
Remediation Action Plan

**Concept and Stage 1 - Redevelopment of
Newington College Senior Campus**

**200-244 and 221-235 Stanmore Road,
Stanmore NSW**

**Prepared for Council of Newington
College, c/o AJC**

Project 234875.01

28 April 2026

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The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

Signature

Date

Author		28 April 2026
Reviewer		28 April 2026

Executive Summary

Douglas Partners Pty Ltd (Douglas) has been commissioned by Newington College, c/o AJC (the Applicant) to prepare this Remediation Action Plan (RAP) in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs), and in support of the State Significant Development Application (SSD-78268465) for alterations and additions to the Newington College Senior Campus in Stanmore located at 200-244 and 221-235 Stanmore Road, Stanmore NSW. The site for the purposes of this RAP covers the Stage 01 to Stage 06 areas shown on Drawing 1, Appendix A.

The remediation objectives, devised in accordance with Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE) (2019a), are to:

- Address potentially unacceptable risks to relevant environmental values from contamination.
- Render the site suitable, from a contamination perspective, for the proposed development.

Asbestos and polycyclic aromatic hydrocarbons (PAH) contamination has been identified in fill exceeding the site assessment criteria (SAC) at some test locations as part of the previous preliminary site investigation (PSI), as discussed in more detail herein. The remediation preference and general sequence of remediation includes:

- Data gap investigation (Stage 01 to Stage 06 of the proposed development).
- Delineation of PAH (Stage 01 and Stage 02 and 03) and asbestos (Stage 06) contamination in soil.
- Removal of all fill exceeding the SAC for off-site disposal under a formal waste classification.

An update of this RAP, or alternatively an addendum or remediation works plan (RWP) will be undertaken at the completion of the data gap investigation, the reporting form being dependent on the significance of the change to the remediation approach. Noting the proposed staging of the works, in the event of any changes to relevant EPA endorsed guidelines or Regulations, there may need to be additional changes or addenda to the RAP to capture those changes.

The RAP provides protocols, sequence and validation plans for the proposed remediation works listed above as well as for data gaps, contingency and unexpected finds. Site responsibilities, and work, health and safety requirements are discussed.

It is considered that conformance with this RAP will minimise the potential for environmental, public and worker health impacts during the remediation works at the site, and will render the site suitable for the proposed development.

The remediation and validation works undertaken will need to be documented in a formal validation report.

Table of Contents

	Page No
1. Introduction	1
2. Project information	3
2.1 Description of the site and locality	3
2.2 Project description	4
3. Scope of work	5
4. Site description	6
5. Environmental setting	7
6. Summary of Preliminary Site Investigation (Douglas, 2026)	8
7. Conceptual site model	11
8. Data gap investigation	13
8.1 Stage 01	14
8.2 Stage 01 Temporary Car Park	15
8.3 Stage 02 and 03	15
8.4 Stage 04	16
8.5 Stage 05	17
8.6 Stage 06	18
9. Remediation extent	19
10. Remediation options assessment	19
11. Preferred remediation strategy	20
11.1 Rationale	20
11.2 Sequence of remediation	20
12. Assessment criteria	21
12.1 Remediation acceptance criteria	21
12.2 Site assessment criteria	22
13. Validation plan	23
13.1 Data quality objectives	23
13.2 Validation assessment requirements	23
13.3 Visual inspections	23
13.4 Validation sampling	23
14. Waste disposal	24

15.	Imported material.....	25
16.	Quality assurance and quality control.....	26
17.	Management and responsibilities	27
17.1	Site management plan	27
17.2	Site responsibilities	27
17.3	Contingency plan and unexpected finds protocol	27
18.	Validation reporting.....	27
18.1	Documentation	27
18.2	Reporting.....	28
19.	Conclusions.....	28
20.	References	29
21.	Limitations.....	30

Appendix A:	Drawings
Appendix B:	About this Report
Appendix C:	Borehole Logs from Previous Report [Douglas, 2025]
Appendix D:	Site Assessment Criteria
Appendix E:	Summary results tables [Douglas, 2025]
Appendix F:	Remediation Options Assessment and Evaluation
Appendix G:	Site Management Plan
Appendix H:	Contingency Plan and Unexpected Finds Protocol
Appendix I:	Data Quality Objectives

Remediation Action Plan

Concept and Stage 1 - Redevelopment of Newington College Senior Campus

200-244 and 221-235 Stanmore Road, Stanmore NSW

1. Introduction

Douglas Partners Pty Ltd (Douglas) has been commissioned by the Council of Newington College (the Applicant) to prepare this Remediation Action Plan (RAP) in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs), and in support of the State Significant Development Application (SSD-78268465) for alterations and additions to the Newington College Senior Campus located at 200-244 and 221-235 Stanmore Road, Stanmore NSW. The site for the purposes of this RAP covers the Stage 01 to Stage 06 areas shown on Drawing 1, Appendix A.

This report covers the concept proposal (Stage 01 to Stage 06 areas as shown on Drawing 1) and detailed stage 1 works associated with the proposed alterations and additions to Newington College. The proposed stages of the concept proposal are outlined below:

- Stage 01 - Sevington Courts and a Temporary Carpark (will be removed at completion of Stage 01)
- Stage 02 - Refurbish Centenary Hall
- Stage 03 - New College Lan Building
- Stage 04 - Memorial Drive Landscaping
- Stage 05 - Remove Demountable Classrooms and Landscaping works
- Stage 06 - Concordia Redevelopment

The boundary of the site (Stages 01 to 06) is shown on Drawing 1, Appendix A. It is noted that the RAP applies to the site only, and if any further areas within the Newington College Senior Campus are subject to works, the RAP will need to be revised.

The report was prepared in accordance with Douglas' proposal 234875.00.P.002.Rev2 dated 11 September 2025.

The remediation objectives, devised in accordance with CRC (2019a), are to:

- Address potentially unacceptable risks to relevant environmental values from contamination.
- Render the site suitable, from a contamination perspective, for the proposed development.

This RAP has been prepared in response to the SEARs requirements issued below. This RAP provides details of the work that will be required within the site to meet the remediation objectives.

SEARs	Documentation Requirement	Response
Issues and Assessment Requirements – Concept Proposal 18. Contamination and Remediation In accordance with Chapter 4 of SEPP (Resilience and Hazards) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the concept development)	- Preliminary Site Investigation If required, provide: - Detailed Site Investigation - Remediation Action Plan - Preliminary Long-term Environmental Management Plan	This RAP in its entirety. A Preliminary Site Investigation with Limited Sampling report has been prepared under a separate cover. Given the operational nature of the site, it is considered that it is currently not feasible to conduct a full detailed site investigation (DSI) prior to demolition.
Issues and Assessment Requirements – Detailed Stage 1 works 10. Contamination and Remediation In accordance with Chapter 4 of SEPP (Resilience and Hazards) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the concept development)	- Preliminary Site Investigation If required, provide: - Detailed Site Investigation - Remediation Action Plan including interim audit advice from an EPA accredited site auditor certifying the RAP is appropriate - Preliminary Long-term Environmental Management Plan	Therefore, this remediation action plan (RAP) has been prepared in accordance with NSW EPA (2020), and includes a data gap investigation to be completed once accessible.

The following key guidelines were consulted in the preparation of this report:

- NEPC National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM] (NEPC, 2013).
- NSW EPA *Guidelines for Consultants Reporting on Contaminated Land* (NSW EPA, 2020).
- CRC CARE Remediation Action Plan: Development - Guideline on Establishing Remediation Objectives (CRC CARE, 2019a).

SEPP (Resilience and Hazards) 2021 lists circumstances under which remediation would be designated as Category 1, requiring development consent. It is recommended that the planners associated with the project determine whether remediation at the site constitutes Category 1 or Category 2 remediation works.

It is understood that this report will be reviewed by a NSW accredited site auditor as part of a site audit under the *Contaminated Land Management Act 1997* (NSW), which involves their review of this RAP and associated reports.

This report must be read in conjunction with all appendices including the notes provided in Appendix A.

It is noted that this RAP is an update of the previous revision (reference: 234875.01. R.002.Rev2) to reflect changes in the proposed development, specifically the inclusion of the Stage 01 temporary carpark, and a minor boundary change to Stage 06.

2. Project information

The following project information has been provided by Urbis. The architectural drawings available at the time of reporting are included in Appendix A.

2.1 Description of the site and locality

The Newington College Senior Campus is located at 200-244 Stanmore Road, Stanmore and is bordered by Stanmore Road to the north, Newington Road to the south and College Lane to the west. The College boundary also includes the Concordia building to the north at 221-235 Stanmore Road. The main campus is legally described as Lot 8 in DP710369 and the Concordia site is legally described as Lot A in DP109269, Lot 1 in DP49, Lot B in DP330028, and Lot 1 in DP526319.

Key features of the Campus include:

- The main campus site is a regular shaped allotment with an area of 8.7 ha. The Concordia site (and access handle to Cavendish Street), immediately north of the main campus is irregular in shape and is 2,903 sqm in area.*
- The topography of the main campus is a defining characteristic, particularly the grassed slope from the historic Founders Building down to Johnson Oval. The site has an overall fall of approximately 18 m from the north-west corner to south-east corner.*
- The at-grade car park adjacent to the Concordia building sits approximately 2.8 m above the Stanmore Road street level, and is accessed via Cavendish Street (to the rear).*
- The existing school buildings are largely located along the College Lane and Newington Road edges of the site. Existing buildings generally range from 2-4 storeys in scale. The balance of the site comprises at-grade car parking and sporting facilities, including sporting ovals and tennis courts.*
- The Concordia building across Stanmore Road is a two-storey building with basement and car parking accessed from Stanmore Road. An at-grade car park is located within the eastern portion of this site, with vehicular access from a driveway to Cavendish Street (to the north).*
- The site has a primary frontage to Stanmore Road (which accommodates both vehicular and pedestrian access to the site) and a secondary frontage to Newington Road, which is generally limited to pedestrian access and service vehicles.*
- The area surrounding the site is predominantly zoned R2 Low Density Residential and includes a combination of single dwellings and residential flat building ranging from 1-3 storeys in height. Stanmore Train Station is located approximately 220 m to the north. An existing pedestrian bridge and signalised traffic lights provide pedestrian access over Stanmore Road to Stanmore Train Station, further north.*

The Campus is identified in the figure overleaf.



