20.1
(ii) complaint;	Richard Crookes Construction CEMP, Section 17.2
(iii) failure to comply with statutory requirements; and	Richard Crookes Construction CEMP, Section 20.1

(h) a protocol for periodic review of the plan.

This plan is to be reviewed bi-monthly to ensure it is reflective of the construction staging of the development until such time that all exposed soil surfaces have been covered.

In addition, the plan shall also be reviewed after significant rainfall events to coincide with the inspection of Sediment and Soil Erosion Control devices as instructed by Richard Crookes Constructions.

Construction Environmental Management Plan

B18. The Applicant must prepare a Construction Soil and Water Management Plan (CSWMSP) and the plan must address, but not be limited to the following:

- a) Be prepared by a suitably qualified expert, in consultation with Council.**
- b) Describe all erosion and sediment controls to be implemented during construction.**
- c) Provide a plan of how all construction works will be managed in a wet weather events (i.e., storage of equipment, stabilization of the Site);**
- d) Detail all off-Site flows from the site; and**
- e) Describe the measures that must be implemented to manage stormwater and flood flows for small and large sized events, including but not limited to 1 in 1-year ARI, 1 in 5-year ARI and 1 in 100-year ARI).**

Northrop Commentary

- (a) This Construction Soil and Management Plan has been prepared under the guidance of an experienced Chartered Senior Civil Engineer. Relevant CV's have been provided in the appendices.
- (b) Erosion and Sediment Controls to be implemented during construction are briefly described in Section 2.2 of this report and documented on the civil engineering plans
- (c) The management of construction works during wet weather is identified on the attached Wet Weather Management Plan prepared by Richard Crookes Constructions (Appendix C) which address procedures during such events. This is further noted in the Construction Environmental Management Plan prepared by Richard Crookes Constructions in Appendix D Sections 9 & 10. It is understood that general construction equipment is stored in containers during wet weather. Machinery / Plant is positioned away from flow paths to ensure that surface flows to the basin are not impeded. Typically, after a wet weather event, a 20-50mm layer of the subgrade is stripped and stockpiled to dry and be recompacted.
- (d) The soil and water management plan prepared by Northrop Consulting Engineers has been updated to indicate direction of flows on site during rain events.
- (e) Surface flows generated during storm events up to the 1 in 10-year storm event are directed over land or within the constructed pit and pipe network to the legal point of discharge.

