

The background of the document is a photograph of a construction site. It shows heavy machinery, including what appears to be a large drill or auger, with various metal components, bolts, and hoses. The scene is somewhat dark and industrial. Overlaid on this image are several large, semi-transparent geometric shapes in shades of grey, teal, and orange, which also appear in the company logo.

# Dewatering Management Plan 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield (NSW)

Reference: P3444\_07

Date: 22 April 2026

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## Table of Contents

|                                                                  |           |
|------------------------------------------------------------------|-----------|
| <b>1. Introduction .....</b>                                     | <b>1</b>  |
| 1.1 Overview .....                                               | 1         |
| 1.2 Proposed Development .....                                   | 1         |
| 1.3 Proposed Dewatering Schedule.....                            | 2         |
| 1.4 Objectives .....                                             | 2         |
| <b>2. Geological Model.....</b>                                  | <b>2</b>  |
| <b>3. Hydrogeological Model.....</b>                             | <b>3</b>  |
| 3.1 Hydrogeological Summary .....                                | 3         |
| 3.2 Summary of Groundwater Observations.....                     | 3         |
| <b>4. Groundwater Flow Modelling .....</b>                       | <b>3</b>  |
| 4.1 Proposed Shoring and Groundwater Management.....             | 3         |
| 4.2 Analytical Seepage Modelling.....                            | 3         |
| 4.2.1 Modelling Inputs .....                                     | 4         |
| 4.2.2 Modelled Seepage .....                                     | 5         |
| 4.2.3 Modelled Groundwater Drawdown.....                         | 6         |
| <b>5. NSW Aquifer Interference Policy Impact Assessment.....</b> | <b>7</b>  |
| <b>6. Water Discharge Methodology .....</b>                      | <b>8</b>  |
| <b>7. Groundwater Monitoring.....</b>                            | <b>10</b> |
| 7.1 Water Level Monitoring .....                                 | 10        |
| 7.2 Water Inflow Monitoring .....                                | 12        |
| 7.3 Water Quality Monitoring.....                                | 13        |
| 7.4 Contingency Measures.....                                    | 14        |
| 7.5 Reporting and Record Keeping .....                           | 15        |
| 7.6 Project Stakeholders.....                                    | 15        |
| <b>8. Management of Ongoing Discharge .....</b>                  | <b>15</b> |
| <b>9. Conclusions and Recommendations .....</b>                  | <b>15</b> |
| <b>10. Statement of Limitations .....</b>                        | <b>16</b> |



## 1. Introduction

### 1.1 Overview

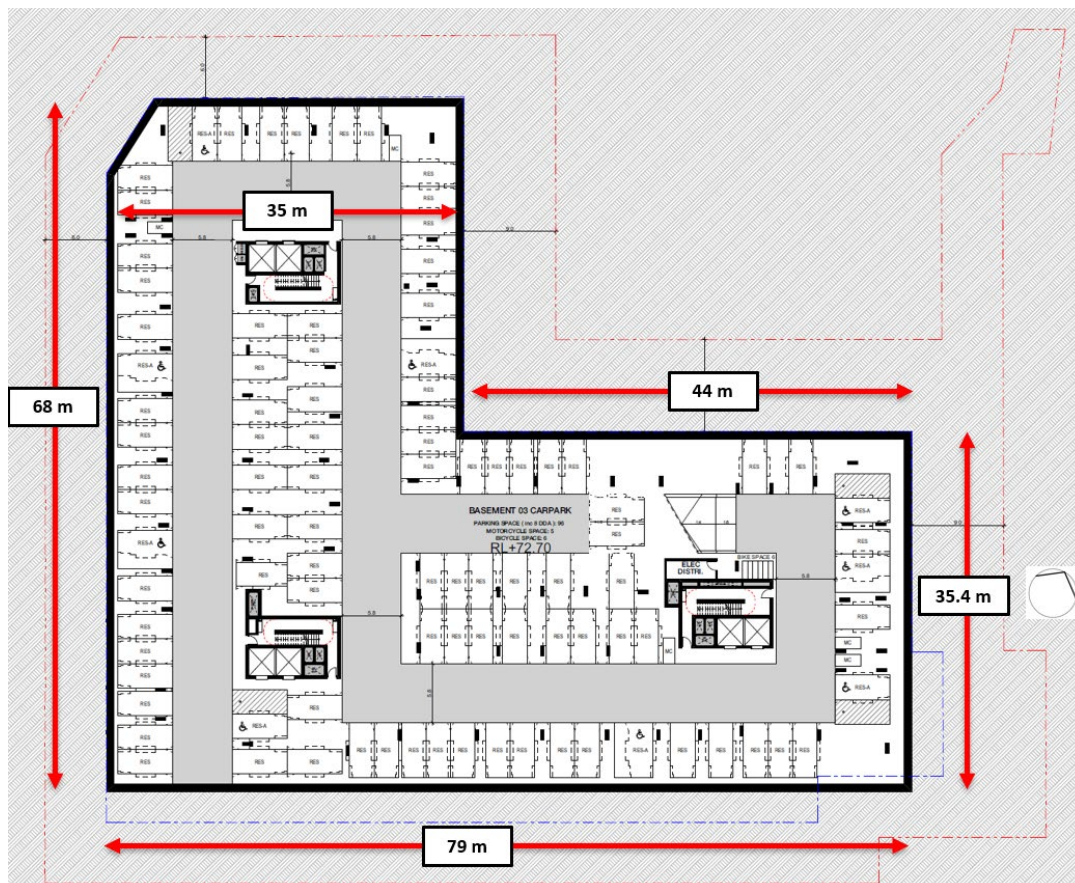
Morrow Geotechnics Pty Ltd has carried out a Groundwater Study and prepared a Site Hydrogeology Report for the proposed development at 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW (the site) also known as Lot 30 in DP 4215, Lot 71 in DP 4665, Lot 7 in DP 17373, Lot B in DP 344051 and Lot 1 in DP 127411.

- Morrow Geotechnics Pty Ltd, Geotechnical Investigation Report, *59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW*, referenced P3444\_05 and dated 22 April 2026 (MG 2026-1); and
- Morrow Geotechnics Pty Ltd, Site Hydrogeology Report, *59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW* referenced P3444\_06 and dated 22 April 2026 (MG 2026-2).

The geotechnical report presents the results of site investigations for the proposed development and geotechnical recommendations for design and construction.

### 1.2 Proposed Development

Architectural drawings for the proposed development have been prepared by DKO Architecture for project number 13688 and dated 30 March 2026. From the drawings provided morrow geotechnics understands the proposed involves the construction of a eight-storey multi-residence development over three levels of basement carpark. Excavation for the basement is expected to extend to a depth of approximately 19 m below existing ground level (mBGL) to RL 72.70 mAHD. Basement dimensions are shown in **Figure 1** below.



**Figure 1:** Proposed Basement Dimensions B2 (area approx. 3922 m<sup>2</sup>, perimeter approx. 291 m)



## 1.3 Proposed Dewatering Schedule

Given the relatively low permeability of the bedrock profile encountered in the geotechnical investigation it is proposed to construct the basement as a drained soldier pile wall. Dewatering through spear points and pumping is not proposed for the construction period, rather any groundwater seepage will be allowed to drain through strip drainage installed behind shotcrete panels and collected by sump pits within the basement.

The excavation program for the proposed basement is expected to take up to 8 months. Temporary construction dewatering is expected to occur for construction seepage inflows during this 8 month period.

## 1.4 Objectives

The objective of this Dewatering Management Plan is to identify a methodology for construction dewatering of the site such that:

- Construction dewatering volumes are quantified to be within acceptable thresholds;
- The location of any groundwater extraction works, if required, is clearly delineated;
- The process for disposal of extracted groundwater, if required, is clearly defined;
- The quality of any groundwater is assessed in accordance with ANZG/ANZECC guidelines for disposal off site, if required;
- The impact of groundwater drawdown on neighbouring properties is assessed;
- Provide a NSW Aquifer Interference Policy assessment of the proposed activity;
- Monitoring and contingency plans are outlined for safe management of construction dewatering;
- This Dewatering Management Plan will be used as the basis for approval to enable connection and discharge into Councils stormwater system.

## 2. Geological Model

The Soil Conservation Service of NSW Sydney 1:100,000 Soil Landscapes Series Sheet 9130 (1st Edition) indicates that the residual landscape at the site likely comprises the Blacktown Landscape. This landscape type typically includes gently undulating rises with broad rounded crests and ridges with gently inclined slopes of typically < 5 %. It generally comprises shallow to moderately deep (< 1.5 m) red and brown podzolic soils on upper slopes. These soils are noted to be typically moderately reactive and highly plastic.

Information on regional sub-surface conditions, referenced from the Department of Mineral Resources Geological Map Sydney 1:100,000 (Geological Series Sheet 9130) indicate that the site is located in (Rwa) Ashfield Shale of the Wianamatta Group, which is typically comprised of black to dark-grey shale and laminite.

Further discussion of the geological and geotechnical conditions at the site is provided in the Geotechnical Investigation Report (MG 2026-1) and in the Site Hydrogeology Report (MG 2026-2).

### **3. Hydrogeological Model**

#### **3.1 Hydrogeological Summary**

A full hydrogeological assessment of the site has been carried out by Morrow Geotechnics as referenced in Section 1.1 above and hereafter referred to as MG 2026-2.

#### **3.2 Summary of Groundwater Observations**

Average groundwater levels at the three piezometers fall within the following lithologies;

- BH1 - Unit 6 Class II Sandstone;
- BH2 - Unit 3 Class V Sandstone; and
- BH5 - Unit 3 Class V Sandstone.

Water levels within the borehole BH1 and BH5 were moderately responsive to rainfall events during the monitoring period. This is inferred to result from surface water infiltration following rainfall recharging the groundwater.

The results of the water level monitoring show a stable hydraulic gradient across the site between RL 81.55 mAHD and RL 83.29 mAHD. On the basis of ongoing groundwater monitoring at the site it is recommended that a design groundwater level for site is taken at the following depths;

- BH1 – RL 85.00 mAHD;
- BH2 - RL 83.80 mAHD; and
- BH5 - RL 82.50 mAHD.

On the basis of the testing results presented above, the following permeability values may be adopted for design and analysis of the excavation:

- Class V to Class IV Sandstone –  $3.8 \times 10^{-7}$  m/s - interpreted from BH2 and BH5 testing; and
- Class III to Class II Sandstone –  $2.8 \times 10^{-8}$  m/s - interpreted from BH1 testing.

### **4. Groundwater Flow Modelling**

#### **4.1 Proposed Shoring and Groundwater Management**

Morrow Geotechnics understands that the structural design will be for a drained basement. No spear points or wells are proposed for extraction of groundwater at the site. Groundwater seepage will be allowed to drain to sump pits within the basement. Any accumulation of groundwater within the sump pit would be dewatered by pumping from the sump pit using appropriate environmental controls as discussed in this Dewatering Management Plan.

#### **4.2 Analytical Seepage Modelling**

Groundwater seepage analysis for flow into the drained basement has been calculated using a Plaxis 2D Flow Module. Plaxis is a 2D finite element and limit equilibrium software package used for design of geotechnical and hydrogeological design of structures such as excavations, dams, embankments and tunnels. PLAXIS 2D calculates deformations, soil stresses, water flow and groundwater pressures.

The Plaxis Flow Module allows complex groundwater head distributions to be calculated at any point in time with time dependent groundwater flow calculations. PLAXIS Flow displays contours and vectors of groundwater flow, pore pressures, saturation, suction, and Darcy flux. For curves, options exist to visualize the development of groundwater head and pore pressures in time through various calculation phases, providing valuable insight in the groundwater flow process.

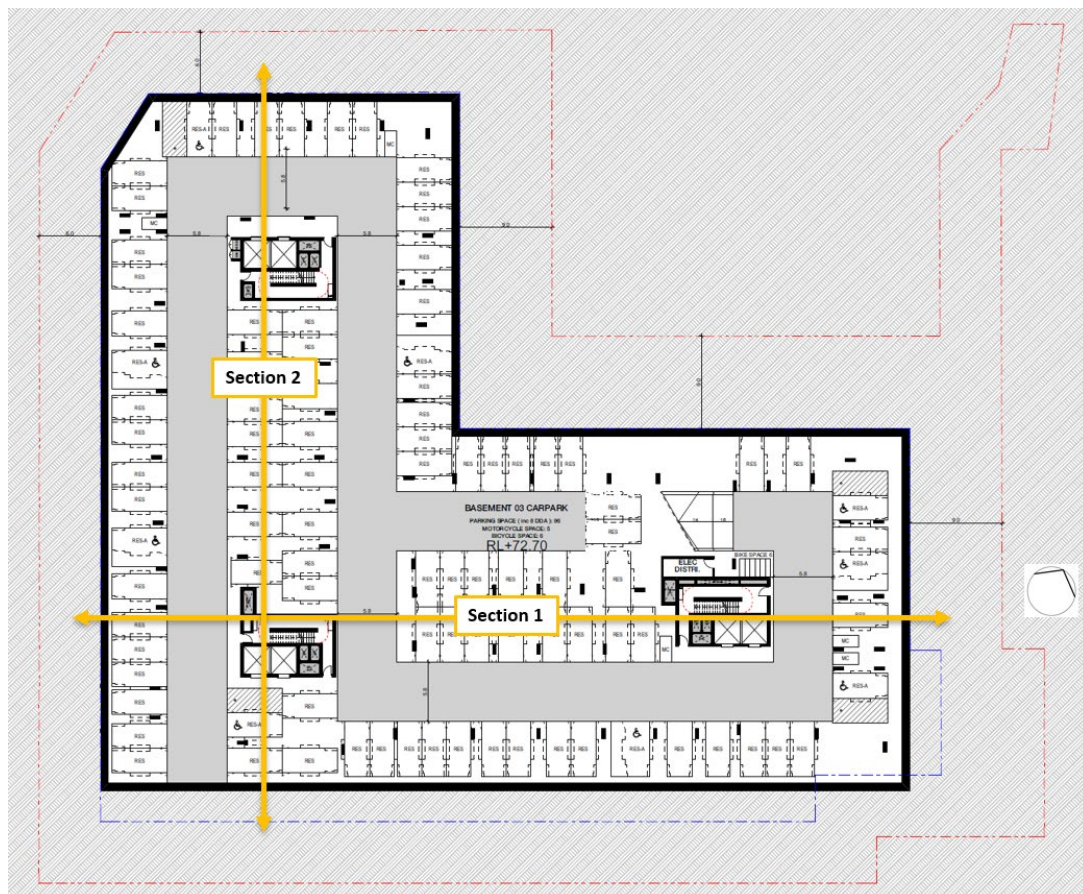
The limitation of the 2D Plaxis Flow module is that it is likely to overestimate the groundwater flow volumes and groundwater drawdown due to 2D cross sectional analysis.

## 4.2.1 Modelling Inputs

Geological profiles, groundwater levels and hydraulic permeabilities have been entered into the analytical model as per the hydrogeological model presented in the MG 2026-2 SHR for the site.

For the formation of the model a mean annual deep drainage groundwater recharge flux of 20 mm per year (Australian National Water Commission, 2005) has been assumed.

Two cross sections have been modelled as shown on **Figure 2** below.



**Figure 2:** Modelling Cross Section 1 and 2

The Plaxis model has been set up as a “Flow Only” calculation using the “Transient Groundwater Flow” stage types. Given the relatively low permeability of soil and rock units obtained from the hydraulic conductivity testing, a model width of 200 m and model depth of 100 m was adequate for modelling the full extent of groundwater impacts from the proposed development.

Vertical model boundaries were set as open to allow infinite recharge of flow at model boundaries at the initial ground levels.

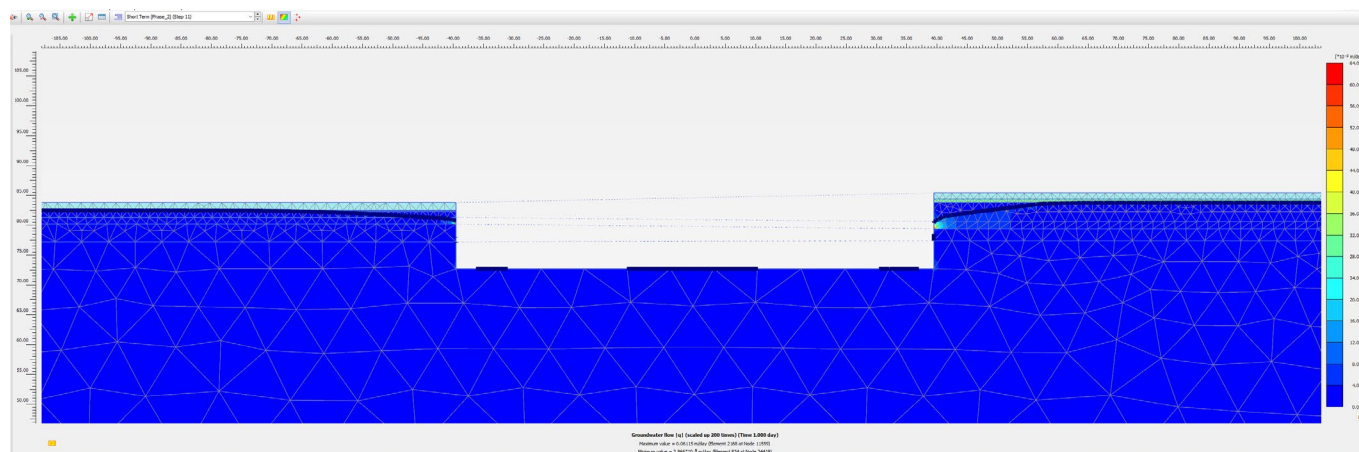


Short term flow modelling was based on the initial 24 hour period following excavation. The flow rates from short term modelling have been applied to the entire construction period as a worst case scenario given that flow rates reduce quickly after the initial 24 hour flow period. This has been taken as a conservative approach.

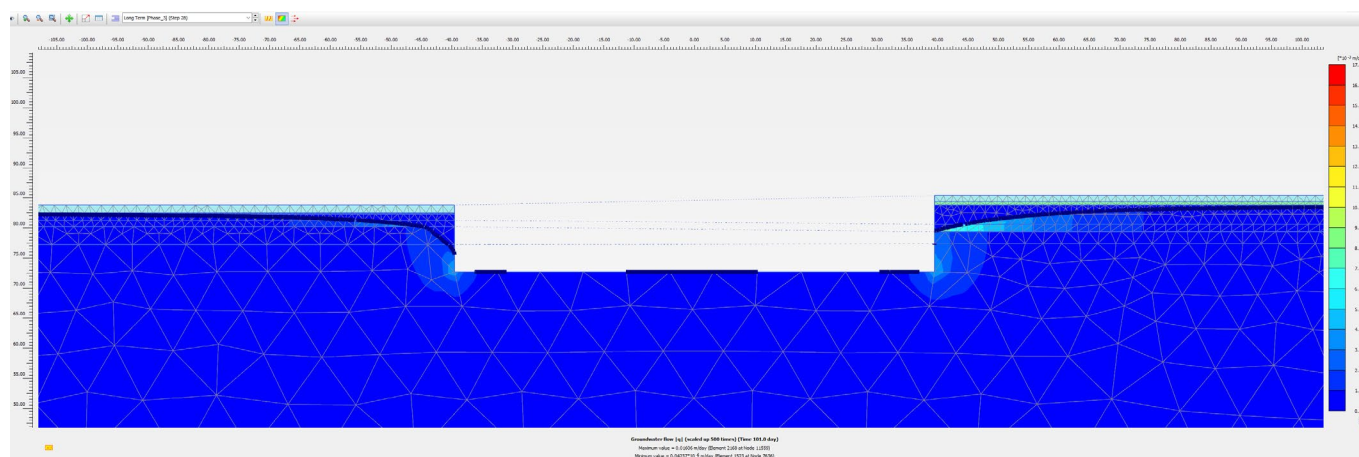
Long-term flow modelling was based off stabilised flow after allowing the model to run for a 100 day period. Steady flow rates for all models have been achieved at 100 days.

## 4.2.2 Modelled Seepage

Typical Plaxis outputs for each groundwater flow modelling and groundwater head drawdown curves are shown in **Figure 3** and **Figure 4** below.



**Figure 3:** Typical aquifer flow conditions (Section 1 short term flow shown).



**Figure 4:** Typical aquifer flow conditions (Section 1 long term flow shown).

Full outputs of Plaxis results are included in the Plaxis output reports attached as **Appendix A**.

Tabulated results of seepage calculations for each of the above cases are presented in **Table 1**.

**Table 1 Seepage Calculations**

| Analysis Case                  | Up Gradient Seepage to Excavation Face (L/day/m) | Down Gradient Seepage to Excavation Face (L/day/m) | Excavation Base Seepage (L/day/m <sup>2</sup> ) |
|--------------------------------|--------------------------------------------------|----------------------------------------------------|-------------------------------------------------|
| <b>Section 1</b><br>Short Term | 52.23                                            | 34.7                                               | 0.67                                            |
| <b>Section 1</b><br>Long Term  | 20.7                                             | 7.71                                               | 0.44                                            |
| <b>Section 2</b><br>Short Term | 20.04                                            | 36.8                                               | 0.71                                            |
| <b>Section 2</b><br>Long Term  | 15.29                                            | 6.58                                               | 0.48                                            |

Peak upgradient and downgradient seepage rates have been generalized across the 50% of the basement area each as a worst-case projection of groundwater flows. Calculations of total volume of seepage inflow have been based on an excavation perimeter of approximately 291 m and an excavation base area of approximately 3922 m<sup>2</sup>.

Based on the above seepage rates and the size of the proposed excavation, the expected seepage to a drained basement is modelled to be:

- Short Term Flows for Temporary Dewatering During Construction  
**4.81 ML/year**
- Long Term Flows during Service Life of Structure Following Completion of Construction  
**1.99 ML/year**

Projected seepage inflows for a drained basement are below the WaterNSW threshold for exemption from the requirement of a Water Access License.

#### **4.2.3 Modelled Groundwater Drawdown**

Drawdown water level is within 2 m of preconstruction levels at a distance of less than 7 m from the excavation face on all boundaries. According to the Bureau of Meteorology (BOM) Australian Groundwater Explorer no "Water Supply Works" bores are present within 500 m of the site. The results of the drawdown modelling showed less than 200 mm groundwater drawdown at a maximum distance of 97 m from the excavation.

Groundwater drawdown as been assessed from the Plaxis model. Tabulated results of drawdown calculations for each of the above cases are presented in **Table 2**.

**Table 2 Modelled Groundwater Drawdown**

| Analysis Case           | Up Gradient Drawdown (m)        |      |      |      | Down Gradient Drawdown (m)      |      |      |      | Distance to Minimal Drawdown < (200 mm) |
|-------------------------|---------------------------------|------|------|------|---------------------------------|------|------|------|-----------------------------------------|
|                         | Distance Behind Excavation Face |      |      |      | Distance Behind Excavation Face |      |      |      |                                         |
|                         | 0.5 m                           | 5 m  | 10 m | 20 m | 0.5 m                           | 5 m  | 10 m | 20 m |                                         |
| Section 1<br>Short Term | 2.88                            | 1.80 | 1.16 | 0.17 | 1.61                            | 1.16 | 0.87 | 0.36 | 23.4                                    |
| Section 1<br>Long Term  | 4.14                            | 3.19 | 2.34 | 1.39 | 5.95                            | 2.31 | 1.67 | 0.99 | 76.78                                   |
| Section 2<br>Short Term | 1.25                            | 0.31 | 0.23 | 0.27 | 1.62                            | 1.20 | 0.91 | 0.39 | 57.1                                    |
| Section 2<br>Long Term  | 6.94                            | 4.71 | 3.62 | 1.84 | 5.38                            | 2.23 | 1.67 | 0.99 | 96.17                                   |

Based on the modelling the predicted groundwater drawdown impact on neighbouring properties is negligible.

## 5. NSW Aquifer Interference Policy Impact Assessment

The Water Management Act 2000 includes the concept of ensuring “no more than minimal harm” for the granting of approvals.

For the purposes of this assessment the Groundwater Source is assessed as a “Fracture Rock Water Source.”

The impact assessment has been based on the following three assessment criteria:

- **Water Table -**

Less than or equal to 10% cumulative variation in the water table, allowing for typical climatic “post-water sharing plan” variations, 40m from any:

- a) high priority groundwater dependent ecosystem; or
- b) high priority culturally significant site;

listed in the schedule of the relevant water sharing plan.

A maximum of a 2 m decline cumulatively at any water supply work.

Measured variations in the water table were shown at between 0.47 m and 2.78 m over the monitoring period. Morrow Geotechnics has carried out a search of registered water supply works and none are present within 100 m of the proposed excavation.

Analysis presented within this DMP shows that all drawdown effects of the proposed works are less than 200 mm at less than approximately 97 m away from the excavation, therefore Morrow Geotechnics can confirm that the proposed works will have “minimal impact” on the Water Table.

- **Water Pressure -**



A cumulative pressure head decline of not more than 40% of the “post-water sharing plan” pressure head above the base of the water source to a maximum of a 2m decline, at any water supply work.

Analysis presented within this DMP shows that all drawdown effects of the proposed works are less than 200 mm at less than 97 m away from the excavation, therefore Morrow Geotechnics can confirm that the proposed works will have “minimal impact” on the Water Pressure at registered water supply works.

- **Water Quality -**

Any change in the groundwater quality should not lower the beneficial use category of the groundwater source beyond 40 m from the activity.

Water quality monitoring will be carried out throughout the works as indicated in **Section 7** of this report. The works are not projected to cause any detrimental effect to the water quality beyond 40 m from the activity.

Based on the assessment of the proposed works achieving the requirements of Level 1 minimal impact considerations, Morrow Geotechnics can confirm that the proposed works will do no more than minimal harm to Water Quality.

## 6. Water Discharge Methodology

During the works it is proposed to dewater for excavation below the water table. All water must be detained on site prior to discharge to ensure it meets the ANZG (2018) standards.

The process for assessing that water is safe for discharge to Council stormwater systems is as follows:

1. All seepage water within the proposed excavation must be detained on site for testing prior to discharge to stormwater. The site detention should comprise a sump pit which is a minimum 2 m x 2 m x 1 m deep, maintained at the location shown on **Figure 5** below (one sump pit per basement excavation). This will be excavated as the excavation level is lowered to maintain a sump point within the basement. In the event of a high period of rainfall the existing sump pit can be expanded to accommodate the increased volume of water. The sump is only required where existing stormwater systems are removed.
2. Prior to the discharge of water from the site, sampling of the discharge water must be undertaken by an environmental specialist. **Water quality testing must take place prior to the discharge of any stormwater/groundwater from the site.** The proposed sump pit volume of 4000L will be sufficient to hold the groundwater while awaiting the lab results for a period of up to 2 weeks, the water quality testing will be scheduled for a 24 hour turn around.

Water quality testing is to the published threshold values of the ANZG (2018) guidelines for marine water systems. Where thresholds for analytes are not given in ANZG (2018), ANZECC (2000) and NEPM (2013) guidelines have been used.

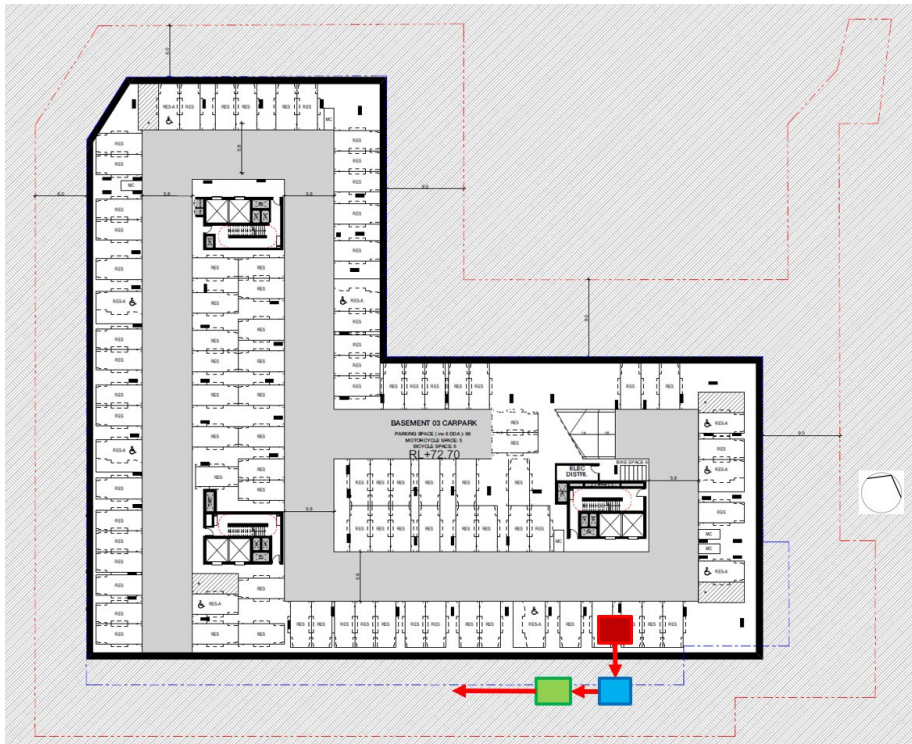
3. If water quality testing returns analyte values within ANZG, ANZECC and NEPM a threshold values then the detained water can be discharged to Council stormwater system in accordance with the following requirements:

- a) The discharge rate will be limited to 10 L/sec per pump to ensure no damage is caused to Council infrastructure. The proposed pumping rate is low in comparison to the capacity of all but the smallest stormwater drains and is highly unlikely to cause overload at any point in the drainage system.
- b) Water quality testing must be undertaken prior to discharge as per the schedule shown in **Table 4** below. No groundwater is to be discharged before the laboratory results are received and interpreted.
  - o If water quality testing exceeds ANZG, ANZECC and NEPM threshold values then water treatment facilities must be set up on site prior to any discharge from site. This can be achieved by either mixing the discharge water with fresh water to dilute the metal concentration. This may require water storage on site in tanks depending on the progression of the excavation works. Alternatively, water treatment facilities such as those shown below must be established on site to treat stormwater/groundwater prior to any discharge from site. The system must be verified to have reduced analyte levels to below relevant thresholds prior to discharge to stormwater. An indicative water treatment option prior to discharge to stormwater is shown in **Figure 6** below.

There are various water treatment solutions available for wastewater management, tailored to remove contaminants efficiently. A qualified contractor can design and implement the appropriate system based on specific needs. Potential treatment options include:

- o **Sediment Tanks:** These tanks offer a simple and effective solution for water with high levels of suspended solids. Internal baffles increase settling time for continuous water flow, improving sediment separation. Chemical dosing units can also be integrated to enhance settling rates, effectively reducing Total Suspended Solids (TSS).
- o **Siltstoppers:** Designed to accelerate the settling process, siltstoppers significantly reduce the time needed to remove sediment from impacted water, lowering TSS levels.
- o **Chemical Dosing Units:** A variety of chemical dosing systems are available to manage pH levels, reduce TSS, and remove heavy metals from wastewater.
- o **Chemically Enhanced Primary Treatment (CEPT):** CEPT systems combine clarification with chemical dosing and control to treat wastewater through a physio-chemical process. These systems manage pH levels, reduce TSS, remove heavy metals and hydrocarbons, and facilitate solids and sludge handling.
- o **Media Filtration:** Media filtration systems are designed to treat contaminants that cannot be removed by physio-chemical methods. These systems adsorb dissolved-phase pollutants and can be used for particle filtration or water polishing (removal of colour and odour). The media type determines the contaminants removed, including heavy metals, hydrocarbons, Total Organic Carbon (TOC), nitrates, and ammonia.
- o **Sludge Thickening Tanks:** These tanks are used to store and separate sludge and slurry by-products, facilitating efficient solids management and handling.

These solutions ensure efficient wastewater treatment, addressing a variety of contaminants and enabling safe discharge or reuse.



**Figure 5:** Construction Dewatering Flowpath

1. RED: Water drains in the site to sump pit in corner of excavation.
2. BLUE: Water pumped to Settlement Tank at Natural Ground Level for management of TSS (if required).
3. GREEN: Water enters CEPT system and dosing unit (if required) for management of pH and dissolved metals.
4. Water discharged to Council stormwater system.



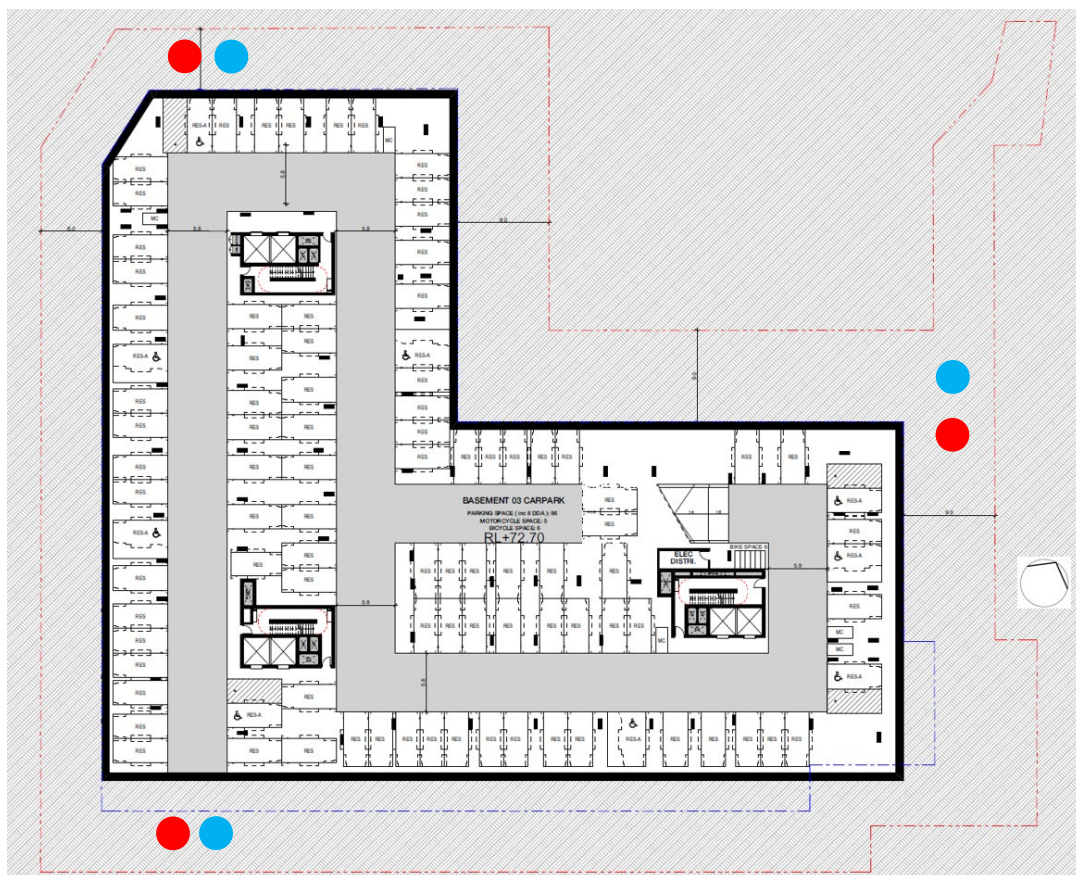
**Figure 6:** Indicative possible treatment system where analyte values exceed Council, ANZG or NEPM threshold values

## 7. Groundwater Monitoring

### 7.1 Water Level Monitoring

During the excavation period the water level must be monitored **daily** within the installed groundwater monitoring wells to ensure that excessive groundwater drawdown does not occur.





**Figure 7:** Groundwater level monitoring locations

- Existing Monitoring Well Location
- Proposed Monitoring Well Location

It is anticipated that the existing wells will be destroyed during excavation. Prior to excavation two additional wells must be installed as replacements.

Groundwater readings are to be taken at a minimum of three monitoring wells during construction. Due to the existing wells likely being damaged during demolition they must be replaced with a “like for like” well. “Like for like” protocols include all aspects of well construction such as well materials, screened zone, plug depth, etc. Installation details of the existing wells can be found in Section 3.1 of the MG 2026-2 Site Hydrogeology Report.

Prior to the commencement of bulk earthworks at least one round of monitoring should be undertaken to establish baseline readings. Pre works measurements should be forwarded to the project stakeholders outlined in **Table 5**. During the works phase readings should be taken daily until works have been completed and no further drawdown is detected.

All groundwater data is to be presented to the project geotechnical and structural engineers along with details of the monitoring visit including:

- date and time of monitoring;
- progress of works at time of monitoring;
- weather conditions during and preceding the monitoring; and
- any further comments relative to the monitoring.



Morrow Geotechnics recommends that drawdown limits are set at 3500 mm below baseline readings. Groundwater modelling showed groundwater variation of up to approximately 2780 mm over the monitoring period. The finite element modelling also showed that the impacts of groundwater drawdown are negligible on neighbouring structures within the geological profile encountered at the site.

The following threshold criteria should be adopted during construction:

- **Alert:** If drawdown levels are less than 70% of the agreed value, works should continue. Monitoring should continue to be carried out at the nominated intervals and monitoring reports forwarded to the relevant stakeholders as outlined in **Table 5**.
- **Alarm:** If drawdown levels are greater than 70% but less than 100% of the agreed value, the geotechnical engineer, structural engineer and client representatives should be notified and the monitoring data reviewed. Ongoing monitoring events should continue undertaken at 24 hour intervals until notified otherwise by nominated engineers in consultation with client and WaterNSW.
- **Action:** If drawdown levels are greater than 100% of the agreed value excavation should cease immediately. The geotechnical engineer, structural engineer, WaterNSW and client representatives should be notified and work should cease until a risk management/contingency plan is implemented to safeguard neighbouring structures. Monitoring should continue daily during this period.

**Table 3 Summary of Monitoring Conditions**

| Criteria              |                                                  |
|-----------------------|--------------------------------------------------|
| Monitoring Points     | Well locations as shown in <b>Figure 7</b> above |
| Agreed Drawdown Limit | 3500 mm                                          |
| Alert Level           | < 2450 mm                                        |
| Alarm Level           | 2450 - 3500 mm                                   |
| Action Level          | > 3500 mm                                        |

## 7.2 Water Inflow Monitoring

Modelling of the site has shown a predicted groundwater inflow rate during construction of **92.50 kL/week**. During the excavation period the pumpout volume must be monitored to ensure that excessive groundwater extraction does not occur.

The following threshold criteria should be adopted during construction:

- **Alert (less than 9.24 kL/day):** If extraction levels are less than 70% of the agreed value, works should continue. Monitoring should continue to be carried out at the nominated intervals and monitoring reports forwarded to the relevant stakeholders as outlined in **Table 5**.
- **Alarm (9.24 to 13.21 kL/day):** If extraction levels are greater than 70% but less than 100% of the agreed value, the geotechnical engineer, structural engineer and client representatives

should be notified and the monitoring data reviewed. Ongoing monitoring events should continue undertaken at 24 hour intervals until notified otherwise by nominated engineers in consultation with client and WaterNSW.

- **Action (greater than 13.21 kL/day):** If extraction levels are greater than 100% of the agreed value excavation should cease immediately. The geotechnical engineer, structural engineer, WaterNSW and client representatives should be notified and work should cease until a risk management/contingency plan is implemented to safeguard neighbouring structures. Monitoring should continue daily during this period.

### 7.3 Water Quality Monitoring

During excavation works water quality samples from the discharged water must be tested according to the frequency outlined in **Table 4** below.

Water samples are to be sent to a NATA accredited laboratory for testing against Council, NHMRC (2010), ANZG (2018), ANZECC (2000) and NEPM (2013) standards. Relevant water quality results are presented in **Table 10** to **Table 14** of the MG2026-2 report.

If analyte values exceed the published threshold values of the Council, NHMRC (2010), ANZG (2018), ANZECC (2000) and NEPM (2013) guidelines for marine water systems then the geotechnical engineer structural engineer, WaterNSW and client representatives should be notified.

Initial water quality testing indicates concentrations of **Aluminium, Cobalt, Copper, Iron, Manganese, Nickel** and **Zinc** exceed the threshold guideline values. **Escherichia Coli** concentrations 18 CFU/100 mL exceeds the criteria (no detection in 100 mL). The **Turbidity** value of 370 NTU exceeds the ANZECC (2000) guideline value (10 NTU).

