Douglas PARTNERS

GROUNDED EXPERTISE

Remediation Action Plan

Tamworth Regional Aquatic Centre

Jack Smyth Drive, Hillvue NSW

Prepared for Tamworth Regional Council

Project 226965.01

4 March 2025

Douglas Partners Pty Ltd
ABN 75 053 980 117
douglaspartners.com.au
15 Callistemon Close, Warabrook,
NSW 2304
(02) 4960 9600

Document History

Details

Project No.	226965.01
Document Title	Remediation Action Plan
Site Address	Jack Smyth Drive, Hillvue NSW
Report Prepared For	Tamworth Regional Council
Filename	226965.01.R.002.Rev0

Status and Review

Status	Prepared by	Reviewed by	Date issued
Revision 0	Sarah Krebs / Patrick Heads	Chris Bozinovski	4 March 2025

Distribution of Copies

Status	Issued to
Revision 0	Tamworth Regional Council

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	Patrick Heads	4 March 2025
Reviewer	C. Bozinovski CEnvP (SC41163)	4 March 2025

Douglas Partners acknowledges Australia's First Peoples as the Traditional Owners of the Land and Sea on which we operate. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islander peoples across the many communities in which we live, visit and work. We recognise and respect their ongoing cultural and spiritual connection to Country.

Executive Summary

Douglas Partners Pty Ltd (Douglas) has prepared this Remediation Action Plan (RAP) for the proposed Tamworth Regional Aquatic Centre at Jack Smyth Drive, Hillvue NSW. The RAP was commissioned by Callum Fletcher of Tamworth Regional Council (TRC).

Douglas has previous conducted a geotechnical investigation, preliminary site investigation (PSI) and detailed site investigation (DSI) at the site for the proposed aquatic centre. The results of the previous investigations indicated the presence of extensive fill across the site. The results of contamination testing within the fill indicated the general absence of gross contamination at the test locations, with chemical contaminant concentrations within the adopted health-based assessment criteria for a recreational site use. Localised asbestos containing materials, in the form of fibre cement pipe (approximately 100-200 mm diameter) was encountered at three locations within the site.

The objectives of the remediation are to address potentially unacceptable risks to relevant human health and environmental values from contamination and to render the site suitable, from a contamination perspective, for the proposed development. For this site, remediation of the identified localised asbestos impacts will be required. The preferred remediation option is for excavation and disposal of asbestos-impacted fill and validation of the remaining soils.

The remediation works will generally comprise the following:

- Engagement of an appropriately licensed contractor;
- Application to SafeWork NSW;
- Inception meeting between the contractor, client and remediation consultant;
- Excavation of the localised asbestos-impacted fill under full time inspection;
- Waste classification of the impacted soils for disposal to an appropriately licensed landfill;
- Validation of the excavations by the remediation consultant;
- Preparation of a validation report for the remediation of impacted soils;
- Completion of earthworks and construction under an unexpected finds protocol.

It should be noted that this RAP does not form a detailed specification for the proposed site remediation works, but rather represents a planning document which outlines the means by which site remediation can be achieved.

Table of Contents

Page No

1. Introduction 1
2. Proposed development 2
3. Scope of work 2
4. Site description 3
5. Environmental setting 5
6. Summary of previous investigations 7
   - 6.1 Preliminary site investigation (Douglas, 2024) 7
   - 6.2 Detailed site investigation (Douglas, 2025) 7
7. Conceptual site model 8
8. Remediation extent 10
9. Remediation options assessment 11
10. Preferred remediation strategy 11
    - 10.1 Rationale 11
    - 10.2 Sequence of remediation 12
11. Assessment criteria 12
    - 11.1 Remediation acceptance criteria 12
    - 11.2 Site assessment criteria 13
12. Validation plan 13
    - 12.1 Data quality objectives 13
    - 12.2 Validation assessment requirements 14
    - 12.3 Visual inspections 14
    - 12.4 Validation sampling 14
13. Waste disposal 15
14. Quality assurance and quality control 16
15. Management and responsibilities 17
    - 15.1 Site management plan 17
    - 15.2 Site responsibilities 17
    - 15.3 Contingency plan and unexpected finds protocol 17
16. Validation reporting 17
    - 16.1 Documentation 17

16.2 Reporting 18
17. Conclusions 18
18. References 18
19. Limitations 19

Appendix A: Drawings

Drawing 1 – Test Location Plan

Proposed Development Plans (CO.OP ref 100358)

Appendix B: About this Report

Appendix C: Tabulated Summary Results from Previous Report(s)

Appendix D: Borehole and Test Pit Logs from Previous Report(s)

Appendix E: Remediation Options Assessment and Evaluation

Appendix F: Site Assessment Criteria

Appendix G: Data Quality Objectives

Appendix H: Site Management Plan

Appendix I: Contingency Plan and Unexpected Finds Protocol

Remediation Action Plan
Tamworth Regional Aquatic Centre
Jack Smyth Drive, Hillvue NSW

1. Introduction

Douglas Partners Pty Ltd (Douglas) has prepared this Remediation Action Plan (RAP) for the proposed Tamworth Regional Aquatic Centre at Jack Smyth Drive, Hillvue NSW. The RAP was commissioned by Callum Fletcher of Tamworth Regional Council (TRC) and was undertaken in line with Douglas' proposal 226965.01.P.001.Rev0 dated 15 July 2024.

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); and
- CRC CARE Remediation Action Plan: Development - Guideline on Establishing Remediation Objectives (CRC CARE, 2019a).

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

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

This RAP provides details of the work that will be required at the site to meet the remediation objectives. The requirement for remediation was based on the results of assessment by Douglas as follows:

- Douglas Partners, Report on Preliminary Site Investigation, proposed Tamworth Aquatic Centre, Jack Smyth Drive, Hillvue (Douglas, 2024).

Douglas Partners, Report on Detailed Site Investigation, proposed Tamworth Aquatic Centre, Jack Smyth Drive, Hillvue (Douglas, 2025).The proposed development will cover an area of approximately 24,000 m^2 with a building footprint of 6,500 m2 and 7,000 m^2 of flexible pavement. The proposed development plans are included in Appendix A.

This RAP presents the procedures and plans which provide the means by which site remediation can be achieved. The Remediation Contractor must base their detailed work methodologies around the requirements of this RAP.

The site layout is shown on Drawing 1, Appendix A. This report must be read in conjunction with all appendices including the notes provided in Appendix A.

2. Proposed development

We understand that TRC propose to construct a new Tamworth Regional Aquatic Centre (TRAC) and Northern Inland Centre of Sport and Health (NICSH) facility at the site. The proposed development will cover an area of approximately 24,000 m^2 with a building footprint of 6,500 m^2 and 7,000 m^2 of flexible pavement.

The supplied sections for the proposed development (CO.OP ref 100358) included in Appendix A, indicate that minimal cut or fill is proposed for the development, with the exception of excavations for pool structures and associated infrastructure (i.e. pumps, pipes etc) up to approximately 2.5 m depth, together with likely shallow excavations for building footings and other services.

It is likely that surplus material will be generated from the excavation of the pool structures and associated infrastructure, however, the total volume of materials was not known whilst preparing this RAP. Discussions with the client suggested that surplus materials would be maintained within the greater lot area, subject to suitability, and placed to the west of the proposed development.

We understand from the supplied client drawings, which are included in Appendix A with an overlay of the ground floor plan shown on Drawing 1, that the following features are proposed for the development:

- TRAC facilities:
  - Ten Lane 50 m indoor pool including spectator seating;
  - Warm water pool, spa and sauna;
  - Change rooms and amenities including wet and dry areas;
  - Administration, offices, store, dry plant rooms and café;
  - Leisure pool with water play and learn to swim (Stage 2 Extension);
  - 50 m outdoor swimming pool (Stage 3 Extension);
- NICSH facilities:
  - Administration, office, teaching and study spaces;
  - Testing lab and dry amenities;
  - Strength and conditions gym (Stage 2 Extension); and
  - Sprint track (Stage 2 Extension).

3. Scope of work

The scope of work to achieve the objectives of the RAP was as follows:

- Summarise the findings of previous investigations used to inform the status of contamination and contamination risk at the site;

- Present the conceptual site model (CSM) from the previous investigation (Douglas, 2025) listing potential and likely contamination source, pathway and receptor linkages to address potentially unacceptable risks to human health and relevant environmental values from contamination;
- Define the anticipated extent of remediation;
- Assess, select and justify a preferred approach to management and/or remediation 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;
- Select an appropriate remediation strategy 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 demonstrated / validated;
- Outline waste classification, handling and tracking requirements for soils to be disposed/managed;
- Outline environmental safeguards required to complete the remediation works;
- Include contingency plans and an unexpected finds protocol; and
- Identify the need for, and nature of, any long-term management and/or monitoring following the completion of management / remediation and, if required, provide an outline of an environmental management plan.

4. Site description

Site address	Jack Smyth Drive, Hillvue NSW
Legal description	Part Lot 102 Deposited Plan 1262475
Approximate Area	24,000 m^2
Zoning	Tourist (SP3)
Local Council Area	Tamworth Regional Council (TRC)
Current use	Vacant
Surrounding uses	North – Recreational (golf course), commercial and residential East – Recreational (hockey fields) South – Recreational (sporting facilities indoor and outdoor) West – Recreational (golf course), vacant land

The approximate site extent/development area is shown on Figure 1.

Figure 1: Approximate site extent, shown in red

5. Environmental setting

Regional topography	The general topography of the surrounding Hillvue and Tamworth area typically comprises generally flat areas around Relative Level (RL) 400 m relative to Australian height datum (AHD). Elevated mountain areas are located approximately 5 km to 10 km to the north-east and east of the site
Site topography	The investigation area is relatively flat with a drainage gully up to 1 m depth bisecting the centre of the investigation area. Based on the supplied site contour plan and survey results of test locations the investigation area had surface levels of approximately 409 m AHD along the northern boundary to approximately 411 m AHD along the southern boundary. Along the northern part of the investigation area is a batter of approximately 2 m in height which slopes down to the north at approximately 20°.
Soil Landscape	Reference to the Tamworth 1:100,000 scale Soil Landscape Sheet indicates the site is located within Residual soils of the Duri landscape, which is characterised by "extensive rolling to undulating hills and low hills. Slopes <10%". Limitations for this soil landscape include gully erosion risk, sheet erosion risk, localised low wet bearing strength, localised dryland salinity, localised sodicity, localised shallow soils and localised poor drainage, localised permanently high watertables, localised known discharge and recharge areas, localised high run-on. It is noted, however, that fill has been placed over the natural soils within the site.
Geology	Reference to the NSW Seamless Geology dataset made available by the NSW Government Department of Regional New South Wales, indicates that the site is likely to be underlain by either Mandowa Mudstone (purple shading) which typically comprises mudstone with thin siltstone and fine sandstone bands. The site is also mapped within close proximity to areas comprising Keepit Conglomerate (grey shading, which typically comprises conglomerate and sandstone) and Noumea Beds (brown shading, which typically comprises wacke, siltstone and mudstone). A review of NCCA naturally occurring asbestos (NOA) mapping indicates the site is not within a mapped risk area of containing geological units of naturally occurring asbestos.
Acid Sulfate Soils	Reference to the NSW Acid Sulfate Soil Risk Map indicates the site is not located within an area of known potential for acid sulfate soils.
Surface water	The site contained a drainage gully that bisects the centre of the site. Water was observed ponded within the southern part of the drain but would likely drain to the northern end of the site. Based on site observations, groundwater would likely flow and discharge to the north towards Barnes Gully (located approximately 500 m north of the site) and then into the Peel River, located to the north of the site.
Regional topography	The general topography of the surrounding area typically comprises rolling residential and flat commercial, recreational or undeveloped areas.
Groundwater	A search for registered groundwater bores in the WaterNSW groundwater bore database indicated that there are three bores within 500 m of the site and a further ten within 1 km of the site. A summary of groundwater information including

standing water levels (SWL) and water bearing zones (WBZ) recorded have been provided below in Table 1 for bores within 500 m of the site.

Table 1: Registered Groundwater Bore Information

Bore ID Authorised Purpose	Installation Year	Location	Bore Depth (m)	Standing water level (m)	Water Bearing Zone (m)
GW003362 Stock	1935	130 m SE	20.1	15.8	17.4 (Rock) 19.2 (Rock)
GW013346 Stock	1956	350 m NW	NR		NR
GW903625 Domestic	2020	380m NW	48.0	2.0	35.0-36.0 (Rock) 42.0-43.0 (Shale)
GW968448 Domestic	2008	450 m NW	36.0	5.0	18.0–20.0 (Shale)

Likely groundwater flow would be to the north to north-west towards Barnes Gully approximately 500 m north of the site.

Figure 2: Seamless geology dataset with approximate site location (red outline) within the greater facility location (blue outline)

6. Summary of previous investigations

6.1 Preliminary site investigation (Douglas, 2024)

Douglas has previously undertaken a preliminary site investigation (contamination) (PSI) at the site in 2024 (Douglas, 2024).

The investigation included a review of proposed development plans, a brief desktop / site history review, site walkover, subsurface investigation at twelve geotechnical pit locations, and laboratory testing of soils.

Site history assessment indicated that previous site use included agricultural/grazing use, prior to Council acquiring the site in 1990. Subsequent to Council ownership, it is understood that the site has been filled with soils from nearby developments, however, the source of fill was not known. The site has also been used as sporting fields.

The PSI identified a number of potential sources of contamination at the site as follows:

- Potential hazardous building materials (HBM) including asbestos from opportunistic dumping, imported fill materials and placement at the site;
- Potential spills and leaks (heavy metal and hydrocarbons) from vehicle and machinery parking and storage on site; and
- Potential use of pesticides / herbicides for weed control and maintenance.

Subsurface conditions encountered across the site within the geotechnical boreholes and test pits confirmed the presence of variable fill materials within all test locations across the site to depths between 0.75 and 3 m, with building materials including bricks, concrete and timber. The fill was underlain by residual clays / silty clays, extremely weathered material comprising clays, gravels, and bedrock. No free groundwater was observed within the depth of investigation during excavation of test pits or drilling of boreholes. Ponded water was observed within the southern portion of the drainage gully which bisects the site.

Chemical laboratory testing was undertaken on a total of eleven selected soil / fill samples (including one QC sample). The results of the limited testing indicated the absence of gross contamination at the locations sampled and tested, with all results within the adopted site assessment criteria (SAC) for the proposed development. It is noted that elevated PAH was detected in Pit 8 at 0.5m but was below the adopted SAC for the site.

The PSI concluded that the site is likely to be considered suitable for the proposed recreational development with respect to contamination, subject to additional investigation of fill materials with reference to WA asbestos guidelines (WA DoH, 2021) and NEPM (NEPC, 2013) to further assess potential asbestos, contamination concentrations and inform potential remediation options for the site.

6.2 Detailed site investigation (Douglas, 2025)

Douglas has previously undertaken a detailed site investigation (contamination) (DSI) at the site in 2024 (Douglas, 2025).

The investigation included review of the preliminary site investigation, preparation of a sampling quality and analysis plan (SAQP), excavation of 75 test pits, on site screening / sieving of 10L bulk samples for each fill layer per pit to assess the potential presence of asbestos containing materials (ACM), collection of soil samples from the test pits, laboratory analysis of selected samples for assessment of chemical contamination and asbestos, and preparation of a DSI report. Test locations are presented on Drawing 1 in Appendix A

Subsurface conditions encountered across the site within the test pits confirmed the presence of variable fill materials within all test locations across the site to depths between 0.7 m and 3.4 m, with likely road making materials (gravels, asphalt, concrete) and some building materials including bricks, concrete and timber. The fill was underlain by residual clays / silty clays, extremely weathered material comprising clays, gravels, and bedrock. Test pits from the DSI are presented in Appendix D.

The results of initial subsurface investigation and contamination testing generally indicated the absence of gross chemical contamination at the locations and depths tested. Asbestos containing materials were encountered at two test pit locations, encountered as a section of fibre cement pipe. As a result, additional systematic and targeted assessment was conducted across the proposed development area to further assess the potential for asbestos contamination in fill.

The results of the initial and subsequent subsurface investigation and testing indicated the general absence of gross contamination in fill and soil at the site. Asbestos contamination, identified in fibre cement pipe, was encountered and identified as asbestos containing material at one further test location (i.e. a total of three out of 75 test locations following 'double density' subsurface investigation – Pits 108, 109 and 238, with the impacted fill layer observed to approximately 1.4 m to 1.6 m depth). Test locations are shown in Drawing 1, Appendix A. Tabulated summaries of the laboratory testing are provided in Appendix C.

The DSI concluded that the site is likely to be considered suitable for the proposed recreational development with respect to contamination, subject to preparation of a remediation action plan and subsequent remediation/management of the identified localised asbestos-impacted soils.

7. Conceptual site model

A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or the future i.e. it enables an assessment of the potential source – pathway – receptor linkages (complete pathways).

Based on the preliminary site investigation (Douglas, 2024), the potential sources of contamination and associated contaminants of potential concern (CoPC) for the site were identified as per Table 2.

Table 2: Summary of potential sources

Potential sources and associated CoPC
On site sources
S1: Imported fill materials and placement at the site (depending on the source): CoPC include metals, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylene (BTEX), polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), organochlorine pesticides (OCP), organophosphorus pesticides (OPP), phenols, asbestos. **S2:** Vehicle and machinery parking / storage, possible spills/leaks CoPC include TRH, BTEX, PAH and metals **S3:** Chemical use, possible use of pesticides and herbicides for weed control and maintenance CoPC include metals, pesticides (OCP/OPP) **S4:** Opportunistic dumping of materials at the site (i.e. building or construction waste) CoPC include TRH, BTEX, PAH, PCB, OCP, OPP, metals and asbestos

The following potential human and environmental receptors, along with relevant potential pathways, were identified and are summarised in Table 3.

Table 3: Summary of potential receptors and pathways

Potential human receptors
HR1: Current users [recreational users and site workers] **HR2:** Construction and maintenance workers **HR3:** End users [recreational users] **HR4**: Adjacent site users [recreational / commercial land use]
Potential environmental receptors
ER1: Surface water [adjacent waterways to the north and east; likely fresh water] **ER2:** Groundwater **ER3:** Terrestrial ecosystems
Potential pathways to human receptors
HP1: Ingestion and dermal contact **HP2:** Inhalation of dust and/or vapours
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:** Contact with terrestrial ecology

Following investigation of the potential sources in the DSI, as identified in Table 2, a revised CSM was provided and is reproduced in Table 4.

Table 4: Revised CSM - Summary of potential sources, pathways, receptors and risk management actions

Source and CoPC	Exposure pathway	Receptor	Risk management action
S1: Fill, metals, TRH, BTEX, PAH, OCP, OPP, PCB, phenols, asbestos. **S4:** Opportunistic dumping, metals, TRH, BTEX, PAH, OCP, OPP, PCB, asbestos.	**HP2:** Inhalation of dust and/or vapours	**HR1:** Current users [vacant land] **HR2:** Construction and maintenance workers **HR3:** End users [recreational] **HR4:** Adjacent site users [recreational]	Subsurface investigation has indicated the general absence of gross contamination. Fibre cement pipes located during the investigation in Pits 108, 109 and Pit 238 have been confirmed as ACM. Further detailed asbestos investigation has been conducted as part of this assessment to quantify the extent of bonded ACM impacts in soil/fill in the vicinity of the identified ACM pipe and also across the site. The result of additional assessment suggests the general absence of gross asbestos contamination, with the exception of the pipe fragments at Pits 108, 109 and 238 Controls should be in place in the event that significant quantities of ACM are disturbed during construction (relevant to HP2). Options for the management of ACM impacted fill which exceed the relevant land use criteria include cap and contain, remediation of impacted soil and off-site disposal.

8. Remediation extent

The approximate extent of Remediation Areas, based on an interpretation of the available test pits and sampling data are shown on Figure 3 below. It is noted that as a conservative estimate, the area of impact was taken to be the closest 'clean' test location. ACM impact was observed in Pits 108, 109 and 238, with possible impact to approximately 1.4 m to 1.6 m depth based on the impacted fill depth. The actual extent (ie the final remediation extent) will be established during excavation of the areas (ie under full time inspection).

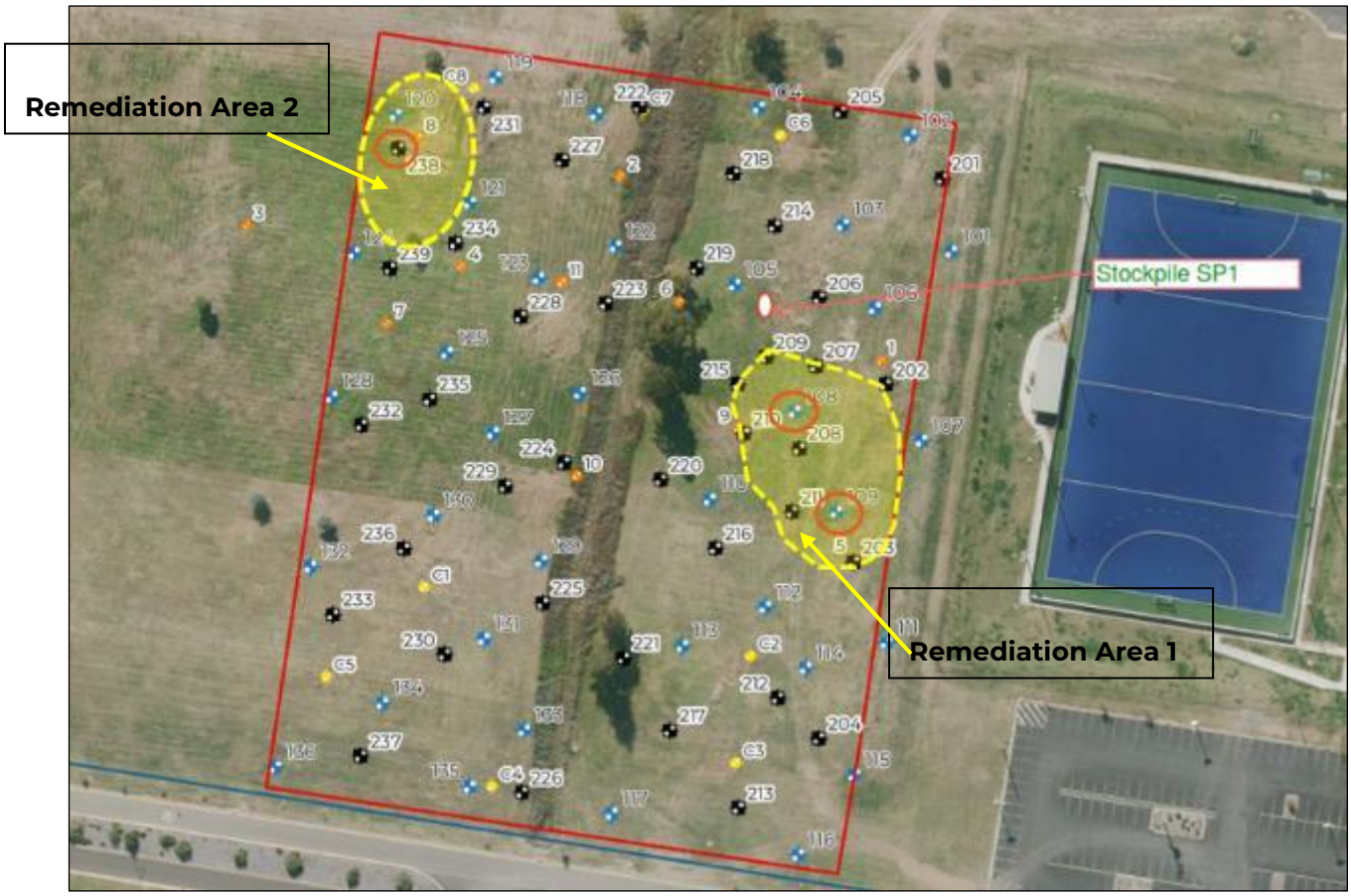


Figure 3: Approximate extent of Remediation Areas in yellow, Jack Smyth Drive, Hillvue NSW

9. 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 E.

10. Preferred remediation strategy

10.1 Rationale

The rationale for the selection of the preferred remediation strategy is outlined in Appendix E. The preferred remediation strategy is for:

- Remediation Area 1: Excavation and off-site disposal for the asbestos impacted fill;
- Remediation Area 2: Excavation and off-site disposal for the asbestos impacted fill.

10.2 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:

- Task 1: Engage licensed contractor and conduct inception meeting:
  - Engage contractor licensed to conduct bonded asbestos works;
  - Submit SafeWork NSW notification for asbestos works at least seven days prior to commencement;
  - Inception meeting to be held between client (Council), contractor, validation consultant prior to commencement to discuss methodologies, procedures, contingency etc;
- Task 2: Progressive excavation starting at the identified ACM location and depth and expanding outward under full time inspection by environmental consultant for Remediation Areas 1 and 2. Off-site disposal of asbestos impacted materials:
  - Waste classification of the asbestos-impacted fill. The fill has previously been classified as part of the DSI (Douglas, 2025));
  - Disposal of asbestos-impacted fill to a landfill licensed to accept asbestos impacted soils;
  - Validation following removal of impacted soils from each remediation excavation;
- Task 3: General earthworks and construction:
  - Due to the presence of extensive fill materials across the site and the presence of some building material, all site excavations should be conducted in a controlled manner with appropriate inspections (by contractor) and precautions in case further localised areas of asbestos impacts are encountered;
  - Excavation of fill/soils as part of proposed aquatic centre development should be conducted in accordance with the unexpected finds protocol (See Appendix I);
  - If additional localised asbestos impacted areas are identified, these should be treated as Areas 1 and 2 above.

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

11. Assessment criteria

11.1 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 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 site assessment criteria (SAC) in Appendix F for protection of human health and ecology. The following table provides a summary of the RAC.

Table 5: Remediation acceptance criteria

Item	Remediation acceptance criteria
Remediation Area 1 and 2 Excavation and off-site disposal of asbestos impacts	Validation of excavations following impacted soils removal, via inspection, in-situ sieving/screening and laboratory analysis. Samples from the base and sides of the excavations must have a concentration for asbestos as follows: • Bonded ACM - recreational land use 0.02 %w/w • Fibrous asbestos and asbestos fines (FA and AF) – 0.001 %w/w • All forms - no asbestos at the surface

11.2 Site assessment criteria

Additional area(s) of contamination encountered beyond those outlined in Section 7, during the course of the remediation and site redevelopment, will be subject to the contingency plan or unexpected find protocol (Appendix I) and assessed using the SAC in Appendix F. The broader list of contaminants and their SAC are included in Appendix F.

The SAC should also be used as part of the assessment framework for imported soils (i.e. contaminant concentrations in imported soils must comply with the SAC together with NSW EPA waste regulations and guidelines.

The adopted investigation and screening levels comprise levels for a generic recreation use scenario which is commensurate with an aquatic centre. The derivation of the SAC is included in Appendix F and the adopted SAC are listed in the summary analytical results tables in Appendix C.

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.

12. Validation plan

12.1 Data quality objectives

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

12.2 Validation assessment requirements

The following site validation work will be required:

- Field assessment by the Environmental Consultant comprising:
  - Full-time visual inspection during remediation of identified areas of contamination, including taking photographs for record purposes and visual assessment of stripped surfaces;
  - Collecting validation samples from excavations resulting from the removal of contaminated soils, including contaminated soil stockpile footprints (if relevant) to assess the remaining soils for ongoing suitability;
  - Air monitoring for air borne asbestos fibres by the remediation contractor during disturbance of fill materials which may contain asbestos (i.e. any excavations, stockpiling, placement or transport of impacted fill materials). This will include:
    - Asbestos air monitoring during excavation and validation of Remediation Areas 1 and 2;
    - Asbestos air monitoring if potential ACM is encountered during general site earthworks and excavation of fill (i.e. under the UFP);
- Laboratory analysis of validation samples at a NATA accredited laboratory for:
  - The CoPC relevant to the remediation area; and
  - Quality control (QC) samples in accordance with Section 14;
- Comparison by the Environmental Consultant of the laboratory results with the SAC and/or RAC as appropriate (refer to Section 11); and
- Preparation by the Environmental Consultant of a validation report detailing the methods and results of the remediation works and validation assessment.

12.3 Visual inspections

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

12.4 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 m^2):

- Base of excavation: one sample per 25 m^2 or part thereof, with a minimum of three samples where the base of the excavation is fill rather than natural soils; and
- Sides of excavation: one sample per 10 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 ≥500 m^2):

- Base of excavation: sampling on a grid at a density in accordance with Table 2 in NSW EPA (2022) or a minimum of 10 samples. In sub-areas with any specific signs of concern, a higher sampling density may be required; and
- 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 filling.

For the purposes of this assessment, the contaminants of concern are asbestos containing materials (bonded) and asbestos fines. The validation samples will therefore take the following form:

- In-situ screening/sieving of a 10L sample of fill/soil at each validation test location;
- A 500 mL soil/fill sample at each validation test location, to be analysed by a NATA-accredited laboratory for asbestos fines in soil.

Where contaminated soils are stored on bare soils, the footprint of the stockpile will require validation following removal of the contaminated soils at a frequency of on sample per 25 m^2 or part thereof, with a minimum of three samples.

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 G). 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 the impacted material has been fully chased out.

It is noted that validation samples for asbestos should be collected in accordance with the process for asbestos quantification outlined in NEPM 2013 (i.e. field screening of bulk samples and 500 ml samples for laboratory analysis), unless validation samples are collected from natural soils from below the fill, natural interface, only 500mL samples will be required.

In the event that contamination extends beyond site boundaries or in areas that can't be practically chased out (e.g. under services), 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.

13. 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); and
- NSW EPA *Addendum to the Waste Classification Guidelines (2014) - Part 1: Classifying Waste* (NSW EPA, 2016) [addendum for per- and poly-fluoroalkyl substances (PFAS)].

Impacted fill in Remediation Areas 1 and 2 has previously been tested as part of the DSI (Douglas, 2025). Testing results to date suggest a 'General Solid Waste' classification. Samples will be collected from excavated and stockpiled fill to confirm waste classification prior to disposal The frequency is to be determined by the Environmental Consultant based on the NSW EPA sampling design guidelines (NSW EPA, 2022), the risk of contamination and heterogeneity of the material.

For stockpiles comprising similar materials and a:

- Volume up to 200 m^3: a recommended minimum frequency of one sample per 25 m^3, with a minimum of three per stockpile (NSW EPA, 2022); or
- Volume greater than 200 m^3: a recommended minimum frequency of one sample per 25 m^3, 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 m^3 which are impacted, or potentially impacted, by asbestos the Environmental Consultant shall provide guidance in accordance with NSW EPA (2022).

