Appendix 6. Land, Soils & Geology

- 6.1 Report – Factual 2024 (IGSL)
- **Harbour Point Bray (Phase 1) Ground Investigation 2021 (IGSL)**

6.1 River Quarter Bray Ground Investigation Report – Factual 2024 (IGSL)

IGSL Limited
Atkins

Ground Investigation for River Quarter Bray
Co. Wicklow

Factual Ground Investigation Report

Report No. 24991

May 2024



Report



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FOREWORD

The following conditions and notes on the geotechnical site investigation procedures should be read in conjunction with this report.

Standards

The ground investigation works for this project have been carried out by IGSL in accordance with Eurocode 7 - Part 2: Ground Investigation & Testing (EN 1997-2:2007). This has been used together with complementary documents such as BS 5930:2015 and BS 1377 (Parts 1 to 9) and the following European Norms:

- EN 1997-2 Eurocode 7: 2007 Geotechnical Design Part 2: Ground Investigation & Testing
- EN ISO 22475-1:2006 Geotechnical Investigation and Sampling Sampling Methods & Groundwater Measurements
- EN ISO 14688-1:2018 Geotechnical Investigation and Testing Identification and Classification of Soil, Part 1: Identification and Description
- EN ISO 14688-2:2018 Geotechnical Investigation and Testing Identification and Classification of Soil, Part 2: Classification Principles
- EN ISO 14689-1:2018 Geotechnical Investigation and Testing Identification & Classification of Rock, Part 1: Identification & Description

Reporting

This report has been prepared for Atkins and the information should not be used without prior written permission of either party. IGSL Ltd accepts no responsibility or liability for this document being used other than for the purposes for which it was intended. No responsibility can be held by IGSL Ltd for ground conditions between exploratory hole locations.

The engineering logs provide ground profiles and configuration of strata relevant to the investigation depths achieved and caution should be taken when extrapolating between exploratory points. No liability is accepted for ground conditions extraneous to the investigation points. Unless specifically stated, no account has been taken of possible subsidence due to mineral extraction, mining works or karstification below or close to the site.

Boring Procedures

Unless otherwise stated, 'shell and auger' or cable percussive boring technique has been employed as defined by Section 6.3 of IS EN ISO 22475-1:2006. The boring operations, sampling and in-situ testing complies with the recommendations of IS EN 1997-2:2007 and BS 1377:1990 and EN ISO 22476-3:2005+A1:2011. The shell and auger boring technique allows for continuous sampling in clay and silt above the water table and sand and gravel below the water table (Table 2 of IS EN ISO 22475-1:2006).

It is highlighted that some disturbance and variations is unavoidable in particular ground (e.g. blowing sands, gravel / cobble dominant glacial deposits etc). Attention is drawn to this condition, whenever it is suspected. Where cobbles and boulders are recorded, no conclusion should be drawn concerning the size, presence, lithological nature, or numbers per unit volume of ground.

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Factual Report River Quarter, Bray

Rotary Drilling Procedures

Rotary drilling methods are used to recover very heavily over-consolidated glacial till and bedrock samples in line with Section 3.5 of IS EN 1997-2:2007 and IS EN ISO 22475-1. Open hole drilling methods (odex or symmetrix) are utilized to advance the drillholes through granular dominant superficial deposits, with coring in hard ('cemented') fine grained or cohesive glacial 03/2025 deposits and bedrock.

In-Situ Testing

Standard penetration tests are conducted by IGSL strictly in accordance with Section 4.6 of IS EN 1997-2:2007. The SPT equipment (hammer energy test) has been calibrated in accordance with EN ISO 22476-3:2005+A1:2011 and the Energy Ratio (E_r) is defined as the ratio of the actual energy E_{meas} (measured energy during calibration) delivered to the drive weight assembly into the drive rod below the anvil, to the theoretical energy (Etheor) as calculated from the drive weight assembly. The measured number of blows (N) reported on the engineering logs are uncorrected. In sands, the energy losses due to rod length and the effect of the overburden pressure should be taken into account (see IS EN ISO 22476-3:2005+A1:2011).

Groundwater

The depth of entry of any influx of groundwater is recorded during the course of boring or drilling operations. However, the normal rate of boring does not usually permit the recording of an equilibrium level for any one water strike. Where possible drilling is suspended for a period of twenty minutes to monitor the subsequent rise in water level. Groundwater conditions observed in the borings or pits are those appertaining to the period of investigation. It should be noted however, that groundwater levels are subject to diurnal, seasonal and climatic variations and can also be affected by drainage conditions, tidal variations etc.

Soil Sampling

Three categories of sampling methods are outlined in EN ISO 22475-1:2006. The categories are referenced A, B and C for any given ground conditions and are shown in Tables 1 and 2 of EN ISO 22475-1:2006. Reference should be made to EN 1997-2:2007 for guidelines on sample class and quality for strength and compressibility testing. Samples of quality classes 1 or 2 can only be obtained by using Category A sampling methods.

Where appropriate Class 1 thin wall undisturbed tube samples (UT100) are obtained in fine grained soils and strictly meet the requirements of EN 1997-2:2007 and EN ISO 22475-1:2006. Soil samples for laboratory tests are divided into five classes with respect to the soil properties that are assumed to remain unchanged during sampling, handling transport and storage. The minimum sample quality required for testing purposes to Eurocode 7 compatibility (EN 1997-2:2007) is shown in Table A.

