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**Unexpected Finds (Contamination)  
Protocol**

**Flide Street, Caringbah, Affordable  
Housing**

**2 Flide Street, Caringbah NSW**

**Prepared for Homes NSW**

**Project 233414.04**

**26 September 2025**

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

### Signature

### Date

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<b>Reviewer</b>	p.p. <i>Lisa Teng</i>	26 September 2025

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# Report on Unexpected Finds (Contamination) Protocol Flide Street, Caringbah, Affordable Housing 2 Flide Street, Caringbah NSW

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## 1. Introduction

This Unexpected Finds Protocol (UFP) has been prepared by Douglas Partners Pty Ltd (Douglas) on behalf of Homes NSW for a State Significant Development Application (SSD-84862461) and Planning Proposal for the redevelopment of existing social housing (the Project) at 2 Flide Street, Caringbah (the site). The Project involves the construction of two residential flat buildings – one rising to part 13 and part 14 storeys, and the other to 8 storeys – comprising a total of 164 social and affordable housing apartments. The development also includes a communal room and a two-level basement car park. The site is shown on Drawing 1, Appendix A.

To support the Proposal, adjustments to the permissible height and floor space (FSR) ratio via an amendment to the Sutherland Shire Local Environment Plan 2015 are required.

This UFP has been prepared to outline appropriate management procedures and reporting protocols to be implemented during site development works, including earthworks, to manage the risk of potential unexpected finds of contamination. The required management procedures include an inspection of the ground surface following the demolition to visually assess the exposed surface soils for indicators of potential contamination and, if considered necessary based on the inspection, a data gap investigation.

Douglas has previously completed contamination investigations for the development. These investigations did not identify contamination requiring remediation and consequently have not triggered the need for a remediation action plan (RAP). This UFP addresses the recommendations of the previous detailed site investigation (DSI) (Douglas, 2025b).

This document should be provided to all contractors involved in ground disturbance activities on the project and must be adhered to during the duration site development works (including earthworks).

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

## 2. Site information

### 2.1 Site details

The site is located within the Sutherland Shire local government area (LGA) and is zoned R4 High Density Residential under the Sutherland Shire Local Environmental Plan (SSLEP) 2015.

The site has a total area of approximately 3,596 square metres (sqm) and is bound by Flide Street to the north, Gardere Street to the west, Willarong Road to the east and the rail corridor for the Eastern Suburbs & Illawarra Line to the south. Refer to Figure 1, below.

The site is accessible by public transport, being within 400 m of the entrance to Caringbah Station and bus stops on the Kingsway which have frequent services to Sutherland, Miranda and Cronulla.

The site currently comprises 38 social housing units within two 3 storey buildings with a single level basement car park.

Surrounding land uses are:

- North – Flide Street then mixed low and high density residential;
- East – mixed commercial and high density residential then the Kingsway and commercial;
- South – train line then mixed low and high density residential; and
- West - Gardere Street and train line then high density residential.



**Figure 1: Site Location (Source: Metromap)**

## 2.2 Proposed development

The proposed development comprises the construction of two residential flat buildings – one rising to part 13 and part 14 storeys, and the other to 8 storeys – comprising a total of 164 social and affordable housing apartments. The development also includes a communal room and a two-level basement car park.

The proposal includes bulk earthworks, tree removal and associated landscaping and public domain works.

To support the Proposal, a concurrent Planning Proposal seeks amendments to the development standards within SSLEP as follows:

- Height – Increase the maximum building height development standard from 16 m to 50 m; and
- FSR – Increase the maximum FSR development standard from 1.2:1 to 4.0:1.

The existing buildings on the Site were approved for demolition under Part 5 of the *Environmental Planning and Assessment Act 1979*, and does not form part of this proposal. This included removal of all trees on top of the existing basement.

Refer to Drawing 1 in Appendix A.

### 3. Previous investigations

#### 3.1 Reviewed information

Previous investigations that were reviewed in preparation of this UFP include:

- Douglas (Douglas, 2025a) *Report on Preliminary Site (Contamination) Investigation, Proposed Development without Consent (Demolition), 2 Flide Street, Caringbah NSW*. Ref 233414.04.R.001.Rev1 dated 24 June 2025.
- Douglas (Douglas, 2025b) *Report on Detailed Site (Contamination) Investigation, Proposed Residential Development, 2 Flide Street, Caringbah NSW*, Ref 233414.04.R.002.DftA dated 11 June 2025.

A brief summary of the general sub-surface profile and groundwater levels encountered during the DSI, and concurrent geotechnical investigation is included in Section 3.2, with further information provided in Appendix C.

Previous borehole logs are attached in Appendix D. The laboratory results are summarised in the following tables attached in Appendix E:

- Table F1: Summary of Laboratory Results – Soil Site Suitability Assessment;
- Table F2: Summary of Laboratory Results – Groundwater Assessment; and
- Table F3: Summary of Laboratory Results – Preliminary In Situ Waste Classification Assessment.

#### 3.2 Recorded subsurface conditions

Subsurface conditions encountered during the previous Douglas investigations are summarised below:

- Fill – dark brown and brown, highly variable, silty sand, sand, silty and sandy clay, clay and sandy silt to depths between 0.2 and 0.85 m; except for at BH05 and BH06 (which were underlain by the basement structure) and encountered sandy silt then silty sand fill. Trace slag and concrete rubble was observed at 0.4 m depth in BH08. It is noted that refusal in fill

occurred in BH04; and BH05 and BH06 refused on the apparent top of the basement structure;

- Residual Soil – Very stiff and hard, low to medium plasticity, grey and mottled red brown, silty clay and silty sandy clay with ironstone gravel, including some extremely weathered material. It is noted that BH01 refused on gravels; underlain by,
- Sandstone and Clay – Interbedded clay (extremely weathered sandstone), and moderately weathered sandstone, with ironstone and iron-cemented bands of low, medium and high strength, grey and pale grey, orange, orange-brown and red-brown. BH12B and BH13B refused on inferred bedrock.

No visual or olfactory evidence (e.g. staining, odours, free phase product) was observed during the investigations other than slag and concrete rubble noted above to suggest the presence of contamination within the soils or groundwater at the site.

Groundwater levels were gauged on 5 May 2025 using an electronic oil / water interface meter prior to developing the wells and again on 9 May 2025 prior to sampling. During groundwater sampling, the standing water level (SWL) within the wells was at depths between 2.52 m and 8.49 m bgl. It should be noted that groundwater levels are affected by climatic conditions and soil permeability and will therefore vary with time.

## 4. Identification of unexpected finds

### 4.1 Unexpected finds

Unexpected finds of potential contamination may be identified by visual (appearance or staining) and/or olfactory (odour) evidence during site works. Unexpected finds could include:

- Potential asbestos containing material (ACM) such as (but not limited to) fibre cement, vinyl tiles, bituminous membranes and loose fibres;
- Soils or liquids with unnatural staining or odours, including oily staining; and
- An underground structure potentially previously used for chemical storage (such as an underground storage tank) or waste (such as an oil / water separator).

### 4.2 Responsibilities

The Project Principal will retain the overall responsibility for ensuring this UFP is appropriately implemented. The Principal Contractor will be the party responsible for daily implementation of this UFP and shall fulfil the responsibilities of the Principal Contractor as defined by SafeWork NSW. The Principal Contractor is responsible for:

- Inducting all site personnel into their obligations under this UFP, including the mechanism by which any unexpected find is to be reported;
- Making a copy of the UFP available to all excavation and construction personnel prior to commencing work, and on-site during all works; and
- Ensuring that the plan is implemented by contractors during works undertaken at the site.

Site workers are responsible for identifying and reporting any unexpected finds, and following all reasonable instruction provided by the Principal Contractor to manage the unexpected find.

All site workers must be inducted to the UFP prior to commencement of any works. The induction can be undertaken at the time of a general site induction and toolbox meetings. Induction into the UFP must be performed by a suitably qualified person.

The UFP is to be implemented by the contractor during any site preparation, excavation and construction works where the ground surface is disturbed. Prior to the commencement of site works, a pre-start meeting should be convened between all relevant parties to discuss the requirements of the UFP and to assign roles and responsibilities.

#### 4.3 **Timing**

This plan applies for the period of construction, including earthworks, being carried out at the site. This plan does not include procedures for on-going site management.

#### 4.4 **Data gap investigation**

The field investigation for the DSI was constrained by existing buildings / site infrastructure, and the site being occupied. The area of the existing basement footprint had a limited assessment of two boreholes completed with hand tools in the basement. Both of these boreholes encountered natural soil directly beneath base coarse sand, indicating a low risk of contamination. Boreholes were used instead of test pits to reduce disturbance to the site, noting that boreholes are inefficient for identifying asbestos.

A data gap investigation (DGI) must therefore be conducted as part of the requirements to identify potential unexpected finds. The following investigations are required as a minimum, to address gaps in the available contamination assessment data:

- Prior to demolition, undertake a HBM assessment to identify risks and appropriate management during demolition works;
- After demolition, in order to assist in the early identification of unexpected finds and to minimise the potential for unexpected finds to be damaged and/or spread across the site during earthworks and/or development works, a site walkover should be undertaken by a competent person (ie a suitably qualified environmental consultant, refer to Section 8 for definitions).
  - o The walkover should be undertaken on a 3 m x 3 m cross grid pattern to assess the presence of visible contamination at the surface and any stockpiled topsoil / materials from the demolition and vegetation clearance process;
- Following the walkover, if indicators of contamination (i.e. identification of potentially asbestos containing material, presence of an undocumented buried structure, other visual or olfactory indicators e.g. presence of building material, hydrocarbon odours, etc.) are found, assessment of soil from test pits targeted at any identified areas of potential concern (to observed depth of impact):
  - o It is anticipated that the soil assessment would include sampling and testing for any identified contaminants of potential concern, which could include asbestos [which should be assessed in accordance with NEPC (2013), including on-site assessment for potential asbestos containing materials on 10 L samples and laboratory analysis of 500 mL samples]; and

- o The number of sieve locations should be assessed by the environmental consultant and be based on either double that recommended in Table 2 of NSW EPA *Contaminated Sites Sampling Design Guidelines* (NSW EPA, 2022)<sup>1</sup> or otherwise on a 5 m x 5 m grid with a minimum of three locations.

The findings of these investigations should be documented in a short report, along with any recommendations based on the observations and laboratory results.

Should any unexpected contamination be encountered during the investigations, the relevant procedures in this UFP for the specific find (refer to Section 5) should be implemented.

## 5. Contingency plan

### 5.1 Contingency plan – general procedures

Should an indicator of potential contamination be encountered during development works, the following general unexpected finds protocol should be followed in addition to the relevant specific procedures (depending on the nature of the unexpected find) detailed below:

- Upon discovery of an unexpected find the contractor shall cease work in the potentially contaminated area as soon as it is safe to do so and move to a designated meeting point or safe area;
- The site (project) manager is to be notified, and the affected area cordoned off using barrier tape and warning signs (if appropriate) and sediment controls. Warning signs shall be specific to the findings and potential hazards and shall comply with the Australian Standard 1319-1994 - Safety Signs for the Occupational Environment;
- The site (project) manager is to notify the Principal's Representative. The Consent Authority and any other relevant regulatory authorities should be notified as required by the development consent or any other regulation (e.g. under the Protection of the Environment Operations Act 1997);
- A qualified environmental consultant is to be notified by the site (project) manager to inspect the area and confirm the presence or otherwise of hazards or contamination, and to determine the method and extent of investigation or remediation works to be undertaken. A report detailing this information will be compiled by the environmental consultant and provided to the site (project) manager;
- The assessment results together with a suitable management plan shall be provided to the Principal's Representative (and to the Consent Authority if required by the development consent) and Site Auditor;
- The environmental consultant will provide advice with respect to operational control (i.e. dust management and personal protective equipment (PPE) requirements) and the appropriate action to manage the unexpected find. The environmental consultant will also conduct control monitoring (e.g. air monitoring) and validation assessment as required;

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<sup>1</sup> ie, consistent with the WA Department of Health (2021) guidelines for areas suspected of ACM contamination, as referenced in Section 5.2.5 of NSW EPA (2022)

- If remediation is required, the environmental consultant will prepare a remediation works plan (RWP) which will be provided to the Site Auditor for review. The RWP will be based on the requirements of the following sections (as applicable);
- Works are not to recommence in the affected area until appropriate advice has been obtained from the environmental consultant and clearance has been provided;
- Details of all unexpected finds are to be recorded in the site record system, including location and description of the unexpected find, volume of the material removed, the waste classification of the material, the licensed facility that the material was disposed to, the receipts from the licenced facility confirming volume received and validation results to demonstrate complete removal of the identified contamination. Alternatively, if the material is to be retained on site, a remediation action plan (RAP) should be developed and all management to be undertaken in accordance with the RAP, then the final location of the material should be recorded in the site records system; and
- Details of the remediation and validation works undertaken with respect to the unexpected find must be incorporated into a validation assessment report prepared by a suitably qualified environmental consultant.

## 5.2 Contingency plan – waste classification and disposal

Any potentially contaminated soil / rock to be disposed of off-site is to be managed as follows:

- Excavated material from remedial activities will be separated from other materials and stockpiled for assessment (waste classification);
- Stockpiles should be managed appropriately, as outlined in Section 5.3 below;
- Waste classification sampling of the materials will be undertaken in accordance with NSW EPA waste classification guidelines (NSW EPA, 2014a) and sampling design guidelines (NSW EPA, 2022);
- Depending on the waste classification and nature of contamination, materials will either be transported to an appropriate waste facility that is licenced to legally accept waste of the relevant classification or alternate solutions adopted e.g., remediation on site which may require additional management plans and procedures to be developed;
- All work associated with the contaminated soil will be undertaken by an appropriately licensed contractor, as stipulated by the environmental consultant; and
- Documentary evidence (weighbridge dockets) of appropriate (legal) disposal of the material is to be provided to the site (project) manager if disposal occurs to ensure that all waste is accounted for and is disposed of appropriately in accordance with NSW EPA requirements.

## 5.3 Contingency plan - management of potentially contaminated stockpile material

Stockpiles of potentially contaminated material should be managed in an appropriate manner so that the risk of harm to human health and the environment is prevented or minimised. Stockpiles should be managed as follows:

- Stockpiled material should be placed in a clearly marked and segregated area;
- Stockpiles should be placed on an impervious, non-soil base away from the site boundary, surface watercourses, catchments, flood zones and groundwater recharge areas, residential

areas, and other sensitive receivers. Where possible stockpile locations should be on level ground; and

- Stockpile height should be limited to a maximum of 3 m (and the height of stockpiles should generally be lower than any surrounding structures).
- Physical controls (e.g. geofabric, hessian or plastic) should be used to cover the stockpile and anchor covers should be used to prevent the covers blowing away. The physical controls will depend on the material stockpiled:
  - o Stockpiles containing asbestos containing material (ACM) should be handled minimally and covered to control dust emissions. In dry and windy conditions, the stockpile should be lightly wetted in addition to being covered whilst awaiting disposal;
  - o Stockpiles containing potentially leachable contaminants should be covered with an impermeable covering at the end of each day and prior to large rainfall events to minimise potential leaching of the stockpiled contaminated soils whilst awaiting disposal; and
  - o Stockpiles containing malodorous material should be covered and contained and located away from sensitive receptors and/or neighbouring properties. Effective management and monitoring may be required including ensuring aerobic conditions within the stockpile are maintained whilst awaiting disposal.
- All stockpiled material should have sediment controls (e.g. a physical barrier) to minimise run off; and
- Where contamination has been identified in the stockpile, and the stockpile has been placed on exposed soil (ie. not on plastic or concrete), the footprint of the stockpile is to be sampled and tested for the contaminants identified in the stockpile following its removal. Sampling is to be undertaken on a 5 m grid with samples to be tested for the identified contaminants of concern. Validation sample test results will be compared to the site assessment criteria.