All waste must be tracked by the Remediation Contractor from 'cradle to grave'. Copies of all consignment notes / disposal dockets (or similar) 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.

14. Quality assurance and quality control

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

- Sampling location rationale met the sampling objective;
- Standard operating procedures (SOP) are followed;
- Appropriate QA/QC samples are collected/prepared and analysed where relevant;
- Samples are stored under secure, temperature-controlled conditions;
- Chain of custody documentation is employed for the handling, transport and delivery of samples to the selected laboratory.

Where relevant (i.e. for chemical contamination testing), 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:

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

15. Management and responsibilities

15.1 Site management plan

A general site management plan for the operational phase of site remediation is included in Appendix H. 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).

15.2 Site responsibilities

The site management plan (Appendix H) 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.

15.3 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 I.

16. Validation reporting

16.1 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);
- 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;
- 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 for works within Remediation Areas 1 and 2, and where additional asbestos works are undertaken such as during unexpected finds (Remediation Contractor); and
- Interim / final visual and sampling clearances for any asbestos related works ((Remediation Contractor).

16.2 **Reporting**

A validation assessment report will be prepared by the Environmental Consultant with reference to 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.

17. Conclusions

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

Due to the presence and extent of fill across the site, an important part of construction will be the unexpected finds protocol.

Prior to construction, detailed design drawings for construction (including civil, structural and landscape plans) should be updated to reflect the requirements of this RAP.

18. 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. (2024). *Report on Preliminary Site Investigation for Contamination, Proposed Tamworth Regional Aquatic Centre, Jack Smyth Drive, Hillvue NSW, Document No. 226965.00.R.001.Rev0*. Douglas Partners Pty Ltd.

Douglas. (2025). *Report on Detailed Site Investigation, Proposed Tamworth Regional Aquatic Centre, Jack Smyth Drive, Hillvue NSW, Document No. 226965.01.R.001.Rev0*. Douglas Partners Pty Ltd.

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.

WA DoH. (2021). *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*. WA Department of Health.

19. Limitations

Douglas Partners Pty Ltd (Douglas) has prepared this report for this project at Jack Smyth Drive, Hillvue NSW in line with Douglas' proposal dated 15 July 2024 and acceptance received from Callum Fletcher of Tamworth Regional Council dated 18 July 2024 and 8 October 2024. The work was carried out under Q061/2024 terms. This report is provided for the exclusive use of Tamworth Regional Council 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.

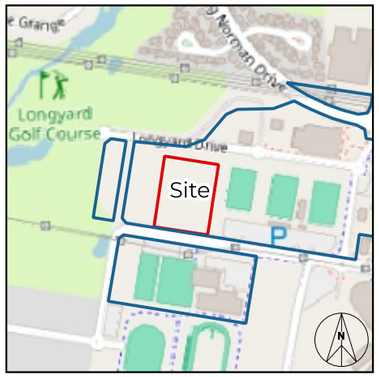
This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by Douglas. This is because this report has been written as advice and opinion rather than instructions for construction.

Asbestos has previously been detected by observation and by laboratory analysis in fill materials at the test locations sampled and analysed. Extensive fill materials have been identified across the site. Demolition materials, such as asphalt, brick, concrete, metal, golf balls, timber, plastic barrier board, PVC pipes, plastic pipes, concrete pavers, concrete slabs, metal reinforcement bar, metal cans, wire, styrofoam, plastic pegs, gumboot and sections of fibre cement pipe, were also located in previous below-ground fill, and these are considered as indicative of the possible presence of hazardous building materials (HBM), including asbestos.

Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been sampled and analysed. It is therefore considered possible that HBM, including asbestos, may be present in unobserved or untested parts of the site, between and beyond sampling locations, and hence no warranty can be given that additional asbestos is not present.

Appendix A

Drawings
Drawing 1 – Test Location Plan
Proposed Development Plans (CO.OP ref 100358)



SITE LOCATION

location of confirmed asbestos containing materials

LEGEND

- Lot Boundary
- Site Boundary
- Test Pit Location 200 series Nov
- Test Pit Locati 100 series Aug 2024
- Borehole Location (226965.00
- Excavator Test Pit (226965.00
- Pavement Test Pit 226965.00

0 25 50 75 m

NOTE:
1. Drawing projection in GDA2020 / MGA zone 56, adapted from aerial imagery from "Meteromap" dated 01.04.2024.
2. Test locations are approximate only and were located using dGPS.

Douglas PARTNERS

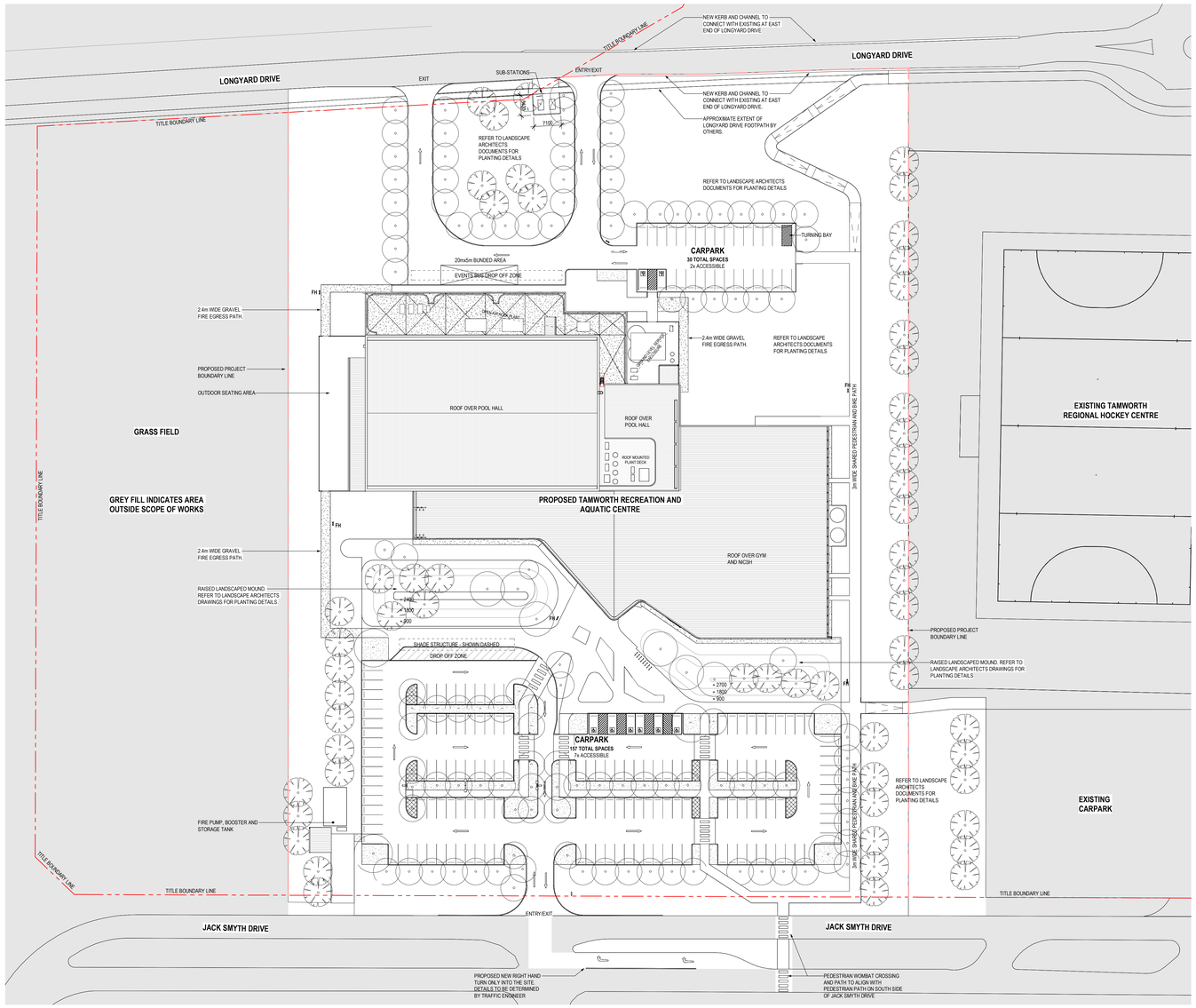
CLIENT:	Tamworth Regional Council		
OFFICE:	Newcastle	DRAWN BY:	MJD
SCALE:	1:1250 @A3	DATE:	02.December.2024

TITLE: **Test Location Plan - Detailed Site Investigation**
Proposed Aquatic Centre
Jack Smyth Drive, Hillvue NSW

N

PROJECT:	226965.01
DRAWING No:	1
REVISION:	0

DP.QGIS.A3LandscapeDrawingLayout.Rev3 - P:\226965.01 - HILLVUE, Jack Smyth Drive, DSI\7.0 Drawings\7.2 Out\226965.01.00.D.001.Mapping.qgz



UNCONTROLLED DOCUMENT - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	APP
C	50% DESIGN DEVELOPMENT	14.08.2025	SC
B	30% DESIGN DEVELOPMENT	31.07.2025	SC
A	ISSUE FOR INFORMATION	30.07.2025	SC

CLIENT Tamworth Regional Council

CO.OP
CO-OP STUDIO
Level 6, 54 Wellington Street, Collingwood, 3066
Office: +61 452 281 614
admin@co-opstudio.com.au

PROJECT
Tamworth Regional Aquatic Centre and Northern Inland Centre of Sport and Health

PROJECT NUMBER
100358

DRAWING
SITE PLAN

SCALE 1 : 500 @ A0

DRAWN BY Author

UNCONTROLLED DOCUMENT

DRAWING NO. A101

REVISION

FILE NAME Autodesk Docs://Tamworth RAC/100358_Tamworth RAC_R23_360.rvt

DATE PRINTED 14/08/2025 3:58:00 PM

Appendix B

About this Report

About this Report

October 2024

Introduction

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

Douglas' 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

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, Douglas 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, Douglas 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, Douglas will be pleased to assist with investigations or advice to resolve the matter.

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, Douglas 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. Douglas 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.

intentionally blank

Appendix C

Tabulated Summary Results from Previous Report(s)

Table G1: Summary of Laboratory Results – Land Use (Priority metals, Priority PAH, Priority TRH, BTEX)

			Priority metals													Priority PAH				Priority TRH						BTEX			
			Total Arsenic	Beryllium	Boron	Cadmium	Total Chromium	Cobalt	Copper	Lead	Manganese	Mercury (inorganic)	Nickel	Selenium (Total)	Zinc	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	Total Xylenes
		PQL	4	1	10	0.4	1	1	1	1	1	0.1	1	2	1	1	0.05	0.5	0.05	25	50	25	50	100	100	0.2	0.5	1	1
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
101	1 m	05/08/24	<4	<1	<10	<0.4	**16**	**10**	**27**	**17**	**500**	<0.1	**9**	<2	**39**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
102	1.5 m	05/08/24	**4**	<1	<10	<0.4	**14**	**14**	**38**	**14**	**680**	<0.1	**14**	<2	**64**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
103	0.5 m	05/08/24	<4	<1	<10	<0.4	**16**	**10**	**35**	**7**	**430**	<0.1	**10**	<2	**42**	<1	**0.1**	<0.5	**1.2**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
104	1 m	06/08/24	**7**	<1	<10	<0.4	**8**	**13**	**29**	**17**	**660**	<0.1	**10**	<2	**59**	<1	**0.1**	<0.5	**0.67**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
D1/SBK (105/0.5)	0 m	06/08/24	**4**	<1	<10	<0.4	**17**	**14**	**34**	**11**	**740**	<0.1	**13**	<2	**45**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
105	1.5 m	06/08/24	<4	<1	<10	<0.4	**13**	**15**	**33**	**12**	**830**	<0.1	**12**	<2	**45**	<1	**0.1**	<0.5	**0.62**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
106	0 - 0.1 m	06/08/24	**4**	<1	<10	<0.4	**17**	**12**	**34**	**10**	**630**	<0.1	**15**	<2	**42**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
107	2 m	06/08/24	<4	<1	<10	<0.4	**15**	**10**	**30**	**15**	**630**	<0.1	**11**	<2	**30**	<1	**0.1**	<0.5	**1.7**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
108	1 m	06/08/24	<4	<1	<10	<0.4	**18**	**14**	**41**	**11**	**660**	<0.1	**12**	<2	**44**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
109	0 - 0.1 m	06/08/24	**7**	<1	<10	<0.4	**26**	**16**	**30**	**9**	**840**	<0.1	**23**	<2	**50**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
110	0.5 m	06/08/24	<4	<1	<10	<0.4	**13**	**8**	**24**	**23**	**400**	<0.1	**11**	<2	**45**	<1	**0.05**	<0.5	**0.05**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
111	0.5 m	06/08/24	**6**	<1	<10	<0.4	**29**	**15**	**33**	**9**	**860**	<0.1	**23**	<2	**52**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
112	1 m	06/08/24	<4	<1	<10	<0.4	**32**	**11**	**53**	**15**	**560**	<0.1	**10**	<2	**51**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
113	1 m	06/08/24	<4	<1	<10	<0.4	**8**	**10**	**46**	**6**	**620**	<0.1	**8**	<2	**70**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
114	0.5 m	06/08/24	<4	<1	<10	<0.4	**12**	**11**	**28**	**6**	**550**	<0.1	**11**	<2	**41**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
115	0 - 0.1 m	06/08/24	<4	<1	<10	<0.4	**12**	**12**	**29**	**8**	**480**	<0.1	**12**	<2	**47**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
D3/SBK	0 - 0.1 m	06/08/24	**6**	<1	<10	<0.4	**23**	**17**	**42**	**11**	**880**	<0.1	**22**	<2	**63**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
115	1 m	06/08/24	**4**	<1	<10	<0.4	**10**	**11**	**26**	**8**	**480**	<0.1	**14**	<2	**40**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
116	0 - 0.1 m	06/08/24	**5**	<1	<10	<0.4	**12**	**14**	**36**	**12**	**680**	<0.1	**13**	<2	**70**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
117	0.5 m	06/08/24	**5**	<1	<10	<0.4	**13**	**15**	**59**	**10**	**820**	<0.1	**13**	<2	**74**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
118	2 m	07/08/24	<4	<1	<10	<0.4	**9**	**12**	**39**	**10**	**610**	<0.1	**14**	<2	**56**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
119	2.5 m	07/08/24	<4	<1	<10	<0.4	**14**	**14**	**36**	**12**	**610**	<0.1	**13**	<2	**48**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
120	2 m	07/08/24	<4	<1	<10	<0.4	**19**	**12**	**32**	**11**	**570**	<0.1	**14**	<2	**58**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
121	1 m	07/08/24	<4	<1	<10	<0.4	**14**	**12**	**32**	**11**	**650**	<0.1	**11**	<2	**45**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
121 - [TRIPLICATE]	1 m	07/08/24	4	<1	<10	<0.4	**17**	**12**	**33**	**11**	**570**	<0.1	**12**	<2	**48**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800										
122	1.5 m	07/08/24	**5**	**1**	<10	<0.4	**25**	**21**	**65**	**15**	**880**	<0.1	**17**	<2	**67**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
123	1.5 m	07/08/24	<4	<1	<10	<0.4	**17**	**15**	**46**	**27**	**770**	<0.1	**11**	<2	**53**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
124	2 m	07/08/24	**4**	<1	<10	<0.4	**15**	**10**	**31**	**11**	**510**	<0.1	**13**	<2	**42**	<1	**0.08**	<0.5	**0.2**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
125	1 m	07/08/24	**4**	<1	<10	<0.4	**16**	**10**	**35**	**170**	**480**	<0.1	**11**	<2	**110**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
126	0.5 m	07/08/24	**5**	<1	<10	<0.4	**18**	**11**	**38**	**13**	**520**	<0.1	**13**	<2	**62**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
127	1 m	07/08/24	**5**	<1	<10	<0.4	**18**	**16**	**36**	**16**	**740**	<0.1	**15**	<2	**49**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
128	2.5 m	07/08/24	**5**	<1	<10	<0.4	**21**	**15**	**43**	**14**	**690**	<0.1	**15**	<2	**54**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
129	1 m	07/08/24	<4	<1	<10	<0.4	**12**	**13**	**41**	**11**	**560**	<0.1	**12**	<2	**58**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
130	1.5 m	07/08/24	**4**	<1	<10	<0.4	**17**	**13**	**39**	**16**	**550**	<0.1	**13**	<2	**56**	<1	<0.05	<0.5	**0.1**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
131	1 m	08/08/24	**5**	<1	<10	<0.4	**22**	**19**	**49**	**15**	**1000**	<0.1	**18**	<2	**71**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
132	0.5 m	08/08/24	**7**	<1	<10	<0.4	**15**	**16**	**36**	**19**	**760**	<0.1	**13**	<2	**56**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
133	1.5 m	08/08/24	**22**	<1	<10	<0.4	**10**	**9**	**41**	**6**	**1,700**	<0.1	**14**	<2	**43**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
134	0 - 0.1 m	08/08/24	**6**	<1	<10	<0.4	**29**	**19**	**35**	**18**	**1000**	<0.1	**15**	<2	**49**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
135	1 m	08/08/24	<4	<1	<10	<0.4	**18**	**12**	**30**	**12**	**650**	<0.1	**14**	<2	**38**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
136	0 - 0.1 m	08/08/24	<4	<1	<10	<0.4	**8**	**6**	**19**	**7**	**380**	<0.1	**7**	<2	**28**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
SP1-1	0 m	08/08/24	**5**	<1	<10	<0.4	**13**	**7**	**16**	**5**	**360**	<0.1	**13**	<2	**28**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45
SP1-2	0 m	08/08/24	<4	<1	<10	<0.4	**4**	**2**	**7**	**3**	**140**	<0.1	**5**	<2	**15**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300	100	90	20,000	90	300	410	300	17,000	230	600	1,100	19,000	80	1,200	280	700	30,000	800	5	170	0.7	3	300	120	50	180	280	1,300	5,600	0.7	65	480	105	NL	125	NL	45

Lab result

HIL/HSL value EIL/ESL/EGV value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report **Blue** = DC exceedance **Red** = EGV-indirect exceedance HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Not limiting NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level EGV = Environmental Guideline Value ML = Management Limit DC = Direct Contact HSL

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Recreational C including public open space

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-C (NEPC, 2013 or HEPA, 2020 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2020)
HSL (vapour intrusion)	HSL-A/B (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL C Recreational /Open space (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2020)

Table G2: Summary of Laboratory Results – Land Use (OCP, OPP, PCB, PFAS)

			Priority OCP									Priority OPP	PCB	Priority PFAS					Coal Tar ID
			DDT+DDE+DDD c	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyriphos	Total PCB	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS	Presence of Coal Tar
		PQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.005	0.005	0.005	0.005	0.005	
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
101	1 m	05/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
103	0.5 m	05/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
105	1.5 m	06/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
107	2 m	06/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
109	0 - 0.1 m	06/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -	
111	0.5 m	06/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
113	1 m	06/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
115	1 m	06/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
117	0.5 m	06/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
119	2.5 m	07/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -	
121	1 m	07/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
123	1.5 m	07/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
124	2 m	07/08/24	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	-
			- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	10 10	1 -	1 1	1 -	
125	1 m	07/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
127	1 m	07/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
129	1 m	07/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
131	1 m	08/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
133	1.5 m	08/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
135	1 m	08/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -	
SP1-1	0 m	08/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
SP1-2	0 m	08/08/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -	
123	2.3 - 2.35 m	07/08/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Absent
			- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	

Lab result

HIL/HSL value EIL/ESL/EGV value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report **Blue** = DC exceedance **Red** = EGV-indirect exceedance HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Not limiting NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level EGV = Environmental Guideline Value ML = Management Limit DC = Direct Contact HSL

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Recreational C including public open space

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-C (NEPC, 2013 or HEPA, 2020 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2020)
HSL (vapour intrusion)	HSL-C (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL C Recreational /Open space (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2020)

Douglas PARTNERS

Table G3: Summary of Laboratory Results for Land Use – Asbestos (FA/AF), Asbestos (materials)

			Asbestos (FA/AF)				Asbestos, Other						
			ABS_Sample_mass	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Trace Analysis (AS)	Asbestos ID in soil <0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	Total Asbestos#1	Asbestos ID in materials	Asbestos Summary
		PQL				0.001					0.1		0.1
Sample ID	Depth	Sample Date	g	g	g	%(w/w)	-	-	-	-	g/kg	-	
101	1 m	05/08/24	**662.92**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
102	1.5 m	05/08/24	**750.82**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
103	0.5 m	05/08/24	**884.93**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
104	1 m	06/08/24	**886.03**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
105	1.5 m	06/08/24	**647.45**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
106	0 - 0.1 m	06/08/24	**593.95**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
107	2 m	06/08/24	**548.68**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
108	1 m	06/08/24	**789.27**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
109	0 - 0.1 m	06/08/24	**652.02**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
110	0.5 m	06/08/24	**773.73**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
111	0.5 m	06/08/24	**657.41**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
112	1 m	06/08/24	**721.49**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
113	1 m	06/08/24	**689.66**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
114	0.5 m	06/08/24	**556.35**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
114	1 m	06/08/24	**591.39**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
115	1 m	06/08/24	**768.37**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
116	0 - 0.1 m	06/08/24	**817.42**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
117	0.5 m	06/08/24	**673.58**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
118	2 m	07/08/24	**679.61**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
119	2.5 m	07/08/24	**798.35**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
120	2 m	07/08/24	**707.96**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
121	1 m	07/08/24	**665.01**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
122	1.5 m	07/08/24	**644.31**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
123	1.5 m	07/08/24	**657.17**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
124	2 m	07/08/24	**755.19**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
125	1 m	07/08/24	**850.92**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
126	0.5 m	07/08/24	**656.63**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
127	1 m	07/08/24	**667.3**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
128	2.5 m	07/08/24	**879.62**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
129	1 m	07/08/24	**650.23**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
130	1.5 m	07/08/24	**794.32**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
131	1 m	08/08/24	**736.89**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
132	0.5 m	08/08/24	**602.71**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
133	1.5 m	08/08/24	**693.52**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
134	0 - 0.1 m	08/08/24	**639.89**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
135	1 m	08/08/24	**633.57**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
136	0 - 0.1 m	08/08/24	**797.77**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
SP1-1	0 m	08/08/24	**724.05**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
SP1-2	0 m	08/08/24	**1,081.79**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
115	0 - 0.1 m	06/08/24	**703.2**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
102	0 - 0.1 m	06/08/24	**645.95**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
107	0 - 0.1 m	06/08/24	**616.3**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
120	0 - 0.1 m	07/08/24	**593.94**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
122	0 - 0.1 m	07/08/24	**566.5**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
127	0 - 0.1 m	07/08/24	**521.33**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
135	0 - 0.1 m	08/08/24	**671.69**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
108/F1	0 m	06/08/24	-	-	-	-	NAD	-	-	-	-	**Detected**	**Detected**
131	0 - 0.1 m	08/08/24	**637.23**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
201	1 m	29/10/24	**749.88**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
202	0.5 m	29/10/24	**752.72**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
203	0.5 m	29/10/24	**972.27**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
204	0 - 0.1 m	30/10/24	**901.1**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
204	0.8 m	30/10/24	**579.64**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
205	0.5 m	29/10/24	**881.32**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
205	1.5 m	29/10/24	**837.62**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
206	0.5 m	29/10/24	**830.4**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
207	1 m	29/10/24	**775.61**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
207	2 m	29/10/24	**770.66**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
208	0.5 m	29/10/24	**790.72**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
208	1 m	29/10/24	**731.92**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
209	0.5 m	29/10/24	**809.72**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
208	1.5 m	29/10/24	**945.01**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
210	0 - 0.1 m	29/10/24	**802.79**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
210	1.5 m	29/10/24	**895.81**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
211	1 m	29/10/24	**716.63**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
212	0.5 m	30/10/24	**999.36**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
213	0.5 m	30/10/24	**800.44**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
214	1 m	31/10/24	**860.08**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
214	2.5 m	31/10/24	**836.11**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
215	1 m	31/10/24	**611.79**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
216	1 m	29/10/24	**785.87**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
217	0.5 m	30/10/24	**765.45**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
218	0 - 0.1 m	30/10/24	**765.85**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
218	1 m	30/10/24	**859.36**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
219	2 m	29/10/24	**750.94**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
220	0 - 0.1 m	29/10/24	**919.45**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
220	1 m	29/10/24	**969.09**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
221	0 - 0.1 m	30/10/24	**761.25**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
221	0.8 m	30/10/24	**1,022.57**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
222	0.5 m	30/10/24	**773.87**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
222	2.5 m	30/10/24	**836.53**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
223	0.5 m	30/10/24	**823.48**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
223	1.5 m	30/10/24	**907.05**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
224	0 - 0.1 m	30/10/24	**885.86**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
224	1 m	30/10/24	**682.7**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
225	1 m	31/10/24	**806.21**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
225	1.5 m	31/10/24	**790.24**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
226	0.5 m	31/10/24	**764.01**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
227	0 - 0.1 m	30/10/24	**823.61**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
227	1 m	30/10/24	**954.03**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
228	1.5 m	30/10/24	**797.47**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
229	0 - 0.1 m	31/10/24	**890.36**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
229	1.5 m	31/10/24	**755.41**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
230	0.5 m	31/10/24	**809.57**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
230	1.5 m	31/10/24	**617.86**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
231	0.5 m	30/10/24	**772.01**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
231	1 m	30/10/24	**712.52**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
232	0.5 m	30/10/24	**682.43**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
232	1.5 m	30/10/24	**734.71**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
233	0.5 m	30/10/24	**706.9**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
233	1.5 m	30/10/24	**587.15**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
234	0.5 m	30/10/24	**792.9**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
234	1.5 m	30/10/24	**788.64**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
235	0.5 m	30/10/24	**656.39**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
235	2 m	30/10/24	**497.96**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
236	1 m	31/10/24	**815.79**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
237	0 - 0.1 m	31/10/24	**913.65**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
238	0.5 m	31/10/24	**703.65**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
238	1.5 m	31/10/24	**882.54**	-	**0.0004**	<0.001	-	NAD	**Detected**	NAD	<0.1	-	**Detected**
239	1 m	30/10/24	**776.36**	-	-	<0.001	-	NAD	NAD	NAD	<0.1	-	-
238/F1	0 m	30/10/24	-	-	-	-	NAD	-	-	-	-	**Detected**	**Detected**

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Recreational C including public open space

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

Douglas PARTNERS

Table G4: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, OCP, OPP, PCB, PFAS - Waste Classification

			Metals									TRH		BTEX				PAH		OCP				OPP	PCB	PFAS	
			Total Arsenic	Beryllium	Cadmium	Total Chromium	Lead	TCLP Lead	Mercury (inorganic)	Nickel	Selenium (Total)	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)pyrene (BaP)	Total PAH	Scheduled Chemical Waste (standard)	Total Endosulfan	Total Analysed OCP	Mirex	Total Analysed OPP	Total PCB	PFOA	PFOS + PFHxS
		PQL	4	1	0.4	1	1	0.03	0.1	1	2	25	50	0.2	0.5	1	1	0.05	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.005	0.005
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
101	1 m	05/08/24	<4	<1	<0.4	16	17	-	<0.1	9	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
102	1.5 m	05/08/24	4	<1	<0.4	14	14	-	<0.1	14	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
103	0.5 m	05/08/24	<4	<1	<0.4	16	7	-	<0.1	10	<2	<25	<50	<0.2	<0.5	<1	<1	0.1	1.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
104	1 m	06/08/24	7	<1	<0.4	8	17	-	<0.1	10	<2	<25	<50	<0.2	<0.5	<1	<1	0.1	0.67	-	-	-	-	-	-	-	-
D1/SBK	0.5 m	06/08/24	4	<1	<0.4	17	11	-	<0.1	13	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
105	0.5 m	06/08/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105	1.5 m	06/08/24	<4	<1	<0.4	13	12	-	<0.1	12	<2	<25	<50	<0.2	<0.5	<1	<1	0.1	0.62	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
106	0 - 0.1 m	06/08/24	4	<1	<0.4	17	10	-	<0.1	15	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
107	2 m	06/08/24	<4	<1	<0.4	15	15	-	<0.1	11	<2	<25	<50	<0.2	<0.5	<1	<1	0.1	1.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
108	1 m	06/08/24	<4	<1	<0.4	18	11	-	<0.1	12	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
109	0 - 0.1 m	06/08/24	7	<1	<0.4	26	9	-	<0.1	23	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.005	<0.005
110	0.5 m	06/08/24	<4	<1	<0.4	13	23	-	<0.1	11	<2	<25	<50	<0.2	<0.5	<1	<1	0.05	0.05	-	-	-	-	-	-	-	-
111	0.5 m	06/08/24	6	<1	<0.4	29	9	-	<0.1	23	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
112	1 m	06/08/24	<4	<1	<0.4	32	15	-	<0.1	10	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
113	1 m	06/08/24	<4	<1	<0.4	8	8	-	<0.1	8	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
114	0.5 m	06/08/24	<4	<1	<0.4	12	6	-	<0.1	11	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
114	1 m	06/08/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
115	0 - 0.1 m	06/08/24	<4	<1	<0.4	12	8	-	<0.1	12	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
D3/SBK	0 m	06/08/24	6	<1	<0.4	23	11	-	<0.1	22	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
115	1 m	06/08/24	4	<1	<0.4	10	8	-	<0.1	14	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
116	0 - 0.1 m	06/08/24	5	<1	<0.4	12	12	-	<0.1	13	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
117	0.5 m	06/08/24	5	<1	<0.4	13	10	-	<0.1	13	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
118	2 m	07/08/24	<4	<1	<0.4	9	10	-	<0.1	14	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
119	2.5 m	07/08/24	<4	<1	<0.4	14	12	-	<0.1	13	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.005	<0.005
120	2 m	07/08/24	<4	<1	<0.4	19	11	-	<0.1	14	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
121	1 m	07/08/24	<4	<1	<0.4	14	11	-	<0.1	11	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
122	1.5 m	07/08/24	5	1	<0.4	25	15	-	<0.1	17	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
123	1.5 m	07/08/24	<4	<1	<0.4	17	27	-	<0.1	11	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
124	2 m	07/08/24	4	<1	<0.4	15	11	-	<0.1	13	<2	<25	<50	<0.2	<0.5	<1	<1	0.08	0.2	-	-	-	-	-	-	<0.005	<0.005
125	1 m	07/08/24	4	<1	<0.4	16	170	0.1	<0.1	11	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
126	0.5 m	07/08/24	5	<1	<0.4	18	13	-	<0.1	13	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
127	1 m	07/08/24	5	<1	<0.4	18	16	-	<0.1	15	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
128	2.5 m	07/08/24	5	<1	<0.4	21	14	-	<0.1	15	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
129	1 m	07/08/24	<4	<1	<0.4	12	11	-	<0.1	12	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
130	1.5 m	07/08/24	4	<1	<0.4	17	16	-	<0.1	13	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	0.1	-	-	-	-	-	-	-	-
131	1 m	08/08/24	5	<1	<0.4	22	15	-	<0.1	18	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
132	0.5 m	08/08/24	7	<1	<0.4	15	18	-	<0.1	13	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
133	1.5 m	08/08/24	22	<1	<0.4	10	6	-	<0.1	14	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
134	0 - 0.1 m	08/08/24	6	<1	<0.4	29	18	-	<0.1	15	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
135	1 m	08/08/24	<4	<1	<0.4	18	12	-	<0.1	14	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.005	<0.005
136	0 - 0.1 m	08/08/24	<4	<1	<0.4	8	7	-	<0.1	7	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-
SP1-1	0 m	08/08/24	5	<1	<0.4	13	5	-	<0.1	13	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
SP1-2	0 m	08/08/24	<4	<1	<0.4	4	3	-	<0.1	5	<2	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-
Waste Classification Criteria [f]																											
CT1			100	20	20	100	100	-	4	40	20	650	10,000	10	288	600	1000	0.8	200	<50	60	-	-	4	<50	-	-
SCC1			500	100	100	1,900	1,500	-	50	1,050	50	650	10,000	18	518	1,080	1,800	10	200	<50	108	-	-	7.5	<50	18	1.8
TCLP1			-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CT2			400	80	80	400	400	-	16	160	80	2,600	40,000	40	1,152	2,400	4,000	3.2	800	<50	240	-	-	16	<50	-	-
SCC2			2,000	400	400	7,600	6,000	-	200	4,200	200	2,600	40,000	72	2,073	4,320	7,200	23	800	<50	432	-	-	30	<50	72	7.2
TCLP2			-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CT1 exceedance TCLP1 and/or SCC1 exceedance CT2 exceedance TCLP2 and/or SCC2 exceedance Asbestos detection

- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Total chromium used as initial screen for chromium(VI).

c Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

f NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste

PQL Practical quantitation limit

CT1 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste

SCC1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

TCLP1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

CT2 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste

SCC2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

TCLP2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

Table G5: Summary of Laboratory Results – Asbestos - Waste Classification

			Asbestos										
			Asbestos ID in materials	Trace Analysis (AS)	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Total Asbestos#1	Asbestos Comment	Asbestos Summary
		PQL								0.001	0.1		0.001
Sample ID	Depth	Sample Date	-	-	-	-	-	g	g	%(w/w)	g/kg	-	
101	1 m	05/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
102	1.5 m	05/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
103	0.5 m	05/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
104	1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
105	0.5 m	06/08/24	-	-	-	-	-	-	-	-	-	-	-
105	1.5 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
106	0 - 0.1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
107	2 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
108	1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
109	0 - 0.1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
110	0.5 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
111	0.5 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
112	1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
113	1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
114	0.5 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
114	1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
115	0 - 0.1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
115	1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
116	0 - 0.1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
117	0.5 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
118	2 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
119	2.5 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
120	2 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
121	1 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
122	1.5 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
123	1.5 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
124	2 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
125	1 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
126	0.5 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
127	1 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
128	2.5 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
129	1 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
130	1.5 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
131	1 m	08/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
132	0.5 m	08/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
133	1.5 m	08/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
134	0 - 0.1 m	08/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
135	1 m	08/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
136	0 - 0.1 m	08/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
SP1-1	0 m	08/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
SP1-2	0 m	08/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
102	0 - 0.1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
107	0 - 0.1 m	06/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
120	0 - 0.1 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
122	0 - 0.1 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
127	0 - 0.1 m	07/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
135	0 - 0.1 m	08/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
108/F1	0 m	06/08/24	Detected	NAD	-	-	-	-	-	-	-	-	Detected
123	2.3 - 2.35 m	07/08/24	-	-	-	-	-	-	-	-	-	-	-
131	0 - 0.1 m	08/08/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
201	1 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
202	0.5 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
203	0.5 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
204	0 - 0.1 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
204	0.8 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
205	0.5 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
205	1.5 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
206	0.5 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
207	1 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
207	2 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
208	0.5 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
208	1 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
209	0.5 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
208	1.5 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
210	0 - 0.1 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
210	1.5 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
211	1 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
212	0.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
213	0.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
214	1 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
214	2.5 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
215	1 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
216	1 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
217	0.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
218	0 - 0.1 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
218	1 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
219	2 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
220	0 - 0.1 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
220	1 m	29/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
221	0 - 0.1 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
221	0.8 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
222	0.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
222	2.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
223	0.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
223	1.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
224	0 - 0.1 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
224	1 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
225	1 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
225	1.5 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
226	0.5 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
227	0 - 0.1 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
227	1 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
228	1.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
229	0 - 0.1 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
229	1.5 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
230	0.5 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
230	1.5 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
231	0.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
231	1 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
232	0.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
232	1.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
233	0.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
233	1.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
234	0.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
234	1.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
235	0.5 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
235	2 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
236	1 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
237	0 - 0.1 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
238	0.5 m	31/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
238	1.5 m	31/10/24	-	-	NAD	Detected	NAD	–	0.0004	<0.001	<0.1	YES	Detected
239	1 m	30/10/24	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	Nil	-
238/F1	0 m	30/10/24	Detected	NAD	-	-	-	-	-	-	-	-	Detected
Waste Classification Criteria [f]													
CT1			-	-	-	-	-	-	-	-	-	-	-
SCC1			-	-	-	-	-	-	-	-	-	-	-
TCLP1			-	-	-	-	-	-	-	-	-	-	-
CT2			-	-	-	-	-	-	-	-	-	-	-
SCC2			-	-	-	-	-	-	-	-	-	-	-
TCLP2			-	-	-	-	-	-	-	-	-	-	-

Notes:

a	QA/QC replicate of sample listed directly below the primary sample
b	Total chromium used as initial screen for chromium(VI).
c	Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)
d	Criteria for scheduled chemicals used as an initial screen
e	Criteria for Chlorpyrifos used as initial screen
f	NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste
PQL	Practical quantitation limit
CT1	Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste
SCC1	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
TCLP1	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
CT2	Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste
SCC2	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste
TCLP2	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

Douglas Partners
Geotechnics | Environment | Groundwater

Table G6: Summary of Field Asbestos Sieving

Test Pit	Sample Depth (m)	Soil Description	Soil Mass (kg)	No. Fragments	Fragment Condition	Fibro Size Range (mm)	Fibro Mass (g)	Fibro Mass (kg)	% Asbestos Content Assumed 15% Asbestos	Asbestos Present in Material
101	0-0.2	Fill / Silty Clay	15.6	0	-	-	-	-	-	-
101	0.2-0.7	Fill / Sandy Gravelly Clay	17.1	0	-	-	-	-	-	-
101	0.7-1.1	Fill / Silty Clay with gravel	16.2	0	-	-	-	-	-	-
101	1.3-2.3	Fill / Silty Clay with gravel	17.3	0	-	-	-	-	-	-
102	0-0.2	Fill / Sandy Clay with gravel	16.6	0	-	-	-	-	-	-
102	0.2 - 0.75	Fill / Gravelly Clay	18.5	0	-	-	-	-	-	-
102	1.0 - 2.0	Fill / Sandy Clay	17.7	0	-	-	-	-	-	-
103	0 - 0.15	Fill / Silty Clay trace gravel	15.1	0	-	-	-	-	-	-
103	0.15-0.9	Fill / Sandy Clay with gravel	14.2	0	-	-	-	-	-	-
103	0.9-1.2	Fill / Silty Clay with gravel	16.4	0	-	-	-	-	-	-
103	1.4-2.4	Fill / Silty Clay with gravel	17.9	0	-	-	-	-	-	-
104	0-0.4	Fill / Silty Clay with sand	18.2	0	-	-	-	-	-	-
104	0.5-1.5	Fill / Silty Clay with gravel	18.7	0	-	-	-	-	-	-
104	1.7-2.7	Fill / Silty Clay with gravel	17.3	0	-	-	-	-	-	-
105	0-0.4	Fill / Silty Sand with Gravel	17	0	-	-	-	-	-	-
105	0.6-1.6	Fill / Silty Clay with Gravel	18.1	0	-	-	-	-	-	-
105	1.8-2.1	Fill / Clayey Gravel with sand	17.3	0	-	-	-	-	-	-
105	2.1-2.7	Fill / Sandy Gravel	19.7	0	-	-	-	-	-	-
106	0-0.6	Fill / Silty Clay trace gravel	15.4	0	-	-	-	-	-	-
106	0.6-1.1	Fill / Gravelly Clay with sand	14.2	0	-	-	-	-	-	-
106	1.1-2.1	Fill / Gravelly Clay with sand	16.1	0	-	-	-	-	-	-
107	0-0.7	Fill / Silty Clay with Gravel	16.6	0	-	-	-	-	-	-
107	0.7-1.1	Fill / Silty Clay with Gravel	16.9	0	-	-	-	-	-	-
107	1.1-1.6	Fill / Silty Clay	17.8	0	-	-	-	-	-	-
107	1.6-2.5	Fill / Silty Clay trace gravel	18.5	0	-	-	-	-	-	-
108	0-0.3	Fill / Silty Clay	14.3	0	-	-	-	-	-	-
108	0.4-1.4	Fill / Silty Gravelly Clay	19.1	21	good	50-200	3.10E-03	3.10E-06	2.43E-05	YES
108	1.4-2.1	Fill / Clay with gravel	16.7	0	-	-	-	-	-	-
109	0-0.2	Fill / Silty Clay	17.2	0	-	-	-	-	-	-
109	0.2-0.6	Fill / Gravelly Clay	15.8	0	-	-	-	-	-	-
109	0.6-1.6	Fill / Silty Clay with sand	19	0	-	-	-	-	-	-
110	0-0.2	Fill / Silty Clay	17.1	0	-	-	-	-	-	-
110	0.4-1.4	Fill / Silty Clay	15.6	0	-	-	-	-	-	-
110	1.4-1.9	Fill / Gravelly Clay	15.4	0	-	-	-	-	-	-
111	0-0.8	Fill / Silty Clay with sand	14.8	0	-	-	-	-	-	-
111	0.8-1.0	Fill / Silty Clay with sand	13.9	0	-	-	-	-	-	-
111	1.0-1.8	Fill / Silty Clay	18.3	0	-	-	-	-	-	-
112	0-0.2	Fill / Silty Clay	15.2	0	-	-	-	-	-	-
112	0.2-0.5	Fill / Silty Clay with sand	17.6	0	-	-	-	-	-	-
112	0.5-1.3	Fill / Silty Clay with sand	16.9	0	-	-	-	-	-	-
112	1.3-1.7	Fill / Silty Clay trace sand	16.7	0	-	-	-	-	-	-
113	0-0.6	Fill / Silty Clay	16.1	0	-	-	-	-	-	-
113	0.6-1.3	Fill / Gravelly Clay	17.3	0	-	-	-	-	-	-
113	1.3-1.8	Fill / Silty Clay	15.4	0	-	-	-	-	-	-
114	0-0.9	Fill / Silty Clay trace gravel	14.6	0	-	-	-	-	-	-
114	0.9-1.3	Fill / Silty Clay with gravel	16.1	0	-	-	-	-	-	-
115	0-0.4	Fill / Silty Clay trace gravel	15.3	0	-	-	-	-	-	-
115	0.4-0.7	Fill / Silty Clay with gravel	17.7	0	-	-	-	-	-	-
116	0-0.4	Fill / Silty Clay with sand	18.8	0	-	-	-	-	-	-
116	0.4-0.7	Fill / Silty Clay with sand	17.9	0	-	-	-	-	-	-
117	0-0.4	Fill / Silty Clay	17.3	0	-	-	-	-	-	-
117	0.4-0.5	Fill / Silty Clay	16.2	0	-	-	-	-	-	-
118	0-0.4	Fill / Silty Clay with gravel	15.4	0	-	-	-	-	-	-
118	0.4-1.4	Fill / Sandy Clay, trace gravel	14.6	0	-	-	-	-	-	-
118	1.6-2.6	Fill / Silty Clay with gravel	15.7	0	-	-	-	-	-	-
118	2.8-3.4	Fill / Gravelly Clay	16.6	0	-	-	-	-	-	-
119	0-0.4	Fill / Silty Clay with gravel	16.6	0	-	-	-	-	-	-
119	0.4-0.9	Fill / Silty Clay with gravel	17.9	0	-	-	-	-	-	-
119	0.9-1.4	Fill / Silty Clay with gravel	18.2	0	-	-	-	-	-	-
119	1.4-2.4	Fill / Silty Clay trace gravel	19.1	0	-	-	-	-	-	-
120	0-0.6	Fill / Silty Clay trace gravel	17.6	0	-	-	-	-	-	-
120	0.6-1.3	Fill / Silty Clay trace gravel	16.2	0	-	-	-	-	-	-
120	1.3-2.7	Fill / Gravelly Clay, trace sand	15.7	0	-	-	-	-	-	-
121	0-0.6	Fill / Silty Clay	16.9	0	-	-	-	-	-	-
121	0.7-1.4	Fill / Gravelly Clay with sand	17.1	0	-	-	-	-	-	-
121	1.5-2.5	Fill / Silty Clay with gravel	18.3	0	-	-	-	-	-	-
122	0-0.4	Fill / Silty Clay with sand	19.1	0	-	-	-	-	-	-
122	0.4-0.8	Fill / Silty Clay with sand	12.4	0	-	-	-	-	-	-
122	0.8-1.8	Fill / Silty Clay with sand	16.7	0	-	-	-	-	-	-
122	1.9-2.9	Fill / Sandy Gravelly Clay	16.6	0	-	-	-	-	-	-
123	0-1.0	Fill / Silty Clay trace gravel	17.7	0	-	-	-	-	-	-
123	1.3-2.2	Fill / Silty Clay with sand	18.8	0	-	-	-	-	-	-
123	2.4-2.8	Fill / Silty Clay with gravel	17.2	0	-	-	-	-	-	-
124	0-0.6	Fill / Silty Clay trace gravel	16.3	0	-	-	-	-	-	-
124	0.6-1.2	Fill / Sandy Clay with gravel	18.1	0	-	-	-	-	-	-
124	1.4-2.4	Fill / Sandy Clay with gravel	17.9	0	-	-	-	-	-	-
125	0-0.8	Fill / Silty Clay with sand	16.1	0	-	-	-	-	-	-
125	0.9-1.9	Fill / Silty Clay with sand	15.3	0	-	-	-	-	-	-
125	1.9-2.6	Fill / Sandy Clay trace gravel	15.7	0	-	-	-	-	-	-
126	0-0.6	Fill / Silty Clay with sand	16.4	0	-	-	-	-	-	-
126	0.6-1.2	Fill / Gravelly Clay, with silt	15.6	0	-	-	-	-	-	-
126	1.2-2.2	Fill / Silty Clay with gravel	18.8	0	-	-	-	-	-	-
127	0-0.6	Fill / Silty Clay with sand	17.2	0	-	-	-	-	-	-
127	0.6-1.2	Fill / Gravelly Clay, with silt	16.1	0	-	-	-	-	-	-
127	1.2-2.2	Fill / Silty Clay trace sand	16.2	0	-	-	-	-	-	-
128	0-0.6	Fill / Silty Clay with sand	17.4	0	-	-	-	-	-	-
128	0.6-1.2	Fill / Silty Clay with gravel	14.6	0	-	-	-	-	-	-
128	1.4-2.4	Fill / Gravelly Clay	13.8	0	-	-	-	-	-	-
129	0-0.6	Fill / Silty Clay with sand	15.7	0	-	-	-	-	-	-
129	0.9-1.9	Fill / Gravelly Clay, with sand	15.8	0	-	-	-	-	-	-
130	0-0.4	Fill / Silty Clay with sand	17.3	0	-	-	-	-	-	-
130	0.4-0.6	Fill / Silty Clay with sand	18.2	0	-	-	-	-	-	-
130	0.6-1.4	Fill / Silty Clay trace sand	17.5	0	-	-	-	-	-	-
130	1.4-1.9	Fill / Sandy Clay with gravel	16.6	0	-	-	-	-	-	-
131	0-0.7	Fill / Silty Clay with sand	16.7	0	-	-	-	-	-	-
131	0.8-1.8	Fill/ Clayey Sand	17.6	0	-	-	-	-	-	-
132	0-0.25	Fill / Silty Clay	18.6	0	-	-	-	-	-	-
132	0.3-1.3	Fill / Gravelly Clay with sand	19.6	0	-	-	-	-	-	-
133	0-0.4	Fill / Silty Clay with gravel	12.7	0	-	-	-	-	-	-
133	0.4-1.2	Fill / Silty Gravelly Clay	13.1	0	-	-	-	-	-	-
133	1.2-1.9	Fill / Silty Clay with gravel	17.3	0	-	-	-	-	-	-
134	0-0.3	Fill / Silty Clay with sand	16.4	0	-	-	-	-	-	-
134	0.3-0.5	Fill / Silty Gravelly Clay	15.5	0	-	-	-	-	-	-
134	0.6-1.3	Fill / Gravelly Clayey Sand	14	0	-	-	-	-	-	-
135	0-0.3	Fill / Silty Clay with sand	14.9	0	-	-	-	-	-	-
135	0.3-1.1	Fill / Silty Clay trace sand	15.6	0	-	-	-	-	-	-
136	0-0.45	Fill / Silty Gravelly Clay	17.1	0	-	-	-	-	-	-
136	0.45-0.9	Fill / Silty Clay with gravels	18.2	0	-	-	-	-	-	-
SP1-1	0-0.2	Fill / Sandy Gravel	12.1	0	-	-	-	-	-	-
SP1-2	0-0.2	Fill / Sandy Gravel	12.3	0	-	-	-	-	-	-
SP1-3	0-0.2	Fill / Sandy Gravel	11.7	0	-	-	-	-	-	-
201	0-0.4	FILL / Silty Sandy CLAY	15.5	0	-	-	-	-	-	-
201	0.5-0.9	FILL / CLAY	14.6	0	-	-	-	-	-	-
201	1.0-1.4	FILL / Sandy Gravelly CLAY	12.3	0	-	-	-	-	-	-
201	1.5-2.3	FILL / Sandy Gravelly CLAY	15.8	0	-	-	-	-	-	-
202	0-0.4	FILL / Sandy CLAY, with gravel	15.2	0	-	-	-	-	-	-
202	0.5-1.1	FILL / Clayey GRAVEL, with sand	14.4	0	-	-	-	-	-	-
202	1.2-1.9	FILL / Sandy CLAY, with gravel	10.9	0	-	-	-	-	-	-
203	0-0.3	FILL / Sandy CLAY, with gravel	11.7	0	-	-	-	-	-	-
203	0.4-0.6	FILL / Sandy Gravelly CLAY	14.8	0	-	-	-	-	-	-
203	0.7-1.4	FILL / Silty Sandy CLAY, with gravel	15.1	0	-	-	-	-	-	-
204	0-0.3	FILL / Sandy CLAY, with gravel	14.1	0	-	-	-	-	-	-
204	0.4-0.9	FILL / Sandy Gravelly CLAY	11.8	0	-	-	-	-	-	-
204	1.0-1.4	Clayey GRAVEL	15.1	0	-	-	-	-	-	-
205	0-0.3	FILL / Clayey SAND	12.1	0	-	-	-	-	-	-
205	0.4-0.9	FILL / Sandy CLAY, with gravel	15.4	0	-	-	-	-	-	-
205	1.0-1.8	FILL / Sandy CLAY, with gravel	13.3	0	-	-	-	-	-	-
205	1.9-2.2	FILL / Sandy CLAY	11.5	0	-	-	-	-	-	-
206	0-0.4	FILL / Sandy CLAY, with gravel	11.9	0	-	-	-	-	-	-
206	0.5-1.1	FILL / Sandy CLAY, with gravel	11.7	0	-	-	-	-	-	-
206	1.1-1.3	FILL / Sandy GRAVEL	13.4	0	-	-	-	-	-	-
206	1.5-2.5	FILL / Silty Sandy CLAY	14.4	0	-	-	-	-	-	-
207	0-0.6	FILL / Silty Sandy CLAY, with gravel	15.7	0	-	-	-	-	-	-
207	0.7-1.2	FILL / Sandy CLAY, with gravel	11.6	0	-	-	-	-	-	-
207	1.3-2.2	FILL / Silty Sandy CLAY	16.3	0	-	-	-	-	-	-
208	0-0.4	FILL / Sandy CLAY, with gravel	13.7	0	-	-	-	-	-	-
208	0.5-0.9	FILL / Sandy Gravelly CLAY	11.5	0	-	-	-	-	-	-
208	1.0-1.3	FILL / Silty Sandy CLAY, with gravel	13.4	0	-	-	-	-	-	-
208	1.4-1.9	FILL / Silty Sandy CLAY, with gravel	16.3	0	-	-	-	-	-	-
209	0-0.4	FILL / Silty Sandy CLAY, with gravel	12.2	0	-	-	-	-	-	-
209	0.5-0.9	FILL / Sandy Gravelly CLAY	13.7	0	-	-	-	-	-	-
209	1.0-1.9	FILL / Sandy Gravelly CLAY	12.1	0	-	-	-	-	-	-
209	2.0-2.4	FILL / Silty CLAY, with sand	11.6	0	-	-	-	-	-	-
210	0-0.6	FILL / Sandy Gravelly CLAY	13.8	0	-	-	-	-	-	-
210	0.7-1.1	FILL / Sandy Gravelly CLAY	14.7	0	-	-	-	-	-	-
210	1.2-1.7	FILL / Sandy CLAY, with gravel	12.2	0	-	-	-	-	-	-
210	1.8-2.3	FILL / Silty Sandy CLAY	14.5	0	-	-	-	-	-	-
211	0-0.3	FILL / Sandy CLAY, with gravel	13.5	0	-	-	-	-	-	-
211	0.4-1.4	FILL / Sandy Gravelly CLAY	15.3	0	-	-	-	-	-	-
211	1.45-1.7	FILL / Silty Sandy CLAY	16.2	0	-	-	-	-	-	-
212	0-0.3	FILL / Silty Sandy CLAY, with gravel	11.9	0	-	-	-	-	-	-
212	0.4-0.9	FILL / Sandy CLAY, with gravel	13.3	0	-	-	-	-	-	-
212	1.0-1.4	FILL / Silty Sandy CLAY	12.2	0	-	-	-	-	-	-
213	0-0.4	FILL / Sandy CLAY, with gravel	14.7	0	-	-	-	-	-	-
213	0.5-0.8	FILL / Sandy CLAY	12.4	0	-	-	-	-	-	-
214	0-0.8	FILL / Sandy CLAY, with gravel	16.9	0	-	-	-	-	-	-
214	0.9-1.2	FILL / Sandy CLAY, with gravel	12.7	0	-	-	-	-	-	-
214	1.3-2.2	FILL / Silty Sandy CLAY, with gravel	11.3	0	-	-	-	-	-	-
214	2.3-2.9	FILL / Silty CLAY	11.9	0	-	-	-	-	-	-
215	0-0.9	FILL / Sandy CLAY, with gravel	13.2	0	-	-	-	-	-	-
215	1.0-1.4	FILL / Sandy Gravelly CLAY	15.7	0	-	-	-	-	-	-
215	1.5-1.9	FILL / Sandy CLAY	14.1	0	-	-	-	-	-	-
215	2.0-2.4	FILL / Silty Sandy CLAY	12.9	0	-	-	-	-	-	-
216	0-0.3	FILL / Sandy CLAY, with gravel	12.8	0	-	-	-	-	-	-
216	0.4-0.9	FILL / Sandy CLAY, with gravel	14.4	0	-	-	-	-	-	-
216	1.0-1.4	FILL / Sandy Gravelly CLAY	15.4	0	-	-	-	-	-	-
216	1.5-1.9	FILL / Silty Sandy CLAY	13.5	0	-	-	-	-	-	-
217	0-0.3	FILL / Sandy CLAY, with gravel	12.2	0	-	-	-	-	-	-
217	0.4-0.9	FILL / Clayey Sandy GRAVEL	15.6	0	-	-	-	-	-	-
217	1.0-1.2	FILL / Silty Sandy CLAY	12.3	0	-	-	-	-	-	-
218	0-0.4	FILL / Clayey Silty SAND, with gravel	13.1	0	-	-	-	-	-	-
218	0.5-0.8	FILL / Sandy CLAY, with gravel	12.4	0	-	-	-	-	-	-
218	0.9-1.6	FILL / Sandy CLAY	15.2	0	-	-	-	-	-	-
218	1.7-2.4	FILL / Silty Sandy CLAY	13.7	0	-	-	-	-	-	-
219	0-1.0	FILL / Silty Sandy CLAY, with gravel	15.1	0	-	-	-	-	-	-
219	1.1-1.6	FILL / Sandy CLAY, with gravel	12.4	0	-	-	-	-	-	-
219	1.7-2.6	FILL / Silty Sandy CLAY, with gravel	13.3	0	-	-	-	-	-	-
220	0-0.8	FILL / Sandy Gravelly CLAY	11.6	0	-	-	-	-	-	-
220	0.9-1.4	FILL / Sandy CLAY, with gravel	13.3	0	-	-	-	-	-	-
220	1.4-1.6	FILL / Silty CLAY, with sand	12.2	0	-	-	-	-	-	-
220	1.7-2.4	FILL / Silty CLAY, trace sand	16.1	0	-	-	-	-	-	-
221	0-0.4	FILL / Sandy CLAY, with gravel	11.5	0	-	-	-	-	-	-
221	0.5-1.4	FILL / Clayey Sandy GRAVEL	13.7	0	-	-	-	-	-	-
221	1.4-4.6	FILL / Silty Sandy CLAY	16.4	0	-	-	-	-	-	-
222	0-0.3	FILL / Silty Sandy CLAY, with gravel	12.9	0	-	-	-	-	-	-
222	0.4-0.9	FILL / Silty Sandy CLAY, with gravel	11.9	0	-	-	-	-	-	-
222	1.0-2.0	FILL / Sandy Gravelly CLAY	12.7	0	-	-	-	-	-	-
222	2.1-2.8	FILL / Sandy Gravelly CLAY	15.4	0	-	-	-	-	-	-
223	0-0.6	FILL / Sandy CLAY, with gravel	16.2	0	-	-	-	-	-	-
223	0.7-1.1	FILL / Silty Sandy CLAY, with gravel	13.7	0	-	-	-	-	-	-
223	1.2-2.2	FILL / Silty Sandy CLAY, with gravel	17.1	0	-	-	-	-	-	-
224	0-0.4	FILL / Sandy Gravelly CLAY	12.9	0	-	-	-	-	-	-
224	0.5-0.9	FILL / Silty Sandy CLAY, with gravel	13.7	0	-	-	-	-	-	-
224	1.0-1.9	FILL / Sandy CLAY, with gravel	13.6	0	-	-	-	-	-	-
224	2.0-2.4	FILL / Silty Sandy CLAY, trace gravel	15.4	0	-	-	-	-	-	-
225	0-0.8	FILL / Sandy Gravelly CLAY	12.4	0	-	-	-	-	-	-
225	0.9-1.3	FILL / Sandy CLAY, with gravel	11.8	0	-	-	-	-	-	-
225	1.4-2.3	FILL / Silty Sandy CLAY	14.3	0	-	-	-	-	-	-
226	0-0.4	FILL / Sandy CLAY, with gravel	14.8	0	-	-	-	-	-	-
226	0.5-0.7	FILL / Sandy Gravelly CLAY	13.9	0	-	-	-	-	-	-
226	0.8-1.2	FILL / Sandy CLAY, with gravel	15.9	0	-	-	-	-	-	-
227	0-0.6	FILL / Sandy CLAY, with gravel	14.6	0	-	-	-	-	-	-
227	0.7-1.1	FILL / Clayey SAND	16.5	0	-	-	-	-	-	-
227	1.2-2.2	FILL / Sandy Gravelly CLAY	13.6	0	-	-	-	-	-	-
228	0-0.4	FILL / Clayey SAND, with gravel	12.8	0	-	-	-	-	-	-
228	0.5-0.9	FILL / Sandy CLAY, with gravel	15.4	0	-	-	-	-	-	-
228	1.0-1.4	FILL / Sandy Gravelly CLAY	12.2	0	-	-	-	-	-	-
228	1.5-2.4	FILL / Silty Sandy CLAY, with gravel	14.3	0	-	-	-	-	-	-
229	0-0.7	FILL / Sandy CLAY, with gravel	12.6	0	-	-	-	-	-	-
229	0.8-1.1	FILL / Silty Sandy CLAY, with gravel	15.7	0	-	-	-	-	-	-
229	1.2-1.9	FILL / Sandy CLAY, with gravel	16.7	0	-	-	-	-	-	-
229	2.0-2.4	FILL / Silty Sandy CLAY	13.7	0	-	-	-	-	-	-
230	0-0.3	FILL / Sandy CLAY, with gravel	12.1	0	-	-	-	-	-	-
230	0.4-0.6	FILL / Silty Sandy CLAY, with gravel	13.1	0	-	-	-	-	-	-
230	0.7-1.8	FILL / Sandy CLAY, with gravel	12.4	0	-	-	-	-	-	-
231	0-0.4	FILL / Silty Sandy CLAY	11.3	0	-	-	-	-	-	-
231	0.4-0.6	FILL / Sandy Gravelly CLAY	12.7	0	-	-	-	-	-	-
231	0.7-1.1	FILL / Silty CLAY with gravel	16.7	0	-	-	-	-	-	-
231	1.2-2.2	FILL / Silty CLAY with gravel	12.4	0	-	-	-	-	-	-
231	2.3-3.3	FILL / Silty CLAY with gravel	17.8	0	-	-	-	-	-	-
233	0-0.4	FILL / Sandy Gravelly CLAY	11.7	0	-	-	-	-	-	-
233	0.5-1.1	Fill / Clayey GRAVEL with sand	12.3	0	-	-	-	-	-	-
233	1.2-1.6	FILL / Silty Sandy CLAY	12.4	0	-	-	-	-	-	-
234	0-0.7	FILL / Silty Sandy CLAY	13.4	0	-	-	-	-	-	-
234	0.8-1.1	FILL / Sandy Gravelly CLAY	14.7	0	-	-	-	-	-	-
234	1.2-1.8	FILL / Sandy CLAY, with gravel	15.3	0	-	-	-	-	-	-
234	1.9-2.4	FILL / Silty Sandy CLAY, with gravel	14.5	0	-	-	-	-	-	-
235	0-0.4	FILL / Sandy Gravelly CLAY	12.7	0	-	-	-	-	-	-
235	0.5-0.7	FILL / Sandy CLAY, with gravel	16.4	0	-	-	-	-	-	-
235	0.8-1.4	FILL / Silty Sandy CLAY	12.9	0	-	-	-	-	-	-
235	1.5-2.4	FILL / Silty Sandy CLAY	14.3	0	-	-	-	-	-	-
236	0-0.4	FILL / Sandy Gravelly CLAY	14.4	0	-	-	-	-	-	-
236	0.5-1.1	FILL / Sandy CLAY, with gravel	12.1	0	-	-	-	-	-	-
236	1.2-2.1	FILL / Silty Sandy CLAY, with gravel	16.3	0	-	-	-	-	-	-
237	0-0.3	FILL / Sandy CLAY, with gravel	14.6	0	-	-	-	-	-	-
237	0.4-0.6	FILL / Sandy CLAY, with gravel	13.7	0	-	-	-	-	-	-
237	0.7-1.3	FILL / Silty Sandy CLAY, with gravel	13.5	0	-	-	-	-	-	-
238	0-0.4	FILL / Sandy CLAY, with gravel	13.3	0	-	-	-	-	-	-
238	0.5-1.4	FILL / Silty Sandy CLAY, with gravel	14.9	0	-	-	-	-	-	-
238	1.5-2.5	FILL / Silty Sandy CLAY, with gravel	15.2	0	-	-	-	-	-	-
239	0-0.7	FILL / Sandy Gravelly CLAY	14.1	0	-	-	-	-	-	-
239	0.8-1.2	FILL / Sandy Gravelly CLAY	13.6	0	-	-	-	-	-	-
239	1.3-2.2	FILL / Silty Sandy CLAY, with gravel	16	0	-	-	-	-	-	-
Criteria		Recreational Land Use							0.02% w/w asbestos for ACM	