Baseline conditions at the site must be considered in preparation of a response to exceedances of NHMRC, ANZG, ANZECC and NEPM thresholds.

**Table 4 List of Required Laboratory Tests and Schedule**

| Type                      | Corresponding laboratory analyses                                                                                                                                                                  | Testing requirements                            | Testing Frequency              |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------|
| Physical Parameters       | Alkalinity (bicarbonate, carbonate, hydroxide and total), electrical conductivity (EC), pH, redox potential (Eh), total dissolved solids (TDS), total hardness, temperature, dissolved oxygen (DO) | Mandatory                                       | Daily while discharging water  |
| Other Physical Parameters | Turbidity* (NTU), total suspended solids* (TSS), total organic carbon* (TOC), sodium absorption ratio* (SAR)                                                                                       | Mandatory for discharge to any receiving waters | Weekly while discharging water |
| Major Anions              | Sulfate (SO <sub>4</sub> ), chloride (Cl), carbonates (CO <sub>3</sub> ), bromide (Br), fluoride (F)                                                                                               | Mandatory                                       | Weekly while discharging water |
| Major Cations             | Calcium (Ca), magnesium (Mg), sodium (Na), potassium (K)                                                                                                                                           | Mandatory                                       | Weekly while discharging water |
| Ionic Balance             | Cation/anion balance (as a percentage)                                                                                                                                                             | Mandatory                                       | Weekly while discharging water |

| Type                                            | Corresponding laboratory analyses                                                                                                                                                                                                                                                                                                                                     | Testing requirements                                                                                                                                                                                                               | Testing Frequency              |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Dissolved Inorganics and Dissolved Heavy metals | Aluminium (Al), antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), boron (B), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), iron (Fe), lead (Pb), lithium (Li), manganese (Mn), mercury (Hg), molybdenum (Mo), nickel (Ni), selenium (Se), silica (dissolved SiO <sub>2</sub> ), silver (Ag), strontium (Sr), uranium (U), vanadium (V), zinc (Zn)    | Mandatory for baseline thereafter negotiable, depending on site setting unless otherwise required by another regulatory body                                                                                                       | Weekly while discharging water |
| Nutrients                                       | Ammonia (NH <sub>3</sub> ), nitrate (NO <sub>3</sub> ), total nitrogen (N), oxidised nitrogen (N), total phosphorus (P), reactive phosphorus (P)                                                                                                                                                                                                                      | Mandatory for baseline thereafter negotiable, depending on site setting unless otherwise required by another regulatory body                                                                                                       | As specified by WaterNSW       |
| Microbiological Organisms                       | Faecal coliforms, faecal streptococci, Escherichia coli                                                                                                                                                                                                                                                                                                               | Mandatory for baseline thereafter negotiable, depending on site setting unless otherwise required by another regulatory body                                                                                                       | As specified by WaterNSW       |
| Organics                                        | Benzene toluene ethylbenzene xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), total recoverable hydrocarbons (TRHs)                                                                                                                                                                                                                                            | Mandatory for baseline thereafter negotiable, depending on site contamination status unless otherwise required by another regulatory body                                                                                          | As specified by WaterNSW       |
| Other                                           | Range of analytes relevant to site-specific contaminants of environmental concern—for example:<br>• pesticides (OCPS, OPPs)<br>• polychlorinated biphenyls (PCBs)<br>• semivolatile chlorinated hydrocarbons (SVOCs)<br>• volatile chlorinated hydrocarbons (VOCs)<br>• chlorinated aliphatics<br>• phenols<br>• perfluoroalkyl and polyfluoroalkyl substances (PFAS) | As required by the NSW EPA or accredited site auditor (for properties regulated under the Contaminated Land Management Act 1997), on the advice of a specialist environmental consultant or as required by another regulatory body | As specified by WaterNSW       |

## 7.4 Contingency Measures

Contingency measures are to be determined by the project geotechnical and structural engineers in response to groundwater drawdown behaviour observed during the excavation. Possible contingency measures may include:

- Inspection of ground conditions on neighbouring sites;
- Ceasing excavation during updates to excavation support design;
- Groundwater reinjection;



- Permeation grouting to reduce the permeability of native material.

## 7.5 Reporting and Record Keeping

A record of groundwater taken under exemption is a condition of the Water Supply Works Approval and must be submitted when or before the approval is surrendered. The dewatering completion report must include;

- A record of metered volumes taken must be recorded either weekly or daily.
- A summary of water level measurements taken daily from monitoring bores.
- A record of water quality testing.

## 7.6 Project Stakeholders

**Table 5 Stakeholder Contacts**

| Contact Person                              |                                    | Contact Details                           |
|---------------------------------------------|------------------------------------|-------------------------------------------|
| Hydrogeologist/<br>Geotechnical<br>Engineer | Andrew Butel<br>Morrow Geotechnics | andy@morrowgeo.com.au<br>0427 357 856     |
| WaterNSW                                    |                                    | enquiries@waterNSW.com.au<br>1300 662 077 |

## 8. Management of Ongoing Discharge

Ongoing groundwater seepage has been modelled to be less than 1.99 ML/year for the service life of the structures. The design of the basement OSD and pump out system must allow for this volume of water in addition to stormwater volumes.

There are two other sources of water to the pump-out system which have been identified by the project hydraulic engineer:

1. Rainwater catchment to impermeable areas of the development.
2. Fire sprinkler pump tests.

The total volume of water which will flow into the OSD tank from rain water and fire system testing will dilute the groundwater at a sufficient rate to bring the groundwater exceedances for suspended metals to below ANZG guideline levels.

No further ongoing treatment of groundwater is necessary.

## 9. Conclusions and Recommendations

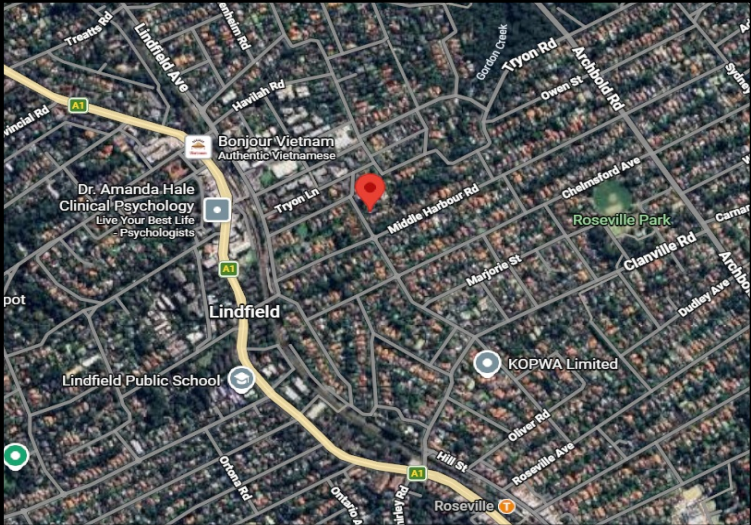
This development will be assessed as a State Significant Development (SSD) under the NSW Government's *Environmental Planning and Assessment Act 1979*. This report, along with the MC 2026-2 Site Hydrogeology Report, will be used as part of the SSD application process. As such, a Water Supply Work Approval is not required under Section 4.41(1)(g) of the *Environmental Planning and Assessment Act 1979*.

## **10. Statement of Limitations**

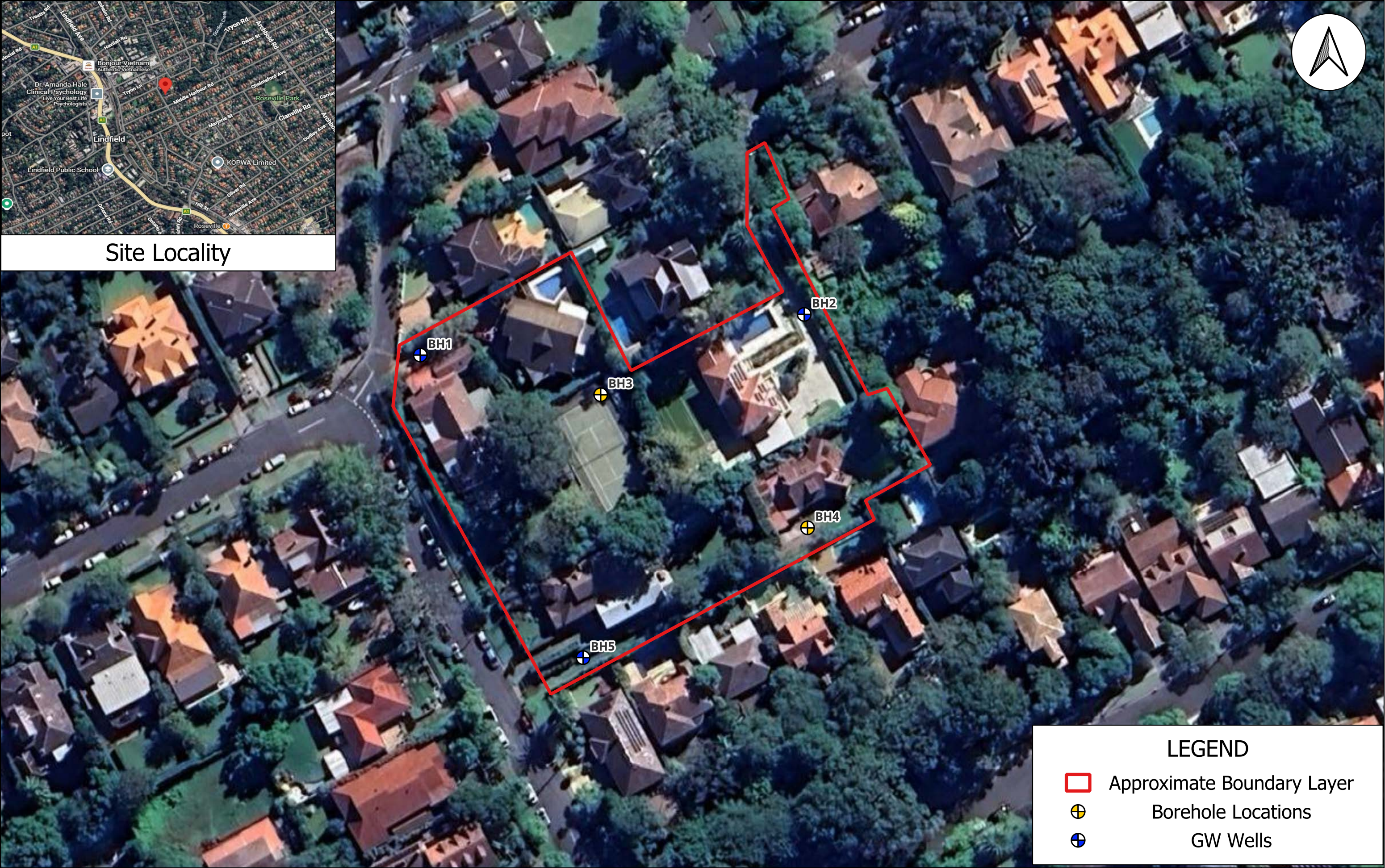
The advice and parameters presented in this Groundwater Management Plan are for assessment of the expected groundwater seepage based upon the proposed development and encountered site conditions at the investigation locations.

We draw your attention to the document "Important Information", which is attached to this letter. The statements presented in this document are intended to advise you of what your realistic expectations of this report should be. The document is not intended to reduce the level of responsibility accepted by Morrow Geotechnics, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in so doing.





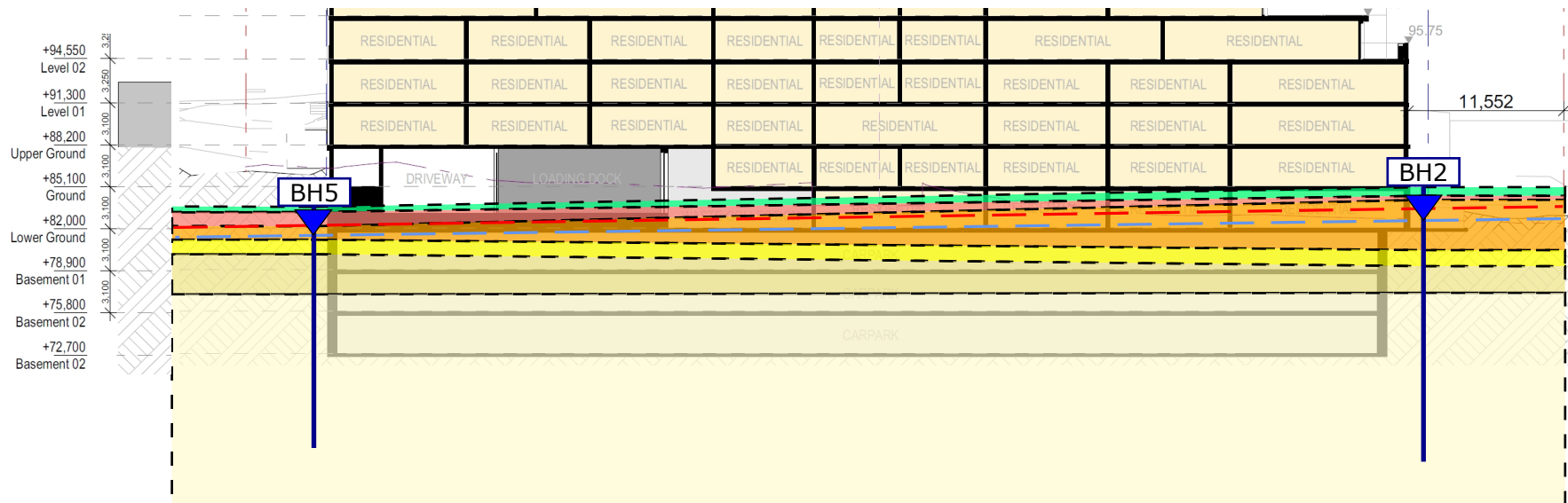
Site Locality



LEGEND

-  Approximate Boundary Layer
-  Borehole Locations
-  GW Wells





- Unit 1 - Fill/Topsoil
- Unit 2 - Residual Clay
- Unit 3 - Class V Sandstone
- Unit 4 - Class IV Sandstone
- Unit 5 - Class III Sandstone
- Unit 6 - Class II Sandstone
- Average Groundwater Level (BH2 - 82.89 mAHD, BH5 - 81.78 mAHD)
- Average Groundwater Level
- Highest Predicted Groundwater Level/Design Groundwater Level (BH2 - 83.80 mAHD, BH5 - 82.50 mAHD)

# morrow

2/5-7 Malta Street, Fairfield East NSW 2165

79/6 Bellambi Lane, Bellambi NSW 2518

P: 02 8599 7579 | E: info@morrowgeo.com.au

Project  
**Geotechnical Investigation**

Project Address  
**59-63 Trafalgar Avenue & 1A/B Valley Road,  
Lindfield NSW**

Drawing Title  
**Section 1**

Client  
**Castle Hill No.8 Pty Ltd**

Project Number  
**P3444**

Figure

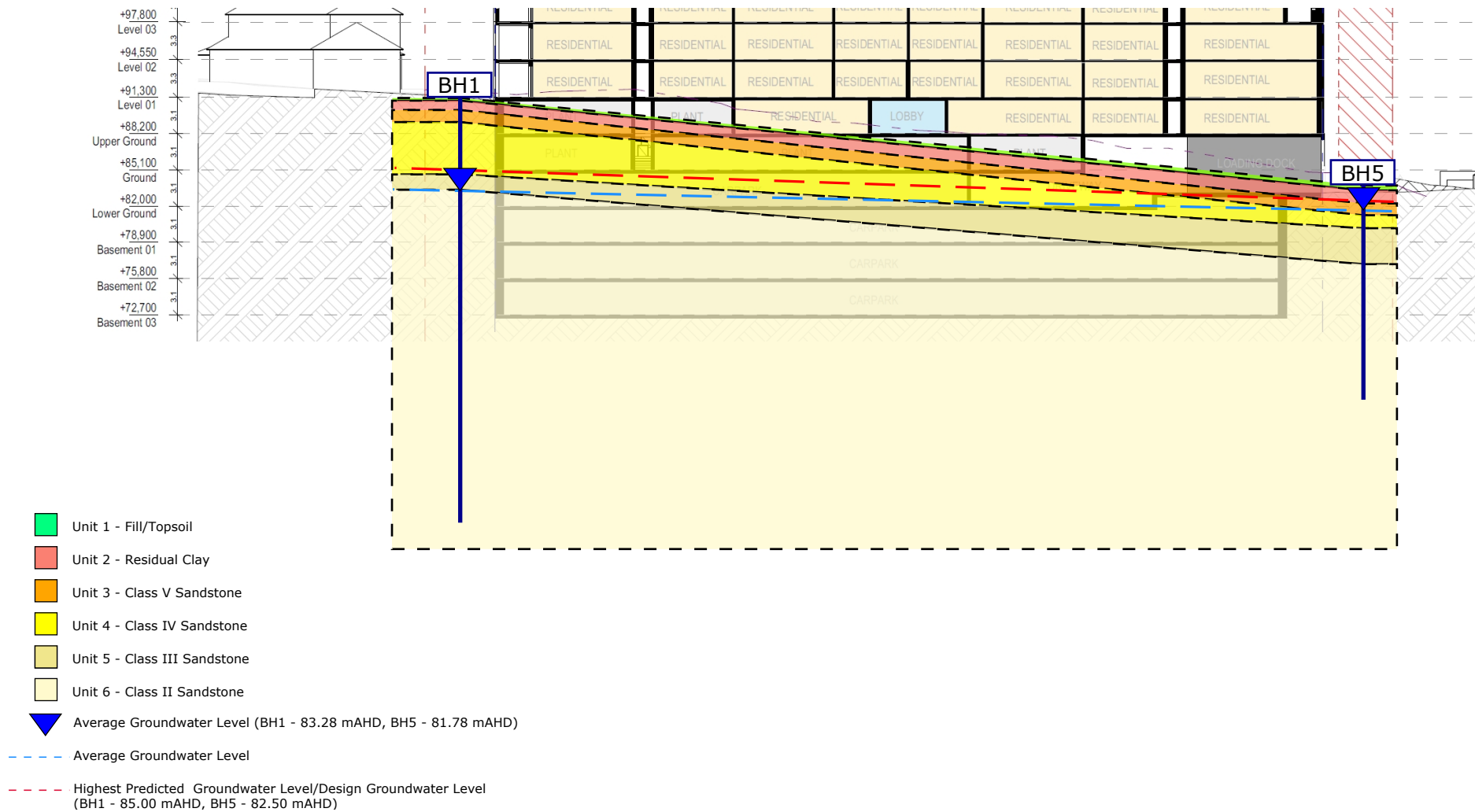
**1**

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Drawn By:  
**AB**

Date:  
**22 April 2026**





# morrow

2/5-7 Malta Street, Fairfield East NSW 2165

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P: 02 8599 7579 | E: info@morrowgeo.com.au

Project  
**Geotechnical Investigation**

Project Address  
**59-63 Trafalgar Avenue & 1A/B Valley Road,  
Lindfield NSW**

Drawing Title  
**Section 2**

Client  
**Castle Hill No.8 Pty Ltd**

Project Number  
**P3444**

Figure

2

Scale:  
**Not To Scale**

Drawn By:  
**AB**

Date:  
**22 April 2026**

**APPENDIX A**

**BOREHOLE LOGS, EXPLANATORY NOTES AND SITE  
PHOTOS**

|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330797,48   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261245,34 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 91.30(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 35.75 m | Date : 26/02/2025                 | Loc Comment : Driveway of 63 Trafalgar Avenue , near the gate.      |

| Drilling Method | Water   | Well Diagram | Testing | Elevation | Graphic Log | Material Type | Classification Code | Material Description                                                                                                                        | Depth (m) | Consistency | Weathering | Moisture |
|-----------------|---------|--------------|---------|-----------|-------------|---------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|------------|----------|
|                 |         |              |         | Depth (m) |             |               |                     |                                                                                                                                             |           |             |            |          |
| ADT             | 2. GWNE |              |         | 91.1      |             | Non-Soil      | PAV                 | Non-Soil - Pavers                                                                                                                           | 0.15      |             |            |          |
|                 |         |              |         | 0.15      |             |               |                     | Residual Silty CLAY stiff to very stiff, medium to high plasticity, pale brown brown pale grey, trace fine to medium sized gravel, w < pl.  |           |             |            |          |
|                 |         |              |         | 90.3      |             | Residual      | CI-CH               |                                                                                                                                             |           | St-VSt      |            | w < PL   |
|                 |         |              |         | 1         |             |               |                     | Extremely weathered Sandstone, Silty CLAY hard, low to medium plasticity, pale grey mottled brown, with ironstone and sandstone bands.      | 1         |             |            |          |
|                 |         |              |         | 89.3      |             | Rock          | SLT                 |                                                                                                                                             |           | H           | XW         |          |
|                 |         |              |         | 2         |             |               |                     | Rock SANDSTONE: highly weathered, very low to low strength, pale brown pale grey mottled red, fine to medium grained, with ironstone bands. | 2         |             |            |          |
|                 |         |              |         |           |             | Rock          | SST                 |                                                                                                                                             | 3         | VLS-LS      | HW         |          |



|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
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| Drilling Method                         | Water | Well Diagram | Testing | Elevation   | Graphic Log | Material Type | Classification Code | Material Description                                                                                                                        | Depth (m) | Consistency | Weathering | Moisture |
|-----------------------------------------|-------|--------------|---------|-------------|-------------|---------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|------------|----------|
|                                         |       |              |         | Depth (m)   |             |               |                     |                                                                                                                                             |           |             |            |          |
| <div> <div></div> <div>ADT</div> </div> |       |              |         |             |             | Rock          | SST                 | Rock SANDSTONE: highly weathered, very low to low strength, pale brown pale grey mottled red, fine to medium grained, with ironstone bands. |           | VLS-LS      | HW         |          |
|                                         |       |              |         | 86.6<br>4.7 |             |               |                     |                                                                                                                                             | 4.7       |             |            |          |
|                                         |       |              |         |             |             |               |                     | Commenced Coring at 4.7m                                                                                                                    |           |             |            |          |

|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
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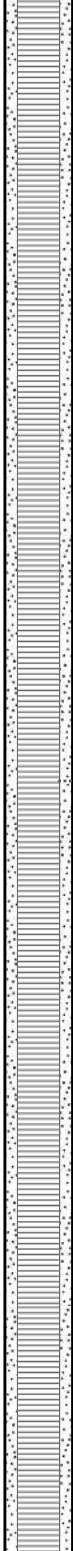
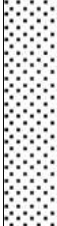
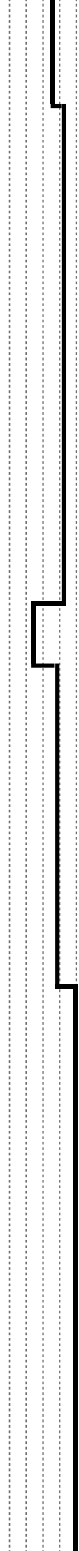
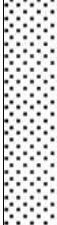
| Drilling Method | Water | Well Diagram | Elevation | Graphic Log | Classification Code | Material Description                                                                                                                 | Depth (m) | Weathering | Testing          | Estimated Strength | RQD% and TCR%              | Defect Spacing (mm) | Defect Description                                                                                                                                                                 |
|-----------------|-------|--------------|-----------|-------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|------------------|--------------------|----------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |       |              | Depth (m) |             |                     |                                                                                                                                      |           |            | Is(50)           |                    |                            |                     |                                                                                                                                                                                    |
|                 |       |              |           |             |                     | Commenced Coring at 4.7m                                                                                                             |           |            |                  |                    |                            |                     |                                                                                                                                                                                    |
|                 |       |              | 86.2      | X           | SST                 | Rock SANDSTONE: highly to moderately weathered, medium strength, red pale grey, fine grained, ..                                     | 5         | HW-MW      | d:0.10 ; a:0.40  |                    | RQD = 27.78%<br>TCR = 100% |                     | 4.73, P, 5°, UN, RO, STN, OP,<br>4.75, P, 10°, UN, RO, STN, C,<br>4.79, P, 5°, IR, RO, CL, OP, (X2),<br>4.87, P, 5°, UN, RO, STN, OP, (X2),<br>4.95, P, 5°, PL, RO, STN, OP, (X2), |
|                 |       |              | 5.06      |             | CRL                 | Coreloss                                                                                                                             | 5.06      |            |                  |                    |                            |                     | 5.05, P, 5°, UN, RO, CL, OP, (X2),<br>5.06-5.24, CORELOSS,                                                                                                                         |
|                 |       |              | 86.1      | X           | SST                 | Rock SANDSTONE: highly to moderately weathered, low strength, pale grey pale brown, fine to medium grained, with ironstone beddings. | 5.24      | HW-MW      |                  |                    |                            |                     | 5.24-5.45, CRF, 5°, IR, RO, STN, OP,                                                                                                                                               |
|                 |       |              | 5.24      |             |                     |                                                                                                                                      |           |            |                  |                    |                            |                     | 5.43-5.52, XWS,                                                                                                                                                                    |
|                 |       |              | 85.8      | X           | SST                 | Rock SANDSTONE: moderately weathered, medium strength, pale grey, fine to medium grained, carbonaceous beddings.                     | 5.53      | MW         | d:0.24 ; a:0.98  |                    | RQD = 63.16%<br>TCR = 100% |                     | 5.61, P, 5°, IR, RO, CL, OP,<br>5.64, P, 5°, IR, RO, CL, OP,                                                                                                                       |
|                 |       |              | 5.53      |             |                     |                                                                                                                                      |           |            |                  |                    |                            |                     | 5.81, XWS, 5mm,<br>5.83-5.84, XWS, 10mm,                                                                                                                                           |
|                 |       |              | 85.5      | X           | SST                 | As above, but pale grey pale brown.                                                                                                  | 5.85      | MW         |                  |                    |                            |                     | 6.03, P, 5°, UN, RO, CL, OP, (X2),                                                                                                                                                 |
|                 |       |              | 5.85      |             |                     |                                                                                                                                      |           |            |                  |                    |                            |                     | 6.2-6.37, CORELOSS,                                                                                                                                                                |
|                 |       |              | 85.1      | X           | CRL                 | Coreloss                                                                                                                             | 6.2       |            |                  |                    |                            |                     | 6.46, P, 5°, UN, RO, CL, OP,                                                                                                                                                       |
|                 |       |              | 6.2       |             |                     |                                                                                                                                      |           |            |                  |                    |                            |                     | 6.61, P, 5°, UN, RO, CL, OP,                                                                                                                                                       |
|                 |       |              | 84.9      | X           | SST                 | Rock SANDSTONE: moderately to slightly weathered, medium to high strength, pale grey, fine to medium grained, ..                     | 6.37      | MW-SW      | d:0.25 ; a:1.36  |                    |                            |                     | 6.81, P, 5°, PL, RO, CL, OP, (X2),                                                                                                                                                 |
|                 |       |              | 6.37      |             |                     |                                                                                                                                      |           |            |                  |                    |                            |                     | 7.02, P, 5°, UN, RO, CL, OP, (X2),                                                                                                                                                 |
|                 |       |              | 84.5      | X           | SST                 | As above, but moderately weathered, low to medium strength, pale grey, with siltstone bands.                                         | 6.8       | MW         | d:0.09 ; a:0.38  |                    |                            |                     | 7.16, P, 5°, PL, RO, CL, OP,                                                                                                                                                       |
|                 |       |              | 6.8       |             |                     |                                                                                                                                      |           |            |                  |                    |                            |                     | 7.25, P, PL, RO, CL, OP, (X2),                                                                                                                                                     |
|                 |       |              | 84.3      | X           | SST                 | Rock SANDSTONE: slightly weathered, high strength, pale grey, fine grained, ..                                                       | 7.2       | SW         | d:0.142 ; a:1.30 |                    | RQD = 94.38%<br>TCR = 100% |                     | 7.43, P, 5°, UN, RO, CL, OP, (2X),                                                                                                                                                 |
|                 |       |              | 7         |             |                     |                                                                                                                                      |           |            |                  |                    |                            |                     | 7.61-7.67, CRF, 5°,<br>7.7, P, 5°, PL, RO, CL, OP,                                                                                                                                 |

|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
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| Total Depth : 35.75 m | Date : 26/02/2025                 | Loc Comment : Driveway of 63 Trafalgar Avenue , near the gate.      |

| Drilling Method | Water                | Well Diagram     | Elevation | Graphic Log | Classification Code | Material Description                                                                                        | Depth (m) | Weathering | Testing         | Estimated Strength                            | RQD% and TCR%              | Defect Spacing (mm) | Defect Description             |
|-----------------|----------------------|------------------|-----------|-------------|---------------------|-------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|-----------------------------------------------|----------------------------|---------------------|--------------------------------|
|                 |                      |                  | Depth (m) |             |                     |                                                                                                             |           |            | Is(50)          |                                               |                            |                     |                                |
| NMLC Coring     | Loss - 0% Water Loss | 50mm PVC Slotted | 83.3      |             | SST                 | Rock SANDSTONE: slightly weathered, high strength, pale grey, fine to medium grained, with siltstone bands. | 8         | SW         |                 | VLS 0.1<br>LS 0.3<br>MS 1.0<br>HS 3<br>EPS 10 | RQD = 94.38%<br>TCR = 100% |                     | 8.27, P, 5°, PL, RO, CL, OP,   |
|                 |                      |                  | 8         |             |                     |                                                                                                             |           |            | d:1.07 ; a:1.68 |                                               |                            |                     |                                |
|                 |                      |                  | 82.3      |             | SST                 | As above, but pale grey.                                                                                    | 9         | SW         |                 |                                               | RQD = 100%<br>TCR = 100%   |                     | 8.61, P, 10°, UN, RO, CL, OP,  |
|                 |                      |                  | 9         |             |                     |                                                                                                             |           |            | d:1.46 ; a:2.17 |                                               |                            |                     |                                |
| NMLC Coring     | Loss - 0% Water Loss | 50mm PVC Slotted |           |             | SST                 |                                                                                                             | 10        | SW         |                 |                                               | RQD = 100%<br>TCR = 100%   |                     | 9.81, P, 5°, UN, RO, CL, OP,   |
|                 |                      |                  |           |             |                     |                                                                                                             |           |            | d:1.69 ; a:2.03 |                                               |                            |                     |                                |
|                 |                      |                  |           |             | SST                 | As above, but moderately weathered, medium to high strength.                                                | 11        | MW         |                 |                                               | RQD = 100%<br>TCR = 100%   |                     | 10.64, P, 30°, PL, RO, CL, OP, |
|                 |                      |                  |           |             |                     |                                                                                                             |           |            | d:0.79 ; a:1.75 |                                               |                            |                     |                                |
| NMLC Coring     | Loss - 0% Water Loss | 50mm PVC Slotted | 80.1      |             | SST                 |                                                                                                             | 11.2      |            |                 |                                               | RQD = 100%<br>TCR = 100%   |                     | 11.64, P, 5°, PL, RO, CL, OP,  |
|                 |                      |                  | 11.2      |             |                     |                                                                                                             |           |            |                 |                                               |                            |                     |                                |



|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
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| Drilling Method | Water                | Well Diagram                                                                       | Elevation | Graphic Log                                                                         | Classification Code | Material Description                                         | Depth (m) | Weathering | Testing         | Estimated Strength                                   | RQD% and TCR%            | Defect Spacing (mm)                                                                  | Defect Description             |
|-----------------|----------------------|------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------|-----------|------------|-----------------|------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------|--------------------------------|
|                 |                      |                                                                                    | Depth (m) |                                                                                     |                     |                                                              |           |            | Is(50)          |                                                      |                          |                                                                                      |                                |
| NMLC Coring     | Loss - 0% Water Loss |  | 78.7      |    | SST                 | As above, but moderately weathered, medium to high strength. | 12.6      | MW         | d:1.44 ; a:1.71 | YLS 0.1<br>LS 0.3<br>MS 1.0<br>HS 3<br>HRS 10<br>EPS | RQD = 100%<br>TCR = 100% |  | 12.27, P, 10°, PL, RO, CL, OP, |
|                 |                      |                                                                                    | 12.6      |                                                                                     | SST                 | As above, but slightly weathered, high strength.             | 13        | SW         | d:1.07 ; a:1.26 |                                                      |                          |                                                                                      |                                |
|                 |                      |                                                                                    | 77.6      |  | SST                 | As above, but fine to coarse grained.                        | 13.7      | SW         | d:1.23 ; a:1.45 |                                                      | RQD = 100%<br>TCR = 100% |                                                                                      |                                |
|                 |                      |                                                                                    | 13.7      |                                                                                     | SST                 |                                                              | 15        | SW         | d:1.47 ; a:1.49 |                                                      | RQD = 100%<br>TCR = 100% |                                                                                      |                                |

|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
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| Drilling Method | Water                | Well Diagram     | Elevation | Graphic Log | Classification Code | Material Description                                                                  | Depth (m) | Weathering | Testing         | Estimated Strength | RQD% and TCR%                | Defect Spacing (mm) | Defect Description |
|-----------------|----------------------|------------------|-----------|-------------|---------------------|---------------------------------------------------------------------------------------|-----------|------------|-----------------|--------------------|------------------------------|---------------------|--------------------|
|                 |                      |                  | Depth (m) |             |                     |                                                                                       |           |            | Is(50)          |                    |                              |                     |                    |
| NMLC Coring     | Loss - 0% Water Loss | 50mm PVC Slotted |           | SST         |                     | As above, but fine to coarse grained.                                                 |           |            |                 |                    |                              |                     |                    |
|                 |                      |                  |           |             |                     |                                                                                       |           |            | d:1.23 ; a:1.31 |                    |                              |                     |                    |
|                 |                      |                  |           |             |                     |                                                                                       | 17        | SW         |                 |                    |                              |                     |                    |
|                 |                      |                  |           |             |                     |                                                                                       |           |            | d:1.36 ; a:1.23 |                    |                              |                     |                    |
|                 |                      |                  |           |             |                     |                                                                                       | 18        |            |                 |                    |                              |                     |                    |
|                 |                      |                  | 72.6      | CRL         |                     |                                                                                       | 18.7      |            |                 |                    |                              |                     |                    |
|                 |                      |                  | 18.7      |             |                     | Coreloss                                                                              |           |            |                 |                    |                              |                     |                    |
|                 |                      |                  | 72.5      |             |                     |                                                                                       | 18.8      |            |                 |                    |                              |                     |                    |
|                 |                      |                  | 18.8      |             |                     | Rock SANDSTONE: slightly weathered, high strength, pale grey, fine to coarse grained. |           |            | d:1.28 ; a:1.09 |                    |                              |                     |                    |
|                 |                      |                  |           |             |                     |                                                                                       | 19        | SW         |                 |                    |                              |                     |                    |
|                 | Loss - 0% Water Loss |                  |           | SST         |                     |                                                                                       |           |            |                 |                    | RQD = 96.67%<br>TCR = 96.67% |                     |                    |
|                 |                      |                  |           |             |                     |                                                                                       |           |            | d:1.18 ; a:1.10 |                    |                              |                     |                    |

|             |              |                  |                       |             |                                                            |
|-------------|--------------|------------------|-----------------------|-------------|------------------------------------------------------------|
| UTM         | : 56S        | Driller Rig      | : GEO205 - Comacchio  | Job Number  | : P3444                                                    |
| Easting     | : 330797.48  | Driller Supplier | : GEOSENSE            | Client      | : Landmark Group Construction Australia Pty Ltd            |
| Northing    | : 6261245.34 | Logged By        | : Ozzie Baskan        | Project     | : Lindfield                                                |
| RL          | : 91.30(m)   | Reviewed By      | : Mahmoud Jangidaryan | Location    | : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth | : 35.75 m    | Date             | : 26/02/2025          | Loc Comment | : Driveway of 63 Trafalgar Avenue , near the gate.         |

| Drilling Method | Water                           | Well Diagram                | Elevation | Graphic Log | Classification Code | Material Description                                                                  | Depth (m)                                 | Weathering | Testing         |  | Estimated Strength                                                                                          | RQD% and TCR%                | Defect Spacing (mm)                                                         | Defect Description                                                                                                                                                                                                                                                                                                  |
|-----------------|---------------------------------|-----------------------------|-----------|-------------|---------------------|---------------------------------------------------------------------------------------|-------------------------------------------|------------|-----------------|--|-------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |                                 |                             | Depth (m) |             |                     |                                                                                       |                                           |            | Is(50)          |  |                                                                                                             |                              |                                                                             |                                                                                                                                                                                                                                                                                                                     |
| NMLC Coring     | <div>Loss - 0% Water Loss</div> | <div>50mm PVC Slotted</div> |           |             | SST                 | Rock SANDSTONE: slightly weathered, high strength, pale grey, fine to coarse grained. | <div>21</div> <div>22</div> <div>23</div> | SW         |                 |  | <div>WLS 0.1</div> <div>LS 0.3</div> <div>MS 0.3</div> <div>HS 1.0</div> <div>WHS 3</div> <div>EHS 10</div> | RQD = 96.67%<br>TCR = 96.67% | <div>30</div> <div>100</div> <div>300</div> <div>1000</div> <div>3000</div> | <div>20.03, J, 30°, PL, RO, CT, OP, (X2),</div> <div>20.35, P, 5°, PL, RO, CT, OP,</div> <div>20.68, P, 5°, PL, RO, CL, OP, (X2),</div> <div>21.62, P, 20°, PL, RO, VN, OP,</div> <div>22.75, J, 70°, UN, RO, CL, OP,</div> <div>23.13, P, 5°, PL, RO, CL, OP, (X2),</div> <div>23.45, P, 5°, PL, RO, CT, OP,</div> |
|                 |                                 |                             |           |             |                     |                                                                                       |                                           |            |                 |  |                                                                                                             |                              |                                                                             |                                                                                                                                                                                                                                                                                                                     |
|                 |                                 |                             |           |             |                     |                                                                                       |                                           |            | d:1.68 ; a:1.03 |  |                                                                                                             |                              |                                                                             |                                                                                                                                                                                                                                                                                                                     |
|                 |                                 |                             |           |             |                     |                                                                                       |                                           |            |                 |  |                                                                                                             |                              |                                                                             |                                                                                                                                                                                                                                                                                                                     |
|                 |                                 |                             |           |             |                     |                                                                                       |                                           |            | d:1.23 ; a:1.28 |  |                                                                                                             |                              |                                                                             |                                                                                                                                                                                                                                                                                                                     |
|                 |                                 |                             |           |             |                     |                                                                                       |                                           |            |                 |  |                                                                                                             |                              |                                                                             |                                                                                                                                                                                                                                                                                                                     |
|                 |                                 |                             |           |             |                     |                                                                                       |                                           |            | d:0.75 ; a:1.53 |  |                                                                                                             |                              |                                                                             |                                                                                                                                                                                                                                                                                                                     |
|                 |                                 |                             |           |             |                     |                                                                                       |                                           |            |                 |  |                                                                                                             |                              |                                                                             |                                                                                                                                                                                                                                                                                                                     |
|                 |                                 |                             |           |             |                     |                                                                                       |                                           |            | d:1.03 ; a:1.09 |  |                                                                                                             |                              |                                                                             |                                                                                                                                                                                                                                                                                                                     |