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Table A – Details of Sample Quality Requirements

| | | `(). |
|----------------|------------------------|------------------------------|
| EN 1997 Clause | Test | Minimum Sample Quality Class |
| 5.5.3 | Water Content | 3 |
| 5.5.4 | Bulk Density | 2 |
| 5.5.5 | Particle Density | N/S |
| 5.5.6 | Particle Size Analysis | N/S |
| 5.5.7 | Consistency Limits | 4 |
| 5.5.8 | Density Index | N/S |
| 5.5.9 | Soil Dispersivity | N/S |
| 5.5.10 | Frost Susceptibility | N/S |
| 5.6.2 | Organic Content | 4 |
| 5.6.3 | Carbonate Content | 3 |
| 5.6.4 | Sulphate Content | 3 |
| 5.6.5 | рH | 3 |
| 5.6.6 | Chloride Content | 3 |
| 5.7 | Strength Index | 1 |
| 5.8 | Strength Tests | 1 |
| 5.9 | Compressibility Tests | 1 |
| 5.10 | Compaction Tests | N/S |
| 5.11 | Permeability | 2 |
| | | |

N/S – not stated. Presume a representative sample of appropriate size.

Samples recovered from trial pits or trenches meet the requirements of IS EN ISO 22475-1. It is highlighted that unforeseen circumstances such as variations in geological strata may lead to lower quality sample classes being obtained.

Engineering Logging

Soil and rock identification is based on the examination of the samples recovered and conforms with IS EN ISO 14688-1:2018 and IS EN ISO 14689-1:2018. Rock weathering classification conforms to IS EN ISO 14689-1:2018 while discontinuities (bedding planes, joints, cleavages, faults etc) are classified in accordance with 4.3.3 of IS EN ISO 14689-1:2018. Rock mechanical indices (TCR, SCR, RQD) are defined in accordance with IS EN ISO 22475-1:2006.

Retention of Samples

After satisfactory completion of all the scheduled laboratory tests on any sample, the remaining material will be discarded. Unless a period of retention of samples is agreed, it is company policy to discard soil samples one month after submission of our final report.

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1.0 Introduction and Objectives

It is proposed to construct a development at a site at Bray, Co. Wicklow. The multi-storey development will be mixed-use (residential, retail and leisure).

The site location is as shown on Figure 1 with the approximate site outline shown in blue?



Figure 1 – Site Location (Base Mapping – Google Earth Professional)

IGSL Limited were appointed by Ballymore Development to conduct a ground investigation at the site under the technical direction and supervision of consulting engineers, Atkins. The objectives of the investigation were to ascertain the ground and groundwater conditions, and to produce a report which will assist in the geotechnical design of the new development.

This report presents the fieldwork data and the results of laboratory testing.

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2.0 Scope of Works

The programme of exploratory works included the following:

- 15 no. cable percussive boreholes
- 7 no. rotary coreholes at selected borehole locations
- 1 no. monitoring well drilled using "open hole" techniques
- 8 no. cone penetration tests (CPT)
- 6 no. mechanically excavated trial pits
- 6 no. window samples
- 6 no. dynamic cone penetrometer (TRL DCP) tests at trial pit locations
- Groundwater and gas monitoring
- A programme of geotechnical, chemical and environmental laboratory testing

The exploratory hole locations are shown on the as-surveyed aerial plan in Appendix 10 of this report.

2.1 Cable Percussive Boreholes

Boreholes were constructed in 15 locations (BH301 to BH315) using a Dando 2000 rig equipped with 200 mm casing. The bored depths ranged from 9.0 to 14.2 metres below existing ground level (m BGL).

A hand dug inspection pit was excavated at each location prior to commencing drilling works and the locations were scanned for services using a CAT detection tool.

During the course of boring, in-situ Standard Penetration Tests (SPT) were undertaken at regular intervals. Samples were also recovered to assist in the visual description of recovered soils and to provide specimens for laboratory testing. In low strength soils, driven tube samples (U100) were obtained.

Instances of groundwater ingress were recorded and monitored for a further 20 minutes to permit the water to rise. Standpipes were installed in BH307 and BH312 to permit long-term monitoring of groundwater levels.

The borehole records are presented in Appendix 1 of this report.

2.2 Rotary Coreholes

Rotary coreholes RC302, 304, 308, 309, 10, 313 and 314 were drilled at corresponding boreholes to investigate for the presence of bedrock. A Beretta T-440 tracked coring rig was used.

Symmetrix "open hole" techniques were used to advance through the upper deposits, reverting to rotary coring techniques on the first indications of bedrock. It is noted that Symmetrix drilling

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produces highly pulverised drill returns and therefore, soil descriptions based on these returns are very approximate.

Standard Penetration Tests (SPT) were undertaken within overburden soils to provide an indication of soil strength below the borehole refusal depths.

Standpipes were installed in RC302, 304 and 308 to permit long-term groundwater monitoring

Rotary coring of rock was carried out using an air/mist flush to maximise recovery. Cores of 78 mm diameter were recovered to the drilled depths of between 16 and 25 m BGL and these were placed securely in wooden storage boxes.

The recovered core was inspected by a qualified engineering geologist and logged in detail at IGSL's laboratory. Records detailing the Total Core Recovery (TCR), Solid Core Recovery (SCR) and Rock Quality Designation (RQD) were produced. Core records also include a fracture log (spacing between successive core joints measured from the cores).

All cores were labelled and photographed for inclusion in the report. Photographs are presented digitally for ease of browsing and to permit close examination at high resolution. Corehole records and photographs are included in Appendix 2 of this report.

2.3 Monitoring Well

Symmetrix "open hole" techniques were used to form a monitoring well (ROH3), which was drilled to a depth of 20 m BGL.

The Open Hole record in Appendix 3 offers an interpretation of the soil stratification. However, it is noted that Symmetrix drilling produces highly pulverised drill returns and therefore, soil descriptions based on these returns are very approximate.

2.4 Trial Pits

Trial pitting was performed at 6 locations (TP301 to TP306) using a JCB excavator. The trial pits were logged and sampled by an IGSL geotechnical engineer in accordance with BS 5930:2015 +A1:2020.

Hand shear vane tests were performed within the upper soils to permit an assessment of the insitu shear strengths.