Notes:
Criteria for all site uses is 0.001% asbestos for Friable asbestos or Asbestos Fines
ACM - Asbestos Containing Material
w/w - weight/weight
NT - Not Tested
NA - Not Applicable
101 to 136 - Test Pit samples August 2024
201 to 239 - Test Pit samples October 2024

Douglas PARTNERS

Table E1: Summary of Laboratory Results – Priority metals, PAH, TRH, BTEX

			Priority metals								Priority PAH				Priority TRH						BTEX			
			Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	Total Xylenes
		PQL	4	0.4	1	1	1	0.1	1	1	1	0.05	0.5	0.05	25	50	25	50	100	100	0.2	0.5	1	1
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
8	0.5 m	07/05/24	**6**	<0.4	**14**	**40**	**11**	<0.1	**13**	**56**	<1	**0.2**	<0.5	**2.7**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	4 170	- 0.7	3 -	300 -	- -	- 120	40 180	230 -	- 1,300	- 5,600	0.6 65	390 105	NL 125	95 45
8	2.5 m	07/05/24	**7**	<0.4	**13**	**37**	**11**	<0.1	**14**	**56**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	NL 170	- 0.7	3 -	300 -	- -	- 120	150 180	NL -	- 1,300	- 5,600	2 65	NL 105	NL 125	NL 45
9	1 m	07/05/24	**5**	<0.4	**20**	**39**	**11**	<0.1	**19**	**56**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	NL 170	- 0.7	3 -	300 -	- -	- 120	90 180	NL -	- 1,300	- 5,600	1 65	NL 105	NL 125	310 45
QA	0 m	07/05/24	**4**	<0.4	**26**	**37**	**9**	<0.1	**27**	**51**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45
QA - [TRIPLICATE]	0 m	07/05/24	**4**	<0.4	**20**	**38**	**9**	<0.1	**17**	**50**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
9	2.5 m	07/05/24	<4	<0.4	**12**	**35**	**7**	<0.1	**16**	**50**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	NL 170	- 0.7	3 -	300 -	- -	- 120	150 180	NL -	- 1,300	- 5,600	2 65	NL 105	NL 125	NL 45
10	0.5 m	07/05/24	**6**	<0.4	**16**	**35**	**9**	<0.1	**13**	**49**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45
11	2 m	07/05/24	**5**	<0.4	**15**	**54**	**10**	<0.1	**12**	**60**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	NL 170	- 0.7	3 -	300 -	- -	- 120	150 180	NL -	- 1,300	- 5,600	2 65	NL 105	NL 125	NL 45
C2	0.7 m	07/05/24	**5**	<0.4	**11**	**31**	**13**	<0.1	**11**	**64**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45
C5	0.2 m	07/05/24	**7**	<0.4	**29**	**39**	**12**	<0.1	**16**	**43**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	5 170	- 0.7	3 -	300 -	- -	- 120	50 180	280 -	- 1,300	- 5,600	0.7 65	480 105	NL 125	110 45
C5	1 m	07/05/24	**5**	<0.4	**13**	**41**	**9**	<0.1	**12**	**60**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	NL 170	- 0.7	3 -	300 -	- -	- 120	90 180	NL -	- 1,300	- 5,600	1 65	NL 105	NL 125	310 45
C6	2 m	07/05/24	**4**	<0.4	**14**	**33**	**10**	<0.1	**13**	**51**	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			300 100	90 -	300 410	17,000 110	600 1,100	80 -	1,200 35	30,000 250	NL 170	- 0.7	3 -	300 -	- -	- 120	150 180	NL -	- 1,300	- 5,600	2 65	NL 105	NL 125	NL 45
10	2 m	07/05/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Lab result:
HIL/HSL value EIL/ESL/EGV value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report **Blue** = DC exceedance **Red** = EGV-indirect exceedance HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Not limiting NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level EGV = Environmental Guideline Value ML = Management Limit DC = Direct Contact HSL

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Recreational C including public open space

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-C (NEPC, 2013 or HEPA, 2020 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2020)
HSL (vapour intrusion)	HSL-A/B (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL C Recreational /Open space (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)

Douglas PARTNERS

Table E2: Summary of Laboratory Results – Priority OCP, OPP, PCB and Asbestos

			Priority OCP									Priority OPP	PCB	Asbestos (FA/AF)					Asbestos, Other						
			DDT+DDE+DDD c	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyriphos	Total PCB	Asb_Sample_mass	ACM >7mm Estimation	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Asbestos ID in soil >0.1g/kg	Trace Analysis (AS)	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	Total Asbestos#1	Asbestos Summary
		PQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			0.01		0.001						0.1	0.1
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	g	g	%(w/w)	g	%(w/w)	-	-	-	-	-	g/kg	
8	0.5 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD	NAD	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -							
8	2.5 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD	NAD	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -							
9	1 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD	NAD	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -							
QA	0 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD	NAD	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -							
QA - [TRIPLICATE]	0 m	07/05/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -							
9	2.5 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD	NAD	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -							
10	0.5 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1,119.36**	-	<0.01	-	<0.001	-	-	NAD	NAD	NAD	<0.1	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	0.001 -							
11	2 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**2,200**	-	<0.01	-	<0.001	-	-	NAD	NAD	NAD	<0.1	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	0.001 -							
C2	0.7 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD	NAD	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -							
C5	0.2 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD	NAD	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -							
C5	1 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD	NAD	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -							
C6	2 m	07/05/24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD	NAD	-	-	-	-	-
			400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -							
10	2 m	07/05/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -							

Lab result:
HIL/HSL value EIL/ESL/EGV value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report **Blue** = DC exceedance **Red** = EGV-indirect exceedance HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Not limiting NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level EGV = Environmental Guideline Value ML = Management Limit DC = Direct Contact HSL

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Recreational C including public open space

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-C (NEPC, 2013 or HEPA, 2020 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2020)
HSL (vapour intrusion)	HSL-A/B (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL C Recreational /Open space (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)

Appendix D

Borehole and Test Pit Logs from Previous Report(s)

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.4 AHD
COORDINATE: E:301245.3, N:6554006.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 8
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
07/05/24 No free groundwater observed	409	0	FILL / Clayey SILT, with sand: brown; low plasticity; fine to medium sand; abundant organics.		FILL				D		0.50	DCP9/150	5 10 15 25
		0.60	FILL / Gravelly CLAY, with cobbles, trace sand: brown and grey brown; medium to high plasticity; fine to coarse, angular to sub-angular gravel; angular to sub-angular, fine to medium cobbles; fine to coarse sand; with asphalt and pvc pipe.		FILL	NA	w<PL				1		
	408	1											
		2							D		2.50		
	407	2.80	Silty CLAY: dark brown; medium to high plasticity.		RS	VSt to H	w=PL				3	PP	300-350kPa
	406	3											
		3.60	CLAY: yellow brown and grey brown; medium to high plasticity.		RS						4	PP	300-400kPa
		4											
	405	4.40	Sandy GRAVEL, with cobbles: yellow brown; fine to coarse, angular to sub-angular; fine to coarse sand; fine to course cobbles.		XWM	D to VD	D						
			Test Pit discontinued at 4.70m depth. Refusal.										

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan
METHOD: 1.4m wide bucket with teeth
REMARKS: Coordinates and surface level recorded using dGPS in "fix" mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.6 AHD
COORDINATE: E:301315.2, N:6553938.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 9
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	SAMPLE DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
07/05/24 No free groundwater observed	409	0	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to coarse sand; fine to coarse, angular to sub-angular gravel; abundant organics trace plastic bottle.		FILL	NA	w<PL		D		0.10	DCP9/150	5 10 15 26
		0.35	FILL / Gravelly CLAY, with sand: brown; low to medium plasticity; fine to coarse, angular to sub-angular gravel; fine to coarse sand; with concrete, metal, reo bar.						D		1.00		
	408	1			FILL								
		2									2		
		2.20	Silty CLAY: grey brown; low to medium plasticity.		RS	VSt to H			D		2.50	PP	>400kPa
	407	3									3		
		3.00	Sandy GRAVEL: grey and orange brown.		XWM	D to VD	D						
	406	4	Test Pit discontinued at 3.90m depth. Refusal.										
	405												

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan

METHOD: Bucket refusal at 3.4m, single tyne ripper to 3.9m

REMARKS: Coordinates and surface level recorded using dGPS in “fix” mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 410.2 AHD
COORDINATE: E:301272.9, N:6553925.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 10
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] / DENSITY.[*]	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)
07/05/24 No free groundwater observed	410	0.25	FILL / Silty CLAY: brown; low to medium plasticity; abundant organics.		FILL	NA	w=PL		D		0.10
			FILL / Sandy CLAY, trace gravel: pale brown; medium to high plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with reinforced concrete and house bricks.		FILL				D		0.50
		0.70	FILL / Silty CLAY, with sand, trace gravel: grey white and pale brown; medium to high plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL		w<PL				
	409	1									1
		1.50	FILL / Sandy CLAY, with gravel: brown; medium to high plasticity; fine to medium sand; fine to coarse, sub-angular to sub-rounded gravel; with asphalt.		FILL		w>PL				
	408	2							D		2.00
		2.30	CLAY, trace silt: brown; medium to high plasticity.		RS	St to VSt	w=PL				
	407	3.00	Sandy GRAVEL, with cobbles: grey; fine to coarse, sub-angular to angular; fine to coarse sand; angular to sub-angular, fine to medium cobbles.		XWM	D to VD	D				3
		4									4
	406		Test Pit discontinued at 4.10m depth. Refusal.								

TESTING AND REMARKS

TEST TYPE: DCP9/150; PP <25-350kPa; PP 150-250kPa

RESULTS AND REMARKS: 5, 10, 15, 29, 25

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan

METHOD: 1.4m wide toothed bucket, from 3.3m with single tyne ripper. Approx 10min to excavate 400mm

REMARKS: Coordinates and surface level recorded using dGPS in "fix" mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.8 AHD
COORDINATE: E:301275.0, N:6553965.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 11
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
	409	0.30	FILL / Clayey SILT, trace sand, trace gravel: brown; low to medium plasticity; fine to coarse sand; fine to medium, angular to sub-angular gravel; abundant organics.		FILL		w=PL						
			FILL / Clayey SILT, with sand: grey brown; low plasticity; fine sand.		FILL				D		0.80	DCP9/150	5 10 15 25
	408	1.20	FILL / Silty CLAY, with sand, with gravel: brown; medium plasticity; fine to coarse sand; fine to coarse, angular to sub-angular gravel; with asphalt with concrete, traffic barrier board.		FILL	NA			D		2.00		
Seepage 07/05/24		2.00					w<PL						
	407	2.70	CLAY, trace sand: grey brown; medium to high plasticity; fine to medium sand.		RS	H						PP	>400kPa
	406	4.20	Sandy GRAVEL: grey and grey brown; fine to coarse, angular to sub-angular.		XWM	D to VD	D						
	405	4.60	Test Pit discontinued at 4.60m depth. Refusal.										

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan
METHOD: 1.4m wide bucket with teeth
REMARKS: Coordinates and surface level recorded using dGPS in "fix" mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 410.0 AHD
COORDINATE: E:301247.6, N:6553906.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: C1
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
07/05/24 No free groundwater observed		0.00	FILL / Silty CLAY, with gravel: brown; low to medium plasticity; fine to coarse gravel; with organics.		FILL							DCP9/150	5 10 15 25
		0.40	FILL / Silty CLAY, with gravel, trace sand: orange brown; low to medium plasticity; fine to medium, angular to sub-angular gravel; fine to medium sand.		FILL								
		0.70	FILL / Sandy SILT: brown; low plasticity; fine to medium sand; with organics.		FILL	NA							
	409	1									1		
		1.10	FILL / Clayey SILT: grey brown; low plasticity.		FILL		w<PL						
		1.50	CLAY, with silt, trace sand: brown; medium to high plasticity; fine sand.		RS	VSt to H						PP	>400kPa
	408	2									2		
			Test Pit discontinued at 2.30m depth. Limit of investigation.										
	407	3											
	406	4											

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan
METHOD: 1.4m wide bucket with teeth
REMARKS: Coordinates and surface level recorded using dGPS in “fix” mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.6 AHD
COORDINATE: E:301317.7, N:6553886.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: C2
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] / DENSITY.[*]	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
07/05/24 No free groundwater observed	409	0.30	FILL / Clayey SILT: brown; low to medium plasticity; abundant organics.		FILL						0.50	DCP9/150	5 10 15
			FILL / Gravelly CLAY, with sand: brown; low to medium plasticity; fine to coarse, angular to sub-angular gravel; fine to medium sand.		FILL	NA	w<PL		B		0.70		
		1							D		1.00		
	408	1.20	Sandy CLAY: grey brown; low to medium plasticity; fine to medium sand.		RS	VSt to H							22
		1.90	Sandy CLAY, trace gravel: yellow brown; low plasticity; fine to medium sand; fine to medium, angular to sub-angular gravel.		XWM						2		
		2	Test Pit discontinued at 2.10m depth. Limit of investigation.										
	407												
		3											
	406												
		4											
	405												

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan
METHOD: 1.4m wide bucket with teeth
REMARKS: Coordinates and surface level recorded using dGPS in “fix” mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.7 AHD
COORDINATE: E:301312.7, N:6553862.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: C3
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	SAMPLE DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
07/05/24 No free groundwater observed	409	0.15	FILL / Sandy SILT: brown; low plasticity; fine to medium sand; abundant organics.		FILL							DCP9/150	5 10 15 22
			FILL / Gravelly CLAY, trace sand: brown; low to medium plasticity; fine to coarse, angular to sub-angular gravel; fine to coarse sand.		FILL	NA							21 25
		0.75	Sandy SILT, trace clay: grey white; low plasticity; fine to medium sand.		RS	VSt to H	w<PL		B		0.80		
		1									1.00		
		1.20	Silty CLAY, trace sand: brown; low plasticity; fine to medium sand.		RS								
	408		Test Pit discontinued at 1.65m depth. Refusal.										
		2											
	407												
		3											
	406												
		4											
	405												

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan
METHOD: 1.4m wide bucket with teeth
REMARKS: Coordinates and surface level recorded using dGPS in “fix” mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 410.2 AHD
COORDINATE: E:301255.4, N:6553855.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: C4
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	RESULTS AND REMARKS
07/05/24 No free groundwater observed	410	0.20	FILL / Silty CLAY, with gravel: brown; low to medium plasticity; fine to medium, angular to sub-angular gravel; abundant organics.		FILL		w>PL						
			FILL / Silty CLAY, with gravel, trace sand: brown; low to medium plasticity; fine to coarse, angular to sub-angular gravel; fine to coarse sand; with concrete, golf balls.		FILL	NA			D		0.50	DCP9/150	5 10 15 24 24 24 24
	409	1.00	Silty CLAY: brown; medium to high plasticity.		RS	VSt to H	w<PL				1	PP	>400kPa 25
			Test Pit discontinued at 1.55m depth. Refusal.										
	408	2											
	407	3											
	406	4											

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan
METHOD: 1.4m wide bucket with teeth
REMARKS: Coordinates and surface level recorded using dGPS in "fix" mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 410.3 AHD
COORDINATE: E:301222.8, N:6553883.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: C5
PROJECT No: 226965.00
DATE: 07/05/24
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
07/05/24 No free groundwater observed	410 / 0.00	FILL / Silty CLAY: brown; low plasticity; abundant organics.		FILL				D		0.20	DCP9/150	5 10 15 24 25
	0.30	FILL / Silty CLAY, with gravel, trace sand: brown; low to medium plasticity; fine to coarse, sub-angular to sub-rounded gravel.		FILL	NA	w<PL		B		0.50		
	1							D		1.00		
	409 / 1.30	CLAY: brown; medium to high plasticity.		RS	VSt to H						PP	>400kPa
	2	Test Pit discontinued at 1.65m depth. Limit of investigation.										
	408											
	3											
	407											
	4											
	406											

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan
METHOD: 1.4m wide bucket with teeth
REMARKS: Coordinates and surface level recorded using dGPS in "fix" mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.2 AHD
COORDINATE: E:301329.5, N:6554002.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: C6
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	RESULTS AND REMARKS
07/05/24 No free groundwater observed	409	0.25	FILL / Silty CLAY, trace gravel: brown; low plasticity; fine to coarse, angular to sub-angular gravel; abundant organics.		FILL								
			FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to coarse, angular to sub-angular gravel; with concrete and asphalt.		FILL				B		0.50	DCP9/150	5 10 15 24 25
		1									1.00		
	408	1.10	FILL / Silty CLAY, with gravel: red brown; medium to high plasticity; fine to coarse, angular to sub-angular gravel.		FILL	NA	w<PL						
		1.50	FILL / Silty CLAY, with gravel: grey; low to medium plasticity; fine to coarse, angular to sub-angular gravel.		FILL				D		2.00		
	407	2											
			Test Pit discontinued at 2.30m depth. Limit of investigation.										
	406	3											
	405	4											

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan
METHOD: 1.4m wide bucket with teeth
REMARKS: Coordinates and surface level recorded using dGPS in "fix" mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.3 AHD
COORDINATE: E:301289.6, N:6554011.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: C7
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
07/05/24 No free groundwater observed	409	0.35	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to coarse, angular to sub-angular gravel; abundant organics.		FILL								
		1	FILL / Silty CLAY, with gravel: brown; medium to high plasticity; fine to coarse, angular to sub-angular gravel.		FILL				B		0.50	DCP9/150	5 10 15 25
	408	1.10	FILL / Silty CLAY, with gravel: grey brown; medium to high plasticity; fine to coarse, angular to sub-angular gravel; pvc pipe, timber, poly pipe, concrete.		FILL	NA	w<PL				1.00		
	407	2.00	FILL / Gravelly CLAY, trace cobbles: brown; medium to high plasticity; fine to coarse, angular to sub-angular gravel; angular to sub-angular, fine to medium cobbles.		FILL						2		
			Test Pit discontinued at 2.40m depth. Limit of investigation.										
	406	3											
	405	4											

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: Kobelco SK330
OPERATOR: TPE Civil (Peter)
LOGGED: Cowan
METHOD: 1.4m wide bucket with teeth
REMARKS: Coordinates and surface level recorded using dGPS in "fix" mode which has typical accuracy of ±0.1 m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.1 AHD
COORDINATE: E:301262.0, N:6554020.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: C8
PROJECT No: 226965.00
DATE: 07/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
07/05/24 No free groundwater observed	409	0.25	FILL / Silty CLAY: brown; low to medium plasticity; abundant organics.		FILL							DCP9/150	5 10 15 25
			FILL / Silty CLAY, with gravel: yellow brown and brown; low to medium plasticity; fine to coarse, angular to sub-angular gravel; with concrete.		FILL								
	408	1.00	FILL / Silty CLAY: brown; medium to high plasticity.		FILL	NA	w<PL				1		
		1.60	FILL / Silty CLAY, with gravel: grey brown; low to medium plasticity; fine to coarse, angular to sub-angular gravel.		FILL								
		1.90	FILL / Silty CLAY, with gravel: red brown; low to medium plasticity; fine to coarse, angular to sub-angular gravel.		FILL						2		
	407	2	Test Pit discontinued at 2.10m depth. Limit of investigation.										
	406	3											
	405	4											

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: Kobelco SK330
METHOD: 1.4m wide bucket with teeth
REMARKS: Coordinates and surface level recorded using dGPS in "fix" mode which has typical accuracy of ±0.1 m

OPERATOR: TPE Civil (Peter)
LOGGED: Cowan

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.3 AHD
COORDINATE: E:301347.7, N:6553955.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 1
PROJECT No: 226965.00
DATE: 22/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(*) DENSITY.(*)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	ROCK RECOVERY (%)	ROCK RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING TEST TYPE	TESTING RESULTS AND REMARKS
22/05/24 No free groundwater observed	409	0.25	FILL / Silty CLAY: brown; low to medium plasticity; abundant organic matter.		FILL	NA	w<PL									D	0.10		
			FILL / Sandy Gravelly CLAY, trace silt: brown; low to medium plasticity; fine to medium sand; fine to coarse gravel.													D	0.50		
	408	1			FILL	NA	w<PL									D	1.00		
																SPT	1.45	SPT	7,6,5 N=11
																D	1.50		
		1.80	Clayey SILT, with gravel: yellow and brown; low to medium plasticity; fine to medium gravel.																
	407	2			RS	St	w<PL									D	2.00		
		2.50	Silty CLAY, with gravel: brown; low to medium plasticity; fine gravel.													D	2.50		
																SPT	2.65	SPT	25/150
		3			XWM	H	w<PL										3		
		3.10	SILTSTONE: grey brown, fine grained, laminated					HW	3.10	H				3.10-3.35m: CZ, 10-20°					PLT	PL(D)=0.66MPa
	406	3.30	SANDSTONE: grey and white, medium to coarse grained, massive					MW	3.30	M to H				3.40-3.66m: JT, 40-50°, PR, VNR Clay 1mm, RF					PLT	PL(A)=1.47MPa
		3.43	CONGLOMERATE: grey brown and white, fine to coarse grained, massive						3.64		100	52		3.45m: P, 10-20°, PR, VNR Clay 1mm, RF 3.79m: JT, 10-20°, UN, CN 1mm, RF 3.81m JT, 40-50°, UN, VNR Clay 1mm, RF					PLT	PL(D)=1.99MPa
		4															4	PLT	PL(A)=4.33MPa
		4.05	SILTSTONE: grey brown, fine grained, laminated					MW to SW	4.05	H				3.86m: JT, UN CA 1mm, RF 4.12-4.14m: CZ, 20 mm 4.25-4.43m: JT x3, 60-70°, UN, TI 1mm, RF 4.27-4.29m: DS, 10-20°, PR, Clay 15 mm 4.45-4.70m: JT x2, 70-80°, PR, TI 1mm, RF 4.52-470m: JT x7, 20-40°, PR, TI 2mm, RF			PLT	PL(A)=1.82MPa
	405		Borehole discontinued at 4.70m depth. Limit of investigation.															PLT	PL(D)=2.01MPa

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: Scout 2
METHOD: Solid Flight Auger to 2.5m, NMLC to 4.7m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: HW to 3.1m

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Combined Log

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.1 AHD
COORDINATE: E:301288.1, N:6553998.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 2
PROJECT No: 226965.00
DATE: 22/05/24
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING TEST TYPE	TESTING RESULTS AND REMARKS
22/05/24 No free groundwater observed	409	0.20	FILL / Sandy CLAY, trace gravel: brown; low to medium plasticity; fine to medium sand; fine gravel; abundant organic matter.		FILL	NA	w<PL		D		0.10		
			FILL / Silty CLAY, with sand, trace gravel: brown; low to medium plasticity; fine to medium sand; fine to medium gravel; black pvc pipe.		FILL	NA	w<PL		D		0.50		
	408	1.00	FILL / Silty CLAY, with sand, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium gravel.		FILL	NA	w<PL		D		1.00		
									SPT		1.45	SPT	7,9,6 N=15
									D		1.50		
	407	2							D		2.00		
									D		2.50		
		2.75	Silty CLAY, trace gravel: grey and yellow; medium to high plasticity; fine to medium gravel.						SPT		2.95	SPT	4,2,3 N=5 90-140kPa
	406	3			RS	F to St	w=PL		D		3.00	PP	
									U50		3.40		
		3.70	Silty CLAY, trace gravel: pale brown; low to medium plasticity; fine gravel.		XWM	H	w<PL						
	405	4						No sample recovered	D		4.00		14/10
									SPT				

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: Scout 2
METHOD: Solid Flight Auger to 5.4m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.1 AHD
COORDINATE: E:301288.1, N:6553998.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 2
PROJECT No: 226965.00
DATE: 22/05/24
SHEET: 2 of 2

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
	404	[CONT] Silty CLAY, trace gravel: pale brown; low to medium plasticity; fine gravel.		XWM	H	w<PL						
		Borehole discontinued at 5.40m depth. TC bit refusal.										
	403											
	402											
	401											
	400											

6
7
8
9

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: Scout 2
METHOD: Solid Flight Auger to 5.4m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.8 AHD
COORDINATE: E:301202.6, N:6553987.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 3
PROJECT No: 226965.00
DATE: 21/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
21/05/24 No free groundwater observed		0.15	FILL / Sandy GRAVEL: brown; fine to medium; fine sand.		FILL	NA	D		D		0.10		
	409		FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to coarse gravel.						D		0.50		
		1							D		1.00		
					FILL	NA	w=PL		SPT		1.45	SPT	5,5,6 N=11
	408	2									2.00		
		2.25	Silty CLAY, trace gravel: brown; medium to high plasticity; fine gravel.						U50		2.40	PP	>400kPa
											2.50		
	407								SPT			SPT	5,7,8 N=15
		3			RS	St to VSt	w=PL				2.95		
	406	4.00	Sandy CLAY, trace gravel: pale yellow; medium to high plasticity; fine to medium sand; fine to medium gravel.		XWM	H	w<PL		SPT		4.00	PP	380->400kPa
												SPT	10,20,25/140
	405		Borehole discontinued at 4.50m depth. TC bit refusal.								4.44		

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: Scout 2
METHOD: Solid Flight Auger to 4.5m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.9 AHD
COORDINATE: E:301252.5, N:6553973.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 4
PROJECT No: 226965.00
DATE: 22/05/24
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
22/06/24 No free groundwater observed	409	0.10	FILL / Sandy CLAY, with gravel: pale brown; low to medium plasticity; fine to medium sand; fine gravel; with organic matter.		FILL	NA	w<PL		D		0.10		
			FILL / Silty CLAY, trace gravel: brown; low to medium plasticity.						D		0.50		
		1							D		1.00		
					FILL	NA	w<PL		SPT			SPT	9,21,22 N=43
											1.45		
									D		1.50		
	408	2							D		2.00		
		2.50	FILL / Sandy CLAY, with gravel, trace silt: brown; low to medium plasticity; fine to medium sand; fine to medium gravel.		FILL	NA	w<PL		D		2.50	PP	100-140kPa
									SPT			SPT	5,5,5 N=10
	407	3.00	CLAY, trace silt: dark brown; low to medium plasticity.		RS	St to VSt	w<PL		D		2.95		
									U50		3.00		
											3.40		
	406	4.00	Gravelly CLAY, with sand: grey and grey brown; medium plasticity; fine to coarse, sub-angular to angular gravel; fine to medium sand.		XWM	H	w<PL		SPT		4.00	SPT	25/70
											4.07		
	405												

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: Scout 2
METHOD: Solid Flight Auger to 5.2m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.9 AHD
COORDINATE: E:301252.5, N:6553973.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 4
PROJECT No: 226965.00
DATE: 22/05/24
SHEET: 2 of 2

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
	404 / 6	[CONT] Gravelly CLAY, with sand: grey and grey brown; medium plasticity; fine to coarse, sub-angular to angular gravel; fine to medium		XWM	H	w<PL						
		Borehole discontinued at 5.20m depth. TC bit refusal.										
	403 / 7											
	402 / 8											
	401 / 9											
	400											

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: Scout 2
METHOD: Solid Flight Auger to 5.2m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.4 AHD
COORDINATE: E:301341.4, N:6553909.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 5
PROJECT No: 226965.00
DATE: 22/05/24
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(†) DENSITY.(†)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING TEST TYPE	TESTING RESULTS AND REMARKS
23/06/24 No free groundwater observed	409	0.00	FILL / Silty CLAY, trace gravel: pale brown; low to medium plasticity; fine gravel.		FILL	NA	w<PL									D	0.00–0.10	0.10		
																D	0.40–0.50	0.50		
		0.80	FILL / Silty Gravelly CLAY: brown; low to medium plasticity; fine to medium gravel.													D	0.90–1.00	1.00		
	408	1			FILL	NA	w<PL									SPT	1.00–1.45		SPT	16,15,17 N=32
																D	1.40–1.50	1.50		
		2.00	FILL / Gravelly CLAY, trace silt: pale yellow; low plasticity; fine to medium gravel.		FILL	NA	w<PL									D	1.90–2.00	2.00		
	407	2.40	Clayey GRAVEL, with sand: brown; fine to coarse, sub-angular to angular; fine to medium sand.		XWM	D to VD	D									D	2.40–2.50	2.50		
																SPT	2.50–2.87	2.87	SPT	21,20,25/70
		3																3		
		3.05	SILTSTONE: brown and yellow brown, fine grained, laminated						3.05		100	55		3.05-3.16m: F 3.30m: JT/70°, PR, Fe, RF					PLT PLT	PL(D)=1.28MPa PL(A)=5.3MPa
	406							HW to MW		H	100	0		3.44m: JT/10°, PR, RF 3.48m: JT/10°, PR, RF 3.51m: JT/60°, PR, Clay, RF 3.54m: JT/20°, PR, RF 3.56m: JT/10°, PR, RF 3.61-4.36m: F						
		4																4		
	405								4.55		100	43		4.44m: JT/70°, PR, Fe, RF 4.55-4.69m: CS					PLT PLT	PL(I)=1.41MPa PL(A)=2.06MPa
			4.55m-4.69m: Grey clay seam					SEAM	4.69	SEAM			SEAM	4.69-4.79m: JT/80°, PR, Fe, RF						
			4.69m: Brown					MW		H				4.89-4.97m: JT/80°, PR, Fe, RF						

