The Forest High School

Incident Report No 2 – SSD 26876801 Condition A25

This Incident report has been prepared in accordance with Condition A25 of the Forest High School Development Consent (SSD 26876801) in response to an incident that occurred on site on 19 & 20 February 2024. The Department of Education (DOE) notified the Department of Planning, Housing and Infrastructure (DPHI) of the incident on 20 February 2024 (Attachment A).

Please find bellow the detailed report addressing all requirements in Appendix 2 of the Development Consent.

1. Summary of the Incident

On 19 February 2024, SINSW was notified by the Head Contractor ADCO of a breach in the sediment and erosion control on the site.

Due to heavy rainfall on 19 & 20 February 2024, sediment controls to the Southern boundary of the sited failed allowing sediment-laden water to escape into the adjoining Cerebral Palsy Alliance (CPA) carpark. Supplementary sediment controls in the CPA carpark captured the sediment in the carpark, however fine particulate which cannot be captured by sediment fabric was suspected to have escaped into the Council stormwater catchment feeding into Allambie Rd.

The heavy rainfall also resulted in a passive discharge of water from the western side of the site. All three levels of sediment control in this area worked as per the approved sediment and erosion control plan to capture sediment. However, fine particulate which cannot be captured by sediment fabric was suspected to have escaped into the adjoining Madison Way Reserve.

2. Investigation

Immediately after discovering the breach in the sediment and erosion control on the eastern side of the site, the Head Contractor inspected controls around the site to ensure there were no further issues.

The following investigations were conducted as a result of the incident to assess the sediment and erosion controls on site:

- Johnstaff (SINSW's Project Managers) inspected the site sediment and erosion controls on 20 February 2024 and were satisfied that measures were in place in accordance with the approved Sediment and Erosion and Control Plan (Attachment B). Photos from this site inspection can be found at Attachment C.
- ADCO (Head Contractor) undertook an investigation into the incident and provided the report at Attachment D. The report identifies the following:
    - There was significant torrential rain on 19 & 20 February 2024 – 30mm of rain in 2 hours. This is considered to be outside the normal operating expectations of the installed environmental controls.
    - Sediment controls at the boundary were undermined resulting in sediment escaping the site on the east.
    - The Sediment basins reached capacity on the west and overflow escaped through the perimeter sediment controls.
    - Site contours did not direct water on the east to the sediment basin as expected – All rain to date did not show the water pathways that were encountered during this significant torrential rain event.
    - Sediment controls installed did not withstand the water force during the significant torrential rain event.
    - There was an additional quantity of water entering the site through the council stormwater system from the Allambie Rd and Aquatic Dr road infrastructure which exacerbated the issue.

Piping of the council stormwater infrastructure commenced on 17 February 2024 to minimise the amount of water entering the site, however these works were not completed until after 20 February 2024.

It should be noted, the following inspections of sediment and erosion controls on site were conducted prior to the incident:

- Northern Beaches Council inspected the site on 22 January 2024 and did not raise any issues with the sediment and erosion controls in place.

- Johnstaff (SINSW's Project Manager) undertook a site inspection on 31 January 2024 and 16 February 2024 and were satisfied that measures were in place in accordance with the approved plans.
- Members of the SINSW Compliance team attended the site on 7 February 2024 to undertake an inspection of the ADCO sediment control measures. They were generally satisfied with the sediment control measures and did not raise any issues with what had been installed.
- Henry & Hymas (Project Civil Engineer) undertook an inspection on 16 February 2024 and provided a report on the condition of the controls (Attachment E). The report notes that all sediment and erosion control measures were generally satisfactory and in accordance with the design by Henry & Hymas.
- The EPA visited the site on 9 February 2024 to inspect the sediment control measures in place. They were generally satisfied with the sediment control measures and did not raise any issues with what had been installed.

The result of the investigation of the incident is that all sediment and erosion control measures were in place in accordance with the approved plans and were being maintained and inspected regularly by the Head Contractor. The breach was as a result of a significant torrential rain event outside the normal operating expectations of the installed environmental controls and the additional water entering the site through the Council stormwater system.