Further reference should also be made to EPA Victoria '*Managing Stockpiles*' Guidance Sheet (EPAV, 2020).

The site (project) manager should document the following information about the stockpile in the site record system:

- The type of material stockpiled;
- The location of the material stockpiled;
- The approximately volume of the stockpile(s);
- Stockpiling method;
- The date and time that the material was stockpiled;
- The date and time that stockpiled material is transported off the site; and
- If contaminated material is retained on site and/or managed under the RAP, then the final location of the material.

#### 5.4 Contingency plan – asbestos

In the event that asbestos impacted soil is encountered during site works, the following additional procedures are to be applied.

Potentially asbestos impacted material should generally be managed / removed as follows:

- The area will be inspected by a qualified environmental consultant including visual identification of any ACM and a sample of the fragment and nearby soils collected to be analysed at a NATA accredited laboratory to assess the presence of asbestos in the fragment or fibrous asbestos / asbestos fines in the soil;
- The environmental consultant will assess if the find potentially comprises bonded or friable asbestos. If required, an occupational hygienist is to confirm the classification in accordance with the WHS legislation;
- The contractor is to undertake any works associated with the find under the appropriate licensing and controls required under WHS legislation. This may require using a sub-contractor with appropriate licensing;
- The asbestos contractor is to provide notification to SafeWork NSW in accordance with regulatory requirements (generally 5 days prior to commencement of asbestos works for non-emergency works);
- A qualified occupational hygienist and/or licensed asbestos assessor is to be engaged to provide services in accordance with the WHS legislation. This may include asbestos air monitoring; and
- Excavate and stockpile impacted materials (based on field observations) for waste classification) in accordance with the RWP which may require the supervision of the environmental consultant. Stockpiles should be managed in accordance with this UFP.
- Validation of the asbestos removal area by a qualified environmental consultant for the contaminants of concern in general accordance with NSW EPA endorsed guidance. For asbestos the following provisional validation sampling density is provided:
  - o Visual inspection of the excavation on a 3 m x 3 m grid for asbestos and if any ACM is identified, further excavation is to be carried out by the contractor;
  - o Validation sampling for the base of the excavation: sampling density based on the NSW EPA *Sampling Design: Part 1: Application; 2022*;
  - o Validation sampling of the side of excavation: one sample per 15 linear metre (minimum of 1 sample per side) and one sample per 1.5 m depth interval;
  - o Collection of ~500 mL samples at each location for fibrous asbestos and asbestos fines (FA / AF) analysis; and
  - o Collection of bulk (10L) soil samples for on-site sieving (gravimetric assessment) of soils at each sampling location, to assess for potential asbestos containing material (where validating for asbestos containing material) (note this will not be required for natural clay / rock samples).
- If required, 'chase out' additional asbestos impacted material identified by the validation, and undertake further validation sampling and analysis as required to assess appropriate removal of impacted materials;
- Following the removal of asbestos contaminated fill, a clearance inspection and report must be completed by an occupational hygienist prior to recommencement of non-asbestos works;
- Waste classification and off-site disposal of impacted materials in accordance with EPA (2014a); and

- Inclusion of validation, waste classification and disposal documents (including landfill docket and, in the case of asbestos, any relevant soil results, air monitoring results and photographic evidence) in a validation assessment report for the site.

### 5.5 Contingency plan – buried structures

In the event that buried structures, such as underground storage tanks (UST), are encountered during site works, the following additional procedure are to be applied.

The structure(s) and any associated pipework should generally be managed / removed as follows:

- Upon discovery of the structure, the site (project) manager is to be notified, and the area barricaded;
- The area will be inspected by a qualified environmental consultant including visual identification of the structure and associated pipework;
- All decommissioning works are to be conducted by a suitably qualified contractor in accordance with SafeWork NSW requirements and the applicable Australian Standards;
- The environmental consultant conducting the validation assessment for a UST must be a duly qualified person in accordance with EPA (2020);
- Decommission and make safe the structure by removing contents (if any). This is likely to entail testing of the contents and/or collection of the contents for disposal to a licensed liquid waste facility;
- Remove and dispose of the structure and associated pipework by the qualified contractor. In the case of a UST, the tank must be removed in accordance with Australian Standard AS 4926 - 2008 *The Removal and Disposal of Petroleum Underground Storage Tanks*;
- Excavate and stockpile impacted materials (initially based on field observations) for waste classification). Stockpiles should be managed in accordance with this UFP;
- Validation of the tank pit (if the find is a UST or a structure requiring some form of remediation) by a qualified environmental consultant for the contaminants in general accordance with NSW EPA endorsed guidance). For a UST and associated pipework, this should be the following minimum sampling density in EPA (2020) as well as QA / QC sampling and analysis in accordance with NEPC (2013);
- If required, "chase out" all of the material in the remediation pit identified to be impacted by petroleum hydrocarbons, and undertake further validation sampling and analysis as required to assess appropriate removal of impacted materials;
- Handling, waste classification and off-site disposal of impacted materials in accordance with this UFP and
- Inclusion of validation, waste classification and disposal documents (including landfill docket and, in the case of USTs, tank and pipe work destruction certificates) in a validation assessment report for the site.

### 5.6 Contingency plan – other staining and odours

In the event that visual or olfactory signs of contamination, such as hydrocarbon odours or staining are encountered during site works, the following additional procedure are to be applied.

The identified indicator of contamination should generally be dealt with in the following manner:

- If contamination of potential concern is confirmed to be present, after assessment of the extent and nature of the contamination, excavate and stockpile impacted materials (based on the results of the assessment and field observations) for waste classification, management and disposal as per this UFP.
- Validation of the remedial excavation by a qualified environmental consultant for the contaminants of concern, at approximately the following sampling density, unless advised otherwise by the environmental consultant:
  - o Base of the excavation: one sample per 25 m<sup>2</sup>, i.e., 5 m x 5 m grid;
  - o Side of remedial excavation: one sample per 10 metre (minimum of one sample per side) and one sample per 2 - 3 m depth interval; and
  - o QA / QC sampling and analysis at a rate of at least 10% of the samples collected.
- If required, 'chase out' additional impacted material identified by the validation, and undertake further validation sampling and analysis as required to assess appropriate removal of impacted materials; and
- Inclusion of validation results and relevant documents confirming legal disposal in a validation assessment report to be prepared by the environmental consultant.

## 6. Concluding statements

This UFP has been prepared to outline appropriate management procedures and reporting protocols that should be implemented in the event that indicators of contamination are encountered during the proposed development.

It is possible that indications of contamination not specifically covered in this UFP may be encountered at the site. In such a scenario, a precautionary principal will be applied and the general unexpected finds protocol (Section 5.1) should be applied in all circumstances.

## 7. 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.

Douglas. (2025a). *Report on Preliminary Site (Contamination) Investigation, Proposed Development without Consent (Demolition), 2 Flide Street, Caringbah NSW*. Ref 233414.04.R.001.Rev1 dated 24 June 2025.

Douglas. (2025b). *Report on Detailed Site (Contamination) Investigation, Proposed Residential Development, 2 Flide Street, Caringbah NSW*. Ref 233414.04.R.002.DftA dated 11 June 2025.

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. (2020). *Underground Petroleum Storage Systems - Guidelines for implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019*. Doc Ref: EPA 2020P2700: NSW Environment Protection Authority.

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

## 8. Definitions

<i>Asbestos:</i>	The fibrous form of those mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos) and tremolite, or any mixture containing one or more of the mineral silicates belonging to the serpentine and amphibole groups.
<i>Asbestos-containing material (ACM):</i>	This comprises asbestos considered to be in a sound condition, although possibly broken or fragmented, and the asbestos is bound in a matrix, e.g. asbestos fencing or vinyl tiles.
<i>Asbestos work:</i>	Work undertaken in connection with a work process in which exposure to asbestos may occur and includes any work process involving the use, application, removal, mixing or other handling of asbestos or asbestos containing material.
<i>Competent person:</i>	A person possessing adequate qualifications, such as suitable training and sufficient knowledge, experience and skill, for the safe performance of the specific work.
<i>Control Monitoring:</i>	Air monitoring, using static or positional equipment to measure the level of airborne asbestos fibres in an area during work on ACM. Control monitoring is designed to assist in assessing the effectiveness of control measures. Its results are not representative of actual occupational exposures and should not be used for that purpose.
<i>Dust and debris:</i>	Visible particles, fragments or chunks of material, large and heavy enough to have settled in the work area, that are likely to have originated from ACM.
<i>Environmental consultant:</i>	A person possessing adequate qualifications such as an appropriate science or engineering degree and suitable industry relevant experience in relation to contaminated sites and/or site remediation as per the NEPM (NEPC, 2013). The environmental consultant may also nominate a competent person (as defined above) or act as a competent person as per the definition.

<i>NEPM:</i>	National Environmental Protection Measure.
<i>Unexpected Finds:</i>	An unforeseen discovery of an underground structure (such as a UST), indication of potential contamination or waste made during earthwork activities undertaken on the site.
<i>Underground Structure:</i>	Any man-made structures present in the subsurface including but not limited to tanks, pipes and other conduits, pits and soak wells.
<i>Waste:</i>	For the purpose of this document waste may mean one or more of the following: <ul style="list-style-type: none"><li>• Any substance that is discarded, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration to the environment;</li><li>• Any discarded, rejected, unwanted, surplus or abandoned substance;</li><li>• Any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery, or purification by a separate operation from that which produced the substance; and</li><li>• Any substance described in regulations under the Environmental Protection Act 1986 as waste.</li></ul>

## 9. Limitations

Douglas Partners Pty Ltd (Douglas) has prepared this report (or services) for this project at 2 Flide Street, Caringbah NSW in line with Douglas' proposal dated 21 March 2025 and acceptance received from Homes NSW. The work was carried out under Contract LAHC 2025/207 Environmental Contamination Services – Caringbah and Punchbowl – BH3KJ and BH3KL. This report is provided for the exclusive use of Homes NSW 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.

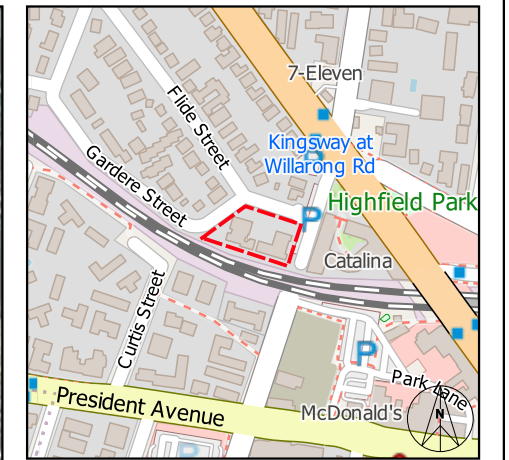
Asbestos has not been detected by observation or by laboratory analysis, either on the surface of the site, or in fill materials at the test locations sampled and analysed. Building demolition materials, such as concrete and slag, were, however, observed at one location (BH08), and these are considered 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. This is either due to undetected variations in ground conditions or to budget constraints (as discussed above), or to parts of the site being inaccessible and not available for inspection / sampling, or to vegetation preventing visual inspection and reasonable access. 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 asbestos is not present.

---

## **Appendix A**

Drawings



**SITE LOCATION**

**LEGEND**

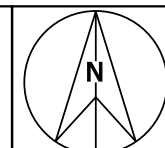
- Approximate Site Boundary
- Approximate Lot Boundary
- Basement Boundary
- Existing Basement Footprint
- Proposed Basement Footprint as of 12.09.2025
- ◆ Environmental Borehole Location
- ▲ Geotechnical Borehole and Groundwater Well Location

NOTE:  
 1. Drawing projection in GDA2020 / MGA zone 56, adapted from aerial imagery from metromap.com dated 15.12.2024  
 2. Test locations and boundaries shown are approximate only



CLIENT: Homes NSW	
OFFICE: Sydney	DRAWN BY: SAF
SCALE: 1:500 @A3	DATE: 26.September.2025

TITLE: **Site and Test Location Plan**  
**Flide Street, Caringbah, Affordable Housing**  
**2 Flide Street, Caringbah, NSW**



PROJECT:	233414.04
DRAWING NO:	1
REVISION:	2

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Do not scale drawings.

Print in Colour.

Client  
**Homes NSW**



- Legend:**
- Site Boundary
  - Surrounding Property Boundary
  - Transport NSW Railway Boundary
  - Existing Building
  - Existing Site Elements
  - Extent of Lower Ground Carpark
  - Extent of Existing Carpark and Foot Path
  - Extent of Indicative Landscaping outside of the Site Boundary
  - Construction Period Tree Protection Zone - Consolidated Area

- Existing Trees
  - Txx: Refer to arborist report for tree identification
  - Proposed trees
  - CL: Clothesline
- Legend Landscape: Refer to arborist drawings for final location/requirements

**Data Issue Record**  
Current Revision released by

Rev	Date	Description
3	19.09.2025	SSDA
2	16.09.2025	For Information
1	12.09.2025	Frozen SSDA Plans

Project Title  
**Flide Street, Caringbah**  
First Nations Country  
**Gadigal**  
Project Address  
**2 Flide Street  
Caringbah**  
Project No.  
**S12899**



Drawing Title  
**DA03 - General Arrangement Plans  
Basement 01**

Phase  
**SSDA**  
Status  
**For Approval**  
Drawing no.  
**DA03.001**

Scale  
**1 : 200 @ A1**  
Revision  
**3**

	LEVEL CARS				M/BIKE	BICYCLE		STORAGE (NOT IN APT)
	RESI	RESI-ACC	VISITOR			RESI	VISITOR	
07								1
04								1
01						78	6	
00	33	5	1 (ACC)	2	-	-	-	30
B1	41	4	-	-	-	-	-	18
<b>TOTAL</b>		84		2		140 <sup>a</sup>		50

<sup>a</sup>REMAINDER OF RESIDENTIAL BICYCLES STORED WITHIN APARTMENTS IF NOT WITHIN A BIKE LOCKER/CAGE ON B1-L01



**Legend:**

- Site Boundary
- Surrounding Property Boundary
- Transport NSW Railway Boundary
- Existing Building
- Existing Site Elements
- Extent of Lower Ground Carpark
- Extent of Existing Carpark and Foot Path
- Extent of Indicative landscaping outside of the Site Boundary
- Construction Period Tree Protection Zone - Consolidated Area

Existing Trees  
 Txx: Refer to arborist report for tree identification  
 Proposed trees  
 CL: Clothesline

Legend Landscaping: Refer to arborist drawings for final location/requirements

**Data Issue Record**  
Current Revision released by

Rev	Date	Description
3	19.09.2025	SSDA
2	16.09.2025	For Information
1	12.09.2025	Frozen SSDA Plans

Project Title  
Flide Street, Caringbah

First Nations Country  
Gadigal

Project Address  
2 Flide Street  
Caringbah

Project No.  
S12899

Drawing Title  
DA03 - General Arrangement Plans  
Upper Ground Level 01

Phase  
SSDA

Status  
For Approval

Drawing No.  
DA03.101

Scale  
1 : 200 @ A1

Revision  
3



LEVEL	CARS			M/BIKE	BICYCLE		STORAGE (NOT IN APT)
	RESI	RESI+ACC	VISITOR		RESI	VISITOR	
07							1
04							1
01						78	6
00	33	5	1 (ACC)	2	-	-	30
B1	41	4	-	-	-	-	18
<b>TOTAL</b>	<b>84</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>140*</b>	<b>50</b>

\*REMAINDER OF RESIDENTIAL BICYCLES STORED WITHIN APARTMENTS IF NOT WITHIN A BIKE LOCKER/CAGE ON B1-L01

Transformative thinking for the future city.

Bates Smart Architects Pty Ltd  
ABN 68 094 740 986

NSW Nominated Responsible Architects  
Kellie Payne 6454, Philip Vivian 6696, Guy Lake 7119, Matt Allen 8498.

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Do not scale drawings.

Print in Colour.