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: Scout 2
METHOD: Solid Flight Auger to 2.87m, NMLC to 5.20m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: HW to 3m

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Combined Log

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.4 AHD
COORDINATE: E:301341.4, N:6553909.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 5
PROJECT No: 226965.00
DATE: 22/05/24
SHEET: 2 of 2

CONDITIONS ENCOUNTERED																		SAMPLE				TESTING	
				SOIL			ROCK																
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(†) / DENSITY.(†)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH (VL L M H VH EH)	RECOVERY (%)	RQD	FRACTURE SPACING (m) (>0.06, 0.06-0.18, 0.18-0.60, 0.60-2.00, >2.00)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	7	[CONT] SILTSTONE: brown and yellow brown, fine grained, laminated					MW		H	100	43		5.00-5.15m: JT x2/80°, PR, Fe, RF					PLT	PL(I)=2.16MPa
	6	Borehole discontinued at 5.20m depth. Limit of investigation.																					
	8																						
	9																						

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: Scout 2
METHOD: Solid Flight Auger to 2.87m, NMLC to 5.20m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: HW to 3m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.2 AHD
COORDINATE: E:301308.0, N:6553972.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 6
PROJECT No: 226965.00
DATE: 23/05/24
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
22/06/24 No free groundwater observed	409	0.30	FILL / Sandy CLAY, with gravel: brown; medium to high plasticity; fine to medium sand; fine to medium gravel; abundant organics.		FILL	NA	w<PL		D		0.10		
			FILL / Silty Gravelly CLAY, trace sand: brown; medium to high plasticity; fine to coarse gravel.		FILL	NA	w=PL		D		0.50		
	408	1.00	FILL / Silty Gravelly CLAY, trace sand: pale brown; low to medium plasticity; fine to coarse gravel.		FILL	NA	w<PL		D		1.00		
									SPT		1.45	SPT	4,7,7 N=14
									D		1.50		
		2							D		2.00		
	407	2.20	FILL / Sandy CLAY, trace silt, trace gravel: grey and brown; low to medium plasticity; fine to medium sand; fine to medium gravel.		FILL	NA	w<PL		D		2.20		
		2.50	Silty CLAY, trace sand, trace gravel: grey and brown; low to medium plasticity; fine sand; fine gravel.		RS	F to St	w>PL		D		2.50		
									SPT		2.95	SPT	4,3,5 N=8
		3.00	CLAY, with gravel: brown; medium to high plasticity; fine to medium gravel.		RS	St to VSt	w>PL		D		3.00		
	406								U50		3.35		
											3.75		
		4.00	Gravelly CLAY: grey, brown and yellow brown; medium plasticity; fine to medium, sub-angular to angular gravel.		XWM	H	w=PL		D		4.00		
	405										4.50		
									SPT		4.85	SPT	20,25/100

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: Scout 2
METHOD: Solid Flight Auger to 5.62m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: HW to 3.1m

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 409.2 AHD
COORDINATE: E:301308.0, N:6553972.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 6
PROJECT No: 226965.00
DATE: 23/05/24
SHEET: 2 of 2

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
	404	[CONT] Gravelly CLAY: grey, brown and yellow brown; medium plasticity; fine to medium, sub-angular to angular gravel.		XWM	H	w=PL		D SPT		5.50 5.62	SPT	25/120
	403	Borehole discontinued at 5.62m depth. Limit of investigation.										
	402											
	401											
	400											

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: Scout 2
METHOD: Solid Flight Auger to 5.62m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: HW to 3.1m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue

SURFACE LEVEL: 410.0 AHD
COORDINATE: E:301234.5, N:6553961.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 7
PROJECT No: 226965.00
DATE: 21/05/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] DENSITY.[*]	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
21/06/24 No free groundwater observed	410	0.10	FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to coarse sand; fine to coarse gravel; abundant organics.		FILL	NA	w<PL		D		0.10		
			FILL / Sandy CLAY, with gravel: pale yellow; low to medium plasticity; fine to medium sand; fine to coarse gravel.		FILL	NA	w<PL		D		0.50		
		0.85	FILL / Silty Gravelly CLAY: brown; low to medium plasticity; fine to coarse gravel.		FILL	NA	w=PL		D		1.00		
	409	1							SPT		1.45	SPT	7,8,12 N=20
		1.50	FILL / Silty CLAY, with sand, trace gravel: pale brown; low to medium plasticity; fine to medium sand; fine gravel.		FILL	NA	w<PL		D		1.50		
		2.00	FILL / Sandy CLAY, trace gravel: dark brown; medium to high plasticity; fine to medium sand; fine gravel.		FILL	NA	w<PL		D		2.00		
	408								D		2.50		
		2.75	Silty CLAY: dark brown; medium to high plasticity.		RS	St to VSt	w>PL		SPT		2.95	SPT	6,5,5 N=10 250-360kPa
		3									3	PP	
	407	3.10	CLAY, trace gravel: dark brown; medium to high plasticity; fine gravel.		RS	St to VSt	w>PL		U50		3.10	PP	180kPa
											3.50		
		4.00	Sandy CLAY, with gravel: pale yellow; low to medium plasticity; fine to medium sand; fine to coarse gravel.		XWM	H	w<PL		D		4.00		
	406								SPT		4.39	SPT	7,10,25/60
			Borehole discontinued at 4.80m depth. TC bit refusal.						D		4.80		

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: Scout 2
METHOD: Solid Flight Auger to 4.8m
REMARKS:

OPERATOR: Ground Test (Ellis)

LOGGED: Parmar
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.5 AHD
COORDINATE: E:301365.7, N:6553979.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 101
PROJECT No: 226965.01
DATE: 05/08/24
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
05/08/24 no free groundwater observed	409	FILL / Silty CLAY: brown; low to medium plasticity; with rootlets.		FILL	NA	w<PL		D/ES		0.05	PID	<1ppm
	0.20	FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.50	PID	<1ppm
	0.70	FILL / Silty CLAY, with gravel: red brown; low to medium plasticity; trace concrete, plastic brick fragments.		FILL				D/ES		1.00	PID	<1ppm
	1.10	FILL / Silty CLAY, with gravel: brown; low to medium plasticity.		FILL				D/ES		1.50	PID	<1ppm
	408							D/ES		2.00	PID	<1ppm
	2							D/ES		2.50	PID	<1ppm
	407							D/ES		3.00	PID	<1ppm
	2.70	SILTSTONE: grey / brown.		RS possibly XWM	H							
	3											
	406	Test Pit discontinued at 3.20m depth.										
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.5 AHD
COORDINATE: E:301356.3, N:6554006.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 102
PROJECT No: 226965.01
DATE: 05/08/24
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
05/08/24 no free groundwater observed		0.20	FILL / Sandy CLAY, with gravel: dark brown; low to medium plasticity; fine to medium sand; fine to coarse, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
	408		FILL / Gravelly CLAY: brown; low to medium plasticity; with brick fragments, concrete, plastic wire, pipe.		FILL				D/ES		0.50	PID	<1ppm
		0.75	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium gravel; trace concrete fragments.						D/ES		1.00	PID	<1ppm
		1				NA	w<PL						
	407				FILL				D/ES		1.50	PID	<1ppm
		2							D/ES		2.00	PID	<1ppm
		2.10	SILTSTONE: grey / brown.		RS possibly XWM	H							
	406								D/ES		2.50	PID	<1ppm
			Test Pit discontinued at 2.60m depth.										
	405	3											
		4											
	404												

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.9 AHD
COORDINATE: E:301340.8, N:6553985.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 103
PROJECT No: 226965.01
DATE: 05/08/24
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
05/08/24 no free groundwater observed	408	FILL / Silty CLAY, trace gravel: brown; low to medium plasticity; fine to coarse, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
	0.15	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; with concrete, asphalt.		FILL				D/ES		0.50	PID	<1ppm
	0.90	FILL / Silty CLAY, with gravel: red brown; medium to high plasticity; fine to medium, sub-angular to sub-rounded gravel.		FILL				D/ES		1.00	PID	<1ppm
	1	FILL / Silty CLAY, with gravel: grey; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel.		FILL	NA	w<PL		D/ES		1.50	PID	<1ppm
	1.20											
	407							D/ES		2.00	PID	<1ppm
	2											
	2.70	SILTSTONE: grey / brown.		RS possibly XWM	H			D/ES		2.50	PID	<1ppm
	406											
	3							D/ES		3.00	PID	<1ppm
	405	Test Pit discontinued at 3.20m depth.										
	4											
	404											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.9 AHD
COORDINATE: E:301321.6, N:6554012.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 104
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	408	0.40	FILL / Silty CLAY, with sand, trace gravel: brown; medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; rootlets.		FILL	NA		w<PL	PFAS	D/ES		0.05	PID	<1ppm
		1	FILL / Silty CLAY, with gravel: brown; medium plasticity; fine to medium, sub-angular to sub-rounded gravel; with asphalt, polypipe, concrete pylon / slab.		FILL				PFAS	D/ES		0.50	PID	<1ppm
												1	PID	<1ppm
		1.60	FILL / Silty CLAY, with gravel: grey / brown; low to medium plasticity.		FILL					D/ES		1.50	PID	<1ppm
	407	2							PFAS	D/ES		2.00	PID	<1ppm
										D/ES		2.50	PID	<1ppm
	406	2.80	SILTSTONE: mottled yellow / black.		RS possibly XWM	H				D/ES		3.00	PID	<1ppm
		3												
	405	4	Test Pit discontinued at 3.30m depth.											
	404													

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.2 AHD
COORDINATE: E:301316.1, N:6553972.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 105
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	409 / 0	FILL / Silty SAND, with gravel: brown; fine to medium; rootlets.		FILL	NA	M		D/ES		0.05	PID	<1ppm
	0.40	FILL / Silty CLAY, with sand, trace gravel: brown; low plasticity; with concrete reo.		FILL		w<PL		D/ES		0.50	PID	<1ppm
	408 / 1							D/ES		1.00	PID	<1ppm
								D/ES		1.50	PID	<1ppm
	1.80	FILL / Clayey GRAVEL, with sand: orange brown; low to medium plasticity clay; trace reo, brick fragment.		FILL		M	PFAS	D/ES		2.00	PID	<1ppm
	2 / 2.10	FILL / Sandy GRAVEL: grey; fine to medium; fine to medium sand.		FILL			PFAS	D/ES		2.50	PID	<1ppm
	407 / 2.70	SILTSTONE: yellow / brown; medium.		RS	H			D/ES		3.00	PID	<1ppm
	3 / 406	Test Pit discontinued at 3.20m depth.										
	4 / 405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.2 AHD
COORDINATE: E:301348.2, N:6553966.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 106
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	409	FILL / Silty CLAY, trace gravel: brown; low plasticity; fine to medium, sub-angular to sub-rounded gravel; with rootlets, brick fragments.		FILL	NA	w<PL		D/ES		0.05	PID	<1ppm
								D/ES		0.50	PID	<1ppm
	0.60	FILL / Gravelly CLAY, with sand: pale red / brown; low to medium plasticity; sub-angular to sub-rounded gravel.		FILL		w<PL						
	1							D/ES		1.00	PID	<1ppm
	1.10	FILL / Gravelly CLAY, with sand: brown; medium to high plasticity; with asphalt.		FILL		w<PL						
	408							D/ES		1.50	PID	<1ppm
	2							D/ES		2.00	PID	<1ppm
	2.10	SILTSTONE, with gravel: yellow / brown.		RS possibly XWM								
	407							D/ES		2.50	PID	<1ppm
		Test Pit discontinued at 2.60m depth.										
	3											
	406											
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.2 AHD
COORDINATE: E:301358.9, N:6553936.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 107
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	410	0.00	FILL / Silty CLAY, with gravel: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel.		FILL	NA	w<PL	PFAS	D/ES		0.05	PID	<1ppm
								PFAS	D/ES		0.50	PID	<1ppm
		0.70	FILL / Silty CLAY, with gravel: grey / brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel.		FILL								
		1						PFAS	D/ES		1.00	PID	<1ppm
	409	1.10	FILL / Silty CLAY: dark grey; low to medium plasticity.		FILL								
								PFAS	D/ES		1.50	PID	<1ppm
		1.60	FILL / Silty CLAY, trace gravel: brown; medium to high plasticity; fine to medium, sub-angular to sub-rounded gravel.		FILL								
		2						PFAS	D/ES		2.00	PID	<1ppm
	408	2.50	SILTSTONE: yellow / brown.		XWM			PFAS	D/ES		2.50	PID	<1ppm
		3	Test Pit discontinued at 3.00m depth.					PFAS	D/ES		3.00	PID	<1ppm
	407												
		4											
	406												

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.4 AHD
COORDINATE: E:301329.8, N:6553943.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 108
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	409	FILL / Silty CLAY: brown; low to medium plasticity; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
	0.30											
		FILL / Silty Gravelly CLAY, with sand: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; fine to medium sand; with rootlets, trace concrete, brick, pipe line at 1.20m below ground level (PACM).		FILL	NA	w<PL		D/ES		0.50	PID	<1ppm
	1							D/ES		1.00	PID	<1ppm
	1.40											
	408	FILL / CLAY, with gravel: red / brown; medium plasticity; fine to medium, sub-angular to sub-rounded gravel; trace concrete, brick.		FILL				D/ES		1.50	PID	<1ppm
	2							D/ES		2.00	PID	<1ppm
	2.10											
		SILTSTONE: yellow brown.		XWM								
	407							D/ES		2.50	PID	<1ppm
		Test Pit discontinued at 2.60m depth.										
	3											
	406											
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.5 AHD
COORDINATE: E:301339.3, N:6553920.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 109
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	409	FILL / Silty CLAY, trace sand, trace gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; rootlets.		FILL			PFAS	D/ES		0.05	PID	<1ppm
	0.20	FILL / Gravelly CLAY, trace sand: orange brown; low to medium plasticity; fine to coarse, sub-angular to sub-rounded gravel; fine to medium sand.		FILL			PFAS	D/ES		0.50	PID	<1ppm
	0.60	FILL / Silty CLAY, with sand, trace gravel: mottled brown / grey; medium to high plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL	NA	w<PL	PFAS	D/ES		1.00	PID	<1ppm
	1	1.20m: pipe line at 1.20m below ground level (PACM)					PFAS	D/ES		1.50	PID	<1ppm
	408											
	1.60	SILTSTONE: grey / brown.		XWM			PFAS	D/ES		2.00	PID	<1ppm
	2											
		Test Pit discontinued at 2.10m depth.										
	407											
	3											
	406											
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.7 AHD
COORDINATE: E:301310.4, N:6553922.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 110
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	409	FILL / Silty CLAY; low to medium plasticity; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
	0.20	FILL / Silty CLAY: brown; low to medium plasticity; with rootlets, plastic, pipe, reo, gravels, asphalt.		FILL	NA	w<PL		D/ES		0.50	PID	<1ppm
	1							D/ES		1.00	PID	<1ppm
	1.40	FILL / Gravelly CLAY, with sand: orange / brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel.		FILL				D/ES		1.50	PID	<1ppm
	408 / 1.90	SILTSTONE: grey / brown.		XWM				D/ES		2.00	PID	<1ppm
	2											
	407											
	3	Test Pit discontinued at 2.90m depth.										
	406											
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS: D2/ SBK at 0m to 0.1m

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.5 AHD
COORDINATE: E:301350.8, N:6553890.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 111
PROJECT No: 226965.01
DATE: 06/08/24
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
	410 / 0	FILL / Silty CLAY, with sand, trace gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
								D/ES		0.50	PID	<1ppm
	0.80	FILL / Silty CLAY, with sand, with gravel: dark orange; low to medium plasticity; fine to medium sand; fine to coarse, sub-angular to sub-rounded gravel; trace asphalt .		FILL	NA	w<PL					PID	<1ppm
	1.00	FILL / Silty CLAY: orange brown; medium plasticity.		FILL				D/ES		1.00		
	409							D/ES		1.50	PID	<1ppm
	1.80	SILTSTONE: grey orange yellow.		XWM								
	2							D/ES		2.00	PID	<1ppm
Seepage observed 06/08/24	408	Test Pit discontinued at 2.30m depth.										
	3											
	407											
	4											
	406											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.5 AHD
COORDINATE: E:301323.1, N:6553898.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 112
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	409	FILL / Silty CLAY, trace sand, trace gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL			PFAS	D/ES		0.05	PID	<1ppm
	0.20											
		FILL / Silty CLAY, with sand, with gravel: orange brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.40	PID	<1ppm
	0.50											
		FILL / Silty CLAY, with sand, with gravel: red brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace concrete, asphalt.		FILL	NA	w<PL						
	1							D/ES		1.00	PID	<1ppm
	1.30											
	408	FILL / Silty CLAY, trace sand: grey brown; medium to high plasticity; fine to medium sand.		FILL				D/ES		1.50	PID	<1ppm
	1.70											
		SILTSTONE: yellow brown.		XWM				D/ES		2.00	PID	<1ppm
	2											
	407	Test Pit discontinued at 2.30m depth.										
	3											
	406											
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.7 AHD
COORDINATE: E:301304.1, N:6553889.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 113
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	409	0.60	FILL / Silty CLAY, trace sand, trace gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL	NA	w<PL		D/ES		0.05	PID	<1ppm
									D/ES		0.50	PID	<1ppm
		1	FILL / Gravelly CLAY, trace sand: mottled grey red brown; low plasticity; fine to medium, sub-angular to sub-rounded gravel; fine to medium sand; with concrete gravel.		FILL				D/ES		1.00	PID	<1ppm
		1.30	FILL / Silty CLAY, trace gravel: dark brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel.		FILL				D/ES		1.50	PID	<1ppm
	408	1.60	SILTSTONE: yellow brown.		XWM				D/ES		2.00	PID	<1ppm
		2											
	407	3	Test Pit discontinued at 2.10m depth.										
	406	4											
	405												

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.6 AHD
COORDINATE: E:301332.3, N:6553884.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 114
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	409	FILL / Silty CLAY, trace gravel: brown; low to medium plasticity; fine to medium gravel; with rootlets.		FILL	NA	w<PL		D/ES		0.05	PID	<1ppm
								D/ES		0.50	PID	<1ppm
	0.90 / 1	FILL / Silty CLAY, with gravel: grey; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; with rootlets, with concrete gravels.		FILL				D/ES		1.00	PID	<1ppm
	1.30 / 408	SILTSTONE: yellow / brown.		XWM				D/ES		1.50	PID	<1ppm
	2 / 407	Test Pit discontinued at 1.80m depth.										
	3 / 406											
	4 / 405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.4 AHD
COORDINATE: E:301343.4, N:6553859.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 115
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	410 / 0.00	FILL / Silty CLAY, trace gravel: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
	410 / 0.40	FILL / Silty CLAY, with gravel: brown; low to medium plasticity; fine to coarse, sub-angular to sub-rounded gravel; with concrete gravels.		FILL				D/ES		0.50	PID	<1ppm
	1							D/ES		1.00	PID	<1ppm
	409 / 1.40	SILTSTONE: grey / yellow.		XWM				D/ES		1.50	PID	<1ppm
	2	Test Pit discontinued at 1.80m depth.										
	408											
	3											
	407											
	4											
	406											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS: D3/SBK at 0m to 0.1m

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.7 AHD
COORDINATE: E:301330.6, N:6553841.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 116
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	409 / 0	FILL / Silty CLAY, with sand, trace gravel: brown; low to medium plasticity; with rootlets.		FILL	NA	w<PL		D/ES		0.05	PID	<1ppm
	0.40	FILL / Silty CLAY, with sand: grey; medium to high plasticity.		FILL				D/ES		0.50	PID	<1ppm
	0.70	CLAY: yellow brown; medium to high plasticity.		RS	St to H						PP	250-310kPa
	1							D/ES		1.00	PID	<1ppm
	408 / 2	Test Pit discontinued at 1.30m depth.										
	407 / 3											
	406 / 4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.6 AHD
COORDINATE: E:301287.9, N:6553851.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 117
PROJECT No: 226965.01
DATE: 06/08/24
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
06/08/24 no free groundwater observed	409	FILL / Silty CLAY: brown; with rootlets, conduit, heston, orange fencing, asphalt, plastic.		FILL	NA	w<PL		D/ES		0.05	PID	<1ppm
								D/ES		0.50	PID	<1ppm
	0.90											
	1	SILTSTONE: yelllow brown.		XWM				D/ES		1.00	PID	<1ppm
	408	Test Pit discontinued at 1.40m depth.										
	2											
	407											
	3											
	406											
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.2 AHD
COORDINATE: E:301284.4, N:6554011.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 118
PROJECT No: 226965.01
DATE: 07/08/24
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
	409 / 0	FILL / Silty CLAY, with gravel: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel.		FILL				D/ES		0.05	PID	<1ppm
	0.40	FILL / Sandy CLAY, trace gravel: grey / brown; low to medium plasticity; fine to coarse sand; fine to medium, sub-angular gravel.		FILL				D/ES		0.50	PID	<1ppm
	1							D/ES		1.00	PID	<1ppm
	408 / 1.40	FILL / Silty CLAY, with gravel: brown; low to medium plasticity.		FILL	NA	w<PL		D/ES		1.50	PID	<1ppm
	2							D/ES		2.00	PID	<1ppm
	407 / 2.80	FILL / Gravelly CLAY: grey / brown; low to medium plasticity; possibly natural material, strata obstructed by pit collapsing.		FILL		w>PL		D/ES		2.50	PID	<1ppm
Free groundwater observed 07/08/24	3 / 406							D/ES		3.00	PID	<1ppm
	4 / 405	Test Pit discontinued at 3.40m depth. Pit collapsing.										

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.0 AHD
COORDINATE: E:301261.3, N:6554019.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 119
PROJECT No: 226965.01
DATE: 07/08/24
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
		0.00	FILL / Silty CLAY, with gravel: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL	NA			PFAS	D/ES		0.05	PID	<1ppm
		0.40	FILL / Silty CLAY, with gravel, trace sand: mottled orange / grey / brown; low to medium plasticity; fine to medium gravel; fine to medium sand.		FILL				PFAS	D/ES		0.50	PID	<1ppm
		0.90	FILL / Silty CLAY, with gravel: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; trace concrete, asphalt.		FILL				PFAS	D/ES		1.00	PID	<1ppm
	408	1												
		1.40	FILL / Silty CLAY, trace gravel: brown; low to medium plasticity; fine to medium, sub-angular to angular gravel.		FILL		w<PL		PFAS	D/ES		1.50	PID	<1ppm
	407	2							PFAS	D/ES		2.00	PID	<1ppm
		2.40	FILL / Silty CLAY, with sand: grey; low to medium plasticity; fine to medium sand; with trace bark, roots rotting.		FILL				PFAS	D/ES		2.50	PID	<1ppm
Free groundwater observed 07/08/24			2.80m: possible natural material, strata obstructed											
	406	3					w>PL		PFAS	D/ES		3.00		
	405	4	Test Pit discontinued at 3.20m depth. Pit collapsing.											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.5 AHD
COORDINATE: E:301238.5, N:6554010.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 120
PROJECT No: 226965.01
DATE: 07/08/24
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
07/08/24 no free groundwater observed	409 / 0.00	FILL / Silty CLAY, trace gravel: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
								D/ES		0.50	PID	<1ppm
	409 / 0.60	FILL / Silty CLAY, trace gravel: orange / brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel.		FILL								
	1							D/ES		1.00	PID	<1ppm
	1.30	FILL / Gravelly CLAY, trace sand: grey / brown; medium to high plasticity; fine to coarse, sub-angular to sub-rounded gravel; fine to medium sand; trace concrete, plastic, wire.		FILL	NA	w<PL		D/ES		1.50	PID	<1ppm
	408											
	2							D/ES		2.00	PID	<1ppm
	407 / 2.70	Silty CLAY: grey; medium to high plasticity.		RS	St to VSt			D/ES		2.50	PID	<1ppm
											PP	200-260kPa
	3							D/ES		3.00	PID	<1ppm
	406	Test Pit discontinued at 3.30m depth.										
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS: D4/SBK at 1.0m

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.6 AHD
COORDINATE: E:301255.5, N:6553990.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 121
PROJECT No: 226965.01
DATE: 07/08/24
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
07/08/24 no free groundwater observed	409 / 0	FILL / Silty CLAY: brown; with rootlets.		FILL							PID	<1ppm
	0.60	FILL /; with asphalt. Concrete, reo, brick.		FILL							PID	<1ppm
	0.65	FILL / Gravelly CLAY, with sand: mottled orange brown.		FILL						1	PID	<1ppm
	1											
	1.40	FILL / Silty CLAY, with gravel: brown.		FILL	NA	w<PL					PID	<1ppm
	408											
	2									2	PID	<1ppm
	407										PID	<1ppm
	2.90										PP	310-340kPa
	3	Silty CLAY: grey.		RS	VSt					3	PID	<1ppm
	406	Test Pit discontinued at 3.40m depth.										
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.3 AHD
COORDINATE: E:301288.8, N:6553980.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 122
PROJECT No: 226965.01
DATE: 07/08/24
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
	409 / 0	FILL / Silty CLAY, with sand, trace gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
	0.40	FILL / Silty CLAY, with sand, with gravel: brown; low plasticity; fine to medium sand; fine to medium gravel.		FILL				D/ES		0.50	PID	<1ppm
	0.80 / 1 / 408	FILL / Silty CLAY, with sand, trace gravel: red brown; medium plasticity; fine to coarse sand; fine to medium, sub-angular to sub-rounded gravel; with pipe, plastic, concrete, gravels, star picket.		FILL	NA	w<PL		D/ES		1.00	PID	<1ppm
								D/ES		1.50	PID	<1ppm
Seepage from 07/08/24	1.80 / 2 / 407	FILL / Sandy Gravelly CLAY: grey; medium to high plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL				D/ES		2.00	PID	<1ppm
	2.90 / 3 / 406	FILL / Clayey GRAVEL: dark grey; fine to medium, sub-angular to sub-rounded.		FILL		W		D/ES		3.00	PID	<1ppm
	4 / 405	Test Pit discontinued at 3.40m depth. Pit collapsing.										

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.6 AHD
COORDINATE: E:301271.2, N:6553973.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 123
PROJECT No: 226965.01
DATE: 07/08/24
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
07/08/24 no free groundwater observed	409	FILL / Silty CLAY, trace gravel: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
								D/ES		0.50	PID	<1ppm
	1							D/ES		1.00	PID	<1ppm
	1.10	FILL / Silty CLAY, with sand, with gravel: orange / brown; low to medium plasticity; fine to medium sand; fine to coarse, sub-angular to sub-rounded gravel; trace concrete, plastic.		FILL	NA	w<PL		D/ES		1.50	PID	<1ppm
	408											
	2							D/ES		2.00	PID	<1ppm
	2.30			FILL								
	2.35	FILL / ASPHALT: black.										
		FILL / Silty CLAY, with gravel: grey; medium to high plasticity; fine to medium, sub-angular to sub-rounded gravel.		FILL				D/ES		2.50	PID	<1ppm
	407											
	2.80	Silty CLAY; medium to high plasticity.		RS	St to VSt	w<PL						
	3							D/ES		3.00	PID	<1ppm
		Test Pit discontinued at 3.30m depth.										
	406											
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.9 AHD
COORDINATE: E:301228.9, N:6553979.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 124
PROJECT No: 226965.01
DATE: 07/08/24
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
07/08/24 no free groundwater observed	409	FILL / Silty CLAY, trace gravel: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL			PFAS	D/ES		0.05	PID	<1ppm
							PFAS	D/ES		0.50	PID	<1ppm
	0.60	FILL / Sandy CLAY, with gravel: orange brown; low plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL								
	1						PFAS	D/ES		1.00	PID	<1ppm
	1.20	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; reo plastic, silt fencing, brick, insulation (PAEM).		FILL	NA	w<PL						
	408						PFAS	D/ES		1.50	PID	<1ppm
	2						PFAS	D/ES		2.00	PID	<1ppm
	2.80	Silty CLAY: grey / brown; medium to high plasticity.		RS	VSt	w<PL						
	407						PFAS	D/ES		2.50	PID	<1ppm
	3						PFAS	D/ES		3.00	PID	<1ppm
		Test Pit discontinued at 3.30m depth.										
	406											
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.1 AHD
COORDINATE: E:301250.2, N:6553956.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 125
PROJECT No: 226965.01
DATE: 07/08/24
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
07/08/24 no free groundwater observed	410	0	FILL / Silty CLAY, with sand, trace gravel: brown; low to medium plasticity; fine to coarse, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
									D/ES		0.50	PID	<1ppm
		0.80	FILL / Silty CLAY, with sand, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to angular gravel; with concrete, asphalt, wire.		FILL	NA	w<PL		D/ES		1.00	PID	<1ppm
	409	1											
									D/ES		1.50	PID	<1ppm
		1.90	FILL / Sandy CLAY, trace gravel: orange / brown; medium to high plasticity; fine to medium, sub-angular to angular gravel.		FILL				D/ES		2.00	PID	<1ppm
	408	2											
									D/ES		2.50	PID	<1ppm
		2.60	Silty CLAY: grey; medium to high plasticity.		RS	VSt							
	407	3							D/ES		3.00	PID	<1ppm
	406	4	Test Pit discontinued at 3.10m depth.										