C24. Disposal of Seepage and Stormwater

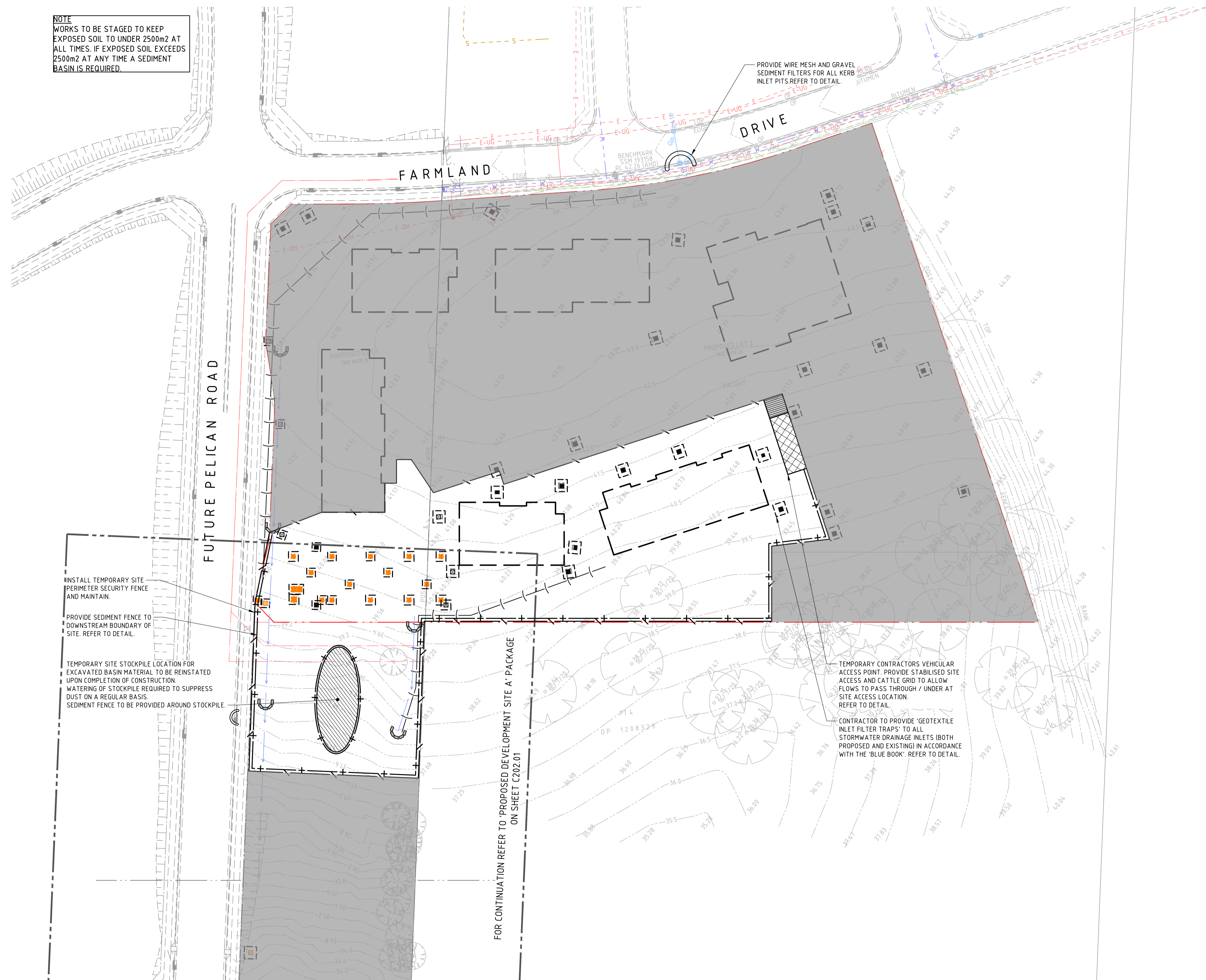
Adequate provisions must be made to collect and discharge stormwater drainage during construction of the building to the satisfaction of the principal certifying authority. The prior written approval of Council must be obtained to connect or discharge site stormwater to Council's stormwater drainage system or street gutter.

Northrop Commentary

The project design team have approached Blacktown City Council to initiate discussions regarding the proposed measures to control soil erosion and sedimentation during construction including proposed methods of discharging stormwater from the site. The Post Approval Consultation Record has been provided in Appendix C.

Appendix A – Soil & Water Management Plans

NOTE
WORKS TO BE STAGED TO KEEP EXPOSED SOIL TO UNDER 2500m² AT ALL TIMES. IF EXPOSED SOIL EXCEEDS 2500m² AT ANY TIME A SEDIMENT BASIN IS REQUIRED.



LEGEND	
	BOUNDARY LINE
	EASEMENT LINE
	EXISTING KERB
	EXISTING ELECTRICITY
	EXISTING ELECTRICITY (OVERHEAD)
	EXISTING ELECTRICITY (UNDERGROUND)
	EXISTING GAS
	EXISTING WATER
	EXISTING STORMWATER
	EXISTING CONTOURS
	SEDIMENT FENCE
	SECURITY FENCE
	PROPOSED BUILDING FOOTPRINT
	WIRE MESH AND GRAVEL SEDIMENT FILTER
	GEOTEXTILE INLET FILTER TRAPS
	DRAINAGE SWALE / BUND / DIVERSION MOUND
	DRAINAGE SWALE
	STABILISED SITE ACCESS WITH SHAKER GRID
	STOCKPILE
	EXISTING TREE TO BE RETAINED