Figure 1. Campus location (Source: Urbis 2024)

2.2 Project description

The SSDA seeks consent for staged alterations and additions to the Newington College Senior Campus comprising:

Concept Proposal for the provision of new and upgraded facilities, including:

- Building envelope for the redevelopment of Sevington Courts [Stage 01] to accommodate recreational facilities and teaching spaces (refer to detailed Stage 1 Works below).
- Building envelope for alterations and additions to Centenary Hall and development of an adjoining, four storey teaching and learning facility (College Lane building). This development will accommodate a cafeteria and dining hall, lecture theatre, multi-purpose teaching spaces and additional pastoral spaces.
- Building envelope for the redevelopment of the Concordia building to accommodate a performance theatre, multi-purpose gallery and exam centre, new teaching spaces and basement car parking. The Concordia redevelopment includes a new pedestrian bridge across Stanmore Road to the main campus.
- Landscaping design strategy across the campus.
- Car parking provision and circulation arrangements.
- Increase of 368 students and 45 full-time equivalent (FTE) staff.

Detailed Stage 1 works, including:

- *Earthworks and the associated demolition of Sevington Courts.*
- *Construction, fit-out and operation of 3 storey buildings comprising multi-purpose indoor and rooftop courts, fitness centre, multi-purpose teaching spaces, amenities and basement car parking.*
- *Alterations to the existing driveway within the site to facilitate vehicle access to the new basement car park.*
- *Temporary car park during construction phase of Stage 1 Works.*
- *Tree removal and new landscaping adjacent to the Stage 1 development site.*
- *Increase of 368 students and 45 FTE staff.*

The project description generally aligns with the six-stage development process listed in Section 1 and shown on Drawing 1, Appendix A. This RAP only applies to those stages outlined on Drawing 1, Appendix A.

3. Scope of work

The scope of work to achieve the objective of the RAP is as follows:

- Summarise the findings of previous investigations used to inform the status of contamination and contamination risk at the site.
- Present a conceptual site model (CSM) to list potential and likely contamination source, pathway and receptor linkages to address potentially unacceptable risks to human health and relevant environmental values from contamination.
- Identify gaps in the current understanding of contamination at the site, and how these are to be addressed to support the remediation process.
- Define the anticipated extent of remediation.
- Assess potentially suitable remediation options to render the site suitable for its proposed use, and which will minimise potentially unacceptable risk to human health and/or the environment, and which includes the consideration of the principles of ecologically sustainable development.
- Discuss options with the client to confirm the remediation approach to management and/or remediation to render the site suitable, from a contamination perspective, for the proposed development.
- Establish the remediation acceptance criteria (RAC) to be adopted for validation of remediation.
- Identify how successful implementation of the RAP will be validated.
- Outline waste classification, handling and tracking requirements.
- Outline environmental safeguards required to complete the remediation works.
- Include contingency plans and an unexpected finds protocol.

4. Site description

Site address	221 - 235 Stanmore Road, Stanmore NSW. 200 - 244 Stanmore Road, Stanmore NSW.				
Legal description	Lot 1 in Deposit Plan 526319 Lot 1 in Deposit Plan 49 Lot A in Deposit Plan 109269 Lot B in Deposit Plan 330028 Lot 8 in Deposit Plan 710369 (noting only part of this lot is within the site)				
Approximate Total Site Area	In total 1.28 ha comprising: • Stage 01 - Sevington Courts: 3,600 m² • Stage 01 – Temporary Car Park Area: 1,100 m² • Stage 02 & 03 – Refurbish Centenary Hall & New College Lane Building: 2,000 m² • Stage 04 – Memorial Drive Landscaping: 2,300 m² • Stage 05 – Remove Demountable Classrooms: 900 m² • Stage 06 – Concordia Redevelopment: 2,900 m²				
Zoning	SP2 - Infrastructure – Educational Establishments				
Local Council Area	Inner West Council				
Current use	Secondary school				
Surrounding uses	<table> <tr> <td>Stage 01 to 05</td><td> North – Stanmore Road then proposed Concordia Redevelopment site (Stage 06), residential, and Stanmore Public School further north East – School infrastructure then residential further east South – Newington Road then residential further south West – College Lane then residential further west </td></tr> <tr> <td>Stage 06</td><td> North – Residential East - Residential South – Stanmore Road then school infrastructure West –Residential </td></tr> </table>	Stage 01 to 05	North – Stanmore Road then proposed Concordia Redevelopment site (Stage 06), residential, and Stanmore Public School further north East – School infrastructure then residential further east South – Newington Road then residential further south West – College Lane then residential further west	Stage 06	North – Residential East - Residential South – Stanmore Road then school infrastructure West –Residential
Stage 01 to 05	North – Stanmore Road then proposed Concordia Redevelopment site (Stage 06), residential, and Stanmore Public School further north East – School infrastructure then residential further east South – Newington Road then residential further south West – College Lane then residential further west				
Stage 06	North – Residential East - Residential South – Stanmore Road then school infrastructure West –Residential				

The boundary of each stage and the college is shown on Figure 2, and Drawing 1, Appendix A.



Figure 2. Site (Stage 01 to Stage 06 that are subject to this RAP) location (refer to Drawing 1 for full legend)

5. Environmental setting

Regional topography	The site is situated on a local crest with the regional topography generally sloping downwards to the northeast towards Blackwattle Bay (via Johnstons Creek), south and southeast to Botany Bay (via Cooks River).
Site topography	Reference to NSW 2 m Elevation Counters map indicated that the site generally slopes down towards the southeast with surface levels ranging from approximately 38 m Australian Height Datum (AHD) at Stage 06 to 30 m AHD at Stage 01. The detailed topography of each stage as below: - Stage 01 slopes slightly down towards the southeast with surface levels ranging from approximately 34 m AHD to 30 m AHD. - Stage 02 and 03 slopes slightly down towards the southeast with surface levels ranging from approximately 34 m AHD to 32 m AHD.

	- Stage 04 slopes slightly down towards the southeast with surface levels ranging from approximately 36 m AHD to 30 m AHD. - Stage 05 slopes slightly down towards the southeast with surface levels ranging from approximately 38 m AHD to 34 m AHD. - Stage 06 is generally level with a slight slope to the north to northwest with topography at approximately 38 m AHD.
Soil landscape	Reference to Sydney 1:100 000 Soils Landscape Sheet indicates that the site is located within the Blacktown landscape area and typically consists of highly plastic and relatively impermeable residual soil.
Geology	Reference to the Sydney 1:100 000 Series Seamless Geology Geological Sheet indicates that the site is underlain by Ashfield Shale of the Wianamatta Group, typically comprising black to light grey shale and laminite.
Acid sulfate soils	Reference to the published national mapping indicates that the site is located within an area mapped as having 'extremely low probability of occurrence' of acid sulfate soil (ASS). Reference to regional ASS Risk map indicates that the site is located within an area mapped as 'no known occurrence of acid sulphate soils'.
Surface water and groundwater	Surface water runoff from the site is expected to follow the general regional topography and drain into the local stormwater system. As the site is situated on a local crest, the surface water is likely eventually drain either to Johnstons Creek (Stage 06), which is approximately 900 m north of the proposed Concordia Redevelopment site (Stage 06), or to the Cooks River (Stage 01 to 05), which is approximately 3 km south of the Stage 01. Likewise, groundwater is also anticipated to follow the regional topography, either to the north to Johnstons Creek or to the southeast towards the Cooks River. Given the local geology (i.e. Ashfield Shale), the groundwater in the fractured rock beneath the site is anticipated to be saline and very low yield. Accordingly, there is not expected to be any significant potential beneficial uses of the shallow groundwater.

6. Summary of Preliminary Site Investigation (Douglas, 2026)

Douglas has previously prepared a PSI for the development site as below:

- Report on *Preliminary Site (Contamination) Investigation with Limited Sampling, Concept and Stage 1 - Redevelopment of Newington College, 200-244 and 221-235 Stanmore Road, Stanmore NSW* (report reference: 234875.01.R.001.Rev5, dated April 2026) (Douglas, 2026).

The objective of the PSI was to assess the suitability of the site for the proposed development from a contamination perspective and to assess whether further investigation and/or management was required. The PSI comprised a desktop review of environmental and site history information, a walkover and a limited program of intrusive soil and groundwater investigation to assess the potential suitability of the site for the proposed development.

The desktop search indicated that Stages 01 to 04 have been mainly used for educational infrastructure purposes since *circa* 1863. Stage 05 was acquired by the College in 1971 from the Methodist Church (N.S.W.) Property Trust, previously used for church or educational purposes. The building was demolished before 1978, after which the area was used by the College as a car park and for demountable classrooms. Stage 06 has been mainly used for residential purposes before 1964, followed by commercial purposes between 1964 and 2007, and then education purposes.

Potential sources of contamination identified from the site history information included fill (including potential impacts from previously demolished buildings, car park), the degradation of hazardous building materials and historical commercial activities (Stage 06 only).

The boreholes drilled and sampled as part of the PSI, numbering BH1 to BH4, BH6 to BH15 are shown on Drawing 2, Appendix A. Fill depths recorded during the sampling ranged between 0.7 m and 2.3 m below ground level (bgl) for Stage 01 with depth increasing from east to west, between 0.5 m bgl and 0.9 m bgl for Stage 02 to 04, and between 0.23 m and 2.8 m bgl for Stage 06 with generally shallow fill in the at grade car park area in the west and deeper fill area in the east. Asbestos containing material (ACM) was observed in BH1/0.15-0.25. Building debris, which can be indicative of asbestos contamination, was observed in a number of boreholes, including at least one borehole at each stage, with a larger quantity of building debris observed in fill in the east of Stage 06. Borehole logs are included in Appendix C.