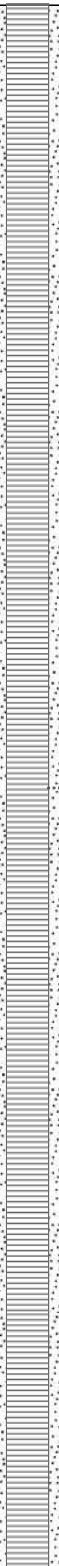
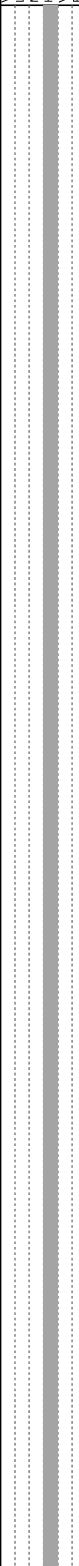
|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330797.48   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261245.34 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 91.30(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 35.75 m | Date : 26/02/2025                 | Loc Comment : Driveway of 63 Trafalgar Avenue , near the gate.      |

| Drilling Method | Water                | Well Diagram     | Elevation    | Graphic Log | Classification Code | Material Description                                                                                                        | Depth (m) | Weathering | Testing         | Estimated Strength | RQD% and TCR%            | Defect Spacing (mm) | Defect Description            |
|-----------------|----------------------|------------------|--------------|-------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|--------------------|--------------------------|---------------------|-------------------------------|
|                 |                      |                  | Depth (m)    |             |                     |                                                                                                                             |           |            | Is(50)          |                    |                          |                     |                               |
| NMLC Coring     | Loss - 0% Water Loss | 50mm PVC Slotted |              | SST         | SST                 | Rock SANDSTONE: slightly weathered, high strength, pale grey, fine to coarse grained.                                       |           | SW         |                 |                    | RQD = 100%<br>TCR = 100% |                     | 24.6, P, 5°, UN, RO, CL, OP,  |
|                 |                      |                  |              |             |                     |                                                                                                                             | 25        |            | d:1.28 ; a:1.50 |                    |                          |                     |                               |
|                 |                      |                  |              |             |                     |                                                                                                                             | 26        |            | d:1.45 ; a:1.30 |                    |                          |                     |                               |
|                 |                      |                  |              |             |                     |                                                                                                                             | 26.6      |            | d:0.72 ; a:1.15 |                    | RQD = 100%<br>TCR = 100% |                     |                               |
|                 |                      |                  | 64.7<br>26.6 |             |                     | Rock SANDSTONE: slightly weathered, high strength, grey mottled dark grey, fine to coarse grained, laminations at 0° to 5°. | 26.6      |            |                 |                    |                          |                     |                               |
|                 |                      |                  |              | SST         | SST                 |                                                                                                                             | 27        | SW         | d:0.71 ; a:1.82 |                    |                          |                     | 27.33, P, 5°, PL, RO, CL, OP, |
|                 |                      |                  |              |             |                     |                                                                                                                             |           |            | d:0.43 ; a:1.32 |                    | RQD = 100%<br>TCR = 100% |                     |                               |
|                 | Loss - 0% Water Loss |                  |              |             |                     |                                                                                                                             |           |            |                 |                    |                          |                     | 27.98, P, 5°, PL, RO, CL, OP, |

Loss



|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330797.48   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261245.34 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 91.30(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 35.75 m | Date : 26/02/2025                 | Loc Comment : Driveway of 63 Trafalgar Avenue , near the gate.      |

| Drilling Method | Water                | Well Diagram                                                                       | Elevation | Graphic Log                                                                        | Classification Code | Material Description                                                                                                 | Depth (m)       | Weathering | Testing         |                                                                                      | Estimated Strength       | RQD% and TCR%                                                                        | Defect Spacing (mm) | Defect Description |
|-----------------|----------------------|------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------|-----------------|------------|-----------------|--------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------|---------------------|--------------------|
|                 |                      |                                                                                    | Depth (m) |                                                                                    |                     |                                                                                                                      |                 |            | Is(50)          |                                                                                      |                          |                                                                                      |                     |                    |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                      |                 |            |                 |                                                                                      |                          |                                                                                      |                     |                    |
| NMLC Coring     | Loss - 0% Water Loss |  | 63.3      |  | SST                 | Rock SANDSTONE: slightly weathered, high strength, grey dark grey, fine to coarse grained, laminations at 5° to 10°. | 28              | SW         |                 |  | RQD = 100%<br>TCR = 100% |  |                     |                    |
|                 |                      |                                                                                    | 28        |                                                                                    |                     |                                                                                                                      | d:0.90 ; a:1.05 |            |                 |                                                                                      |                          |                                                                                      |                     |                    |
|                 |                      |                                                                                    | 62.7      |                                                                                    |                     |                                                                                                                      | 28.64           |            |                 |                                                                                      |                          |                                                                                      |                     |                    |
|                 |                      |                                                                                    | 28.64     |                                                                                    |                     | As above, but pale grey.                                                                                             |                 |            |                 |                                                                                      |                          |                                                                                      |                     |                    |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                      | 29              |            | d:0.72 ; a:1.30 |                                                                                      |                          |                                                                                      |                     |                    |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                      | 30              |            | d:1.19 ; a:1.37 |                                                                                      |                          |                                                                                      |                     |                    |
|                 |                      |                                                                                    |           |                                                                                    | SST                 |                                                                                                                      |                 | SW         |                 |                                                                                      |                          |                                                                                      |                     |                    |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                      | 31              |            | d:1.13 ; a:1.22 |                                                                                      |                          |                                                                                      |                     |                    |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                      |                 |            |                 |                                                                                      | RQD = 100%<br>TCR = 100% |                                                                                      |                     |                    |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                      |                 |            | d:1.90 ; a:2.39 |                                                                                      |                          |                                                                                      |                     |                    |

|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330797.48   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261245.34 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 91.30(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 35.75 m | Date : 26/02/2025                 | Loc Comment : Driveway of 63 Trafalgar Avenue , near the gate.      |

| Drilling Method            | Water                             | Well Diagram                | Elevation     | Graphic Log | Classification Code | Material Description                                                                  | Depth (m) | Weathering | Testing |  | Estimated Strength                                           | RQD% and TCR%              | Defect Spacing (mm)                             | Defect Description                                                                                                                                                                                                                                          |
|----------------------------|-----------------------------------|-----------------------------|---------------|-------------|---------------------|---------------------------------------------------------------------------------------|-----------|------------|---------|--|--------------------------------------------------------------|----------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            |                                   |                             | Depth (m)     |             |                     |                                                                                       |           |            | Is(50)  |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
| <div>↑ NMLC Coring ↓</div> | <div>▲ Loss = 0% Water Loss</div> | <div>50mm PVC Slotted</div> |               | <div></div> | SST                 | As above, but pale grey.                                                              | 33        | SW         |         |  | <div>VS 0.1<br/>LS 0.3<br/>MS 1.0<br/>VHS 3<br/>EHS 10</div> | RQD = 100%<br>TCR = 100%   | <div>30<br/>100<br/>300<br/>1000<br/>3000</div> |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             | 56.6<br>34.65 | <div></div> | SHA                 | Rock SHALE: moderately weathered, medium strength, dark grey, fine grained.           | 34.65     | MW         |         |  | <div></div>                                                  | RQD = 96.84%<br>TCR = 100% | <div>30<br/>100<br/>300<br/>1000<br/>3000</div> | <div>33.34, P, 10°, UN, RO, CL, OP,<br/><br/>34.29-34.32, CRF, 5°,<br/><br/>34.77-34.8, CRF, 5°,<br/>34.91, J, 40°, UN, SO, CL, OP,<br/><br/>35.2, P, 30°, PL, SO, CL, OP,<br/><br/>35.43, P, 10°, PL, RO, CL, OP,<br/>35.49, P, 20°, PL, RO, CL, OP,</div> |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             | 55.9<br>35.43 | <div></div> | SST                 | Rock SANDSTONE: slightly weathered, high strength, pale grey, fine to coarse grained. | 35.43     | SW         |         |  | <div></div>                                                  |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     |                                                                                       |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |
|                            |                                   |                             |               |             |                     | BH1 Reached Target Depth at 35.75m                                                    |           |            |         |  |                                                              |                            |                                                 |                                                                                                                                                                                                                                                             |

# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

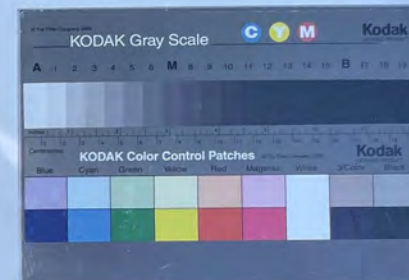
LOGGED BY: Ozzie B.

BOREHOLE ID: BH1

DEPTH: 4.7m to 9.0m

CORE TRAY NO: 1 of 7

DATE: 26/02/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

Box 1 of 7

|              |                                                          |          |              |
|--------------|----------------------------------------------------------|----------|--------------|
| Client       | Landmark Group Construction Australia Pty Ltd            |          |              |
| Location     | 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |          |              |
| Project name | Lindfield                                                |          |              |
| Project No   | P3444                                                    | Scale    | Not to Scale |
| BH No        | BH1                                                      | BH Depth | CorePhoto    |



# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

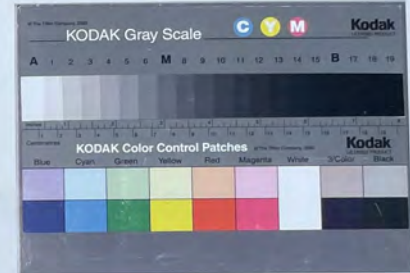
LOGGED BY: Ozzie B.

BOREHOLE ID: BH1

DEPTH: 3.0m to 14.0m

CORE TRAY NO: 2 of 7

DATE: 27/02/2025



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02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

Box 2 of 7

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH1

## BH Depth

CorePhoto



# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

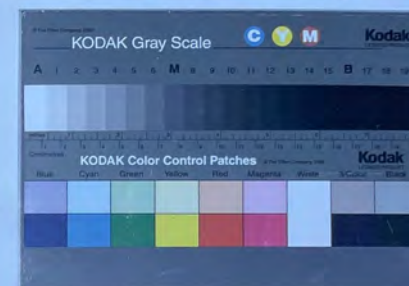
LOGGED BY: Ozzie B.

BOREHOLE ID: BH1

DEPTH: 14.0m to 19.0m

CORE TRAY NO: 3 of 7

DATE: 27/02/2025



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02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

Box 3 of 7

|              |                                                          |          |              |
|--------------|----------------------------------------------------------|----------|--------------|
| Client       | Landmark Group Construction Australia Pty Ltd            |          |              |
| Location     | 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |          |              |
| Project name | Lindfield                                                |          |              |
| Project No   | P3444                                                    | Scale    | Not to Scale |
| BH No        | BH1                                                      | BH Depth | CorePhoto    |

# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

LOGGED BY: Ozzie B.

BOREHOLE ID: BH1

DEPTH: 13m to 24m

CORE TRAY N 4 of 7

DATE: 27/02/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

Box 4 of 7

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH1

## BH Depth

CorePhoto



# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

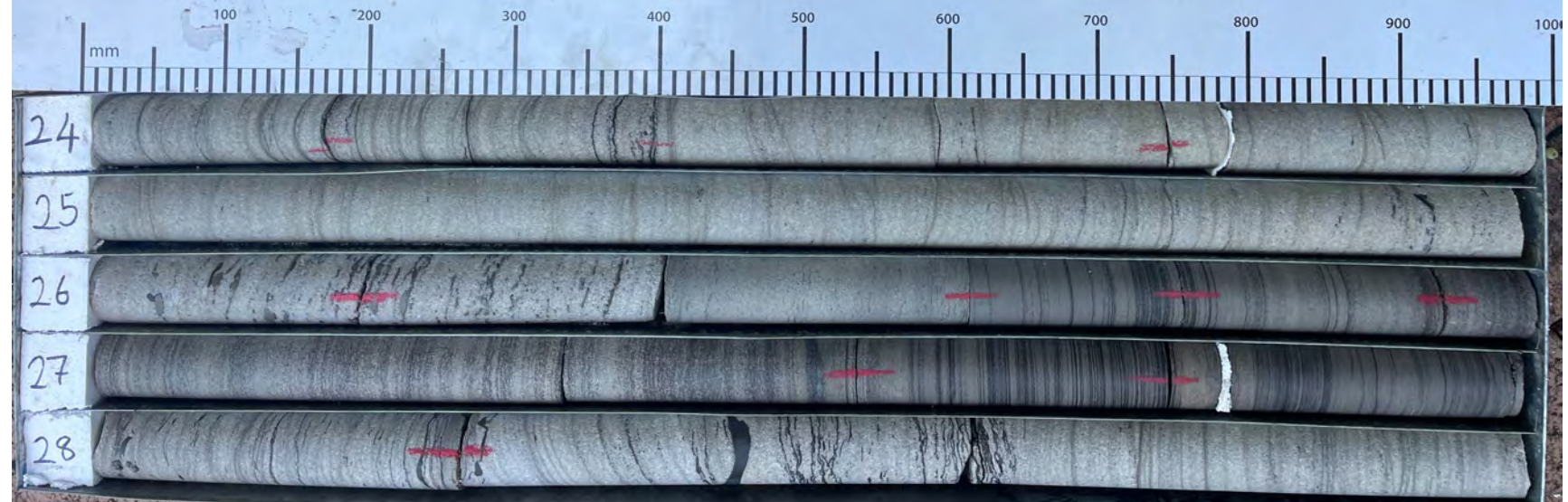
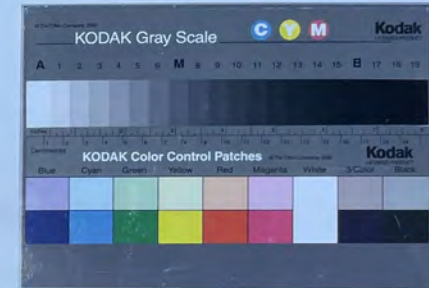
LOGGED BY: Ozzie B.

BOREHOLE ID: BH1

DEPTH: 24m to 29m

CORE TRAY N° 5 of 7

DATE: 27/02/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

Box 5 of 7

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH1

## BH Depth

CorePhoto

# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

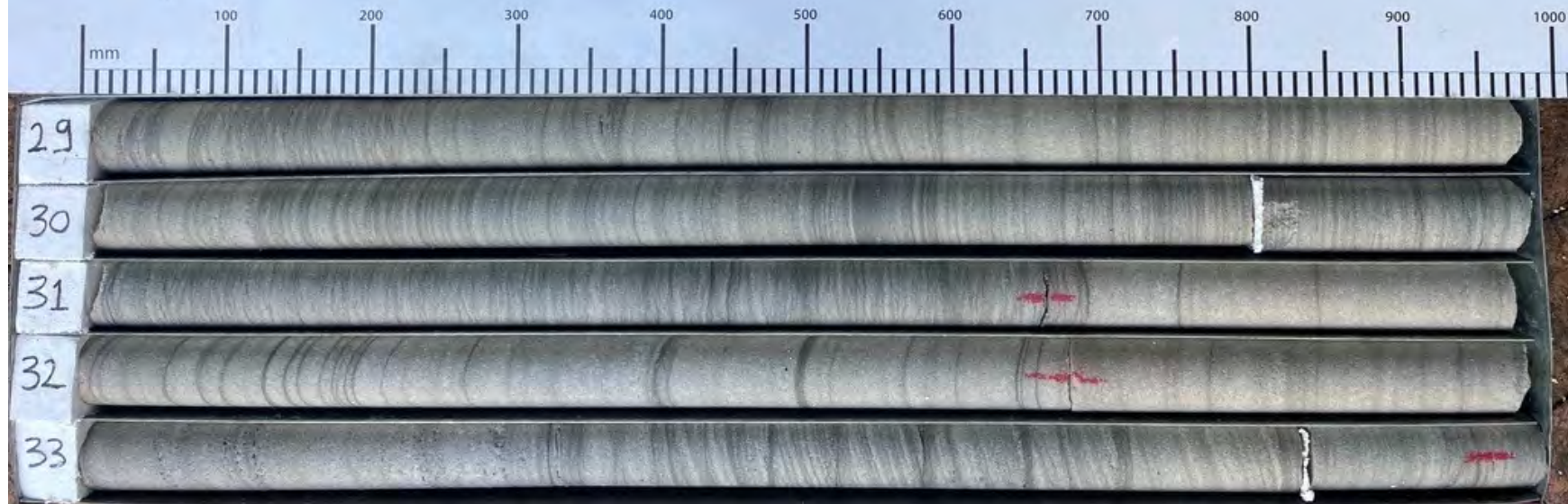
LOGGED BY: Ozzie B.

BOREHOLE ID: BH1

DEPTH: 29m to 34m

CORE TRAY NO: 6 of 7

DATE: 27/02/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

Box 6 of 7

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH1

## BH Depth

CorePhoto



# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

LOGGED BY: Ozzie B.

BOREHOLE ID: BH1

DEPTH: 34m to 35.75m

CORE TRAY N 7 of 7

DATE: 27/02/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

Box 7 of 7

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH1

## BH Depth

CorePhoto

|                       |                                  |                                                                     |
|-----------------------|----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio | Job Number : P3444                                                  |
| Easting : 330881,21   | Driller Supplier : GEOSENSE      | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261255,66 | Logged By : Mahmoud Jangidaryan  | Project : Lindfield                                                 |
| RL : 85,40(m)         | Reviewed By : Ozzie Baskan       | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 20,5 m  | Date : 14/02/2025                | Loc Comment : Driveway of 1A Valley Road, across from the pool.     |

| Drilling Method    | Water   | Well Diagram | Testing         | Elevation | Graphic Log | Material Type | Classification Code | Material Description                                                                                                                                                             | Depth (m) | Consistency | Weathering | Moisture |
|--------------------|---------|--------------|-----------------|-----------|-------------|---------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|------------|----------|
|                    |         |              | SPT             |           |             |               |                     |                                                                                                                                                                                  |           |             |            |          |
| Diatube<br>↑ ADT ↓ | 1, GWNE |              |                 | 85.3      |             | Non-Soil      | CCT                 | Concrete                                                                                                                                                                         | 0.13      |             |            |          |
|                    |         |              |                 | 0.13      |             |               |                     | FILL Gravelly SAND loose, dark grey, fine grained, fine to medium sized gravel, moist.                                                                                           |           | L           |            | M        |
|                    |         |              | 3,3,3 (N=6)     | 84.7      |             | FILL          | SP                  |                                                                                                                                                                                  | 0.7       |             |            |          |
|                    |         |              |                 | 0.7       |             |               |                     | Residual Gravelly to sandy CLAY firm to stiff, medium plasticity, fine sized gravel, inorganic, ironstone gravels.                                                               |           | F-St        |            |          |
|                    |         |              |                 | 84.4      |             | Rock          | SST                 | Extremely weathered Sandstone, Gravelly SAND very dense, pale grey with orange, fine grained, fine to medium sized gravel, trace low plasticity clay, trace low plasticity silt. | 1         | VD-WC       | XW         | D        |
|                    |         |              | 0mm,0/mm (N=23) |           |             |               |                     |                                                                                                                                                                                  |           |             |            |          |
|                    |         |              |                 | 83.7      |             |               |                     | Commenced Coring at 1.75m                                                                                                                                                        | 1.75      |             |            |          |
|                    |         |              |                 | 1.75      |             |               |                     |                                                                                                                                                                                  |           |             |            |          |

|                       |                                  |                                                                     |
|-----------------------|----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio | Job Number : P3444                                                  |
| Easting : 330881.21   | Driller Supplier : GEOSENSE      | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261255.66 | Logged By : Mahmoud Jangidaryan  | Project : Lindfield                                                 |
| RL : 85.40(m)         | Reviewed By : Ozzie Baskan       | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 20.5 m  | Date : 14/02/2025                | Loc Comment : Driveway of 1A Valley Road, across from the pool.     |

| Drilling Method | Water | Well Diagram | Elevation    | Graphic Log | Classification Code | Material Description                                                                                      | Depth (m) | Weathering | Testing | Estimated Strength                                   | RQD% and TCR%             | Defect Spacing (mm)              | Defect Description                                                                                                    |
|-----------------|-------|--------------|--------------|-------------|---------------------|-----------------------------------------------------------------------------------------------------------|-----------|------------|---------|------------------------------------------------------|---------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|                 |       |              | Depth (m)    |             |                     |                                                                                                           |           |            | Is(50)  |                                                      |                           |                                  |                                                                                                                       |
|                 |       | A            |              |             |                     |                                                                                                           |           |            |         | VLS 0.03<br>LS 0.1<br>MS 0.3<br>HS 1<br>FHS 3<br>EHS |                           | 90<br>100<br>300<br>1000<br>3000 |                                                                                                                       |
|                 |       |              |              |             |                     | Commenced Coring at 1.75m                                                                                 | 1         |            |         |                                                      |                           |                                  |                                                                                                                       |
|                 |       |              |              |             |                     | Coreloss                                                                                                  | 2         |            |         |                                                      |                           |                                  | 1.75-2.38, CORELOSS,                                                                                                  |
|                 |       |              |              |             | CRL                 |                                                                                                           |           |            |         |                                                      |                           |                                  |                                                                                                                       |
|                 |       |              | 83.0<br>2.4  |             |                     | Rock SANDSTONE: highly weathered, very low strength, pale grey orange red, fine grained, ironstone bands. | 2.4       |            |         |                                                      | RQD = 0%<br>TCR = 53.33%  |                                  | 2.38-3.1, XWS,                                                                                                        |
|                 |       |              |              |             | SST                 |                                                                                                           | 3         |            |         |                                                      |                           |                                  | 3.13, P, 5°, PL, RO,<br>3.16, P, 5°, PL, RO,<br>3.24, P, 5°, PL, RO,<br>3.42, P, 5°, PL, SO,<br>3.51, P, 25°, PL, SO, |
|                 |       |              | 81.6<br>3.77 |             |                     |                                                                                                           | 3.77      |            |         |                                                      | RQD = 15%<br>TCR = 59.17% |                                  | 3.77-4.45, CORELOSS,                                                                                                  |
|                 |       |              |              |             | CRL                 | Coreloss                                                                                                  |           |            |         |                                                      |                           |                                  |                                                                                                                       |

|                       |                                  |                                                                     |
|-----------------------|----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio | Job Number : P3444                                                  |
| Easting : 330881.21   | Driller Supplier : GEOSENSE      | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261255.66 | Logged By : Mahmoud Jangidaryan  | Project : Lindfield                                                 |
| RL : 85.40(m)         | Reviewed By : Ozzie Baskan       | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 20.5 m  | Date : 14/02/2025                | Loc Comment : Driveway of 1A Valley Road, across from the pool.     |

| Drilling Method | Water                 | Well Diagram     | Elevation | Graphic Log | Classification Code | Material Description                                                                                                                        | Depth (m) | Weathering | Testing         | Estimated Strength                                   | RQD% and TCR%             | Defect Spacing (mm)              | Defect Description                                                                 |
|-----------------|-----------------------|------------------|-----------|-------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|------------------------------------------------------|---------------------------|----------------------------------|------------------------------------------------------------------------------------|
|                 |                       |                  | Depth (m) |             |                     |                                                                                                                                             |           |            | Is(50)          |                                                      |                           |                                  |                                                                                    |
| NMLC Coring     | Loss - 20% Water Loss | 50mm PVC Solid   | 81.0      | CRL         | CRL                 | Coreloss                                                                                                                                    | 4.45      | HW         | d:0.06 ; a:0.04 | VLS 0.03<br>LS 0.1<br>MS 0.3<br>HS 1<br>HRS 3<br>EPS | RQD = 15%<br>TCR = 59.17% | 30<br>100<br>300<br>1000<br>3000 | 4.45-4.8, XWS,                                                                     |
|                 |                       |                  | 4.45      |             |                     |                                                                                                                                             |           |            |                 |                                                      |                           |                                  |                                                                                    |
| NMLC Coring     | Loss - 20% Water Loss | 50mm PVC Slotted | 80.3      | SST         | SST                 | Rock SANDSTONE: highly weathered, very low strength, pale grey orange red, fine grained.                                                    | 5.1       | HW         | d:0.27 ; a:1.12 |                                                      |                           |                                  | 5.05-5.15, J, 80°, PL, RO,                                                         |
|                 |                       |                  | 5.1       |             |                     |                                                                                                                                             |           |            |                 |                                                      |                           |                                  |                                                                                    |
| NMLC Coring     | Loss - 20% Water Loss | 50mm PVC Slotted | 79.4      | SST         | SST                 | Rock SANDSTONE: moderately to slightly weathered, medium strength, pale grey with red, very fine grained.                                   | 6.6       | HW         | d:0.04 ; a:0.47 |                                                      |                           |                                  | 5.28, P, 10°, CV, RO,<br>5.32-5.63, CRF, RO,                                       |
|                 |                       |                  | 6         |             |                     |                                                                                                                                             |           |            |                 |                                                      |                           |                                  |                                                                                    |
| NMLC Coring     | Loss - 20% Water Loss | 50mm PVC Slotted |           | SST         | SST                 | Rock SANDSTONE: moderately to slightly weathered, medium strength, pale grey with grey and brown, very fine grained, carbonaceous beddings. |           | MW-SW      | d:0.64 ; a:1.41 |                                                      | RQD = 74%<br>TCR = 100%   |                                  | 5.86, P, 10°, RO,<br>5.91-5.95, CS,                                                |
|                 |                       |                  |           |             |                     |                                                                                                                                             |           |            |                 |                                                      |                           |                                  |                                                                                    |
| NMLC Coring     | Loss - 20% Water Loss | 50mm PVC Slotted |           | SST         | SST                 |                                                                                                                                             |           |            | d:0.81 ; a:0.93 |                                                      |                           |                                  | 6.15, P, 15°, IR, VR,<br>6.26, P, 20°, PL, RO, CL, ,<br>6.3, P, 20°, PL, RO, CL, , |
|                 |                       |                  |           |             |                     |                                                                                                                                             |           |            |                 |                                                      |                           |                                  |                                                                                    |
| NMLC Coring     | Loss - 20% Water Loss | 50mm PVC Slotted |           | SST         | SST                 |                                                                                                                                             |           |            | d:1.39 ; a:1.09 |                                                      |                           |                                  | 6.66, J, 50°, PL, RO,<br>6.73, J, 50°, PL, RO,<br>6.77, J, 50°, PL, RO,            |
|                 |                       |                  |           |             |                     |                                                                                                                                             |           |            |                 |                                                      |                           |                                  |                                                                                    |
| NMLC Coring     | Loss - 20% Water Loss | 50mm PVC Slotted |           | SST         | SST                 |                                                                                                                                             |           |            |                 |                                                      |                           |                                  | 7.72, P, 20°, IR, RO, CL, ,<br>7.77, P, 5°, PL, RO,                                |
|                 |                       |                  |           |             |                     |                                                                                                                                             |           |            |                 |                                                      |                           |                                  |                                                                                    |
| NMLC Coring     | Loss - 20% Water Loss | 50mm PVC Slotted |           | SST         | SST                 |                                                                                                                                             |           |            |                 |                                                      |                           |                                  | 7.93, P, 5°, PL, RO,                                                               |
|                 |                       |                  |           |             |                     |                                                                                                                                             |           |            |                 |                                                      |                           |                                  |                                                                                    |



|                       |                                  |                                                                     |
|-----------------------|----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio | Job Number : P3444                                                  |
| Easting : 330881.21   | Driller Supplier : GEOSENSE      | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261255.66 | Logged By : Mahmoud Jangidaryan  | Project : Lindfield                                                 |
| RL : 85.40(m)         | Reviewed By : Ozzie Baskan       | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 20.5 m  | Date : 14/02/2025                | Loc Comment : Driveway of 1A Valley Road, across from the pool.     |

| Drilling Method | Water | Well Diagram | Elevation | Graphic Log | Classification Code | Material Description                                                                                                                        | Depth (m) | Weathering | Testing         | Estimated Strength                                       | RQD% and TCR%                                           | Defect Spacing (mm)                                                                                                   | Defect Description |
|-----------------|-------|--------------|-----------|-------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|----------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------|
|                 |       |              | Depth (m) |             |                     |                                                                                                                                             |           |            | Is(50)          |                                                          |                                                         |                                                                                                                       |                    |
|                 |       |              |           |             | SST                 | Rock SANDSTONE: moderately to slightly weathered, medium strength, pale grey with grey and brown, very fine grained, carbonaceous beddings. |           | MW-SW      |                 | VLS 0.03<br>LS 0.1<br>MS 0.3<br>HS 0.3<br>EPS 1<br>EPS 3 | RQD = 74%<br>TCR = 100%<br><br>RQD = 100%<br>TCR = 100% |                                                                                                                       |                    |
|                 |       |              | 76.4<br>9 |             |                     | Rock SANDSTONE: fresh weathered, high strength, pale grey grey, fine grained, with carbonaceous beddings..                                  | 9.9       |            | d:0.60 ; a:0.85 |                                                          |                                                         |                                                                                                                       |                    |
|                 |       |              |           |             | SST                 |                                                                                                                                             | 10        | F          | d:1.26 ; a:1.47 |                                                          |                                                         | 9.53, P, 10°, PL, RO,<br><br>9.76, P, 10°, PL, RO,<br><br>9.89, P, 10°, PL, RO,<br><br><br><br>11.07, P, 10°, PL, RO, |                    |
|                 |       |              |           |             |                     |                                                                                                                                             |           |            |                 |                                                          |                                                         |                                                                                                                       |                    |
|                 |       |              |           |             |                     |                                                                                                                                             |           |            | d:1.12 ; a:0.90 |                                                          |                                                         |                                                                                                                       |                    |
|                 |       |              |           |             |                     |                                                                                                                                             |           |            |                 |                                                          |                                                         |                                                                                                                       |                    |
|                 |       |              |           |             |                     |                                                                                                                                             | 11        |            | d:1.10 ; a:1.04 |                                                          |                                                         |                                                                                                                       |                    |
|                 |       |              |           |             |                     |                                                                                                                                             |           |            |                 |                                                          | RQD = 100%<br>TCR = 100%                                |                                                                                                                       |                    |

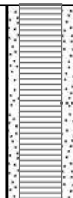
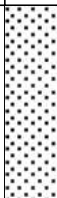
|                       |                                  |                                                                     |
|-----------------------|----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio | Job Number : P3444                                                  |
| Easting : 330881.21   | Driller Supplier : GEOSENSE      | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261255.66 | Logged By : Mahmoud Jangidaryan  | Project : Lindfield                                                 |
| RL : 85.40(m)         | Reviewed By : Ozzie Baskan       | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 20.5 m  | Date : 14/02/2025                | Loc Comment : Driveway of 1A Valley Road, across from the pool.     |

| Drilling Method | Water                 | Well Diagram     | Elevation | Graphic Log | Classification Code | Material Description                                                                                       | Depth (m) | Weathering | Testing         | Estimated Strength                                       | RQD% and TCR%            | Defect Spacing (mm) | Defect Description                                                                                |
|-----------------|-----------------------|------------------|-----------|-------------|---------------------|------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|----------------------------------------------------------|--------------------------|---------------------|---------------------------------------------------------------------------------------------------|
|                 |                       |                  | Depth (m) |             |                     |                                                                                                            |           |            | Is(50)          |                                                          |                          |                     |                                                                                                   |
| NMLC Coring     | Loss - 10% Water Loss | 50mm PVC Slotted |           |             | SST                 | Rock SANDSTONE: fresh weathered, high strength, pale grey grey, fine grained, with carbonaceous beddings.. | 13        | F          | d:0.92; a:1.60  | VLS 0.03<br>LS 0.1<br>MS 0.1<br>HS 0.3<br>EPS 1<br>EPS 3 | RQD = 100%<br>TCR = 100% |                     | 12.63, P, 20°, PL, RO,                                                                            |
|                 |                       |                  |           |             |                     |                                                                                                            |           |            | d:1.47 ; a:1.50 |                                                          |                          |                     |                                                                                                   |
|                 |                       |                  |           |             |                     |                                                                                                            | 14        |            | d:1.99 ; a:1.72 |                                                          |                          |                     |                                                                                                   |
|                 |                       |                  |           |             |                     |                                                                                                            |           |            | d:1.54 ; a:1.80 |                                                          |                          |                     |                                                                                                   |
|                 |                       |                  |           |             |                     |                                                                                                            | 15        |            | d:1.93 ; a:2.38 |                                                          |                          |                     | 15.62, P, 10°, UN, RO,<br>15.67, P, 5°, PL, RO,<br>15.71, P, 5°, PL, RO,<br>15.81, P, 5°, PL, RO, |
|                 |                       |                  |           |             |                     |                                                                                                            |           |            |                 |                                                          |                          |                     |                                                                                                   |

|                       |                                  |                                                                     |
|-----------------------|----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio | Job Number : P3444                                                  |
| Easting : 330881.21   | Driller Supplier : GEOSENSE      | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261255.66 | Logged By : Mahmoud Jangidaryan  | Project : Lindfield                                                 |
| RL : 85.40(m)         | Reviewed By : Ozzie Baskan       | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 20.5 m  | Date : 14/02/2025                | Loc Comment : Driveway of 1A Valley Road, across from the pool.     |

| Drilling Method | Water                 | Well Diagram     | Elevation<br>Depth (m) | Graphic Log | Classification Code | Material Description                                                                                       | Depth (m) | Weathering | Testing         |                                                          | Estimated Strength | RQD% and TCR% | Defect Spacing (mm) | Defect Description                              |
|-----------------|-----------------------|------------------|------------------------|-------------|---------------------|------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|----------------------------------------------------------|--------------------|---------------|---------------------|-------------------------------------------------|
|                 |                       |                  |                        |             |                     |                                                                                                            |           |            | Is(50)          |                                                          |                    |               |                     |                                                 |
| NMLC Coring     | Loss - 10% Water Loss | 50mm PVC Slotted |                        |             | SST                 | Rock SANDSTONE: fresh weathered, high strength, pale grey grey, fine grained, with carbonaceous beddings.. | 17        | F          | d:2.10 ; a:2.36 | VLS 0.03<br>LS 0.1<br>MS 0.3<br>HS 0.3<br>EPS 1<br>EPS 3 |                    |               |                     | 16.9, J, 30°, PL, RO,                           |
|                 |                       |                  |                        |             |                     |                                                                                                            |           |            | d:1.88 ; a:1.61 |                                                          |                    |               |                     |                                                 |
|                 |                       |                  |                        |             |                     |                                                                                                            | 18        |            | d:2.13 ; a:1.78 |                                                          |                    |               |                     | 17.9, P, PL, VR,                                |
|                 |                       |                  |                        |             |                     |                                                                                                            |           |            | d:1.61 ; a:1.35 |                                                          |                    |               |                     |                                                 |
|                 |                       |                  |                        |             |                     |                                                                                                            | 19        |            |                 |                                                          |                    |               |                     | 18.52, P, 5°, PL, VR,<br>18.61, P, 10°, PL, VR, |
|                 |                       |                  |                        |             |                     |                                                                                                            |           |            |                 |                                                          |                    |               |                     |                                                 |

|             |              |                  |                       |             |                                                            |
|-------------|--------------|------------------|-----------------------|-------------|------------------------------------------------------------|
| UTM         | : 56S        | Driller Rig      | : GEO205 - Comacchio  | Job Number  | : P3444                                                    |
| Easting     | : 330881,21  | Driller Supplier | : GEOSENSE            | Client      | : Landmark Group Construction Australia Pty Ltd            |
| Northing    | : 6261255,66 | Logged By        | : Mahmoud Jangidaryan | Project     | : Lindfield                                                |
| RL          | : 85.40(m)   | Reviewed By      | : Ozzie Baskan        | Location    | : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth | : 20.5 m     | Date             | : 14/02/2025          | Loc Comment | : Driveway of 1A Valley Road, across from the pool.        |

| Drilling Method | Water | Well Diagram                                                                      | Elevation | Graphic Log                                                                       | Classification Code | Material Description                                                                                       | Depth (m) | Weathering | Testing |                 | Estimated Strength                                                                           | RQD% and TCR% | Defect Spacing (mm)                                                                 | Defect Description                                  |
|-----------------|-------|-----------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------|-----------|------------|---------|-----------------|----------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|-----------------------------------------------------|
|                 |       |                                                                                   | Depth (m) |                                                                                   |                     |                                                                                                            |           |            | Is(50)  |                 |                                                                                              |               |                                                                                     |                                                     |
| NMLC Coring     |       |  |           |  | SST                 | Rock SANDSTONE: fresh weathered, high strength, pale grey grey, fine grained, with carbonaceous beddings.. |           | F          |         | d:1.34 ; a:1.71 | <div><div>WLS</div><div>LS</div><div>MS</div><div>HS</div><div>WHS</div><div>EHs</div></div> |               |  | 20.17, P, 10°, UN, VR,<br><br>20.42, P, 5°, PL, RO, |
|                 |       |                                                                                   |           |                                                                                   |                     | BH2 Reached Target Depth at 20.5m                                                                          |           |            |         |                 |                                                                                              |               |                                                                                     |                                                     |



morrow

CLIENT NAME: Landmark Group

PROJECT: Lindfield

LOCATION: 1A Valley Road

JOB NUMBER: P3444

LOGGED BY: MJ

BOREHOLE ID: BH2

DEPTH: 1.75 to 6.0 m

CORE TRAY NO: Box 1 of 4

DATE: 14,2,2025



morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

#### Photo description

Box 1 of 4

#### Client

Landmark Group Construction Australia Pty Ltd

#### Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

#### Project name

Lindfield

#### Project No

P3444

#### Scale

Not to Scale

#### BH No

BH2

#### BH Depth

CorePhoto

# morrow

CLIENT NAME: Landmark Group

PROJECT: Lindfield

LOCATION: 1A Valley Road

JOB NUMBER: P3444

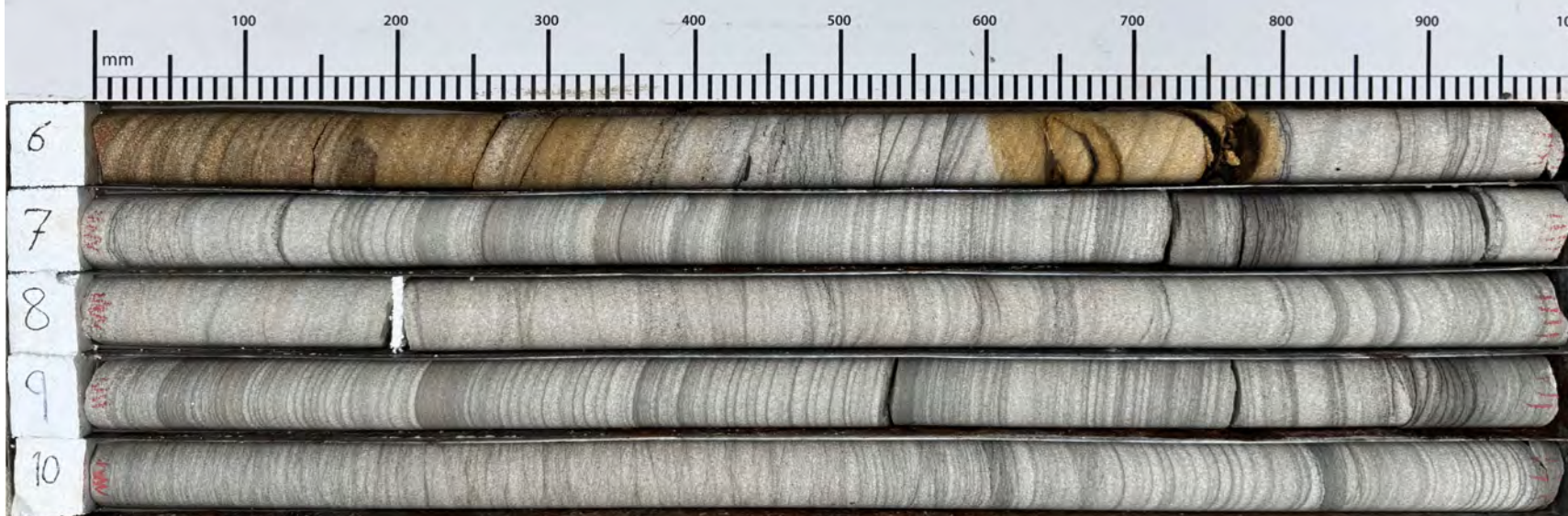
LOGGED BY: MJ

BOREHOLE ID: BH2

DEPTH: 6.0 to 11.0 m

CORE TRAY NO: Box 2 of 4

DATE: 14, 2, 2025



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02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



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## Photo description

Box 2 of 4

|              |                                                          |          |              |
|--------------|----------------------------------------------------------|----------|--------------|
| Client       | Landmark Group Construction Australia Pty Ltd            |          |              |
| Location     | 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |          |              |
| Project name | Lindfield                                                |          |              |
| Project No   | P3444                                                    | Scale    | Not to Scale |
| BH No        | BH2                                                      | BH Depth | CorePhoto    |



# morrow

CLIENT NAME: Landmark Group

PROJECT: Lindfield

LOCATION: 1A Valley Road

JOB NUMBER: P3444

LOGGED BY: MJ

BOREHOLE ID: BH2

DEPTH: 11.0 to 16.0 m

CORE TRAY NO: Box 3 of 4

DATE: 14,2,2025



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02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