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS: D5/SBK and T1/SBK at 0.5m

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.7 AHD
COORDINATE: E:301280.6, N:6553947.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 126
PROJECT No: 226965.01
DATE: 07/08/24
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
07/08/24 no free groundwater observed	409 / 0	FILL / Silty CLAY, with sand, trace gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
								D/ES		0.50	PID	<1ppm
	0.60	FILL / Gravelly CLAY, with silt, with sand: grey / brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; fine to medium sand; with concrete gravels, plastic, wire.		FILL				D/ES		1.00	PID	<1ppm
	1											
	1.20	FILL / Silty CLAY, with gravel: red / brown; low to medium plasticity; fine to coarse, sub-angular to sub-rounded gravel.		FILL	NA	w<PL		D/ES		1.50	PID	<1ppm
	408											
	2							D/ES		2.00		
											PID	<1ppm
	2.40	Silty CLAY: grey; medium to high plasticity.		RS	VSt			D/ES		2.50	PP	300-340kPa
	407											
	3	Test Pit discontinued at 2.90m depth.										
	406											
	4											
	405											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.0 AHD
COORDINATE: E:301260.7, N:6553938.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 127
PROJECT No: 226965.01
DATE: 07/08/24
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
07/08/24 no free groundwater observed			FILL / Silty CLAY, with sand, trace gravel: brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL	NA	w<PL		D/ES		0.05	PID	<1ppm
		0.60	FILL / Gravelly CLAY, with silt: grey / brown; fine to medium, sub-angular to sub-rounded gravel; trace concrete, gravels, plastic, wire.		FILL				D/ES		0.50	PID	<1ppm
	409	1							D/ES		1.00	PID	<1ppm
		1.20	FILL / Silty CLAY, trace sand, trace gravel: red / brown; fine to coarse sand; fine to medium, sub-angular gravel.		FILL				D/ES		1.50	PID	<1ppm
	408	2							D/ES		2.00	PID	<1ppm
		2.30	CLAY: grey.		RS	VSt			D/ES		2.50	PID	<1ppm
			Test Pit discontinued at 2.80m depth.										
	407	3											
	406	4											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.0 AHD
COORDINATE: E:301223.8, N:6553946.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 128
PROJECT No: 226965.01
DATE: 07/08/24
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
07/08/24 no free groundwater observed	409 / 0	FILL / Silty CLAY, with sand, trace gravel: brown; medium to high plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets, with plastic.		FILL				D/ES		0.05	PID	<1ppm
								D/ES		0.50	PID	<1ppm
	0.60	FILL / Silty CLAY, with gravel, trace sand: brown mottled orange; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; fine to medium sand; with rootlets, with plastic.		FILL								
	1							D/ES		1.00	PID	<1ppm
	1.20	FILL / Gravelly CLAY: red brown; low to medium plasticity; fine to coarse, sub-angular to sub-rounded gravel; with concrete with reo, plastic, brick, tree bark, asphalt.		FILL	NA	w<PL						
	408 / 2							D/ES		1.50	PID	<1ppm
								D/ES		2.00		
	2.70	Silty CLAY: pale brown; medium to high plasticity.		RS	VSt	w<PL						
	407 / 3							D/ES		2.50	PID	<1ppm
										3.00	PID	<1ppm
		Test Pit discontinued at 3.10m depth.										
	406 / 4											
	5											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.3 AHD
COORDINATE: E:301271.8, N:6553908.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 129
PROJECT No: 226965.01
DATE: 08/08/24
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
08/08/24 no free groundwater observed	410 / 0	FILL / Silty CLAY, with sand, with gravel: brown; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
								D/ES		0.50	PID	<1ppm
	0.60	FILL / Gravelly CLAY, with sand: brown motted orange; with plastic sheeting, metal wire.										
	1				NA	w<PL		D/ES		1.00	PID	<1ppm
	409			FILL								
								D/ES		1.50		
	2							D/ES		2.00	PID	<1ppm
	2.10	Silty CLAY: grey / brown.									PP	>400kPa
	408			RS	H	w<PL						
								D/ES		2.50	PID	<1ppm
		Test Pit discontinued at 2.70m depth.										
	3											
	407											
	4											
	406											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.0 AHD
COORDINATE: E:301247.1, N:6553919.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 130
PROJECT No: 226965.01
DATE: 07/08/24
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
07/08/24 no free groundwater observed	409 / 0	FILL / Silty CLAY, with sand, with gravel: brown; medium to high plasticity; fine to medium sand; fine to medium gravel; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
	0.40	FILL / Silty CLAY, with sand, trace gravel: orange brown; medium to high plasticity; fine to medium sand; fine to medium gravel.		FILL				D/ES		0.50	PID	<1ppm
	0.60	FILL / Silty CLAY, trace sand: brown; low to medium plasticity; fine to medium sand.		FILL	NA	w<PL		D/ES		1.00	PID	<1ppm
	1											
	1.40	FILL / Sandy CLAY: orange / brown; medium to high plasticity; fine to medium sand; with asphalt, concrete gravels, wire, plastic.		FILL				D/ES		1.50	PID	<1ppm
	1.90	Silty CLAY: grey; medium to high plasticity.		RS	VSt	w<PL					PP	320-340kPa
	408 / 2							D/ES		2.00	PID	<1ppm
		Test Pit discontinued at 2.50m depth.										
	407 / 3											
	406 / 4											
	5											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.4 AHD
COORDINATE: E:301258.7, N:6553890.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 131
PROJECT No: 226965.01
DATE: 08/08/24
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
08/08/24 no free groundwater observed	410 / 0	FILL / Silty CLAY, with sand, trace gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL			PFAS	D/ES		0.05	PID	<1ppm
							PFAS	D/ES		0.50	PID	<1ppm
	0.70 / 409	FILL / Clayey SAND, with gravel, trace silt: grey / brown; fine to medium; fine to medium gravel; trace asphalt, concrete, metal wire.		FILL			PFAS	D/ES		1.00	PID	<1ppm
	1						PFAS	D/ES		1.50	PID	<1ppm
	1.80 / 408	FILL / Silty CLAY: brown; low to medium plasticity.		FILL							PP	>400kPa
	2						PFAS	D/ES		2.00	PID	<1ppm
		Test Pit discontinued at 2.30m depth.										
	3 / 407											
	4 / 406											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.1 AHD
COORDINATE: E:301218.9, N:6553907.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 132
PROJECT No: 226965.01
DATE: 08/08/24
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
08/08/24 no free groundwater observed	410 / 0	FILL / Silty CLAY: brown; rootlets.		FILL				D/ES		0.05	PID	<1ppm
	0.25	FILL / Gravelly CLAY, with sand: orange / brown.		FILL	NA	w<PL		D/ES		0.50	PID	<1ppm
	409 / 1							D/ES		1.00	PID	<1ppm
	1.40	Silty CLAY: brown.		RS	VSt to H	w<PL					PP	320-350kPa
								D/ES		1.50	PID	<1ppm
	408 / 2	Test Pit discontinued at 1.90m depth.										
	407 / 3											
	406 / 4											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS: D6/SBK at 0m to 0.1m

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.6 AHD
COORDINATE: E:301267.9, N:6553870.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 133
PROJECT No: 226965.01
DATE: 08/08/24
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
08/08/24 no free groundwater observed	410.6 / 0	FILL / Silty CLAY, with gravel, trace sand: brown; medium to high plasticity; fine to medium gravel; fine to medium sand; with rootlets.		FILL							PID	ppm
	0.40											
	410	FILL / Silty Gravelly CLAY, with sand: brown / orange; medium to high plasticity; fine to medium, sub-angular to sub-rounded gravel; fine to medium sand.		FILL	NA	w<PL					PID	ppm
	1									1	PID	ppm
	1.20											
	409	FILL / Silty CLAY, with gravel, trace sand: brown; low plasticity; fine to medium gravel; fine to medium sand; concrete slab, PVC, plastic, wire, golf ball.		FILL							PID	ppm
	1.90										PP	>400kPa
	2	Silty CLAY: brown; medium to high plasticity.			H	w<PL				2	PID	ppm
	408	Test Pit discontinued at 2.40m depth.										
	3											
	407											
	4											
	406											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.3 AHD
COORDINATE: E:301235.4, N:6553876.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 134
PROJECT No: 226965.01
DATE: 08/08/24
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
08/08/24 no free groundwater observed	410 / 0.00	FILL / Silty CLAY, with sand: brown; low to medium plasticity; with rootlets.		FILL	NA	w<PL		D/ES		0.05	PID	<1ppm
	0.30	FILL / Silty Gravelly CLAY: orange brown; medium to high plasticity; with rootlets.		FILL				D/ES		0.50	PID	<1ppm
	0.55	FILL / Clayey Gravelly SAND: grey brown; fine to medium; fine to coarse, sub-angular to sub-rounded gravel; with concrete gravels, plastic.		FILL		M		D/ES		1.00	PID	<1ppm
	409 / 1.30	Silty CLAY: brown; medium to high plasticity.		RS	VSt	w<PL		D/ES		1.50	PID	<1ppm
											PP	280-310kPa
		Test Pit discontinued at 1.80m depth.										
	408											
	407											
	406											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)
LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.3 AHD
COORDINATE: E:301255.4, N:6553857.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 135
PROJECT No: 226965.01
DATE: 08/08/24
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
08/08/24 no free groundwater observed	410 / 0.30	FILL / Silty CLAY, with sand; low to medium plasticity; with rootlets.		FILL	NA	w<PL	PFAS	D/ES		0.05	PID	<1ppm
							PFAS	D/ES		0.10		
		FILL / Silty CLAY, trace sand, trace gravel: orange brown; low to medium plasticity; with concrete, plastic, golf ball.		FILL							PID	<1ppm
	1						PFAS	D/ES		1.00	PID	<1ppm
	1.10 / 409	Gravelly CLAY: pale grey; medium to high plasticity; fine to medium gravel; with siltstone (gravel) laminations.		RS possibly XWM								
							PFAS	D/ES		1.50	PID	<1ppm
	2 / 408	Test Pit discontinued at 1.60m depth.										
	3 / 407											
	4 / 406											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.3 AHD
COORDINATE: E:301210.8, N:6553861.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 136
PROJECT No: 226965.01
DATE: 08/08/24
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
08/08/24 no free groundwater observed	410	FILL / Silty Gravelly CLAY, trace sand: brown; low plasticity; fine to coarse, sub-angular to sub-rounded gravel; fine to medium sand; with rootlets.		FILL				D/ES		0.05	PID	<1ppm
	0.45	FILL / Silty CLAY, with gravel, trace sand: brown; low to medium plasticity; fine to coarse, sub-angular to sub-rounded gravel; fine to medium sand; trace concrete gravels, plastic.		FILL	NA	w<PL		D/ES		0.50	PID	<1ppm
	0.90	Silty CLAY.		RS	VSt to H	w<PL		D/ES		1.00	PP	350-370kPa
	1										PID	<1ppm
	409											
		Test Pit discontinued at 1.40m depth.										
	2											
	408											
	3											
	407											
	4											
	406											

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: 14 Tonne Excavator
METHOD: 600mm bucket
REMARKS:

OPERATOR: TCE (Peter Platt)

LOGGED: Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 407.8 AHD
COORDINATE: E:301363.6, N:6553996.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 201
PROJECT No: 226965.01
DATE: 29/10/24
SHEET: 1 of 1

CONDITIONS ENCOUNTERED												SAMPLE			TESTING	
				SOIL			ROCK									
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(†) DENSITY.(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
29/10/24 No free groundwater observed	407 / 0	FILL / Silty Sandy CLAY: brown; low plasticity; fine to medium sand; with rootlets.		FILL	NA	w<PL					D		0.10	PID	<1ppm
	0.40	FILL / CLAY: orange brown; low plasticity.		FILL	NA	w<PL					D		0.50	PID	<1ppm
	0.90 / 1	FILL / Sandy Gravelly CLAY: orange brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL	NA	w<PL					D		1.00	PID	<1ppm
	1.40 / 406	FILL / Sandy Gravelly CLAY: grey brown; medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL	NA	w<PL					D		1.50	PID	<1ppm
	2										D		2.00	PID	<1ppm
	2.30 / 405	SILTSTONE: grey brown					XW	2.30	H		D		2.50	PID	<1ppm
	3	Test Pit discontinued at 2.80m depth. Limit of investigation.													

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.4 AHD
COORDINATE: E:301350.6, N:6553949.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 202
PROJECT No: 226965.01
DATE: 29/10/24
SHEET: 1 of 1

CONDITIONS ENCOUNTERED												SAMPLE			TESTING	
				SOIL			ROCK									
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(†) / DENSITY.(†)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH (VL L M F VH EH)	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
29/10/24 No free groundwater observed	408 / 0	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; with rootlets.		FILL	NA	w<PL					D		0.10	PID	<1ppm
	0.40	FILL / Clayey GRAVEL, with sand: brown; fine to medium, sub-angular to sub-rounded.		FILL	NA	M					D		0.50	PID	<1ppm
	1										D		1.00	PID	<1ppm
	1.10	FILL / Sandy CLAY, with gravel: brown; low plasticity; fine to medium sand.		FILL	NA	w<PL					D		1.50	PID	<1ppm
	407 / 1.90	SILTSTONE: grey brown					XW	1.90	H		D		2.00	PID	<1ppm
	2														
	406	Test Pit discontinued at 2.40m depth. Limit of investigation.													
	3														
	405														

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 406.4 AHD
COORDINATE: E:301343.3, N:6553908.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 203
PROJECT No: 226965.01
DATE: 29/10/24
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
29/10/24 No free groundwater observed	406 / 0.30	FILL / Sandy CLAY, with gravel, trace silt: brown; low to medium plasticity; fine to medium sand; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
		FILL / Sandy Gravelly CLAY: red brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with asphalt.		FILL	NA	w<PL		D		0.50	PID	<1ppm
	0.60 / 1	FILL / Silty Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; with asphalt.		FILL	NA	w<PL		D		1.00	PID	<1ppm
	405 / 1.40	Gravelly CLAY: brown grey mottled; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; gravels comprised of siltstone.		RS possibly XWM	H	NA		D		1.50	PID	<1ppm
	2 / 404	Test Pit discontinued at 1.90m depth. Limit of investigation.										
	3 / 403											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.7 AHD
COORDINATE: E:301335.3, N:6553868.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 204
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; with rootlets, plastic pipe and concrete gravels.		FILL	NA	w<PL		D		0.10	PID	<1ppm
	0.30	FILL / Sandy Gravelly CLAY: orange brown; low to medium plasticity; fine to medium sand; with plastic.		FILL	NA	w<PL		D		0.50	PID	<1ppm
	0.70	FILL / Silty Sandy CLAY: grey brown; low to medium plasticity.		FILL	NA	w<PL		D		0.80	PID	<1ppm
	0.90	Clayey GRAVEL: grey brown; fine to medium, sub-angular to sub-rounded; gravels comprised of siltstone.		RS possibly XWM	H	NA		D		1.20	PID	<1ppm
	408	Test Pit discontinued at 1.40m depth. Limit of investigation.										
	407											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.2 AHD
COORDINATE: E:301340.3, N:6554011.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 205
PROJECT No: 226965.01
DATE: 29/10/24
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
29/10/24 No free groundwater observed	408	0.30	FILL / Clayey SAND: brown; fine to medium; with rootlets.		FILL	NA	M		D		0.10	PID	<1ppm
			FILL / Sandy CLAY, with gravel: dark brown; low plasticity; fine to medium sand; with asphalt.		FILL	NA	w<PL		D		0.50	PID	<1ppm
		0.90											
	407	1	FILL / Sandy CLAY, with gravel: brown; low plasticity; fine to medium sand; with wire, plastic bottle.		FILL	NA	w<PL		D		1.00	PID	<1ppm
									D		1.50	PID	<1ppm
		1.80											
		2	FILL / Sandy CLAY: brown; low plasticity; fine to medium sand.		FILL	NA	w<PL		D		2.00	PID	<1ppm
	406	2.20	Sandy CLAY: brown; low plasticity; fine to medium sand.		RS	F to H	w<PL		D		2.50	PID	<1ppm
		3	Test Pit discontinued at 2.70m depth. Limit of investigation.										
	405												

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.4 AHD
COORDINATE: E:301335.4, N:6553969.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 206
PROJECT No: 226965.01
DATE: 29/10/24
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
30/10/24 No free groundwater observed	408 / 0.40	FILL / Sandy CLAY, with silt, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
	1	FILL / Sandy CLAY, with gravel, trace silt: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with concrete slab and brick.		FILL	NA	w<PL		D		0.50	PID	<1ppm
	1.10							D		1.00	PID	<1ppm
	1.30	FILL / Sandy GRAVEL: pale red brown; fine to medium, sub-angular to sub-rounded; fine to medium sand.		FILL	NA	M		D		1.20	PID	<1ppm
	407	FILL / Silty Sandy CLAY: brown; low to medium plasticity; fine to medium sand.						D		1.50	PID	<1ppm
	2			FILL	NA	w<PL		D		2.00	PID	<1ppm
	406							D		2.50	PID	<1ppm
	2.70	Silty CLAY: grey brown; low to medium plasticity.		RS	F to H	w<PL		D		3.00	PID	<1ppm
	3											
	405	Test Pit discontinued at 3.20m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.6 AHD
COORDINATE: E:301334.6, N:6553953.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 207
PROJECT No: 226965.01
DATE: 29/10/24
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
29/10/24 No free groundwater observed	408 / 0.00	FILL / Silty Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
								D		0.50	PID	<1ppm
	408 / 0.60	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; with concrete and asphalt.		FILL	NA	w<PL						
	1							D		1.00	PID	<1ppm
	1.20	FILL / Silty Sandy CLAY: brown; low to medium plasticity; fine to medium sand; with plastic, metal cans, pavers and asphalt.		FILL	NA	w<PL						
	407							D		1.50	PID	<1ppm
	2							D		2.00	PID	<1ppm
	2.20	Clayey GRAVEL: grey brown; fine to medium, sub-angular to sub-rounded; gravels comprised of siltstone.		RS possibly XWM	NA	NA						
	406							D		2.50	PID	<1ppm
		Test Pit discontinued at 2.70m depth. Limit of investigation.										
	3											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.8 AHD
COORDINATE: E:301330.8, N:6553934.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 208
PROJECT No: 226965.01
DATE: 29/10/24
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
29/10/24 No free groundwater observed	408	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets and plastic.		FILL	NA	w<PL		D		0.10	PID	<1ppm
	0.40	FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with concrete, reinforced bar and brick.		FILL	NA	w<PL		D		0.50	PID	<1ppm
	0.90	FILL / Silty Sandy CLAY, with gravel: red orange brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with asphalt.		FILL	NA	w<PL		D		1.00	PID	<1ppm
	1											
	1.30	FILL / Silty Sandy CLAY, with gravel: grey; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL	NA	w<PL		D		1.50	PID	<1ppm
	407											
	1.90	Gravelly CLAY: grey; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; gravels comprised of siltstone.		RS possibly XWM	H	w<PL		D		2.00	PID	<1ppm
	2											
	406	Test Pit discontinued at 2.40m depth. Limit of investigation.										
	3											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.9 AHD
COORDINATE: E:301323.2, N:6553955.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 209
PROJECT No: 226965.01
DATE: 29/10/24
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
29/10/24 No free groundwater observed	408 / 0.00	FILL / Silty Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
	0.40	FILL / Sandy Gravelly CLAY, trace silt: orange brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; with concrete.		FILL	NA	w<PL		D		0.50	PID	<1ppm
	0.90 / 1	FILL / Sandy Gravelly CLAY, trace silt: orange brown; low to medium plasticity; fine to medium sand; with asphalt.		FILL	NA	w<PL		D		1.00	PID	<1ppm
	407 / 1.90 / 2	FILL / Silty CLAY, with sand, trace gravel: pale grey; low to medium plasticity.		FILL	NA	w<PL		D		1.50	PID	<1ppm
	2.40	Clayey Sandy GRAVEL: grey yellow brown; fine to medium, sub-angular to sub-rounded; fine to medium sand; gravels comprised of siltstone.		RS	D	M		D		2.00	PID	<1ppm
	406 / 3	Test Pit discontinued at 2.90m depth. Limit of investigation.						D		2.50	PID	<1ppm

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.2 AHD
COORDINATE: E:301318.2, N:6553938.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 210
PROJECT No: 226965.01
DATE: 29/10/24
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
29/10/24 No free groundwater observed	409	FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets, concrete and reinforced bar.		FILL	NA	w<PL		D		0.10	PID	<1ppm
	0.60							D		0.50	PID	<1ppm
	1	FILL / Sandy Gravelly CLAY, trace silt: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL	NA	w<PL		D		1.00	PID	<1ppm
	1.10 / 408	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; with asphalt, concrete and reinforced bar.		FILL	NA	w<PL		D		1.50	PID	<1ppm
	1.70	FILL / Silty Sandy CLAY, trace gravel: grey; low to medium plasticity; fine to medium sand.		FILL	NA	w<PL		D		2.00	PID	<1ppm
	2 / 407											
	2.30	Silty Sandy CLAY: dark grey brown; low to medium plasticity; fine to medium sand.		RS	F	w<PL		D		2.50	PID	<1ppm
	3 / 406	Test Pit discontinued at 2.80m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 404.9 AHD
COORDINATE: E:301329.1, N:6553920.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 211
PROJECT No: 226965.01
DATE: 29/10/24
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
29/10/24 No free groundwater observed	404 / 0	FILL / Sandy CLAY, with gravel, trace silt: pale brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
	0.30	FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace PVC pipe, concrete cobbles.		FILL	NA	w<PL		D		0.50	PID	<1ppm
	1							D		1.00	PID	<1ppm
	1.45	FILL / Silty Sandy CLAY, trace gravel: dfark brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace asphalt.		FILL	NA	w<PL		D		1.50	PID	<1ppm
	1.70	Gravelly CLAY: mottled yellow grey; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; gravels comprised of siltstone.		RS possibly XWM	F to H	w<PL		D		2.00	PID	<1ppm
	403 / 2											
	402 / 3	Test Pit discontinued at 2.20m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.6 AHD
COORDINATE: E:301325.9, N:6553877.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 212
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409	FILL / Silty Sandy CLAY, with gravel: brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets and plastic pipe.		FILL	NA	w<PL		D		0.10	PID	<1ppm
	0.30	FILL / Sandy CLAY, with gravel, trace silt: pale brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with plastic flagging and concrete gravels.		FILL	NA	w<PL		D		0.50	PID	<1ppm
	0.90	FILL / Silty Sandy CLAY: brown; low plasticity; fine to medium sand.		FILL possibly RS	NA	w<PL		D		1.00	PID	<1ppm
	1.40	Silty Sandy CLAY: brown; low to medium plasticity; fine to medium sand.		RS	H	w<PL		D		1.50	PID	<1ppm
	408											
	2	Test Pit discontinued at 1.90m depth. Limit of investigation.										
	407											
	3											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.6 AHD
COORDINATE: E:301316.9, N:6553852.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 213
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409	FILL / Sandy CLAY, with gravel, trace silt: orange brown; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
	0.40	FILL / Sandy CLAY, with silt, trace gravel: brown.		FILL	NA	w<PL		D		0.50	PID	<1ppm
	0.80	Silty Sandy CLAY: brown.		RS	H	w<PL		D		1.00	PID	<1ppm
	1											
	408	Test Pit discontinued at 1.30m depth. Limit of investigation.										
	2											
	407											
	3											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.6 AHD
COORDINATE: E:301325.2, N:6553985.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 214
PROJECT No: 226965.01
DATE: 31/10/24
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
31/10/24 No free groundwater observed	408	FILL / Sandy CLAY, with gravel, trace silt: brown; low to medium plasticity; fine to medium sand; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
								D		0.50	PID	<1ppm
	0.80											
	1	FILL / Sandy CLAY, with gravel: orange brown; low to medium plasticity; fine to medium sand; with asphalt.		FILL	NA	w<PL		D		1.00	PID	<1ppm
	1.20											
	407	FILL / Silty Sandy CLAY, with gravel: dark brown; low to medium plasticity; fine to medium sand; with bark.		FILL	NA	w<PL		D		1.50	PID	<1ppm
	2							D		2.00	PID	<1ppm
	2.20											
	406	FILL / Silty CLAY, trace sand: grey; low to medium plasticity; with metal pipe, brick and plastic.		FILL	NA	w<PL		D		2.50	PID	<1ppm
	2.90											
	3	FILL / Silty CLAY: pale grey mottled yellow; low to medium plasticity.		FILL	H	w<PL		D		3.00	PID	<1ppm
		Test Pit discontinued at 3.40m depth. Limit of investigation.										

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: 14 Tonne Excavator
OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs
METHOD: 600mm bucket with teeth
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.0 AHD
COORDINATE: E:301316.8, N:6553949.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 215
PROJECT No: 226965.01
DATE: 31/10/24
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
31/10/24 No free groundwater observed	409	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
								D		0.50	PID	<1ppm
	0.90 / 1 / 408	FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL	NA	w<PL		D		1.00	PID	<1ppm
	1.40	FILL / Sandy CLAY: red brown; low to medium plasticity; fine to medium sand.		FILL	NA	w<PL		D		1.50	PID	<1ppm
	1.90 / 2 / 407	FILL / Silty Sandy CLAY: brown; low to medium plasticity; fine to medium sand.		FILL	NA	w<PL		D		2.00	PID	<1ppm
	2.40	Silty CLAY: grey; low to medium plasticity.		RS	H	w<PL					PID	<1ppm
	406 / 3	Test Pit discontinued at 2.90m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 406.5 AHD
COORDINATE: E:301311.7, N:6553911.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 216
PROJECT No: 226965.01
DATE: 29/10/24
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
29/10/24 No free groundwater observed	406 / 0.00	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
	0.30	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with asphalt.		FILL	NA	w<PL		D		0.50	PID	<1ppm
	0.90 / 1	FILL / Sandy Gravelly CLAY: pale brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with concrete, pebbles and asphalt.		FILL	NA	w<PL		D		1.00	PID	<1ppm
	405 / 1.40	FILL / Silty Sandy CLAY: grey; low to medium plasticity.		FILL	NA	w<PL		D		1.50	PID	<1ppm
	1.90 / 2	Silty CLAY, with sand: mottled grey brown; low to medium plasticity; fine to medium sand.		RS	H	w<PL		D		2.00	PID	<1ppm
	404	Test Pit discontinued at 2.40m depth. Limit of investigation.										
	3 / 403											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.8 AHD
COORDINATE: E:301301.1, N:6553870.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 217
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409	FILL / Sandy CLAY, with gravel, trace silt: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
	0.30	FILL / Clayey Sandy GRAVEL: orange brown; fine to medium, sub-angular to sub-rounded; fine to medium sand; with plastic and concrete tile.		FILL	NA	M		D		0.50	PID	<1ppm
	0.90	FILL / Silty Sandy CLAY: grey brown; low to medium plasticity; fine to medium sand.		FILL	NA	w<PL		D		1.00	PID	<1ppm
	1.20	Clayey GRAVEL: grey brown mottled; fine to medium, sub-angular to sub-rounded; gravels comprised of siltstone.		RS	D	M		D		1.50	PID	<1ppm
	408	Test Pit discontinued at 1.70m depth. Limit of investigation.										
	407											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.5 AHD
COORDINATE: E:301315.8, N:6553997.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 218
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	408	FILL / Clayey Silty SAND, with gravel: brown; fine to medium; low to medium plasticity clay; low to medium plasticity silt; fine to medium, sub-angular to sub-rounded gravel; with rootlets, with tile fragments.		FILL	NA	M		D		0.10	PID	<1ppm
	0.40	FILL / Sandy CLAY, with gravel: brown; low plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL	NA	w<PL		D		0.50	PID	<1ppm
	0.80	FILL / Sandy CLAY: orange brown; low plasticity; fine to medium sand; with asphalt.		FILL	NA	w<PL		D		1.00	PID	<1ppm
	1 / 407							D		1.50	PID	<1ppm
	1.60	FILL / Silty Sandy CLAY: brown; low to medium plasticity; fine to medium sand; with wire.		FILL	NA	w<PL		D		2.00	PID	<1ppm
	2 / 406 / 2.40	Silty CLAY: grey; low to medium plasticity.		RS	H	w<PL		D		2.50	PID	<1ppm
	3 / 5	Test Pit discontinued at 2.90m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 408.7 AHD
COORDINATE: E:301307.3, N:6553975.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 219
PROJECT No: 226965.01
DATE: 29/10/24
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
29/10/24 No free groundwater observed	408	FILL / Silty Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets. From 0.00m-0.40m: colour pale brown		FILL	NA	w<PL		D		0.10	PID	<1ppm
								D		0.50	PID	<1ppm
	1							D		1.00	PID	<1ppm
	1.10	FILL / Sandy CLAY, with gravel: brown; low plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with asphalt.		FILL	NA	w<PL		D		1.50	PID	<1ppm
	407 1.60	FILL / Silty Sandy CLAY, with gravel: grey brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with asphalt and concrete slab.		FILL	NA	w<PL		D		2.00	PID	<1ppm
	2							D		2.50	PID	<1ppm
	406 2.60	Silty CLAY: mottled grey yellow.		RS	H	w<PL						
	3							D		3.00	PID	<1ppm
		Test Pit discontinued at 3.10m depth. Limit of investigation.										