Soil summary results are presented in Tables E1 to E3, Appendix E. The analytical or statistical results for all contaminants tested in all samples were below the adopted Site Assessment Criteria (SAC) (derivation extracted and included in Appendix D) with the exception of below:

- Stage 01:
 - o Concentration of Benzo(a)pyrene B(a)P TEQ in sample BH16 / 0.6-0.8 at 15 mg/kg and BD6/20250415 (replicate of BH15/0.4-0.5) at 4.6 mg/kg exceeded the Health Investigation Level (HIL) criteria of 3 mg/kg. Given that the concentration of B(a)P TEQ in sample BH16/ 0.6-0.8 exceeds the SAC by >2.5 times, the impacted soil at this location represents a hotspot and is to be managed separately. The exceedance at BH15 (BD6) was not considered to be of concern as the calculated 95% upper confidence limit (UCL) of the arithmetic mean (95% UCL) for all fill samples within the Stage 01 was 2.2 mg/kg, which is below the SAC. The 95% UCL was calculated using USEPA ProUCL.
 - o Nickel in sample BH15/0.8 - 1 at 19 mg/kg slightly exceeded the site-specific ecological criteria of 10 mg/kg. The exceedance is not considered as concern given the nickel was recorded in natural soil and is considered likely to be naturally occurring.
 - o B(a)P in samples BH11/0.8-1 at 0.77 mg/kg, BH11/1.2-1.5 at 0.8 mg/kg, BH12/0.8-1 at 0.88 mg/kg, BH12/1.3-1.5 at 1.4 mg/kg, BH12/1.8-2.3 at 0.78 mg/kg, BH14/0.4-0.5 at 2.1 mg/kg, BH16/0.6-0.8 at 9.9 mg/kg and the replicate sample BD6/20250415 of BH15/ 0.4-0.5 at 3.1 mg/kg which exceeded the ESL of 0.7 mg/kg. It is noted that the B(a)P ESL is a low reliability value. Higher reliability screening levels have been published in CRC CARE Risk-based Management and Remediation Guidance for Benzo(a)pyrene (CRC CARE, 2017). The high reliability value of 33 mg/kg (or ranging between 21 mg/kg to 135 mg/kg) for fresh B(a)P for urban residential and public open and use space suggests that the concentrations of B(a)P detected within those samples are unlikely to pose an unacceptable risk to terrestrial ecosystems and therefore the exceedances are not considered to be of concern.

- Stage 02 and 03:
 - o Concentration of B(a)P in sample BH07 / 0.1-0.2 at 120 mg/kg exceeded the CRC CARE criteria of 33 mg/kg and the SAC.
 - o Concentration of B(a)P TEQ in sample BH07 / 0.1-0.2 at 160 mg/kg exceeded the HIL-A of 3 mg/kg.
 - o Concentration of total polyaromatic hydrocarbons (PAH) in sample BH07 / 0.1-0.2 at 1500 mg/kg exceeded the HIL-A of 300 mg/kg.
- Stage 06:
 - o An ACM fragment was identified in BH1 / 0.15-0.25 and confirmed by laboratory analysis to contain chrysotile and amosite asbestos.

Some metals, B(a)P and total recoverable hydrocarbons (TRH) results also exceeded the ecological based SAC but were not considered to present an unacceptable risk as discussed herein.

Groundwater summary results are presented in Table E4, Appendix E.

The groundwater analytical results suggested that groundwater beneath the site has not been significantly impacted by organic contaminants TRH, PAH, per and fluoroalkyl substances (PFAS), organochlorine pesticides (OCP), organophosphorus pesticides (OPP), polychlorinated biphenyls (PCB), phenol or volatile organic compounds (VOC) (including benzene, toluene, ethylbenzene and xylenes (BTEX)). The copper, nickel and zinc exceedances were considered likely to be attributed to the ambient concentrations in the urbanised area and were therefore not considered significant.

The waste classification summary results are presented in Tables E5 and E6, Appendix E. The following preliminary waste classification with reference to the NSW EPA (2014) waste classification guidelines was provided:

- Fill within Stage 01 and Stage 02 to 04 with the exception of BH7: provisionally classified as General solid waste (non-putrescible).
- Fill represented by sample BH7 / 0.1-0.2: provisionally classified as hazardous waste (noting further assessment, including of the source of the PAH, may find that a different classification is more appropriate).
- All fill within Stage 06: provisionally classified as Special Waste (asbestos) – General Solid Waste (non putrescible) unless further testing using test pits or other bulk sampling methods allows delineation of asbestos.

Based on the findings of the PSI, it was considered that the site can be made suitable for the proposed development from a contamination standpoint subject to the following recommendations:

- A remediation action plan (RAP) be prepared in accordance with NSW EPA (2020) to include:
 - o A requirement of a data gap investigation (DGI) when suitable access is available (e.g. following demolition).
 - o Protocols for the validation of site remediation.

- o Protocols for waste classification of any materials requiring off-site disposal, and protocols for material import, including check-sampling, where appropriate.
- o Other general requirements for RAPs under NSW EPA (2020).
- Management of hazardous building materials (HBM) in the current buildings to prevent contamination of soils during the demolition process. This should be conducted in accordance with regulatory requirements and include:
 - o A HBM survey of the current building within the site to assess the presence of hazardous building materials prior to demolition of the building.
 - o Management of HBM during demolition.
 - o A walkover inspection following demolition to assess the presence of any suspected ACM within any building demolition footprints and nearby surface by a suitably qualified occupational hygienist or environmental consultant.

7. Conceptual site model

The data collected during the PSI generally confirmed that for certain potential contaminant sources, potentially complete exposure pathways to the identified receptors exist, whereas for others, they do not. The conceptual site model (CSM), derived from the findings of the PSI is provided in Table 1, Table 2 and Table 3.

Table 1: Summary of potential sources

Potential sources and associated CoPC
S1: Fill: Associated with levelling and demolition of former buildings and car parks CoPC: metals, PFAS, TRH, BTEX, PAH, PCB, OCP, phenols and asbestos
S2: Current buildings CoPC: asbestos, synthetic mineral fibres (SMF), lead (in paint) and PCB

The following potential human and environmental receptors, along with relevant potential pathways, have been identified and summarised in Table 2.

Table 2: Summary of potential receptors and pathways

Potential human receptors
HR1: Current users [educational]
HR2: Construction and maintenance workers
HR3: End users [educational]
HR4: Adjacent site users [residential]

Potential environmental receptors
ER1: Surface water [Johnsons Creek and Cooks River] ER2: Groundwater ER3: Terrestrial ecosystems
Potential pathways to human receptors
HP1: Ingestion and dermal contact HP2: Inhalation of dust
Potential pathways to environmental receptors
EP1: Surface water run-off EP2: Leaching of contaminants and vertical migration into groundwater EP3: Lateral migration of groundwater providing base flow to water bodies EP4: Inhalation, ingestion and absorption

A summary of the potentially complete exposure pathways for the proposed land use is shown in the table below.

Table 3: Summary of potentially complete exposure pathways (proposed land use)

Source and CoPC	Exposure pathway	Receptor	Risk management action
SI: Fill: CoPC: metals, PFAS, TRH, BTEX, PAH, PCB, OCP, phenols and asbestos. [NOTE: Whilst no significant concentrations of most metals, PFAS, TRH, BTEX, PCB, OCP and phenols have been reported in the PSI, there remains data gaps requiring further investigation, hence these potential contaminants remain].	HP1: Ingestion and dermal contact HP2: Inhalation of dust	HR1: Current users HR2: Construction and maintenance workers HR3: End users HR4: Adjacent site	Conduct a data gap investigation to meet EPA's minimum required sampling density for each of the Stages (discussed in Section 8).
	EP1: Surface water run-off EP3: Lateral migration of groundwater providing base flow to water bodies	ER1: Surface water	Conduct additional targeted investigations of BaP, BaP TEQ and PAH BH16 (Stage 01) and BH07 (Stage 02 and 03) and targeted investigations for asbestos around BH1 (Stage 06) to delineate the extent of contamination in localised areas.
	EP2: Leaching of contaminants and vertical migration into groundwater	ER2: Groundwater	
	EP4: Inhalation, ingestion and absorption	ER3: Terrestrial ecosystems	

Source and CoPC	Exposure pathway	Receptor	Risk management action
S2: Current buildings CoPC: include asbestos, SMF lead (in paint) and PCB	HP1: Ingestion and dermal contact HP2: Inhalation of dust	HR1: Current users HR2: Construction and maintenance workers HR3: End users	A hazardous building material survey is recommended to be conducted prior to the demolition of the buildings

8. Data gap investigation

The PSI (Douglas, 2025) presented the following limitations to the investigation:

- The footprints of the current buildings within Stages 02, 03 and 06, and under the synthetic grass of Stage 01 were not accessible for sampling.
- Stages 04 and 05 were added to the scope of the PSI after the intrusive investigation had been completed. No boreholes were placed within Stage 05.
- Stage 01 temporary car park was incorporated into the scope following completion of the intrusive investigation of the PSI. Douglas was advised by the client that the proposed temporary car park will not involve disturbance of the underlying soils, and the current surface coverings, including the tennis surface, will remain in place. The temporary car park will be removed upon completion of Stage 01. No boreholes were advanced within this area. However, this is not considered to present a risk given that the proposed use does not involve soil disturbance. Notwithstanding, the PSI recommended that a site inspection be undertaken following removal of the temporary car park to assess for any evidence of potential contamination associated with its use.
- The use of boreholes instead of test pits to minimise disturbance to current site activities, noting boreholes are not efficient for identifying asbestos. Given that the building debris, a potential indicator of asbestos, was observed in boreholes across the site there is considered to be a risk of asbestos being present that has not been well characterised by the current data.
- The samples were opportunistically collected from geotechnical investigation boreholes which did not follow a systematic sampling pattern. Additionally, some of the boreholes were placed outside of the site boundary due to access restriction.

As such, following the demolition / removal of existing buildings, a data gap investigation is recommended for each of the development stages as detailed in Sections 8.1 to 8.6. The current sampling extent and the NSW EPA's minimum recommended sampling density for site characterisation is summarised in Table 4 below.