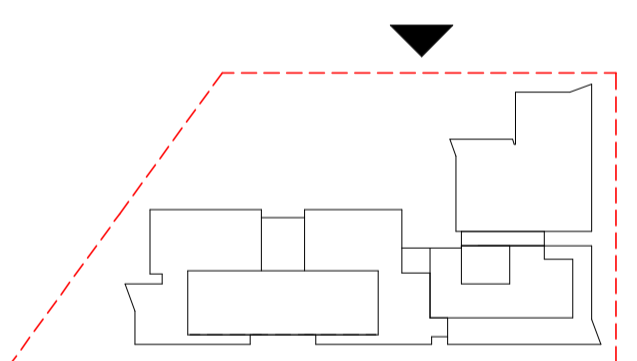
Client

Homes NSW



Key Plan

Elevation view point



Data Issue Record

Current Revision released by

Rev	Date	Description
2	19.09.2025	SSDA
1	16.09.2025	For Information

Project Title

Flide Street, Caringbah

First Nations Country

Gadigal

Project Address

2 Flide Street

Caringbah

Project No.

S12899

Drawing Title

DA09 - Elevations

North Elevation

Phase

SSDA

Status

For Approval

Drawing no.

DA09.001

Scale

1 : 200 @ A1

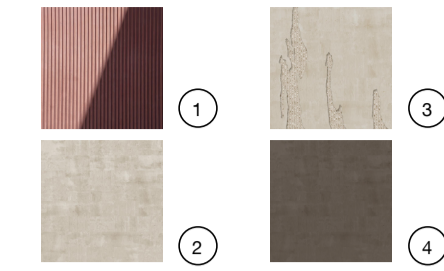
Revision

2

LEGEND

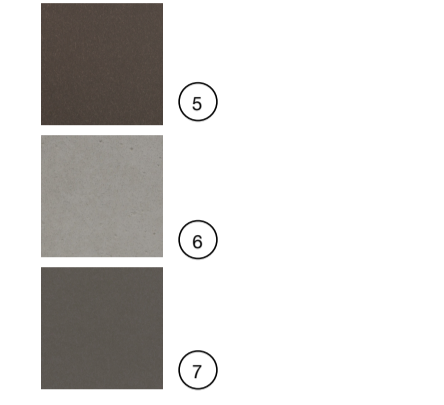
Precast Concrete

1. Terracotta pigmented & ribbed concrete panels
2. Warm sandy pigmented concrete panels
3. Warm sandy pigmented & textured concrete panels
4. Bronze pigmented concrete panels



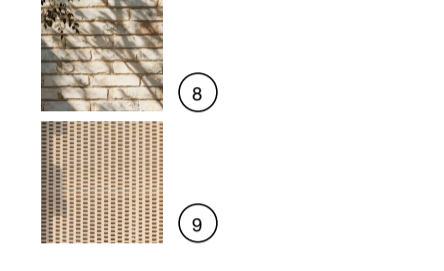
Fibre Cement Sheet

5. Integral colour FC sheet in (5) dark-bronze grey
6. Warm grey and (7) mid-dark bronze grey to balcony return walls and external soffits



Brick

8. Recycled brick and brick slip to ground floor areas
9. 'Hit & miss' brick pattern



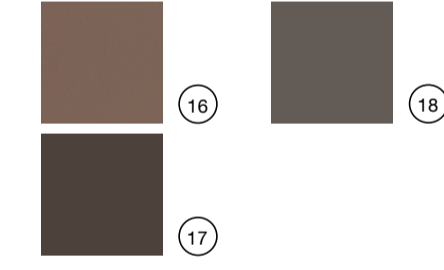
Metal Work

10. Bronze-toned SOLIDAL perforated V-shaped pleated profile solid aluminium balustrades, or similar
11. Terracotta-toned SOLIDAL perforated V-shaped pleated profile solid aluminium balustrades, or similar
12. Colourbond Nineline V-shaped pleat, or similar, to spandrel panels and cladding
13. Mid-dark-grey Allora Series Chevron Vertical Louvers, or similar
14. Galvanised perforated metal screen with bespoke Design with Country finish
15. Perforated mesh screen
16. Steel Palisade fence



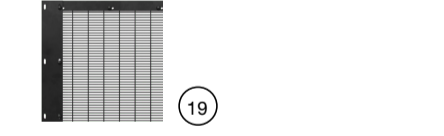
Powdercoat

17. Powdercoat to aluminium cladding & window framing, spandrel panels, handrails, metalwork, roller doors and window sunhoods in (16) dark bronze to ground plane, (17) dark-bronze grey, (18) mid-dark bronze grey



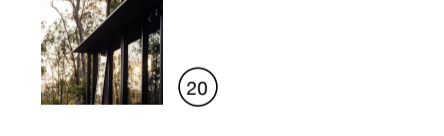
Fencing

19. Powdercoated anti-climb mesh fence to match adjacent site



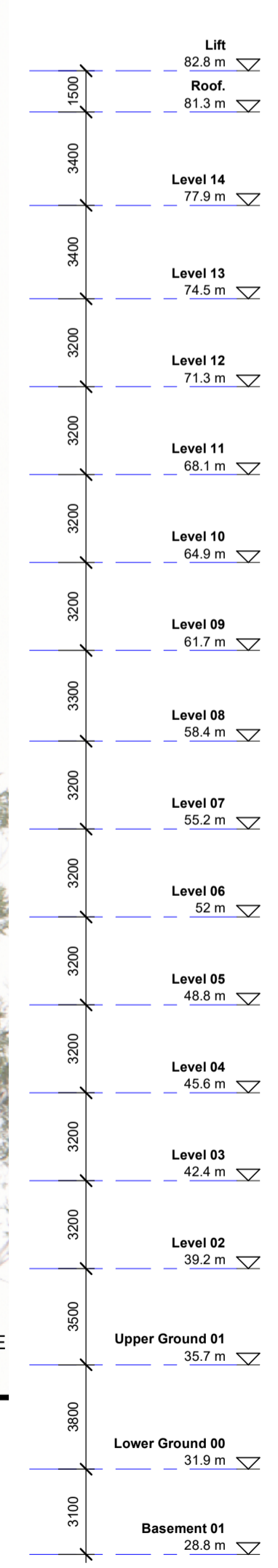
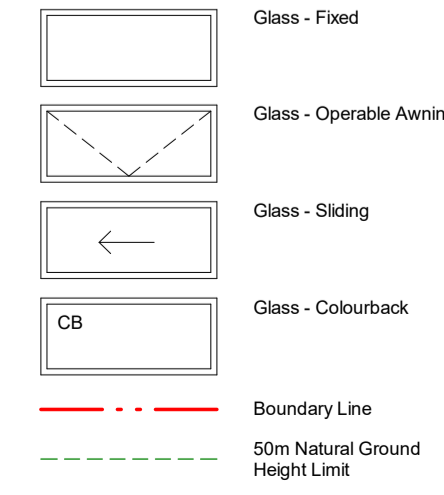
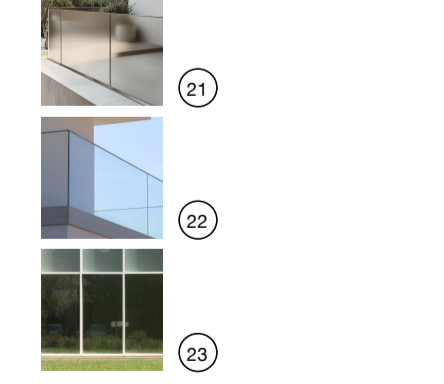
Window Shading

20. Heka Hood powdercoated slimline sunhood, or similar



Glass

21. Obscure glass balustrade
22. Clear glass balustrade
23. Colourback glass, colour TBC



---

## **Appendix B**

About this Report

## 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

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

## Borehole and Test Pit Logs

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

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

## Groundwater

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

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

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

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

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

## Reports

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

continued next page

## About this Report

### Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, 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.

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## **Appendix C**

Summary of Previous Reports

## 1. Summary of previous investigations

### 1.1 Douglas (2025a) (the 'PSI')

The preliminary site investigation (PSI) comprised a desktop study, including a review of readily available published data about the site's geology, topography and hydrogeological information, historical aerial photographs, historical title deeds, and planning certificates.

The review of historical information concluded that the site had been used for low density residential housing since 1943, and prior to that time was likely to have been either undeveloped or under residential use. Since then, a development application for a commercial development for shops and a medical centre including a carpark was lodged in the early to mid-1960s. However, it appears that only the carpark development was approved in 1964 and based on aerial photography, the site remained largely undeveloped with most of the residential buildings remaining on-site, with buildings on the central lot demolished and the area used for carparking and possibly as a car yard (based on Council records).

The identified potential sources of contamination comprised:

- Fill of unknown origin associated with levelling the site prior to construction of current buildings and landscaping;
- Former site use (residential, car park and used car yard) including demolition and deterioration of former buildings; and
- Current buildings (i.e. potential hazardous building material (HBM)).

The PSI concluded that:

*'Based on the review of site history and the site walkover, it is considered that there is a moderate risk that asbestos is present in fill outside of the basement based on the age of the previous site buildings and potential for fill of unknown origin associated with levelling and landscaping. The risk of significant and broad scale chemical contamination is considered to be generally low to moderate, although some localised chemical contamination could be present. The risk of contamination in groundwater is considered to be generally low but could be present from the former car yard use.'*

The PSI recommended an intrusive detailed site investigation (DSI) be carried out for soil and subsequently groundwater (if required based on soil results).

The report also recommended a groundwater quality assessment could be conducted as part of the DSI to inform dewatering requirements, if dewatering for the proposed basement is required.

### 1.2 Douglas (2025b) (the 'DSI')

The detailed site investigation (DSI) included drilling and soil sampling from eleven boreholes (BH01, BH02, BH04, BH4A, BH05-BH07, BH09, BH10, BH12B, and BH13B) across the site using hand tools to a maximum depth of 1.4 m below ground level (bgl), development and sampling of three groundwater wells (BH03, BH08 and BH11) installed as part of a concurrent geotechnical investigation, and preparation of a preliminary waste classification.

Selected soil and groundwater samples were tested at a National Associate of Testing Authorities (NATA) accredited laboratory for various combinations of contaminants of potential concern identified in the PSI as follows: heavy metals, total recoverable hydrocarbons (TRH), total petroleum hydrocarbons (TPH), volatile organic compounds (VOC), monocyclic aromatic hydrocarbons - benzene, toluene, ethylbenzene and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), organochlorine pesticides (OCP), organophosphorus pesticides (OPP), asbestos, nitrogen (ammonia, nitrate, nitrite), E Coli / faecal coliforms, pH, electrical conductivity (EC), cation exchange capacity (CEC), anions, cations, total suspended solids (TSS), and total dissolved solids (TDS).

The borehole logs for this assessment, and concurrent geotechnical investigation, are provided in Appendix C. The logs recorded the following general sub-surface profile:

- Fill – dark brown and brown, highly variable, silty sand, sand, silty and sandy clay, clay and sandy silt to depths between 0.2 and 0.85 m; except for at BH05 and BH06 (which were underlain by the basement structure) and encountered sandy silt then silty sand fill. Trace slag and concrete rubble was observed at 0.4 m depth in BH08. It is noted that refusal in fill occurred in BH04; and BH05 and BH06 refused on the apparent top of the basement structure;
- Residual Soil – Very stiff and hard, low to medium plasticity, grey and mottled red brown, silty clay and silty sandy clay with ironstone gravel, including some extremely weathered material. It is noted that BH01 refused on gravels; underlain by,
- Sandstone and Clay – Interbedded clay (extremely weathered sandstone), and moderately weathered sandstone, with ironstone and iron-cemented bands of low, medium and high strength, grey and pale grey, orange, orange-brown and red-brown. BH12B and BH13B refused on inferred bedrock.

No visual or olfactory evidence (e.g. staining, odours, free phase product) was observed during the investigations other than slag and concrete rubble noted above to suggest the presence of contamination within the soils or groundwater at the site.

Groundwater levels were gauged on 5 May 2025 using an electronic oil / water interface meter prior to developing the wells and again on 9 May 2025 prior to sampling. During groundwater sampling, the standing water level (SWL) within the wells was at depths between 2.52 m and 8.49 m bgl. It should be noted that groundwater levels are affected by climatic conditions and soil permeability and will therefore vary with time.

The soil laboratory results are summaries in Table F1, Appendix D, along with the site assessment criteria (SAC). The analytical results for all contaminants analysed in the tested samples were below the SAC with the exception of:

- TRH >C10 – C16 in sample BH01/0-0.05 at 380 mg/kg which exceeded the ESL of 120 mg/kg;
- TRH F2 (>C10 – C16 less naphthalene) in sample BH01/0-0.05 at 380 mg/kg which exceeded the HSL-A (0-<1 m) of 280 mg/kg; and
- TRH F3 (>C16 -C34) in sample BH01/0-0.5 at 2400 (mg/kg) which exceeded the ESL of 1300 mg/kg.

Based on field observations, BH01/0-0.05 comprised mulch with no petroleum odours or staining. The chromatogram was compared with the laboratory hydrocarbon reference library and bears

similarity to wood chips and did not appear to match the chromatograms reviewed for petroleum products. The TRH concentrations recorded were therefore considered to be from natural organic matter in the mulch and not a petroleum source, hence not a contamination concern.

The groundwater laboratory results are summarised in Table F2, Appendix D, along with the SAC. All contaminant concentrations recorded in groundwater were below the SAC, with the exception of:

- Copper in samples BH03 (2 µg/L), BH08 (7 mg/kg) and BH11 (2 mg/kg), which exceeded the ANZG (2018) 95% LOP freshwater guideline (FWG) of 1.4 µg/L and the ANZG (2018) 95% LOP marine water guideline (MWG) of 1.3 µg/L;
- Nickel in sample BH08 (9 µg/L) which MWG of 7 µg/L, and BH11 (24 µg/L), which exceeded the MWG as well as the FWG of 24 µg/L; and
- Zinc in samples BH03 (18 µg/L), BH08 (39 µg/L) and BH11 (89 µg/L), which exceeded the FWG and MWG of 8 µg/L.

The recorded metal concentrations (copper, nickel and zinc) were considered to be representative of diffuse background concentrations across urbanised Sydney.

It was anticipated that groundwater would be encountered during bulk excavation works. Treatment of extracted groundwater was expected to be required prior to disposal. It was noted that disposal requirements are to be confirmed with the relevant utility owner (e.g. Council, Sydney Water.) prior to commencing dewatering and disposal works.

A preliminary waste classification assessment recorded all contaminant concentrations for the analysed fill samples to be below the contaminant thresholds (CTI) for general solid waste, except for lead in sample BH08/0.45-0.6 (120 mg/kg) which exceeded the CTI of 100 mg/kg. A toxicity characteristics leaching procedure (TCLP) test was conducted for lead on this sample and the specific contaminant threshold (SCC) and TCLP concentration (0.04 mg/kg) were below the SCCI and TCLP1 thresholds for general solid waste, respectively. The preliminary waste classification results are summarised in Table F3, Appendix D.

As such, it was considered likely that fill soils were preliminarily classifiable as general solid waste (non-putrescible). However, it was noted that not all soils were tested due to limitations in accessibility and the site being occupied. Specifically, building debris was observed at BH08 and was considered to be an indicator of possible asbestos in soils. The DSI advised that further assessment of any excess soil to the development would be required before a formal classification suitable for waste disposal could be provided.

The DSI considered that the site was suitable for the proposed development subject to undertaking a HBM assessment within the buildings on site, preparation of an unexpected finds protocol, and site inspection / walkover post demolition to assess the surface and near surface soils for potential contamination.