3. Corrective and Preventative Actions

Upon becoming aware of the incident on 19 February 2024, the Head Contractor took the following immediate corrective actions:

- Sediment controls which failed were fixed
- Sediment that escaped the site boundary controls was cleaned up to prevent potential for discharge to the environment
- The adjoining CPA driveway was pressure washed and a water truck and street sweeper was used to clean the area
- Sediment traps at external drains were cleaned of debris and reinstated
- SINSW was informed of the incident

SINSW immediately notified DPHI issuing an Incident Notification under Condition A24 of the Development Consent (Attachment and requested that ADCO undertake an investigation into the incident. This included requesting an inspection and status of sediment control on site. Evidence of this investigation was provided by ADCO (Attachment D).

The following preventative actions were undertaken by the Head Contractor to prevent recurrence:

- The existing Sediment basin 3 (to the east of the site) was extended to increase the capacity of water being held on the eastern side of the site, reducing the potential for passive discharge of sediment laden water from site
- An additional sediment basin was created to increase the capacity of water being held on the western side of the site, reducing the potential for passive discharge of sediment laden water from the site
- Additional bunding was created around the site to direct and hold water on site
- The existing Council stormwater which is being discharged onto the site was commenced to be piped on 17 February 2024 to the edge of the vegetation on site, reducing the quantity of water running through the portion of the site which has been cleared for the development. These works were not completed until after 20 February 2024.

The following additional measures are being investigated to further prevent recurrence:

- Temporarily piping the Council stormwater through the remainder of the site to an existing culvert at the boundary. This will completely remove the risk of sediment being picked up by the Council stormwater entering the site. This has been discussed and agreed with Council
- Installation of an onsite mechanical filtration system to sediment basin 1 (to the west of the site) to treat and discharge water during and after rain events

In addition to the above, ADCO and its civil subcontractor will be undertaking ongoing weekly inspections of the sediment control as well as inspections after all rainfall events to ensure there are no breaches. This will include the surrounding road surfaces at site entry points and on the Arranounbai Driveway.

ADCO and the SINSW project team will undertake ongoing spot checks to confirm sediment control is in place, operational and no sediment is in the stormwater pits or on road surfaces.

Enc: Attachment A – DOE notification to DPHI dated 20 February 2024
Attachment B – Sediment Control Plan dated 15 November 2023
Attachment C – Photos from Johnstaff site inspection 20 February 2024
Attachment D – ADCO Incident Report
Attachment E – Henry & Hymas Inspection Report dated 16 February 2024

Attachment A – DOE notification to DPHI dated 20 February 2024

DOC24/393888

Kiersten Fishburn
Planning Secretary
Department of Planning, Housing and Infrastructure
Locked Bag 5022
Parramatta NSW 2150

20 February 2024

Attn: Rob Sherry

Dear Ms Fishburn

The Forest High School (SSD 26876801): Incident Notification – Condition A24

I refer to The Forest High School approved on the 23 November 2023.

The Department of Education is writing to notify the Department of Planning and Environment of an incident that occurred on site on 19 February 2024. Please find a summary table of the incident below:

Incident No.	**2**
Details of the incident	Due to heavy rainfall, sediment controls to the South East boundary of the site have failed allowing sediment laden water to escape. Supplementary sediment control around the site has captured sediment, however sediment is suspected to have escaped into the Council stormwater catchment feeding into Allambie Rd. The heavy rainfall has also resulted in a passive discharge of water from the western side of the site. All three levels of sediment control in this area have worked as per the approved sediment and erosion control plan to capture sediment. However, fine particulate which cannot be captured by sediment fabric is suspected to have escaped into the adjoining Madison Way Reserve.