Table 4: Sampling density (current and required)

Stage	Area (m ²)	Minimum recommended sampling numbers (NSW EPA 2022)	Sampling conducted to date – PSI (Douglas, 2025)	Additional requirements
01	3,600	11	4	7 additional test pits for site characterization and 4 targeted delineation test pits around BH16.
02 and 03	2,000	8	1	7 additional test pits for site characterization and 2 targeted delineation test pits around BH7.
04	2,300	8	2	6 additional test pits.
05	900	8	0	8 test pits.
06 ¹	2,900	9	4	14 additional test pits (to meet the double density requirements to characterise a site impacted by asbestos).

¹Note: As shown on drawing 1, a portion of Stage 06 overlaps with Stage 05 and will therefore be assessed as part of Stage 05.

Note that depending on post demolition observations, additional test locations may be recommended in excess to those nominated above.

8.1 Stage 01

During the site investigation works for Douglas (2025), B(a)P TEQ was detected at concentrations of 15 mg/kg, above the HIL A criteria of 3 mg/kg at test location BH16. The result also indicates that the fill in which the contamination was identified is heterogeneous, and that similar fill was present in nearby bores within the Stage 01 development area, indicating a potential for more extensive contamination impact in this area of the site.

All fill within the Stage 01 development area is expected to be disposed of off-site as part of the basement excavation. The fill in this area was preliminarily classified as General Solid Waste (GSW), noting further assessment may determine that a different classification is appropriate part or all of the fill. The final design of the building will consist of an enclosed three to four storey sports facility, with hardstand.

As such, additional intrusive investigation of fill within the Stage 01 development area, post demolition of existing courts and removal of hardstand, is proposed to:

- Further characterise the fill, and provide a final waste classification(s).
- Assess the need for validation following removal, to either delineate waste classification categories and/or validate complete removal of contaminated fill (or all fill).

The following scope of works is proposed:

- Excavate seven additional test pits to allow inspection of the fill, and four additional test pits to delineate the extent of BaP TEQ contamination surrounding BH16. The proposed test locations are shown in Drawing 4, Appendix A.
- Sample the fill at the surface and then at every 0.5 m depth intervals or at signs of contamination (i.e. odours, staining and/or asbestos etc.), including a minimum of one sample from natural soils at each location. The test pits will be extended below any fill to a minimum 1.0 m into observed natural soil.
- For asbestos assessment, collect one approximate 10 L and one 500 mL sample from each location. Screen all 10 L asbestos samples for potential ACM.
- Analyse samples at a NATA accredited laboratory for the following potential contaminants of concern identified in the CSM (Table 1):
 - o Heavy metals.
 - o PFAS.
 - o TRH.
 - o BTEX.
 - o PAH.
 - o OCP.
 - o PCB.
 - o Phenols.
 - o Asbestos.
- Preparation of a Data Gap Investigation report (including a final waste classification) and an amendment to this RAP (if required).

8.2 Stage 01 Temporary Car Park

It is understood that the temporary car park will be removed following completion of Stage 01. The area should subsequently be assessed by the Environmental Consultant, either through visual inspection or, if deemed necessary, targeted sampling following its vacancy.

8.3 Stage 02 and 03

During the site investigation works for Douglas (2025), B(a)P, B(a)P TEQ and Total PAH was detected at concentrations above the HIL A criteria at test location BH7. Fill within Stages 02 and 03, with the exception of BH7, was provisionally classified as GSW (non-putrescible). Fill represented by sample BH7 / 0.1-0.2 was provisionally classified as hazardous waste (noting further assessment, including of the source of the PAH, may find that a different classification is more appropriate).

The final design of the building will consist of two enclosed buildings (already existing Centenary Hall (Stage 02) and new College Lane building (Stage 03)) with hardstand.

As such, additional intrusive investigation of fill within the Stages 02 and 03 development areas, prior to building alterations and redevelopment, is proposed to:

- Further characterise the fill, including determining the extent of PAH contamination.
- Assess the need for validation following removal, to either delineate waste classification categories and/or validate complete removal of contaminated fill.

The following scope of works is proposed:

- Excavate two additional test pits around BH7 to potentially delineate the extent of PAH contamination surrounding that test location. The proposed test pit locations are shown on attached Drawing 4, Appendix A.
- Excavate five additional test pits to allow inspection and further characterisation of the fill and natural soils. The proposed test pit locations are shown on attached Drawing 4, Appendix A.
- Sample the fill at the surface and then at every 0.5 m depth intervals or at signs of contamination (i.e. odours, staining and/or asbestos etc.), including a minimum of one sample from natural soils at each location. The test pits will be extended below any fill to a minimum 1.0 m into observed natural soil.
- For asbestos assessment, collect one approximate 10 L and one 500 mL sample from each location. Screen all 10 L asbestos samples for potential ACM.
- Analyse samples at a NATA accredited laboratory for the following potential contaminants of concern identified in the CSM (Table 1):
 - o Heavy metals.
 - o PFAS.
 - o TRH.
 - o BTEX.
 - o PAH.
 - o OCP.
 - o PCB.
 - o Phenols.
 - o Asbestos.
- Preparation of a Data Gap Investigation report and an amendment to this RAP (if required).

8.4 Stage 04

It is noted that Stage 04 was added to the scope of the PSI after the intrusive investigation for the PSI (Douglas, 2025) had been completed. No targeted test locations were placed within the Stage 04 development area; incidentally two borehole locations from Douglas (2025) were observed to be within the Stage 04 boundary and results were assessed for a preliminary screening. As such, additional intrusive investigation is recommended to meet the minimum sampling density requirements for site characterisation as per the NSW EPA sampling design guidelines. The development of Stage 04 comprises of new landscaping design.

Additional testing of fill within the Stage 04 development area, prior to landscaping works, is proposed to:

- Further characterise the fill.
- Assess the presence of contamination (if any) and advise on any remediation and validation if required.

The following scope of works is proposed:

- Excavate six additional test pits to allow inspection of the fill and natural soils. The proposed test pit locations are shown on attached Drawing 4, Appendix A.
- Sample the fill at the surface and then at every 0.5 m depth intervals or at signs of contamination (i.e. odours, staining and/or asbestos etc.), including a minimum of one sample from natural soils at each location. The test pits will be extended below any fill to a minimum 1.0 m into observed natural soil.
- For asbestos assessment, collect one approximate 10 L and one 500 mL sample from each location. Screen all 10 L asbestos samples for potential ACM.
- Analyse samples at a NATA accredited laboratory for the following potential contaminants of concern identified in the CSM (Table 1):
 - o Heavy metals.
 - o PFAS.
 - o TRH.
 - o BTEX.
 - o PAH.
 - o OCP.
 - o PCB.
 - o Phenols.
 - o Asbestos.
- Preparation of a Data Gap Investigation report and an amendment to this RAP (if required).

8.5 Stage 05

It is noted that Stage 05 was added to the scope of the PSI after the intrusive investigation for the PSI (Douglas, 2025) had been completed. As such, no test locations were located within the Stage 05 development area. An intrusive investigation is recommended to meet the minimum sampling density requirements for site characterisation as per the NSW EPA sampling design guidelines. The development comprises the construction of an enclosed building (Sevington Pavillion).

The following scope of works is proposed, post removal of temporary / demountable buildings:

- Excavate eight test pits to allow inspection of the fill and natural soils. The proposed test pit locations are shown on attached Drawing 4, Appendix A.
- Sample the fill at the surface and then at every 0.5 m depth intervals or at signs of contamination (i.e. odours, staining and/or asbestos etc.), including a minimum of one

sample from natural soils at each location. The test pits will be extended below any fill to a minimum 1.0 m into observed natural soil.

- For asbestos assessment, collect one approximate 10 L and one 500 mL sample from each location. Screen all 10 L asbestos samples for potential ACM.
- Analyse samples at a NATA accredited laboratory for the following potential contaminants of concern identified in the CSM (Table 1):
 - o Heavy metals.
 - o PFAS.
 - o TRH.
 - o BTEX.
 - o PAH.
 - o OCP.
 - o PCB.
 - o Phenols.
 - o Asbestos.
- Preparation of a Data Gap Investigation report and an amendment to this RAP (if required).

8.6 Stage 06

During the site investigation works for Douglas (2025), a fragment of fibre cement (confirmed by laboratory analysis to be ACM) was observed in BH1 at 0.15-0.25 m depth. Building debris, which can be indicative of asbestos contamination, was observed in fill across the Stage 06 development area in the completed boreholes. The development comprises an enclosed building with a basement level.

All fill within the Stage 06 development area is expected to be disposed of off-site as part of the basement excavation. The fill within Stage 06 was provisionally classified as Special Waste (asbestos) – GSW (non-putrescible) unless further testing using test pits or other bulk sampling methods allows delineation of asbestos.

As such, the following scope of works is proposed, post demolition and removal of hardstand:

- Excavate an additional fourteen test pits to allow inspection of the fill and natural soils, with test locations located radially around BH1 to determine the extent of asbestos contamination. The proposed test pit locations are shown on attached Drawing 4, Appendix A.
- Sample the fill at the surface and then at every 0.5 m depth intervals or at signs of contamination (i.e. odours, staining and/or asbestos etc.), including a minimum of one sample from natural soils at each location. The test pits will be extended below any fill to a minimum 1.0 m into observed natural soil.
- For asbestos assessment, collect one approximate 10 L and one 500 mL sample from each location. Screen all 10 L asbestos samples for potential ACM.

- Analyse samples at a NATA accredited laboratory for the following potential contaminants of concern identified in the CSM (Table 1):
 - o Heavy metals.
 - o PFAS.
 - o TRH.
 - o BTEX.
 - o PAH.
 - o OCP.
 - o PCB.
 - o Phenols.
 - o Asbestos.
- Preparation of a Data Gap Investigation report and an amendment to this RAP (if required).

9. Remediation extent

The extent of remediation for known / identified onsite contamination sources provisionally comprises (subject to the results of the Data Gap Investigation):

- Remediation Area 1: Hotspot of BaP (TEQ) impacted fill around BH16 (Stage 01).
- Remediation Area 2: Hotspot of BaP, BaP (TEQ) and PAH impacted fill around BH7 (Stage 02 and 03), noting that BH7 is outside the boundary of Stage 02, but may be indicative of similar fill within the adjoining part of Stage 02.
- Remediation Area 3: Asbestos contaminated fill across Stage 06 site (subject to delineation).