- GENERAL NOTES:**
- REFER SPECIFICATIONS NOTES FOR SEDIMENT AND SOIL EROSION CONTROL GENERAL REQUIREMENTS.
 - ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL / RELEVANT AUTHORITY SPECIFICATIONS AND DETAILS.
 - ALL SEDIMENT AND SOIL EROSION CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH THE 'BLUE BOOK'. CONTRACTOR TO ENSURE THESE MEASURES ARE IN PLACE AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION WORKS.
 - CONTRACTOR TO PROVIDE 'WIRE MESH AND GRAVEL SEDIMENT FILTER' TO ALL PAVED / ROAD AREAS (BOTH PROPOSED AND EXISTING) IN ACCORDANCE WITH THE 'BLUE BOOK'.
 - CONTRACTOR TO PROVIDE 'GEOTEXTILE INLET FILTER TRAPS' TO ALL STORMWATER DRAINAGE INLETS (BOTH PROPOSED AND EXISTING) IN ACCORDANCE WITH THE 'BLUE BOOK'.

DRAWN: V. CHON DESIGNED: J. GRINSELL JOB MANAGER: J. GILLIGAN VERIFIER:

INSTALL TEMPORARY SITE PERIMETER SECURITY FENCE AND MAINTAIN.

PROVIDE SEDIMENT FENCE TO DOWNSTREAM BOUNDARY OF SITE. REFER TO DETAIL.

TEMPORARY SITE STOCKPILE LOCATION FOR EXCAVATED BASIN MATERIAL TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION. WATERING OF STOCKPILE REQUIRED TO SUPPRESS DUST ON A REGULAR BASIS. SEDIMENT FENCE TO BE PROVIDED AROUND STOCKPILE.

TEMPORARY CONTRACTORS VEHICULAR ACCESS POINT. PROVIDE STABILISED SITE ACCESS AND CATTLE GRID TO ALLOW FLOWS TO PASS THROUGH / UNDER AT SITE ACCESS LOCATION. REFER TO DETAIL.

CONTRACTOR TO PROVIDE 'GEOTEXTILE INLET FILTER TRAPS' TO ALL STORMWATER DRAINAGE INLETS (BOTH PROPOSED AND EXISTING) IN ACCORDANCE WITH THE 'BLUE BOOK'. REFER TO DETAIL.

FOR CONTINUATION REFER TO 'PROPOSED DEVELOPMENT SITE A' PACKAGE ON SHEET C202.01

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT
H	ISSUED FOR APPROVAL	VC		JRG	26.02.20	
J	ISSUED FOR CLIENT REVIEW	VC		JRG	26.05.20	
K	ISSUED FOR INFORMATION	VC		JRG	15.06.20	
L	ISSUED FOR CONSTRUCTION	VC	JG	JRG	26.06.20	
M	RE-ISSUED FOR CONSTRUCTION	JO	JG	JRG	24.07.20	
N	ISSUED FOR STAGE 2 CC1	JRG		JRG	22.02.22	

RICHARD CROOKES CONSTRUCTIONS

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PROJECT
GALUNGARA PRIMARY SCHOOL

PELICAN ROAD, SCHOFIELDS

DRAWING TITLE
CIVIL DOCUMENTATION CONSTRUCTION CERTIFICATE

SEDIMENT AND SOIL EROSION CONTROL PLAN

JOB NUMBER
182535

DRAWING NUMBER
C02.01

REVISION
N

DRAWING SHEET SIZE = A1

Appendix B – RCC Wet Weather Management Plan

During wet weather events the Site Manager & WHS Advisor will complete a site walk to review how construction works will be completed and if changes are required.

In addition, a Geotechnical Engineer will review all steep batters and cut areas to ensure they are stable as required.