How was the incident detected	The Head Contractor in charge of the site discovered the incident during the heavy rainfall on 19 February 2024.
When the applicant became aware of the incident	The applicant was advised of the incident by the Head Contractor on 19 February 2024
Actual or potential non-compliance with conditions of consent	Sediment has escaped the site into the Allambie Rd Council stormwater. Fine particulate unable to be captured by sediment fabric has escaped the site into the Madison Way Reserve.
Immediate steps that were taken	The Head Contractor has: - Fixed the sediment control which failed along the South East boundary of the site - Cleaned up the sediment which has escaped the site - Inspected all sediment control measures on site - Arranged for their Civil Engineer to undertake an inspection of the sediment control measures across the site to ensure they comply with the approved plans and are fit for purpose
Further action(s) that will be taken	SINSW has requested the Head Contractor undertake a formal investigation into the incident and SINSW will undertake its own investigations. The Head Contractor is investigating further measures which can be put in place above and beyond those in the approval to improve sediment control on the site during heavy rain

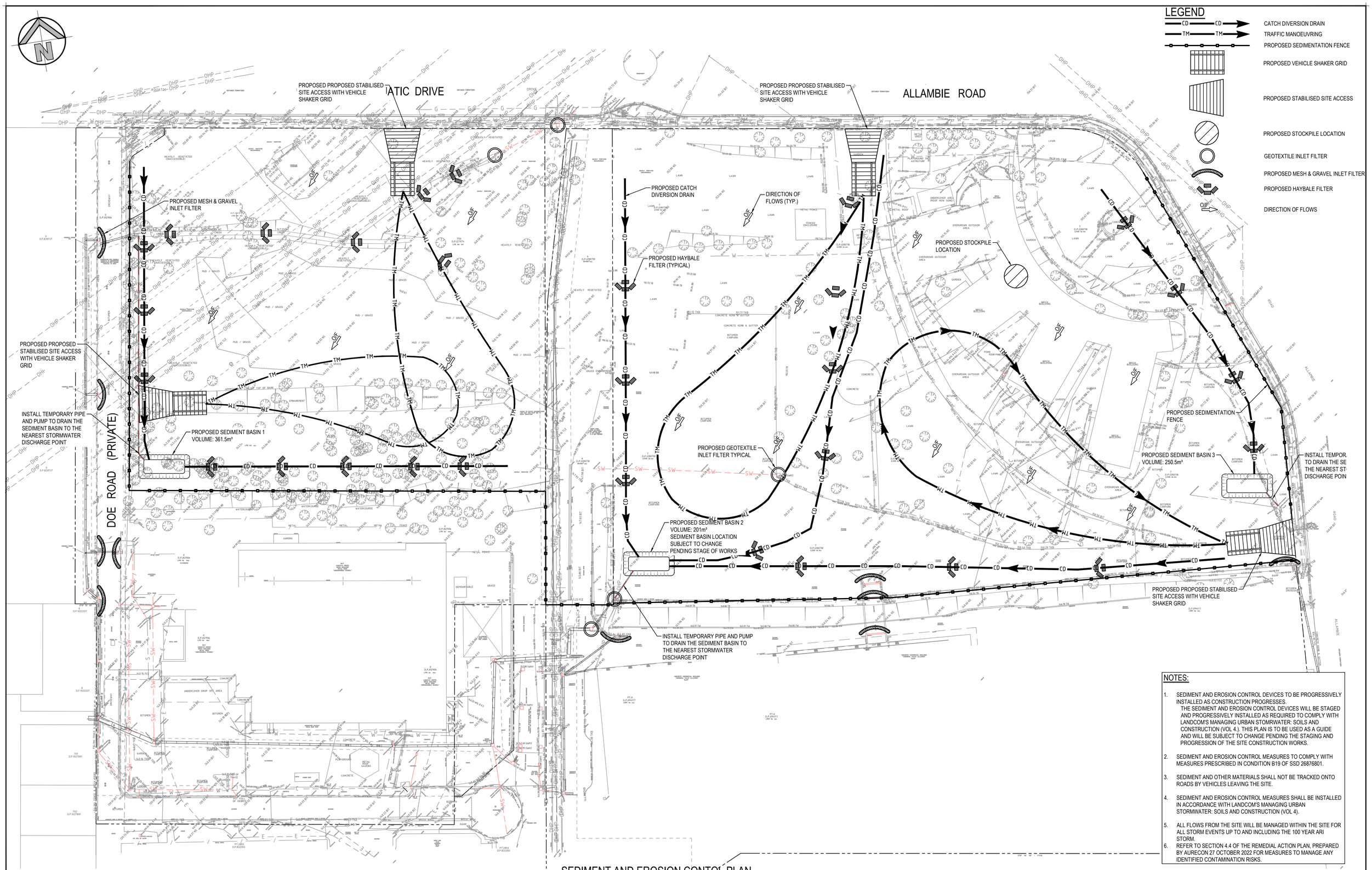
In line with Appendix 2 of the SSDA consent conditions, within 30 days of the date on which the incident occurred we will provide a formal incident report. Should you wish to discuss this incident or require further information please do not hesitate to contact the undersigned and/or the primary contact from the SINSW Planning Compliance Team listed in the submission.