Pit sidewalls were assessed in terms of their short-term stability and any instances of groundwater ingress were recorded. Bulk soil samples were also recovered to provide specimens for laboratory testing.

The samples were placed in heavy duty polyethene bags and sealed before being transported to Naas for laboratory testing. For this project, environmental samples were obtained and placed in appropriate containers.

The trial pits were backfilled with the as-dug arisings and reinstated to the satisfaction of IGSL's site geotechnical engineer. The trial pit logs in Appendix 4 include descriptions of the soils encountered, groundwater conditions and stability of the pit sidewalls.

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2.5 Window Samples

Window samples were undertaken in 6 locations (WS6A, 6B, 7A, 7B, 8A and 8B) in order to obtain undisturbed samples of the upper soils and to facilitate accurate sub-sampling for environmental analysis.

Window samples are advanced by driving a steel sampling tube under constant percussive efforts. The soils enter the tube within a protective plastic liner, which is withdrawn after every metre of progress. The liners are then placed in wooden channel boxes and transported to the IGSL offices where they are logged and sub-sampled as required.

Environmental sub-samples were placed in appropriate containers (amber glass jars and vials).

Standpipes were installed in all window samples to permit long-term monitoring of groundwater levels. Gas valves were fitted to the standpipes at WS06A, 07A and 08A.

The window sample records are presented in Appendix 5 of this report.

2.6 TRL Dynamic Cone Penetrometer

DCP tests (DCP301 to DCP306) were undertaken at corresponding trial pit locations in order to estimate the in-situ CBR values for the subgrade soils.

The results of each test are presented in terms of the DCP blow-count (mm/blow) against depth of penetration and the depth range for calculation purposes is generally related to a specific soil layer.

The DCP test records are included in Appendix 6. It is noted that a depth range commencing at c. 0.6 m BGL (i.e. typical road subgrade level) has generally been selected for the purpose of CBR calculation. However, alternative depth ranges can be selected and the equivalent CBR calculated using the equation provided on the record.

2.7 CPT Testing

A wheel-mounted CPT rig was deployed by In Situ SI to undertake eight piezocone penetration tests (CPTU) and four dissipation tests. A re-test at CPT303 resulted in a total of nine CPTs undertaken.

The final depths of the tests were determined when the maximal safe capacity of the equipment was reached. These ranged between 8.8 and 11.8 m BGL.

Direct measurement of Cone Resistance, q_c , Sleeve Friction, f_s and Porewater Pressure, u_2 was undertaken during the CPT test. Dissipation tests were undertaken at CPT301 (2 nr.), CPT304 and CPT307.

The CPTu test records and dissipation test results are presented in the In Situ SI report, which is presented under separate cover.

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2.8 Groundwater and Gas Monitoring

Standpipes were installed in boreholes BH307 and BH312, in rotary coreholes RC302, 304 and 308 and in all window samples in order to permit long term monitoring of groundwater levels.

Gas valves were also fitted to the standpipes at window samples WS06A, 07A and 08A to permit monitoring of ground-gas levels.

The results of groundwater and gas monitoring are presented in Appendix 7 of this report.

2.9 As-Built Survey

On completion of fieldworks, the location (x,y) and elevation (z) of each exploratory location was determined by detailed survey using GPS Realtime Kinetic survey instrument.

The Irish Transverse Mercator (ITM) survey co-ordinates and ground levels related to Malin Head Datum are presented on the exploratory hole records and these were used to plot the as-built locations on the site plans in Appendix 10 of this report.

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3.0 Laboratory Testing

Laboratory test results are segregated and presented as follows:

- Appendix 8 Geotechnical Laboratory Testing
- Appendix 9 Chemical and Environmental Testing

Geotechnical testing of soils comprised:

- Moisture Content
- Atterberg Limits (Plasticity Index)
- Particle Size Distribution (PSD)
- Unconsolidated Undrained (UU) Triaxial
- Consolidation (Oedometer)
- Point Load Strength Index (PLSI) on rock core samples

Chemical and environmental testing was undertaken by Eurofins Chemtest and included:

- Sulphate Suite (Acid Soluble, Water Soluble, Total Sulphate)
- pH
- Organic content
- Test Suite E (as per Atkins Specification)
- RILTA Suite
- Salt Content (Salinity) with results expressed as electrical conductivity (µS/cm)
- Test Suite F (as per Atkins Specification) *

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^{*} Water samples were recovered from the standpipes at ROH03, WS06, WS07 and WS08. Two samples were obtained from each location, coinciding with high and low tide levels. Both samples were tested in accordance with Test Suite F (as per Atkins Specification)

4.0 References

1. BS 5930:2015+A1:2020 Code of Practice for Site Investigations; British Standards Institute

- 2. Manual of Contract Documents for Highway Works, Volume 5, Section 3, Ground Investigation, Part 4: Specification
- 3. BRE Special Digest 1: 2005 Concrete in aggressive ground
- 4. EN 1997-3; Eurocode 7: Geotechnical Design Part 3: Design assisted by field testing; 1997
- 5. BS1377; British Standard Methods of Test for Soils for Civil Engineering Purposes; British Standards Institute;1990.
- 6. BRE Digest 365, September 1991, British Research Establishment
- 7. Manual of Contract Documents for Road Works, Volume 1: Specification for Road Works (March 2007)
- 8. Manual of Soil Laboratory Testing, Volume 3; K.H. Head
- 9. ISRM Suggested Methods for Determining Point Load Strength
- 10. ISRM Suggested Methods for Determining the Uniaxial Compressive Strength and Deformability of Rock Materials
- 11. TRL Report 447- Sulfate specification for structural backfills
- 12. CIRIA C580
- 13. Specification for Roadworks Series 600 Specification for Roadworks

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Appendix 1 Cable Percussive Boreholes