Box 3 of 4

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH2

## BH Depth

CorePhoto



**morrow**



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

#### Photo description

Box 4 of 4

#### Client

Landmark Group Construction Australia Pty Ltd

#### Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

#### Project name

Lindfield

#### Project No

P3444

#### Scale

Not to Scale

#### BH No

BH2

#### BH Depth

CorePhoto



|                       |                                 |                                                                                |
|-----------------------|---------------------------------|--------------------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : Man Portable      | Job Number : P3444                                                             |
| Easting : 330840,02   | Driller Supplier : TIGHT Site   | Client : Landmark Group Construction Australia Pty Ltd                         |
| Northing : 6261235,97 | Logged By : Mahmoud Jangidaryan | Project : Lindfield                                                            |
| RL : 87.50(m)         | Reviewed By : Ozzie Baskan      | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW            |
| Total Depth : 20.4 m  | Date : 11/02/2025               | Loc Comment : North-eastern corner of the tennis court at 63 Trafalgar Avenue. |

| Drilling Method           | Water | Testing | Elevation<br>Depth (m) | Material Type | Graphic Log | Classification Code | Material Description                                                                                                                                                            | Depth (m)   | Consistency | Weathering | Moisture |
|---------------------------|-------|---------|------------------------|---------------|-------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|------------|----------|
| tube<br>↑ Hand Auger<br>↓ |       |         | 87.4<br>0.08           | Non-Soil      |             | CCT                 | Concrete                                                                                                                                                                        | 0.08        |             |            |          |
|                           |       |         | 87.2<br>0.3            | FILL          |             | CL                  | FILL Gravelly to sandy CLAY low plasticity, stiff, orange pale grey, fine to medium sized gravel, fine grained sand, trace low plasticity silt, inorganic, w < pl.              | 0.3         | St          |            | w < PL   |
|                           |       |         | 87.0<br>0.45           | Residual      |             | CH                  | Residual Silty CLAY stiff to very stiff, high plasticity, pale grey with red, inorganic, trace of ironstone gravels.                                                            | 0.45        | St-VSt      |            |          |
|                           |       |         | 86.9<br>0.6            | Rock          |             | SST                 | Extremely weathered Sandstone, Gravelly SAND very dense, pale grey orange red, fine to medium grained, fine sized gravel, trace low plasticity clay, trace low plasticity silt. | 0.50<br>0.6 | VD-PC-MC    | XW         | M        |
|                           |       |         |                        |               |             |                     | Commenced Coring at 0.6m                                                                                                                                                        |             |             |            |          |

|                       |                                 |                                                                                |
|-----------------------|---------------------------------|--------------------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : Man Portable      | Job Number : P3444                                                             |
| Easting : 330840.02   | Driller Supplier : TIGHT Site   | Client : Landmark Group Construction Australia Pty Ltd                         |
| Northing : 6261235.97 | Logged By : Mahmoud Jangidaryan | Project : Lindfield                                                            |
| RL : 87.50(m)         | Reviewed By : Ozzie Baskan      | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW            |
| Total Depth : 20.4 m  | Date : 11/02/2025               | Loc Comment : North-eastern corner of the tennis court at 63 Trafalgar Avenue. |

| Drilling Method | Water         | Depth (m) | Elevation (m) | Graphic Log | Classification Code | Material Description                                                                                                                                      | Depth (m) | Weathering | Testing         | Estimated Strength                                  | RQD% and TCR%                | Defect Spacing (mm)              | Defect Description<br>type, inclination, planarity, roughness, coating, thickness                                                                                                                           |
|-----------------|---------------|-----------|---------------|-------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|-----------------------------------------------------|------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |               |           |               |             |                     |                                                                                                                                                           |           |            | Is(50)          |                                                     |                              |                                  |                                                                                                                                                                                                             |
|                 |               |           | 88            |             |                     |                                                                                                                                                           |           |            |                 | MS 0.1<br>LS 0.3<br>MS 1.0<br>HS 3<br>VHS 10<br>EHS |                              | 30<br>100<br>300<br>1000<br>3000 |                                                                                                                                                                                                             |
|                 |               | 0.50      | 87            |             |                     | Commenced Coring at 0.6m                                                                                                                                  | 0.50      |            |                 |                                                     |                              |                                  |                                                                                                                                                                                                             |
| NVLC Coring     | No Water Loss | 1         |               |             | SST                 | Rock SANDSTONE: highly weathered, very low strength, pale grey dark grey pale brown, very fine grained, with siltstone laminations and iron staining.     | 1         | HW         | d:1.67 ; a:1.93 |                                                     | RQD = 0%<br>TCR = 100%       |                                  | 0.6-0.85, CRF,                                                                                                                                                                                              |
|                 |               | 1.50      | 86            |             |                     |                                                                                                                                                           | 1.50      |            | d:0.02 ; a:0.85 |                                                     |                              |                                  | 0.98, P, 10°, PL, RO, CL, ,<br>1-1.02, J, 85°, PL, RO, ,<br>1.06-1.09, XWS,                                                                                                                                 |
|                 |               | 2         |               |             |                     |                                                                                                                                                           | 2         |            |                 |                                                     |                              |                                  | 1.19, P, 5°, PL, RO, ,                                                                                                                                                                                      |
|                 |               | 2.50      | 85            |             |                     |                                                                                                                                                           | 2.50      |            |                 |                                                     |                              |                                  | 1.52, P, 5°, PL, RO, ,                                                                                                                                                                                      |
|                 |               | 3         |               |             |                     |                                                                                                                                                           | 3         |            |                 |                                                     |                              |                                  | 1.87, P, 20°, PL, RO, ,<br>1.9, P, 10°, PL, RO, ,                                                                                                                                                           |
|                 |               | 3.50      | 84            |             |                     |                                                                                                                                                           | 3.50      |            |                 |                                                     | RQD = 33.75%<br>TCR = 99.38% |                                  | 2.04, P, 10°, PL, RO, CL, ,<br>2.15, P, 10°, PL, RO, CL, ,<br>2.24, P, 5°, PL, RO, CL, ,<br>2.26, P, 5°, PL, RO, CL, ,<br>2.3, P, 5°, PL, RO, CL, ,<br>2.35-2.36, CORELOSS, ,<br>2.42, P, 5°, PL, SO, CL, , |
|                 |               |           |               |             | CRL<br>SST          | Coreloss<br>Rock SANDSTONE: highly weathered, medium strength, pale grey dark grey pale brown, fine grained, with siltstone lamination and iron staining. | 2.36      |            | d:0.56 ; a:0.81 |                                                     |                              |                                  | 2.64, P, 5°, PL, RO, CL, , (X2),                                                                                                                                                                            |
|                 |               |           |               |             |                     |                                                                                                                                                           |           |            | d:0.26 ; a:0.43 |                                                     |                              |                                  | 2.9, P, 10°, PL, RO, CL, ,                                                                                                                                                                                  |
|                 |               |           |               |             |                     |                                                                                                                                                           |           |            |                 |                                                     |                              |                                  | 3.26, P, 10°, PL, RO, CL, ,<br>3.32, P, 10°, PL, RO, ,<br>3.36-3.45, J, 60°, PL, RO, ,                                                                                                                      |
|                 |               |           |               |             |                     |                                                                                                                                                           |           |            |                 |                                                     |                              |                                  | 3.48, P, 5°, PL, RO, ,<br>3.56, P, 5°, PL, RO, ,                                                                                                                                                            |
|                 |               |           |               |             |                     |                                                                                                                                                           |           |            |                 |                                                     | RQD = 0%<br>TCR = 88.73%     |                                  | 3.65, P, 10°, PL, RO, (X2),<br>3.72, P, 10°, PL, RO, ,                                                                                                                                                      |
|                 |               |           |               |             |                     |                                                                                                                                                           |           |            |                 |                                                     |                              |                                  | 3.82, P, 10°, PL, RO, (X2),<br>3.92, P, 10°, PL, RO, (X2),                                                                                                                                                  |

|                       |                                 |                                                                                |
|-----------------------|---------------------------------|--------------------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : Man Portable      | Job Number : P3444                                                             |
| Easting : 330840.02   | Driller Supplier : TIGHT Site   | Client : Landmark Group Construction Australia Pty Ltd                         |
| Northing : 6261235.97 | Logged By : Mahmoud Jangidaryan | Project : Lindfield                                                            |
| RL : 87.50(m)         | Reviewed By : Ozzie Baskan      | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW            |
| Total Depth : 20.4 m  | Date : 11/02/2025               | Loc Comment : North-eastern corner of the tennis court at 63 Trafalgar Avenue. |

| Drilling Method | Water         | Depth (m) | Elevation (m) | Graphic Log | Classification Code | Material Description                                                                                                                          | Depth (m) | Weathering | Testing         |                    | RQD% and TCR%              | Defect Spacing (mm) | Defect Description<br><small>type, inclination, planarity, roughness, coating, thickness</small> |
|-----------------|---------------|-----------|---------------|-------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|--------------------|----------------------------|---------------------|--------------------------------------------------------------------------------------------------|
|                 |               |           |               |             |                     |                                                                                                                                               |           |            | Is(50)          | Estimated Strength |                            |                     |                                                                                                  |
| NMLC Coring     | No Water Loss |           | 84            |             | SST                 | Rock SANDSTONE: highly weathered, medium strength, pale grey dark grey pale brown, fine grained, with siltstone lamination and iron staining. | 4.31      | HW         |                 |                    | RQD = 0%<br>TCR = 88.73%   |                     | 4.07-4.17, J, 75°, PL, RO, STN, OP,                                                              |
|                 |               |           |               |             | CRL                 | Coreloss                                                                                                                                      | 4.39      |            |                 |                    |                            |                     | 4.19, P, 10°, PL, RO,                                                                            |
|                 |               | 4.50      | 83            |             | SST                 | Rock SANDSTONE: highly weathered, high strength, pale grey dark grey pale brown, fine grained, with siltstone lamination and iron staining.   | 4.50      | HW         | d:0.78 ; a:1.12 |                    | RQD = 98.74%<br>TCR = 100% |                     | 4.25-4.3, CS,                                                                                    |
|                 |               |           |               |             |                     |                                                                                                                                               | 4.7       |            |                 |                    |                            |                     | 4.31-4.39, CORELOSS,                                                                             |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 4.41, P, 10°, PL, RO, CL, ,                                                                      |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 4.57, P, 10°, PL, RO,                                                                            |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 4.63-4.67, J, 40°, PL, RO, (X2),                                                                 |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 4.73-4.79, J, 40°, PL, RO,                                                                       |
|                 |               | 5         |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 4.9, P, 10°, PL, RO, CL, OP,                                                                     |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 5.18, P, 10°, PL, RO, CL, OP,                                                                    |
|                 |               | 5.50      | 82            |             |                     |                                                                                                                                               | 5.50      |            | d:0.72 ; a:1.04 |                    | RQD = 77.22%<br>TCR = 100% |                     | 5.58, P, 10°, UN, VR, CL, OP,                                                                    |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 5.92, P, 5°, PL, RO, CL, OP,                                                                     |
|                 |               | 6         |               |             |                     |                                                                                                                                               | 6         |            |                 |                    |                            |                     | 6.02, P, 5°, CV, RO, CL, OP,                                                                     |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 6.1, P, 15°, PL, RO, CL, OP,                                                                     |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    | RQD = 71.95%<br>TCR = 100% |                     | 6.14, P, 15°, PL, RO, CL, OP,                                                                    |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 6.19, P, 20°, IR, VR, CL, OP,                                                                    |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 6.27, 10°, CV, RO, CL, OP,                                                                       |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 6.33, P, 20°, PL, RO, CL, OP,                                                                    |
|                 |               | 6.50      | 81            |             |                     |                                                                                                                                               | 6.50      |            | d:1.23 ; a:1.50 |                    | RQD = 71.95%<br>TCR = 100% |                     | 6.34, P, 20°, PL, RO, CL, OP,                                                                    |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 7.04, P, PL, SO, CL, OP,                                                                         |
|                 |               | 7         |               |             |                     |                                                                                                                                               | 7         |            |                 |                    |                            |                     | 7.23, P, PL, SO, CL, OP,                                                                         |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 7.44, P, UN, RO, CL, OP,                                                                         |
|                 |               | 7.50      | 80            |             |                     |                                                                                                                                               | 7.50      |            | d:1.30 ; a:1.70 |                    | RQD = 71.95%<br>TCR = 100% |                     | 7.69, P, 5°, PL, RO,                                                                             |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 7.78, P, 5°, PL, RO,                                                                             |
|                 |               |           |               |             |                     |                                                                                                                                               |           |            |                 |                    |                            |                     | 7.83, P, 5°, PL, RO,                                                                             |

|                       |                                 |                                                                                |
|-----------------------|---------------------------------|--------------------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : Man Portable      | Job Number : P3444                                                             |
| Easting : 330840.02   | Driller Supplier : TIGHT Site   | Client : Landmark Group Construction Australia Pty Ltd                         |
| Northing : 6261235.97 | Logged By : Mahmoud Jangidaryan | Project : Lindfield                                                            |
| RL : 87.50(m)         | Reviewed By : Ozzie Baskan      | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW            |
| Total Depth : 20.4 m  | Date : 11/02/2025               | Loc Comment : North-eastern corner of the tennis court at 63 Trafalgar Avenue. |

| Drilling Method | Water         | Depth (m) | Elevation (m) | Graphic Log | Classification Code | Material Description                                                                          | Depth (m)       | Weathering | Testing                    | Estimated Strength                                                                | RQD% and TCR%                                                                                                         | Defect Spacing (mm) | Defect Description<br><small>type, inclination, planarity, roughness, coating, thickness</small> |
|-----------------|---------------|-----------|---------------|-------------|---------------------|-----------------------------------------------------------------------------------------------|-----------------|------------|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------|
|                 |               |           |               |             |                     |                                                                                               |                 |            | Is(50)                     |                                                                                   |                                                                                                                       |                     |                                                                                                  |
| NMLC Coring     | No Water Loss |           | 80            |             | SST                 | Rock SANDSTONE: moderately weathered, high strength, pale grey with pale brown, fine grained. |                 | MW         |                            | VLS 0.1<br>LS 0.3<br>MS 1.0<br>HS 3<br>VHS 10<br>EHS                              |                                                                                                                       |                     |                                                                                                  |
|                 |               | 8.50      | 79            |             |                     | 8.3                                                                                           | d:0.32 ; a:0.83 |            | RQD = 71.95%<br>TCR = 100% |                                                                                   | 8.19, P, 5°, PL, RO,<br>8.31, P, 10°, PL, VR,<br>8.36, P, 10°, PL, VR,<br>8.5, P, 2°, PL, SO,<br>8.66-8.73, CORELOSS, |                     |                                                                                                  |
|                 |               | 9         |               |             | 9                   |                                                                                               |                 |            |                            | 9, P, 20°, PL, RO, CL, OP,<br>9.02-9.06, J, 40°, PL, RO,<br>9.06, P, 10°, PL, RO, |                                                                                                                       |                     |                                                                                                  |
|                 |               | 9.50      | 78            |             |                     | 9.50                                                                                          | d:1.16 ; a:1.32 |            |                            |                                                                                   |                                                                                                                       |                     |                                                                                                  |
|                 |               | 10        |               |             | 10                  | SW-F                                                                                          |                 |            | RQD = 100% TCR = 100%      |                                                                                   |                                                                                                                       |                     |                                                                                                  |
|                 |               | 10.50     | 77            |             |                     | 10.50                                                                                         | d:0.89 ; a:0.86 |            |                            | 10.4, P, 5°, PL, RO, CL, OP,                                                      |                                                                                                                       |                     |                                                                                                  |
|                 |               | 11        |               |             | 11                  |                                                                                               |                 |            |                            | 11.24, J, 45°, PL, RO, CL, OP,<br>11.27, P, 30°, PL, RO, CL, OP,                  |                                                                                                                       |                     |                                                                                                  |
|                 |               | 11.50     | 76            |             |                     | 11.50                                                                                         | d:1.34 ; a:1.43 |            | ROD = 96.86%<br>TCR = 100% | 11.51, P, 3°, PL, SO, CL, OP,                                                     |                                                                                                                       |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                               |                 |            |                            |                                                                                   |                                                                                                                       |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                               |                 |            |                            |                                                                                   |                                                                                                                       |                     |                                                                                                  |



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| UTM : 56S             | Driller Rig : Man Portable      | Job Number : P3444                                                             |
| Easting : 330840.02   | Driller Supplier : TIGHT Site   | Client : Landmark Group Construction Australia Pty Ltd                         |
| Northing : 6261235.97 | Logged By : Mahmoud Jangidaryan | Project : Lindfield                                                            |
| RL : 87.50(m)         | Reviewed By : Ozzie Baskan      | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW            |
| Total Depth : 20.4 m  | Date : 11/02/2025               | Loc Comment : North-eastern corner of the tennis court at 63 Trafalgar Avenue. |

| Drilling Method | Water         | Depth (m) | Elevation (m) | Graphic Log | Classification Code | Material Description                                                                                                        | Depth (m) | Weathering | Testing           |                    | RQD% and TCR%              | Defect Spacing (mm) | Defect Description<br><small>type, inclination, planarity, roughness, coating, thickness</small> |
|-----------------|---------------|-----------|---------------|-------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------|------------|-------------------|--------------------|----------------------------|---------------------|--------------------------------------------------------------------------------------------------|
|                 |               |           |               |             |                     |                                                                                                                             |           |            | Is(50)            | Estimated Strength |                            |                     |                                                                                                  |
|                 | No Water Loss |           | 76            |             | SST                 | Rock SANDSTONE: slightly to fresh weathered, medium to high strength, pale grey, fine grained, with carbonaceous beddings.. |           |            |                   |                    | RQD = 96.86%<br>TCR = 100% |                     |                                                                                                  |
|                 |               | 12.50     | 75            |             |                     |                                                                                                                             | 12.50     | SW-F       | d:0.97 ; a:0.82   |                    |                            |                     |                                                                                                  |
|                 |               | 13        |               |             |                     |                                                                                                                             | 13        |            |                   |                    |                            |                     |                                                                                                  |
|                 |               | 13.50     | 74            |             |                     |                                                                                                                             | 13.50     |            | d:0.63 ; a:0.94   |                    |                            |                     |                                                                                                  |
|                 |               | 14        |               |             |                     |                                                                                                                             | 14        |            |                   |                    |                            |                     |                                                                                                  |
|                 |               | 14.50     | 73            |             |                     | Rock SANDSTONE: fresh weathered, high strength, pale grey, fine grained, with carbonaceous beddings.                        | 14.50     |            | d:0.78 ; a:0.1.05 |                    |                            |                     |                                                                                                  |
|                 |               | 15        |               |             |                     |                                                                                                                             | 15        | F          |                   |                    |                            |                     |                                                                                                  |
|                 |               | 15.50     | 72            |             |                     |                                                                                                                             | 15.50     |            | d:0.57 ; a:1.68   |                    |                            |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                                                             |           |            |                   |                    |                            |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                                                             |           |            |                   |                    |                            |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                                                             |           |            |                   |                    |                            |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                                                             |           |            |                   |                    |                            |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                                                             |           |            |                   |                    |                            |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                                                             |           |            |                   |                    |                            |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                                                             |           |            |                   |                    |                            |                     |                                                                                                  |

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|-----------------------|---------------------------------|--------------------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : Man Portable      | Job Number : P3444                                                             |
| Easting : 330840.02   | Driller Supplier : TIGHT Site   | Client : Landmark Group Construction Australia Pty Ltd                         |
| Northing : 6261235.97 | Logged By : Mahmoud Jangidaryan | Project : Lindfield                                                            |
| RL : 87.50(m)         | Reviewed By : Ozzie Baskan      | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW            |
| Total Depth : 20.4 m  | Date : 11/02/2025               | Loc Comment : North-eastern corner of the tennis court at 63 Trafalgar Avenue. |

| Drilling Method | Water         | Depth (m) | Elevation (m) | Graphic Log | Classification Code | Material Description                                                                                 | Depth (m) | Weathering | Testing         |                                                                                                | RQD% and TCR%         | Defect Spacing (mm) | Defect Description<br><small>type, inclination, planarity, roughness, coating, thickness</small> |
|-----------------|---------------|-----------|---------------|-------------|---------------------|------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|------------------------------------------------------------------------------------------------|-----------------------|---------------------|--------------------------------------------------------------------------------------------------|
|                 |               |           |               |             |                     |                                                                                                      |           |            | Is(50)          | Estimated Strength<br><small>MLS 0.1<br/>LS 0.3<br/>MS 1.0<br/>HS 3<br/>VHS 10<br/>EHS</small> |                       |                     |                                                                                                  |
|                 | No Water Loss |           | 72            |             | SST                 | Rock SANDSTONE: fresh weathered, high strength, pale grey, fine grained, with carbonaceous beddings. |           | F          |                 |                                                                                                | RQD = 100% TCR = 100% |                     | 16.13, P, PL, VR, CL, OP,                                                                        |
|                 |               | 16.50     | 71            |             |                     |                                                                                                      | 16.50     |            | d:1.39 ; a:2.12 |                                                                                                |                       |                     | 16.8, P, 5°, PL, RO, CL, OP,                                                                     |
|                 |               | 17        |               |             |                     |                                                                                                      | 17        |            |                 |                                                                                                |                       |                     | 17.08, P, 5°, PL, VR, CL, OP,                                                                    |
|                 |               | 17.50     | 70            |             |                     |                                                                                                      | 17.50     |            | d:0.84 ; a:1.22 |                                                                                                |                       |                     | 17.19, P, 20°, PL, RO, CL, OP,                                                                   |
|                 |               | 18        |               |             |                     |                                                                                                      | 18        |            |                 |                                                                                                |                       |                     | 17.98, P, 30°, PL, VR, CL, OP,                                                                   |
|                 |               | 18.50     | 69            |             |                     |                                                                                                      | 18.50     |            | d:1.68 ; a:1.64 |                                                                                                |                       |                     | 18.38, P, PL, RO, CL, OP,                                                                        |
|                 |               | 19        |               |             |                     |                                                                                                      | 19        |            |                 |                                                                                                |                       |                     | 18.91, P, 10°, PL, RO, CL, OP,                                                                   |
|                 |               | 19.50     | 68            |             |                     |                                                                                                      | 19.50     |            | d:1.56 ; a:2.21 |                                                                                                |                       |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                                      |           |            |                 |                                                                                                |                       |                     |                                                                                                  |
|                 |               |           |               |             |                     |                                                                                                      |           |            |                 |                                                                                                |                       |                     |                                                                                                  |

|                       |                                 |                                                                                |
|-----------------------|---------------------------------|--------------------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : Man Portable      | Job Number : P3444                                                             |
| Easting : 330840.02   | Driller Supplier : TIGHT Site   | Client : Landmark Group Construction Australia Pty Ltd                         |
| Northing : 6261235.97 | Logged By : Mahmoud Jangidaryan | Project : Lindfield                                                            |
| RL : 87.50(m)         | Reviewed By : Ozzie Baskan      | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW            |
| Total Depth : 20.4 m  | Date : 11/02/2025               | Loc Comment : North-eastern corner of the tennis court at 63 Trafalgar Avenue. |

| Drilling Method    | Water | Depth (m) | Elevation (m) | Graphic Log                                                                       | Classification Code | Material Description                                                                                 | Depth (m) | Weathering      | Testing |                                                                                                | RQD% and TCR%         | Defect Spacing (mm)                                                                 | Defect Description<br><small>type, inclination, planarity, roughness, coating, thickness</small> |
|--------------------|-------|-----------|---------------|-----------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------|-----------|-----------------|---------|------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|                    |       |           |               |                                                                                   |                     |                                                                                                      |           |                 | Is(50)  | Estimated Strength<br><small>MLS 0.1<br/>LS 0.3<br/>MS 1.0<br/>HS 3<br/>VHS 10<br/>EHS</small> |                       |                                                                                     |                                                                                                  |
| ↑ NMLC Coring<br>↓ |       |           | 68            |  | SST                 | Rock SANDSTONE: fresh weathered, high strength, pale grey, fine grained, with carbonaceous beddings. |           | F               |         |                                                                                                | RQD = 100% TCR = 100% |  |                                                                                                  |
|                    |       |           |               |                                                                                   |                     |                                                                                                      |           | d:2.27 ; a:0.88 |         |                                                                                                |                       |                                                                                     |                                                                                                  |
|                    |       |           |               |                                                                                   |                     | BH3 Reached Target Depth at 20.4m                                                                    |           |                 |         |                                                                                                |                       |                                                                                     |                                                                                                  |

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CLIENT NAME: Landmark Group

PROJECT: Lindfield

LOCATION: 63 Trafalgar Ave

JOB NUMBER: P3444

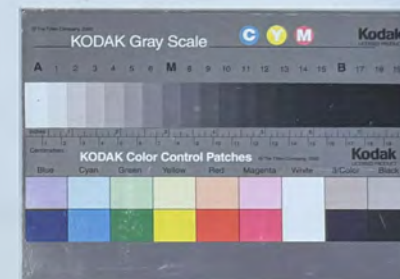
LOGGED BY: MS

BOREHOLE ID: BH3

DEPTH: 0.6 to 5.0m

CORE TRAY NO: Box 1 of 4

DATE: 11, 2, 25



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02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

BH3 - Box 1 of 4

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH3

## BH Depth

CorePhoto



# morrow

CLIENT NAME: Landmark Group

PROJECT: Lindfield

LOCATION: 63 Trafalgar Ave

JOB NUMBER: P3444

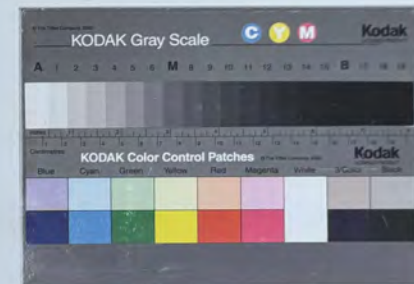
LOGGED BY: MJ

BOREHOLE ID: BH3

DEPTH: 5.0 to 10.0m

CORE TRAY N: Box 2 of 4

DATE: 11, 2, 25



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Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

BH3 - Box 2 of 4

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH3

## BH Depth

CorePhoto

# morrow

CLIENT NAME: Landmark Group

PROJECT: Lindfield

LOCATION: 63 Trafalgar Ave

JOB NUMBER: P3444

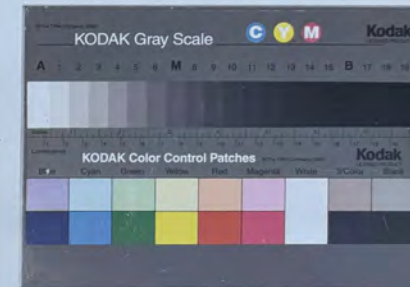
LOGGED BY: MS

BOREHOLE ID: BH3

DEPTH: 10.0 to 15.0m

CORE TRAY N: Box 3 of 4

DATE: 11, 2, 25



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Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



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## Photo description

BH3 - Box 3 of 4

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

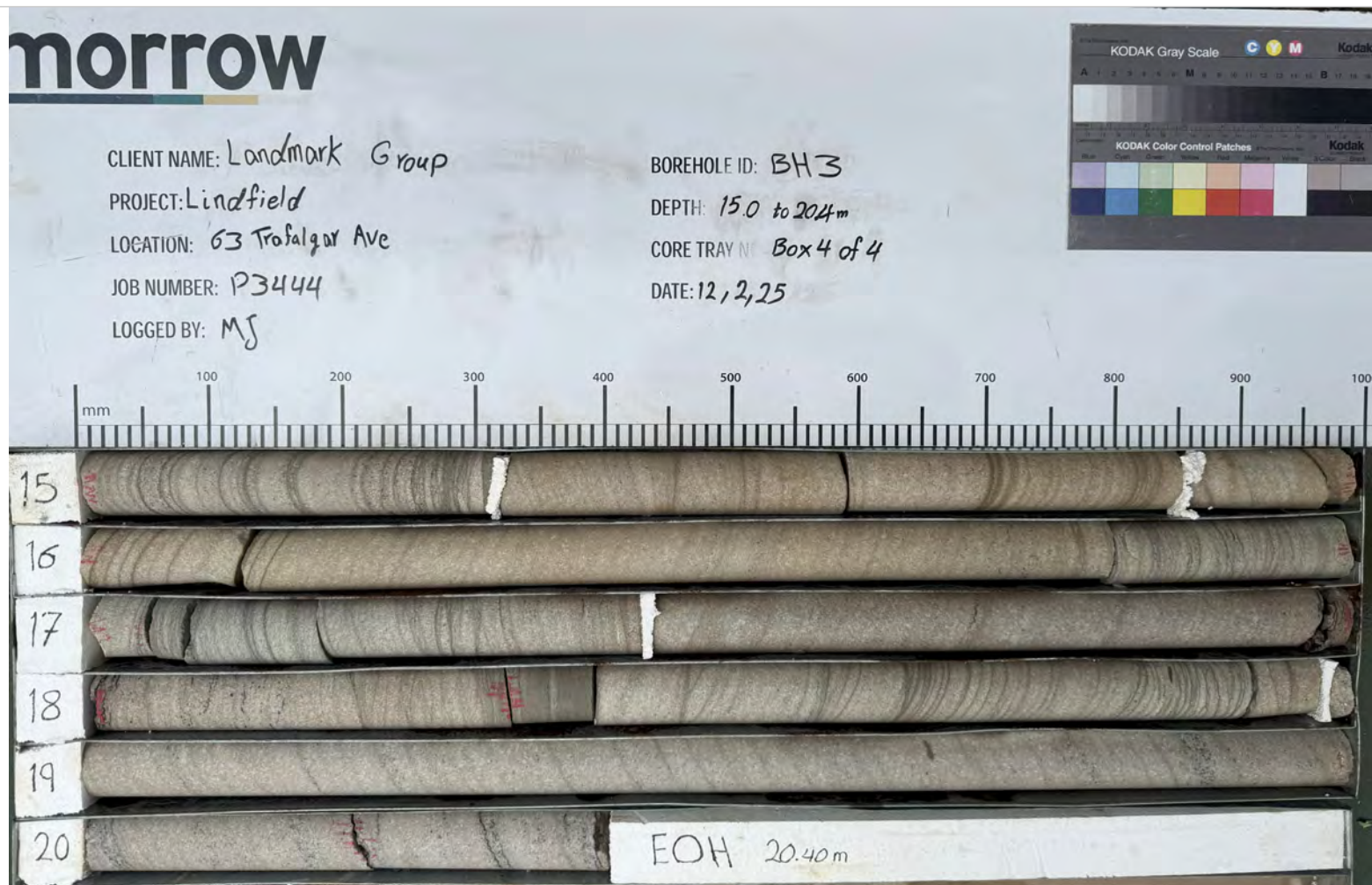
## BH No

BH3

## BH Depth

CorePhoto





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02 8599 7579



Sydney Gadigal Land  
 2/5-7 Malta Street, Fairfield  
 East NSW 2155



info@morrowgeo.com.au

#### Photo description

BH3 - Box 4 of 4

#### Client

Landmark Group Construction Australia Pty Ltd

#### Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

#### Project name

Lindfield

#### Project No

P3444

#### Scale

Not to Scale

#### BH No

BH3

#### BH Depth

CorePhoto

|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330887,16   | Driller Supplier : GEONSENSE      | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261205,27 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 81.70(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 18 m    | Date : 03/03/2025                 | Loc Comment : End of the driveway of 1B Valley Road.                |

| Drilling Method | Water   | Testing        | Depth (m) | Elevation (m) | Material Type | Graphic Log | Classification Code | Material Description                                                                                                                   | Elevation    | Consistency/Density | Moisture |
|-----------------|---------|----------------|-----------|---------------|---------------|-------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------|----------|
|                 |         | SPT            |           |               |               |             |                     |                                                                                                                                        | Depth (m)    |                     |          |
|                 | 2. GWNE |                |           | 82            | TOPSOIL       |             | SM                  | Topsoil Silty SAND very loose to loose, dark grey, fine grained, dry.                                                                  |              | VL-L                | D        |
|                 |         |                |           |               | FILL          |             | CL                  | FILL Silty CLAY low plasticity, soft to firm, dark grey, w < pl.                                                                       | 81.5<br>0.2  | S-F                 | w < PL   |
|                 |         | 2,2,3<br>(N=5) |           |               | Residual      |             | CI-CH               | Residual Silty CLAY firm to stiff, medium to high plasticity, pale brown, w > pl, with organic matter (roots).                         | 81.2<br>0.5  | F-St                | w > PL   |
|                 |         |                | 1         | 81            |               |             |                     |                                                                                                                                        |              |                     |          |
|                 |         | 8,5,3<br>(N=8) |           |               | Residual      |             | CI-CH               | Residual Silty CLAY firm to stiff, medium to high plasticity, grey white mottled red, w > pl, with organic matter (roots).             | 80.2<br>1.5  | F-St                | w > PL   |
|                 |         |                | 2         | 80            |               |             |                     |                                                                                                                                        |              |                     |          |
|                 |         |                |           |               | Rock          |             | SST                 | Extremely weathered Sandstone, Silty CLAY hard, low to medium plasticity, pale grey mottled brown, with ironstone and sandstone bands. | 79.2<br>2.5  | VLS                 |          |
|                 |         |                | 3         | 79            | Rock          |             | SST                 | Rock SANDSTONE: highly weathered, very low to low strength, white grey red, fine to medium grained.                                    | 78.7<br>3    | VLS-LS              |          |
|                 |         |                |           |               |               |             |                     | Commenced Coring at 3.62m                                                                                                              | 78.1<br>3.62 |                     |          |



|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330887.16   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261205.27 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 81.70(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 18 m    | Date : 03/03/2025                 | Loc Comment : End of the driveway of 1B Valley Road.                |

| Drilling Method | Water | Depth (m) | Elevation (m) | Graphic Log | Classification Code | Material Description                                                                                                  | Depth (m) | Weathering | Testing        | Estimated Strength                                   | RQD% and TCR%            | Defect Spacing (mm)              | Defect Description<br><small>type, inclination, planarity, roughness, coating, thickness</small> |
|-----------------|-------|-----------|---------------|-------------|---------------------|-----------------------------------------------------------------------------------------------------------------------|-----------|------------|----------------|------------------------------------------------------|--------------------------|----------------------------------|--------------------------------------------------------------------------------------------------|
|                 |       |           |               |             |                     |                                                                                                                       |           |            | Is(50)         |                                                      |                          |                                  |                                                                                                  |
|                 |       |           | 82            |             |                     |                                                                                                                       |           |            |                | VLS 0.1<br>LS 0.3<br>MS 1.0<br>HS 3<br>VHS 10<br>EHS |                          | 30<br>100<br>900<br>1000<br>9000 |                                                                                                  |
|                 |       | 0.50      | 81            |             |                     |                                                                                                                       | 0.50      |            |                |                                                      |                          |                                  |                                                                                                  |
|                 |       | 1         |               |             |                     |                                                                                                                       | 1         |            |                |                                                      |                          |                                  |                                                                                                  |
|                 |       | 1.50      | 80            |             |                     |                                                                                                                       | 1.50      |            |                |                                                      |                          |                                  |                                                                                                  |
|                 |       | 2         |               |             |                     |                                                                                                                       | 2         |            |                |                                                      |                          |                                  |                                                                                                  |
|                 |       | 2.50      | 79            |             |                     |                                                                                                                       | 2.50      |            |                |                                                      |                          |                                  |                                                                                                  |
|                 |       | 3         |               |             |                     |                                                                                                                       | 3         |            |                |                                                      |                          |                                  |                                                                                                  |
|                 |       | 3.50      | 78            |             |                     | Commenced Coring at 3.62m                                                                                             | 3.50      |            |                |                                                      |                          |                                  |                                                                                                  |
| ↑ NMLC Coring ↓ |       |           |               |             | SST                 | Rock SANDSTONE: moderately weathered, high strength, red grey pale brown, fine to medium grained, with iron staining. |           | MW         | d:0.86; a:1.82 |                                                      | RQD = 100%<br>TCR = 100% |                                  | 3.62, P, PL, RO, CL, OP,                                                                         |

|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330887.16   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261205.27 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 81.70(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 18 m    | Date : 03/03/2025                 | Loc Comment : End of the driveway of 1B Valley Road.                |

| Drilling Method | Water                                                | Depth (m) | Elevation (m) | Graphic Log | Classification Code | Material Description                                                                                                  | Depth (m)                                                                                                                 | Weathering | Testing        |                              | Estimated Strength                                                                                            | RQD% and TCR%         | Defect Spacing (mm)                                                                | Defect Description<br><small>type, inclination, planarity, roughness, coating, thickness</small> |                                     |
|-----------------|------------------------------------------------------|-----------|---------------|-------------|---------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------|----------------|------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------|
|                 |                                                      |           |               |             |                     |                                                                                                                       |                                                                                                                           |            | Is(50)         |                              |                                                                                                               |                       |                                                                                    |                                                                                                  |                                     |
| NMLC Coring     | <div><div></div><div>Loss 10% Water Loss</div></div> | 78        |               |             | SST                 | Rock SANDSTONE: moderately weathered, high strength, red grey pale brown, fine to medium grained, with iron staining. |                                                                                                                           | MW         |                |                              | <div><div>VLS 0.1</div><div>LS 0.3</div><div>MS 1.0</div><div>HS 3</div><div>VHS 10</div><div>EHS</div></div> | RQD = 100% TCR = 100% | <div><div>30</div><div>100</div><div>300</div><div>1000</div><div>3000</div></div> | 4.06, P, 30°, PL, RO, CL, OP,                                                                    |                                     |
|                 |                                                      | 4.50      | 77            |             | 4.50                |                                                                                                                       |                                                                                                                           |            |                | 4.67, J, 5°, PL, RO, CT, OP, |                                                                                                               |                       |                                                                                    |                                                                                                  |                                     |
|                 |                                                      | 5         |               |             | SST                 | Rock SANDSTONE: moderately weathered, medium strength, fine to medium grained, laminations at 5° to 10°.              | 4.68                                                                                                                      | MW         | d:0.38, a:0.46 |                              |                                                                                                               |                       |                                                                                    | 4.67, J, 5°, PL, RO, CT, OP,                                                                     |                                     |
|                 |                                                      | 5.4       | 5             |             | 5                   | MW                                                                                                                    |                                                                                                                           |            |                |                              | 5.2, 5°, PL, RO, CL, OP,                                                                                      |                       |                                                                                    |                                                                                                  |                                     |
|                 |                                                      | 5.50      | 76            | 5.50        |                     | SST                                                                                                                   | Rock SANDSTONE: moderately weathered, medium strength, orange pale grey, fine to medium grained, with ironstone staining. | 5.4        | MW             | d:0.87, a:0.68               |                                                                                                               |                       |                                                                                    | 5.2, 5°, PL, RO, CL, OP,                                                                         |                                     |
|                 |                                                      | 6         | 6             | 6           |                     | MW                                                                                                                    |                                                                                                                           |            |                |                              |                                                                                                               |                       |                                                                                    |                                                                                                  |                                     |
|                 |                                                      | 6.16      |               | 6.16        |                     |                                                                                                                       |                                                                                                                           |            |                |                              |                                                                                                               |                       |                                                                                    |                                                                                                  |                                     |
|                 |                                                      | 6.50      | 75            | 6.50        |                     | SST                                                                                                                   | As above, but pale grey.                                                                                                  | 6.50       | MW             | d:0.59, a:0.88               |                                                                                                               |                       |                                                                                    |                                                                                                  | 6.68, P, 30°, PL, RO, VN, OP,       |
|                 |                                                      | 7         | 7             | 7           |                     | MW                                                                                                                    |                                                                                                                           |            |                |                              | 6.88, J, 5°, PL, RO, STN, OP, (X2),                                                                           |                       |                                                                                    |                                                                                                  |                                     |
|                 |                                                      |           |               | 7.2         |                     |                                                                                                                       |                                                                                                                           | 7.2        |                |                              |                                                                                                               |                       |                                                                                    |                                                                                                  | 7.05, P, 5°, PL, RO, STN, OP, (X2), |
| NMLC Coring     | <div><div></div><div>Loss 0% Water Loss</div></div>  | 7.50      | 74            |             | SST                 | Rock SANDSTONE: slightly weathered, medium to high strength, pale grey, fine to medium grained.                       | 7.50                                                                                                                      | SW         | d:0.8, a:1.21  |                              |                                                                                                               | RQD = 100% TCR = 100% |                                                                                    |                                                                                                  |                                     |

|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330887.16   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261205.27 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 81.70(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 18 m    | Date : 03/03/2025                 | Loc Comment : End of the driveway of 1B Valley Road.                |

| Drilling Method | Water              | Depth (m) | Elevation (m) | Graphic Log | Classification Code | Material Description                                                                            | Depth (m) | Weathering | Testing | Estimated Strength                                   | RQD% and TCR%         | Defect Spacing (mm) | Defect Description<br><small>type, inclination, planarity, roughness, coating, thickness</small>                                                            |  |  |  |  |
|-----------------|--------------------|-----------|---------------|-------------|---------------------|-------------------------------------------------------------------------------------------------|-----------|------------|---------|------------------------------------------------------|-----------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|                 |                    |           |               |             |                     |                                                                                                 |           |            | Is(50)  |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
| NMLC Coring     |                    |           | 74            |             | SST                 | Rock SANDSTONE: slightly weathered, medium to high strength, pale grey, fine to medium grained. |           |            |         | VLS 0.1<br>LS 0.3<br>MS 1.0<br>HS 3<br>VHS 10<br>EHS | RQD = 100% TCR = 100% |                     | 8.46, P, 30°, PL, RO, CL, OP,<br><br>8.95, P, 5°, PL, RO, CL, OP,<br><br><br><br>10.55, P, 5°, PL, RO, VN, OP,<br><br><br><br>11.46, P, 5°, IR, RO, CL, OP, |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    | 8.50      | 73            |             |                     |                                                                                                 |           | 8.50       |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 | Loss 0% Water Loss |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    | 9         |               |             |                     |                                                                                                 |           | 9          |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    | 9.50      | 72            |             |                     |                                                                                                 |           | 9.50       |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    | 10        |               |             |                     |                                                                                                 |           | 10         | SW      |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |
|                 |                    |           |               |             |                     |                                                                                                 |           |            |         |                                                      |                       |                     |                                                                                                                                                             |  |  |  |  |