Yours sincerely

Sumi Thambyrajah

Sumi Thambyrajah
Project Director
School Infrastructure NSW

Attachment B – Sediment Control Plan dated 15 November 2023



SEDIMENT AND EROSION CONTOL PLAN

SCALE: 1:500

NOTES:

1. SEDIMENT AND EROSION CONTROL DEVICES TO BE PROGRESSIVELY INSTALLED AS CONSTRUCTION PROGRESSES.
   THE SEDIMENT AND EROSION CONTROL DEVICES WILL BE STAGED AND PROGRESSIVELY INSTALLED AS REQUIRED TO COMPLY WITH LANDCOM'S MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION (VOL 4.). THIS PLAN IS TO BE USED AS A GUIDE AND WILL BE SUBJECT TO CHANGE PENDING THE STAGING AND PROGRESSION OF THE SITE CONSTRUCTION WORKS.
2. SEDIMENT AND EROSION CONTROL MEASURES TO COMPLY WITH MEASURES PRESCRIBED IN CONDITION B19 OF SSD 26876801.
3. SEDIMENT AND OTHER MATERIALS SHALL NOT BE TRACKED ONTO ROADS BY VEHICLES LEAVING THE SITE.
4. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH LANDCOM'S MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION (VOL 4).
5. ALL FLOWS FROM THE SITE WILL BE MANAGED WITHIN THE SITE FOR ALL STORM EVENTS UP TO AND INCLUDING THE 100 YEAR ARI STORM.
6. REFER TO SECTION 4.4 OF THE REMEDIAL ACTION PLAN, PREPARED BY AURECON 27 OCTOBER 2022 FOR MEASURES TO MANAGE ANY IDENTIFIED CONTAMINATION RISKS.

ISSUED FOR 100% DD

SURVEY INFORMATION
SURVEYED BY
C.M.S. SURVEYOURS PTY LIMITED
DATUM: AHD
ORIGIN OF LEVELS: SSM 9185, RL 127.659

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
04	NOTES AND GATE STABILISED ACCESS ADDED.	MP	FZ	15.11.2023
03	ISSUED FOR 100% DD	MP	FZ	13.10.2023
02	ISSUED FOR 100% DRAFT DD	MP	FZ	22.09.2023
01	ISSUED FOR CC1	FZ	BS	08.09.2023

Client: ADCO
Architect: ARCHITECTUS

Suite 2.01
828 Pacific Highway
Gordon NSW 2072
Global-Mark.com.au®
H&H Job No: 231123
Telephone +61 2 9417 8400
Facsimile +61 2 9417 8337
Email email@hhconsult.com.au
Web www.henryandhymas.com.au