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: 14 Tonne Excavator
OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs
METHOD: 600mm bucket with teeth
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 406.0 AHD
COORDINATE: E:301299.1, N:6553927.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 220
PROJECT No: 226965.01
DATE: 29/10/24
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
29/10/24 No free groundwater observed	406	FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to medium sand; fine to coarse, sub-angular to sub-rounded gravel; with rootlets, metal wire and asphalt.		FILL	NA	w<PL		D		0.10	PID	<1ppm
								D		0.50	PID	<1ppm
	0.80	FILL / Sandy CLAY, with gravel: red brown; low plasticity; fine to medium sand; with styrofoam, concrete and asphalt.		FILL	NA	w<PL						
	405 1							D		1.00	PID	<1ppm
	1.10	FILL / Silty CLAY, with sand, trace gravel: dark brown; low to medium plasticity; trace asphalt .		FILL	NA	w<PL						
								D		1.50	PID	<1ppm
	1.60	FILL / Silty CLAY, trace sand: brown; low to medium plasticity; trace asphalt .		FILL	NA	w<PL						
	404 2	From 2.20m: colour change to dark brown						D		2.00	PID	<1ppm
	2.40	Gravelly CLAY: mottled grey yellow; low to medium plasticity; fine to medium gravel; gravels comprised of siltstone.		RS	H	w<PL		D		2.50	PID	<1ppm
	403 3	Test Pit discontinued at 2.90m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.7 AHD
COORDINATE: E:301290.6, N:6553886.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 221
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409	FILL / Sandy CLAY, with silt, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL		w<PL		D		0.10	PID	<1ppm
	0.40											
		FILL / Clayey Sandy GRAVEL: orange brown; fine to medium, sub-angular to sub-rounded; fine to medium sand; with plastic, tree roots.		FILL	NA	M		D		0.80	PID	<1ppm
	1									1		
	1.40	FILL / Silty Sandy CLAY: grey brown; low to medium plasticity; fine to medium sand.		FILL		w<PL		D		1.50	PID	<1ppm
	1.60											
	408	Clayey GRAVEL, with sand: mottled grey brown; fine to medium, sub-angular to sub-rounded; fine to medium sand; sub-angular to sub-rounded, gravels comprised of siltstone.		RS	D	M		D		2.00	PID	<1ppm
	2											
		Test Pit discontinued at 2.10m depth. Limit of investigation.										
	407											
	3											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.2 AHD
COORDINATE: E:301294.2, N:6554012.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 222
PROJECT No: 226965.01
DATE: 30/10/24
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^]	DENSITY.[^]	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
30/10/24 No free groundwater observed	409	0.30	FILL / Silty Sandy CLAY, with gravel: grey brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL					D		0.10	PID	<1ppm
			FILL / Silty Sandy CLAY, with gravel: brown; medium to high plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with concrete, red bark, plastic metal wires.		FILL					D		0.50	PID	<1ppm
		0.90	FILL / Sandy Gravelly CLAY, with silt: orange brown; medium to high plasticity; fine to medium sand; fine to medium gravel; with asphalt.		FILL	NA		w<PL				1.00	PID	<1ppm
	408	1												
		2								D		2		
	407											2.50		
		2.80	Silty Sandy CLAY: brown; low to medium plasticity; fine to coarse sand; sub-angular.		RS	H				D		3.00	PID	<1ppm
	406	3												
			Test Pit discontinued at 3.30m depth. Limit of investigation.											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.5 AHD
COORDINATE: E:301286.5, N:6553967.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 223
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409 / 0	FILL / Sandy CLAY, with gravel, trace silt: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with concrete cobbles, asphalt. 0.00m-0.20m: trace rootlets		FILL				D		0.50	PID	<1ppm
	0.60	FILL / Silty Sandy CLAY, with gravel: grey; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace concrete gravels.		FILL				D		1.00	PID	<1ppm
	1 / 1.10	FILL / Silty Sandy CLAY, with gravel: orange red brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with asphalt, plastic bottle lid, concrete.		FILL	NA	w<PL				1.50	PID	<1ppm
	408 / 2							D		2		
	407 / 2.70	Silty CLAY, with sand: grey; low to medium plasticity; fine to medium sand.		RS	H					2.50	PID	<1ppm
	3							D		3.00	PID	<1ppm
	406	Test Pit discontinued at 3.20m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.9 AHD
COORDINATE: E:301277.0, N:6553931.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 224
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409	0.00	FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace concrete gravel, plastic. 0.00m-0.20m: trace rootlets		FILL	NA	w<PL		D		0.10	PID	<1ppm
		0.40	FILL / Silty Sandy CLAY, with gravel: grey brown; low plasticity; fine to medium sand; fine to medium gravel; trace PVC, trace plastic peg.		FILL				D		0.50	PID	<1ppm
		0.90	FILL / Sandy CLAY, with gravel: orange brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with asphalt concrete gravels.		FILL						1	PID	<1ppm
	408	1.90	FILL / Silty Sandy CLAY, trace gravel: grey brown; low plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace asphalt.		FILL				D		1.50	PID	<1ppm
		2.40	Silty Sandy CLAY: mottled grey brown; low to medium plasticity; fine to medium sand.		RS	H			D		2.00	PID	<1ppm
	407	3	Test Pit discontinued at 2.90m depth. Limit of investigation.						D		2.50	PID	<1ppm

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.4 AHD
COORDINATE: E:301272.1, N:6553899.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 225
PROJECT No: 226965.01
DATE: 31/10/24
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
31/10/24 No free groundwater observed	410	FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets, trace plastic.		FILL					D		0.10	PID	<1ppm
									D		0.50	PID	<1ppm
	0.80	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with concrete cobble.		FILL		NA			D		1.00	PID	<1ppm
	1												
	1.30	FILL / Silty Sandy CLAY: brown; low to medium plasticity; fine to medium sand; with brick, asphalt, concrete.		FILL			w<PL		D		1.50	PID	<1ppm
	409												
	2								D		2.00	PID	<1ppm
	2.30	Silty Sandy CLAY: brown; low to medium plasticity; fine to medium sand.		RS		H			D		2.50	PID	<1ppm
	408												
		Test Pit discontinued at 2.80m depth. Limit of investigation.											
	3												
	407												

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.1 AHD
COORDINATE: E:301267.3, N:6553855.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 226
PROJECT No: 226965.01
DATE: 31/10/24
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
30/10/24 No free groundwater observed	410	0.00	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets, trace plastic.		FILL	NA		w<PL		D		0.10	PID	<1ppm
		0.40	FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with plastic sheeting, plastic pipe, concrete cobbles.		FILL					D		0.50	PID	<1ppm
		0.70	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace plastic strip, tree root.		FILL					D		1.00	PID	<1ppm
	409	1												
		1.20	Silty CLAY, with sand: brown; low to medium plasticity; fine to medium sand.		RS	F to H				D		1.50	PID	<1ppm
	408	2	Test Pit discontinued at 1.70m depth. Limit of investigation.											
	407	3												

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.2 AHD
COORDINATE: E:301276.5, N:6554000.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 227
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409 / 0	FILL / Sandy CLAY, with gravel, trace silt: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets, with poly pipe.		FILL		w<PL		D		0.10	PID	<1ppm
								D		0.50	PID	<1ppm
	0.60	FILL / Clayey SAND, trace gravel: grey brown; fine to medium; fine to medium, sub-angular to sub-rounded gravel; trace concrete gravels.		FILL		M						
	1							D		1.00	PID	<1ppm
	1.10	FILL / Sandy Gravelly CLAY, with silt: orange brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with asphalt.		FILL	NA	w<PL						
	408							D		1.50	PID	<1ppm
	2							D		2.00	PID	<1ppm
	407 / 2.30	Clayey GRAVEL, with sand; fine to medium, sub-angular to sub-rounded; low plasticity clay; fine to medium sand; gravels comprised of siltstone.		RS	D	M						
								D		2.80	PID	<1ppm
	3	Test Pit discontinued at 2.80m depth. Limit of investigation.										
	406											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.7 AHD
COORDINATE: E:301267.0, N:6553964.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 228
PROJECT No: 226965.01
DATE:
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
31/10/24 No free groundwater observed	409	FILL / Clayey SAND, with gravel: brown; fine to medium; fine to coarse, sub-angular to sub-rounded gravel; with rootlets.		FILL		M		D		0.10	PID	<1ppm
	0.40											
	409	FILL / Sandy CLAY, with silt, with gravel: pale grey brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; sub-angular to sub-rounded, trace pebbles.		FILL				D		0.50	PID	<1ppm
	0.90											
	1	FILL / Sandy Gravelly CLAY: brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; siltstone gravels.		FILL	NA			D		1.00	PID	<1ppm
	1.40											
	408	FILL / Silty Sandy CLAY, with gravel: red brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace asphalt, plastic pipe.		FILL		w<PL					PID	<1ppm
								D		1.80		
	2									2.00	PID	<1ppm
	2.40											
	407	Silty CLAY, with sand: mottled grey brown; fine to medium sand.		RS	H			D		2.50	PID	<1ppm
	3	Test Pit discontinued at 3.00m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.1 AHD
COORDINATE: E:301263.5, N:6553925.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 229
PROJECT No: 226965.01
DATE: 31/10/24
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
31/10/24 No free groundwater observed	410	0.00	FILL / Sandy CLAY, with gravel, trace silt: brown; low plasticity; fine to coarse sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets, trace plastic.		FILL	NA	w<PL		D		0.10	PID	<1ppm
									D		0.50	PID	<1ppm
		0.70	FILL / Silty Sandy CLAY, with gravel: brown; low plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel.		FILL				D		1.00	PID	<1ppm
	409	1.10	FILL / Sandy CLAY, with gravel, trace silt: orange brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with asphalt.		FILL				D		1.50	PID	<1ppm
		1.90	FILL / Silty Sandy CLAY: grey; low to medium plasticity; fine to medium sand.		FILL				D		2.00	PID	<1ppm
	408	2.40	Silty Sandy CLAY: brown; low to medium plasticity; fine to medium sand.		RS	H			D		2.80	PID	<1ppm
	407	3.00	Test Pit discontinued at 2.90m depth. Limit of investigation.										

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: 14 Tonne Excavator
OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs
METHOD: 600mm bucket with teeth
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.2 AHD
COORDINATE: E:301249.6, N:6553887.4
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 230
PROJECT No: 226965.01
DATE: 31/10/24
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
31/10/24 No free groundwater observed	410 / 0.30	FILL / Sandy CLAY, with gravel: brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
		FILL / Silty Sandy CLAY, with gravel: grey brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace plastic PVC pipe.		FILL				D		0.50	PID	<1ppm
	0.60 / 409 / 1	FILL / Sandy CLAY, with gravel: brown; fine to coarse sand; fine to medium, sub-angular to sub-rounded gravel; with asphalt.		FILL				D		1.00	PID	<1ppm
								D		1.50	PID	<1ppm
	1.80 / 408 / 2	Silty Sandy CLAY, trace gravel: brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; gravels comprised of siltstone.		RS	H			D		2.00	PID	<1ppm
	407 / 3	Test Pit discontinued at 2.30m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.2 AHD
COORDINATE: E:301258.7, N:6554012.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 231
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409	0.00	FILL / Silty Sandy CLAY: brown; medium to high plasticity; fine to medium sand; with rootlets.		FILL	NA	w<PL		D		0.10	PID	<1ppm
		0.40	FILL / Sandy Gravelly CLAY, with silt: pale brown; low to medium plasticity; fine to coarse sand; fine to coarse gravel; with asphalt.		FILL				D		0.50	PID	<1ppm
		0.60	FILL / Silty CLAY, with gravel: mottled grey brown; medium to high plasticity; fine to medium, sub-angular to sub-rounded gravel; with asphalt, with concrete gravels, wire.		FILL				D		1.00	PID	<1ppm
	408	1.10	FILL / Silty CLAY, with gravel: grey; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; with tree roots.		FILL				D		1.50	PID	<1ppm
									D		2.00	PID	<1ppm
	407								D		2.50	PID	<1ppm
									D		3.00	PID	<1ppm
	406	3.40	Silty CLAY: grey; low to medium plasticity.		possibly RS	F			D		3.50	PID	<1ppm
			Test Pit discontinued at 3.60m depth. Limit of excavator and pit starting to collapse.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.9 AHD
COORDINATE: E:301230.6, N:6553939.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 232
PROJECT No: 226965.01
DATE: 30/10/24
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
31/10/24 No free groundwater observed	409	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace rootlets.		FILL				D		0.10	PID	<1ppm
	0.40	FILL / Gravelly CLAY, with sand: brown; low to medium plasticity; fine to medium, sub-angular to sub-rounded gravel; fine to medium sand; trace plastic.		FILL				D		0.50	PID	<1ppm
	0.70	FILL / Silty Sandy CLAY, with gravel: orange brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace asphalt.		FILL				D		1.00	PID	<1ppm
	1											
	1.10	FILL / Sandy CLAY, with silt, with gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace brick, concrete gravels, plastic, trace asphalt.		FILL	NA	w<PL		D		1.50	PID	<1ppm
	1.60	FILL / Silty Sandy CLAY, with gravel: grey brown; low to medium plasticity; fine to coarse sand; fine to medium, sub-angular to sub-rounded gravel; trace asphalt.		FILL				D		2.00	PID	<1ppm
	408											
	2											
	2.20	Silty CLAY: grey brown; low to medium plasticity.		RS	H			D		2.50	PID	<1ppm
	407	Test Pit discontinued at 2.70m depth. Limit of investigation.										
	3											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.1 AHD
COORDINATE: E:301224.1, N:6553896.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 233
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	410 / 0	FILL / Sandy Gravelly CLAY: brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL		w<PL		D		0.10	PID	<1ppm
	0.40	FILL / Clayey GRAVEL, with sand: brown; fine to medium, sub-angular to sub-rounded; fine to medium sand; with siltstone gravels, trace plastic.		FILL	NA	M		D		0.50	PID	<1ppm
	409 / 1							D		1.00	PID	<1ppm
	1.10	FILL / Silty Sandy CLAY: brown; low to medium plasticity; fine to medium sand.		FILL				D		1.50	PID	<1ppm
	1.60	Silty CLAY: brown; low to medium plasticity.		RS	H	w<PL		D		2.00	PID	<1ppm
	408 / 2											
		Test Pit discontinued at 2.20m depth. Limit of investigation.										
	407 / 3											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.8 AHD
COORDINATE: E:301252.1, N:6553981.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 234
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409	FILL / Silty Sandy CLAY, with gravel: pale brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets, plastic.		FILL					D		0.50	PID	<1ppm
	0.70												
	409	FILL / Sandy Gravelly CLAY: brown; low plasticity; fine to medium sand; fine to coarse, sub-angular to sub-rounded gravel; trace plastic.		FILL					D		1.00	PID	<1ppm
	1												
	1.10	FILL / Sandy CLAY, with gravel: dark brown; low to medium plasticity; fine to medium sand; fine to medium gravel; trace asphalt.		FILL		NA	w<PL		D		1.50	PID	<1ppm
	408												
	1.80	FILL / Silty Sandy CLAY, with gravel: red orange brown; low plasticity; fine to medium sand; fine to coarse gravel; with asphalt.		FILL					D		2.00	PID	<1ppm
	2												
	2.40	Silty Sandy CLAY: grey brown; low to medium plasticity; fine to medium sand.		RS		H			D		2.50	PID	<1ppm
	407												
	3	Test Pit discontinued at 2.90m depth. Limit of investigation.											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.1 AHD
COORDINATE: E:301246.2, N:6553945.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 235
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	410	0.00	FILL / Sandy Gravelly CLAY, trace silt: brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL					D		0.10	PID	<1ppm
		0.40	FILL / Sandy CLAY, with gravel: orange brown; medium to high plasticity; fine to coarse sand; fine to medium, sub-angular to sub-rounded gravel; trace asphalt, with concrete cobbles.		FILL					D		0.50	PID	<1ppm
		0.70	FILL / Silty Sandy CLAY, trace gravel: brown; low to medium plasticity; fine to coarse sand; fine to coarse, sub-angular to sub-rounded gravel; with asphalt.		FILL		NA			D		1.00	PID	<1ppm
	409	1												
		1.40	FILL / Silty Sandy CLAY, trace gravel: grey brown; low to medium plasticity; fine to coarse sand; fine to coarse, sub-angular to sub-rounded gravel.		FILL			w<PL		D		1.50	PID	<1ppm
	408	2								D		2.00	PID	<1ppm
		2.40	Silty CLAY: grey brown; low to medium plasticity.		RS		H			D		2.50	PID	<1ppm
	407	3	Test Pit discontinued at 2.90m depth. Limit of investigation.											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.0 AHD
COORDINATE: E:301240.3, N:6553911.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 236
PROJECT No: 226965.01
DATE: 31/10/24
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
30/10/24 No free groundwater observed	410		FILL / Sandy Gravelly CLAY: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL					D		0.10	PID	<1ppm
		0.40	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to coarse sand; fine to medium, sub-angular to sub-rounded gravel; trace asphalt.		FILL					D		0.50	PID	<1ppm
	409	1					NA			D		1.00	PID	<1ppm
		1.10	FILL / Silty Sandy CLAY, with gravel: grey brown; low to medium plasticity; fine to coarse sand; fine to medium, sub-angular to sub-rounded gravel.		FILL			w<PL		D		1.50	PID	<1ppm
	408	2								D		2.00	PID	<1ppm
		2.10	Silty CLAY: brown; low to medium plasticity.		RS		H			D		2.50	PID	<1ppm
	407	3	Test Pit discontinued at 2.60m depth. Limit of investigation.											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 410.4 AHD
COORDINATE: E:301230.4, N:6553864.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 237
PROJECT No: 226965.01
DATE: 31/10/24
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
30/10/24 No free groundwater observed	410 / 0.30	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to coarse sand; fine to coarse, sub-angular to sub-rounded gravel; with rootlets, trace plastic?, pipe.		FILL				D		0.10	PID	<1ppm
	0.60	FILL / Sandy CLAY, with gravel: brown; low to medium plasticity; fine to medium sand; fine to coarse, sub-angular to sub-rounded gravel; trace asphalt.		FILL	NA			D		0.50	PID	<1ppm
	1	FILL / Silty Sandy CLAY, with gravel: brown grey; low to medium plasticity; fine to coarse sand; fine to coarse, sub-angular to sub-rounded gravel.		FILL		w<PL		D		1.00	PID	<1ppm
	1.30 / 409	Silty CLAY, trace sand: brown; low to medium plasticity.		RS	H							
		Test Pit discontinued at 1.80m depth. Limit of investigation.						D		1.80	PID	<1ppm
	2 / 408											
	3 / 407											

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.6 AHD
COORDINATE: E:301239.0, N:6554003.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 238
PROJECT No: 226965.01
DATE: 31/10/24
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
30/10/24 No free groundwater observed	409	FILL / Sandy CLAY, with gravel, trace silt: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL				D		0.10	PID	<1ppm
	0.40	FILL / Silty Sandy CLAY, with gravel: brown; low to medium plasticity; fine to coarse sand; fine to medium, sub-angular to sub-rounded gravel; trace asphalt.		FILL						0.50	PID	<1ppm
	1	1.20m-1.22m: Asbestos pipe (1m length)						D		1.00	PID	<1ppm
	1.40	FILL / Silty Sandy CLAY, with gravel: pale brown; low to medium plasticity; fine to coarse sand; fine to coarse, sub-angular to sub-rounded gravel; trace gumboot, golf ball, plastic, concrete.		FILL	NA	w<PL				1.50	PID	<1ppm
	408							D		2	PID	<1ppm
	2									2.50	PID	<1ppm
	407											
	2.90	Silty CLAY: mottled brown grey; low to medium plasticity.		RS	H			D		3.00	PID	<1ppm
	3	Test Pit discontinued at 3.40m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

TEST PIT LOG

CLIENT: Tamworth Regional Council
PROJECT: Proposed Tamworth Regional Aquatic Centre
LOCATION: Jack Smyth Drive, Hillvue, NSW 2304

SURFACE LEVEL: 409.9 AHD
COORDINATE: E:301237.1, N:6553975.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: 239
PROJECT No: 226965.01
DATE: 30/10/24
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
30/10/24 No free groundwater observed	409	FILL / Sandy Gravelly CLAY: brown; fine to medium sand; fine to coarse, sub-angular to sub-rounded gravel; with rootlets.		FILL				D		0.50	PID	<1ppm
	0.70 / 1	FILL / Sandy Gravelly CLAY: pale brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; trace asphalt.		FILL	NA	w<PL		D		1.00	PID	<1ppm
	1.20 / 408 / 2	FILL / Silty Sandy CLAY, with gravel: dark brown; fine to medium sand; fine to medium, sub-angular to sub-rounded gravel; with rootlets.		FILL				D		1.50	PID	<1ppm
	2.20	Clayey GRAVEL, with sand, trace silt: grey brown; fine to medium, sub-angular to sub-rounded; fine to medium sand; gravels comprised of siltstone.		RS	D	M		D		2.50	PID	<1ppm
	407 / 3	Test Pit discontinued at 2.70m depth. Limit of investigation.										

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: 14 Tonne Excavator
METHOD: 600mm bucket with teeth
REMARKS:

OPERATOR: TPE Civil and Earthmoving **LOGGED:** Krebs

Refer to explanatory notes for symbol and abbreviation definitions

Appendix E

Remediation Options Assessment and Evaluation

1. Introduction

The following key guidelines and technical reports were consulted in the preparation of this remediation options assessment:

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM])* (NEPC, 2013); and
- CRC CARE *Remediation Action Plan: Development - Guideline on Performing Remediation Options Assessment* (CRC CARE, 2019a).

The first stage of developing a remediation strategy is to establish clear and measurable remediation objectives and remediation criteria (clean-up levels). These will form the requirements against which remediation options are assessed.

The next stage of the remediation options assessment is to select technology and management options, or combinations of options, that have the potential to reduce contaminant concentrations and/or apply management controls as necessary so that the remediation objectives are achieved and no unacceptable risk is posed by the contamination in the context of the current and proposed site use. Where several viable options have been identified, an assessment of each of the options will be required to determine which option will most adequately and sustainably meet the remediation objectives (CRC CARE, 2019a).

The remediation objectives are to:

- Address potentially unacceptable risks to relevant environmental values from contamination (refer to the CSM in Section 7); and
- Render the site suitable, from a contamination perspective, for the proposed development (refer to Section 2).

2. Hierarchy of remediation options

NEPC (2013) stipulates the preferred hierarchy of options for site clean-up (remediation) and/or management which is outlined as follows:

- On-site treatment of the contamination so that it is destroyed, or the associated risk is reduced to an acceptable level; and
- Off-site treatment of excavated soil, so that the contamination is destroyed, or the associated risk is reduced to an acceptable level, after which soil is returned to the site.

or, if these two options are not practicable;

- Consolidation and isolation of the soil on site by containment with a properly designed barrier; and
- Removal of contaminated material to an approved site or facility, followed, where necessary, by replacement with appropriate material;

or,

- Where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect, implementation of an appropriate management strategy.

3. Remediation options assessment

3.1 Introduction

The following issue has been identified at the site which requires remediation:

- Localised asbestos-impacted fill.

3.2 Remediation options

The remediation strategies are broadly outlined below.

Option 1 - On-site management of impacted fill would generally comprise the following:

- Placement of contaminated materials beneath a pavement, hardstand, or imported VENM/ENM (ie. landscaped areas) with high visibility marker layer between the impacted materials and the pavement/capping;
- Off-site disposal of excess contaminated soils (i.e. to an appropriately licensed landfill following waste classification where applicable) where the materials cannot be accommodated at the site.

Option 2 - Off-site disposal of contaminated soils would generally comprise the following:

- Excavation of the impacted fill:
- Temporary stockpiling of excavated and segregated fill materials to allow waste classification (where required);
- Direct disposal of contaminated soils to an appropriately licensed waste disposal facility;
- Validation of the stripped surface/remaining soils to confirm appropriate removal of this contaminated fill material;
- Re-instatement of site soils (if required) to achieve design levels with 'clean' soil (ENM/VENM or appropriate RRO exempt material).

Options 3 - A combination of excavation and disposal and on-site management of contaminated soils is also considered to be a feasible remediation option to protect human health and the environment, and minimise constraints on the future use of the site for the proposed facility upgrades.

It is noted that Option 4 - Do nothing, is not a viable option to address the source pathway receptors for the identified contaminants.

The proposed development comprises earthworks and excavation of soils for construction of the proposed aquatic centre. Details of excavation levels and extents are not known at this stage however it is likely that bulk excavation will be required across the majority of the site, including the areas of identified contamination, for the construction of the pool area, along with excavation for footings, pavements, services etc.

4. Summary of preferred remediation strategy

On the basis of the above assessment, options 1, 2 and 3 are considered feasible for the proposed development.

It is noted that bulk excavation of fill/soils is required as part of the development. It is anticipated that excavation will be required in the areas of identified localised asbestos contamination. Given that construction excavation is proposed in the areas of contamination and the localised nature of identified impacts, excavation of the impacted soils has been identified as a feasible and optimal strategy – ie Option 2.

Based on the outcome of the options assessment, the preferred remediation strategy is excavation and offsite disposal of asbestos-impacted soils – Option 2. Soils being removed from the site need to be appropriately classified to confirm waste classification and disposed off-site to a landfill licensed to accept asbestos waste.

5. References

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

CRC CARE. (2019b). *Technology Guide: Soil - Excavation*. National Remediation Framework: CRC for Contamination Assessment and Remediation of the Environment.

CRC CARE. (2019c). *Technology Guide: Soil - Containment*. National Remediation Framework: CRC for Contamination Assessment and Remediation of the Environment.

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

WA DoH. (2021). *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*. WA Department of Health.

WorkCover NSW. (2014). *Managing Asbestos in or on Soil*. March 2014: WorkCover NSW, NSW Government.

Appendix F

Site Assessment Criteria

1. Introduction

1.1 Guidelines

The following key guidelines were consulted for deriving the site assessment criteria (SAC):

- *NEPC National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013);
- CRC CARE *Health screening levels for petroleum hydrocarbons in soil and groundwater* (CRC CARE, 2011).

1.2 General

The SAC applied to any contingency or unexpected finds scenarios during site remediation are informed by the CSM which identified human and environmental receptors to potential contamination at the site. Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013).

The following inputs are relevant to the selection and/or derivation of the SAC:

- Land use: recreational;
- Corresponding to land use category 'C', public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate. It is noted that health screening levels (HSLs) for standard residential land use (HSL A) have been utilised for the assessment of soil vapour risk from petroleum hydrocarbons given the proposed development includes buildings / structures as per (NEPC, 2013);
- The site is zoned SP3 – Tourist. Based on information provided in the Tamworth Regional Local Environment Plan 2010, centre-based child care centres are a permissible land use (with consent) in the zoning. Child care centres are generally classified as a sensitive land use for the purposes of contaminated land assessment and are assessed residential land use (with accessible soils) criteria. At this stage the site development is an aquatic centre. Should a more sensitive land use be proposed at the site, including extended or long day care be proposed, additional assessment and evaluation of site contamination characteristics should be conducted; and
- Soil type: clay.

2. Soils

2.1 Health investigation and screening levels

The generic health investigation levels (HIL) and health screening levels (HSL) are considered to be appropriate for the assessment of human health risk via all relevant pathways of exposure associated with contamination at the site. The adopted soil HIL and HSL for the contaminants of concern are in Table 1 and Table 2.

Table 1: Health investigation levels (mg/kg)

Contaminant	HIL-C
Metals	
Arsenic	300
Beryllium	90
Boron	20 000
Cadmium	90
Chromium (VI)	300
Cobalt	300
Copper	17 000
Lead	600
Manganese	19 000
Mercury (inorganic)	80
Methyl mercury	13
Nickel	1200
Selenium	700
Zinc	30 000
PAH	
B(a)P TEQ	3
Total PAH	300
Phenols	
Phenol	40 000
Pentachlorophenol	120
OCP	
DDT+DDE+DDD	400
Aldrin and dieldrin	10
Chlordane	70
Endosulfan	340
Endrin	20
Heptachlor	10
HCB	10
Methoxychlor	400
Mirex	20

Contaminant	HIL-C
OPP	
Chlorpyrifos	250
PCB	
PCB	1

Table 2: Health screening levels (mg/kg)

Contaminant	HSL-A&B	HSL-A&B	HSL-A&B	HSL-A&B
CLAY	**0 m to <1 m**	**1 m to <2 m**	**2 m to <4 m**	**4 m+**
Benzene	0.7	1	2	3
Toluene	480	NL	NL	NL
Ethylbenzene	NL	NL	NL	NL
Xylenes	110	310	NL	NL
Naphthalene	5	NL	NL	NL
TRH F1	50	90	150	290
TRH F2	280	NL	NL	NL

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} minus naphthalene
The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would results in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'

The HSL for direct contact derived from CRC CARE (2011) are in Table 3.

Table 3: Health screening levels for direct contact (mg/kg)

Contaminant	DC HSL-C
Benzene	120
Toluene	18 000
Ethylbenzene	5300
Xylenes	15 000
Naphthalene	1900
TRH F1	5100
TRH F2	3800
TRH F3	5300
TRH F4	7400

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} minus naphthalene

2.2 Health investigation levels for per- and poly-fluoroalkyl substances in soil

The SAC applied to any contingency or unexpected finds scenarios during site remediation for per- and poly-fluoroalkyl substances (PFAS) in soil will be assessed against HIL published in HEPA (2020). The HIL represent a nationally-agreed suite that should be used to inform site investigations. The HIL are intentionally conservative, and an exceedance of these criteria may not constitute a risk if other exposure pathways are controlled. An exceedance of the HIL should trigger further investigations, such as a site-specific risk assessment. At the time of this investigation, screening values were available only for perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexane sulfonate (PFHxS).

The HIL derived from Table 2 of HEPA (2020) are in Table 4.

Table 4: Health investigation levels (mg/kg)

Contaminant	HIL-C
PFOS and PFHxS *	1
PFOA	10

2.3 Asbestos in soil

The on likely exposure levels for different scenarios published in NEPC (2013) for the following forms of asbestos:

- Bonded asbestos containing material (ACM); and
- Fibrous asbestos and asbestos fines (FA and AF).

The HSL are in Table 5.

Table 5: Health screening levels for asbestos

Form of asbestos	HSL-C
ACM	0.02%
FA and AF	0.001%
FA and AF and ACM	No visible asbestos for surface soil *

Notes: Surface soils defined as top 10 cm.
* Based on site observations at the sampling points and the analytical results of surface samples.

2.4 Ecological investigation levels

The SAC applied to any contingency or unexpected finds scenarios during site remediation will use ecological investigation levels (EIL) and added contaminant limits (ACL), where appropriate, as per NEPC (2013) for arsenic, copper, chromium (III), nickel, lead, zinc, DDT and naphthalene. The adopted EIL, derived using the interactive (excel) calculation spreadsheet on the NEPM toolbox website are shown in Table 7 with inputs into their derivation shown in Table 6.

Table 6: Inputs to the derivation of the ecological investigation levels

Variable	Input	Rationale
Age of contaminants	"Aged" (>2 years)	Identified sources of contamination are likely >2 years old
pH	8.40	Minimum result for laboratory testing
CEC	21 $cmol_c/kg$	Minimum result for laboratory testing
Clay content	10%	Clay soil type (conservative)
Traffic volumes	High	Developed Area
State / Territory	NSW	Site Location

Table 7: Ecological investigation levels (mg/kg)

Contaminant	EIL-A-B-C
Metals	
Arsenic	100
Copper	
Nickel	
Chromium III	
Lead	1100
Zinc	
PAH	
Naphthalene	170
OCP	
DDT	180

Notes:
EIL-A-B-C urban residential and public open space

2.5 Ecological screening levels

The SAC applied to any contingency or unexpected finds scenarios during site remediation will use ecological screening levels (ESL) to assess the risk of selected petroleum hydrocarbon compounds, BTEX and benzo(a)pyrene to terrestrial ecosystems. The adopted ESL are shown in Table 8.

.