**Job Number** : P3444  
**Client** : Landmark Group Construction Australia Pty Ltd  
**Project** : Lindfield  
**Location** : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW  
**Loc Comment** : End of the driveway of 1B Valley Road.

| Drilling Method | Water              | Depth (m) | Elevation (m) | Graphic Log | Classification Code | Material Description                                                                     | Depth (m) | Weathering | Testing |                    | RQD% and TCR%         | Defect Spacing (mm) | Defect Description<br><small>type, inclination, planarity, roughness, coating, thickness</small> |
|-----------------|--------------------|-----------|---------------|-------------|---------------------|------------------------------------------------------------------------------------------|-----------|------------|---------|--------------------|-----------------------|---------------------|--------------------------------------------------------------------------------------------------|
|                 |                    |           |               |             |                     |                                                                                          |           |            | Is(50)  | Estimated Strength |                       |                     |                                                                                                  |
|                 |                    |           |               |             |                     |                                                                                          |           |            |         |                    |                       |                     |                                                                                                  |
| NMLC Coring     |                    |           | 70            |             | SST                 | Rock SANDSTONE: slightly weathered, high strength, pale grey, fine to medium grained, .. | 12        | SW         |         |                    | RQD = 100% TCR = 100% |                     | 12.72, P, 5°, CV, RO, CL, OP,                                                                    |
|                 |                    | 12.50     |               |             |                     |                                                                                          |           |            |         |                    |                       |                     |                                                                                                  |
|                 | Loss 0% Water Loss |           |               |             |                     |                                                                                          |           |            |         |                    |                       |                     |                                                                                                  |
|                 |                    | 13        |               |             |                     |                                                                                          |           |            |         |                    |                       |                     |                                                                                                  |
|                 |                    | 13.50     |               |             |                     |                                                                                          |           |            |         |                    |                       |                     |                                                                                                  |
|                 |                    | 14        |               |             |                     |                                                                                          |           |            |         |                    |                       |                     |                                                                                                  |
|                 |                    | 14.50     |               |             |                     |                                                                                          |           |            |         |                    |                       |                     |                                                                                                  |
|                 |                    | 15        |               |             |                     |                                                                                          |           |            |         |                    |                       |                     |                                                                                                  |
|                 |                    | 15.50     |               |             |                     |                                                                                          |           |            |         |                    |                       |                     |                                                                                                  |
|                 | Loss 0% Water Loss |           |               |             |                     |                                                                                          |           |            |         |                    |                       |                     |                                                                                                  |



|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330887,16   | Driller Supplier : GEONSENSE      | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261205,27 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 81.70(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 18 m    | Date : 03/03/2025                 | Loc Comment : End of the driveway of 1B Valley Road.                |

| Drilling Method                                             | Water                                                                                   | Depth (m) | Elevation (m) | Graphic Log | Classification Code | Material Description                                                                     | Depth (m) | Weathering | Testing        | Estimated Strength                                                                                                   | RQD% and TCR%                                            | Defect Spacing (mm)                                                                      | Defect Description<br><small>type, inclination, planarity, roughness, coating, thickness</small> |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------|---------------|-------------|---------------------|------------------------------------------------------------------------------------------|-----------|------------|----------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|                                                             |                                                                                         |           |               |             |                     |                                                                                          |           |            | Is(50)         |                                                                                                                      |                                                          |                                                                                          |                                                                                                  |
| <div> <div></div> <div>NMLC Coring</div> <div></div> </div> | <div> <div></div> <div>Loss</div> <div>0%</div> <div>Water</div> <div>Loss</div> </div> | 66        |               |             | SST                 | Rock SANDSTONE: slightly weathered, high strength, pale grey, fine to medium grained, .. |           | SW         |                | <div> <div>VLS 0.1</div> <div>LS 0.3</div> <div>MS 1.0</div> <div>HS 3</div> <div>VHS 10</div> <div>EHs</div> </div> | <div> <div>RQD = 100%</div> <div>TCR = 100%</div> </div> | <div> <div>30</div> <div>100</div> <div>300</div> <div>1000</div> <div>3000</div> </div> | <div> <div>16.5, P, 10°, IR, RO, STN, ,</div> </div>                                             |
|                                                             |                                                                                         | 16.50 65  |               |             |                     |                                                                                          | 16.50     |            | d:0.76, a:1.85 |                                                                                                                      |                                                          |                                                                                          |                                                                                                  |
|                                                             |                                                                                         | 17        |               |             |                     |                                                                                          | 17        |            |                |                                                                                                                      |                                                          |                                                                                          |                                                                                                  |
|                                                             |                                                                                         | 17.50 64  |               |             |                     |                                                                                          | 17.50     |            | d:0.89, a 1.08 |                                                                                                                      |                                                          |                                                                                          |                                                                                                  |
|                                                             |                                                                                         |           |               |             |                     | BH4 Reached Target Depth at 18m                                                          |           |            |                |                                                                                                                      |                                                          |                                                                                          |                                                                                                  |

# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave., Lindfield

JOB NUMBER: P3444

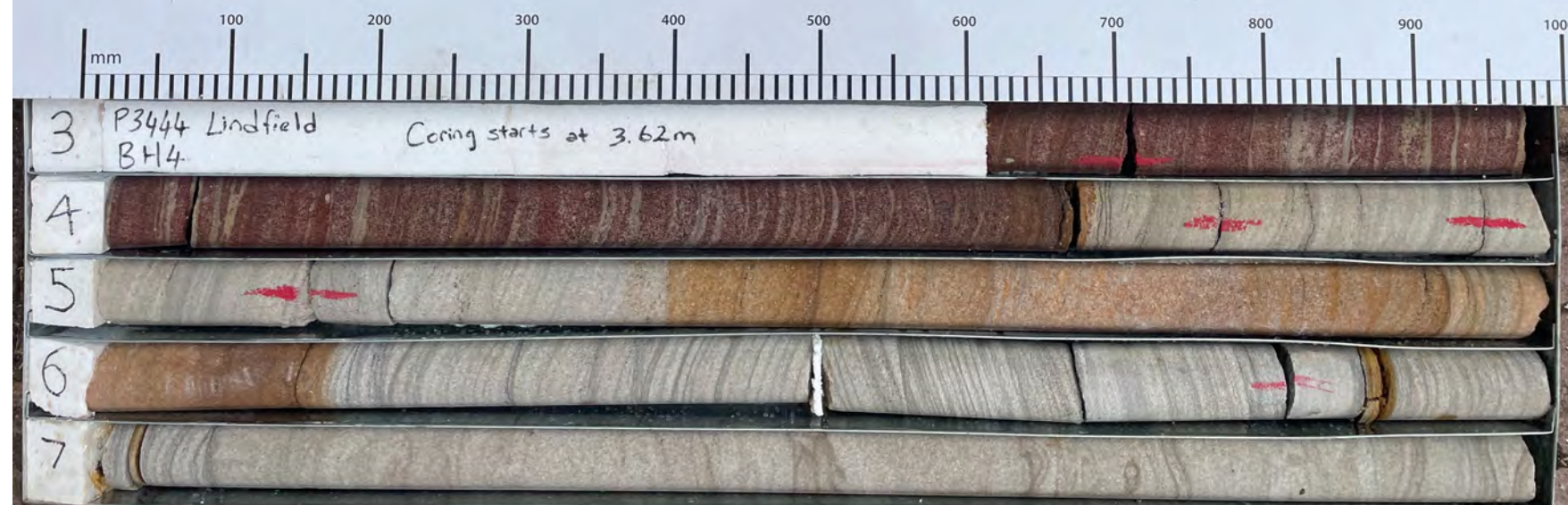
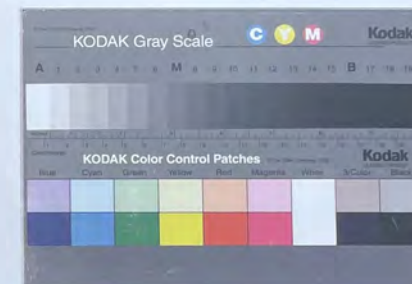
LOGGED BY: Ozzie B.

BOREHOLE ID: BH4

DEPTH: 3.62m to 8.0m

CORE TRAY: 1 of 3

DATE: 3/13/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

BH4 - Box 1 of 3

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH4

## BH Depth

CorePhoto

# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

LOGGED BY: Ozzie B.

BOREHOLE ID: BH4

DEPTH: 80m to 130m

CORE TRAY: 2 of 3

DATE: 3/3/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

BH4 - Box 2 of 3

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH4

## BH Depth

CorePhoto



# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

LOGGED BY: Ozzie B.

BOREHOLE ID: BH4

DEPTH: 13.0m to 18.0m

CORE TRAY: 3 of 3

DATE: 3/13/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

BH4 - Box 3 of 3

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH4

## BH Depth

CorePhoto



|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330828,69   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261173,80 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 83.80(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 18 m    | Date : 28/02/2025                 | Loc Comment : Driveway of 1B Valley road.                           |

| Drilling Method | Water | Well Diagram | Testing | Elevation | Graphic Log | Material Type | Classification Code | Material Description                                                                                                                           | Depth (m) | Consistency | Weathering | Moisture |
|-----------------|-------|--------------|---------|-----------|-------------|---------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|------------|----------|
|                 |       |              |         | Depth (m) |             |               |                     |                                                                                                                                                |           |             |            |          |
|                 |       |              |         | 83.4      |             | TOPSOIL       | CL-CI               | Topsoil Silty CLAY low to medium plasticity, dark grey, with fine to medium sized gravel, with fine grained sand, w < pl.                      | 0.4       |             |            | w < PL   |
|                 |       |              |         | 0.4       |             |               |                     | Residual Sandy CLAY stiff to very stiff, low to medium plasticity, pale brown white, with fine sized gravel, with low plasticity silt, w < pl. | 1         | St-VSt      |            | w < PL   |
|                 |       |              |         | 82.3      |             | Rock          | SST                 | Extremely weathered Sandstone, Silty CLAY hard, low to medium plasticity, pale grey mottled brown, with ironstone and sandstone bands.         | 1.5       | VLS         | XW         |          |
|                 |       |              |         | 1.5       |             |               |                     | Rock SANDSTONE: highly weathered, very low strength, pale brown white pale grey red, fine grained, with ironstone bands.                       | 2.5       | VLS         | HW         |          |
|                 |       |              |         | 81.3      |             |               |                     |                                                                                                                                                | 3         |             |            |          |
|                 |       |              |         | 2.5       |             |               |                     | Commenced Coring at 3.3m                                                                                                                       | 3.3       |             |            |          |

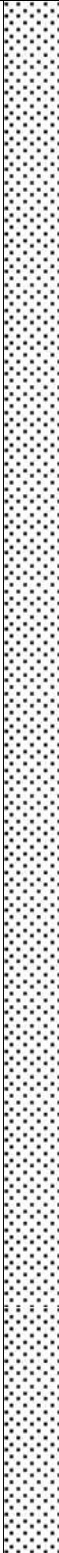
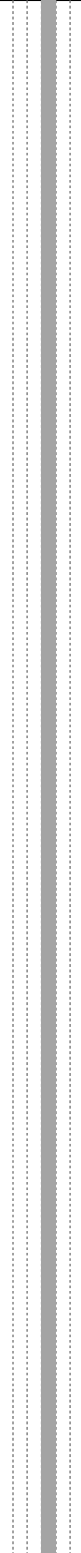
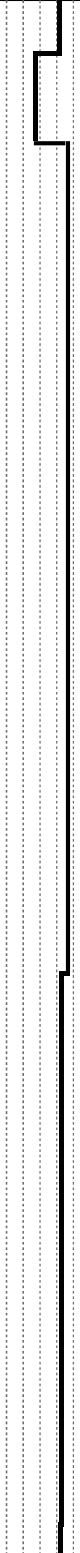
|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330828,69   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261173,80 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 83.80(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 18 m    | Date : 28/02/2025                 | Loc Comment : Driveway of 1B Valley road.                           |

| Drilling Method                      | Water | Well Diagram | Elevation | Graphic Log | Classification Code | Material Description                                                                                                     | Depth (m) | Weathering | Testing         | Estimated Strength                            | RQD% and TCR%             | Defect Spacing (mm)              | Defect Description                                   |
|--------------------------------------|-------|--------------|-----------|-------------|---------------------|--------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|-----------------------------------------------|---------------------------|----------------------------------|------------------------------------------------------|
|                                      |       |              | Depth (m) |             |                     |                                                                                                                          |           |            | Is(50)          |                                               |                           |                                  |                                                      |
|                                      |       | C            |           |             |                     |                                                                                                                          |           |            |                 | VLS 0.1<br>LS 0.3<br>MS 1.0<br>HS 3<br>EPS 10 |                           | 30<br>100<br>300<br>1000<br>3000 |                                                      |
|                                      |       |              |           |             |                     |                                                                                                                          | 1         |            |                 |                                               |                           |                                  |                                                      |
|                                      |       |              |           |             |                     |                                                                                                                          | 2         |            |                 |                                               |                           |                                  |                                                      |
|                                      |       |              |           |             |                     |                                                                                                                          | 3         |            |                 |                                               |                           |                                  |                                                      |
|                                      |       |              |           |             |                     | Commenced Coring at 3.3m                                                                                                 |           |            |                 |                                               |                           |                                  |                                                      |
| NMLC Coring<br>Loss - 20% Water Loss |       |              | 80.3      |             | SST                 | Rock SANDSTONE: highly weathered, very low strength, pale brown white pale grey red, fine grained, with ironstone bands. | 3.55      | MW         | d:0.02 ; a:0.02 |                                               | RQD = 84.52%<br>TCR = 95% |                                  | 3.3-3.5, XWS, 5°,                                    |
|                                      |       |              | 3.55      |             | SST                 | Rock SANDSTONE: moderately weathered, medium strength, red mottled white, fine to medium grained, iron staining.         |           |            | d:0.73 ; a:0.77 |                                               |                           |                                  | 3.7-3.78, XWS,<br><br>3.92, J, 30°, PL, RO, STN, OP, |

|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330828,69   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261173,80 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 83.80(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 18 m    | Date : 28/02/2025                 | Loc Comment : Driveway of 1B Valley road.                           |

| Drilling Method | Water | Well Diagram | Elevation | Graphic Log | Classification Code | Material Description                                                                                                          | Depth (m) | Weathering | Testing         | Estimated Strength | RQD% and TCR%             | Defect Spacing (mm) | Defect Description             |
|-----------------|-------|--------------|-----------|-------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|--------------------|---------------------------|---------------------|--------------------------------|
|                 |       |              | Depth (m) |             |                     |                                                                                                                               |           |            | Is(50)          |                    |                           |                     |                                |
|                 |       |              | 78.7      |             | SST                 | Rock SANDSTONE: moderately weathered, medium strength, red mottled white, fine to medium grained, iron staining.              | 5         | MW         |                 |                    | RQD = 84.52%<br>TCR = 95% |                     | 4.09, P, 5°, IR, RO, STN, OP,  |
|                 |       |              | 5.06      |             |                     | Rock SANDSTONE: moderately weathered, medium strength, pale grey mottled red, fine to medium grained, iron staining.          | 5.06      | MW         | d:0.44 ; a:0.38 |                    |                           |                     | 4.18-4.23, XWS,                |
|                 |       |              | 78.4      |             |                     | Rock SANDSTONE: moderately weathered, medium strength, pale red mottled white, fine to medium grained, iron staining.         | 5.4       | MW         |                 |                    |                           |                     | 4.85, P, 5°, UN, RO, STN, OP,  |
|                 |       |              | 77.8      |             |                     | Rock SANDSTONE: moderately weathered, medium strength, pale grey, fine to medium grained, ..                                  | 6.03      | MW         | d:0.41 ; a:0.88 |                    |                           |                     | 5.02-5.05, XWS,                |
|                 |       |              | 77.4      |             |                     | Core loss                                                                                                                     | 6.4       |            | d:0.76 ; a:0.76 |                    |                           |                     | 5.77-5.79, XWS,                |
|                 |       |              | 77.3      |             | SST                 | Rock SANDSTONE: slightly to fresh weathered, high strength, pale grey, fine to medium grained, with carbonaceous laminations. | 6.55      | SW-F       |                 |                    | RQD = 95%<br>TCR = 95%    |                     | 6.02, J, 10°, IR, RO, STN, OP, |
|                 |       |              |           |             |                     |                                                                                                                               |           |            | d:0.71 ; a:1.04 |                    |                           |                     | 5.89-5.9, XWS,                 |
|                 |       |              |           |             |                     |                                                                                                                               |           |            |                 |                    |                           |                     | 7.08, P, 5°, PL, RO, CL, OP,   |
|                 |       |              |           |             |                     |                                                                                                                               |           |            |                 |                    |                           |                     |                                |
|                 |       |              |           |             |                     |                                                                                                                               |           |            |                 |                    |                           |                     |                                |

|             |              |                  |                       |             |                                                            |
|-------------|--------------|------------------|-----------------------|-------------|------------------------------------------------------------|
| UTM         | : 56S        | Driller Rig      | : GEO205 - Comacchio  | Job Number  | : P3444                                                    |
| Easting     | : 330828,69  | Driller Supplier | : GEOSENSE            | Client      | : Landmark Group Construction Australia Pty Ltd            |
| Northing    | : 6261173,80 | Logged By        | : Ozzie Baskan        | Project     | : Lindfield                                                |
| RL          | : 83.80(m)   | Reviewed By      | : Mahmoud Jangidaryan | Location    | : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth | : 18 m       | Date             | : 28/02/2025          | Loc Comment | : Driveway of 1B Valley road.                              |

| Drilling Method | Water                | Well Diagram                                                                       | Elevation | Graphic Log                                                                        | Classification Code | Material Description                                                                                                          | Depth (m)       | Weathering | Testing        |                 | Estimated Strength                                                                   | RQD% and TCR%            | Defect Spacing (mm)                                                                  | Defect Description                                                      |
|-----------------|----------------------|------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------|------------|----------------|-----------------|--------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
|                 |                      |                                                                                    | Depth (m) |                                                                                    |                     |                                                                                                                               |                 |            | Is(50)         |                 |                                                                                      |                          |                                                                                      |                                                                         |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                               |                 |            |                |                 |                                                                                      |                          |                                                                                      |                                                                         |
| NMLC Coring     | Loss - 0% Water Loss |  |           |  | SST                 | Rock SANDSTONE: slightly to fresh weathered, high strength, pale grey, fine to medium grained, with carbonaceous laminations. |                 | SW-F       |                |                 |  | RQD = 95%<br>TCR = 95%   |  | 8.13, P, 10°, PL, RO, CL, OP, (X2),<br><br>8.36, P, 5°, PL, RO, CT, OP, |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                               | d:1.52 ; a:1.74 |            |                |                 |                                                                                      |                          |                                                                                      |                                                                         |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                               |                 |            |                |                 |                                                                                      |                          |                                                                                      |                                                                         |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                               | d:1.43 ; a:1.60 |            |                |                 |                                                                                      |                          |                                                                                      |                                                                         |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                               | 9               |            |                |                 |                                                                                      |                          |                                                                                      |                                                                         |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                               | 10              |            |                | d:1.38 ; a:1.38 |                                                                                      | RQD = 100%<br>TCR = 100% |                                                                                      | 10.48, J, 30°, PL, SO, VN, OP,                                          |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                               |                 |            |                |                 |                                                                                      |                          |                                                                                      |                                                                         |
|                 | Loss - 0% Water Loss |                                                                                    |           |                                                                                    |                     |                                                                                                                               | 11              |            |                |                 |                                                                                      |                          |                                                                                      |                                                                         |
|                 |                      |                                                                                    |           |                                                                                    |                     |                                                                                                                               |                 |            | d:1.5 ; a:1.67 |                 |                                                                                      |                          | 11.89, P, 5°, IR, RO, CT, OP,                                                        |                                                                         |



|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330828,69   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261173,80 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 83.80(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 18 m    | Date : 28/02/2025                 | Loc Comment : Driveway of 1B Valley road.                           |

| Drilling Method        | Water                           | Well Diagram                | Elevation | Graphic Log    | Classification Code                                                                                                           | Material Description | Depth (m) | Weathering      | Testing                                                      |                          | Estimated Strength       | RQD% and TCR%                                   | Defect Spacing (mm)                 | Defect Description |
|------------------------|---------------------------------|-----------------------------|-----------|----------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------|-----------------|--------------------------------------------------------------|--------------------------|--------------------------|-------------------------------------------------|-------------------------------------|--------------------|
|                        |                                 |                             | Depth (m) |                |                                                                                                                               |                      |           |                 | Is(50)                                                       |                          |                          |                                                 |                                     |                    |
|                        |                                 |                             |           |                |                                                                                                                               |                      |           |                 |                                                              |                          |                          |                                                 |                                     |                    |
| <div>NMLC Coring</div> | <div>Loss - 0% Water Loss</div> | <div>50mm PVC Slotted</div> |           | <div>SST</div> | Rock SANDSTONE: slightly to fresh weathered, high strength, pale grey, fine to medium grained, with carbonaceous laminations. | 13                   | SW-F      | d:1.39 ; a:2.30 | <div>YLS 0.1<br/>LS 0.3<br/>MS 1.0<br/>HS 3<br/>EPS 10</div> | RQD = 100%<br>TCR = 100% | RQD = 100%<br>TCR = 100% | <div>30<br/>100<br/>300<br/>1000<br/>3000</div> | 13.11, J, 10°, PL, RO, VN, OP,      |                    |
|                        |                                 |                             |           |                |                                                                                                                               | d:1.51 ; a:1.63      |           |                 |                                                              |                          |                          |                                                 |                                     |                    |
|                        |                                 |                             |           |                |                                                                                                                               | d:1.58 ; a:2.09      |           |                 |                                                              |                          |                          |                                                 |                                     |                    |
|                        |                                 |                             |           |                |                                                                                                                               | d:1.69 ; a:1.93      |           |                 |                                                              |                          |                          |                                                 |                                     |                    |
|                        |                                 |                             |           |                |                                                                                                                               |                      |           |                 |                                                              |                          |                          |                                                 |                                     |                    |
|                        | <div>Loss - 0% Water Loss</div> |                             |           |                |                                                                                                                               |                      |           |                 |                                                              | RQD = 100%<br>TCR = 100% |                          | 14.17, P, 30°, PL, RO, CT, OP,                  |                                     |                    |
|                        |                                 |                             |           |                |                                                                                                                               |                      |           |                 |                                                              |                          |                          |                                                 | 13.65, J, 5°, IR, RO, CT, OP, (X2), |                    |
|                        |                                 |                             |           |                |                                                                                                                               |                      |           |                 |                                                              |                          |                          |                                                 |                                     |                    |

|                       |                                   |                                                                     |
|-----------------------|-----------------------------------|---------------------------------------------------------------------|
| UTM : 56S             | Driller Rig : GEO205 - Comacchio  | Job Number : P3444                                                  |
| Easting : 330828,69   | Driller Supplier : GEOSENSE       | Client : Landmark Group Construction Australia Pty Ltd              |
| Northing : 6261173,80 | Logged By : Ozzie Baskan          | Project : Lindfield                                                 |
| RL : 83.80(m)         | Reviewed By : Mahmoud Jangidaryan | Location : 59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW |
| Total Depth : 18 m    | Date : 28/02/2025                 | Loc Comment : Driveway of 1B Valley road.                           |

| Drilling Method | Water | Well Diagram | Elevation | Graphic Log | Classification Code | Material Description                                                                                                          | Depth (m) | Weathering | Testing         | Estimated Strength | RQD% and TCR%            | Defect Spacing (mm) | Defect Description |
|-----------------|-------|--------------|-----------|-------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------------|--------------------|--------------------------|---------------------|--------------------|
|                 |       |              | Depth (m) |             |                     |                                                                                                                               |           |            | Is(50)          |                    |                          |                     |                    |
|                 |       |              |           |             |                     | Rock SANDSTONE: slightly to fresh weathered, high strength, pale grey, fine to medium grained, with carbonaceous laminations. | 17        | SW-F       | d:1.70 ; a:1.73 |                    | RQD = 100%<br>TCR = 100% |                     |                    |
|                 |       |              |           |             |                     |                                                                                                                               |           |            | d:2.17 ; a:2.32 |                    |                          |                     |                    |
|                 |       |              |           |             |                     | BH5 Reached Target Depth at 18m                                                                                               |           |            |                 |                    |                          |                     |                    |

# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

LOGGED BY: Ozzie B.

BOREHOLE ID: BH5

DEPTH: 3.3m to 8.0m

CORE TRAY: 1 of 3

DATE: 28/03/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

BH5 - Box 1 of 3

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH5

## BH Depth

CorePhoto

# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

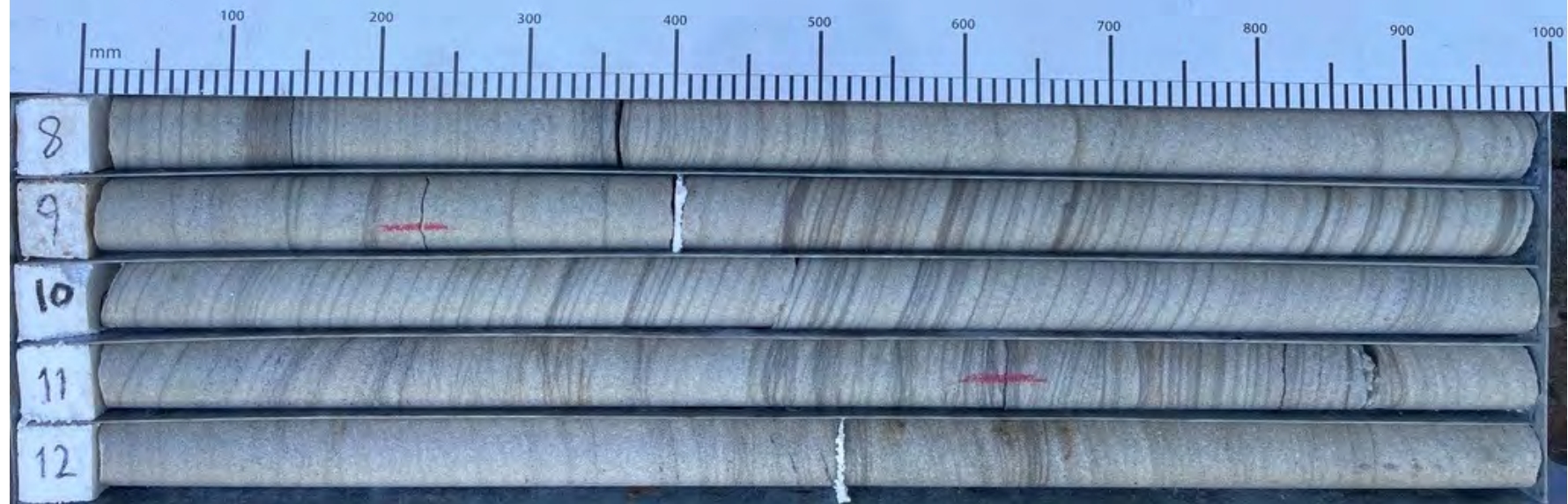
LOGGED BY: Ozzie B.

BOREHOLE ID: BH5

DEPTH: 8m to 13m

CORE TRAY: 2 of 3

DATE: 28/02/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

BH5 - Box 2 of 3

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH5

## BH Depth

CorePhoto



# morrow

CLIENT NAME: LANDMARK

PROJECT:

LOCATION: 63 Trafalgar Ave, Lindfield

JOB NUMBER: P3444

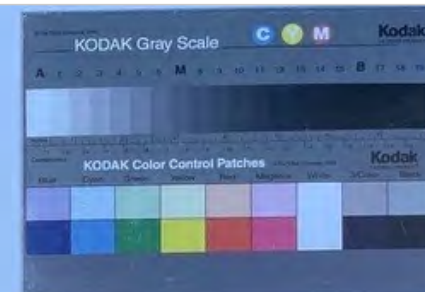
LOGGED BY: Ozzie B.

BOREHOLE ID: BH5

DEPTH: 13m to 18m

CORE TRAY: 3 of 3

DATE: 28/03/2025



# morrow



02 8599 7579



Sydney Gadigal Land,  
2/5-7 Malta Street, Fairfield  
East NSW 2155



info@morrowgeo.com.au

## Photo description

BH5 - Box 3 of 3

## Client

Landmark Group Construction Australia Pty Ltd

## Location

59-63 Trafalgar Avenue & 1A/B Valley Road, Lindfield NSW

## Project name

Lindfield

## Project No

P3444

## Scale

Not to Scale

## BH No

BH5

## BH Depth

CorePhoto

## GENERAL

Information obtained from site investigations is recorded on log sheets. The "Cored Drill Hole Log" presents data from an operation where a core barrel has been used to recover material - commonly rock. The "Non-Core Drill Hole - Geological Log" presents data from an operation where coring has not been used and information is based on a combination of regular sampling and insitu testing. The material penetrated in non-core drilling is commonly soil but may include rock. The "Excavation - Geological Log" presents data and drawings from exposures of soil and rock resulting from excavation of pits, trenches, etc.

The heading of the log sheets contains information on Project Identification, Hole or Pit Identification, Location and Elevation. The main section of the logs contains information on methods and conditions, material substance description and structure presented as a series of columns in relation to depth below the ground surface which is plotted on the left side of the log sheet. The common depth scale is 8m per drill log sheet and about 3-5m for excavation logs sheets.

As far as is practicable the data contained on the log sheets is factual. Some interpretation is inevitable in the identification of material boundaries in areas of partial sampling, the location of areas of core loss, description and classification of material, estimation of strength and identification of drilling induced fractures. Material description and classifications are based on SAA Site Investigation Code AS 1726 - 1993 with some modifications as defined below.

These notes contain an explanation of the terms and abbreviations commonly used on the log sheets.

## DRILLING

### Drilling & Casing

|      |                            |
|------|----------------------------|
| ADV  | Auger Drilling with V-Bit  |
| ADT  | Auger Drilling with TC Bit |
| WB   | Wash-bore drilling         |
| RR   | Rock Roller                |
| NMLC | NMLC core barrel           |
| NQ   | NQ core barrel             |
| HMLC | HMLC core barrel           |
| HQ   | HQ core barrel             |

### Drilling Fluid/Water

The drilling fluid used is identified and loss of return to the surface estimated as a percentage.

### Drilling Penetration/Drill Depth

Core lifts are identified by a line and depth with core loss per run as a percentage. Ease of penetration in non-core drilling is abbreviated as follows:

|    |           |
|----|-----------|
| VE | Very Easy |
| E  | Easy      |
| M  | Medium    |
| H  | High      |
| VH | Very High |

## Groundwater Levels

Date of measurement is shown.

Standing water level measured in completed boreholeLevel taken during or immediately after drilling

|     |                              |
|-----|------------------------------|
| D   | Disturbed                    |
| B   | Bulk                         |
| U   | Undisturbed                  |
| SPT | Standard Penetration Test    |
| N   | Result of SPT (sample taken) |
| PBT | Plate Bearing Test           |
| PZ  | Piezometer Installation      |
| HP  | Hand Penetrometer Test       |

## EXCAVATION LOGS

Explanatory notes are provided at the bottom of drill log sheets. Information about the origin, geology and pedology may be entered in the "Structure and other Observations" column. The depth of the base of excavation (for the logged section) at the appropriate depth in the "Material Description" column. Refusal of excavation plant is noted should it occur. A sketch of the exposure may be added.

## MATERIAL DESCRIPTION – SOIL

Classification Symbol - In accordance with the Unified Classification System (AS 1726-1993, Appendix A, Table A1)

Material Description - In accordance with AS 1726-1993, Appendix A2.3

## Moisture Condition

|   |                                    |
|---|------------------------------------|
| D | Dry, looks and feels dry           |
| M | Moist, No free water on remoulding |
| W | Wet, free water on remoulding      |

Consistency - In accordance with AS 1726-1993, Appendix A2.5

|     |            |               |
|-----|------------|---------------|
| VS  | Very Soft  | < 12.5 kPa    |
| S   | Soft       | 12.5 – 25 kPa |
| F   | Firm       | 25 – 50 kPa   |
| St  | Stiff      | 50 – 100 kPa  |
| VSt | Very Stiff | 100 – 200 kPa |
| H   | Hard       | > 200 kPa     |

Strength figures quoted are the approximate range of undrained shear strength for each class.

Density Index. (%) is estimated or is based on SPT results.

|    |              |           |
|----|--------------|-----------|
| VL | Very Loose   | < 15 %    |
| L  | Loose        | 15 – 35 % |
| MD | Medium Dense | 35 – 65 % |
| D  | Dense        | 65 – 85 % |
| VD | Very Dense   | > 85 %    |

## MATERIAL DESCRIPTION -ROCK

### Material Description

Identification of rock type, composition and texture based on visual features in accordance with AS 1726-1993, Appendix A3.1-A3.3 and Tables A6a, A6b and A7.

### Core Loss

Is shown at the bottom of the run unless otherwise indicated.

### Bedding

|                     |            |
|---------------------|------------|
| Thinly Laminated    | < 6 mm     |
| Laminated           | 6 - 20     |
| Very Thinly Bedded  | 20 - 60    |
| Thinly Bedded       | 60 - 200   |
| Medium Bedded       | 200 - 600  |
| Thickly Bedded      | 600 - 2000 |
| Very Thickly Bedded | > 2000     |

**Weathering** - No distinction is made between weathering and alteration. Weathering classification assists in identification but does not imply engineering properties.

|                           |                                                                                                     |
|---------------------------|-----------------------------------------------------------------------------------------------------|
| Fresh (F)                 | Rock substance unaffected by weathering                                                             |
| Slightly Weathered (SW)   | Rock substance partly stained or discoloured. Colour and texture of fresh rock recognisable.        |
| Moderately Weathered (MW) | Staining or discolouration extends throughout rock substance. Fresh rock colour not recognisable.   |
| Highly Weathered (HW)     | Stained or discoloured throughout. Signs of chemical or physical alteration. Rock texture retained. |
| Extremely Weathered (EW)  | Rock texture evident but material has soil properties and can be remoulded.                         |

**Strength** - The following terms are used to described rock strength:

| Rock Strength Class | Abbreviation | Point Load Strength Index, Is(50) (MPa) |
|---------------------|--------------|-----------------------------------------|
| Extremely Low       | EL           | < 0.03                                  |
| Very Low            | VL           | 0.03 to 0.1                             |
| Low                 | L            | 0.1 to 0.3                              |
| Medium              | M            | 0.3 to 1                                |
| High                | H            | 1 to 3                                  |
| Very High           | VH           | 3 to 10                                 |
| Extremely High      | EH           | ≥ 10                                    |

Strengths are estimated and where possible supported by Point Load Index Testing of representative samples. Test results are plotted on the graphical estimated strength by using Diametral Point Load Test and Axial Point Load Test.

Where the estimated strength log covers more than one range it indicates the rock strength varies between the limits shown.

## MATERIALS STRUCTURE/FRACTURES

### ROCK

**Natural Fracture Spacing** - A plot of average fracture spacing excluding defects known or suspected to be due to drilling, core boxing or testing. Closed or cemented joints, drilling breaks and handling breaks are not included in the Natural Fracture Spacing.

**Visual Log** - A diagrammatic plot of defects showing type, spacing and orientation in relation to core axis.

| Defects |                                                                                                                                                                                                                                                                | Defects open in-situ<br>Defects closed in-situ<br>Breaks through rock substance |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
|         | <br><br> |                                                                                 |

**Additional Data** - Description of individual defects by type, orientation, in-filling, shape and roughness in accordance with AS 1726-1993, Appendix A Table A10, notes and Figure A2.

**Orientation** - angle relative to the plane normal to the core axis.

| Type      | BP<br>JT<br>SM<br>FZ<br>SZ<br>VN<br>FL<br>CL<br>DL<br>HB<br>DB | Bedding Parting<br>Joint<br>Seam<br>Fracture Zone<br>Shear Zone<br>Vein<br>Foliation<br>Cleavage<br>Drill Lift<br>Handling Break<br>Drilling Break |
|-----------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Infilling | CN<br>X<br>Clay<br>KT<br>CA<br>Fe<br>Qz<br>MS<br>MU            | Clean<br>Carbonaceous<br>Clay<br>Chlorite<br>Calcite<br>Iron Oxide<br>Quartz<br>Secondary Mineral<br>Unidentified Mineral                          |
| Shape     | PR<br>CU<br>UN<br>ST<br>IR<br>DIS                              | Planar<br>Curved<br>Undulose<br>Stepped<br>Irregular<br>Discontinuous                                                                              |
| Roughness | POL<br>SL<br>S<br>RF<br>VR                                     | Polished<br>Slickensided<br>Smooth<br>Rough<br>Very Rough                                                                                          |

### SOIL

**Structures** - Fissuring and other defects are described in accordance with AS 1726-1993, Appendix A2.6, using the terminology for rock defects.