DRAWING TO BE PRINTED IN COLOUR

henry&hymas

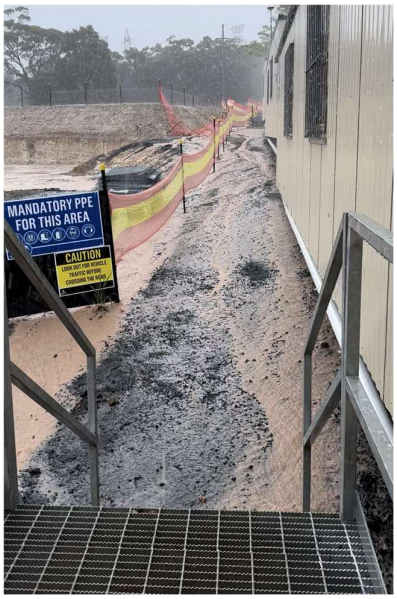
Project: PROPOSED THE FOREST HIGH SCHOOL
187 ALLAMBIE ROAD, ALLAMBIE HEIGHTS, NSW

Title: SEDIMENT AND EROSION CONTOL PLAN

Drawn	Designed	Original issue date
M.Pereira	B.Seizov	JULY
Checked	Approved	Scale @A1
B.Seizov	A.Francis	1:500

Drawing number: 231123_CC_SE01
Revision: 04

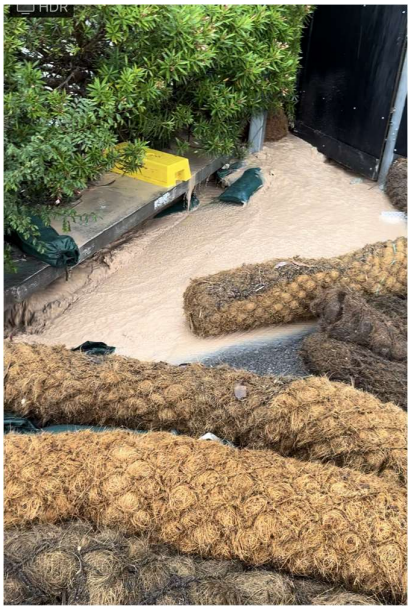
Attachment C – Photos from this Johnstaff site inspection 20 February 2024



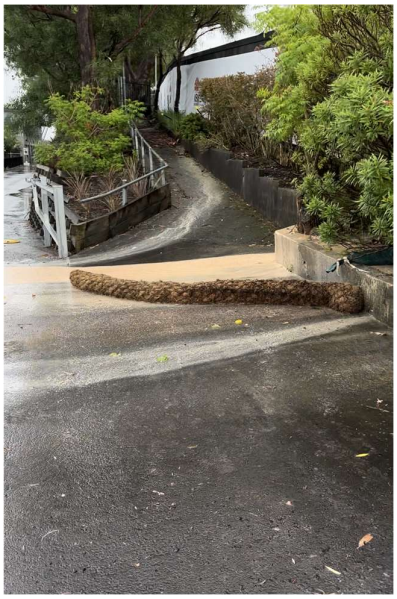
Rainwater flowing down towards the CPA boundry

Excavation works to increase the size of sediment basin No 3

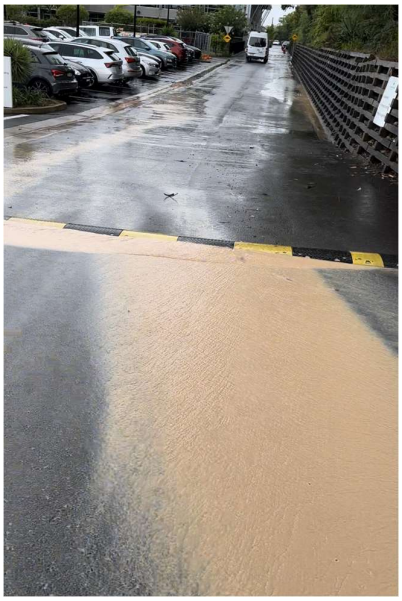
Sediment laden water flowing down Allambie Road