---

## **Appendix D**

Previous Borehole Logs

# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 35.2 AHD  
**COORDINATE:** E:326452.1, N:6231726.3  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH03  
**PROJECT No:** 233414.03  
**DATE:** 30/04/25  
**SHEET:** 1 of 3

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	BACKFILL	WELL PIPE
35.2	0.20	FILL / Silty CLAY: dark brown; low to medium plasticity; trace organic matter.		FILL	(MC)	w>PL		ES	0.20				Concrete	
	0.30	Silty CLAY (CI-CH): grey; medium to high plasticity; trace organic matter.		RS	(VSt)	w=PL		ES	0.30					
	0.60	Silty Sandy CLAY (CI) trace gravel: pale grey mottled red-brown; medium plasticity; fine sand; fine to medium, ironstone gravel.		XWM	(H)	w<PL		ES	0.45					
	1.00	Continued as rock log						ES	0.60					
	2.00								2.00					
	3.00								3.00					
	4.00								4.00					
	5.00								5.00					
	6.00								6.00					
	7.00								7.00					
	8.00								8.00					
	9.00								9.00					

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:** Bobcat  
**METHOD:** HA to 0.6m, AD/T to 1.0m, NMLC to 14.48m  
**REMARKS:** Hole reamed to HQ size for well installation

**OPERATOR:** Ground Test (JJ)

**LOGGED:** C.S. YIP  
**CASING:** HW to 1m

# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 35.2 AHD  
**COORDINATE:** E:326452.1, N:6231726.3  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH03  
**PROJECT No:** 233414.03  
**DATE:** 30/04/25  
**SHEET:** 2 of 3

CONDITIONS ENCOUNTERED										SAMPLE			TESTING													
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE								
RL (m)	35																									
	1	Continued from soil log			1.00																					
	2	Silty Sandy CLAY (CI) trace gravel: pale grey mottled red-brown and orange-brown; medium plasticity; fine to medium sand; fine to medium ironstone gravel; with medium strength ironstone bands.			2.20		52	0								7,10,25 (HB)										
	3		XW			SOIL																				
	4	SANDSTONE: grey and orange-brown, fine to coarse grained, bedded, 0 to 10°; bedded at 0-10°, cross-bedded at 10-25°. Hawkesbury Sandstone.	XW	HW	3.71			91	23	3.71-3.80m: DS, 10°, 90 mm 3.85-4.10m: DS, 0°, 250 mm 4.16m: DS, 10°, 20mm 4.30-4.44m: DS, 10°, 140 mm 4.49m: B, 0°, PR, VNR Clay, SM 4.57-4.64m: DS, 5°, 70 mm 4.83m: B, 10°, PR, SN Fe, RF 4.70-5.00m: DS x4, 0-5°, 5-10mm 5.12m: JT, 60°, PR, CN, RF 5.00-5.30m: DS, 15°, 2-10mm, x4 5.24-5.30m: DS, 15°, 60 mm 5.40m: JT, 45-50°, PR, SN Fe, RF 5.52-5.70m: B x5 0-5°, 1R, CN, RF 5.62m: DS, 0°, 5mm 5.86m: DS, 5°, 5mm 6.00m: DS, 0°, 5mm 6.25m JT, 60°, PR, SN Fe, RF 6.81-6.88m: DS, 10°, 70 mm 6.92m: B, 10°, PR, SN Fe, RF 7.20-7.34m: B x2, 5°, PR, SN Fe, RF 7.63m: DS, 5°, 20mm 7.65m: B, 5°, PR, SN Fe, RF 7.84m: B, 15°, PR, SN Fe, RF 7.88m: JT, 20°, PR, SN Fe, VR 7.90-7.95m: SZ, 10°, 50 mm 8.05m: B, 5°, PR, SN Fe, RF 8.22m: DS, 5°, 40mm 8.29m: B, 10°, PR, SN Fe, RF 8.48m: B, 0°, PR, CT CBS, RF 9.26m: B, 5°, PR, CT CBS, RF 9.29m: B, 5°, PR, CN, RF 9.92m: B, 10°, PR, Clay																
	5				3.71										PLT	PL(A)=0.04MPa										
	6	5.72m-6.40m: with siltstone beds and laminations	MW		5.24																					
	7		SW		5.45										PLT	PL(A)=0.05MPa										
	8		SW		5.70										PLT	PL(A)=0.07MPa										
	9		HW		5.78										PLT	PL(A)=0.31MPa										
	10		SW		5.88																					
	11				6.00																					
	12				6.35																					
	13	SANDSTONE: pale grey and orange-brown, fine to medium grained; bedded at 0-10°, cross-bedded at 15-20°. Hawkesbury Sandstone.	XW		6.81			86	62						PLT	PL(A)=0.10MPa										
	14				6.88																					
	15		SW		7.50										PLT	PL(A)=0.28MPa										
	16				7.56																					
	17				8.40																					
	18	SANDSTONE: pale grey, medium to coarse grained; bedded at 0-10°, cross-bedded at 10-20°. Hawkesbury Sandstone.			8.40										PLT	PL(A)=0.81MPa										
	19				9.30			100	98																	
	20		FR												PLT	PL(A)=0.92MPa										

NOTES: #Soil origin is "probable" unless otherwise stated.

**PLANT:** Bobcat  
**METHOD:** HA to 0.6m, AD/T to 1.0m, NMLC to 14.48m  
**REMARKS:** Hole reamed to HQ size for well installation

**OPERATOR:** Ground Test (JJ)

**LOGGED:** C.S. YIP  
**CASING:** HW to 1m



# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 35.2 AHD  
**COORDINATE:** E:326452.1, N:6231726.3  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH03  
**PROJECT No:** 233414.03  
**DATE:** 30/04/25  
**SHEET:** 3 of 3

CONDITIONS ENCOUNTERED										SAMPLE			TESTING							
GROUNDWATER RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	SOIL STRENGTH (Where encountered) SOIL MOISTURE	GRAPHIC	WEATH. LRS XW HW EWS TFR	DEPTH (m)	STRENGTH VL L M H VH EH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS		BACKFILL	WELL PIPE
																	RESULTS AND REMARKS	RESULTS AND REMARKS		
25		[CONT] SANDSTONE: pale grey, medium to coarse grained; bedded at 0-10°, cross-bedded at 10-20°. Hawkesbury Sandstone.									2mm, VR									
	11							100	98		10.42m: DS, 5°, 5mm					PLT	PL(A)=1.4MPa			
	12							100	100		10.90m DS, 5°, 10mm					PLT	PL(A)=2.2MPa			
	13	12.25m-12.77m: fine to medium grained			FR						12.25m: B, 0°, IR, CN, VR					PLT	PL(A)=1.3MPa			
	13							100	99		12.83m B, 0°, PR, CN, RF					PLT	PL(A)=1.1MPa			
	14										13.33m: DS, 0°, 5mm					PLT	PL(A)=1.1MPa			
	14.48	Borehole discontinued at 14.48m depth. Target depth reached.																		

NOTES: #Soil origin is "probable" unless otherwise stated.

**PLANT:** Bobcat  
**METHOD:** HA to 0.6m, AD/T to 1.0m, NMLC to 14.48m  
**REMARKS:** Hole reamed to HQ size for well installation

**OPERATOR:** Ground Test (JJ)

**LOGGED:** C.S. YIP  
**CASING:** HW to 1m

# CORE PHOTO LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 35.2 AHD  
**COORDINATE:** E:326452.1, N:6231726.3  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH03  
**PROJECT No:** 233414.03  
**DATE:** 30/04/25  
**SHEET:** 1 of 2



1.00-6.00 m depth



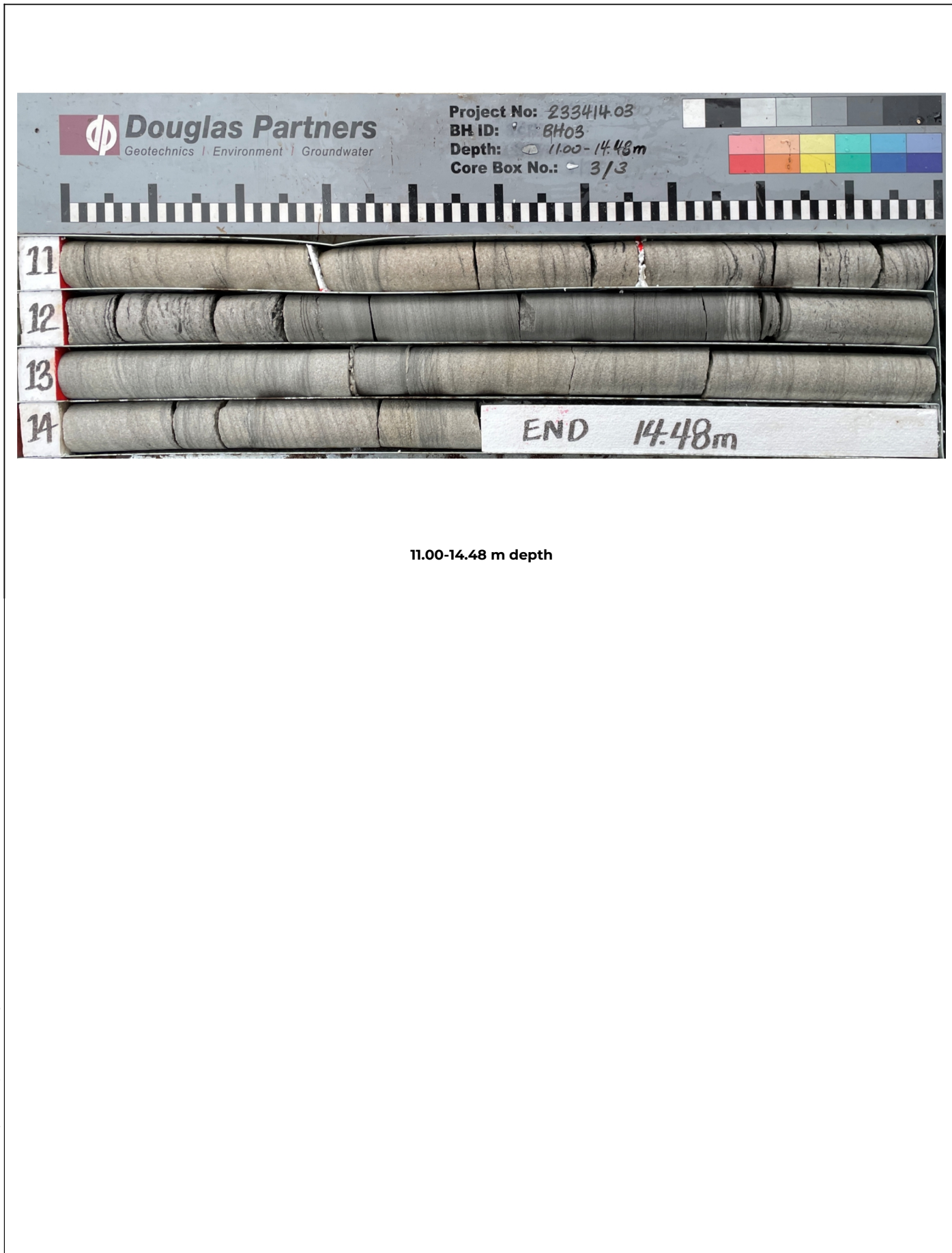
6.00-11.00 m depth

# CORE PHOTO LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 35.2 AHD  
**COORDINATE:** E:326452.1, N:6231726.3  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH03  
**PROJECT No:** 233414.03  
**DATE:** 30/04/25  
**SHEET:** 2 of 2



# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 31.9 AHD  
**COORDINATE:** E:326364.0, N:6231713.3  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH08  
**PROJECT No:** 233414.03  
**DATE:** 01/05/25  
**SHEET:** 1 of 3

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	BACKFILL	WELL PIPE
	0.80	FILL / Silty CLAY with sand trace gravel: dark brown, brown and grey; low to medium plasticity; fine to medium sand; fine to medium, ironstone gravel; trace organic matter. 0.40m: trace slag and concrete rubble		FILL	(MC)	w>PL		ES	0.20				Concrete	
	1.00	Silty CLAY (CI-CH) trace gravel: brown mottled red-brown; medium to high plasticity; fine to medium, ironstone gravel.		RS	St	w=PL		ES	0.40					
	1.20	Silty Sandy CLAY (CI) trace gravel: pale grey mottled orange-brown and red-brown; medium plasticity; fine to medium sand; fine to medium, ironstone gravel.		XWM	VSt - H	w<PL		A/ES	0.60					
	2.00	SANDSTONE: pale grey and red brown, fine to coarse grained; inferred very low to low strength with extremely weathered bands. Hawkesbury Sandstone.			NA	NA		ES	0.80					
	2.50	Continued as rock log						SPT	1.00		SPT	3,4,13 N=17		
	3.00								1.45					
	4.00													
	5.00													
	6.00													
	7.00													
	8.00													
	9.00													
	10.00													

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:** Bobcat **OPERATOR:** Ground Test (JJ) **LOGGED:** C.S. YIP  
**METHOD:** HA to 0.9m, AD/T to 2.5m, NMLC to 15.0m **CASING:** HW to 2.5m  
**REMARKS:** Hole reamed to HQ size for well installation



Refer to explanatory notes for symbol and abbreviation definitions



# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 31.9 AHD  
**COORDINATE:** E:326364.0, N:6231713.3  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH08  
**PROJECT No:** 233414.03  
**DATE:** 01/05/25  
**SHEET:** 3 of 3

CONDITIONS ENCOUNTERED										SAMPLE			TESTING						
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE	
RL (m)	10.00	SANDSTONE: pale grey, medium to coarse grained; indistinctly bedded at 0-10°, cross-bedded at 15-20°. Hawkesbury Sandstone.  12.00m-12.09m: laminite band  12.40m-12.50m: siltstone clasts		FR	10.00	M	100	97	0.00-0.05	10.45m: DS, 0°, 30mm  10.93m: DS, 0°, 20mm  11.86m: B, 10°, PR, CN, RF 11.98m: DS, 0°, 10mm 12.16m: DS, 0°, 10mm  12.46m: B, 20°, PR, CT CBS, RF			10.00	PLT	PL(A)=0.77MPa				
21	11																	PLT	PL(A)=0.87MPa
20	12																	PLT	PL(A)=0.90MPa
19	13																		
18	14																	PLT	PL(A)=1.2MPa
17	15	Borehole discontinued at 15.00m depth. Target depth reached.			15.00	M							15	PLT	PL(A)=1.4MPa				
	16																		
	17																		
	18																		
	19																		
	20																		
	21																		

NOTES: #Soil origin is "probable" unless otherwise stated.