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BH LOG

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GEOTECHNICAL BORING RECORD

REPORT NUMBER

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BOREHOLE NO. BH301 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,547.71 E DATE COMMENCED 17/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,292.19 N DATE COMPLETED 19/10/2023 **GROUND LEVEL (m AOD)** 3.13 **BOREHOLE DEPTH (m)** 13.80 CLIENT SPT HAMMER REF. NO. Ballymore Group **BORFD BY** P Thomas **ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details Depth (m) Depth (m) Elevation Sample Type Recovery Ref. Number Field Test Description Legend Depth (m) Results - 0 TOPSOIL · 11/ 3.03 0.10 XO Very soft brown very sandy SILT/CLAY with some X gravel 0. AA203016 1.00 N = 6(2, 2, 2, 2, 1, 1) -X0 N = 4 (1, 0, 1, 1, 1, 1) 2 AA203017 В 2.00 α 0.53 2.60 Failed U 2.50 Very soft grey very sandy SILT with some fibres ·× × · × N = 3 (1, 0, 1, 0, 1, 1) .× -3 AA203018 В 3.00 . × × × × × × AA203019 U 3.50 100%re × × × × AA203020 N = 2 (1, 0, 0, 1, 0, 1) ×· В 4.00 × 4 × × × -1.47 4.60 AA203021 U 4.50 50%rec Loose grey very silty SAND × N = 1 (1, 0, 0, 0, 1, 0) F 5 -1.97 5.10 AA203022 В 5.00 Very soft grey sandy SILT with some shells ·× × . · × .× × × × × × N = 2(1, 0, 0, 1, 0, 1) AA203023 × × В 6.00 6 × ×. × × ×· × × × × ×. N = 5 (1, 0, 1, 1, 1, 2) AA203024 В 7.00 × × × × × AA203025 В 7.50 .× × N = 3 (1, 0, 1, 0, 1, 1) AA203026 В 8 00 8 × × × × × × × N = 5AA203027 В 9.00 9 (1, 0, 1, 1, 1, 2) ×. -6.37 9.50 11, Soft grey/brown silty/clayey PEAT HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 13.6 13.8 2 **GROUNDWATER PROGRESS** Hole Depth to Water Casing Comments **INSTALLATION DETAILS** Date Depth Depth Tip Depth RZ Top RZ Base Туре **REMARKS** Extremely wet ground conditions ..2.5 Hrs moving rig into position with tracked dumper . CAT scanned location. Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp Sample P - Undisturbed Piston Sample W - Water Sample ntal Sample (Jar + Vial + Tub)



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BH LOG

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GEOTECHNICAL BORING RECORD

REPORT NUMBER

24991

BOREHOLE NO. BH301 CONTRACT Sea Gardens, Bray SHEET Sheet 2 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,547.71 E DATE COMMENCED 17/10/2023 **BOREHOLE DIAMETER (mm)** 719,292.19 N 200 DATE COMPLETED 19/10/2023 **GROUND LEVEL (m AOD)** 3.13 **BOREHOLE DEPTH (m)** 13.80 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORED BY** P Thomas **ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details Depth (m) Depth (m) Elevation Ref. Number Recovery Sample Field Test Legend Description Depth (m) Results AA203028 10.00 Soft grey/brown silty/clayey PEAT (continued) (1, 1, 1, 1, 2, 2) -7.57 10.70 Dense grey fine to coarse sandy silty GRAVEL with N = 33some cobbles and some decayed wood fragments AA203029 11.00 (4, 7, 7, 8, 8, 10) noted N = 42 (6, 7, 9, 10, 9, 14) AA203030 В 12.00 12 N = 50/225 mmAA203031 13 В 13.00 (8, 12, 12, 15, 23) AA203032 В 13.50 -10.67 13.80 N = 50/75 mm Obstruction (25, 50)14 End of Borehole at 13.80 m 15 16 17 18 19 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 13.6 13.8 2 10.70 10.70 2.10 Rapid No 20 **GROUNDWATER PROGRESS** Hole Depth to Water Casing **INSTALLATION DETAILS** Date Comments Depth Depth Tip Depth RZ Top RZ Base Туре **REMARKS** Extremely wet ground conditions ..2.5 Hrs moving rig into position with tracked dumper . CAT scanned location. Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp Sample P - Undisturbed Piston Sample W - Water Sample ntal Sample (Jar + Vial + Tub)



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BH LOG

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GEOTECHNICAL BORING RECORD

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BOREHOLE NO. BH302 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,501.96 E DATE COMMENCED 19/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,299.82 N DATE COMPLETED 23/10/2023 **GROUND LEVEL (m AOD)** 2.49 **BOREHOLE DEPTH (m)** 12.50 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P Thomas **ENERGY RATIO (%) ENGINEER PROCESSED BY** 75C Atkins Samples Standpipe Details (E Depth (m) Elevation Sample Type Recovery Ref. Number Field Test Legend Depth (Description Depth (m) Results - 0 TOPSOIL 11. 11 2.19 0.30 Soft brown very sandy SILT/CLAY with occasional -X0 X 0. N = 6 (1, 0, 1, 1, 2, 2) AA203033 1.00 ō N = 7 (1, 1, 1, 2, 2, 2) 2 AA203034 В 2.00 X -0.21 2.70 Loose grey fine silty sandy GRAVEL N = 6 (11, 1, 2, 2, 1, 1) AA203035 В -3 3.00 % % % % % % % 0 % % % % -1.01 3.50 × Very soft grey very sandy SILT with organic lenses ·× × × . × 14/ 4.00 4.00 N = 2 (1, 1, 0, 1, 0, 1) AA203036 4 × × × × × × Failed ×× × × × 7/4 × N = 2(1, 0, 0, 1, 0, 1) AA203037 В 5.00 5 × × × × /W AA203038 U 5.50 × × · × ·× N = 9AA203039 В 6.00 F 6 -3.71 6.20 (1, 2, 2, 2, 3, 2) Very soft brown/grey slightly sandy SILT with shells N = 3 (1, 0, 1, 1, 0, 1) AA203040 В 7.00 N = 2 (1, 0, 0, 1, 0, 1) AA203041 8 00 8 AA203042 AA203043 В 9.00 9 (1, 0, 0, 0, 0, 1)-7.01 9.50 Very soft grey/brown peaty SILT × × × HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 11.8 12 2.70 3.50 1.00 20 Moderate 0.5 2.70 12.5 4.20 4.20 6.20 20 Slow 12.3 1.5 No **GROUNDWATER PROGRESS** Hole Depth to Water Casing **INSTALLATION DETAILS** Comments Date Depth Depth Tip Depth RZ Top RZ Base Туре **REMARKS** Site was waterlogged .2.5 hrs moving rig into position with tracked dumper .CAT scanned location and hand dug Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp Sample P - Undisturbed Piston Sample W - Water Sample inspection pit was carried out ntal Sample (Jar + Vial + Tub)