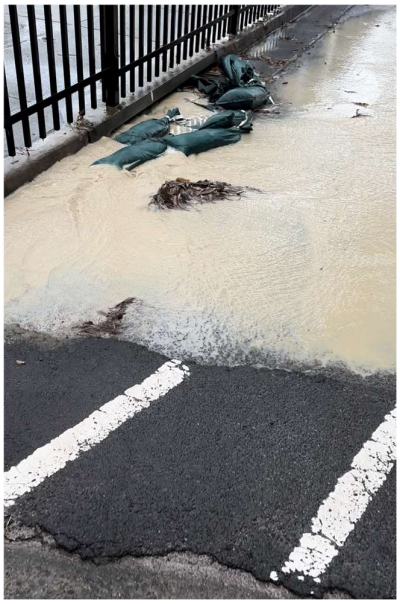
Sediment laden water overflowing sediment control



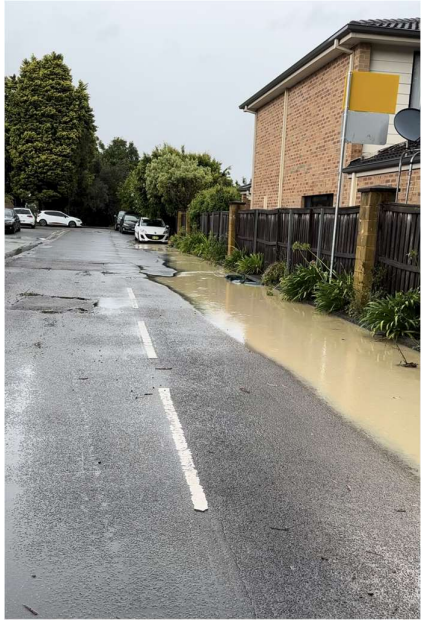
Sediment laden water overflowing sediment control towards CPA drive



Sediment laden water flowing down the CPA driveway



Sediment laden water overflowing sediment control along the DOE road towards Madison



Sediment laden water flowing along Madison way

Attachment D – ADCO Incident Report

Company Name	ADCO Constructions
Report Name	Incident Details - NSW - (3634) Forest High School Main Works

Incident Summary

Reference	INC-21991
Date Added	14/03/2024 3:40:14 PM

Incident Details

Status	Is Draft

Incident Event Details

Description of Event	Sediment laden water undermining controls on site boundary escaped into neighboring property carpark. Secondary controls present around drains, resulted in sediment not reaching nearby protected drains.
Location where event occurred	Gate 1 (southeast corner of site)
Date & Time of Event	19/02/2024 12:30 PM
Date & Time Reported	20/02/2024
Reported By	David Lock
Additional Information	Significant Rain Event

Incident Event Type

Potential / Actual Harm	Potential Harm
Incident Type	Environment
Risk Outcome	Medium
Low: Onsite release contained, no impact	
Medium: Onsite release with material impact	
High / Critical: Offsite release with material impact; Major irreversible off-site environmental impact with significant delays	

Incident Circumstance

Select a Health & Safety Circumstance	Environment
Identify any secondary circumstance (e.g. Fall of materials > 2m (primary circumstance); Work Activity (Structural	Significant rainfall event in the early morning, approximately 30mm over a 2 hour period.

Steel Erection) Secondary Circumstance 'Steel erected out of sequence/inadequate propping')	
Identify the Work Activity in Progress	Excavation – bulk
Immediate Corrective Actions (at time of the incident)	Sediment that by-passed/escaped site boundary controls was cleaned up promptly to prevent potential for discharge to the environment. Pressure washing of driveway. Water truck and Street Sweeper used to clean area. Sediment traps at external drains cleaned of debris and reinstated.
Preventative Actions (proposed to prevent recurrence of the incident)	Sediment and erosion controls to be monitored and rectified as needed, reassess actual controls, implementation of additional bunding/traps required in areas, monitor weather conditions to promote early warning and instigate additional precautionary controls as required.