The approximate provisional extent of Remediation Areas 1, 2 and 3, based on an interpretation of the currently available borehole and sampling data are shown on Drawing 3, Appendix A. This is subject to change based on the results of the Data Gap Investigation. The actual extent (the final remediation extent) will be established at the completion of the data gap investigation and through excavation of the area during remediation.

An update of this RAP, or alternatively an addendum or remediation works plan (RWP) will be undertaken at the completion of the data gap investigation, the reporting form being dependent on the significance of the change to the remediation approach.

10. Remediation options assessment

The objective of the remediation options assessment and evaluation is to establish a preferred remediation strategy. The process involves canvassing various remediation options which may be viable and then ranking each option based on a number of evaluation criteria. The remediation options assessment was undertaken with reference to CRC CARE *Remediation Action Plan: Development - Guideline on Performing Remediation Options Assessment* (CRC CARE, 2019b).

The remediation options assessment is included in Appendix F.

11. Preferred remediation strategy

11.1 Rationale

The rationale for the selection of the preferred remediation strategy is outlined in Appendix F. The preferred option was selected in consultation with the client and was based on both technical considerations (as discussed herein), and other project specific considerations (such as program, cost, and consideration of ongoing liability implications). The preferred remediation strategy for all remediation areas is excavation and off-site disposal.

11.2 Sequence of remediation

The general sequence of remediation shall be determined by the Remediation Contractor with the aim of minimising the potential for cross contamination of 'clean' areas / soils with contaminated soils. This should include avoiding, wherever possible transporting or placing contaminated soil over 'clean' areas separating stockpiles of different origin / contamination profile and validating the complete removal of any contaminated material placed / potentially impacting 'clean' areas.

The general sequence of remediation should consider the following recommended sequence:

- Conduct a HAZMAT inspection prior to any demolition or significant alterations to the buildings, followed by the removal of HAZMAT from buildings or demolition of buildings and hardstand (where required). A clearance should be conducted by an occupational hygienist on completion of demolition works.
- Following demolition and removal of hardstand (where required), the Environmental Consultant is to complete the data gap investigation (DGI) and prepare a RAP addendum or amendment.
- Environmental Consultant to review the results of the DGI, and provide advice to Remediation Contractor to inform any required amendment to the remediation excavation extent and process.
- The Environmental Consultant is to complete a formal waste classification report for identified contaminated soils to be excavated and disposed off-site. On that basis the civil/remediation contractor will nominate a landfill facility capable of accepting the materials under the waste classifications provided [note that all surplus soils to be removed from site will also require a waste classification].
- The remediation contractor is to engage a qualified occupational hygienist to oversee the asbestos removal works (currently Stage 06). The hygienist will be given a copy of this RAP and will make a determination on the management and monitoring requirements including relevant licensing and controls.
- Remediation Contractor to excavate and dispose of fill off-site in accordance with the assigned waste classification(s). Fill of a higher classification (i.e. higher levels of contamination) is to be excavated prior to adjacent of fill of lower classification. The removal of the fill of higher classification is to be validated as complete prior to further excavation.

- If excavated material is placed into a stockpile, the Remediation Contractor will manage it in accordance with the site management plan (Appendix G), and any additional recommendations based on the results of the DGI.
- Environmental Consultant to collect validation samples (including quality control samples) from the resultant excavation in accordance with Section 13.
- Analysis of the validation and quality control samples at a NATA accredited laboratory for PAH, asbestos and any additional CoPC identified by the DGI where relevant.
- If validation samples results exceed the relevant thresholds (as below) of the surrounding soil / rock, further chase out excavation by the Remediation Contractor to the minimum extent advised by the Environmental Consultant:
 - o Where further excavation is proposed to achieve site levels, the relevant threshold will be based on the waste classification of the adjacent materials.
 - o Where no further excavation is proposed, the 'relevant threshold will be the SAC.
- Additional validation samples will be collected and analysed by the Environmental Consultant as above, until all results are within the relevant threshold.
- The occupational hygienist is to undertake a clearance inspection and produce a clearance report stating that no asbestos is observed in the resultant excavations (where asbestos works are undertaken).
- Inclusion of the results in the validation assessment report.

Roles and responsibilities are outlined in the site management plan (Appendix G).

12. Assessment criteria

12.1 Remediation acceptance criteria

The overarching remediation acceptance criterion (RAC) to be adopted for the project is for 'no unacceptable risks posed by the relevant media (i.e. soils, groundwater or soil vapour) to human health or the environment'.

The remediation works are to be validated as meeting the RAC by the Environmental Consultant by means of visual inspection, field screening, recovery and analysis of samples and review of any available plans as set out in this report.

In the absence of derivation of Tier 2 site specific target levels (SSTL), the (RAC) for contaminants in soil are the same as the Tier 1 SAC adopted for Douglas (2025), protective of human health and ecology. The SAC is attached in Appendix C.

The following table provides a summary of the RAC.

Table 5: Remediation acceptance criteria

Item	Remediation acceptance criteria
Remediation Area 1 Excavation and off-site disposal - BaP TEQ	Samples from the base and sides of the excavation must have a concentration of BaP TEQ of <3 mg/kg.
Remediation Area 2 Excavation and off-site disposal - BaP TEQ, BaP and PAH	Samples from the base and sides of the excavation must have a concentration of BaP <33 mg/kg, BaP TEQ of <3 mg/kg and total PAH of <300 mg/kg.
Remediation Area 3 Excavation and off-site disposal - Asbestos	Samples from the base and sides of the excavation must have a concentration <0.001 %w/w and no visible ACM should be observed. A clearance certificate from an occupational hygienist is required to confirm no visual / residual asbestos on the soil surface.
Data Gap Investigation results	All analysed samples to be below the adopted SAC analytically or statistically (as defined in Section 12.2 and Appendix D). The outcomes of the data gap investigation may identify other contaminants to be remediated and validated, to be documented in an updated version of the RAP.

12.2 Site assessment criteria

All samples analysed during the data gap investigation (Section 8) will be assessed against the SAC. The SAC are the same as the Tier 1 SAC adopted for Douglas (2025). This is on the provision that other considerations such as risks to groundwater are also taken into account. The broader list of contaminants and their SAC are included in Appendix D.

Additional area(s) of contamination encountered beyond those outlined in Section 9, if encountered during the course of the remediation and site redevelopment will be subject to the contingency plan or unexpected find protocol (Appendix H) and assessed using the SAC in Appendix D.

The adopted investigation and screening levels comprise levels for a generic residential with accessible soils land use scenario as an initial screen. The derivation of the SAC is included in Appendix D and the adopted SAC are listed in the summary analytical results tables in Appendix E.

The SAC are not RAC, and an exceedance of the SAC does not automatically trigger the need for remediation. Exceedances of the SAC will trigger the need for further assessment of risk by the Environmental Consultant to determine the need for remediation in accordance with NEPC (2013) and Appendix H.

13. Validation plan

13.1 Data quality objectives

The data quality objectives (DQO) for the validation plan are included in Appendix I.

13.2 Validation assessment requirements

The following site validation work will be required:

- Field assessment by the Environmental Consultant comprising:
 - o Visual inspection, including taking photographs for record purposes.
 - o Collecting validation samples from excavations resulting from the removal of contaminated soils, including contaminated soil stockpile footprints (if relevant).
 - o Collecting validation / characterisation samples for materials to be re-used on site.
- Laboratory analysis of validation samples at a NATA accredited laboratory for:
 - o The CoPC relevant to the remediation area.
 - o Quality control (QC) samples in accordance with Section 16.
- Comparison by the Environmental Consultant of the laboratory results with the SAC and/or RAC as appropriate (refer to Section 12).
- Preparation by the Environmental Consultant of a validation report detailing the methods and results of the remediation works and validation assessment.

13.3 Visual inspections

All areas to be assessed and validated will first be subject to a visual inspection by the Environmental Consultant. Any areas of fill / ACM / staining (as appropriate for the remediation) must be removed prior to validation sampling.

13.4 Validation sampling

The sampling frequency will depend on the volume or area to be assessed and the previous results. The following approximate sampling frequencies will be adopted but may be modified by the Environmental Consultant to take into account previous results, where applicable, and findings from the visual inspections.

Small to medium excavations (base <500 m²), for excavation of localised hotspots (if required):

- Base of excavation: one sample per 25 m² or part thereof, with a minimum of three samples where the base of the excavation is fill rather than natural soils. Where natural soils are exposed a reduced sampling frequency of one sample per 100 m² may be adopted at the discretion of the Environmental Consultant.
- Sides of excavation: one sample per 10 m to 20 m length or part thereof with a minimum of one sample per wall. Additional samples will be collected at depths of concern where there is more than one depth of concern, with a minimum of one sample per 1.5 m depth in fill.

Large excavations (base $\geq 500 \text{ m}^2$):

- Base of excavation: sampling on a grid at a density in accordance with Table 2 in NSW EPA (2022). In sub-areas with any specific signs of concern, a higher sampling density may be required.
- Sides of excavation: one sample per 20 m length or part thereof with a minimum of one sample per wall. Additional samples will be collected at depths of concern where there is more than one depth of concern, with a minimum of one sample per 1.5 m depth in fill.

Where contaminated soils are stored on bare soils, the footprint of the stockpile will require validation following removal of the contaminated soils, with a minimum of one sample per stockpile footprint.

Validation samples will be analysed by a NATA accredited laboratory for the relevant CoPC relevant to the remediation area.

Validation sample test results will be compared to the RAC, as per the DQO (Appendix I). Where the RAC are considered to have not been met, the remediation excavation(s) will be expanded to 'chase-out' impacted material, as advised by the Environmental Consultant, with the validation sampling then continuing into the extended excavation. This process will continue until all results are below the RAC.

In the event that contamination extends beyond site boundaries or in areas that can't be practically chased out (e.g. under buildings), validation samples will be taken at the limit of excavation. Notwithstanding that there may be residual contamination present.

Advice may need to be obtained from a qualified geotechnical or structural engineer regarding excavation and/or structure stability if excavations approach site boundaries and/or existing structures.