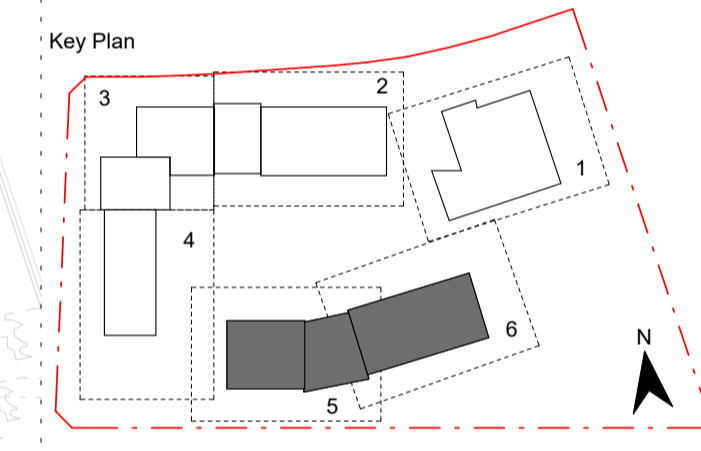
Weekly site walks are completed to review all sediment controls and decisions will be made on what is require to be reinstated, repaired or where additional sediment controls are required.

General Notes:
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 2. Drawings to be printed in colour
 3. Do not scale drawings. Dimensions govern.
 4. All dimensions are in millimetres unless noted otherwise
 5. All dimensions shall be verified on site before proceeding
 6. Any areas indicated on this sheet are approximate and indicative only
 7. Report all discrepancies to Architect prior to commencement of building or fabrication

Drawing Notes:
 1. Refer to COM-AR-9010 for legend of all symbols and codes.
 2. Refer to COM-AR-9011/9012 for all drawing notes.
 3. Refer to COM-AR-9700 for Technical Schedule

Issue	Description	Date
1	ISSUED FOR REVIEW	06.08.2021
A	CONCEPT DESIGN REPORT ISSUE	09.08.2021

- NOTES - SITE PLANS**
- Refer Landscape Architect's documentation for planting, fencing, and outdoor furniture equipment details.
 - Refer Civil Engineer's documentation for details of site and ground works, including pavements and retaining walls.
 - Refer Bushfire Report for requirements and details for Defendable Space.