Environmental Incident Details

Noise complaint/fine	○ Yes	◉ No
Spill	○ Yes	◉ No
Uncontrolled release	◉ Yes	○ No
Release to	Water Soil	
Flora (plants) / Fauna (animals)	○ Yes	◉ No
Heritage (European)	○ Yes	◉ No
Heritage (First Nations)	○ Yes	◉ No
Contaminated Material	○ Yes	◉ No
Outline Clean Up / Remediation Actions	Brooming of sediment to retrieve and brought back on site. Thorough cleaning (pressure washing with collection of dirty water by street sweeper) of driveway, gutters and areas leading to protected drainage inlets. Water Truck and Street Sweeper used to clean affected area.	

Outline Preventative Actions	Reinstate and implement extra traps in areas where sediment traps had been less effective.

Regulator Notification

Needs to be reported to relevant authority	○ Yes ◉ No

Evidence Collection - PEOPLE

Identify all people who may have relevant information about the invident and obtain witness statements.

Were there any witnesses to the event?	○ Yes ◉ No

Evidence Collection - ENVIRONMENT

Examine the scene of the incident for information to help understand the nature of the task being conducted and local environmental conditions.

Weather Conditions	Rain
Bureau of Meteorology (BOM) report	*IDCJAC0009_066188_2024.pdf*
Are there photos of the incident scene?	◉ Yes ○ No
Description	Driveway below Gate 1.
Photo of Incident Scene	*20240220_113043.jpg*
Description	Driveway below Gate 1.
Photo of Incident Scene	*20240220_113040.jpg*
Description	
Photo of Incident Scene	

Description	
Photo of Incident Scene	

Evidence Collection - EQUIPMENT

Review equipment involved in the incident, paying particular attention to condition of equipment and suitability.

Was there plant and equipment involved in the incident?	○ Yes ◉ No

Evidence Collection - PROCEDURES

Review the task being carried out and work procedures to determine if they contributed to the incident.

Select procedures applicable to the incident	

Evidence Collection - ORGANISATION

Review procedures, consultation, training and supervision provided.

Select organisational factors applicable to the incident	

Incident Analysis - 5 WHY

The 5 Why technique of incident analysis is a simple but successful method of identifying the Contributing Factors and Root Causes of an Incident. The 5 Why process involves asking WHY an Incident Happened and continue asking until the question can no longer be answered.

Incident Description	Sediment undermining controls on site boundary and escaping site on east of site, Gate 1.
WHY did the above happen	Site contours not directing water on east of site to sediment basin prior to discharge at southwest corner.
WHY did the above happen	Significant rain even of 57mm in around 2 hours.

WHY did the above happen	All rain events that had been witnessed to date did not show the water pathways that were encountered during the above storm event, nor did the sediment controls installed withstand the water forces during the same event.
WHY did the above happen	Significant rain event of this nature is considered outside the normal operating expectations of the as installed environmental controls.
WHY did the above happen	Short duration significant rainfall event

Incident Analysis - Behaviours and Personal Factors

Select applicable behaviour and personal factors that have resulted in the incident.

Contributing Factor	Other (provide details below)
Comments	A significant rain event of this nature is considered outside the normal operating expectations of the as installed environmental controls.
Root Cause	Other (provide details below)
Comments	While the as installed controls were as documented, installed and approved (inspected prior and post) by qualified persons, the significant rain event and failure of controls in areas have provided opportunities to improve above and beyond minimum standards.

Incident Analysis - Work Environment and Job Systems Factors

Select applicable work environment and job system factors that have resulted in the incident.

Contributing Factor	Inclement Weather – rain, wind, extreme heat etc
Comments	Review BOM report, noting 30.6 mm in 2 hour period.
Root Cause	Other (provide details below)

Comments	Significant rainfall event.