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BOREHOLE NO. BH302 CONTRACT Sea Gardens, Bray SHEET Sheet 2 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,501.96 E DATE COMMENCED 19/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,299.82 N DATE COMPLETED 23/10/2023 **GROUND LEVEL (m AOD)** 2.49 **BOREHOLE DEPTH (m)** 12.50 SPT HAMMER REF. NO. P.Thomas **CLIENT** Ballymore Group **BORFD BY ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details Depth (m) Depth (m) Elevation Ref. Number Recovery Sample Field Test Legend Description Depth (m) Results AA20304 10.00 - 10 Very soft grey/brown peaty SILT (continued) (1, 0, 0, 1, 0, 1) × × 74 × <u>-8.2</u>1 10.70 Dense grey fine to coarse slightly silty sandy GRAVEL with some cobbles N = 35AA203045 11.00 11 (3, 3, 6, 8, 9, 12)1008 9 20 20 20 N = 37 (10, 7, 10, 8, 10, 9) AA203046 В 12.00 12 -10.01 12.50 N = 50/75 mm (25, 50) Obstruction End of Borehole at 12.50 m 13 14 15 16 17 18 19 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Water Time Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 11.8 12 0.5 IGSL.GDT 26/3/24 12.5 1.5 12.3 **GROUNDWATER PROGRESS** Depth to Water Hole Casing **INSTALLATION DETAILS** Comments Date GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 24991. BH LOG **REMARKS** Site was waterlogged .2.5 hrs moving rig into position with tracked dumper .CAT scanned location and hand dug Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp Sample P - Undisturbed Piston Sample W - Water Sample IGSL inspection pit was carried out ntal Sample (Jar + Vial + Tub)



REPORT NUMBER

24991

BOREHOLE NO. BH303 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,587.12 E DATE COMMENCED 24/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,244.15 N DATE COMPLETED 26/10/2023 **GROUND LEVEL (m AOD)** 2.03 **BOREHOLE DEPTH (m)** 14.00 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P Thomas **ENGINEER PROCESSED BY** OF.C Atkins **ENERGY RATIO (%)** Samples Standpipe Details (E Depth (m) Elevation Ref. Number Sample Recovery Field Test Depth (Legend Description Depth (m) Type Results - 0 MADE GROUND (Comprised of hardcore stone fill) 1.53 0.50 AA209320 В 0.50 Firm grey sandy SILT with angular cobbles (Made Ŏ, Q^{\times} Ground) × 0.93 1.10 N = 13AA209321 1.00 (2, 2, 3, 3, 4, 3)Very soft grey very sandy SILT ·× × .× × × N = 1 (1, 0, 0, 1, 0, 0) × AA209322 В 2.00 -0.17 2.20 Loose grey/brown silty very sandy fine GRAVEL AA209323 3 В 3.00 (1, 1, 2, 2, 2, 3) AA209324 N = 9 (1, 2, 2, 2, 3, 2) В 4.00 4 -×0 *0 = *0 = \$ \(\) \(\ N = 1 (1, 0, 0, 0, 1, 0) 5 AA209325 В 5.00 8 8 × × -3.47 5.50 Very soft grey/brown peaty SILT × × 74 × AA209326 100%rec × U 6.00 6 × × <u>\\ X</u> × × × × × × <u>′′,</u> × × AA209327 В 7.00 N = 1(1, 0, 0, 0, 1, 0) × × × × /W × × × × × × AA209328 U 8 00 100%red 8 × <u>/}/</u> × × × × // × × × × × × AA209329 В 9.00 9 × (1, 0, 0, 1, 0, 0) × <u>′′</u>,× × × × -7.77 9.80 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 0.5 3.00 1.00 Moderate 3.00 No 20 0.1 IGSL.GDT 26/3/24 0.75 10.00 10.00 No 1.50 20 12.9 Rapid 12.4 14.2 2 14 **GROUNDWATER PROGRESS** Depth to Water Hole Casing **INSTALLATION DETAILS** Date Comments GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 26-10-23 4.00 2.00 Start of 2nd day 4.00 24991. BH LOG REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp out. Sample P - Undisturbed Piston Sample W - Water Sample IGSL ntal Sample (Jar + Vial + Tub)