14. Waste disposal

Disposal of waste must be to an appropriately licensed waste facility, as per *Protection of the Environment Operations Act 1997* NSW (POEO Act) and the *Protection of the Environment (Waste) Regulation 2014* NSW.

Any waste disposed off-site must be initially classified by the Environmental Consultant in accordance with:

- NSW EPA *Waste Classification Guidelines, Part 1: Classifying Waste* (NSW EPA, 2014a).
- NSW EPA *Waste Classification Guidelines, Part 2: Immobilisation of Waste* (NSW EPA, 2014b).
- NSW EPA *Waste Classification Guidelines, Part 4: Acid Sulfate Soils* (NSW EPA, 2014c).
- NSW EPA *Addendum to the Waste Classification Guidelines (2014) - Part 1: Classifying Waste* (NSW EPA, 2016) [addendum for per- and poly-fluoroalkyl substances (PFAS)].

Samples will be collected from stockpiles / in situ fill at various depths to characterise the full depth of the material. The frequency is to be determined by the Environmental Consultant based on the volume of the stockpile, risk of contamination and heterogeneity of the material.

For stockpiles comprising similar materials and a:

- Volume up to 200 m³: a recommended frequency of typically one sample per 25 m³, with a minimum of three per stockpile (NSW EPA, 2022).
- Volume greater than 200 m³: a recommended frequency of one sample per 25 m³, with a minimum of 12 samples OR a minimum of 10 samples and calculation of the 95% upper confidence limit of the arithmetic mean for all applicable analytes (NSW EPA, 2022). Note that this does not apply to stockpiles impacted, or potentially impacted, by asbestos. For stockpiles greater than 200 m³ which are impacted, or potentially impacted, by asbestos the Environmental Consultant shall provide guidance in accordance with NSW EPA (2022).

Relevant in-situ data from the DGI or Douglas (2025) must be used as part of the waste classification data set, which will provide details on the source location, intent of stockpile use and an indicative volume / tonnage of waste to be disposed of or re-used on-site.

It may be possible to classify excavated soil / fill for reuse on another site under a relevant NSW EPA resource recovery order (RRO) so that it can be used on other sites under the requirements of the corresponding NSW EPA resource recovery exemption (RRE). For this option, the frequency of sampling should be in accordance with the relevant RRO and the contaminants to be analysed will be determined by the Environmental Consultant. The Environmental Consultant will provide a report confirming the suitability of the spoil for reuse under a RRO, or otherwise.

All waste must be tracked by the Remediation Contractor from 'cradle to grave'. Copies of all consignment notes / disposal dockets (or similar), transporter, transporter license and environment protection licences for receipt and disposal of the materials must be maintained by the Remediation Contractor as part of the site log and must be provided to the Environmental Consultant for inclusion in the validation report.

15. Imported material

Any soil, aggregate, and landscaping products imported for the remediation, civil and landscaping works must have contaminant concentrations that meet the relevant criteria outlined in Section 12. Imported materials will only be accepted for use at the site if:

- It can legally be accepted onto the site (e.g. classified as virgin excavated natural material (VENM), quarried, or complying with a Resource Recovery Order) accompanied by a report / certificate prepared by a qualified environmental consultant, or supplier as may be the case.
- Visual inspection of the imported material confirms that the material has no signs of concern and is consistent with those described in the supporting classification documentation.
- It has no aesthetic issues of concern.
- The materials are validated (by inspection / sampling) by the Environmental Consultant as being suitable for use at the site.

The classification report / certificate / letters for all material proposed for import must be reviewed and approved in writing by the Environmental Consultant prior to import. Materials to be imported may need to meet geotechnical requirements which are to be assessed by others, as required.

If permitted by the development consent and approved by the site owner, Remediation Contractor, Environmental Consultant and Site Auditor, material classified under a NSW EPA RRO may also be accepted, provided the material can be used on site in accordance with the corresponding RRE. This could include excavated natural material (ENM), classified under NSW EPA *Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014, The excavated natural material order 2014* (NSW EPA, 2014d).

The need for check-sampling of VENM and/or RRO material is to be determined by the Environmental Consultant depending on the source of the material, adequacy of the supporting documentation provided and inspection(s) of material. Quarried material / VENM may need little or no check sampling. Typically, materials classifying as VENM, or natural quarried products will be subject to inspection on site, with little or no check sampling required. ENM, recycled and blended materials will be subject to increased scrutiny, including a minimum of three check samples per product, per source, at the discretion of the Environmental Consultant. The frequency of check sampling will be based on the nature of the product, the volume to be imported, the quality and completeness of documentation provided, and the quantity of product being imported.

All imported material information required for site validation is listed in Section 18.1.

16. Quality assurance and quality control

Field quality assurance and quality control (QA/QC) testing will include the following:

- 10% sample intra-laboratory analysis, analysed for the same suite as primary sample.
- Rinsate samples (where re-useable sampling equipment is used), analysed for the suite of analytes analysed by the majority of the primary samples.
- Trip spike and trip blank samples (analysed for BTEX) (approximately one per batch of samples where volatile contaminants are CoPC).

The laboratory will undertake analysis in accordance with its NATA accreditation, including in-house QA/QC procedures:

- The QC analytical results will be assessed using the following criteria:
 - o Sampling location rationale met the sampling objective.
 - o Standard operating procedures (SOP) are followed.
 - o Appropriate QA/QC samples are collected / prepared and analysed.
 - o Samples are stored under secure, temperature-controlled conditions.
 - o Chain of custody documentation is employed for the handling, transport and delivery of samples to the selected laboratory.
 - o Conformance with specified holding times.

- o Accuracy of spiked samples within the laboratory's acceptable range (typically 70-130% for inorganic contaminants and greater for some organic contaminants).
- o Field and laboratory duplicate, and replicate samples will have a precision average of +/- 30% relative percentage difference (RPD).

17. Management and responsibilities

17.1 Site management plan

A general site management plan for the operational phase of site remediation is included in Appendix G. The management plan includes soil, noise, dust, work health safety (WHS), remediation schedule, hours of operation and incident response. The Remediation Contractor is to implement the general site management plan for the duration of remediation works by incorporating the plan into their over-arching construction environmental management plan (CEMP).

17.2 Site responsibilities

The site management plan (Appendix G) provides a summary of the general program management and associated responsibilities. Contact details for key utilities are also included in the event of needing to respond to any incidents.

17.3 Contingency plan and unexpected finds protocol

Plans for contingency situations (e.g. encountering asbestos in fill), along with an unexpected finds protocol for dealing with unexpected finds during remediation work / earthworks, are included in Appendix H.

18. Validation reporting

18.1 Documentation

The following documents will need to be collated and reviewed by the Environmental Consultant as part of the validation assessment (including those items that are prepared by the Environmental Consultant):

- Any licences and approvals required for the remediation works (Remediation Contractor).
- Waste classification report(s) (Environmental Consultant).
- Transportation Record: comprising a record of all truckloads of soil (including aggregate) entering the site, including truck identification (e.g. registration number), date, time, source site, load characteristics (e.g. type of material, i.e. quarried aggregate, etc.), approximate volume, use (e.g. general site raising, service trenches, etc.) (Remediation Contractor).
- Disposal dockets: for any soil disposed off-site including transportation records, spoil source, spoil disposal location, receipt provided by the receiving waste facility / site (Remediation Contractor). Note: A record of the building materials disposed off-site is also to be kept and provided to the Principal, on request.

- Reconciliation of waste disposal including review of disposal dockets and comments on disposal / mass balance (reconciliation) in accordance with the relevant waste classification report(s).
- Imported materials records: records for any soil imported onto the site, including source site, classification reports, inspection records of soil upon receipt at site, transportation records, quantities (Remediation Contractor), check sampling results and approvals (Environmental Consultant), supplier details, transporter details, location and depth of placement.
- Records relating to any unexpected finds and contingency plans implemented (Remediation Contractor).
- Laboratory certificates and chain-of-custody documentation.
- Inspections records from the Environmental Consultant.
- Photographic records by all contractors and consultants of the works undertaken within their purview of responsibilities (Remediation Contractor).
- Airborne asbestos monitoring records (in the event that asbestos works are undertaken) (Remediation Contractor).
- Interim / final visual and sampling clearances for any asbestos related works (in the event that asbestos works are undertaken) (Remediation Contractor).

18.2 Reporting

A validation assessment report will be prepared by the Environmental Consultant in accordance with NSW EPA (2020).

The validation report shall describe the remediation approach adopted, methodology, results and conclusion of the assessment and make a statement regarding the suitability of the site for the proposed development (educational).

19. Conclusions

It is considered that the site can be made suitable for the proposed development subject to implementation of this RAP.

It is also considered that conformance with this RAP will minimise the potential for environmental, public and worker health impacts during the remediation works at the site.

The remediation works undertaken will need to be documented in validation reports.

An update of this RAP, or alternatively an addendum or remediation works plan (RWP) will be undertaken at the completion of the data gap investigation (Section 8), the reporting form being dependent on the significance of the change to the remediation approach. Noting the proposed staging of the works, in the event of any changes to relevant EPA endorsed guidelines or Regulations, there may need to be additional changes or addenda to the RAP to capture those changes.

20. References

CRC CARE. (2019a). *Remediation Action Plan: Development - Guideline on Establishing Remediation Objectives*. National Remediation Framework: CRC for Contamination Assessment and Remediation of the Environment.

CRC CARE. (2019b). *Remediation Action Plan: Development - Guideline on Performing Remediation Options Assessment*. National Remediation Framework: CRC for Contamination Assessment and Remediation of the Environment.

Douglas. (2026). *Report on Preliminary Site (Contamination) Investigation with Limited Sampling, Concept and Stage 1 - Redevelopment of Newington College, 200-244 and 221-235 Stanmore Road, Stanmore NSW*. report reference: 234875.01.R.001.Rev5, dated April 2026.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]*. Australian Government Publishing Services Canberra: National Environment Protection Council.

NSW EPA. (2014a). *Waste Classification Guidelines, Part 1: Classifying Waste*. NSW Environment Protection Authority.