**Origin** - Where practicable an assessment is provided of the probable origin of the soil, eg fill, topsoil, alluvium, colluvium, residual soil

## **APPENDIX B**

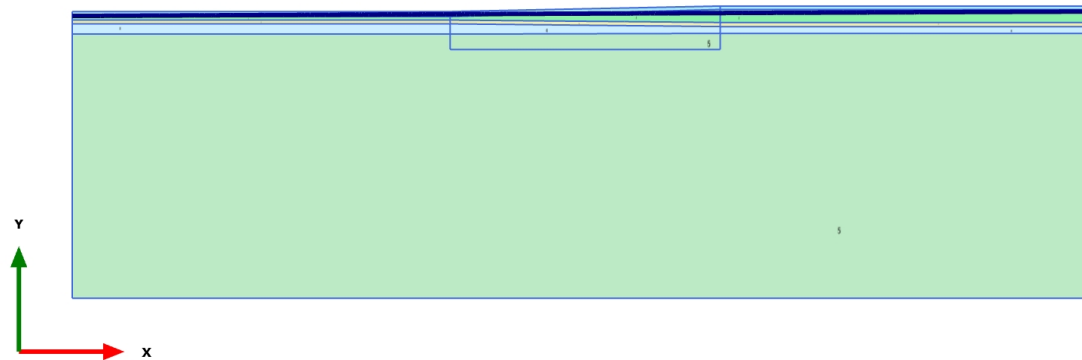
# **PLAXIS FLOW MODELLING REPORTS**



# PLAXIS Report

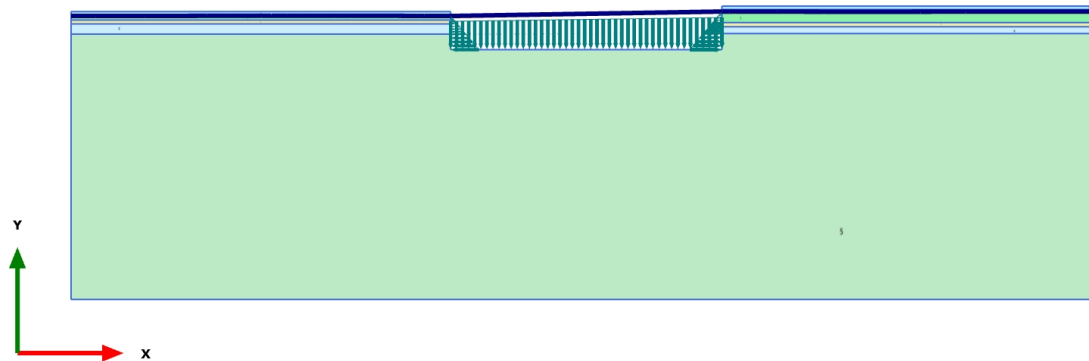
|                |                                                                                                                     |
|----------------|---------------------------------------------------------------------------------------------------------------------|
| Filename       | P3444_Lindfield_Section1(GW3BL).p2dx                                                                                |
| Directory      | C:\Users\Plaxis\Morrow Geotechnics\MG - Documents\1. Projects\P3400-P3499\P3444_Lindfield, LANDMARK\08_Groundwater\ |
| Title          | P3444_Lindfield_Section1(GW3BL)                                                                                     |
| Model          | Plane strain                                                                                                        |
| Elements       | 15-Noded                                                                                                            |
| PLAXIS Version | Version 2024.2.0.1144                                                                                               |

### 1.1.1.1 Calculation results, Initial phase [InitialPhase] (0/0), Materials plot



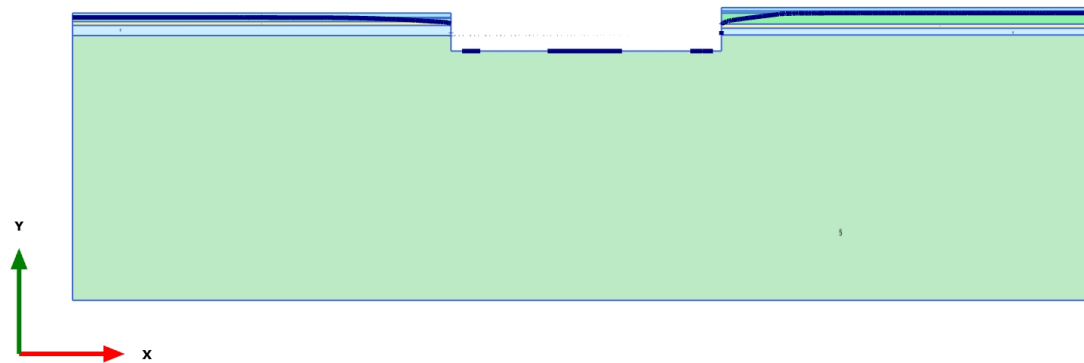
**Materials plot**

### 1.1.1.2 Calculation results, Phase\_1 [Phase\_1] (1 / 1), Materials plot



**Materials plot**

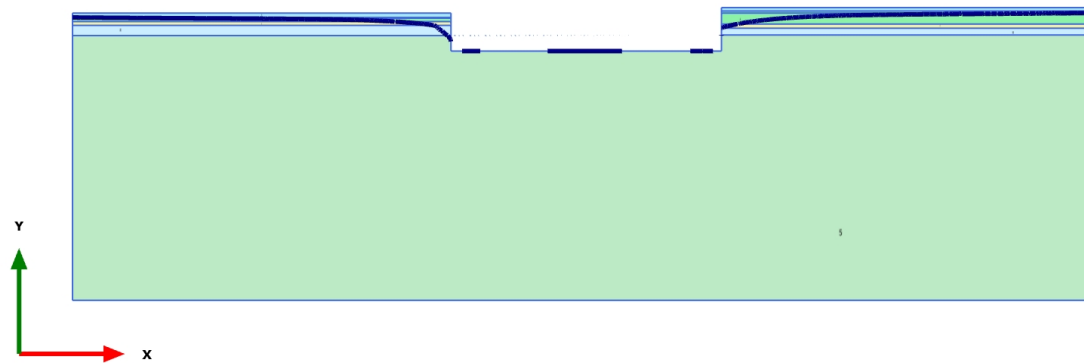
### 1.1.1.3 Calculation results, Short Term [Phase\_2] (2/11), Materials plot



**Materials plot**



#### 1.1.1.4 Calculation results, Long Term [Phase\_3] (3/28), Materials plot



**Materials plot**

### 1.1.2.1.1 Materials - Soil and interfaces - Mohr-Coulomb

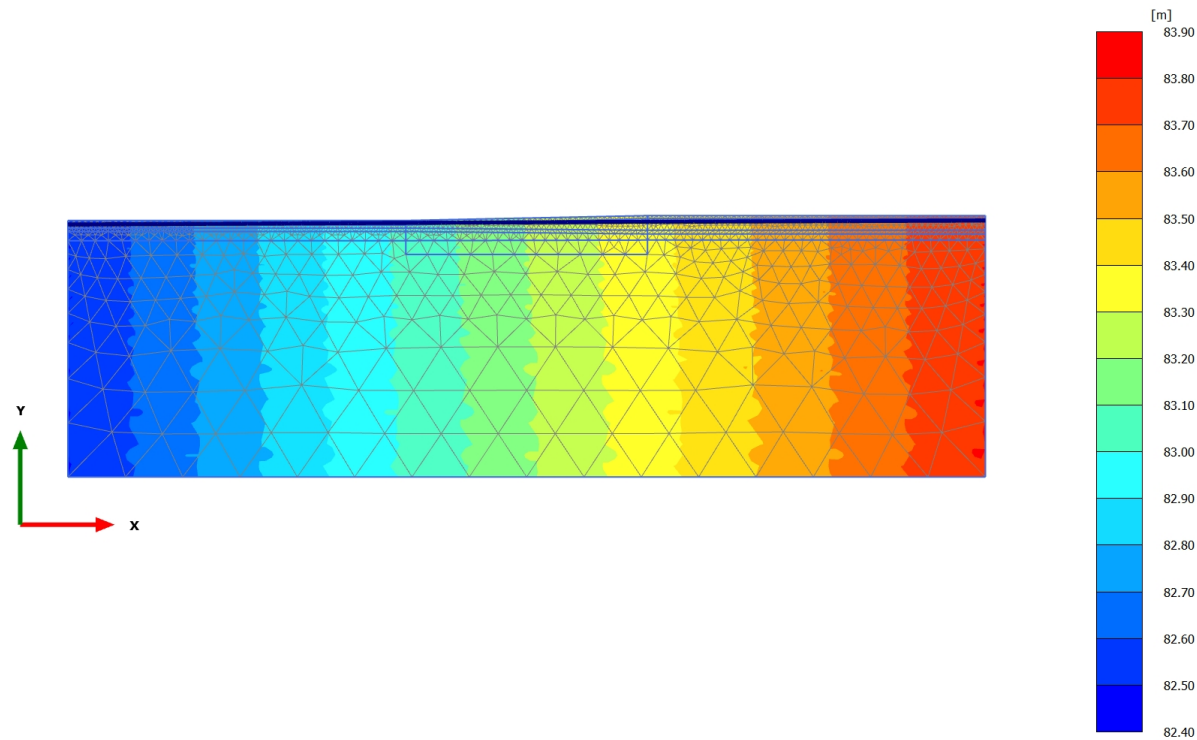
| Identification number |                   | 1                                                                                 | 2                                                                                   | 3                                                                                   | 4                                                                                   | 5                                                                                   |
|-----------------------|-------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Identification        |                   | Soil                                                                              | Class V                                                                             | Class IV                                                                            | Class III                                                                           | Class II                                                                            |
| Soil model            |                   | Mohr-Coulomb                                                                      | Mohr-Coulomb                                                                        | Mohr-Coulomb                                                                        | Mohr-Coulomb                                                                        | Mohr-Coulomb                                                                        |
| Drainage type         |                   | Drained                                                                           | Drained                                                                             | Drained                                                                             | Drained                                                                             | Drained                                                                             |
| Colour                |                   |  |  |  |  |  |
| Comments              |                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| y_unsat               | kN/m <sup>3</sup> | 18.00                                                                             | 24.00                                                                               | 24.00                                                                               | 24.00                                                                               | 24.00                                                                               |
| y_sat                 | kN/m <sup>3</sup> | 19.00                                                                             | 24.00                                                                               | 24.00                                                                               | 24.00                                                                               | 24.00                                                                               |
| e_init                |                   | 0.5000                                                                            | 0.5000                                                                              | 0.5000                                                                              | 0.5000                                                                              | 0.5000                                                                              |
| n_init                |                   | 0.3333                                                                            | 0.3333                                                                              | 0.3333                                                                              | 0.3333                                                                              | 0.3333                                                                              |
| Input method          |                   | SDOF equivalent                                                                   | SDOF equivalent                                                                     | SDOF equivalent                                                                     | SDOF equivalent                                                                     | SDOF equivalent                                                                     |
| Rayleigh $\alpha$     |                   | 0.000                                                                             | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               |
| Rayleigh $\beta$      |                   | 0.000                                                                             | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               |
| $\xi_1$               | %                 | 0.000                                                                             | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               |
| $\xi_2$               | %                 | 0.000                                                                             | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               |
| f_1                   | Hz                | 0.1000                                                                            | 0.1000                                                                              | 0.1000                                                                              | 0.1000                                                                              | 0.1000                                                                              |
| f_2                   | Hz                | 1.000                                                                             | 1.000                                                                               | 1.000                                                                               | 1.000                                                                               | 1.000                                                                               |
| E'_ref                | kN/m <sup>2</sup> | 20.00E3                                                                           | 200.0E3                                                                             | 200.0E3                                                                             | 200.0E3                                                                             | 200.0E3                                                                             |
| $\nu$ (nu)            |                   | 0.3000                                                                            | 0.3000                                                                              | 0.3000                                                                              | 0.3000                                                                              | 0.3000                                                                              |
| G_ref                 | kN/m <sup>2</sup> | 7692                                                                              | 76.92E3                                                                             | 76.92E3                                                                             | 76.92E3                                                                             | 76.92E3                                                                             |
| E_oed                 | kN/m <sup>2</sup> | 26.92E3                                                                           | 269.2E3                                                                             | 269.2E3                                                                             | 269.2E3                                                                             | 269.2E3                                                                             |

| Identification number |                      | 1                      | 2                      | 3                      | 4                      | 5                      |
|-----------------------|----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| E'_inc                | kN/m <sup>2</sup> /m | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| y_ref                 | m                    | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| V_s                   | m/s                  | 64.75                  | 177.3                  | 177.3                  | 177.3                  | 177.3                  |
| V_p                   | m/s                  | 121.1                  | 331.7                  | 331.7                  | 331.7                  | 331.7                  |
| c'_ref                | kN/m <sup>2</sup>    | 100.0                  | 100.0                  | 100.0                  | 100.0                  | 100.0                  |
| φ' (phi)              | °                    | 45.00                  | 45.00                  | 45.00                  | 45.00                  | 45.00                  |
| ψ (psi)               | °                    | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| c'_inc                | kN/m <sup>2</sup> /m | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| y_ref                 | m                    | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| Tension cut-off       |                      | True                   | True                   | True                   | True                   | True                   |
| Tensile strength      | kN/m <sup>2</sup>    | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| Determination         |                      | v-undrained definition | v-undrained definition | v-undrained definition | v-undrained definition | v-undrained definition |
| v_u definition method |                      | Direct                 | Direct                 | Direct                 | Direct                 | Direct                 |
| v_u, equivalent (nu)  |                      | 0.4950                 | 0.4950                 | 0.4950                 | 0.4950                 | 0.4950                 |
| Skempton B            |                      | 0.9783                 | 0.9783                 | 0.9783                 | 0.9783                 | 0.9783                 |
| K_w, ref/n            | kN/m <sup>2</sup>    | 750.0E3                | 7.500E6                | 7.500E6                | 7.500E6                | 7.500E6                |
| Classification type   |                      | Standard               | Standard               | Standard               | Standard               | Standard               |
| Soil class (Standard) |                      | Coarse                 | Coarse                 | Coarse                 | Coarse                 | Coarse                 |
| < 2 μm                | %                    | 10.00                  | 10.00                  | 10.00                  | 10.00                  | 10.00                  |
| 2 μm - 50 μm          | %                    | 13.00                  | 13.00                  | 13.00                  | 13.00                  | 13.00                  |
| 50 μm - 2 mm          | %                    | 77.00                  | 77.00                  | 77.00                  | 77.00                  | 77.00                  |
| Use defaults          |                      | False                  | False                  | False                  | False                  | False                  |
| k_x                   | m/day                | 0.03280                | 0.03280                | 0.03280                | 2.410E-3               | 2.410E-3               |
| k_y                   | m/day                | 0.03280                | 0.03280                | 0.03280                | 2.410E-3               | 2.410E-3               |

| Identification number     |                       | 1           | 2           | 3           | 4           | 5           |
|---------------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|
| Void ratio dependency     |                       | False       | False       | False       | False       | False       |
| c_k                       |                       | 1000E12     | 1000E12     | 1000E12     | 1000E12     | 1000E12     |
| n_init                    |                       | 0.3333      | 0.3333      | 0.3333      | 0.3333      | 0.3333      |
| -ψ_unsat                  | m                     | 10.00E3     | 10.00E3     | 10.00E3     | 10.00E3     | 10.00E3     |
| c_s                       | kJ/t/K                | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| λ_s                       | kW/m/K                | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| ρ_s                       | t/m <sup>3</sup>      | 2.600       | 2.600       | 2.600       | 2.600       | 2.600       |
| Thermal expansion type    |                       | Isotropic   | Isotropic   | Isotropic   | Isotropic   | Isotropic   |
| α_sv                      | 1/K                   | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| Phase change              |                       | False       | False       | False       | False       | False       |
| D_v                       | m <sup>2</sup> /day   | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| f_Tv                      |                       | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| Stiffness determination   |                       | Derived     | Derived     | Derived     | Derived     | Derived     |
| Strength determination    |                       | Rigid       | Rigid       | Rigid       | Rigid       | Rigid       |
| R_inter                   |                       | 1.000       | 1.000       | 1.000       | 1.000       | 1.000       |
| Consider gap closure      |                       | True        | True        | True        | True        | True        |
| Cross permeability        |                       | Impermeable | Impermeable | Impermeable | Impermeable | Impermeable |
| Drainage conductivity, dk | m <sup>3</sup> /day/m | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| R_thermal                 | m <sup>2</sup> K/kW   | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| K_0 determination         |                       | Automatic   | Automatic   | Automatic   | Automatic   | Automatic   |
| K_0,x                     |                       | 0.2929      | 0.2929      | 0.2929      | 0.2929      | 0.2929      |
| K_0,z                     |                       | 0.2929      | 0.2929      | 0.2929      | 0.2929      | 0.2929      |



### 2.1.1.1.1 Calculation results, Initial phase [InitialPhase] (0/0), Groundwater head

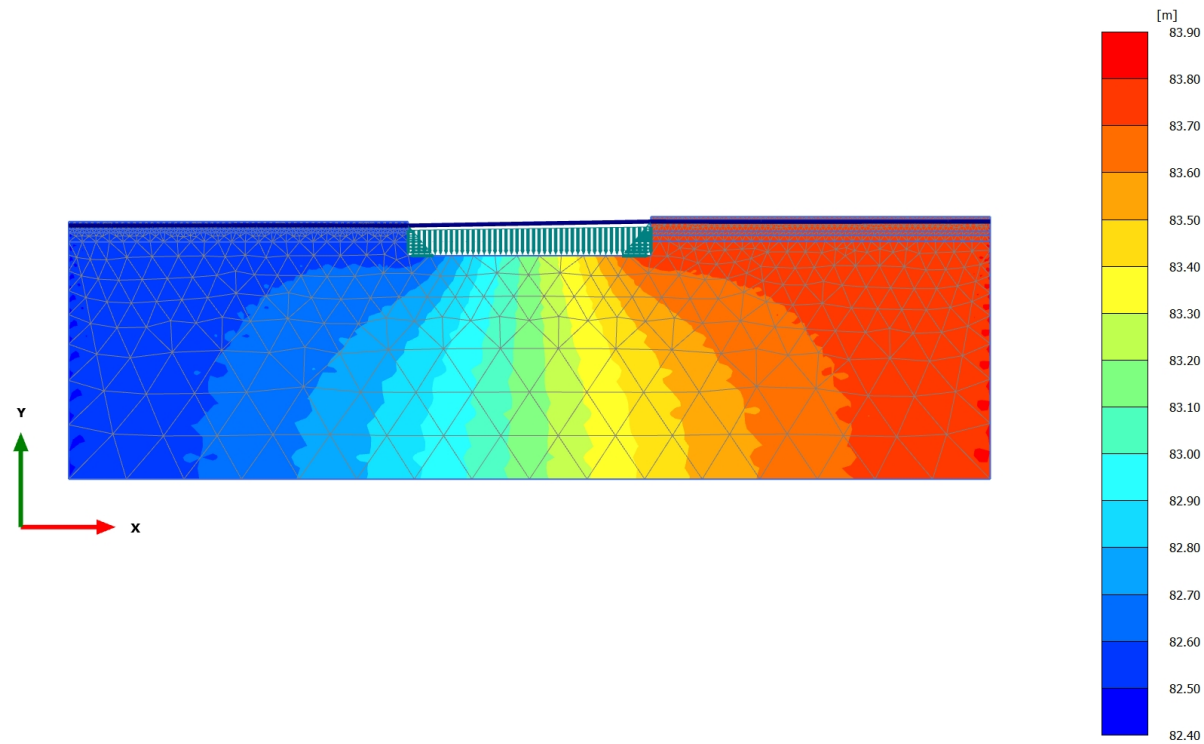


**Groundwater head (scaled up 0.100 times) (Time 0.000 day)**

Maximum value = 83.81 m (Element 2577 at Node 10608)

Minimum value = 82.49 m (Element 2582 at Node 22785)

## 2.1.1.1.2 Calculation results, Phase\_1 [Phase\_1] (1/1), Groundwater head

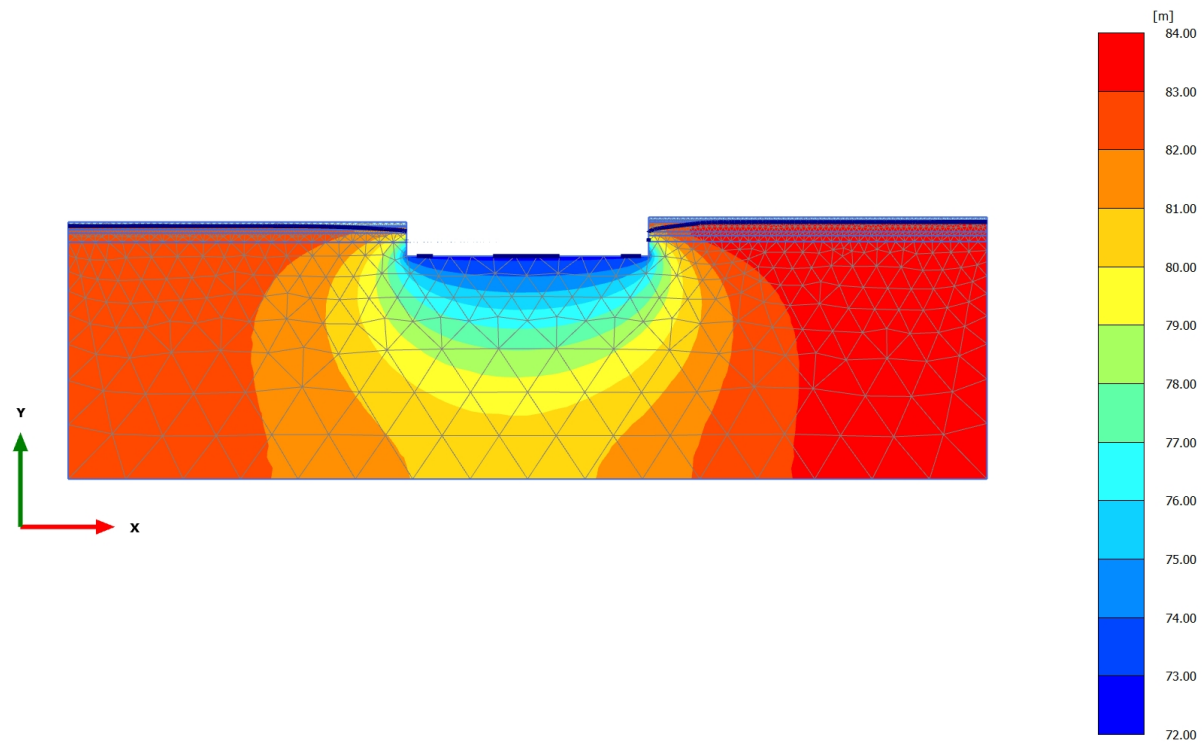


**Groundwater head (scaled up 0.100 times) (Time 0.000 day)**

Maximum value = 83.82 m (Element 2577 at Node 10608)

Minimum value = 82.49 m (Element 2582 at Node 22786)

### 2.1.1.1.3 Calculation results, Short Term [Phase\_2] (2/11), Groundwater head

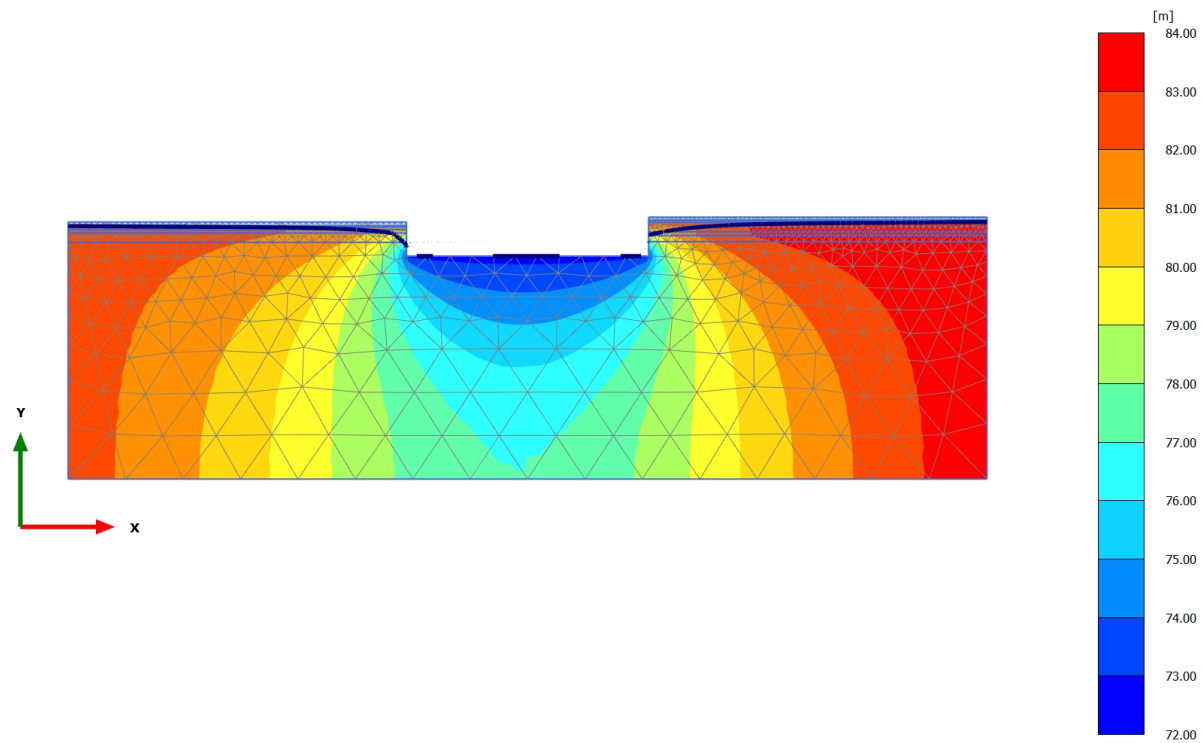


**Groundwater head (scaled up 0.100 times) (Time 1.000 day)**

Maximum value = 83.80 m (Element 2577 at Node 10607)

Minimum value = 72.69 m (Element 2850 at Node 13645)

#### 2.1.1.1.4 Calculation results, Long Term [Phase\_3] (3/28), Groundwater head

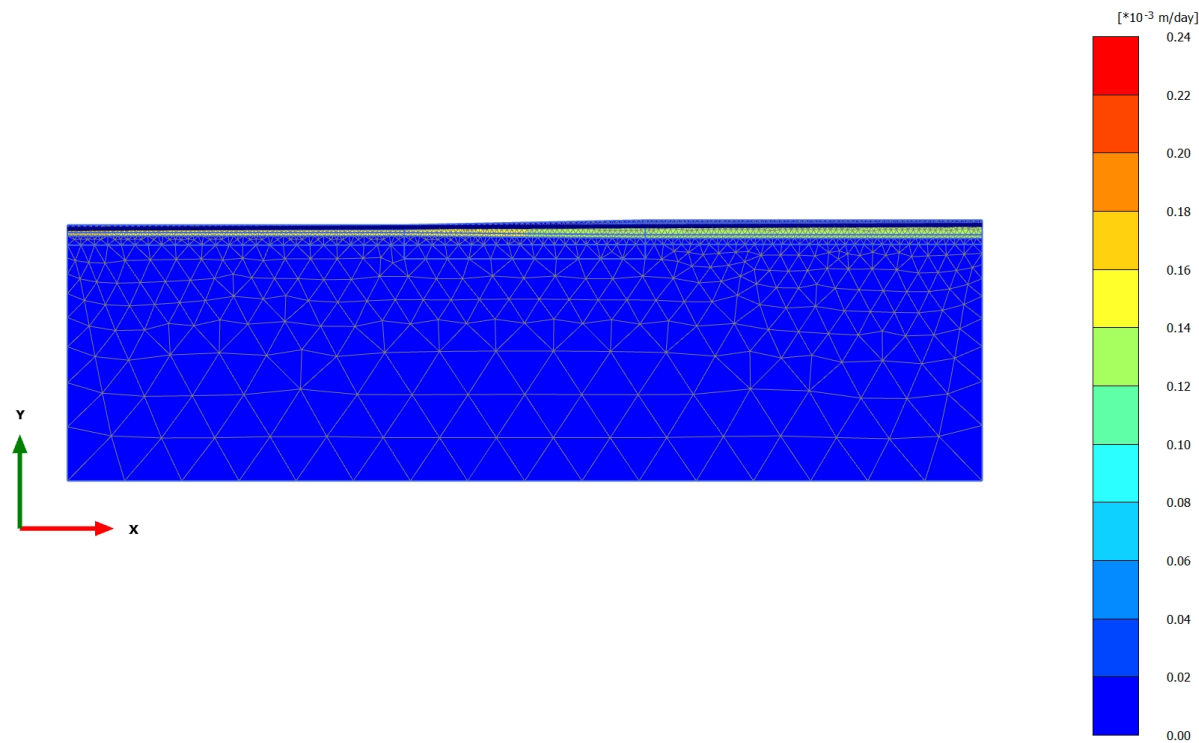


**Groundwater head (scaled up 0.100 times) (Time 101.0 day)**

Maximum value = 83.80 m (Element 2577 at Node 10607)

Minimum value = 72.69 m (Element 2850 at Node 13645)

### 2.1.2.1.1 Calculation results, Initial phase [InitialPhase] (0/0), Groundwater flow $|q|$



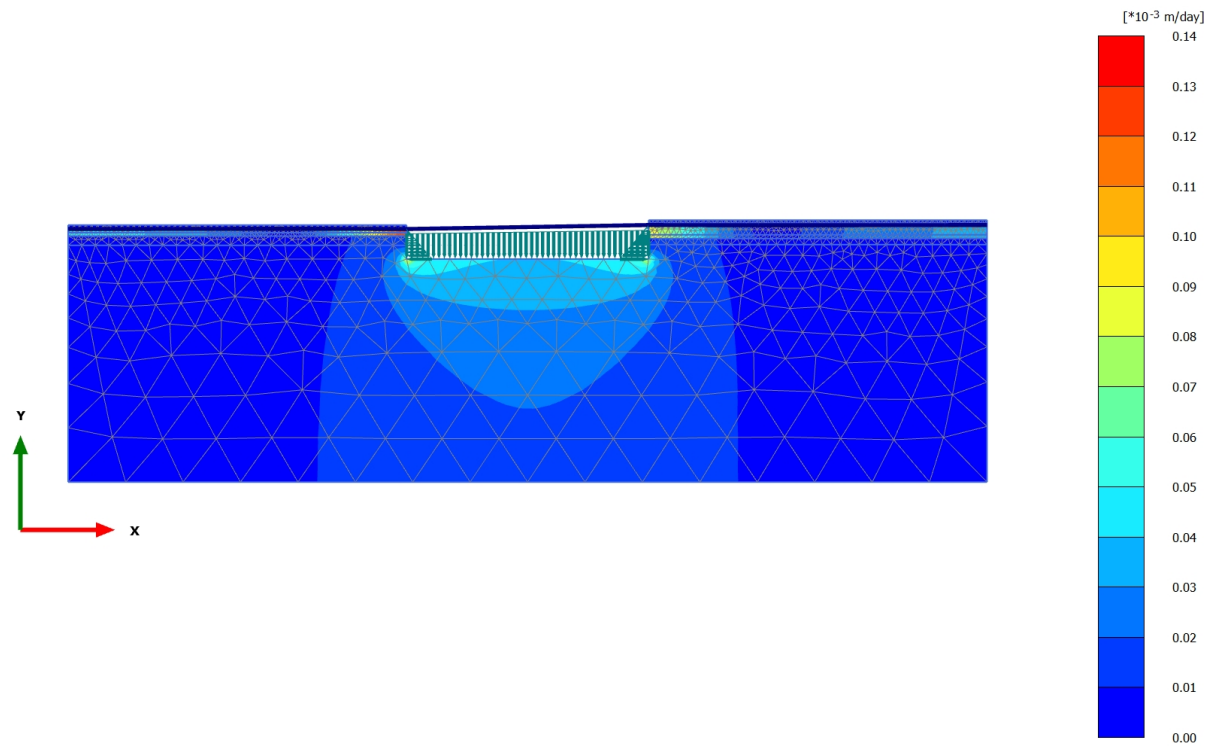
**Groundwater flow  $|q|$  (scaled up  $50.0 \cdot 10^3$  times) (Time 0.000 day)**

Maximum value =  $0.2362 \cdot 10^{-3}$  m/day (Element 436 at Node 14235)

Minimum value =  $1.418 \cdot 10^{-9}$  m/day (Element 204 at Node 7574)



## 2.1.2.1.2 Calculation results, Phase\_1 [Phase\_1] (1/1), Groundwater flow |q|

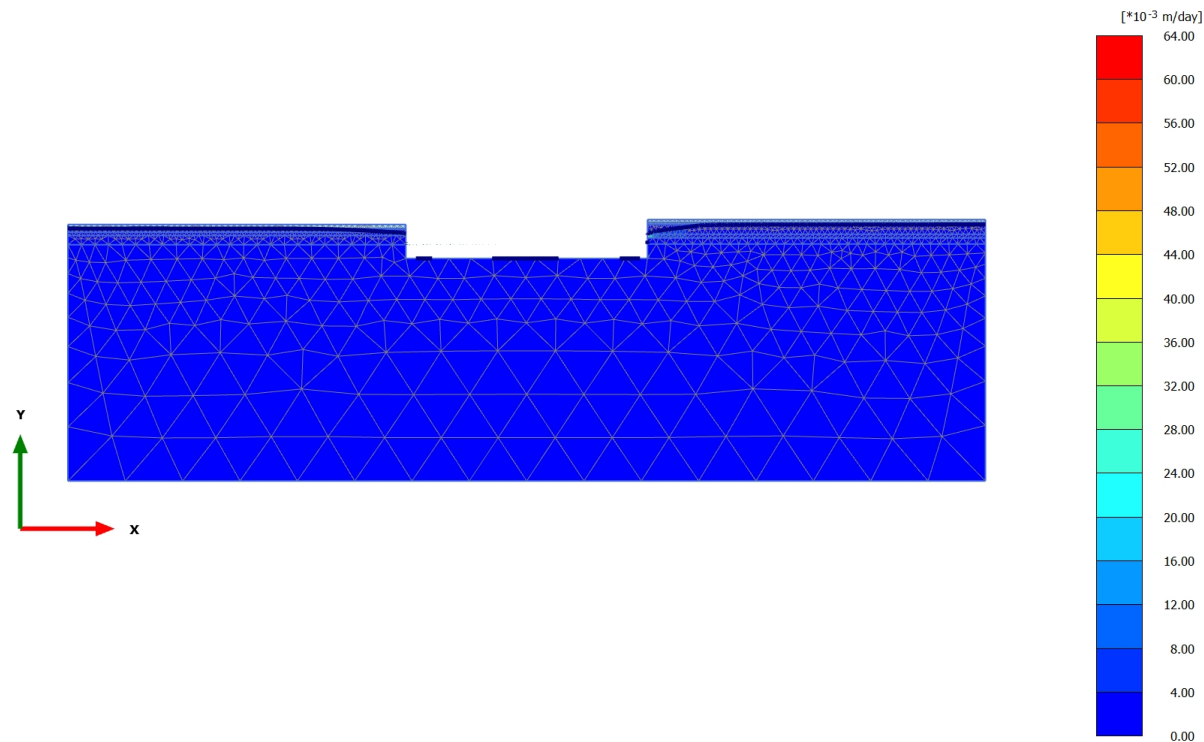


**Groundwater flow |q| (scaled up  $50.0 \cdot 10^3$  times) (Time 0.000 day)**

Maximum value =  $0.1331 \cdot 10^{-3}$  m/day (Element 971 at Node 13395)

Minimum value =  $3.317 \cdot 10^{-12}$  m/day (Element 46 at Node 2929)

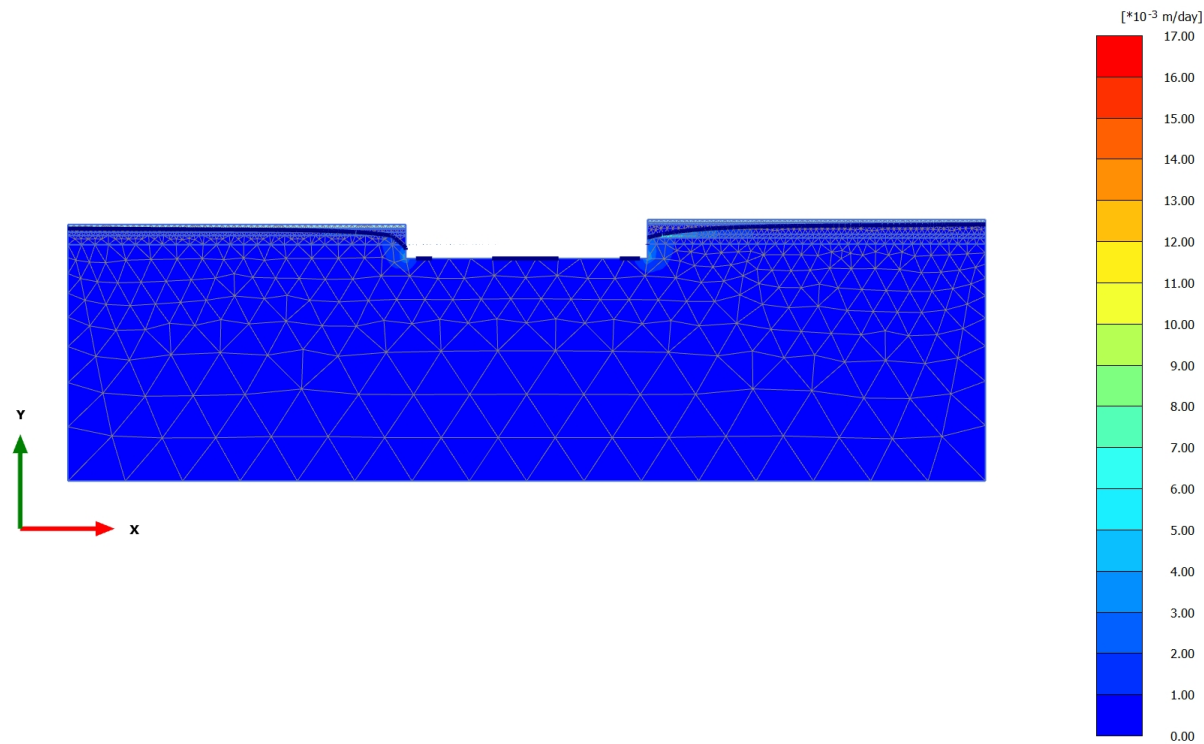
### 2.1.2.1.3 Calculation results, Short Term [Phase\_2] (2/11), Groundwater flow $|q|$



**Groundwater flow  $|q|$  (scaled up 200 times) (Time 1.000 day)**

Maximum value = 0.06115 m/day (Element 2168 at Node 11559)

Minimum value =  $2.966 \cdot 10^{-9}$  m/day (Element 824 at Node 24419)

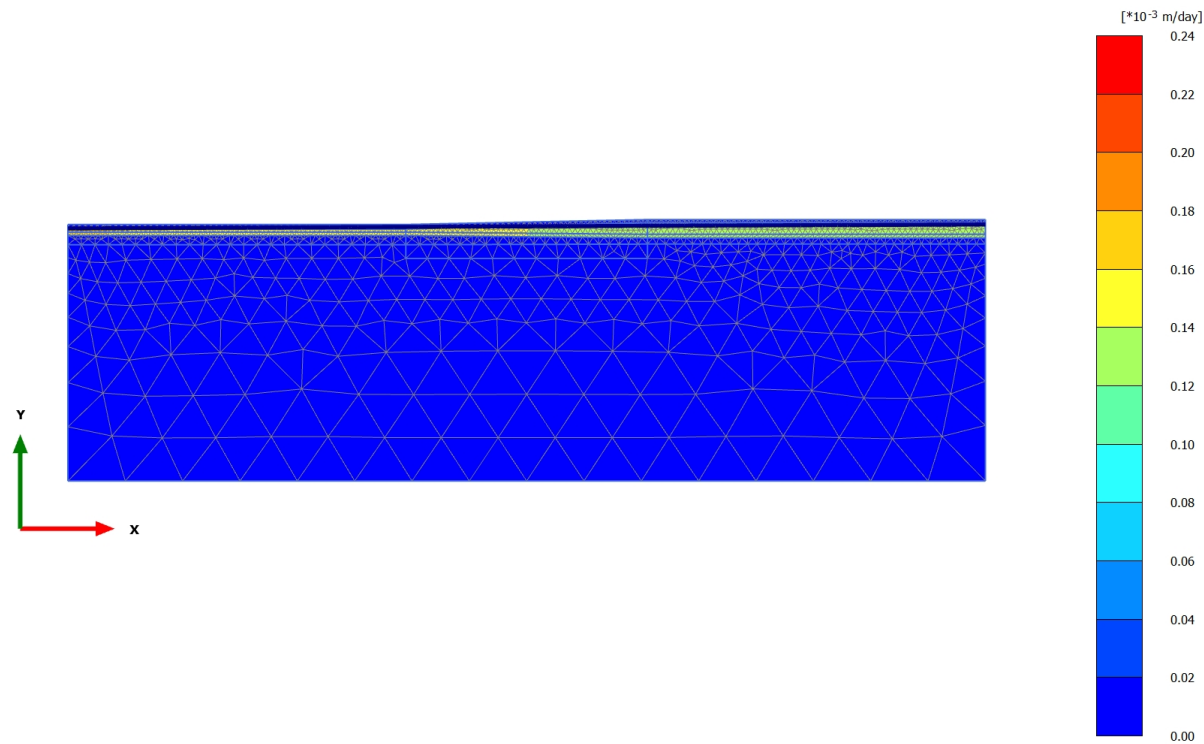
2.1.2.1.4 Calculation results, Long Term [Phase\_3] (3/28), Groundwater flow  $|q|$ 

**Groundwater flow  $|q|$  (scaled up 500 times) (Time 101.0 day)**

Maximum value = 0.01606 m/day (Element 2168 at Node 11559)