REPORT NUMBER

24991

BOREHOLE NO. BH303 CONTRACT Sea Gardens, Bray SHEET Sheet 2 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,587.12 E DATE COMMENCED 24/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,244.15 N DATE COMPLETED 26/10/2023 **GROUND LEVEL (m AOD)** 2.03 **BOREHOLE DEPTH (m)** 14.00 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORED BY** P Thomas **ENGINEER PROCESSED BY** OF.C Atkins **ENERGY RATIO (%)** Samples Standpipe Details Depth (m) Depth (m) Elevation Ref. Number Recovery Sample Field Test Legend Description Depth (m) Type Results 0.000 AA20933 10.00 Loose to medum dense grey very sandy GRAVEL (1, 0, 1, 1, 1, 2) (Possibly very gravelly Sand) (continued) N = 28 AA209331 11.00 11 (4, 4, 5, 6, 8, 9)-9.27 11.30 Dense grey fine to coarse GRAVEL with some cobbles and occasional boulders N = 43 (6, 8, 9, 9, 10, 15) AA209332 В 12.00 12 N = 50/225 mmAA209333 13 В 13.00 (6, 10, 17, 17, 16) -11.97 14.00 N = 50/150 mm (20, 30, 40, 10) -11.97 14.00 AA209334 14.00 Obstruction End of Borehole at 14.00 m 15 16 17 18 19 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 0.5 0.1 IGSL.GDT 26/3/24 12.9 0.75 12.4 14.2 2 14 **GROUNDWATER PROGRESS** Depth to Water Hole Casing **INSTALLATION DETAILS** Date Comments GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 24991. BH LOG REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp out. Sample P - Undisturbed Piston Sample W - Water Sample IGSL ental Sample (Jar + Vial + Tub)



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REPORT NUMBER

24991

BOREHOLE NO. BH304 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,415.29 E DATE COMMENCED 15/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,296.09 N DATE COMPLETED 17/10/2023 **GROUND LEVEL (m AOD)** 3.38 **BOREHOLE DEPTH (m)** 12.90 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P Thomas **ENERGY RATIO (%) ENGINEER PROCESSED BY** 75C Atkins Samples Standpipe Details (E Depth (m) Elevation Sample Type Ref. Number Recovery Field Test Depth (Description Legend Depth (m) Results - 0 TOPSOIL · 11/ 3.28 0.10 XO Very soft brown very sandy SILT with occasional X gravel and some root fibres/organics Ω AA203001 1.00 N = 7(1, 2, 1, 2, 2, 2) 9 1.38 2.00 N = 1 (1, 1, 0, 0, 1, 0) AA203002 AA203003 100%rec Very soft grey/brown sandy SILT 0.78 2.60 Loose brown very silty SAND (Possibly very sandy N = 4 (1, 0, 1, 0, 1, 2) AA203004 В - 3 3.00 × × -0.72 4.10 AA203005 В N = 5 (1, 1, 1, 1, 1, 2) 4.00 Very soft brown SILT/CLAY with roots X -1.12 4.50 Very soft grey SILT × × × × N = 4 (1, 1, 2, 1, 0, 1) - 5 × AA203006 В 5.00 × × × -2.12 5.50 Failed U 5.50 Loose grey very silty SAND (Possibly very sandy Silt) N = 2(1, 0, 0, 1, 0, 1) AA203007 В 6.00 6 6.60 -3.22 Soft grey and grey/brown sandy SILT with some N = 6 (1, 1, 1, 1, 2, 2) AA203008 В 7.00 × × × AA203009 U 7.50 100%rec × N = 5 (1, 0, 1, 1, 1, 2) AA203010 В 8 00 8 ×. × × N = 5AA203011 В 9.00 9 (1, 1, 1, 1, 1, 2) × .× × AA203012 9.50 100%rec HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Water Time Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 2.60 2.60 3.30 2.50 Slow 11.5 11.7 20 1 2 5.50 6.10 1.50 5.50 20 Rapid 12.7 12.9 **GROUNDWATER PROGRESS** Depth to Water Casing **INSTALLATION DETAILS** Comments Date Depth Depth Tip Depth RZ Top RZ Base Туре REMARKS Very wet ground conditions .2hrs moving rig nto position with Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp tracked dumper.CAT scanned location and hand dug inspection Sample P - Undisturbed Piston Sample W - Water Sample pit was carried out. ntal Sample (Jar + Vial + Tub)



REPORT NUMBER

24991

BOREHOLE NO. BH304 CONTRACT Sea Gardens, Bray SHEET Sheet 2 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,415.29 E DATE COMMENCED 15/10/2023 **BOREHOLE DIAMETER (mm)** 719,296.09 N 200 DATE COMPLETED 17/10/2023 **GROUND LEVEL (m AOD)** 3.38 **BOREHOLE DEPTH (m)** 12.90 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORED BY** P Thomas **ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details Depth (m) Depth (m) Elevation Ref. Number Sample Recovery Field Test Legend Description Depth (m) Type Results × AA20301 10.00 - 10 Soft grey and grey/brown sandy SILT with some (1, 1, 1, 1, 0, 1) $\cdot \times$ shells (continued) -7.12 10.50 Failed U 10.50 Dense grey fine to coarse slightly silty sandy GRAVEL with occasional cobbles N = 47 (3, 9, 10, 14, 12, 11) AA203014 В 11.00 000 000 000 000 N = 48 (7, 8, 12, 14, 11, 11) AA203015 В 12.00 12 80×80 -9.52 12.90 N = 50/75 mm Obstruction 13 (25, 50)End of Borehole at 12.90 m 14 15 16 17 18 19 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth Αt То (min) 10.50 10.50 1.80 Rapid 11.5 11.7 No 20 1 IGSL.GDT 26/3/24 2 12.9 12.7 **GROUNDWATER PROGRESS** Depth to Water Hole Casing **INSTALLATION DETAILS** Date Comments GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 24991. BH LOG REMARKS Very wet ground conditions .2hrs moving rig nto position with Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp tracked dumper.CAT scanned location and hand dug inspection Sample P - Undisturbed Piston Sample W - Water Sample IGSL pit was carried out. ental Sample (Jar + Vial + Tub)