Contractor
 Client

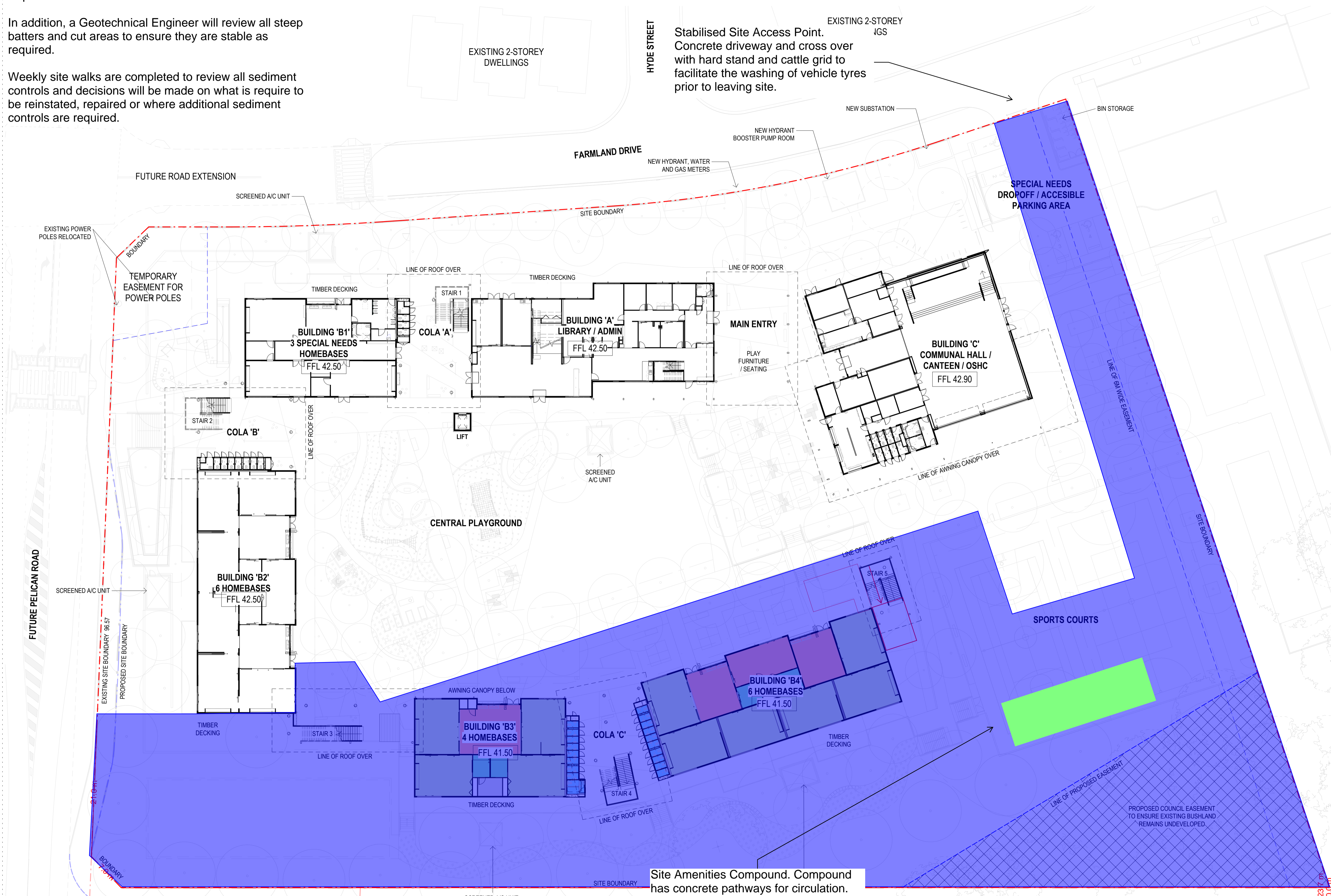


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 architecture interior design urban design landscape
 nom architect M. Sheldon 3990

Project Title
GALUNGARA PUBLIC SCHOOL

Drawing Title
BUILDING COMPLEX GROUND FLOOR PLAN

Scale @	As indicated
Drawing Created (date)	30/05/2019
Drawing Created (by)	DN
Plotted and checked by	DN
Verified	JS
Approved	JS
Project No	Drawing No
180645	AA-AR-1110 A



Site Amenities Compound. Compound has concrete pathways for circulation. All site sheds and amenities are raised to prevent any water access. In addition there are silt fences surrounding the site boundaries to catch any sediment run off.

1 BUILDING COMPLEX GROUND FLOOR PLAN
 1:300



Appendix C – Council Consultation

Post Approval – Consultation

Consultation needs to be meaningful, done with courtesy and respect and be well documented. These are people/ organisations that we need to be building meaningful relationships with.

Conditions of all consent can require consultation with a range of stakeholders. Consultation in the post approval world needs to be well documented to satisfy the condition requirements.

Examples include Council, service providers (eg. Electricity gas etc.), consult with local bus provider and TfNSW.

Read each condition carefully, any reference to consult triggers consultation.

Typically on State Significant Development, there will be a specific consultation condition as to how this piece can be appropriately addressed.

Consultation is not:

- A token gesture
- Done at the end of the piece of work,
- An email to the relevant stakeholder with no response;
- A meeting with the stakeholder with no meeting minutes.

Consultation is:

- Meaningful
- Done prior to the requirement,
- Captures an outcome,
- Identifies matters resolved,
- Identifies matters unresolved,
- Any disagreements are disclosed; and
- How we are going to address unresolved matters?