Minimum value =  $0.04237 \times 10^{-6}$  m/day (Element 1523 at Node 7636)

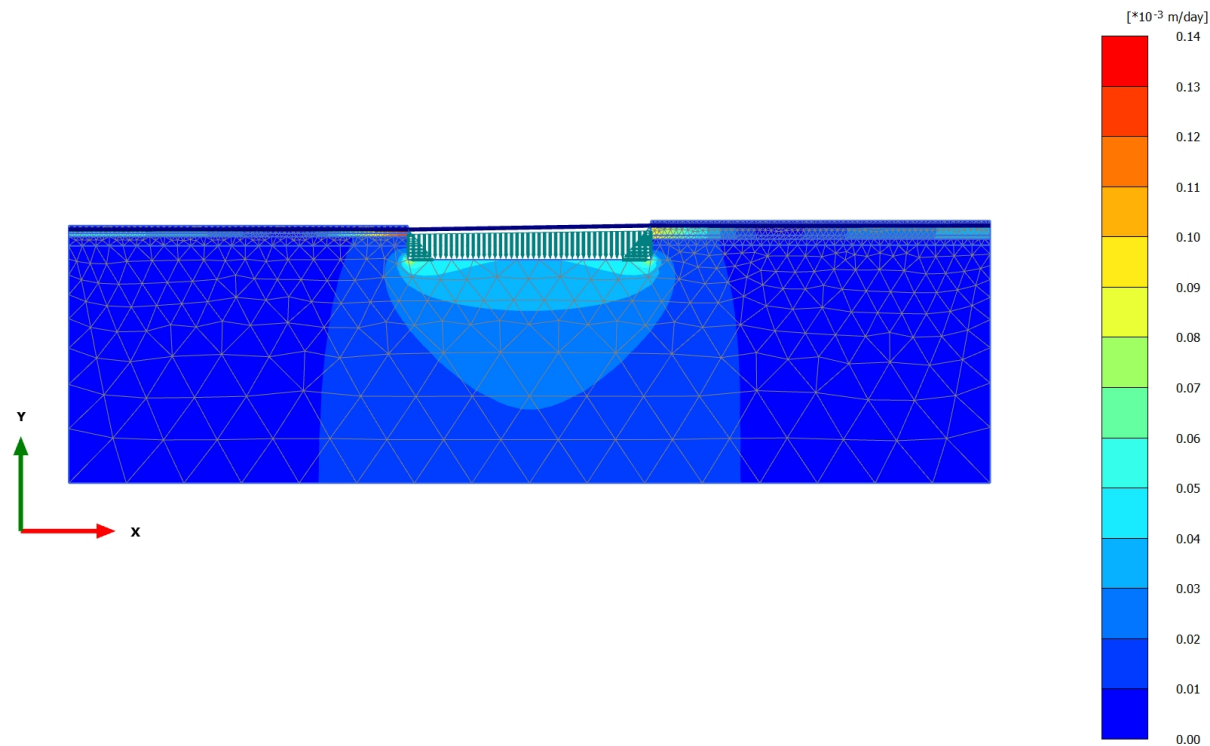
#### 4.1.1 Calculation results, Initial phase [InitialPhase] (0/0), Groundwater flow $|q|$



**Groundwater flow  $|q|$  (scaled up  $50.0 \times 10^3$  times) (Time 0.000 day)**

Maximum value =  $0.2362 \times 10^{-3}$  m/day (Element 436 at Node 14235)

Minimum value =  $1.418 \times 10^{-9}$  m/day (Element 204 at Node 7574)

4.1.2 Calculation results, Phase\_1 [Phase\_1] (1/1), Groundwater flow  $|q|$ 

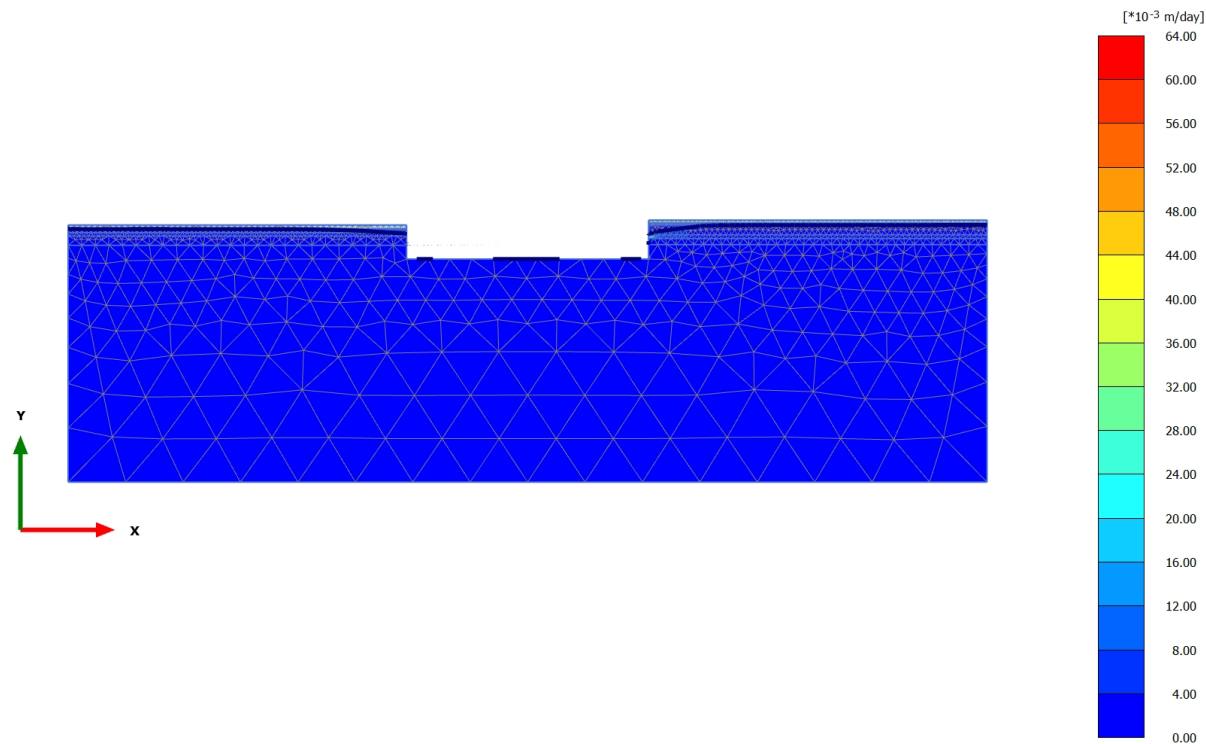
**Groundwater flow  $|q|$  (scaled up  $50.0 \times 10^3$  times) (Time 0.000 day)**

Maximum value =  $0.1331 \times 10^{-3}$  m/day (Element 971 at Node 13395)

Minimum value =  $3.317 \times 10^{-12}$  m/day (Element 46 at Node 2929)



### 4.1.3 Calculation results, Short Term [Phase\_2] (2/11), Groundwater flow |q|

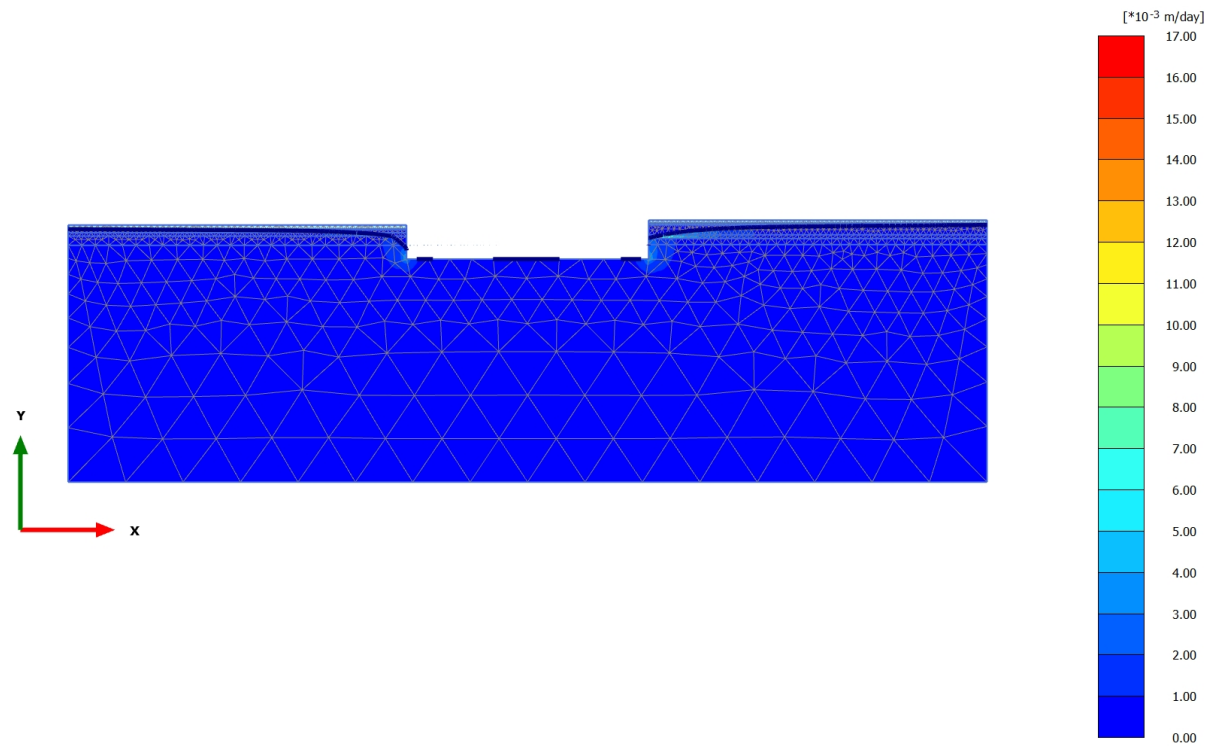


**Groundwater flow |q| (scaled up 200 times) (Time 1.000 day)**

Maximum value = 0.06115 m/day (Element 2168 at Node 11559)

Minimum value =  $2.966 \cdot 10^{-9}$  m/day (Element 824 at Node 24419)

#### 4.1.4 Calculation results, Long Term [Phase\_3] (3/28), Groundwater flow $|q|$



**Groundwater flow  $|q|$  (scaled up 500 times) (Time 101.0 day)**

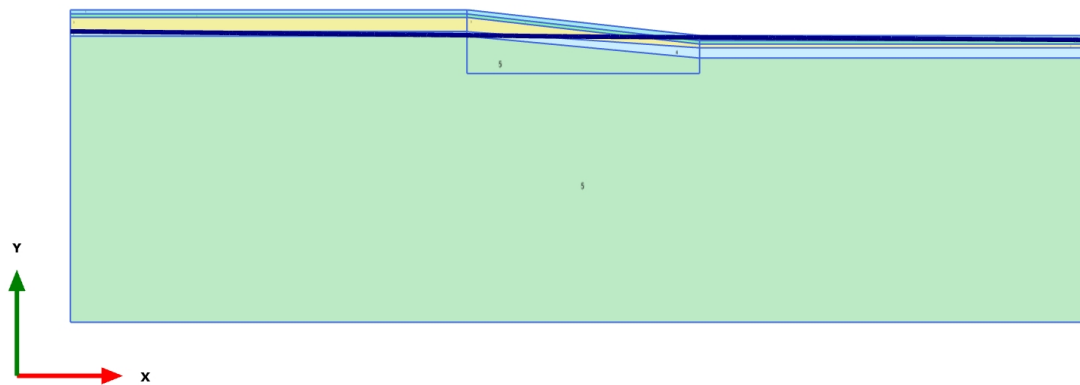
Maximum value = 0.01606 m/day (Element 2168 at Node 11559)

Minimum value =  $0.04237 \times 10^{-6}$  m/day (Element 1523 at Node 7636)

# PLAXIS Report

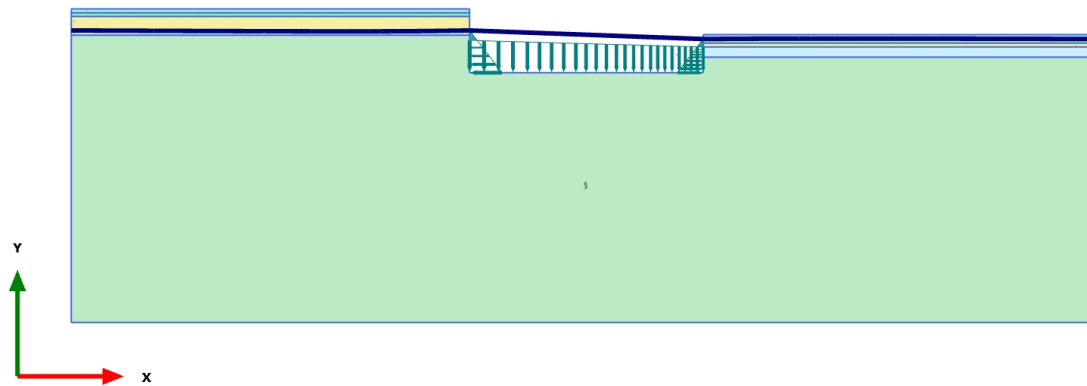
|                |                                                                                                                     |
|----------------|---------------------------------------------------------------------------------------------------------------------|
| Filename       | P3444_Lindfield_Section2(3BLGW).p2dx                                                                                |
| Directory      | C:\Users\Plaxis\Morrow Geotechnics\MG - Documents\1. Projects\P3400-P3499\P3444_Lindfield, LANDMARK\08_Groundwater\ |
| Title          | P3444_Lindfield_Section2(3BLGW)                                                                                     |
| Model          | Plane strain                                                                                                        |
| Elements       | 15-Noded                                                                                                            |
| PLAXIS Version | Version 2024.2.0.1144                                                                                               |

### 1.1.1.1 Calculation results, Initial phase [InitialPhase] (0/0), Materials plot



**Materials plot**

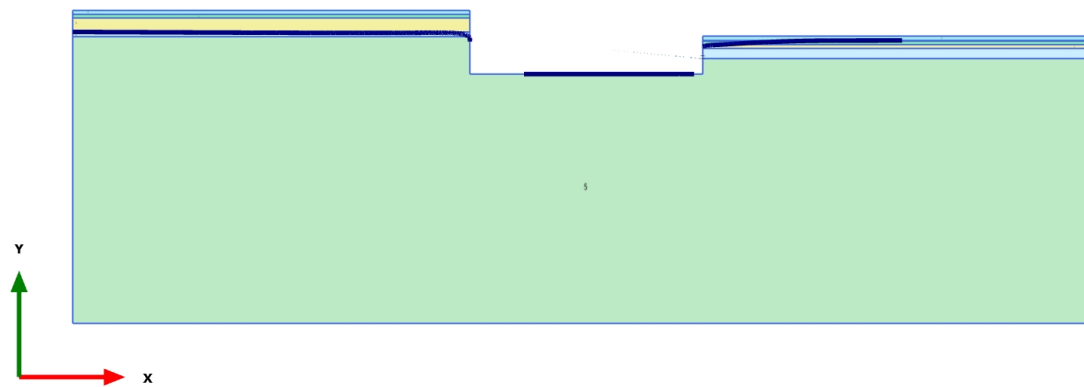
### 1.1.1.2 Calculation results, Phase\_1 [Phase\_1] (1 / 1), Materials plot



**Materials plot**

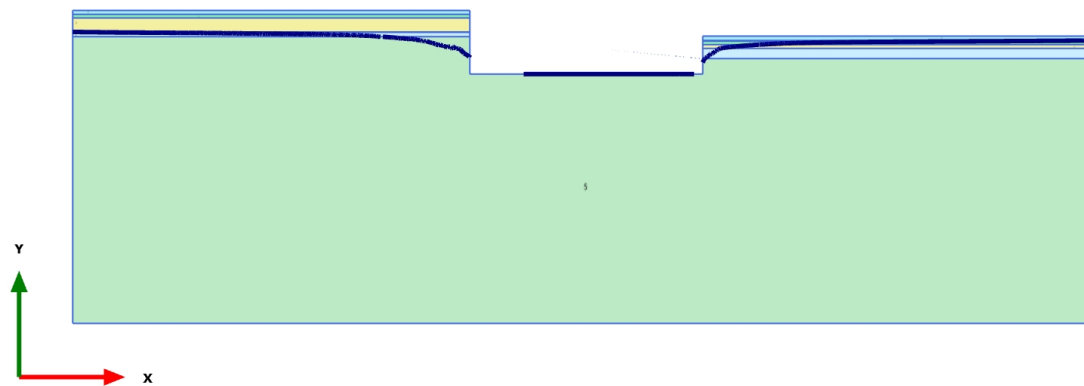


### 1.1.1.3 Calculation results, Short Term [Phase\_2] (2/11), Materials plot



**Materials plot**

#### 1.1.1.4 Calculation results, Long Term [Phase\_3] (3/29), Materials plot



**Materials plot**

### 1.1.2.1.1 Materials - Soil and interfaces - Mohr-Coulomb

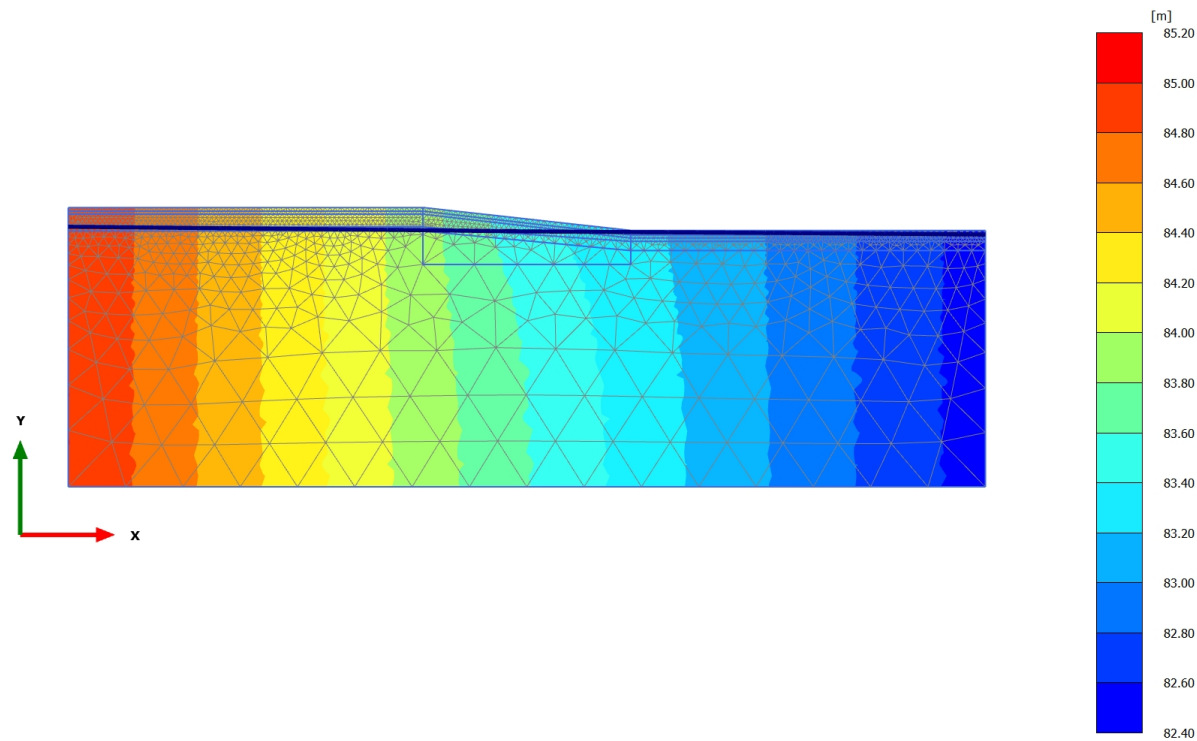
| Identification number |                   | 1                                                                                 | 2                                                                                   | 3                                                                                   | 4                                                                                   | 5                                                                                   |
|-----------------------|-------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Identification        |                   | Soil                                                                              | Class V                                                                             | Class IV                                                                            | Class III                                                                           | Class II                                                                            |
| Soil model            |                   | Mohr-Coulomb                                                                      | Mohr-Coulomb                                                                        | Mohr-Coulomb                                                                        | Mohr-Coulomb                                                                        | Mohr-Coulomb                                                                        |
| Drainage type         |                   | Drained                                                                           | Drained                                                                             | Drained                                                                             | Drained                                                                             | Drained                                                                             |
| Colour                |                   |  |  |  |  |  |
| Comments              |                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| y_unsat               | kN/m <sup>3</sup> | 18.00                                                                             | 24.00                                                                               | 24.00                                                                               | 24.00                                                                               | 24.00                                                                               |
| y_sat                 | kN/m <sup>3</sup> | 19.00                                                                             | 24.00                                                                               | 24.00                                                                               | 24.00                                                                               | 24.00                                                                               |
| e_init                |                   | 0.5000                                                                            | 0.5000                                                                              | 0.5000                                                                              | 0.5000                                                                              | 0.5000                                                                              |
| n_init                |                   | 0.3333                                                                            | 0.3333                                                                              | 0.3333                                                                              | 0.3333                                                                              | 0.3333                                                                              |
| Input method          |                   | SDOF equivalent                                                                   | SDOF equivalent                                                                     | SDOF equivalent                                                                     | SDOF equivalent                                                                     | SDOF equivalent                                                                     |
| Rayleigh $\alpha$     |                   | 0.000                                                                             | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               |
| Rayleigh $\beta$      |                   | 0.000                                                                             | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               |
| $\xi_1$               | %                 | 0.000                                                                             | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               |
| $\xi_2$               | %                 | 0.000                                                                             | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               | 0.000                                                                               |
| f_1                   | Hz                | 0.1000                                                                            | 0.1000                                                                              | 0.1000                                                                              | 0.1000                                                                              | 0.1000                                                                              |
| f_2                   | Hz                | 1.000                                                                             | 1.000                                                                               | 1.000                                                                               | 1.000                                                                               | 1.000                                                                               |
| E'_ref                | kN/m <sup>2</sup> | 20.00E3                                                                           | 200.0E3                                                                             | 200.0E3                                                                             | 200.0E3                                                                             | 200.0E3                                                                             |
| $\nu$ (nu)            |                   | 0.3000                                                                            | 0.4990                                                                              | 0.4990                                                                              | 0.3000                                                                              | 0.3000                                                                              |
| G_ref                 | kN/m <sup>2</sup> | 7692                                                                              | 66.71E3                                                                             | 66.71E3                                                                             | 76.92E3                                                                             | 76.92E3                                                                             |
| E_oed                 | kN/m <sup>2</sup> | 26.92E3                                                                           | 33.42E6                                                                             | 33.42E6                                                                             | 269.2E3                                                                             | 269.2E3                                                                             |

| Identification number |                      | 1                      | 2                      | 3                      | 4                      | 5                      |
|-----------------------|----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| E'_inc                | kN/m <sup>2</sup> /m | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| y_ref                 | m                    | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| V_s                   | m/s                  | 64.75                  | 165.1                  | 165.1                  | 177.3                  | 177.3                  |
| V_p                   | m/s                  | 121.1                  | 3696                   | 3696                   | 331.7                  | 331.7                  |
| c'_ref                | kN/m <sup>2</sup>    | 100.0                  | 100.0                  | 100.0                  | 100.0                  | 100.0                  |
| φ' (phi)              | °                    | 45.00                  | 45.00                  | 45.00                  | 45.00                  | 45.00                  |
| ψ (psi)               | °                    | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| c'_inc                | kN/m <sup>2</sup> /m | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| y_ref                 | m                    | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| Tension cut-off       |                      | True                   | True                   | True                   | True                   | True                   |
| Tensile strength      | kN/m <sup>2</sup>    | 0.000                  | 0.000                  | 0.000                  | 0.000                  | 0.000                  |
| Determination         |                      | v-undrained definition | v-undrained definition | v-undrained definition | v-undrained definition | v-undrained definition |
| v_u definition method |                      | Direct                 | Direct                 | Direct                 | Direct                 | Direct                 |
| v_u, equivalent (nu)  |                      | 0.4950                 | 0.4950                 | 0.4950                 | 0.4950                 | 0.4950                 |
| Skempton B            |                      | 0.9783                 | -4.013                 | -4.013                 | 0.9783                 | 0.9783                 |
| K_w, ref/n            | kN/m <sup>2</sup>    | 750.0E3                | -26.68E6               | -26.68E6               | 7.500E6                | 7.500E6                |
| Classification type   |                      | Standard               | Standard               | Standard               | Standard               | Standard               |
| Soil class (Standard) |                      | Coarse                 | Coarse                 | Coarse                 | Coarse                 | Coarse                 |
| < 2 μm                | %                    | 10.00                  | 10.00                  | 10.00                  | 10.00                  | 10.00                  |
| 2 μm - 50 μm          | %                    | 13.00                  | 13.00                  | 13.00                  | 13.00                  | 13.00                  |
| 50 μm - 2 mm          | %                    | 77.00                  | 77.00                  | 77.00                  | 77.00                  | 77.00                  |
| Use defaults          |                      | False                  | False                  | False                  | False                  | False                  |
| k_x                   | m/day                | 0.03280                | 0.03280                | 0.03280                | 2.410E-3               | 2.410E-3               |
| k_y                   | m/day                | 0.03280                | 0.03280                | 0.03280                | 2.410E-3               | 2.410E-3               |

| Identification number     |                       | 1           | 2           | 3           | 4           | 5           |
|---------------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|
| Void ratio dependency     |                       | False       | False       | False       | False       | False       |
| c_k                       |                       | 1000E12     | 1000E12     | 1000E12     | 1000E12     | 1000E12     |
| n_init                    |                       | 0.3333      | 0.3333      | 0.3333      | 0.3333      | 0.3333      |
| -ψ_unsat                  | m                     | 10.00E3     | 10.00E3     | 10.00E3     | 10.00E3     | 10.00E3     |
| c_s                       | kJ/t/K                | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| λ_s                       | kW/m/K                | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| ρ_s                       | t/m <sup>3</sup>      | 2.600       | 2.600       | 2.600       | 2.600       | 2.600       |
| Thermal expansion type    |                       | Isotropic   | Isotropic   | Isotropic   | Isotropic   | Isotropic   |
| α_sv                      | 1/K                   | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| Phase change              |                       | False       | False       | False       | False       | False       |
| D_v                       | m <sup>2</sup> /day   | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| f_Tv                      |                       | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| Stiffness determination   |                       | Derived     | Derived     | Derived     | Derived     | Derived     |
| Strength determination    |                       | Rigid       | Rigid       | Rigid       | Rigid       | Rigid       |
| R_inter                   |                       | 1.000       | 1.000       | 1.000       | 1.000       | 1.000       |
| Consider gap closure      |                       | True        | True        | True        | True        | True        |
| Cross permeability        |                       | Impermeable | Impermeable | Impermeable | Impermeable | Impermeable |
| Drainage conductivity, dk | m <sup>3</sup> /day/m | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| R_thermal                 | m <sup>2</sup> K/kW   | 0.000       | 0.000       | 0.000       | 0.000       | 0.000       |
| K_0 determination         |                       | Automatic   | Automatic   | Automatic   | Automatic   | Automatic   |
| K_0,x                     |                       | 0.2929      | 0.2929      | 0.2929      | 0.2929      | 0.2929      |
| K_0,z                     |                       | 0.2929      | 0.2929      | 0.2929      | 0.2929      | 0.2929      |



### 2.1.1.1.1 Calculation results, Initial phase [InitialPhase] (0/0), Groundwater head

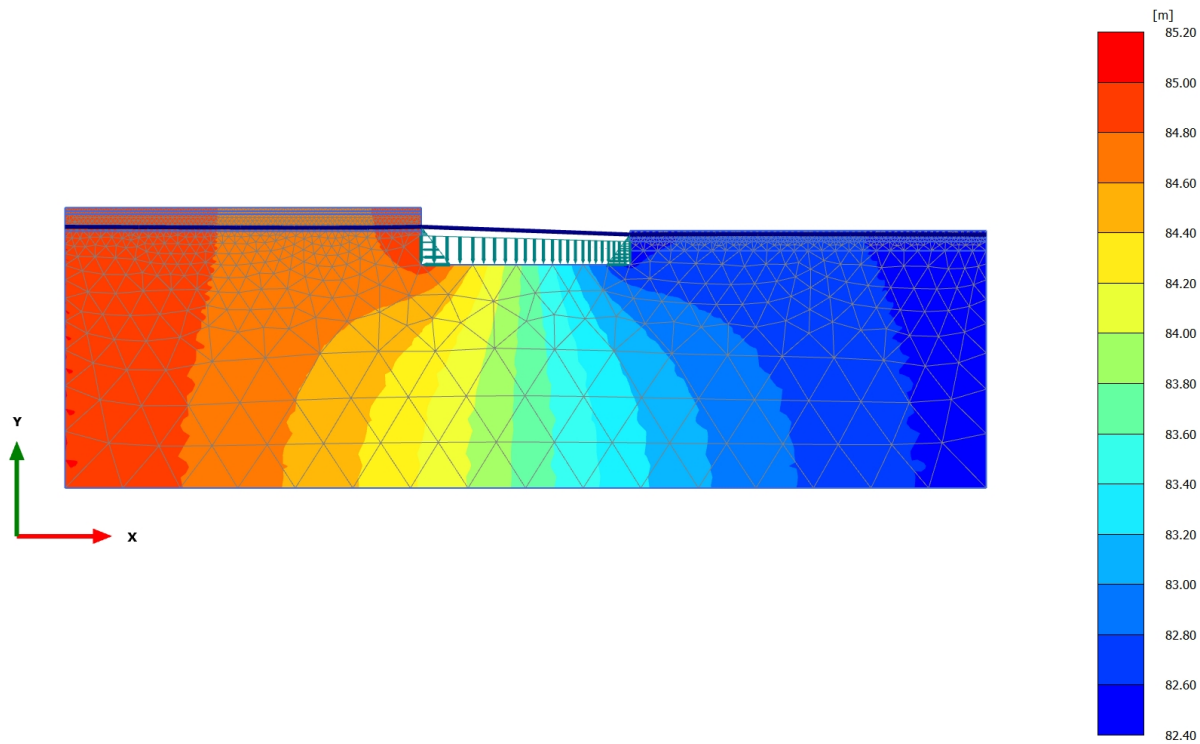


**Groundwater head (scaled up 0.100 times) (Time 0.000 day)**

Maximum value = 85.00 m (Element 2929 at Node 13599)

Minimum value = 82.49 m (Element 2945 at Node 27049)

## 2.1.1.1.2 Calculation results, Phase\_1 [Phase\_1] (1/1), Groundwater head

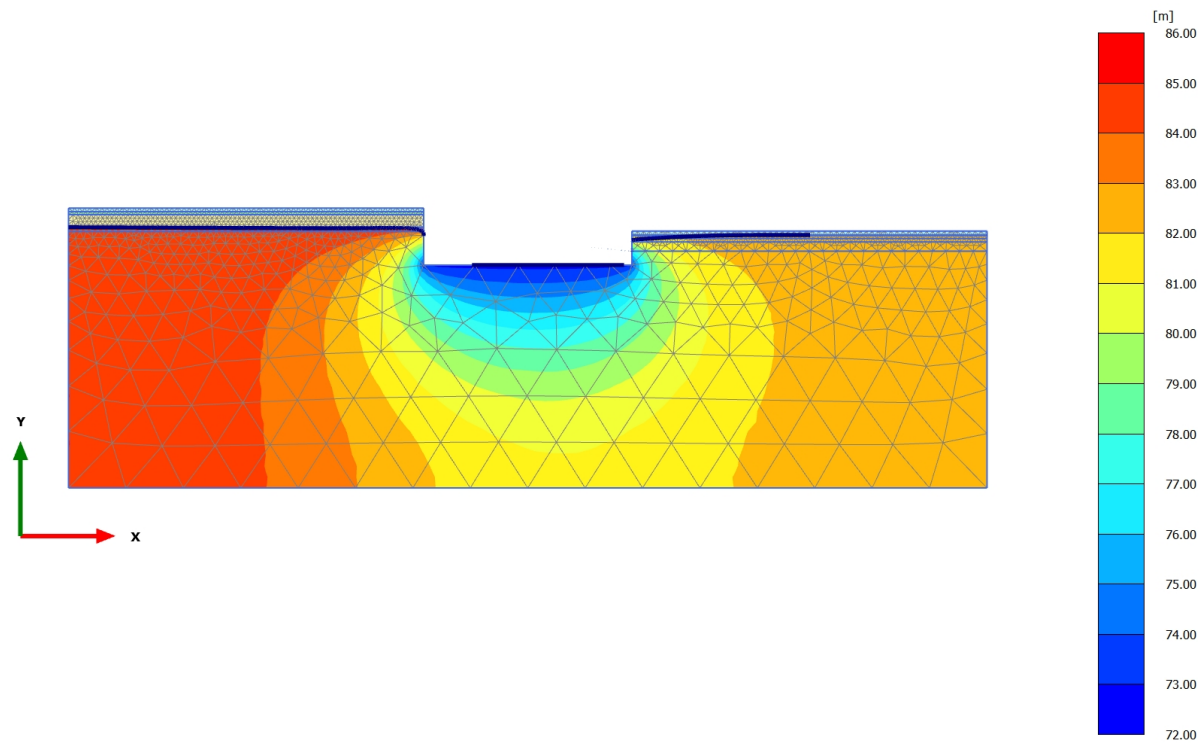


**Groundwater head (scaled up 0.100 times) (Time 0.000 day)**

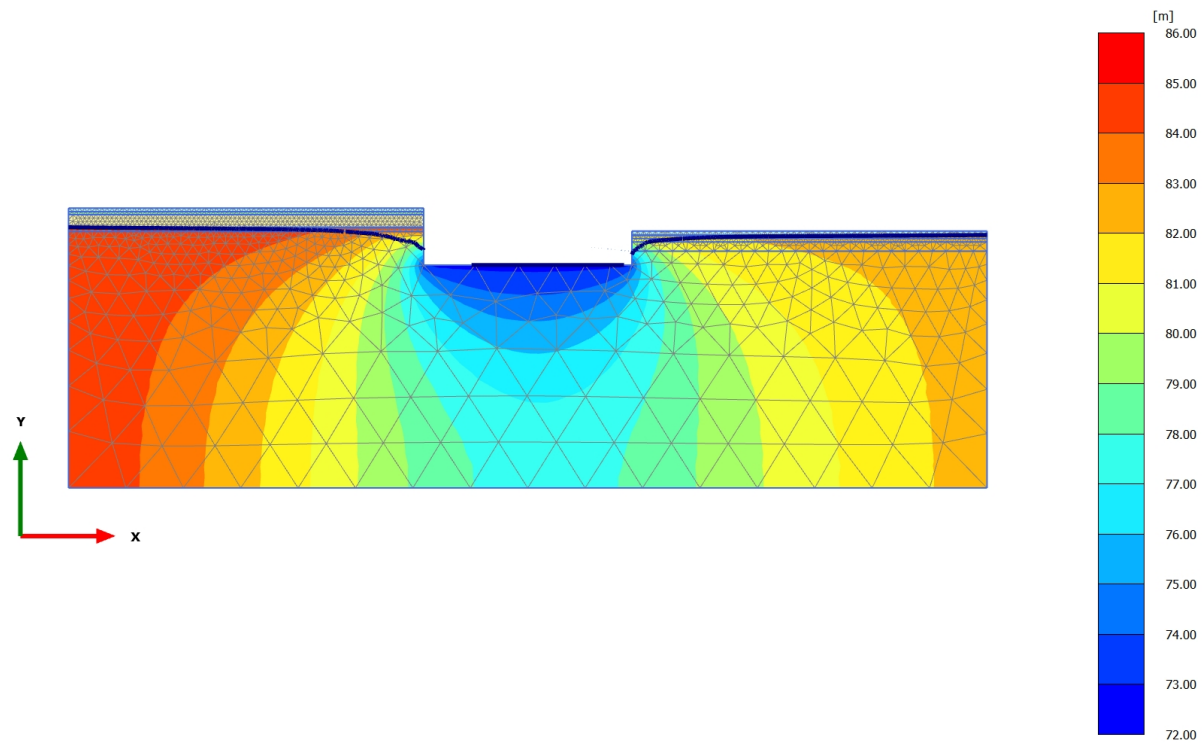
Maximum value = 85.01 m (Element 2929 at Node 13603)

Minimum value = 82.49 m (Element 2945 at Node 27049)

### 2.1.1.1.3 Calculation results, Short Term [Phase\_2] (2/11), Groundwater head



#### 2.1.1.1.4 Calculation results, Long Term [Phase\_3] (3/29), Groundwater head

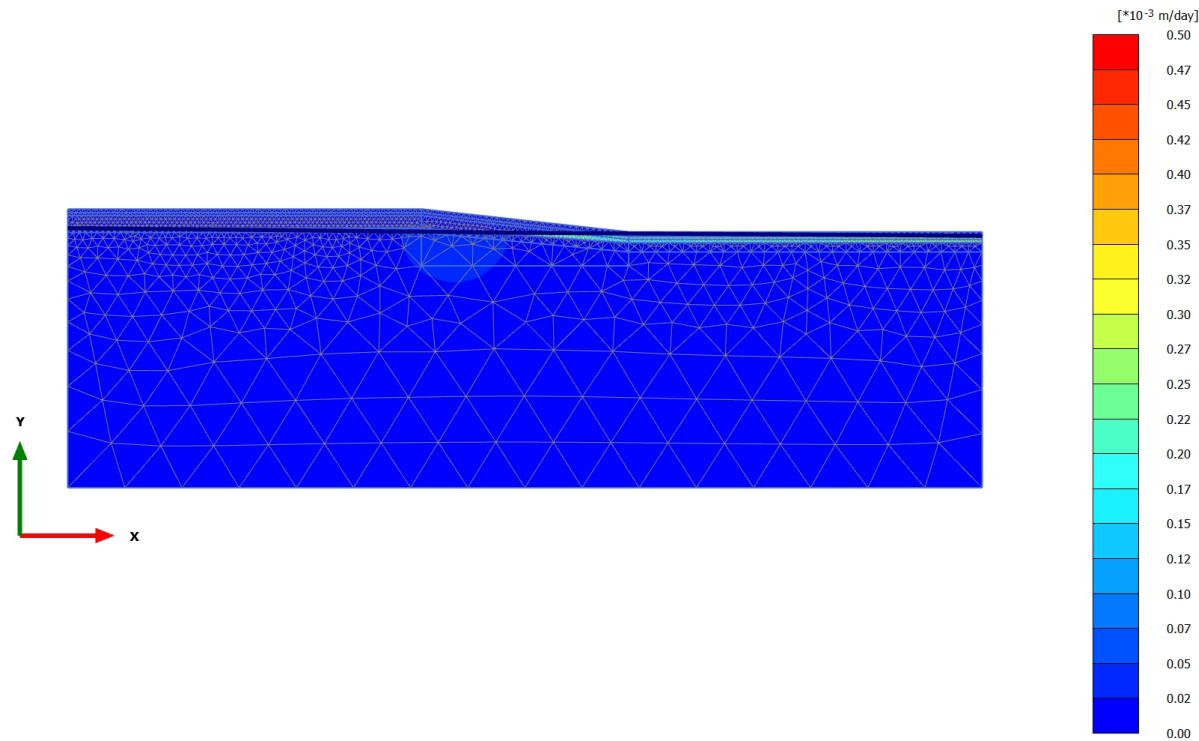


**Groundwater head (scaled up 0.100 times) (Time 101.0 day)**

Maximum value = 85.00 m (Element 2929 at Node 13599)

Minimum value = 72.69 m (Element 3117 at Node 22813)