REPORT NUMBER

24991

BOREHOLE NO. BH305 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,439.63 E DATE COMMENCED 11/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,268.89 N DATE COMPLETED 12/10/2023 **GROUND LEVEL (m AOD)** 2.17 **BOREHOLE DEPTH (m)** 10.70 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P Thomas **ENERGY RATIO (%) ENGINEER PROCESSED BY** 75C Atkins Samples Standpipe Details (E Depth (m) Elevation Recovery Ref. Number Sample Field Test Depth (Legend Description Depth (m) Type Results - 0 TOPSOIL 11/ 0.20 1.97 Soft brown very sandy SILT/CLAY AA197072 1.00 N = 8(1, 1, 2, 3, 2, 1) 0.87 1.30 Very soft to soft grey very sandy SILT/CLAY with -XO some gravel and occasional wood fragments X (Possibly Made Ground) . O. N = 8 (1, 1, 2, 2, 2, 2) AA197073 В 2.00 8 AA197074 -3 В 3.00 (1, 1, 0, 0, 1, 0) -XO -1.23 3.40 Very soft grey SILT with occasional organic fibres × 1/4/ × N = 3 (1, 0, 1, 0, 1, 1) AA197075 В 4.00 4 × × AA197076 U 4.50 100%rec × -2.73 4.90 Very soft grey slightly gravelly silty SAND ×o -2.93 5.10 N = 2(1, 0, 0, 1, 0, 1) AA197077 В 5.00 Very soft to soft grey/brown sandy SILT with shells ·× × × and occasional fibres .× × × × × × N = 4 (1, 1, 1, 1, 1, 1) × × AA197078 В 6.00 6 × ×. × × AA197079 6.50 100%rec ×· × × . × × ×. N = 5 (1, 0, 1, 1, 1, 2) AA197080 В 7.00 × × ×. × × × ·× .× × N = 4 (1, 0, 1, 1, 1, 1) AA197081 В 8 00 8 × × × × × AA197082 U 8.50 100%rec × × × × × × N = 7 (1, 1, 1, 2, 2, 2) AA197083 В 9.00 9 × × ×. × × × × × -7.83 10.00 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Casing Time Water Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 10.5 10.7 3.20 3.40 1.20 Slow 3.20 20 1.5 IGSL.GDT 26/3/24 4.90 4.90 5.20 1.70 20 Moderate **GROUNDWATER PROGRESS** Hole Depth to Water Casing **INSTALLATION DETAILS** Comments Date GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 24991. BH LOG REMARKS 1.5hrs moving rig into position .CAT scanned location and hand Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp dug inspection pit was carried out. Sample P - Undisturbed Piston Sample W - Water Sample IGSL ntal Sample (Jar + Vial + Tub)



REPORT NUMBER

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|--|---------------|---------------------|--------------------|-------------------------------------|--------------------|----------------|-----------|----------------|--|----------------|---|--------------------|---|----------------------|--|
| CO | NTRAC | CT Se | ea Garder | ns, Bray | | | | | | ; | BOREH SHEET | | O. BH305 Sheet 2 of 2 | | |
| CO-ORDINATES 726,439.63 E RIG TYPE 719,268.89 N BOREHO GROUND LEVEL (m AOD) 2.17 | | | | | | | • | nm) 2 | Dando 20 200 10.70 | 000 | DATE COMMENCED 11/10/2023 DATE COMPLETED 12/10/2023 | | | | |
| | ENT SINEEF | | allymore (kins | Group | | AMMER REI | | | | | BORED BY P.Thomas PROCESSED BY | | | | |
| | | | | | · | | | | | Sam | ples | | 20. | 4) | |
| Depth (m) | | | D | escription | | Legend | Elevation | Depth (m) | Ref. Number | Sample Type | Depth (m) | Recovery | | Standpipe Details | |
| 10 | Soft | dark brov | wn PEAT | | | 1, 11, 11, | | | AA197084 | В | 10.00 | | N = 9 (1, 1, 2, 2, 2, 3) | | |
| 11 | | ruction of Boreh | ole at 10. | 70 m | | ,\\\\\ | -8.53 | 10.70 | | | | | N = 16/75 mm (25, 34, 16) | | |
| 13 | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | |
| HA | RD ST | RATA B | ORING/C | HISELLING | | | | | | | | | NATER STRIKE DET | AILS | |
| ror | n (m) | To (m) | Time (h) | Comments | | Wate Strike | | sing S epth | Sealed At | Rise To | | ime min) | Comments | | |
| 10 | 0.5 | 10.7 | 1.5 | | | | | | | | | | | | |
| INS | TALL4 | ATION DI | | | | Dat | | Hole Depth | Casing Depth | Der | oth to | G l Comm | ROUNDWATER PRO ents | GRESS | |
| | Date | Tip De | epth RZ T | op RZ Base | Туре | | ' | | - 1001 | | | | | | |
| REI | MARK | 3 1.5hrs dug in | moving r | ig into position oit was carried | .CAT scanned out . | location and | hand | LB - Bulk L | le Legen Disturbed (tub Disturbed Bulk Disturbe Disturbed Disturbe | ed | · Vial + Tub) | San P - | - Undisturbed 100mm Diameter nple Undisturbed Piston Sample Water Sample | | |