NSW EPA. (2014b). *Waste Classification Guidelines, Part 2: Immobilisation of Waste*. NSW Environment Protection Authority.

NSW EPA. (2014c). *Waste Classification Guidelines, Part 4: Acid Sulfate Soils*. NSW Environment Protection Authority.

NSW EPA. (2014d). *Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014, The excavated natural material order 2014*. NSW Environment Protection Authority.

NSW EPA. (2016). *Addendum to the Waste Classification Guidelines (2014) - Part 1: Classifying Waste*. NSW Environment Protection Authority.

NSW EPA. (2020). *Guidelines for Consultants Reporting on Contaminated Land*. Contaminated Land Guidelines: NSW Environment Protection Authority.

NSW EPA. (2022). *Sampling Design, Part 1: Application; Part 2: Interpretation*. NSW Environment Protection Authority.

21. Limitations

Douglas Partners Pty Ltd (Douglas) has prepared this report (or services) for this project at 200-244 and 221-235 Stanmore Road, Stanmore NSW in line with Douglas' proposal dated 11 September 2025 and acceptance received from Ross Xenos of Newington College, c/o AJC. The work was carried out under Douglas' Engagement Terms. This report is provided for the exclusive use of Newington College, c/o AJC for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of Douglas, does so entirely at its own risk and without recourse to Douglas for any loss or damage. In preparing this report Douglas has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after Douglas' field testing has been completed.

Douglas' advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by Douglas in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

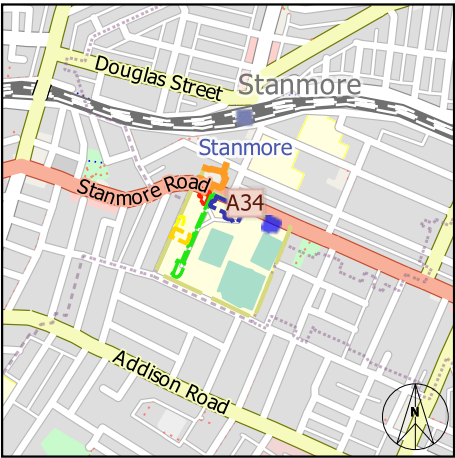
The assessment of atypical safety hazards arising from this advice is restricted to the environmental components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. Douglas cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by Douglas. This is because this report has been written as advice and opinion rather than instructions for construction.

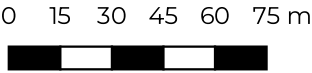
Appendix A

Drawings



SITE LOCATION

- LEGEND
- Newington College Boundary
 - Stage 01
 - Stage 01 Temporary Car Park
 - Stage 02
 - Stage 03
 - Stage 04
 - Stage 05
 - Stage 06

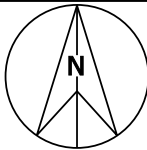


NOTE:
1. Drawing projection in GDA2020 / MGA zone 56, adapted from aerial imagery from metromap.com dated 24.04.2026

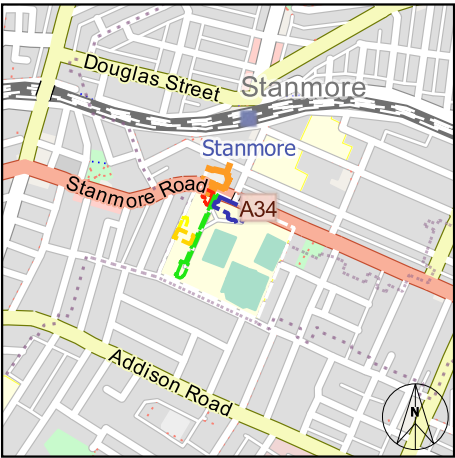


CLIENT: Council of Newington College, c/o AJC	
OFFICE: Sydney	DRAWN BY: CL
SCALE: 1:2200 @A3	DATE: 24.April.2026

TITLE: **Site Plan**
Concept and Stage 1 - Redevelopment of Newington College
221-235 and 200-244 Stanmore Road, Stanmore NSW



PROJECT:	234875.01
DRAWING No:	1
REVISION:	4



SITE LOCATION

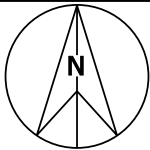
- LEGEND
- Newington College Boundary
 - Stage 01
 - Stage 1 Temporary Car Park
 - Stage 02
 - Stage 03
 - Stage 04
 - Stage 05
 - Stage 06
- Test Location
- Borehole Location
 - Borehole / Groundwater Well

NOTE:
1. Drawing projection in GDA2020 / MGA zone 56, adapted from aerial imagery from metromap.com dated 24.04.2026
2. Test locations are approximate only and were located using differential GPS typically accurate to +/- 0.1 m depending on satellite coverage

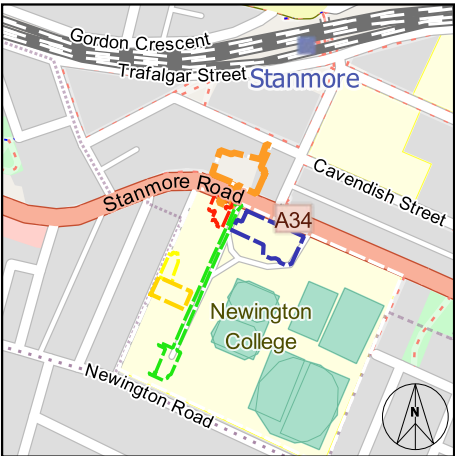


CLIENT: Council of Newington College, c/o AJC
OFFICE: Sydney DRAWN BY: CL
SCALE: 1:2200 @A3 DATE: 24.April.2026

TITLE: **Site and Test Location Plan**
Concept and Stage 1 - Redevelopment of Newington College
221-235 and 200-244 Stanmore Road, Stanmore NSW



PROJECT: 234875.01
DRAWING No: 2
REVISION: 2



SITE LOCATION

LEGEND

- Newington College Boundary
- Stage 01
- Stage 02
- Stage 03
- Stage 04
- Stage 05
- Stage 06
- Remediation Areas
- Borehole locations (with exceedances)

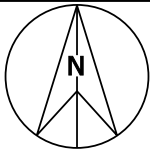
NOTE:
1. Drawing projection in GDA2020 / MGA zone 56, adapted from aerial imagery from metromap.com dated 17.09.2025



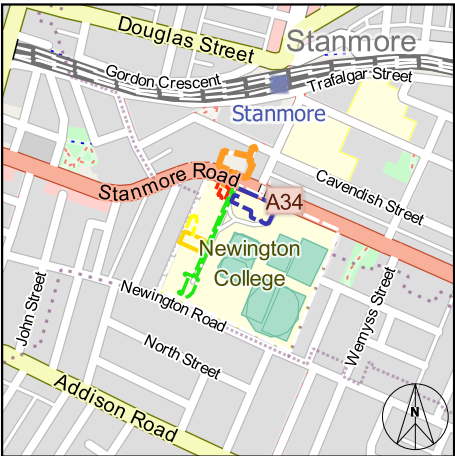
CLIENT: Council of Newington College, c/o AJC
OFFICE: Sydney DRAWN BY: IR
SCALE: 1:1050 @A3 DATE: 24.April.2026

TITLE:

**Indicative Remediation Extent (subject to change following Data Gap Investigation)
Concept and Stage 1 - Redevelopment of Newington College
221-235 and 200-244 Stanmore Road, Stanmore NSW**



PROJECT: 234875.01
DRAWING No: 3
REVISION: 1

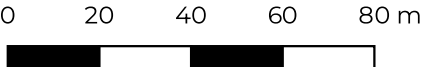


SITE LOCATION

LEGEND

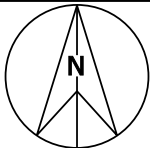
- Newington College Boundary
- Stage 01
- Stage 1 Temporary Car Park
- Stage 02
- Stage 03
- Stage 04
- Stage 05
- Stage 06
- Proposed test locations (General site characterization)
- Proposed test locations (delineation test pits)
- Existing test locations
 - Cored Borehole (2025)
 - Auger Borehole (2025)

NOTE:
1. Drawing projection in GDA2020 / MGA zone 56, adapted from aerial imagery from metromap.com dated 17.09.2025



CLIENT: Council of Newington College, c/o AJC	
OFFICE: Sydney	DRAWN BY: IR
SCALE: 1:1650 @A3	DATE: 24.April.2026

TITLE: **Proposed test locations (Data Gap Investigation)**
Concept and Stage 1 - Redevelopment of Newington College
221-235 and 200-244 Stanmore Road, Stanmore NSW



PROJECT:	234875.01
DRAWING No:	4
REVISION:	1

Appendix B

About this Report

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at

the time of construction as are indicated in the report; and

- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

continued next page

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

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Appendix C

Borehole Logs from Previous Report [Douglas, 2025]

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 37.0 AHD
COORDINATE: E:330108.2, N:6247863.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH01
PROJECT No: 234875.00
DATE: 02/04/25 - 04/04/25
SHEET: 1 of 2

[illegible]

PLANT: Comacchio 205

OPERATOR: Groundtest (J.Johnson)

LOGGED: E.MIERS

METHOD: HA to 0.35m, then WB to 7.3m, then NMLC to 11.73m

CASING: HW to 1.5m

REMARKS: Surface Level estimated from survey. * BD3/20250402 taken from 0.25-0.3m

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Newington Masterplan
LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 37.0 AHD
COORDINATE: E:330108.2, N:6247863.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH01
PROJECT No: 234875.00
DATE: 02/04/25 - 04/04/25
SHEET: 2 of 2

[illegible]