Actions

Corrective Actions (Now) and Preventative Actions (Future) are to address the IDENTIFIED contributing factors and root causes within the incident analysis section. Actions must have a directly link to the incident with the aim of preventing reoccurrence and reduction of risk. Actions must be (SMARTER) – Specific, Measurable, Accountable, Reasonable, Timely, Effective and Reviewed.

Use the ADD ISSUE button to raise Corrective and Preventative Actions.

Continual Improvement

Has the incident identified that elements of the Management Systerm need reinforcing or revision?	○ Yes ◉ No

Incident Investigation Team

Select the persons involved in the incident investigation	Project Manager HSE Advisor Site Manager Site Foreman

Project Manager Sign Off

Project Manager	Signed By David Lock
Date	14/03/2024

HSE Advisor Sign Off

HSE Advisor	
Date	

Site Manager Sign Off

Site Manager	
Date	

Site Foreman Sign Off

Site Foreman	
Date	

Incident Review

The Project Manager, Construction Manager and State HSE Manager must review the incident report information / actions etc. and provide comment.

Project Manager Comments	
Construction Manager Comments	
State HSE Manager Comments	

Incident Close Out

The Project Manager, Construction Manager and State HSE Manager must provide review comments above before the incident can be closed out.

Attachment E – Henry & Hymas Inspection Report dated 16 February 2024

SITE INSPECTION REPORT

Project Name: The Forest High School	Project No.: 231123
Subject: Site Inspection (12:00pm – 12:30pm)	Ref: SIR 2024-02-16
Venue location: 187 Allambie Rd, Allambie Heights	Date: 16/02/2024
Recorded by: Frank Zhou	Page 1 of 1

henry&hymas

Suite 2.01
828 Pacific Highway
Gordon NSW 2072

Tel: 61 (02) 9417 8400
Fax: 61 (02) 9417 8337

Present:

To:	CC:	Name:	Company:	Contact:
✓		Alec Christofides	ADCO	0400 989 344

Weather:	~~Cold~~ / Mild / ~~Hot~~	~~Calm~~ / Windy / ~~Very Windy~~
	Wet / ~~Dry~~ / ~~Drizzle~~	~~No Cloud~~ / ~~Some Cloud~~ / Cloudy

Plant: Nil used for inspection		

Work In Progress: Inspection of sediment and Erosion controls

Item	Inspection notes / Recommendations	By - Due:
1	**Works Inspected:** Sediment and Erosion Control The sediment and erosion control measures that have been implemented on site have been inspected. Refer to the following comments: • The sediment and erosion control measures in place are generally compliant. • The sediment basin constructed near the future building Block B is compliant. This basin captures overflow with sediment from the nearby building pads which temporarily hold water.  • The sediment basin constructed near the future basement carpark is compliant and has sufficient capacity to temporarily hold water and sediment coming from the upstream side.	

Item	Inspection notes / Recommendations	By - Due:

- The building pads of Block E is acting as a temporary sediment basin. Sand bags and geofabrics have been installed to protect the bund near the neighbouring site. It is recommended to divert the overflow from this area to the sediment basin above via temporary swales.

- The sand bag filters have been installed correctly on the temporary swale directing water to the sediment basin at the location of the future OSD tank 1.

Item	Inspection notes / Recommendations	By - Due:

- The sediment basin at the location of the future OSD tank 1 is working and satisfactory. It is recommended to pump out the ponding water within the sediment basin to the nearest drainage point in time.

- It should be noted that the sediment and erosion controls on site are required to be revised as the earthworks for the site is progressed. The nature of sediment and erosion control is such that the design and implementation is constantly changing depending on the progression of the earthworks and stormwater on site. For this reason, it is expected that the sediment and erosion control measures on site do not directly correlate with the documentation prepared by Henry & Hymas.
- Pumping of stormwater into Council's stormwater system is to be in accordance with Council's DCP and the Blue book (Managing Urban Stormwater Soils and Construction).
-

Overall

- All works are generally satisfactory and in accordance with the design by H&H. The sediment and erosion control measures have been implemented in a reasonable way under the current site condition and constraints.