**PLANT:** Bobcat  
**METHOD:** HA to 0.9m, AD/T to 2.5m, NMLC to 15.0m  
**REMARKS:** Hole reamed to HQ size for well installation

**OPERATOR:** Ground Test (JJ)

**LOGGED:** C.S. YIP  
**CASING:** HW to 2.5m

Refer to explanatory notes for symbol and abbreviation definitions



# CORE PHOTO LOG

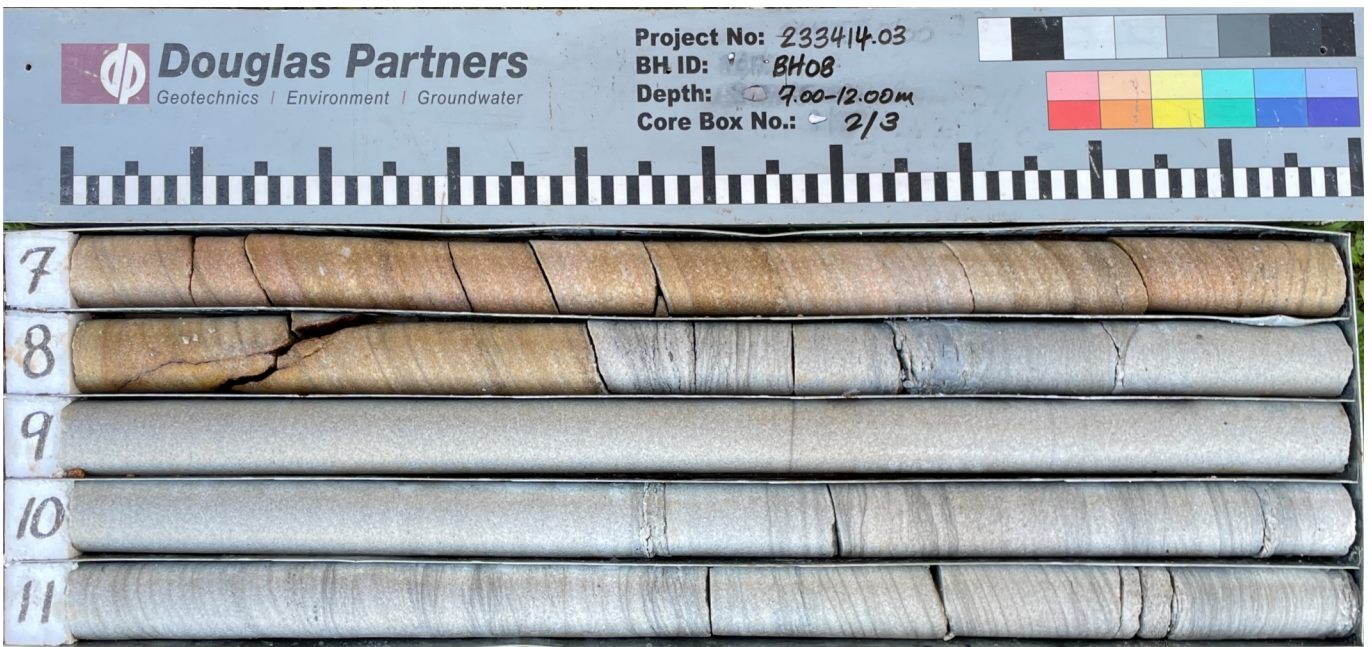
**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 31.9 AHD  
**COORDINATE:** E:326364.0, N:6231713.3  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH08  
**PROJECT No:** 233414.03  
**DATE:** 01/05/25  
**SHEET:** 1 of 2



2.50-7.00 m depth



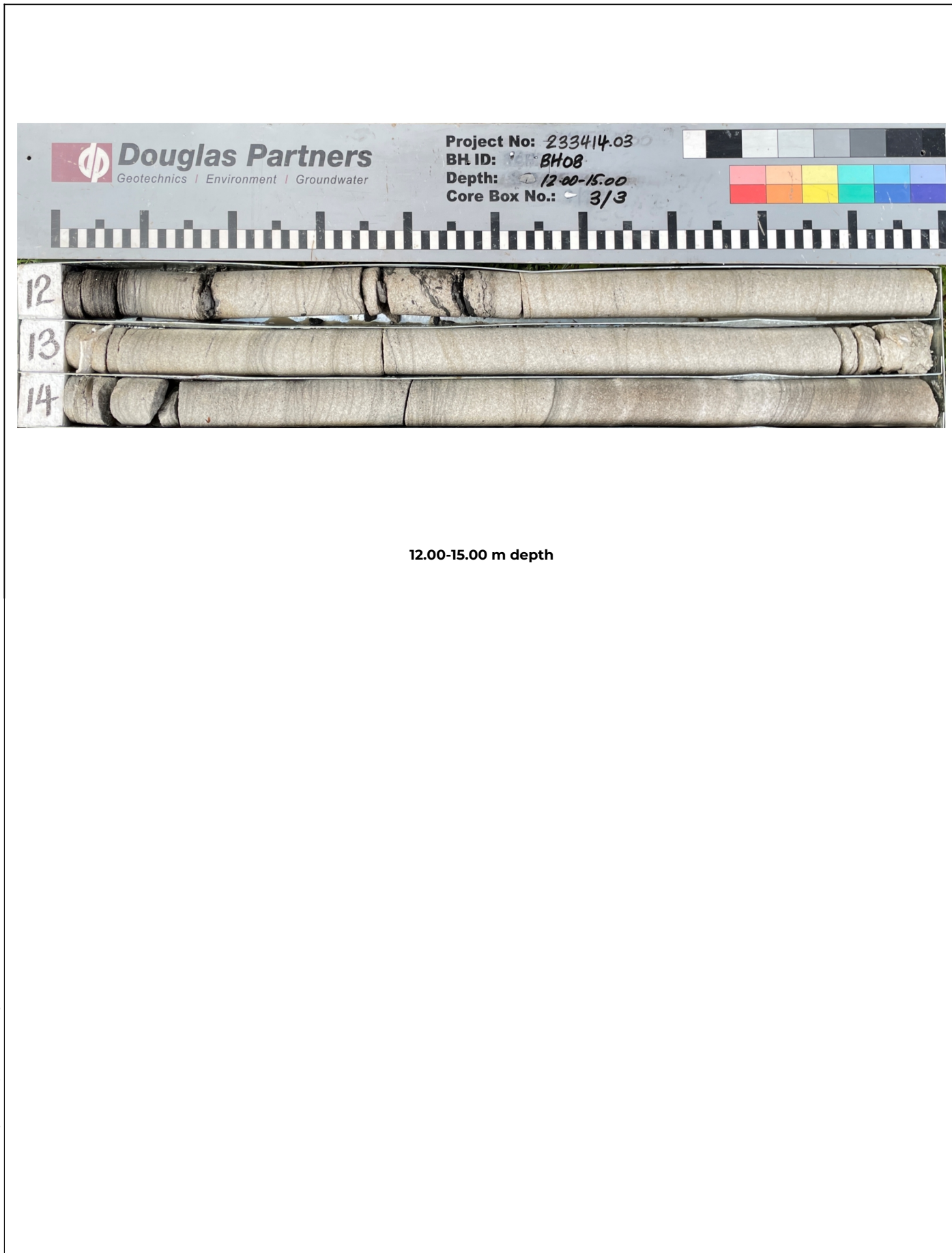
7.00-12.00 m depth

# CORE PHOTO LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 31.9 AHD  
**COORDINATE:** E:326364.0, N:6231713.3  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH08  
**PROJECT No:** 233414.03  
**DATE:** 01/05/25  
**SHEET:** 2 of 2







# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 33.3 AHD  
**COORDINATE:** E:326443.4, N:6231690.0  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH11  
**PROJECT No:** 233414.03  
**DATE:** 02/05/25  
**SHEET:** 3 of 3

CONDITIONS ENCOUNTERED										SAMPLE			TESTING									
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	SOIL STRENGTH (Where encountered)	SOIL MOISTURE	GRAPHIC	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE	
																						WEATH.
	10.00		SANDSTONE: pale grey, medium to coarse grained; bedded at 0-10°, cross-bedded at 10-20°. Hawkesbury Sandstone.							73	71		10.03m: DS, 5°, 10mm						PLT	PL(A)=1.5MPa		
	11		10.04m-10.88m: fine to medium grain, grey				FR						10.87m: DS, 10°, 20mm						PLT	PL(A)=0.93MPa		
	12									100	97		12.22m: DS, 0°, 20mm 12.27m: DS, 0°, 5mm 12.40m: DS, 0°, 20mm 12.61m: DS, 0°, 10mm						PLT	PL(A)=1.0MPa		
	13																		PLT	PL(A)=1.0MPa		
	20																		PLT	PL(A)=0.75MPa		
			Borehole discontinued at 13.40m depth. Target depth reached.																			

NOTES: #Soil origin is "probable" unless otherwise stated.

**PLANT:** Bobcat  
**METHOD:** HA to 0.5m, AD/T to 2.5m, NMLC to 13.4m, WB to 14m  
**REMARKS:** Hole reamed to HQ size and extended to 14m for well installation

**OPERATOR:** Ground Test (CS)

**LOGGED:** C.S. YIP  
**CASING:** HW to 2.5m

Refer to explanatory notes for symbol and abbreviation definitions



# CORE PHOTO LOG

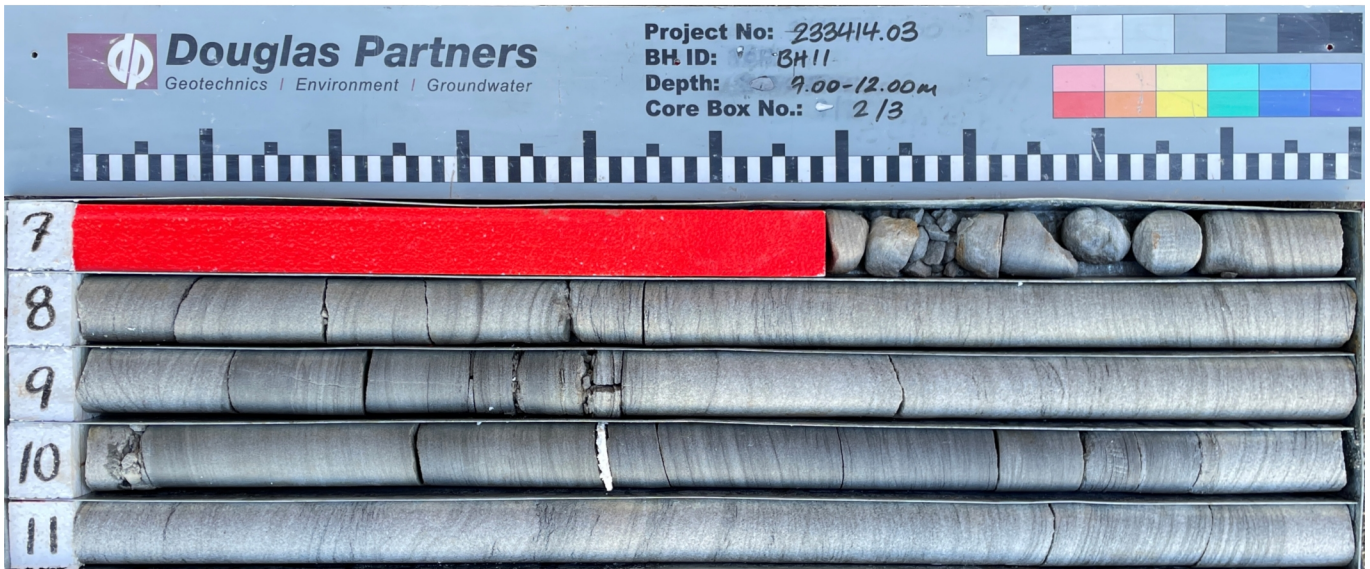
**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 33.3 AHD  
**COORDINATE:** E:326443.4, N:6231690.0  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH11  
**PROJECT No:** 233414.03  
**DATE:** 02/05/25  
**SHEET:** 1 of 2



2.50-7.00 m depth



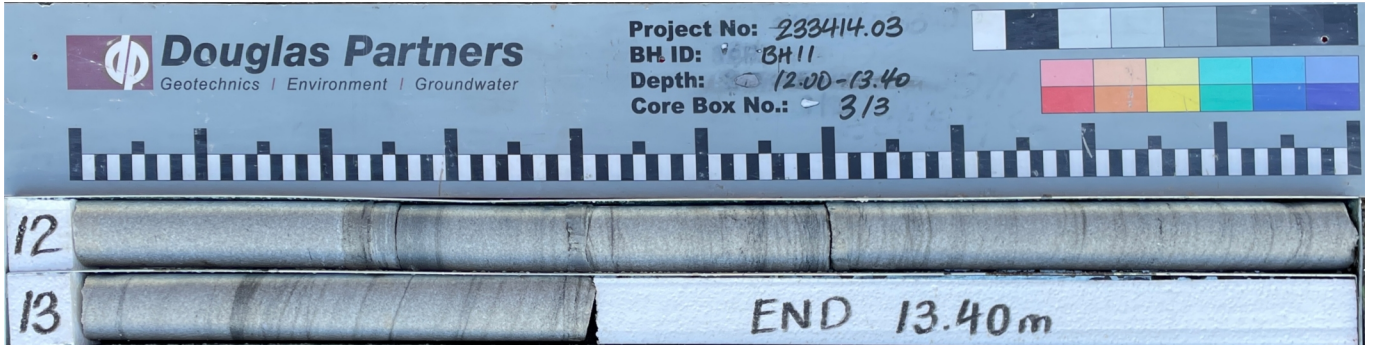
7.00-12.00 m depth

# CORE PHOTO LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 33.3 AHD  
**COORDINATE:** E:326443.4, N:6231690.0  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH11  
**PROJECT No:** 233414.03  
**DATE:** 02/05/25  
**SHEET:** 2 of 2



12.00-13.40 m depth

# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 35.1 AHD  
**COORDINATE:** E:326408.2, N:6231743.2  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH01  
**PROJECT No:** 233414.04  
**DATE:** 30/04/25  
**SHEET:** 1 of 1

GROUNDWATER		CONDITIONS ENCOUNTERED					SAMPLE			TESTING AND REMARKS					
		RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSISTENCY (°)	DENSITY (°)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
30/04/25 No free groundwater observed whilst augering		0.05	FILL / MULCH: orange-brown; woodchips and organics.		FILL			W		ES	0.00 - 0.05	0.05	PID	<1ppm	
		0.10	FILL / Silty SAND: dark brown; fine to coarse; trace rootlets.		FILL						ES	0.05 - 0.10	0.10	PID	<1ppm
		0.20	FILL / Silty SAND trace gravel: dark brown to brown; fine to medium; sandstone gravel; with roots and rootlets.		FILL						ES	0.10 - 0.20	0.20	PID	<1ppm
		0.30			FILL						ES	0.20 - 0.30	0.30	PID	<1ppm
		0.40			FILL		ND	w<PL			ES	0.30 - 0.40	0.40	PID	<1ppm
	0.60			FILL						ES	0.40 - 0.60	0.60	PID	<1ppm	
	0.70			FILL						ES	0.60 - 0.70	0.70	PID	<1ppm	
	0.85	0.85	Silty CLAY (CI-CH): orange-brown; trace rootlets and ironstone gravel.		RS					ES	0.70 - 0.85	0.85	PID	<1ppm	
			Borehole discontinued at 1.00m depth. Refusal on gravels.												