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK	DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
12/15/2005	DEPOSIT	100.00		WELLS FARGO	12/15/2005	DEPOSIT	100.00		WELLS FARGO
12/16/2005	PAYROLL	50.00	101	WELLS FARGO	12/16/2005	PAYROLL	50.00	101	WELLS FARGO
12/17/2005	RENT	200.00	102	WELLS FARGO	12/17/2005	RENT	200.00	102	WELLS FARGO
12/18/2005	UTILITIES	75.00	103	WELLS FARGO	12/18/2005	UTILITIES	75.00	103	WELLS FARGO
12/19/2005	SALES	150.00	104	WELLS FARGO	12/19/2005	SALES	150.00	104	WELLS FARGO
12/20/2005	INVENTORY	30.00	105	WELLS FARGO	12/20/2005	INVENTORY	30.00	105	WELLS FARGO
12/21/2005	ADVERTISING	120.00	106	WELLS FARGO	12/21/2005	ADVERTISING	120.00	106	WELLS FARGO
12/22/2005	TRAVEL	80.00	107	WELLS FARGO	12/22/2005	TRAVEL	80.00	107	WELLS FARGO
12/23/2005	TELEPHONE	40.00	108	WELLS FARGO	12/23/2005	TELEPHONE	40.00	108	WELLS FARGO
12/24/2005	INSURANCE	60.00	109	WELLS FARGO	12/24/2005	INSURANCE	60.00	109	WELLS FARGO
12/25/2005	COMMISSIONS	90.00	110	WELLS FARGO	12/25/2005	COMMISSIONS	90.00	110	WELLS FARGO
12/26/2005	DEPOSIT	100.00		WELLS FARGO	12/26/2005	DEPOSIT	100.00		WELLS FARGO
12/27/2005	PAYROLL	50.00	111	WELLS FARGO	12/27/2005	PAYROLL	50.00	111	WELLS FARGO
12/28/2005	RENT	200.00	112	WELLS FARGO	12/28/2005	RENT	200.00	112	WELLS FARGO
12/29/2005	UTILITIES	75.00	113	WELLS FARGO	12/29/2005	UTILITIES	75.00	113	WELLS FARGO
12/30/2005	SALES	150.00	114	WELLS FARGO	12/30/2005	SALES	150.00	114	WELLS FARGO
12/31/2005	INVENTORY	30.00	115	WELLS FARGO	12/31/2005	INVENTORY	30.00	115	WELLS FARGO

PLANT: Comacchio 205 **OPERATOR:** Groundtest (J.Johnson)
METHOD: HA to 0.35m, then WB to 7.3m, then NMLC to 11.73m
REMARKS: Surface Level estimated from survey. * BD3/20250402 taken from 0.25-0.3m

LOGGED: E.MIERS
CASING: HW to 1.5m



CORE PHOTO LOG

CLIENT: Newington College

PROJECT: Newington Masterplan

LOCATION: 244 Stanmore Road, Stanmore, Sydney, NSW 2048

SURFACE LEVEL: 37.0 AHD

COORDINATE: E:330108.2, N:6247863.8

DATUM/GRID: MGA2020 Zone 56

DIP/AZIMUTH: 90°/---°

LOCATION ID: BH01

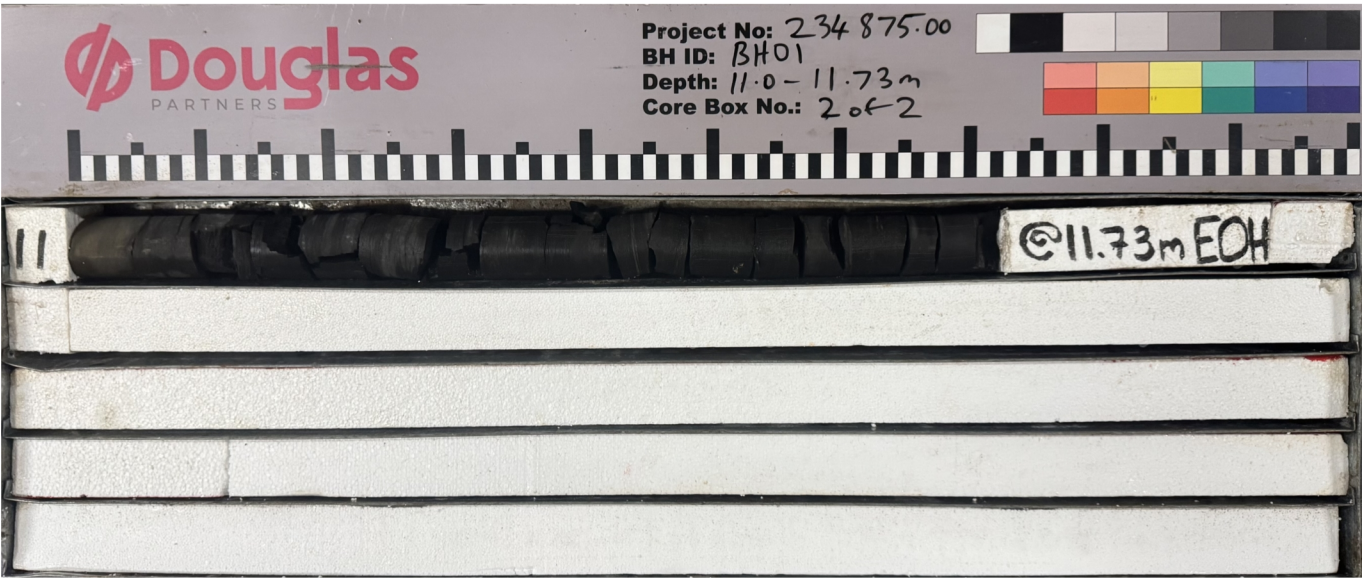
PROJECT No: 234875.00

DATE: 02/04/25 - 04/04/25

SHEET: 1 of 1



7.30-11.00 m depth



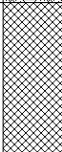
11.00-11.73 m depth

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Masterplan and Concept Stage 1 SSDA
LOCATION: 244 Stanmore Road, Stanmore NSW

SURFACE LEVEL: 36.9 AHD
COORDINATE: E:330109.4, N:6247836.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH02
PROJECT No: 234875.01
DATE: 02/04/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED														SAMPLE			TESTING AND REMARKS				
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. ^(*)	DENSITY. ^(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS							
02/04/25 No free groundwater observed		0.13	CONCRETE; 130mm thick.					NA													
		0.23	FILL / Sandy CLAY trace cobbles: light brown; concrete cobbles.		FILL	ND				ES		0.13	PID	<1ppm							
		0.23	CLAY (CL): light brown; light grey; medium to high plasticity.		RS			w<PL		ES		0.23	PID	<1ppm							
Borehole discontinued at 0.35m depth. Hand auger refusal on very stiff clay.																0.25					
																0.35					

NOTES: #Soil origin is "probable" unless otherwise stated. °Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand Tools
METHOD: DT to 0.13m, HA to 0.35m
REMARKS:

OPERATOR: (DK)
LOGGED: DK
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions



BOREHOLE LOG

CLIENT: Newington College
PROJECT: Masterplan and Concept Stage 1 SSDA
LOCATION: 244 Stanmore Road, Stanmore NSW

SURFACE LEVEL: 38.3 AHD
COORDINATE: E:330147.6, N:6247824.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH03
PROJECT No: 234875.01
DATE: 02/04/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED										SAMPLE		TESTING AND REMARKS		
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. ⁽¹⁾	DENSITY. ⁽²⁾	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
02/04/25 No free groundwater observed		0.05	ASPHALT.											
	38	0.30	Roadbase: Gravelly SAND; fine to medium, roadbase; fine to medium, igneous gravel with bitumen gravel.		FILL			D		ES	0.20 0.30	PID	<1ppm	
			FILL / SAND with gravel trace concrete fragments, terracota, tiles and bricks: light brown; fine to medium; igneous and sandstone gravel.							ES	0.40 0.50	PID	<1ppm	
	1				FILL			M		ES	1.00 1.10	PID	<1ppm	
	37									ES	1.50 1.70	PID	<1ppm	
	1.70		FILL / Sandy CLAY with gravel trace terracota, tiles and bricks: brown to reddish brown; low plasticity; fine to coarse, sandstone and concrete gravel.				ND			ES	1.80 1.90	PID	<1ppm	
	2				FILL					ES	2.40 2.60	PID	<1ppm	
	36							w<PL						
	2.80		CLAY (CL) trace gravel: reddish brown with light orange and light grey; medium to high plasticity; ironstone gravel.		RS					ES	3.00 3.20	PID	<1ppm	
	35													
Borehole discontinued at 3.30m depth. Target depth reached.														
						</								

NOTES: #Soil origin is "probable" unless otherwise stated. °Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Drillman GT-10
METHOD: SAF Auger to 3.3m
REMARKS: BDI/20250402 collected from 1-1.1m

OPERATOR: Ground Test

LOGGED: DK
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Newington College
PROJECT: Masterplan and Concept Stage 1 SSDA
LOCATION: 244 Stanmore Road, Stanmore NSW

SURFACE LEVEL: 38.3 AHD
COORDINATE: E:330154.1, N:6247836.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH04
PROJECT No: 234875.01
DATE: 02/04/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED										SAMPLE			TESTING AND REMARKS	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. ^(*) DENSITY: ^(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	
02/04/25 No free groundwater observed	36	0.05	ASPHALT.											
		0.30	Roadbase: Gravelly SAND; fine to medium, roadbase; igneous gravel with bitumen gravel.		FILL	ND	M							
			FILL / SAND with gravel trace concrete fragments, terracota, tiles and bricks: light brown; fine to medium; igneous and sandstone gravel.		FILL				ES	0.40 0.60	PID	<1ppm		
		1			FILL				ES	1.10 1.20	PID	<1ppm		
		1.50	FILL / Sandy CLAY with gravel trace terracota, tiles and bricks: brown to dark grey-brown; low plasticity; fine to coarse, sandstone and concrete gravel.		FILL				ES	1.50 1.70	PID	<1ppm		
		1.70	CLAY (CL) trace gravel: reddish brown with hint of orange and light grey; medium to high plasticity; ironstone gravel.		RS				ES	1.80 2.00	PID	<1ppm		
		2	Borehole discontinued at 2.00m depth. Target depth reached.											

NOTES: ^(*) Soil origin is "probable" unless otherwise stated. ^(*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

Generated with CORE-GS by Geroc - Soil Log

PLANT: Drillman GT-10
METHOD: SAF Auger to 2m
REMARKS: BDI/20250402 collected from 0.40 to 0.60m

OPERATOR: Ground test

LOGGED: DK
CASING: Uncased