Table 8: Ecological screening levels (mg/kg)

Contaminant	Soil Type	EIL-A-B-C
Benzene	Coarse	50
Toluene	Coarse	85
Ethylbenzene	Coarse	70
Xylenes	Coarse	105
TRH F1	Coarse/ Fine	180*
TRH F2	Coarse/ Fine	120*
TRH F3	Coarse	300
TRH F4	Coarse	2800
B(a)P	Coarse	0.7
Benzene	Fine	65
Toluene	Fine	105
Ethylbenzene	Fine	125
Xylenes	Fine	45
TRH F1	Coarse/ Fine	180*
TRH F2	Coarse/ Fine	120*
TRH F3	Fine	1300
TRH F4	Fine	5600
B(a)P	Fine	0.7

Notes: ESL are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability
TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} including naphthalene
EIL-A-B-C urban residential and public open space

2.6 Ecological soil guideline values

The SAC applied to any contingency or unexpected finds scenarios during site remediation for PFAS will use the interim ecological soil guideline values (EGV) derived from Table3 of HEPA (2020) are in Table 9.

Table 9: Ecological soil guideline values (mg/kg) – all land uses

Contaminant	Direct exposure	Indirect exposure
PFOS	1	0.01
PFOA	10	NC
PFHxS	NC	NC

Notes: NC no criterion

2.7 Management limits

The SAC applied to any contingency or unexpected finds scenarios during site remediation for TRH, in addition to appropriate consideration and application of the HSL and ESL, there are additional considerations which reflect the nature and properties of petroleum hydrocarbons, including:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- Fire and explosion hazards; and
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services.

These 'management limits' (NEPC, 2013) are in Table 10. Management limits must not be used as remediation acceptance criteria, or validation criteria for imported material. They are included for reference only, and to aid in assessment of contingency or unexpected finds scenarios.

Table 10: Management limits (mg/kg)

Contaminant	Soil Type	ML-A-B-C
TRH F1	Coarse	700
TRH F2	Coarse	1000
TRH F3	Coarse	2500
TRH F4	Coarse	10 000
TRH F1	Fine	800
TRH F2	Fine	1000
TRH F3	Fine	3500
TRH F4	Fine	10 000

Notes: TRH F1 is TRH C_6-C_{10} including BTEX
TRH F2 is TRH >C_{10}-C_{16} including naphthalene
ML-A-B-C residential, parkland and public open space

3. References

CRC CARE. (2011). *Health screening levels for petroleum hydrocarbons in soil and groundwater.* Parts 1 to 3, Technical Report No. 10: Cooperative Research Centre for Contamination Assessment and Remediation of the Environment.

HEPA. (2020). *PFAS National Environmental Management Plan (NEMP).* Version 2.0: Heads of EPAs Australia and New Zealand and Australian Government Department of the Environment.

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

Appendix G

Data Quality Objectives

1. Introduction

The objective of the validation plan is to assess the results of validation testing against the remediation acceptance criteria (RAC) stated within Section 11.1, assess the resultant suitability of the site for the intended land use, and to provide information on any environmental impacts which may have resulted from the works.

The validation assessment will be conducted with reference to the seven step data quality objectives process (DQO) as outlined in NEPC (2013), described below. The DQO in NEPC (2013) is in turn, based on the DQO process outlined in USEPA (2006), and associated guidelines.

2. Data quality objectives

Table 1: Data quality objectives

Step	Summary
1: State the problem	The site requires remediation and validation of remediation in order to render it suitable for recreational land use. The objective of the validation plan is to confirm the successful implementation of this remediation action plan. A conceptual site model (CSM) for the proposed development has been prepared (Section 7).
2: Identify the decisions / goal of the study	The CSM identifies the contaminants of potential concern (CoPC) and the likely impacted media. The key CoPC impacting the site is asbestos. The validation sampling results will be compared against the RAC. The preferred remediation strategy as outlined in the RAP is the excavation and disposal of contaminated soils. The success of the remediation and subsequent validation will be based on a comparison of the analytical results for all CoPC to the adopted RAC and, if necessary, compared to the 95% UCL of the mean concentrations.
3: Identify the information inputs	Relevant inputs to the decision include: • The CSM, identifying the CoPC and affected media; • Analysis for the relevant CoPC using NATA accredited laboratories and methods, where possible; • Field and laboratory QA/QC data to assess the suitability of the environmental data for the validation assessment; • Results compared with the RAC; • A photoionisation detector (PID) will be used on-site to screen soils for VOC, should unexpected presumed hydrocarbon contamination be encountered. PID readings will be used to

Step	Summary
	inform remediation progress and sample selection for laboratory analysis.
4: Define the study boundaries	The lateral boundaries of the site are shown on Drawing 1, Appendix A. The vertical boundaries are to the extent of contamination impact as determined from the site history assessment, site observations and previous investigations used to inform the RAP.
5: Develop the analytical approach (or decision rule)	The decision rule is to compare all analytical results with RAC. Initial comparisons will be with individual results then, where required, summary statistics (including mean, standard deviation and 95% upper confidence limit (UCL) of the arithmetic mean (95% UCL) to assess potential risks posed by the site contamination. Quality control results are to be assessed according to their relative percent difference (RPD) values. For field and laboratory duplicate results, RPDs should generally be below 30%; for field blanks, results should be at or less than the limits of reporting (NEPC, 2013). The field and laboratory quality assurance assessment is included in Section 14.
6: Specify the performance or acceptance criteria	Baseline condition: Contaminant concentrations at the site exceed the RAC and pose a potentially unacceptable risk to receptors (null hypothesis). Alternative condition: Contaminant concentrations at the site comply with the RAC and as such, do not pose a potentially unacceptable risk to receptors (alternative hypothesis). Unless conclusive information from the collected data is sufficient to reject the null hypothesis, it is assumed that the baseline condition is true.
7: Optimise the design for obtaining data	Sampling design and procedures to be implemented to optimise data collection for achieving the DQO include the following: • Sampling frequencies in accordance with Section 12.4; • Analysis for the CoPC at NATA accredited laboratories using NATA endorsed methods will be used to perform laboratory analysis whenever possible; and • Adequately experienced environmental scientists/engineers will conduct field work and sample analysis interpretation.

3. References

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

Appendix H

Site Management Plan

1. Introduction

This general site management plan (SMP) has been developed to minimise potentially adverse impacts on the environment, and worker and public health as a result of the proposed remediation works.

The Remediation Contractor must have in place a construction environmental management plan (CEMP) (or similar) which is specific to the equipment used for the remediation and the proposed methods to be adopted by the Remediation Contractor. This SMP has been prepared to augment the Remediation Contractor's CEMP and contains general details for aspects of the work, as per reporting requirements for a remediation action plan (RAP) under NSW EPA *Guidelines for Consultants Reporting on Contaminated Land* (NSW EPA, 2020).

Apart from the management principles outlined in this SMP, the Remediation Contractor must also ensure compliance with all relevant environmental legislation and regulations, including (but not limited to) the following:

- Contaminated Land Management Act 1997 NSW (CLM Act);
- Protection of the Environment Operations Act 1997 NSW (POEO Act);
- Protection of the Environment Legislation Amendment Act 2011 NSW;
- Protection of the Environment Operations Amendment (Scheduled Activities and Waste) Regulation 2008 NSW;
- Environmentally Hazardous Chemicals Act 1985 NSW;
- Environmental Offences and Penalties Act 1989 NSW;
- Pesticide Act 1999 NSW and Pesticides Regulation 2017; and
- Work Health and Safety Act 2017 NSW (WHS Act) and Work Health and Safety Regulations 2017 NSW.

2. Roles and responsibilities

2.1 Principal

The Principal is responsible for the environmental performance of the proposed remediation works, including implementation of acceptable environmental controls during remediation works. The Principal will retain the overall responsibility for ensuring this RAP is appropriately implemented. The Principal is to nominate a representative (the Principal's Representative), who is responsible for overseeing the implementation of this RAP. The actual implementation of the RAP will, however, be conducted by the Principal Contractor on behalf of the Principal.

The Principal is responsible for providing appropriate information to the Contractor to allow them to safely plan the required works. This includes the asbestos register for the site and this RAP.

The Principal is also responsible for implementing an appropriate communications plan.

2.2 Remediation Contractor

The Remediation Contractor will be the party responsible for daily implementation of this RAP and shall fulfil the responsibilities of the Remediation Contractor as defined by SafeWork NSW. It is noted that the Remediation Contractor may appoint appropriately qualified sub-contractors or sub-consultants to assist in fulfilling the requirements of the procedures. The Remediation Contractor will appoint a Site Manager.

In addition to the implementation of the RAP it will be the Remediation Contractors responsibility to:

- Obtain/ensure relevant sub-contractors obtain specific related approvals as necessary to implement the earthworks including permits for removal of asbestos-containing material, SafeWork NSW notification etc.;
- Develop or request and review any site plans to manage the works to be conducted;
- Ensure that all remediation works and other related activities are undertaken in accordance with this RAP;
- Maintain all site records related to the implementation of this RAP including but not limited to;
    - Tracking of all movement of soil within the site and off-site from cradle to grave;
    - Disposal dockets: for any soil disposed off-site including transportation records, spoil source, spoil disposal location, receipt provided by the receiving waste facility / site;
    - Records relating to any unexpected finds and contingency plans implemented;
    - Photographic records by all contractors and consultants of the works undertaken within their purview of responsibilities;
    - Airborne asbestos monitoring records (in the event that asbestos works are undertaken);
    - Interim / final visual and sampling clearances for any asbestos related works (in the event that asbestos works are undertaken);
- Ensure sufficient information is provided to engage or direct all required parties, including sub-contractors, to implement the requirements of the RAP other than those that are the direct responsibility of the Remediation Contractor;
- Manage the implementation of any recommendation made by those parties in relation to work undertaken in accordance with the RAP;
- Inform, if appropriate, the relevant regulatory authorities of any non-conformances with the procedures and requirements of the RAP in accordance with the procedures outlined in this document;
- Retain records of any contingency actions;
- On completion of the project, to review the RAP records for completeness and update as necessary; and
- Recommend any modification to general documentation which would further improve the environmental outcomes of this RAP.

2.3 Surveyor

The project surveyor will be a registered surveyor engaged by the Remediation Contractor to undertake surveying works as required by this RAP.

2.4 Asbestos Contractor

The Asbestos Contractor will be responsible for undertaking all asbestos work involving any asbestos impacted filling and will hold a relevant licence for the removal of asbestos (issued by SafeWork NSW). At this stage, bonded asbestos has been encountered at the site. A contractor licensed to undertake bonded asbestos works (at a minimum) should be engaged for the works.

The Asbestos Contractor can be the same entity as the Remediation Contractor.

2.5 Sub-contractors

All sub-contractors will be inducted onto the site, informed of their responsibilities in relation to this RAP and sign their agreement to abide by the RAP requirements. Where necessary, sub-contractors will also be trained in accordance with the requirements of this document. All sub-contractors must conduct their operations in accordance with the RAP as well as all applicable regulatory requirements.

2.6 Environmental Consultant

The Environmental Consultant will provide advice on implementing the RAP. The Environmental Consultant will be responsible for:

- Undertake any required assessments where applicable (e.g. waste classification, validation);
- Validation of excavations following asbestos impact removal;
- Provide advice and recommendations arising from monitoring and/or inspections, including unexpected finds; and
- Notify the Client with any results of assessments, and any observed non-conformances.

2.7 Licenced Asbestos Assessor

A Licenced Asbestos Assessor will be required to be engaged independently of the Asbestos Contractor to undertake the following:

- Review and approve documentation prepared by the Asbestos Contractor;
- Prepare any WHS plans and advice required by the Remediation Contractor;
- Undertake airborne asbestos monitoring;
- Undertake clearance inspections where a licensed asbestos assessor is required;
- Provide advice and recommendations arising from monitoring and/or inspections; and
- Notify the client with the results of any assessments and any observed non-conformances.

2.8 Site workers

All workers on the site are responsible for observing the requirements of this RAP and other management plans. These responsibilities include the following:

- Being inducted on the site and advised of the general nature of the remediation/environmental issues at the site;
- Being aware of the requirements of this plan;
- Wearing appropriate personal protective equipment (PPE) as required by this plan;
- Only entering restricted areas when permitted; and
- Requesting clarification when unclear of requirements of this or any other plans (e.g. safe work method statements (SWMS)).

3. Water management

3.1 Stormwater

Stormwater must be managed during the remediation works such that potential adverse impacts from surface runoff (e.g. cross contamination, mobilisation of contaminants in soil particles, etc.) are appropriately mitigated. Accordingly, the Remediation Contractor will take appropriate measures which may include:

- Construction, where necessary, of stormwater diversion channels, bunding and linear drainage sumps with catch pits in and around the remediation areas to divert stormwater from the contaminated areas;
- Provision of appropriately located sediment traps including geotextiles; and
- Discharge of excess water in excavations / low points on a regular basis to limit the potential for flooding.

3.2 Dewatering of excavations

Any runoff or seepage water accumulated in site excavations that requires removal must initially be sampled and tested for suspended solids, pH and any contaminants of potential concern (CoPC) as identified by the Environmental Consultant. The options for management of excavation pump-out water, dependent upon the test results, are for disposal of the water as follows:

- Discharge to stormwater with prior approval from Council. Provided the test results comply with relevant ANZG *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018), or any other compliance requirements stipulated by Council. The Environmental Consultant must consider the most appropriate criteria to be used; or
- Discharge to sewer, as industrial trade wastewater, with prior approval from Sydney Water. This option would require the analysis of a larger list of analytes, and compliance with the Sydney Water acceptance standards; or
- Pumping by a liquid waste contractor for removal of the water off-site, in accordance with regulatory requirements.

Note that, depending on the type and scale of the dewatering required, a permit (water use approval) may need to be obtained through NSW Water.

4. Soil management plan

The Remediation Contractor will develop a plan to mitigate cross contamination as part of the CEMP to be implemented throughout the works.

4.1 Stockpiling of contaminated material

Contaminated material shall be excavated and stockpiled at a suitably segregated location(s) away from sensitive areas (e.g. water bodies, drainage lines, stormwater pits, etc.) and ongoing excavations, and in a manner that will not cause nuisance to the neighbouring properties. Soil stockpiles are to be managed as follows:

- An impermeable membrane such as plastic sheeting should be provided at the surface by the Remediation Contractor prior to stockpiling. Plastic sheeting should be taped at joins, as necessary;
- All stockpiles of contaminated material shall be surrounded by star pickets and marking tape or other suitable material to clearly delineate their boundaries;
- Stockpiles shall be lightly conditioned by sprinkler or covered by geotextile or similar cover to prevent dust generation;
- Stockpiles impacted, or potentially impacted, with asbestos must be covered by geotextile;
- Measures should be taken by the Remediation Contractor to prevent the migration of stockpile materials (i.e. perimeter bunds, hay bales, silt fences, etc.); and
- A record of stockpile locations (stockpile register), dimensions, descriptions, environmental controls, etc. should be maintained by the Remediation Contractor.

All movement of soil within the site and off-site is to be tracked by the Remediation Contractor, from cradle to grave. Copies of tracking records must be provided to the Environmental Consultant.

4.2 Stockpiling imported material

Imported material shall be stockpiled at a suitably segregated location(s) away from sensitive areas (e.g. water bodies, drainage lines, stormwater pits, etc.) and ongoing excavations, and in a manner that will not cause nuisance to the neighbouring properties. Soil stockpiles are to be managed as follows:

- Imported material should not be stockpiled within un-remediated areas of the site. If this is unavoidable an impermeable membrane such as plastic sheeting should be provided at the surface by the Remediation Contractor prior to stockpiling. Plastic sheeting should be taped at joins, as necessary;
- All stockpiles of contaminated material shall be surrounded by star pickets and marking tape or other suitable material to clearly delineate their boundaries;
- Stockpiles shall be lightly conditioned by sprinkler or covered by geotextile or similar cover to prevent dust generation; and

- A record of stockpile locations (stockpile register), dimensions, descriptions, environmental controls, etc. should be maintained by the Remediation Contractor.

All movement of soil within the site is to be tracked by the Remediation Contractor, from cradle to grave. Copies of tracking records must be provided to the Environmental Consultant.

4.3 Transport of material off-site and on to site

Transport of contaminated material from the site and imported material to the site shall be via a clearly delineated haul route(s) and this route shall be used exclusively for entry and egress of vehicles used to transport contaminated materials within and away from the site, and onto and within the site. The proposed transport route(s) (to be determined by the Remediation Contractor) will be notified to Council and truck dispatch shall be logged and recorded by the Remediation Contractor for each load leaving or arriving the site. A record of the truck dispatch will be provided to the Environmental Consultant.

All haulage routes for trucks transporting soil, materials, equipment or machinery to and from the site should be selected to meet the following objectives:

- Comply with all road traffic rules;
- Minimise noise, vibration and dust to adjacent premises; and
- Use State roads and minimise use of local roads as far as practicable.

The remediation work will be conducted such that all vehicles:

- Conduct deliveries of soil, materials, equipment or machinery only during the specified hours of remediation;
- Have securely covered loads to prevent any dust or odour emissions during transportation; and
- Exit the site in a forward direction.

In addition, measures will be implemented to ensure no contaminated material is spilled onto public roadways or tracked off-site on vehicle wheels. Roadways will be kept clean throughout the remediation works and will be broomed, if necessary, to achieve a clean environment.

All loads will be securely covered and may be lightly wetted, if required, to ensure that no materials or dust are dropped or deposited outside or within the site. Prior to exiting the site each truck should be inspected by Remediation Contractor personnel and either noted as clean (wheels and chassis) or broomed prior to leaving the site. Any soil spilled onto surrounding streets will be cleaned by mechanical or hand methods, on a daily basis.

Removal of waste materials from the site shall only be carried out contractors holding the appropriate license(s), consent or approvals to dispose the waste materials according to the waste classification and with the appropriate approvals obtained from the EPA, were required.

Materials imported onto the site shall only be carried out contractors holding the appropriate license(s), consent or approvals to transport the materials with the appropriate approvals obtained from the EPA, were required.

All movement of soil within the site is to be tracked by the Remediation Contractor, from cradle to grave. Copies of tracking records must be provided to the Environmental Consultant.

5. Noise and vibration control plan

All equipment and machinery should be operated in an efficient manner to minimise the emission of noise. The use of any plant and/or machinery should not cause unacceptable vibrations to nearby properties and should meet Council requirements.

6. Dust control plan

Dust emissions must be confined within the site boundary as far as is practicable. The following example dust control procedures could be employed to comply with this requirement, as necessary:

- Erection of dust screens around the perimeter of the site (as applicable);
- Securely covering all loads entering or exiting the site;
- Use of water sprays across the site to suppress dust;
- Covering of all stockpiles of contaminated soil remaining on site more than 24 hours;
- Include wheel wash (if applicable); and
- Keeping excavation and stockpile surfaces moist.

Regular checking of the fugitive dust issues is to be undertaken. Remedial measures are to be undertaken to rectify any cases of excessive dust. Due consideration should be given to the management of soils potentially impacted by asbestos (refer to section 8.6 below).

7. Odour control plan

No odours should be detected at any boundary of the site during remediation works by an authorised Council Officer relying solely on sense of smell. The following example procedures could be employed to comply with this requirement as necessary:

- Use of appropriate covering techniques such as plastic sheeting, polythene or geotextile membranes to cover excavation faces or stockpiles;
- Fine spray of water and/or hydrocarbon mitigating agent on impacted areas/stockpiles or loads to lightly condition the material;
- If required, restrict uncovered stockpiles to appropriate sizes to minimise odour generation;
- Ceasing works during periods of inclement weather such as high winds or heavy rain;
- Regular checking of the fugitive dust and odour issues to ensure compliance. Undertake immediate remediation measures to rectify any cases of excessive dust or odour (e.g. use of misting sprays or odour masking agent); and
- Adequate maintenance of equipment and machinery to minimise exhaust emissions.

8. Work health and safety plan

8.1 General

It is the Remediation Contractor's responsibility to devise a SWMS[1] (or series thereof, for various respective tasks) and to implement proper controls that enable the personnel undertaking the remediation to work in a safe environment. This RAP and SMP does not relieve the Remediation Contractor or other contractors of their ultimate responsibility for occupational health and safety of their workforce and to prevent contamination of areas outside the 'remediation' workspace. This RAP and SMP sets out general procedures and the minimum standards and guidelines for remediation that will need to be used in preparing the safe work method statement.

This work health safety plan (WHSP) has been prepared with refence to CRC CARE *Remediation Action Plan: Implementation - Guideline on Health and Safety* (CRC CARE, 2019). The requirements of this WHSP must be incorporated into the Remediation Contractor's SWMS.

All site work must be undertaken in a controlled and safe manner with due regard to potential hazards, training and safe work practices. To attain this the SWMS developed by the Remediation Contractor must comply with policies specified in the Work Health and Safety Regulation 2011.

All appropriate permits, licences and notifications required for the remediation activities must be obtained prior to the commencement of remediation works.

8.2 Site access

Appropriate fencing and signage must be installed around and within the site to prevent unauthorised access and restrict access to remediation areas and/or deep excavations. Access restrictions and administrative arrangements for management of entry of workers or related personnel on site is the responsibility of the Remediation Contractor.

Any existing pits or unstable areas on site that may generate potential safety, or operational risk should be demarcated and taped off, with appropriate rectification action undertaken (e.g. backfilling of pits).

8.3 Personnel and responsibilities

Before undertaking works on site, all personnel will be made aware of the officer responsible for implementing WHS procedures. All personnel must read and understand this WHSP and over-arching SWMS prior to commencing site works and sign a statement to that effect. Contractors employed at the site will be responsible for ensuring that their employees are aware of, and comply with, the requirements of this WHSP and Remediation Contractor's SWMS.

Either a SWMS or construction environmental management plan (CEMP), or other equivalent document incorporating health and safety aspects of the proposed remedial works.

8.4 Chemical contamination hazards

The primary CoPC at the site is asbestos. There is also a lower probability of other contaminants (chemical compounds or substances) being present in the soils due to the variability of fill material across the site.

The risks associated with the identified contaminants to site personnel and workers involved in the remediation are generally considered to be low due to the concentrations within soil and limited exposure durations. These risks are associated with:

- Ingestion of contaminated soil and/or water;
- Dermal contact with contaminated soil and/or water; and
- Inhalation of dusts or vapours of the CoPC.

If additional asbestos (including potentially friable asbestos) is encountered in fill, this risk evaluation should be revised.

Personnel will endeavour, wherever possible, to avoid direct contact with potentially contaminated material. Workers must avoid the potential exposures listed above as far as is practicable. Appropriate personal protective equipment (PPE) must be used to mitigate potential risks.

8.5 Physical hazards

The following physical hazards are associated with conditions that may be created during remediation works:

- Heat exposure;
- Excavations;
- Buried services;
- Noise;
- Dust;
- Electrical equipment;
- Heavy equipment and truck operation; and
- Asbestos.

Safe work practices must be employed to manage the physical risks identified above. For the most part these risks can be managed through appropriate demarcation, access controls and the use of appropriate PPE.

8.6 Safe work practices

The appropriate safe work practices should be clearly defined by the Remediation Contractor in their SWMS. As a minimum, all personnel on site will be required to wear the following PPE:

- Steel-capped boots (mandatory);
- High visibility clothing / vest (mandatory);

- Safety glasses or safety goggles with side shields requirements (as necessary);
- Hard hat (as necessary);
- Appropriate respiratory and protective equipment for any works involving asbestos (as necessary); and
- Hearing protection when working in the vicinity of machinery or plant equipment if noise levels exceed exposure standards (as necessary).

Each item of PPE should meet the corresponding relevant Australian Standard(s).

Specific safe work practices will be adopted when working with asbestos, in accordance with (but not limited to) the following codes of practice:

- SafeWork NSW *Code of Practice, How to Manage and Control Asbestos in the Workplace* (SafeWork NSW, 2022a);
- SafeWork *NSW Code of Practice, How to Safely Remove Asbestos* (SafeWork NSW, 2022b);
- WorkCover *NSW Managing Asbestos in or on Soil* (WorkCover NSW, 2014);
- NOHSC *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Ed* (NOHSC, 2005).

9. Remediation schedule and hours of operation

The remediation works will be conducted within the days and hours specified in the development consent.

10. Response to incidents

The key to effective management of incidents is the timely action taken before any situation reaches a reportable or critical level. Therefore, surveillance activities are extremely important, and should be conducted for the measures prescribed herein and any other measures prescribed in any additional environmental management plan developed subsequently. During construction activities on the site, the following inspection or preventative actions should be performed by the Remediation Contractor:

- Regular inspection of works;
- Completion of routine environmental checklists and follow-up of non-compliance situations;
- Maintenance and supervision on-site; and
- An induction process for site personnel involved in the remediation works that includes relevant information on the contamination status of the site, the remediation works being undertaken, worker health and environmental protection requirements and ensures that all site personnel are familiar with the site emergency procedures.

An emergency response plan will be in place for all aspects of site works. Any emergency will be reported immediately to the site office and/or the Site Manager (and Safety Officer), and the appropriate emergency assistance should be sought. The Site Manager should be responsible for initiating an immediate emergency response using the resources available on the site. Where external assistance is required, the relevant emergency services should be contacted. A table such as that below, containing contact details for key personnel who may be involved in an environmental emergency response should be completed and be readily available to personnel at all times. The table should be completed, and thereafter amended, as required.

The Remediation Contractor will be responsible for ensuring that site personnel are aware of the emergency services available and the appropriate contact details. A site Safety Officer should be contactable, or available, on-site during remediation and development works.

Contact details for key utilities are included in the event of needing to respond to incidents. Blank cells are 'to be confirmed' and should be completed prior to works commencing when all entities are confirmed.

Table 1: Summary of roles and contact details

Role	Personnel / contact	Phone contact details
Principal		
Principal's Representative		
Site Manager		
Remediation Contractor and Builder		
Site Office		
Environmental Consultant		
Consent Authority		
Regulator	NSW EPA (pollution line and general enquiries)	131 555
Utility Provider	Water (Tamworth Regional Council)	(02) 6767 5555, or 1300 733 625
Utility Provider	Power (Essential Energy)	13 20 80
Utility Provider	Gas (APA Group)	1800 427 532
Utility Provider	Telecommunications (Telstra Corporation Limited)	13 22 03 / 1800 653 935
Utility Provider	Telecommunications (Optus)	1800 505 777
Utility Provider	Telecommunications (NBN Co Limited)	1800 687 626 / 1800626329
Utility Provider	Telecommunications (other)	

11. References

ANZG. (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* Canberra, ACT: Australian and New Zealand Governments and Australian state and territory governments.

CRC CARE. (2019). *Remediation Action Plan: Implementation - Guideline on Health and Safety.* National Remediation Framework: CRC for Contamination Assessment and Remediation of the Environment.

NOHSC. (2005). *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Ed.* Canberra, April 2005, NOHSC:3003: National Occupational Health and Safety Commission, Commonwealth of Australia.

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

SafeWork NSW. (2022a). *Code of Practice, How to Manage and Control Asbestos in the Workplace.* December 2022.

SafeWork NSW. (2022b). *Code of Practice, How to Safely Remove Asbestos.* December 2022: SafeWork NSW, NSW Government.

WorkCover NSW. (2014). *Managing Asbestos in or on Soil.* March 2014: WorkCover NSW, NSW Government.

Appendix I

Contingency Plan and Unexpected Finds Protocol

1. General

Where the site conditions are found to be different than that anticipated during the remediation works, the proposed remediation approach may not be appropriate for the contamination encountered. In such cases the Environmental Consultant is to re-assess the contamination and remediation approach and inform the regulator. Where necessary the Environmental Consultant will prepare an addendum to, or revision of, this RAP. Any addendum or revision is to be reviewed and agreed by the regulator before its implementation.

2. Contingency plan

This contingency plan has been developed to provide guidance on processes to follow if contamination (or indicators of contamination), other than that included in the remediation strategy, (Section 10) is encountered during the remediation works. Any such finds shall be surveyed and the location documented.

Although the site has been subject to previous investigation(s), there remains a potential for soil contamination to be present between sampled locations. In the event that signs of soil contamination, other than that included in the remediation strategy, are encountered during remediation e.g. evidence of additional asbestos containing material (ACM), asbestos fines, petroleum, or other chemical odours which weren't previously identified the following protocols will apply:

- The Site Manager is to be notified and the affected area closed off by the use of barrier tape and warning signs;
- The Environmental Consultant is to be notified to inspect the area and assess the significance of the potential contamination and determine extent of remediation works (if deemed necessary) to be undertaken. An assessment report and management plan detailing this information will be compiled by the Environmental Consultant and provided to the Principal's Representative;
- The assessment results together with a suitable management plan shall be provided by the Principal's Representative to the Consent Authority (if required by the development consent);
- A suitably licensed and experienced remediation contractor should be engaged to manage the contingency contamination. As a precautionary measure, a contractor with a friable asbestos licence could be considered for engagement in the event that friable asbestosis encountered;
- The agreed management / remedial strategy, based on the RAP and relevant guidelines (e.g. WA DoH (2021), for asbestos issues), shall be implemented; and
- All details of the assessment and remedial works are to be included in the site validation report.

3. Unexpected finds protocol

This unexpected finds protocol (UFP) has been developed to provide guidance on processes to follow if any unexpected find is encountered during the remediation or future civil and construction works. Any unexpected finds should be surveyed and the location documented.

All site personnel are to be inducted into their responsibilities under this (UFP), which should be included or referenced in the Remediation Contractors Environmental Management Plan.

All site personnel are required to report unexpected signs of environmental concern to the Site Manager if observed during the course of their works e.g. presence of potential unexploded ordinance, unnatural staining, potential contamination sources (such as buried drums or tanks) or chemical spills.

Should signs of concern be observed, the Site Manager, as soon as practical, will:

- Stop work in the affected area and ensure the area is barricaded to prevent unauthorised access;
- Notify authorities needed to obtain emergency response for any health or environmental concerns (e.g. fire brigade);
- Notify the Principal's Representative of the occurrence;
- Notify any of the authorities that the Remediation Contractor is legally / contractually required to notify (e.g. EPA, Council); and
- Notify the Environmental Consultant.

The Principal's Representative is to notify any of the authorities which the Principal is legally / contractually required to notify (e.g. EPA, Council). Where appropriate the Principals Representative will also implement appropriate community consultation in accordance with the Communications Plan (refer to Section 7).

The Environmental Consultant will assess the extent and significance of the find and develop an investigation, remediation or management approach using (where possible) the principles and procedures already outlined in the RAP. Where a Site Auditor is involved, the proposed approach will be discussed and agreed with the Site Auditor prior to implementation.

4. References

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

WA DoH. (2021). *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia.* WA Department of Health.