How to capture all the relevant details on consultation requirements? Any consultation requirement in a condition is required to be accompanied with the following table:



Post Approval Consultation Record

B19 Construction Soil and Water Management Sub-Plan

Identified Party to Consult:	Blacktown City Council (BCC)
Consultation type:	Email correspondence & Phone calls
When is consultation required?	Prior to commencement
Why	B19 – Construction Soil & Water Management Sub-Plan (CSWMSP), prepared in consultation with BCC.
When was consultation held	David Yee and Danny Zabakly confirmed as contacts from Stage 1 approved CSWMP CSWMSP issued to David Yee and Danny Zabakly for review – 25/02/22 Follow up call to David Yee – 10/03/22
Identify persons and positions who were involved	<p>Danny Zabakly Team Leader, Blacktown City Council</p> <p>David Yee Engineering Coordinator, Blacktown City Council</p> <p>Tom Hemmett Project Manager, Richard Crookes Constructions</p> <p>George Denny-Smith Site Engineer, Richard Crookes Constructions</p>
Provide the details of the consultation	<p>Consultation with Blacktown City Council has been attempted through emails and phone calls. During a phone conversation with David Yee, he affirmed receipt of the CSWMSP. He noted that BCC's policy is to rely on a suitably qualified expert to prepare the CSWMP so there is no risk to Council infrastructure or local ecosystems.</p> <p>If any other comments and or updates are required for the CSWMSP these will be updated accordingly.</p>
What specific matters were discussed?	During a phone conversation with David Yee, he affirmed receipt of the CSWMSP. He noted that BCC's policy is to rely on a suitably qualified expert to prepare the CSWMP so there is no risk to Council infrastructure or local ecosystems.
What matters were resolved?	NA
What matters are unresolved?	NA
Any remaining points of disagreement?	No
How will SINSW address matters not resolved?	NA

Appendix D – CV



James Gilligan

Associate | Senior Civil Engineer

BE (Civil) MIEAust CPEng NER

James is an Associate at Northrop and a Senior Civil Engineer with over 14 years' experience managing and delivering buildings and complex civil infrastructure projects requiring design from the concept phase through to construction and post construction stages.

James has particular experience in project management and contract administration. James' technical background includes civil design of utilities, earthworks, stormwater and roads for subdivision and buildings projects across all types of development including Health, Education, Residential, Commercial & Industrial.

Project Experience

Urban Redevelopment

- University of Wollongong Health and Wellbeing Precinct
- St Leonards South Precinct
- Frasers Central Park, Broadway
- Tailors Walk, Pemberton Street, Botany
- 150 Epping Road, Lane Cove
- Glebe Affordable Housing Project, Glebe

Public Domain and Open Spaces

- Blacktown International Centre for Training Excellence
- Croom Regional Sporting Complex, Croom
- Twin Creeks Golf Club, Luddenham
- Elara Neighbourhood Centre, Elara
- Hurstville Bus Interchange, Hurstville
- Windsor Station Bus Interchange, Windsor

Infrastructure / Utilities Coordination

- Northwest Rail Link
- Sydney International Airport – Stage 2B
- Southern Sydney Freight Line

Health

- Nepean Private Hospital
- The George Centre, Gledswood Hills
- Westmead Mental Health Facility
- Cumberland West Mental Health Facility
- Manly Adolescent and Young Adult Hospice
- B22 Mental Health, Blacktown
- Blacktown Forensic Mental Health Unit
- Tumut Hospital Peer Review

Commercial / Industrial

- Goodman Interchange Park, Eastern Creek
- Goodman Oakdale Peer Reviews
- Sydney Business Park Warehouses, Marsden Park
- ESR Horsley Logistics Park Peer Reviews
- Erskine Park Industrial Estate Warehouses
- Kingsford Smith Distribution Centre, Mascot
- Blum Australia Warehouse, Hoxton Park

Education

- Edmondson Park Public School
- Galungara Public School
- Jordan Springs Public School
- Catherine Field Public School
- East Leppington Public School
- Estella Public School
- Westmead Catholic College, Westmead
- St Joseph's College, Hunters Hill
- Barker College Junior School and Early Learning Centre - Waitara
- Meadowbank TAFE - Multi-Trades and Digital Technology Hub
- Kingswood TAFE – Institute of Applied Technology for Construction
- Western Sydney University Subdivision, Westmead

Aged Care

- Zhiva Living, Dural
- Uniting, Marion Street Leichhardt
- Uniting, Norton Street Leichhardt
- Bupa, Sutherland