### 2.1.2.1.1 Calculation results, Initial phase [InitialPhase] (0/0), Groundwater flow $|q|$

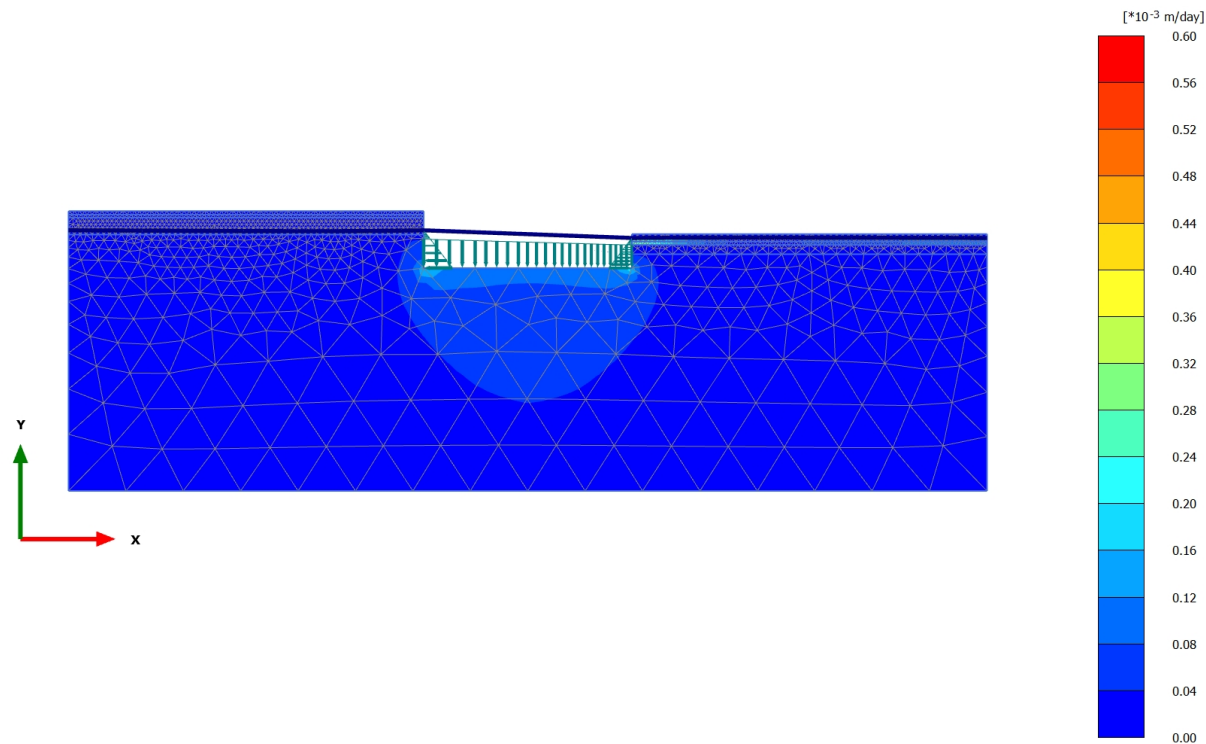


**Groundwater flow  $|q|$  (scaled up  $20.0 \times 10^3$  times) (Time 0.000 day)**

Maximum value =  $0.4841 \times 10^{-3}$  m/day (Element 1553 at Node 18014)

Minimum value =  $3.724 \times 10^{-12}$  m/day (Element 64 at Node 131)



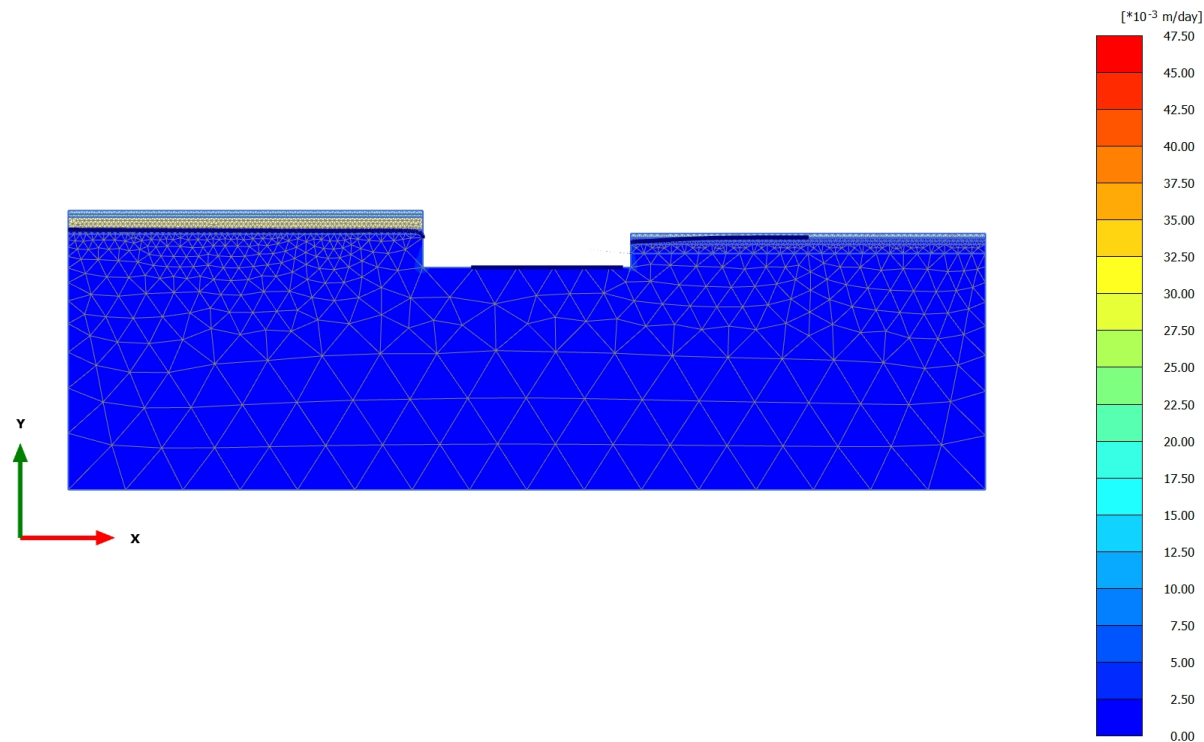
2.1.2.1.2 Calculation results, Phase\_1 [Phase\_1] (1/1), Groundwater flow  $|q|$ 

**Groundwater flow  $|q|$  (scaled up  $20.0 \cdot 10^3$  times) (Time 0.000 day)**

Maximum value =  $0.5900 \cdot 10^{-3}$  m/day (Element 1355 at Node 15007)

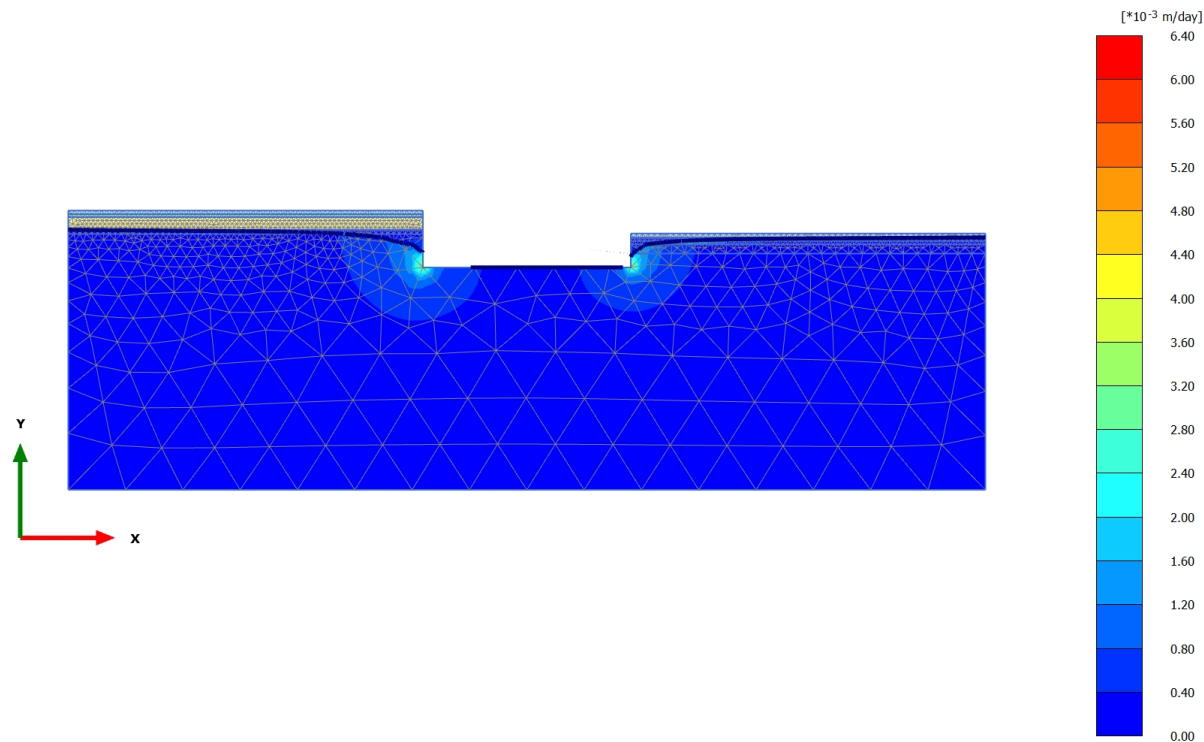
Minimum value =  $1.861 \cdot 10^{-12}$  m/day (Element 64 at Node 131)

### 2.1.2.1.3 Calculation results, Short Term [Phase\_2] (2/11), Groundwater flow $|q|$

**Groundwater flow  $|q|$  (scaled up 200 times) (Time 1.000 day)**

Maximum value = 0.04579 m/day (Element 2691 at Node 21231)

Minimum value =  $3.780 \times 10^{-9}$  m/day (Element 2776 at Node 28851)

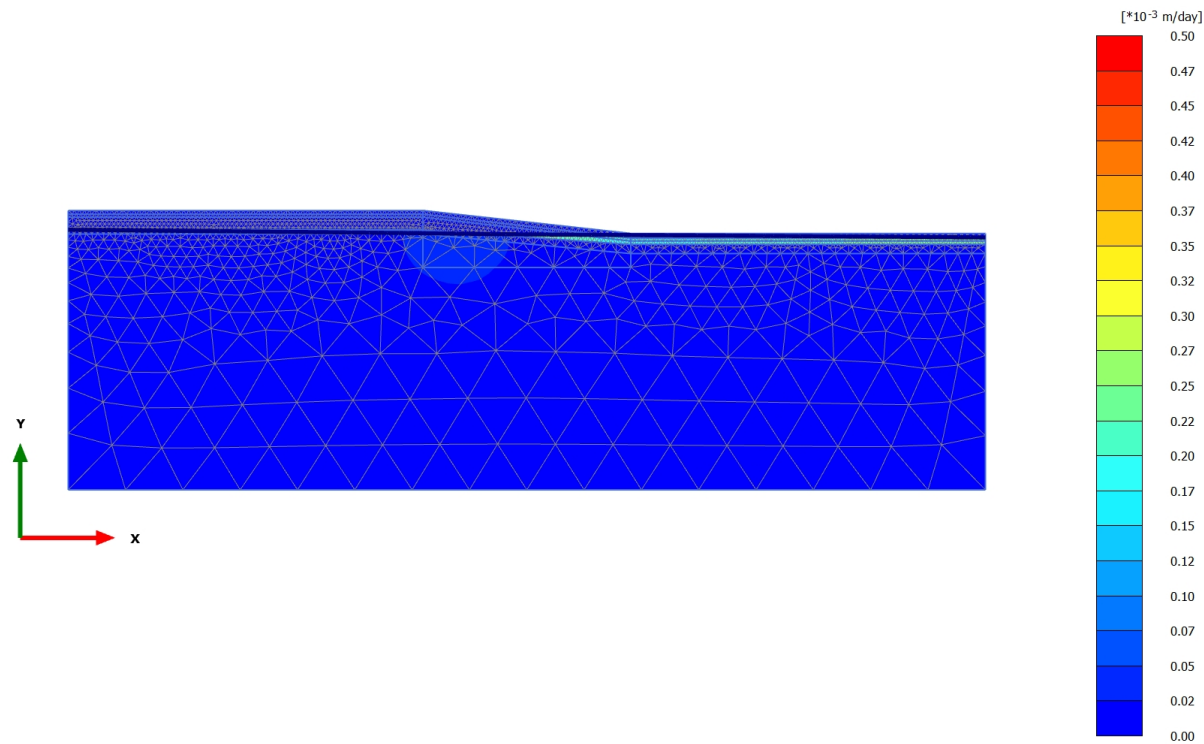
2.1.2.1.4 Calculation results, Long Term [Phase\_3] (3/29), Groundwater flow  $|q|$ 

**Groundwater flow  $|q|$  (scaled up  $2.00 \times 10^3$  times) (Time 101.0 day)**

Maximum value =  $6.005 \times 10^{-3}$  m/day (Element 2610 at Node 21283)

Minimum value =  $9.891 \times 10^{-9}$  m/day (Element 2011 at Node 17272)

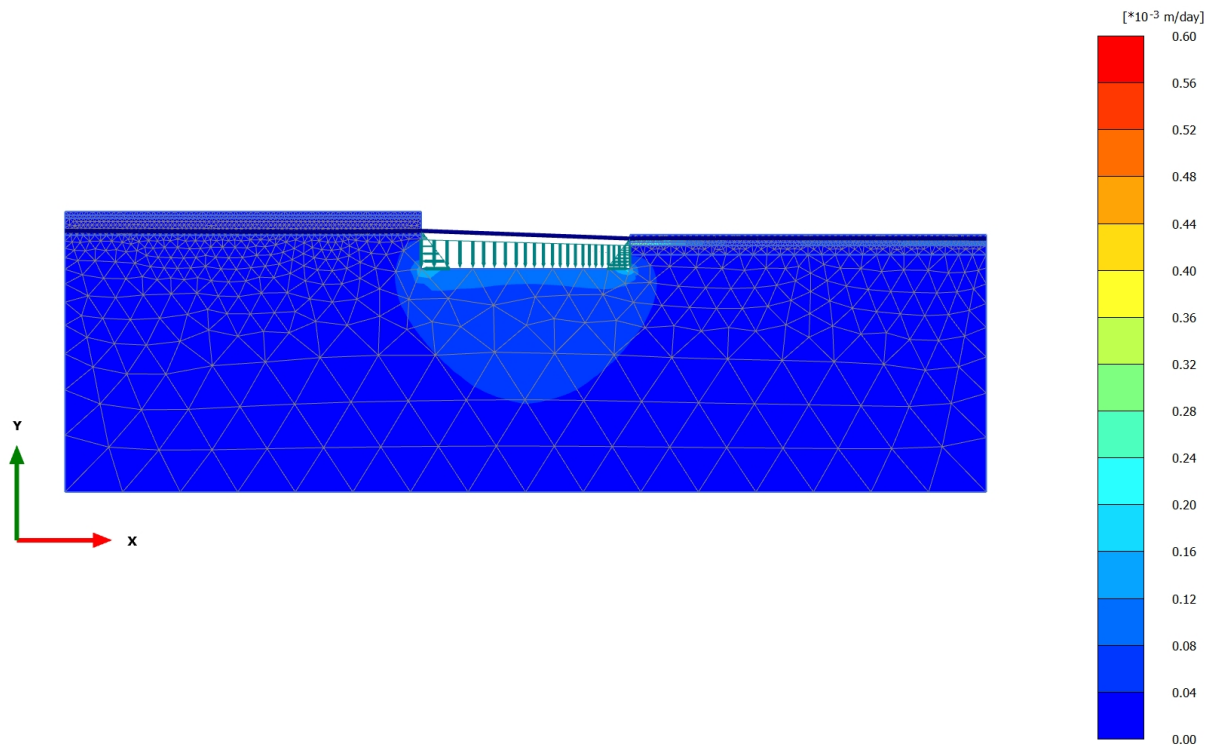
#### 4.1.1 Calculation results, Initial phase [InitialPhase] (0/0), Groundwater flow $|q|$



**Groundwater flow  $|q|$  (scaled up  $20.0 \times 10^3$  times) (Time 0.000 day)**

Maximum value =  $0.4841 \times 10^{-3}$  m/day (Element 1553 at Node 18014)

Minimum value =  $3.724 \times 10^{-12}$  m/day (Element 64 at Node 131)

4.1.2 Calculation results, Phase\_1 [Phase\_1] (1 / 1), Groundwater flow  $|q|$ 

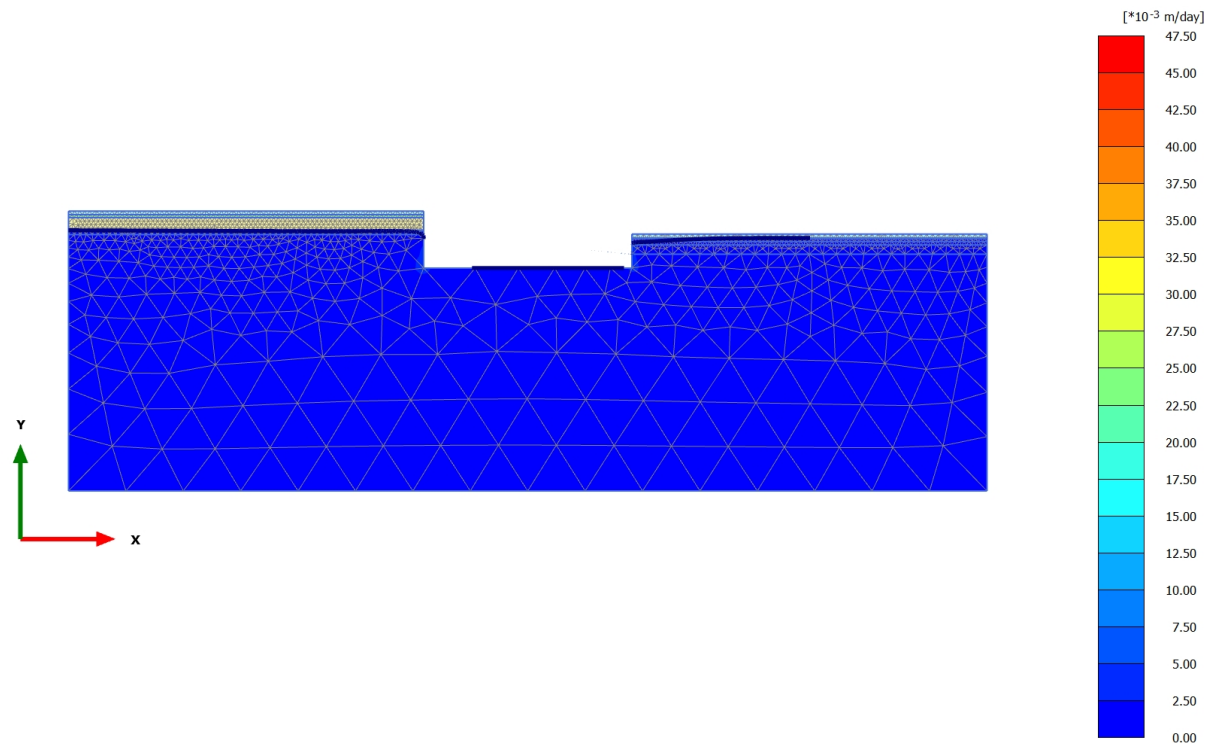
**Groundwater flow  $|q|$  (scaled up  $20.0 \times 10^3$  times) (Time 0.000 day)**

Maximum value =  $0.5900 \times 10^{-3} \text{ m/day}$  (Element 1355 at Node 15007)

Minimum value =  $1.861 \times 10^{-12} \text{ m/day}$  (Element 64 at Node 131)



### 4.1.3 Calculation results, Short Term [Phase\_2] (2/11), Groundwater flow |q|

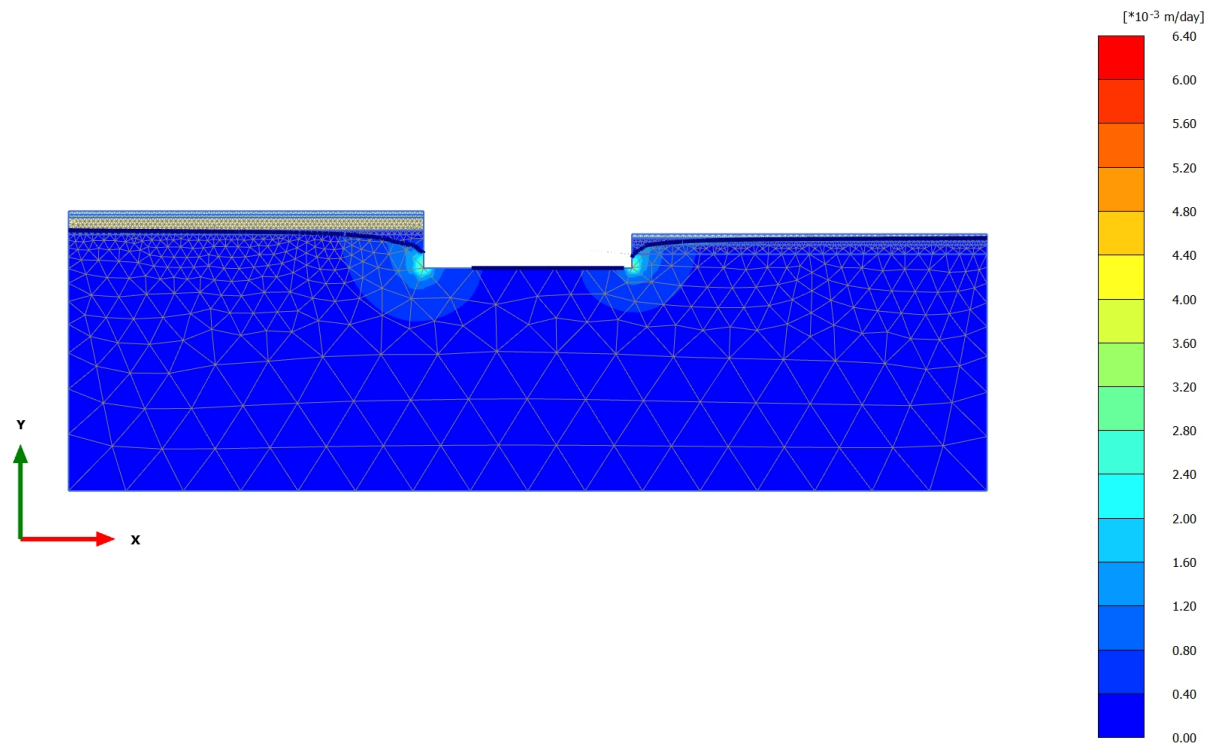


**Groundwater flow |q| (scaled up 200 times) (Time 1.000 day)**

Maximum value = 0.04579 m/day (Element 2691 at Node 21231)

Minimum value = 3.780\*10<sup>-9</sup> m/day (Element 2776 at Node 28851)

#### 4.1.4 Calculation results, Long Term [Phase\_3] (3/29), Groundwater flow $|q|$



**Groundwater flow  $|q|$  (scaled up  $2.00 \times 10^3$  times) (Time 101.0 day)**

Maximum value =  $6.005 \times 10^{-3}$  m/day (Element 2610 at Node 21283)

Minimum value =  $9.891 \times 10^{-9}$  m/day (Element 2011 at Node 17272)

## **APPENDIX C**

# **RECORD OF GROUNDWATER TAKE UNDER EXEMPTION**

# Annual record of groundwater take

Reporting form for aquifer interference activities under a water access licence exemption.

## When to use this form

Use this form to record and report groundwater taken through aquifer interference activities when claiming either of the following **water access licence exemptions**:

- aquifer interference activities taking up to 3 ML per water year per groundwater source
- excavation dewatering within the Botany Sands Groundwater Source taking over 3 ML per water year.

These exemptions are established under Clauses 7 and 17A of Schedule 4, and 21(6), 230(5) and 231(6) of the Water Management (General) Regulation 2018.

To claim either of the exemptions, you must meet the record-keeping and reporting requirements set out in the Water Management (General) Regulation 2018 and in this form. You must also have all other required approvals and authorisations in place and be compliant with them. This record is in addition to any record-making and reporting requirements of any other approvals or authorisations you may hold for your project.

**You will need to complete and submit a separate form for each authorised project and each groundwater source you take water from every year until your project ends.**

If you have taken more than 3 ML of groundwater during an aquifer interference activity in any water source other than the Botany Sands Groundwater Source, you are not eligible for a water access licence exemption. Please contact WaterNSW for assistance.

## Information needed to complete this form

- details of your activity and project, and the locations where groundwater is taken
- related approvals (e.g. work or development approvals, exploration licences)
- details of the meter used to record take **or** the method used to estimate take
- records of groundwater volumes taken throughout the water year.

## Returning completed forms

Completed forms can be submitted as soon as an activity ends, but you must submit your form within 28 days of the end of each water year (that is by 29 July).

Please return your completed form/s to:

- **WaterNSW customers**  
[Customer.Helpdesk@waternsw.com.au](mailto:Customer.Helpdesk@waternsw.com.au) / PO Box 398 Parramatta NSW 2124
- **Department customers**  
[nrar.enquiries@nrar.nsw.gov.au](mailto:nrar.enquiries@nrar.nsw.gov.au) / Locked Bag 5022, Parramatta NSW 2124

## Where to get help

Further information is available at:

- **WaterNSW** / 1300 662 077 / [Customer.Helpdesk@waternsw.com.au](mailto:Customer.Helpdesk@waternsw.com.au)  
[www.waternsw.com.au/customer-service/water-licensing/dewatering](http://www.waternsw.com.au/customer-service/water-licensing/dewatering)
- **Department** / 1800 633 362 / [nrar.enquiries@nrar.nsw.gov.au](mailto:nrar.enquiries@nrar.nsw.gov.au)  
[water.dpie.nsw.gov.au/licensing-and-trade](http://water.dpie.nsw.gov.au/licensing-and-trade)

## How to complete and submit this form

Information about how to complete and submit this form is on the first and last two form pages.

## Section A – Exemption claimed

- Exemption claimed**
- ☐ Aquifer interference activity taking up to 3 ML per water year per groundwater source
- ☐ Excavation dewatering within the Botany Sands Groundwater Source taking over 3 ML per water year

## Total annual volume of groundwater taken under the exemption

Record the water year that applies to this annual record and the total volume of groundwater that was taken for the authorised project under the applying exemption in that water year.

Water year  
(1 July –  
30 June 20xx)

Total recorded volume<sup>i</sup> taken  
within the water year (in  
megalitres **or** litres)

|  |    |
|--|----|
|  | ML |
|  | L  |



## Section B – Proponent details

The proponent<sup>ii</sup> is the person claiming the exemption and submitting the record.

|                                |         |              |                    |
|--------------------------------|---------|--------------|--------------------|
| Title                          | Surname |              |                    |
| Given name/s                   |         |              |                    |
| Company name                   |         |              | ABN <sup>iii</sup> |
| Address                        |         |              |                    |
| Town                           |         | State        | Postcode           |
| Phone                          |         | Mobile phone |                    |
| Email                          |         |              |                    |
| Reference number <sup>iv</sup> |         |              |                    |

|                 |                     |          |      |               |
|-----------------|---------------------|----------|------|---------------|
| Office use only | Agency (circle one) | WaterNSW | NRAR | Date received |
|-----------------|---------------------|----------|------|---------------|

## Section C – Activity details

### Activity description

|                                                |  |                                   |  |
|------------------------------------------------|--|-----------------------------------|--|
| Description of authorised project <sup>v</sup> |  |                                   |  |
| Description of activity <sup>vi</sup>          |  |                                   |  |
| Groundwater extraction method <sup>vii</sup>   |  |                                   |  |
| Activity start date                            |  | Activity end date <sup>viii</sup> |  |

## Activity location

|                                  |     |          |
|----------------------------------|-----|----------|
| Address <sup>ix</sup>            |     |          |
| Town                             | NSW | Postcode |
| Lot/ Deposited Plan/ Section     |     |          |
| GPS coordinates <sup>x</sup>     |     |          |
| Groundwater source <sup>xi</sup> |     |          |

## Landowner contact details

*Required if different from proponent*

|              |                    |          |
|--------------|--------------------|----------|
| Title        | Surname            |          |
| Given name/s |                    |          |
| Company name | ABN <sup>xii</sup> |          |
| Address      |                    |          |
| Town         | State              | Postcode |
| Phone        | Mobile phone       |          |
| Email        |                    |          |

## Section D – Existing project authorisations

You must provide details of existing approvals, permits, or authorisations where held.

If your project does not require any approvals or authorisations, please tick the box.

☐ No approvals or authorisations required

| Authorisation type <sup>xiii</sup> | Issuer | Number | Annual bore extraction limit <sup>xiv</sup> |
|------------------------------------|--------|--------|---------------------------------------------|
|                                    |        |        |                                             |
|                                    |        |        |                                             |
|                                    |        |        |                                             |

## Section E – Declaration

I declare all information contained in this form is accurate, true and complete.

Signature

Date

|                                                                                                                                                                                                                     |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Name                                                                                                                                                                                                                |       |
| Address                                                                                                                                                                                                             | Phone |
| Email                                                                                                                                                                                                               |       |
| <i>It is an offence under section 91J of the Water Management Act 2000 for a person to make a statement or furnish information in connection with a metering record the person knows to be false or misleading.</i> |       |

## Privacy statement

The information you provide on this form is subject to the *Privacy and Personal Information Protection Act 1998*. It is being collected and used for purposes relating to the water access licence exemptions described in this form. Your personal information will not be disclosed to anybody else unless authorised by law. You have the right to request access to, and correct details of, any personal information held. Further information regarding privacy can be obtained from the DPIE website [www.industry.nsw.gov.au/privacy](http://www.industry.nsw.gov.au/privacy).

## Section F – Record of metered volumes

Complete this section to record **metered** extraction volumes under either exemption. If the groundwater take was estimated, do not complete this section, **go to Section G**.

For excavation dewatering taking over 3 ML per water year within the Botany Sands Groundwater Source **complete this record within 24 hours of the end of take and for each week take occurs<sup>xv</sup>**. Note, the water access licence exemption for excavation dewatering within the Botany Sands Groundwater Source requires the use of metering equipment<sup>xvi</sup> to record the groundwater taken.

If a meter has been used to record the groundwater taken for aquifer interference activities taking up to 3 ML per water year per groundwater source, complete this record **for each period of take (rather than weekly) within 24 hours of the end of take<sup>xvii</sup>**.

Meter brand and type

Meter serial number

| No. | Week ending<br>(only complete column for<br>Botany excavation exemption) | Start date and time | Start meter<br>reading | End date and time | End meter<br>reading | Volume taken | Units<br>(L, ML) | Date and time record<br>made |
|-----|--------------------------------------------------------------------------|---------------------|------------------------|-------------------|----------------------|--------------|------------------|------------------------------|
| 1   |                                                                          |                     |                        |                   |                      |              |                  |                              |
| 2   |                                                                          |                     |                        |                   |                      |              |                  |                              |
| 3   |                                                                          |                     |                        |                   |                      |              |                  |                              |
| 4   |                                                                          |                     |                        |                   |                      |              |                  |                              |
| 5   |                                                                          |                     |                        |                   |                      |              |                  |                              |
| 6   |                                                                          |                     |                        |                   |                      |              |                  |                              |
| 7   |                                                                          |                     |                        |                   |                      |              |                  |                              |
| 8   |                                                                          |                     |                        |                   |                      |              |                  |                              |

Record of metered volumes – continued

This page provides additional space if needed.

|                      |  |                     |  |
|----------------------|--|---------------------|--|
| Meter brand and type |  | Meter serial number |  |
|----------------------|--|---------------------|--|

| No. | Week ending<br>(only complete column for<br>Botany excavation exemption) | Start date and time | Start meter<br>reading | End date and time | End meter<br>reading | Volume taken | Units<br>(L, ML) | Date and time record<br>made |
|-----|--------------------------------------------------------------------------|---------------------|------------------------|-------------------|----------------------|--------------|------------------|------------------------------|
|     |                                                                          |                     |                        |                   |                      |              |                  |                              |
|     |                                                                          |                     |                        |                   |                      |              |                  |                              |
|     |                                                                          |                     |                        |                   |                      |              |                  |                              |
|     |                                                                          |                     |                        |                   |                      |              |                  |                              |
|     |                                                                          |                     |                        |                   |                      |              |                  |                              |
|     |                                                                          |                     |                        |                   |                      |              |                  |                              |
|     |                                                                          |                     |                        |                   |                      |              |                  |                              |
|     |                                                                          |                     |                        |                   |                      |              |                  |                              |
|     |                                                                          |                     |                        |                   |                      |              |                  |                              |
|     |                                                                          |                     |                        |                   |                      |              |                  |                              |

## Section G – Record of estimated volume

Complete this section to record estimated extraction volumes under the exemption for aquifer interference activities taking up to 3 ML per water year **only**. Complete this record **for each period of take within 24 hours of the end of take**<sup>xviii</sup>.

Method used to  
**estimate** the volume  
of groundwater taken<sup>xix</sup>

|  |
|--|
|  |
|--|

| No. | Period of take | Estimated volume | Units<br>(L, ML) | Date record made |
|-----|----------------|------------------|------------------|------------------|
| 1   |                |                  |                  |                  |
| 2   |                |                  |                  |                  |
| 3   |                |                  |                  |                  |
| 4   |                |                  |                  |                  |
| 5   |                |                  |                  |                  |
| 6   |                |                  |                  |                  |
| 7   |                |                  |                  |                  |
| 8   |                |                  |                  |                  |
| 9   |                |                  |                  |                  |
| 10  |                |                  |                  |                  |
| 11  |                |                  |                  |                  |
| 12  |                |                  |                  |                  |
| 13  |                |                  |                  |                  |
| 14  |                |                  |                  |                  |
| 15  |                |                  |                  |                  |
| 16  |                |                  |                  |                  |



This page provides additional space if needed.

[illegible]

## Notes

<sup>i</sup> Record the **total volume of groundwater taken** in the water year for the groundwater source in either megalitres (ML) or litres (L).

<sup>ii</sup> The **proponent** may be any person who has the care, control or management of the land.

<sup>iii</sup> Record your Australian Business Number

<sup>iv</sup> As these exemptions commenced in December 2019, no **reference number** is available for the 2019/20 water year. In following years, please provide the reference number that will be issued to you by WaterNSW or NRAR after submitting an annual record for a previous water year for the exemption being claimed.

<sup>v</sup> An **authorised project** means an activity:

- a) that is the subject of a consent, approval or other lawful authority conferred by or under an Act, or
- b) to which Division 5.1 of the *Environmental Planning and Assessment Act 1979* applies, or
- c) that is exempt development under that Act.

**Example authorised projects** include (but are not limited to):

- constructing or maintaining a building or other infrastructure
- creating an artificial lake that fills from groundwater
- installing and operating a ground source heating or cooling system
- exploring for minerals (including coal or petroleum)
- investigating groundwater resources or geotechnical conditions
- investigating a contaminated site
- laying cables or pipelines.

<sup>vi</sup> An **activity** describes how groundwater is taken, and the number of works involved.

**Example activities** include (but are not limited to):

- a battery of 15 spear points to dewater a building construction site
- drilling 25 reverse circulation mineral exploration drill holes
- extracting groundwater from a permanent sump in a building basement
- pump-and-treat of contaminated groundwater using four extraction bores
- evaporation of water from an artificial lake
- extracting groundwater from a temporary trench
- groundwater seepage from a cutting
- water quality sampling from eight monitoring bores using a bailer
- conducting a pumping test
- dewatering from two coal seam gas pilot production bores.

<sup>vii</sup> Examples of **groundwater extraction methods** include pump, airlift, bailer, removed with ground materials, free draining, evaporation from lake etc. Where several extraction points are involved, please detail the **number and type**.

<sup>viii</sup> Specify **best estimate of activity end date** if uncertain.

<sup>ix</sup> For **multiple locations**, please attach a separate list of activity locations and landowner contact details containing information for all fields in Section C of the form.

<sup>x</sup> GPS coordinates, please use **Datum GDA94**.

<sup>xi</sup> If you are unsure which **groundwater source** you are taking water from, please contact WaterNSW or NRAR for assistance.

<sup>xii</sup> Record your Australian Business Number

<sup>xiii</sup> **Example authorisations** include (but are not limited to):

- water supply work approvals issued under the *Water Management Act 2000*
- water licences issued under the *Water Act 1912*
- exploration licences issued under the *Mining Act 1992*
- development approvals issued under the *Environmental Planning and Assessment Act 1979*
- environment protection licences issued under the *Protection of the Environment Operations Act 1997*.

<sup>xiv</sup> Supply the **annual bore extraction limit** if listed on your water supply work approval or other authorisation. Note, it is a requirement of the water access licence exemption for excavation dewatering in the Botany Sands Groundwater Source that the water supply work approval be subject to an annual extraction limit.

<sup>xv</sup> For excavation dewatering within the Botany Sands Groundwater Source taking over 3 ML per water year, for the duration of your activity, you must **make a record within 24 hours of ceasing to take groundwater**. For take occurring over a longer period, you must also make a **record of the total volume of groundwater taken during each week**. Your records must be kept for the duration of your activity and retained for five years. For the purposes of the exemption you do not need to make a record for the weeks during your activity where no groundwater is taken. A new week commences each Monday at 12.01 am.

<sup>xvi</sup> For the purposes of this exemption, metering equipment consists of a meter and a data logger. Telemetry is not required unless specified by a condition of the water supply work approval. In the **event metering equipment becomes faulty**, you must report within 24 hours to WaterNSW at [www.waternsw.com.au/s91i](http://www.waternsw.com.au/s91i). An offence applies under section 91IA of the *Water Management Act 2000* for failing to report faulty metering equipment within 24 hours.

<sup>xvii</sup> For aquifer interference activities taking up to 3 ML per water year, a **record of the total volume of groundwater taken during each period of take must be made within 24 hours of the end of take**. This record must be retained for 5 years. You must make a new record for each period of take during your activity. For the purposes of the exemption you do not need to make a record for the periods during your activity where no groundwater is taken. The **period of take** is either the date groundwater was taken, or the start and end dates for a period of continuous take.

<sup>xviii</sup> For aquifer interference activities taking up to 3 ML per water year, a **record of the total volume of groundwater taken during each period of take must be made within 24 hours of the end of take**. This record must be retained for 5 years. You must make a new record for each period of take during your activity. For the purposes of the exemption you do not need to make a record for the periods during your activity where no groundwater is taken. The **period of take** is either the date groundwater was taken, or the start and end dates for a period of continuous take.

<sup>xix</sup> **Example methods used to estimate** the volume of water taken include (but are not limited to):

- v-notch weir or velocity times area
- borehole volumes
- sump volumes
- bailer volumes
- bucket volumes
- evaporation calculations
- seepage calculations
- other (please specify).

## **APPENDIX D**

# **IMPORTANT INFORMATION**

This Document has been provided by Morrow Geotechnics Pty Ltd subject to the following limitations:

This Document has been prepared for the particular purpose outlined in Morrow Geotechnics' proposal and no responsibility is accepted for the use of this Document, in whole or in part, in other contexts or for any other purpose.

The scope and the period of Morrow Geotechnics' Services are as described in Morrow Geotechnics' proposal and are subject to restrictions and limitations. Morrow Geotechnics did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in the Document. The scope of services may have been limited by such factors as time, budget, site access or other site conditions. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Morrow Geotechnics in regards to it. Any advice given within this document is limited to geotechnical considerations only. Other constraints particular to the project, including but not limited to architectural, environment, heritage and planning matters may apply and should be assessed independently of this advice.

Conditions may exist which were undetectable given the limited nature of the enquiry Morrow Geotechnics was retained to undertake with respect to the site. Variations in conditions may occur between investigatory locations, and there may be special conditions pertaining to the site which have not been revealed by the investigation and which have not therefore been taken into account in the Document. Accordingly, additional studies and actions may be required. No geotechnical investigation can provide a full understanding of all possible subsurface details and anomalies at a site.

In addition, it is recognised that the passage of time affects the information and assessment provided in this Document. Morrow Geotechnics' opinions are based upon information that existed at the time of the production of the Document. It is understood that the Services provided allowed Morrow Geotechnics to form no more than an opinion of the actual conditions of the site at the time the site was visited and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings, or any laws or regulations.

Any assessments made in this Document are based on the conditions indicated from published sources and the investigation described. No warranty is included, either express or implied, that the actual conditions will conform exactly to the assessments contained in this Document.

Where data supplied by the client or other external sources, including previous site investigation data, have been used, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Morrow Geotechnics for incomplete or inaccurate data supplied by others.

Where ground conditions encountered at the site differ significantly from those anticipated in the report, either due to natural variability of subsurface conditions or construction activities, it is a condition of the report that Morrow Geotechnics be notified of any variations and be provided with an opportunity to review the recommendations of this report.

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