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

**PLANT:** Hand Tools

**OPERATOR:** (S. Ferguson)

**LOGGED:** SAF

**METHOD:** Hand auger to 0.55m

**CASING:** Uncased

**REMARKS:** \*Blind replicate BD1/20250430 taken at 0.3 m to 0.4 m  
 Coordinates and levels surveyed by Crux





# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 32.8 AHD  
**COORDINATE:** E:326380.9, N:6231730.2  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH04  
**PROJECT No:** 233414.04  
**DATE:** 30/04/25  
**SHEET:** 1 of 1

GROUNDWATER		CONDITIONS ENCOUNTERED					SAMPLE			TESTING AND REMARKS			
		RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. (°) DENSITY. (°)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE
30/04/25 No free groundwater observed whilst augering		0.05	FILL / MULCH trace sand: dark brown; fine to medium sand; wood chips and organics.		FILL		ND		ES		0.05	PID	<1ppm
		0.10	FILL / CLAY trace rootlets: dark brown to brown; low to medium plasticity.		FILL						0.10		
		0.20	FILL / Sandy CLAY trace gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sandstone gravel.		FILL	ND	w=PL				0.20	PID	<1ppm
		0.40	Borehole discontinued at 0.40m depth. Refusal in fill.		FILL					ES		0.40	PID

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

**PLANT:** Hand Tools

**OPERATOR:** (S. Ferguson)

**LOGGED:** SAF

**METHOD:** Hand auger to 0.4m

**CASING:** Uncased

**REMARKS:** Coordinates and levels surveyed by Crux

Refer to explanatory notes for symbol and abbreviation definitions





# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 32.8 AHD  
**COORDINATE:** E:326380.9, N:6231730.2  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH04A  
**PROJECT No:** 233414.04  
**DATE:** 09/05/25  
**SHEET:** 1 of 1

CONDITIONS ENCOUNTERED				SAMPLE			TESTING AND REMARKS						
GROUNDWATER	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSISTENCY (°)	DENSITY (°)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
09/05/25 No free groundwater observed while augering	0.20	FILL / Sandy SILT with mulch cover: dark brown; fine to medium sand; trace glass.		FILL									
	0.60m	Silty CLAY (CI-CH): orange-brown; trace ironstone.  0.60m: Becoming red-brown with ironstone		RS	ND	w<PL					0.30 0.40	ES	PID <1ppm
	0.90	Borehole discontinued at 1.00m depth. Target depth reached.									0.80 0.90	ES	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:** Hand Tools

**OPERATOR:** (N. Woodward)

**LOGGED:** NW

**METHOD:** Hand auger to 1 m

**CASING:** Uncased

**REMARKS:** Coordinates and levels surveyed by Crux

# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 33.3 AHD  
**COORDINATE:** E:326406.6, N:6231721.6  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH05  
**PROJECT No:** 233414.04  
**DATE:** 30/04/25  
**SHEET:** 1 of 1

CONDITIONS ENCOUNTERED						SAMPLE			TESTING AND REMARKS				
GROUNDWATER RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. (°) DENSITY. (°)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	
Piped water at 0.15m 30/04/25 33	0.10	FILL / Sandy SILT trace rootlets: dark brown; low to medium plasticity; fine to medium sand.		FILL		w < PL		ES	0.10 - 0.15	0.10	PID	< 1ppm	
		FILL / Silty SAND with roots: brown; fine to medium; trace siltstone.		FILL	ND					0.15 - 0.20			
		Borehole discontinued at 0.35m depth. Refusal on concrete slab (basement ceiling).		FILL			W		ES	0.20 - 0.35	0.30	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:** Hand Tools

**OPERATOR:** (S. Ferguson)

**LOGGED:** SAF

**METHOD:** Hand auger to 0.3m

**CASING:** Uncased

**REMARKS:** Coordinates and levels surveyed by Crux

Refer to explanatory notes for symbol and abbreviation definitions



# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 33.8 AHD  
**COORDINATE:** E:326426.6, N:6231722.5  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH06  
**PROJECT No:** 233414.04  
**DATE:** 30/04/25  
**SHEET:** 1 of 1

CONDITIONS ENCOUNTERED							SAMPLE			TESTING AND REMARKS		
GROUNDWATER RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. (%) DENSITY (%)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	0.10	FILL / Sandy SILT trace rootlets: dark brown; low to medium plasticity.		FILL		w>PL		ES	0.10		PID	<1ppm
		FILL / Silty SAND: dark brown to brown; fine to coarse.		FILL	ND					0.20		
				FILL		W		ES	0.20-0.30		PID	<1ppm
		Borehole discontinued at 0.35m depth. Refusal on concrete slab (basement ceiling).										

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

**PLANT:** Hand Tools

**OPERATOR:** (S. Ferguson)

**LOGGED:** SAF

**METHOD:** Hand auger to 0.35m

**CASING:** Uncased

**REMARKS:** Coordinates and levels surveyed by Crux

# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 34.1 AHD  
**COORDINATE:** E:326450.3, N:6231708.8  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH07  
**PROJECT No:** 233414.04  
**DATE:** 05/05/25  
**SHEET:** 1 of 1

CONDITIONS ENCOUNTERED						SAMPLE			TESTING AND REMARKS			
GROUNDWATER RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. (%) DENSITY (%)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
05/05/25 No free groundwater observed	34	FILL / Clayey Silty SAND: dark brown; fine to medium; trace rootlets.		FILL		M			ES	0.20		
	0.30	FILL / Silty CLAY: orange-brown; low to medium plasticity; trace roots, possible reworked.		FILL		ND			ES	0.40		
	0.45	CLAY (CL-CI): orange-brown; low to medium plasticity.		RS		w=PL			ES	0.70		
		0.70m: orange mottled red, mottled dark brown										
Borehole discontinued at 0.80m depth. Target depth reached.												
NOTES: #Soil origin is "probable" unless otherwise stated. %Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.												

Generated with CORE-GS by Ceroc - Soil Log

**PLANT:** Hand Tools  
**METHOD:** Hand auger  
**REMARKS:**

**OPERATOR:** (J. Henley)

**LOGGED:** JH  
**CASING:** Uncased

Refer to explanatory notes for symbol and abbreviation definitions



# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 32.2 AHD  
**COORDINATE:** E:326393.1, N:6231703.4  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH09  
**PROJECT No:** 233414.04  
**DATE:** 05/05/25  
**SHEET:** 1 of 1

GROUNDWATER		CONDITIONS ENCOUNTERED					SAMPLE			TESTING AND REMARKS			
		RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. <sup>(*)</sup> DENSITY. <sup>(*)</sup>	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE
05/05/25 No free groundwater observed			FILL / Sandy CLAY: pale brown to brown; low to medium plasticity.		FILL		w=PL		ES		0.10	PID	<1ppm
		0.20	FILL / Clayey SAND: orange-brown; fine to medium.		FILL		M		ES		0.20		
		0.30	FILL / Silty CLAY with sand: pale grey, mottled red-brown; low to medium plasticity.		FILL		w<PL		ES		0.30	PID	<1ppm
		0.50	FILL / Silty CLAY: orange-brown to brown; low to medium plasticity; possible reworked natural, with gravel, fine to medium.		FILL		w>PL		ES		0.50	PID	<1ppm
		0.80	CLAY (CI-CH): yellow-brown to orange-brown; medium to high plasticity.				ND				0.60	PID	<1ppm
		1.00			RS		w=PL		ES		0.70	PID	<1ppm
	1.20	1.20m: colour change red-brown mottled pale grey								0.90			
	1.40									1.10			
										1.20	PID	<1ppm	
										1.40			
Borehole discontinued at 1.40m depth. Target depth reached.													

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

**PLANT:** Hand Tools

**OPERATOR:** (J. Henley)

**LOGGED:** JH

**METHOD:** Hand auger

**CASING:** Uncased

**REMARKS:** \*Blind replicate BD1/20250505 taken at 1.2 m to 1.4 m



# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 32.6 AHD  
**COORDINATE:** E:326409.7, N:6231697.9  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH10  
**PROJECT No:** 233414.04  
**DATE:** 05/05/25  
**SHEET:** 1 of 1

GROUNDWATER		CONDITIONS ENCOUNTERED					SAMPLE			TESTING AND REMARKS				
		RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. <sup>(1)</sup> DENSITY, <sup>(2)</sup>	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
05/05/25 No free groundwater observed			FILL / Silty SAND: brown; fine to medium; trace rootlets.		FILL		M		ES		0.20	PID	<1ppm	
		0.20	FILL / Sandy SILT: brown; low to medium plasticity.		FILL				ES		0.30	PID	<1ppm	
		0.50	FILL / Silty CLAY: yellow-brown; fine to medium, possible alluvial, possible reworked natural, with ironstone gravel.		FILL		ND		ES		0.50	PID	<1ppm	
		0.70	CLAY (CL-CI): yellow-brown to orange-brown; low to medium plasticity.					w<PL		ES		0.80	PID	<1ppm
		1.10	1.10m: colour change red-brown		RS				ES		1.10	PID	<1ppm	
		Borehole discontinued at 1.30m depth. Refusal on inferred bedrock.												

NOTES: <sup>(1)</sup>Soil origin is "probable" unless otherwise stated. <sup>(2)</sup>Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

**PLANT:** Hand Tools

**OPERATOR:** (J. Jeffcoat)

**LOGGED:** JH

**METHOD:** Hand auger

**CASING:** Uncased

**REMARKS:** \*Blind replicate BD2/20250505 taken at 0.8 m to 1.1 m  
 Coordinates and levels surveyed by Crux

Refer to explanatory notes for symbol and abbreviation definitions



# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 30.3 AHD  
**COORDINATE:** E:326390.7, N:6231718.8  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH12B  
**PROJECT No:** 233414.04  
**DATE:** 30/04/25  
**SHEET:** 1 of 1

GROUNDWATER		CONDITIONS ENCOUNTERED					SAMPLE			TESTING AND REMARKS				
		RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. (°)	DENSITY (°)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE
			0.12	CONCRETE SLAB.										
			0.12	FILL / SAND: yellow-brown; fine to coarse.		FILL	ND	M			ES	0.12	PID	<1ppm
			0.20	CLAY (CI-CH): orange-brown; medium to high plasticity.		RS		w=PL			ES	0.20	PID	<1ppm
			0.30	0.33m: becoming pale grey with red mottling with depth								0.30		
				Borehole discontinued at 0.33m depth. Refusal on inferred bedrock										

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

**PLANT:** Hand Tools

**OPERATOR:** (S. Ferguson)

**LOGGED:** SAF

**METHOD:** Diatube to 0.12m, Hand auger to 0.33m

**CASING:** Uncased

**REMARKS:** Borehole located in the basement  
Coordinates and levels surveyed by Crux

Refer to explanatory notes for symbol and abbreviation definitions



# BOREHOLE LOG

**CLIENT:** Homes NSW  
**PROJECT:** HAFF Project  
**LOCATION:** 2 Flide Street, Caringbah, NSW 2229

**SURFACE LEVEL:** 30.7 AHD  
**COORDINATE:** E:326425.3, N:6231722.4  
**DATUM/GRID:** MGA2020 Zone 56  
**DIP/AZIMUTH:** 90°/---°

**LOCATION ID:** BH13B  
**PROJECT No:** 233414.04  
**DATE:** 30/04/25  
**SHEET:** 1 of 1

GROUNDWATER		CONDITIONS ENCOUNTERED					SAMPLE			TESTING AND REMARKS				
		RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN (#)	CONSIS. (°)	DENSITY (°)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE
30/04/25 No free groundwater observed whilst augering			CONCRETE SLAB.					ND						
	0.12		FILL / SAND: yellow-brown; fine to medium.		FILL			ND		ES		0.12	PID	<1ppm
	0.20		CLAY (CI-CH) trace gravel: brown; medium to high plasticity; fine, sub-angular to sub-rounded, sandstone gravel.		RS			w=PL		ES		0.20	PID	<1ppm
			Borehole discontinued at 0.31m depth. Refusal on inferred bedrock.									0.30		

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

**PLANT:** Hand Tools

**OPERATOR:** (S. Ferguson)

**LOGGED:** SAF

**METHOD:** Diatube to 0.12m, Hand auger to 0.31m

**CASING:** Uncased

**REMARKS:** Borehole located in the basement  
Coordinates and levels surveyed by Crux

Refer to explanatory notes for symbol and abbreviation definitions



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## **Appendix E**

Previous Results

Table F1: Summary of Laboratory Results – Soil Site Suitability Assessment

				Priority metals								Priority PAH				TRH						BTEX					
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene <sup>b</sup>	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ (BaP 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		
HIL-A / HSL- A (0-<1 m)(NEPC, 2013)				100	20	100	6000	300	40	400	7400	5	-	3	300	-	-	50	280	-	-	0.7-3	480	NL	110		
Direct Contact DC HSL-A (NEPC, 2013)				-	-	-	-	-	-	-	-	1400	-	-	-	-	-	4400	3300	4500	6300	100	14,000	4500	12,000		
EIL/ESL (URPOS) (Fine) (NEPC, 2013)				100	-	410	160	1100	-	80	430	170	0.7	-	-	0	120	180	-	1300	5600	65	105	125	45		
Management Limits ML (URPOS) (NEPC, 2013)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	800	1000	3500	10,000	-	-	-	-		
Direct Contact IMW				-	-	-	-	-	-	-	-	-	-	-	-	-	-	82,000	62,000	85,000	120,000	1100	120,000	85,000	130,000		
Sample ID	Depth	Sample Matrix	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			
Maximum Concentration				10	<0.4	28	21	120	<0.1	17	99	<2	0.07	<0.5	0.3	<25	380	<50	380	2400	1500	<0.2	<0.5	<1	<1		
<b>Laboratory Results</b>																											
BH01	0 - 0.05 m	FILL / MULCH	30/04/25	<4	<0.4	2	6	6	<0.1	<1	19	<2	<0.05	<0.5	<0.05	<50	380	<50	380	2,400	1,500	<0.4	<1	<2	<2		
BH01	0.1 - 0.2 m	FILL / Silty SAND	30/04/25	<4	<0.4	4	8	10	<0.1	2	46	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	100	<100	<0.2	<0.5	<1	<1		
BH01 - [TRIPLICATE]	0.1 - 0.2 m	FILL / Silty SAND	30/04/25	<4	<0.4	4	7	8	<0.1	2	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH01	0.3 - 0.4 m	FILL / Silty SAND	30/04/25	6	<0.4	8	11	20	<0.1	4	29	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BD1/20250430 <sup>9</sup>	0.3 - 0.4 m	FILL / Silty SAND	30/04/25	6	<0.4	9	12	23	<0.1	3	40	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH01	0.6 - 0.7 m	FILL / Silty SAND	30/04/25	8	<0.4	16	9	23	<0.1	2	20	<0.1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH02	0 - 0.2 m	FILL / SAND	05/05/25	<4	<0.4	8	5	14	<0.1	1	24	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH02	0.5 - 0.6 m	FILL / Clayey SAND	05/05/25	8	<0.4	16	6	41	0.1	1	24	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH02	0.9 - 1.1 m	CLAY	05/05/25	7	<0.4	24	<1	23	<0.1	<1	2	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH03	0 - 0.2 m	FILL / Silty CLAY	30/04/25	6	<0.4	12	10	31	<0.1	4	33	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH03	0.3 - 0.45 m	Silty CLAY	30/04/25	4	<0.4	9	5	18	<0.1	1	9	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH03	0.8 - 1 m	Sandy Silty CLAY	30/04/25	9	<0.4	25	9	11	<0.1	<1	2	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH04	0 - 0.05 m	FILL / MULCH	30/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH04	0.1 - 0.2 m	FILL / CLAY	30/04/25	5	<0.4	14	10	20	<0.1	3	28	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH04	0.3 - 0.4 m	FILL / Sandy CLAY	30/04/25	<4	<0.4	14	5	12	<0.1	3	9	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH4A	0.3 - 0.4 m	Silty CLAY	09/05/25	5	<0.4	28	<1	12	<0.1	1	2	<0.1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH05	0.2 - 0.3 m	FILL / Silty SAND	30/04/25	5	<0.4	7	7	17	<0.1	2	23	<1	0.06	<0.5	0.3	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH05 - [TRIPLICATE] <sup>9</sup>	0.2 - 0.3 m	FILL / Silty SAND	30/04/25	5	<0.4	8	7	17	<0.1	3	23	-	-	-	-	<25	<50	-	-	-	-	-	-	-	-		
BH06	0 - 0.1 m	FILL / Sandy SILT	30/04/25	5	<0.4	13	8	20	<0.1	3	27	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH07	0 - 0.2 m	FILL / Clayey Silty SAND	05/05/25	4	<0.4	8	10	22	<0.1	4	44	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH07	0.3 - 0.4 m	FILL / Silty CLAY	05/05/25	7	<0.4	14	6	26	<0.1	2	29	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH08	0 - 0.2 m	FILL / Silty CLAY	01/05/25	6	<0.4	9	8	20	<0.1	3	30	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH08	0.2 - 0.4 m	FILL / Silty CLAY	01/05/25	6	<0.4	11	9	15	<0.1	7	16	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH08	0.45 - 0.6 m	FILL / Silty CLAY	01/05/25	6	<0.4	11	21	120	<0.1	3	98	<1	0.07	<0.5	0.07	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BD1/20250501 <sup>9</sup>	0.45 - 0.6 m	FILL / Silty CLAY	01/05/25	5	<0.4	10	7	73	<0.1	<1	37	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH09	0 - 0.1 m	FILL / Sandy CLAY	05/05/25	<4	<0.4	9	9	16	<0.1	2	34	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH09	0.2 - 0.3 m	FILL / Clayey SAND	05/05/25	<4	<0.4	8	10	32	<0.1	3	21	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH09	0.3 - 0.5 m	FILL / Silty CLAY	05/05/25	<4	<0.4	4	3	12	<0.1	<1	6	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH09 - [TRIPLICATE] <sup>9</sup>	0.3 - 0.5 m	FILL / Silty CLAY	05/05/25	<4	<0.4	5	3	8	<0.1	<1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH09	1.2 - 1.4 m	CLAY	05/05/25	4	<0.4	14	<1	13	<0.1	<1	<1	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BD1/20250505 <sup>9</sup>	1.2 - 1.4 m	CLAY	05/05/25	10	<1	20	<5	24	<0.1	<2	<5	<1	<0.5	<0.5	<0.5	<25	<50	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5		
BH10	0 - 0.2 m	FILL / Silty SAND	05/05/25	4	<0.4	10	10	22	<0.1	2	41	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH10	0.3 - 0.5 m	FILL / Sandy SILT	05/05/25	<4	<0.4	8	11	53	<0.1	1	99	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH11	0 - 0.2 m	FILL / Silty CLAY	02/05/25	5	<0.4	17	9	17	<0.1	3	32	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH11	0.2 - 0.4 m	FILL / Silty CLAY	02/05/25	5	<0.4	15	19	33	<0.1	17	37	<1	0.06	<0.5	0.06	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH12B	0.12 - 0.2 m	FILL / SAND	30/04/25	<4	<0.4	2	5	<1	<0.1	1	2	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		
BH13B	0.12 - 0.2 m	FILL / SAND	30/04/25	<4	<0.4	2	5	<1	<0.1	1	2	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1		

Table F1: Summary of Laboratory Results – Soil Site Suitability Assessment

				Priority metals								Priority PAH				TRH						BTEX			
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	Naphthalene <sup>b</sup>	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ (BaP 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
HIL-A / HSL- A (0-<1 m)(NEPC, 2013)				100	20	100	6000	300	40	400	7400	5	-	3	300	-	-	50	280	-	-	0.7-3	480	NL	110
Direct Contact DC HSL-A (NEPC, 2013)				-	-	-	-	-	-	-	-	1400	-	-	-	-	-	4400	3300	4500	6300	100	14,000	4500	12,000
EIL/ESL (URPOS) (Fine) (NEPC, 2013)				100	-	410	160	1100	-	80	430	170	0.7	-	-	0	120	180	-	1300	5600	65	105	125	45
Management Limits ML (URPOS) (NEPC, 2013)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	800	1000	3500	10,000	-	-	-	-
Direct Contact IMW				-	-	-	-	-	-	-	-	-	-	-	-	-	-	82,000	62,000	85,000	120,000	1100	120,000	85,000	130,000
Sample ID	Depth	Sample Matrix	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
Maximum Concentration				10	<0.4	28	21	120	<0.1	17	99	<2	0.07	<0.5	0.3	<25	380	<50	380	2400	1500	<0.2	<0.5	<1	<1

**Laboratory Results**

**Notes:**

■ 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

**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

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 Residential A with garden/accessible soil

Refer to the SAC section of report for information of SAC sources and rationale.

Table F1: Summary of Laboratory Results – Soil Site Suitability Assessment

				Total Phenolics	OCP										OPP			PCB	Asbestos								
			PQL		5	DDT+DDE+DDD <sup>c</sup>	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene <sup>e</sup>	Methoxychlor	Mirex	All other OCP analysed	Chlorpyrifos	All other OPP analysed		Total OPP	Total PCB	Sample mass	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)
HIL-A / HSL- A (0-<1 m)(NEPC, 2013)				100	240	6	50	270	19	6	10	300	10	-	160	-	-	1	-	0.001	-	-	-	-	-	-	0.1
Direct Contact DC HSL-A (NEPC, 2013)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIL/ESL (URPOS) (Fine) (NEPC, 2013)				-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits ML (URPOS) (NEPC, 2013)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Contact IMW				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample ID	Depth	Sample Matrix	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	g	%(w/w)	-	-	-	-	-	g/kg	
Maximum Concentration				<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	960.54	<0.001	-	-	-	-	-	<0.1
<b>Laboratory Results</b>																											
BH01	0 - 0.05 m	FILL / MULCH	30/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160.56	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH01	0.1 - 0.2 m	FILL / Silty SAND	30/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	NAD	NAD	-	-	-	-	
BH01 - [TRIPLICATE]				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH01	0.3 - 0.4 m	FILL / Silty SAND	30/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	642.15	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BD1/20250430 <sup>g</sup>				<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	
BH01	0.6 - 0.7 m	FILL / Silty SAND	30/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	697.23	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH02	0 - 0.2 m	FILL / SAND	05/05/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	722.07	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH02	0.5 - 0.6 m	FILL / Clayey SAND	05/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	704.21	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH02	0.9 - 1.1 m	CLAY	05/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH03	0 - 0.2 m	FILL / Silty CLAY	30/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	525.01	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH03	0.3 - 0.45 m	Silty CLAY	30/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	371.074	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH03	0.8 - 1 m	Sandy Silty CLAY	30/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-	-	-		
BH04	0 - 0.05 m	FILL / MULCH	30/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125.83	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH04	0.1 - 0.2 m	FILL / CLAY	30/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	NAD	NAD	-	-	-	-	
BH04	0.3 - 0.4 m	FILL / Sandy CLAY	30/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	NAD	NAD	-	-	-	-	
BH4A	0.3 - 0.4 m	Silty CLAY	09/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-	-	-	-	
BH05	0.2 - 0.3 m	FILL / Silty SAND	30/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	960.54	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH05 - [TRIPLICATE] <sup>g</sup>				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH06	0 - 0.1 m	FILL / Sandy SILT	30/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	NAD	NAD	-	-	-	-	
BH07	0 - 0.2 m	FILL / Clayey Silty SAND	05/05/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	NAD	NAD	-	-	-	-	
BH07	0.3 - 0.4 m	FILL / Silty CLAY	05/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-	-	-	-	
BH08	0 - 0.2 m	FILL / Silty CLAY	01/05/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	436.19	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH08	0.2 - 0.4 m	FILL / Silty CLAY	01/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	490.7	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH08	0.45 - 0.6 m	FILL / Silty CLAY	01/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	704.7	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BD1/20250501 <sup>g</sup>				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH09	0 - 0.1 m	FILL / Sandy CLAY	05/05/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	649.73	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH09	0.2 - 0.3 m	FILL / Clayey SAND	05/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-	-	-	-	
BH09	0.3 - 0.5 m	FILL / Silty CLAY	05/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	850.22	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH09 - [TRIPLICATE] <sup>g</sup>				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH09	1.2 - 1.4 m	CLAY	05/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BD1/20250505 <sup>g</sup>				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH10	0 - 0.2 m	FILL / Silty SAND	05/05/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	594.26	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH10	0.3 - 0.5 m	FILL / Sandy SILT	05/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	842.27	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH11	0 - 0.2 m	FILL / Silty CLAY	02/05/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	492.93	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH11	0.2 - 0.4 m	FILL / Silty CLAY	02/05/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	698.91	<0.001	NAD	-	NAD	NAD	NAD	<0.1	
BH12B	0.12 - 0.2 m	FILL / SAND	30/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	NAD	NAD	-	-	-	-	
BH13B	0.12 - 0.2 m	FILL / SAND	30/04/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	NAD	NAD	-	-	-	-	

Table F1: Summary of Laboratory Results – Soil Site Suitability Assessment

				Total Phenolics	OCP										OPP			PCB	Asbestos							
Sample ID	Depth	Sample Matrix	Sample Date		DDT+DDE+DDD <sup>c</sup>	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	All other OCP analysed	Chlorpyrifos	All other OPP analysed	Total OPP		Total PCB	Sample mass	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)
			PQL	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.001						0.1
HIL-A / HSL- A (0-<1 m)(NEPC, 2013)				100	240	6	50	270	19	6	10	300	10	-	160	-	-	1	-	0.001	-	-	-	-	-	-
Direct Contact DC HSL-A (NEPC, 2013)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EIL/ESL (URPOS) (Fine) (NEPC, 2013)				-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits ML (URPOS) (NEPC, 2013)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Contact IMW				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample ID	Depth	Sample Matrix	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	g	%(w/w)	-	-	-	-	-	g/kg
Maximum Concentration				<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<b>960.54</b>	<0.001	-	-	-	-	-	<0.1

**Laboratory Results**

**Notes:**

■ 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

**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

- 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 Residential A with garden/accessible soil

Refer to the SAC section of report for information of SAC sources and rationale.

Table F2: Summary of Laboratory Results – Groundwater Assessment

Sample ID				ANZG (2018) 95% LOP Fresh	NHMRC (2012) Recreation	NEPC (2013) HSL 2-4m	BH03	BD1/20250509	BH08	BH11
Sample Date		PQL	Units				08/05/25	08/05/25	08/05/25	08/05/25
Metals & Metalloids - Dissolved	Total Arsenic	1	µg/L	13	100		<1	<1	<1	<b>1</b>
	Cadmium	0.1	µg/L	0.2	20		<0.1	<0.1	<0.1	<0.1
	Total Chromium	1	µg/L	1			<1	<1	<b>1</b>	<1
	Copper	1	µg/L	1.4	20,000		<b>2</b>	<b>2</b>	<b>7</b>	<b>2</b>
	Lead	1	µg/L	3.4	50		<1	<1	<1	<1
	Mercury (inorganic)	0.05	µg/L	0.06	10		<0.05	<0.05	<0.05	<0.05
	Nickel	1	µg/L	11	200		<b>3</b>	<b>3</b>	<b>9</b>	<b>24</b>
Zinc	1	µg/L	8			<b>18</b>	<b>17</b>	<b>39</b>	<b>89</b>	
Non-metallic Inorganics	Cyanide (total)	4	µg/L	7	800		<4	<4	<4	<4
TRH	F1 ((C6-C10)-BTEX)	10	µg/L			NL	<b>10</b>	<10	<10	<b>26</b>
	F2 (>C10-C16 less Naphthalene)	50	µg/L			NL	<50	<50	<50	<50
	F3 (>C16-C34)	100	µg/L				<100	<100	<100	<100
	F4 (>C34-C40)	100	µg/L				<100	<100	<100	<100
BTEX	Benzene	1	µg/L	950	10	5,000	<1	<1	<1	<1
	Toluene	1	µg/L	180	8,000	NL	<1	<1	<1	<1
	Ethylbenzene	1	µg/L	80	3,000	NL	<1	<1	<1	<1
	o-Xylene	1	µg/L	350			<1	<1	<1	<1
	m+p-Xylene	2	µg/L	75			<2	<2	<2	<2
	Total Xylenes	1	µg/L		6,000	NL	<1	<1	<1	<1
Phenolics	Total Phenolics	50	µg/L	320			<50	<50	<50	<50
PAH	Sum of detected PAH	0.1	µg/L	0.01			<0.1	<0.1	<0.1	<0.1
OCP	Sum of detected OCP	0.2	µg/L	0.0004			<0.2	<0.2	<0.2	<0.2
OPP	Sum of detected OPP	0.2	µg/L				<0.2	<0.2	<0.2	<0.2
PCB	Sum of detected PCB	2	µg/L				<2	<2	<2	<2
VOC (excluding BTEX)	Bromodichloromethane	1	µg/L				<b>2</b>	<b>2</b>	<1	<b>3</b>
	Chloroethane	10	µg/L				<10	<10	<10	<10
	Chloroethene (vinyl chloride / VC)	10	µg/L	100	3		<10	<10	<10	<10
	Trichloromethane (chloroform / TCM)	1	µg/L	770			<b>7</b>	<b>6</b>	<b>1</b>	<b>23</b>
	Chloromethane	10	µg/L				<10	<10	<10	<10
	Cyclohexane	1	µg/L				<1	<1	<1	<b>2</b>
	Dichlorodifluoromethane	10	µg/L				<10	<10	<10	<10
	Bromomethane	10	µg/L		10		<10	<10	<10	<10
	Trichlorofluoromethane	10	µg/L				<10	<10	<10	<10
	All other VOCs excluding BTEX analysed	1	µg/L				<1	<1	<1	<1
	Sum of detected VOC	1	µg/L				<b>9</b>	<b>8</b>	<b>1</b>	<b>28</b>
Nutrients	Nitrogen	100	µg/L				<b>200</b>	-	<b>7,400</b>	<b>200</b>
	Ammonia as N	5	µg/L	900			<b>20</b>	-	<b>20</b>	<b>10</b>
	TKN in water	100	µg/L				<b>100</b>	-	<b>6,800</b>	<b>100</b>
	Nitrate as N	5	µg/L	2,600	500,000		<b>53</b>	-	<b>530</b>	<b>20</b>
	Nitrite as N	5	µg/L		30,000		<b>5</b>	-	<b>30</b>	<b>20</b>
	NOx as N	5	µg/L				<b>58</b>	-	<b>560</b>	<b>30</b>
	Organic Nitrogen as N	200	µg/L				<200	-	<b>6,900</b>	<200
	Phosphorous	50	µg/L				<50	-	<50	<50
Anions & Cations	Bicarbonate Alkalinity as CaCO3	5,000	µg/L				<b>13,000</b>	<b>11,000</b>	<b>10,000</b>	<b>30,000</b>
	Chloride	1000	µg/L				<b>56,000</b>	<b>54,000</b>	<b>99,000</b>	<b>230,000</b>
	Hydroxide Alkalinity (OH-) as CaCO3	5,000	µg/L				<5000	<5000	<5000	<5000
	Ionic Balance		mg/kg				<b>-10,000</b>	<b>10,000</b>	<b>70,000</b>	<b>30,000</b>
	Sulphate	1000	µg/L				<b>48,000</b>	<b>47,000</b>	<b>88,000</b>	<b>40,000</b>
	Total Alkalinity as CaCO3	5,000	µg/L				<b>13,000</b>	<b>11,000</b>	<b>10,000</b>	<b>30,000</b>
	Calcium	500	µg/L				<b>6,100</b>	<b>6,400</b>	<b>3,000</b>	<b>15,000</b>
	Magnesium	500	µg/L				<b>5,000</b>	<b>5,000</b>	<b>6,800</b>	<b>17,000</b>
	Potassium	500	µg/L				<b>2,000</b>	<b>2,000</b>	<b>1000</b>	<b>3,000</b>
Sodium	500	µg/L				<b>46,000</b>	<b>46,000</b>	<b>110,000</b>	<b>140,000</b>	
Faecal Coliforms	E.Coli	5,000	cfu/100ml				<18	<18	<100	<1000
	Faecal Coliforms	5,000	cfu/100ml				<18	<18	<100	<1000
Other Parameters	Total dissolved solids	5,000	µg/L				<b>190,000</b>	-	<b>490,000</b>	<b>660,000</b>
	Total suspended solids	5,000	µg/L				<b>460,000</b>	-	<b>170,000</b>	<b>66,000</b>
	pH	-	pH units				<b>5.6</b>	-	<b>5.4</b>	<b>6.1</b>
	Electrical conductivity	1	µS/cm				<b>370</b>	-	<b>710</b>	<b>1100</b>

**Notes:**

- No criterion / not defined / not tested / not applicable
- \* QA/QC replicate of sample listed directly below the primary sample
- NL Not limiting
- PQL Practical quantitation limit

Shaded cell is exceedance of guideline value

Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded

NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Clay 2-4m

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Fresh aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Fresh aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]

NHMRC (2008) Guidelines for Managing Risk in Recreational Water

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection

Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.

ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic

ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered

ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table F3: Summary of Laboratory Results – Preliminary Waste Classification Assessment

				Metals							TRH		BTEX				PAH		Phenols	OCP				
				Total Arsenic	Cadmium	Total Chromium	Lead	TCLP Lead	Mercury (inorganic)	Nickel	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(e)pyrene (BaP)	Total PAH	Total Phenolics	Scheduled Chemical Waste (standard)	Chlordane	Total Endosulfan	Total Analysed OCP	Mirex
PQL				4	0.4	1	1	30	0.1	1	25	50	0.2	0.5	1	1	0.05	0.05	5	0.1	0.1	0.1	0.1	0.1
<b>Waste Classification Criteria</b>																								
CT1				100	20	100	100	-	4	40	-	10,000	10	288	600	1000	0.8	200	288	<50	-	60	-	-
SCC1				500	100	1,900	1,500	-	50	1,050	-	10,000	18	518	1,080	1,800	10	200	518	<50	-	108	-	-
TCLP1				-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CT2				400	80	400	400	-	16	160	-	40,000	40	1,152	2,400	4,000	3.2	800	1,152	<50	-	240	-	-
SCC2				2,000	400	7,600	6,000	-	200	4,200	-	40,000	72	2,073	4,320	7,200	23	800	2,073	<50	-	432	-	-
TCLP2				-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Laboratory Results - Fill Samples</b>																								
Sample ID	Depth	Sample Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	µg/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
BH01	0 - 0.05 m	FILL / MULCH	30/04/25	<4	<0.4	<b>2</b>	<b>6</b>	-	<0.1	<1	<50	<b>3,300</b>	<0.4	<1	<2	<2	<0.05	<0.05	-	-	-	-	-	-
BH01	0.1 - 0.2 m	FILL / Silty SAND	30/04/25	<4	<0.4	<b>4</b>	<b>10</b>	-	<0.1	<b>2</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH01 - [TRIPLICATE]	0.1 - 0.2 m	FILL / Silty SAND	30/04/25	<4	<0.4	<b>4</b>	<b>8</b>	-	<0.1	<b>2</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	0.3 - 0.4 m	FILL / Silty SAND	30/04/25	<b>6</b>	<0.4	<b>8</b>	<b>20</b>	-	<0.1	<b>4</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BDI/20250430	0.3 - 0.4 m	FILL / Silty SAND	30/04/25	<b>6</b>	<0.4	<b>9</b>	<b>23</b>	-	<0.1	<b>3</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH01	0.6 - 0.7 m	FILL / Silty SAND	30/04/25	<b>8</b>	<0.4	<b>16</b>	<b>23</b>	-	<0.1	<b>2</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH02	0 - 0.2 m	FILL / SAND	05/05/25	<4	<0.4	<b>8</b>	<b>14</b>	-	<0.1	<b>1</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	0.5 - 0.6 m	FILL / Clayey SAND	05/05/25	<b>8</b>	<0.4	<b>16</b>	<b>41</b>	-	<b>0.1</b>	<b>1</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH03	0 - 0.2 m	FILL / Silty CLAY	30/04/25	<b>6</b>	<0.4	<b>12</b>	<b>31</b>	-	<0.1	<b>4</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	0 - 0.05 m	FILL / MULCH	30/04/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.1 - 0.2 m	FILL / CLAY	30/04/25	<b>5</b>	<0.4	<b>14</b>	<b>20</b>	-	<0.1	<b>3</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH05	0.2 - 0.3 m	FILL / Silty SAND	30/04/25	<b>5</b>	<0.4	<b>7</b>	<b>17</b>	-	<0.1	<b>2</b>	<25	<50	<0.2	<0.5	<1	<1	<b>0.06</b>	<b>0.3</b>	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH05 - [TRIPLICATE]	0.2 - 0.3 m	FILL / Silty SAND	30/04/25	<b>5</b>	<0.4	<b>8</b>	<b>17</b>	-	<0.1	<b>3</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0 - 0.1 m	FILL / Sandy SILT	30/04/25	<b>5</b>	<0.4	<b>13</b>	<b>20</b>	-	<0.1	<b>3</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH07	0 - 0.2 m	FILL / Clayey Silty SAND	05/05/25	<b>4</b>	<0.4	<b>8</b>	<b>22</b>	-	<0.1	<b>4</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH07	0.3 - 0.4 m	FILL / Silty CLAY	05/05/25	<b>7</b>	<0.4	<b>14</b>	<b>26</b>	-	<0.1	<b>2</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH08	0 - 0.2 m	FILL / Silty CLAY	01/05/25	<b>6</b>	<0.4	<b>9</b>	<b>20</b>	-	<0.1	<b>3</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH08	0.2 - 0.4 m	FILL / Silty CLAY	01/05/25	<b>6</b>	<0.4	<b>11</b>	<b>15</b>	-	<0.1	<b>7</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH08	0.45 - 0.6 m	FILL / Silty CLAY	01/05/25	<b>6</b>	<0.4	<b>11</b>	<b>120</b>	<b>0.04</b>	<0.1	<b>3</b>	<25	<50	<0.2	<0.5	<1	<1	<b>0.07</b>	<b>0.07</b>	-	-	-	-	-	-
BDI/20250501	0.45 - 0.6 m	FILL / Silty CLAY	01/05/25	<b>5</b>	<0.4	<b>10</b>	<b>73</b>	-	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH09	0 - 0.1 m	FILL / Sandy CLAY	05/05/25	<4	<0.4	<b>9</b>	<b>16</b>	-	<0.1	<b>2</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	0.2 - 0.3 m	FILL / Clayey SAND	05/05/25	<4	<0.4	<b>8</b>	<b>32</b>	-	<0.1	<b>3</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH09	0.3 - 0.5 m	FILL / Silty CLAY	05/05/25	<4	<0.4	<b>4</b>	<b>12</b>	-	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.3 - 0.5 m	FILL / Silty CLAY	05/05/25	<4	<0.4	<b>5</b>	<b>8</b>	-	<0.1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	0 - 0.2 m	FILL / Silty SAND	05/05/25	<b>4</b>	<0.4	<b>10</b>	<b>22</b>	-	<0.1	<b>2</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH10	0.3 - 0.5 m	FILL / Sandy SILT	05/05/25	<4	<0.4	<b>8</b>	<b>53</b>	-	<0.1	<b>1</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH11	0 - 0.2 m	FILL / Silty CLAY	02/05/25	<b>5</b>	<0.4	<b>17</b>	<b>17</b>	-	<0.1	<b>3</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH11	0.2 - 0.4 m	FILL / Silty CLAY	02/05/25	<b>5</b>	<0.4	<b>15</b>	<b>33</b>	-	<0.1	<b>17</b>	<25	<50	<0.2	<0.5	<1	<1	<b>0.06</b>	<b>0.06</b>	-	-	-	-	-	-
BH12B	0.12 - 0.2 m	FILL / SAND	30/04/25	<b>5</b>	<0.4	<b>3</b>	<b>3</b>	-	<0.1	<b>4</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH13B	0.12 - 0.2 m	FILL / SAND	30/04/25	<4	<0.4	<b>2</b>	<1	-	<0.1	<b>1</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1

Table F3: Summary of Laboratory Results – Preliminary Waste Classification Assessment

				Metals							TRH		BTEX				PAH		Phenols	OCP				
				Total Arsenic	Cadmium	Total Chromium	Lead	TCLP Lead	Mercury (inorganic)	Nickel	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(e)pyrene (BaP)	Total PAH	Total Phenolics	Scheduled Chemical Waste (standard)	Chlordane	Total Endosulfan	Total Analysed OCP	Mirex
PQL				4	0.4	1	1	30	0.1	1	25	50	0.2	0.5	1	1	0.05	0.05	5	0.1	0.1	0.1	0.1	0.1
<b>Published Background Concentrations</b>																								
NEPC (1999)				1-50	1	5-1000	2-200		0.03	5-500			-	-	-	-	-	-	-				-	
ANZECC (1992)				0.2-30	0.04-2	0.5-110	<2-200		0.001-0.1	2-400			0.05 - 1	0.1 - 1	-	-	-	0.95-5	0.03 - 0.5				<0.001 - <0.97	
ANZECC (2000)				1-53	0.016-0.78	2.5-673	2-81			1-517			-	-	-	-	-	-	-				-	
<b>Laboratory Results - Natural Samples</b>																								
BH02	0.9 - 1.1 m	CLAY	05/05/25	<b>7</b>	<0.4	<b>24</b>	<b>23</b>	-	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH03	0.3 - 0.45 m	Silty CLAY	30/04/25	<b>4</b>	<0.4	<b>9</b>	<b>18</b>	-	<0.1	<b>1</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH03	0.8 - 1 m	Sandy Silty CLAY	30/04/25	<b>9</b>	<0.4	<b>25</b>	<b>11</b>	-	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH04	0.3 - 0.4 m	Silty CLAY	30/04/25	<4	<0.4	<b>14</b>	<b>12</b>	-	<0.1	<b>3</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1
BH4A	0.3 - 0.4 m	Silty CLAY	09/05/25	<b>5</b>	<0.4	<b>28</b>	<b>12</b>	-	<0.1	<b>1</b>	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BH09	1.2 - 1.4 m	CLAY	05/05/25	<b>4</b>	<0.4	<b>14</b>	<b>13</b>	-	<0.1	<1	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-
BD1/20250505	1.2 - 1.4 m	CLAY	05/05/25	<b>10</b>	<1	<b>20</b>	<b>24</b>	-	<0.1	<2	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-

**Notes:** □ 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

Published Background Concentrations for Virgin Excavated Natural Material (VENM) Screening Criteria

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

\*\* Primary sample was not analysed as part of this investigation, as such the replicate sample was treated as a primary sample

Table F3: Summary of Laboratory Results – Preliminary Waste Classification Assessment

				OPP	PCB	Asbestos						
				Total Analysed Opp	Total PCB	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)	FA and AF Estimation	Total Asbestos#1
PQL				0.1	0.1						0.001	0.1
<b>Waste Classification Criteria</b>												
CT1				4	<50	-	-	-	-	-	-	-
SCC1				7.5	<50	-	-	-	-	-	-	-
TCLP1				-	-	-	-	-	-	-	-	-
CT2				16	<50	-	-	-	-	-	-	-
SCC2				30	<50	-	-	-	-	-	-	-
TCLP2				-	-	-	-	-	-	-	-	-
<b>Laboratory Results - Fill Samples</b>												
Sample ID	Depth	Sample Matrix	Sample Date	mg/kg	mg/kg	-	-	-	-	-	%(w/w)	g/kg
BH01	0 - 0.05 m	FILL / MULCH	30/04/25	-	-	-	-	NAD	NAD	NAD	<0.001	<0.1
BH01	0.1 - 0.2 m	FILL / Silty SAND	30/04/25	<0.1	<0.1	NAD	NAD	-	-	-	-	-
BH01 - [TRIPLICATE]	0.1 - 0.2 m	FILL / Silty SAND	30/04/25	-	-	-	-	-	-	-	-	-
BH01	0.3 - 0.4 m	FILL / Silty SAND	30/04/25	<0.1	<0.1	-	-	NAD	NAD	NAD	<0.001	<0.1
BDI/20250430	0.3 - 0.4 m	FILL / Silty SAND	30/04/25	<0.1	<0.1	-	-	-	-	-	-	-
BH01	0.6 - 0.7 m	FILL / Silty SAND	30/04/25	-	-	-	-	NAD	NAD	NAD	<0.001	<0.1
BH02	0 - 0.2 m	FILL / SAND	05/05/25	<0.1	<0.1	-	-	NAD	NAD	NAD	<0.001	<0.1
BH02	0.5 - 0.6 m	FILL / Clayey SAND	05/05/25	-	-	-	-	NAD	NAD	NAD	<0.001	<0.1
BH03	0 - 0.2 m	FILL / Silty CLAY	30/04/25	<0.1	<0.1	-	-	NAD	NAD	NAD	<0.001	<0.1
BH04	0 - 0.05 m	FILL / MULCH	30/04/25	-	-	-	-	NAD	NAD	NAD	<0.001	<0.1
BH04	0.1 - 0.2 m	FILL / CLAY	30/04/25	<0.1	<0.1	NAD	NAD	-	-	-	-	-
BH05	0.2 - 0.3 m	FILL / Silty SAND	30/04/25	<0.1	<0.1	-	-	NAD	NAD	NAD	<0.001	<0.1
BH05 - [TRIPLICATE]	0.2 - 0.3 m	FILL / Silty SAND	30/04/25	-	-	-	-	-	-	-	-	-
BH06	0 - 0.1 m	FILL / Sandy SILT	30/04/25	<0.1	<0.1	NAD	NAD	-	-	-	-	-
BH07	0 - 0.2 m	FILL / Clayey Silty SAND	05/05/25	<0.1	<0.1	NAD	NAD	-	-	-	-	-
BH07	0.3 - 0.4 m	FILL / Silty CLAY	05/05/25	-	-	NAD	NAD	-	-	-	-	-
BH08	0 - 0.2 m	FILL / Silty CLAY	01/05/25	<0.1	<0.1	-	-	NAD	NAD	NAD	<0.001	<0.1
BH08	0.2 - 0.4 m	FILL / Silty CLAY	01/05/25	-	-	-	-	NAD	NAD	NAD	<0.001	<0.1
BH08	0.45 - 0.6 m	FILL / Silty CLAY	01/05/25	-	-	-	-	NAD	NAD	NAD	<0.001	<0.1
BDI/20250501	0.45 - 0.6 m	FILL / Silty CLAY	01/05/25	-	-	-	-	-	-	-	-	-
BH09	0 - 0.1 m	FILL / Sandy CLAY	05/05/25	<0.1	<0.1	-	-	NAD	NAD	NAD	<0.001	<0.1
BH09	0.2 - 0.3 m	FILL / Clayey SAND	05/05/25	-	-	NAD	NAD	-	-	-	-	-
BH09	0.3 - 0.5 m	FILL / Silty CLAY	05/05/25	-	-	-	-	NAD	NAD	NAD	<0.001	<0.1
BH09 - [TRIPLICATE]	0.3 - 0.5 m	FILL / Silty CLAY	05/05/25	-	-	-	-	-	-	-	-	-
BH10	0 - 0.2 m	FILL / Silty SAND	05/05/25	<0.1	<0.1	-	-	NAD	NAD	NAD	<0.001	<0.1
BH10	0.3 - 0.5 m	FILL / Sandy SILT	05/05/25	-	-	-	-	NAD	NAD	NAD	<0.001	<0.1
BH11	0 - 0.2 m	FILL / Silty CLAY	02/05/25	<0.1	<0.1	-	-	NAD	NAD	NAD	<0.001	<0.1
BH11	0.2 - 0.4 m	FILL / Silty CLAY	02/05/25	-	-	-	-	NAD	NAD	NAD	<0.001	<0.1
BH12B	0.12 - 0.2 m	FILL / SAND	30/04/25	<0.1	<0.1	NAD	NAD	-	-	-	-	-
BH13B	0.12 - 0.2 m	FILL / SAND	30/04/25	<0.1	<0.1	NAD	NAD	-	-	-	-	-

Table F3: Summary of Laboratory Results – Preliminary Waste Classification Assessment

				OPP	PCB	Asbestos						
				Total Analysed Opp	Total PCB	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)	FA and AF Estimation	Total Asbestos#
PQL				0.1	0.1						0.001	0.1
<b>Published Background Concentrations</b>												
NEPC (1999)												
ANZECC (1992)					0.02-0.1							
ANZECC (2000)												
<b>Laboratory Results - Natural Samples</b>												
BH02	0.9 - 1.1 m	CLAY	05/05/25	-	-	-	-	-	-	-	-	-
BH03	0.3 - 0.45 m	Silty CLAY	30/04/25	-	-	-	-	NAD	NAD	NAD	<0.001	<0.1
BH03	0.8 - 1 m	Sandy Silty CLAY	30/04/25	-	-	NAD	NAD	-	-	-	-	-
BH04	0.3 - 0.4 m	Silty CLAY	30/04/25	<0.1	<0.1	NAD	NAD	-	-	-	-	-
BH4A	0.3 - 0.4 m	Silty CLAY	09/05/25	-	-	NAD	NAD	-	-	-	-	-
BH09	1.2 - 1.4 m	CLAY	05/05/25	-	-	-	-	-	-	-	-	-
BD1/20250505	1.2 - 1.4 m	CLAY	05/05/25	-	-	-	-	-	-	-	-	-

- Notes:**
- 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
  - Published Background Concentrations for Virgin Excavated Natural Material (VENM) Screening Criteria
  - 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
  - \*\* Primary sample was not analysed as part of this investigation, as such the replicate sample was treated as a primary sample