REPORT NUMBER

24991

BOREHOLE NO. BH306 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,485.61 E DATE COMMENCED 10/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,232.69 N DATE COMPLETED 11/10/2023 **GROUND LEVEL (m AOD)** 3.33 **BOREHOLE DEPTH (m)** 14.20 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P Thomas **ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details (E Depth (m) Elevation Sample Type Recovery Ref. Number Field Test Depth (Description Legend Depth (m) Results - 0 TOPSOIL \1/ 0.20 3.13 Soft brown very sandy SILT/CLAY with some X lenses/bands of fine sandy gravel 0. N = 6 (1, 1, 1, 2, 1, 2) AA197055 1.00 Ō Failed U 1.50 N = 5 (1, 2, 1, 1, 1, 2) 2 AA197056 В 2.00 -XO <u>-</u>ô 0.73 2.60 Firm grey sandy SILT/CLAY 0.23 3.10 AA197057 В -3 3.00 (1, 2, 2, 2, 3, 4) Loose to medium dense grey fine silty sandy **GRAVEL** Failed 3.50 N = 10 (2, 2, 3, 3, 2, 2) AA197058 В 4.00 4 -0.97 4.30 Soft brown grey SILT with some shells 0 N = 4 (1, 0, 1, 1, 1, 1) 5 AA197059 В 5.00 Q -2.17 5.50 90%rec 11/ 11/ AA197060 U 5.50 Very soft dark brown PEAT 1, 11, 11, N = 2 (1, 0, 0, 1, 0, 1) AA197061 В 6.00 F 6 11, 11/ **-**2.97 6.30 Soft grey and grey/brown SILT with some seashells × × AA197062 6.50 100%rec × × × × × × N = 6 (1, 1, 1, 1, 2, 2) AA197063 В 7.00 × × × × × × × × × × × × N = 4 (1, 0, 1, 1, 1, 1) AA197064 В 8 00 8 × × × × × AA197065 100%rec × U 8.50 × × × × N = 2× AA197066 В 9.00 9 (1, 1, 1, 0, 1, 0) × × × × Ø O× -6.17 9.50 0x0 Loose grey fine very sandy silty GRAVEL -6.57 9.90 N. X0 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 13.6 3.80 3.80 4.30 2.50 20 Moderate 13.8 1 IGSL.GDT 26/3/24 2 5.30 14.2 9.50 9.50 No 20 Rapid 14 **GROUNDWATER PROGRESS** Depth to Water Casing **INSTALLATION DETAILS** Comments Date GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 24991. BH LOG **REMARKS** Very wet ground conditions..2hrs moving rig into position with Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp tracked dumper .CAT scanned location and hand dug inspection Sample P - Undisturbed Piston Sample W - Water Sample IGSL pit was carried out. ntal Sample (Jar + Vial + Tub)



REPORT NUMBER

24991

BOREHOLE NO. BH306 CONTRACT Sea Gardens, Bray SHEET Sheet 2 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,485.61 E DATE COMMENCED 10/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,232.69 N DATE COMPLETED 11/10/2023 **GROUND LEVEL (m AOD)** 3.33 **BOREHOLE DEPTH (m)** 14.20 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P Thomas **ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details Depth (m) Depth (m) Elevation Ref. Number Recovery Sample Field Test Legend Description Depth (m) Results AA19706 10.00 Soft dark brown PEAT (continued) 11/ (1, 1, 1, 2, 2, 2) 1, 11, 11, <u>\11/ \11/ \</u> -7.47 10.80 Dense grey fine to coarse slightly silty sandy GRAVEL N = 31 (2, 3, 6, 7, 9, 9) AA197068 11.00 with occasional cobbles N = 43 (3, 6, 7, 10, 11, 15) AA197069 В 12.00 12 N = 56AA197070 13 В 13.00 (6, 11, 12, 14, 15, 15) N = 50/150 mm (16, 9, 22, 28) 14.00 AA197071 14 -10.87 14.20 Obstruction End of Borehole at 14.20 m 15 16 17 18 19 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Water Time Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 13.6 13.8 1 IGSL.GDT 26/3/24 2 14.2 14 **GROUNDWATER PROGRESS** Hole Depth to Water Casing Comments **INSTALLATION DETAILS** Date GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 24991. BH LOG **REMARKS** Very wet ground conditions..2hrs moving rig into position with Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp tracked dumper .CAT scanned location and hand dug inspection Sample P - Undisturbed Piston Sample W - Water Sample IGSL pit was carried out. ental Sample (Jar + Vial + Tub)



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GEOTECHNICAL BORING RECORD

REPORT NUMBER

24991

BOREHOLE NO. BH307 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,513.11 E DATE COMMENCED 04/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,151.54 N DATE COMPLETED 05/10/2023 **GROUND LEVEL (m AOD)** 2.06 **BOREHOLE DEPTH (m)** 11.30 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P Thomas **ENERGY RATIO (%) ENGINEER PROCESSED BY** 75C Atkins Samples Standpipe Details (E Depth (m) Elevation Ref. Number Recovery Sample Field Test Depth (Legend Description Depth (m) Type Results MADE GROUND (Comprised of compacted hardcore road fill) N = 50/225 mm AA192091 1.00 0.86 1.20 (9, 16, 16, 17, 17) Medium dense grey fine to coarse sandy GRAVEL (Possibly Made Ground) N = 30 (4, 5, 7, 6, 7, 10) F₂ AA192092 В 2.00 -0.34 2.40 0 x 0 x Loose grey fine very silty sandyy GRAVEL 20 20 2 20 20 2 20 20 2 -3 AA192093 В 3.00 (5, 3, 3, 3, 3, 3) -1.24 3.30 Soft grey/brown SILT with organics × 14/ × × × × 1/1/ AA192094 В 4.00 4 (1, 0, 0, 1, 1, 2) × × × × × × N = 5 (1, 0, 1, 1, 1, 2) × AA192095 В 5.00 5 × × /W × 100%rec AA192096 U 5.50 × -3.84 5.90 Very soft grey sandy SILT AA192097 В 6.00 6 (1, 0, 0, 1, 0, 1) AA192098 6.50 100%rec AA192099 В 7.00 (1 0 0 1 0 1) N = 3 (1, 0, 1, 0, 1, 1) AA192100 В 8 00 -6.14 8.20 Very soft brown slightly sandy SILT with some shells AA192101 U 8.50 100%rec N = 3AA192102 9.00 В 9 (1, 0, 1, 0, 1, 1) -7.44 9.50 Failed В 9.50 Dense grey fine to coarse GRAVEL with some cobbles and occasional boulders HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 2.10 2.30 Seepage 1.5 2.10 No 20 1.1 1 1.5 2 10.7 3.10 3.10 6.50 1.20 20 Moderate 10.5 11.3 9.50 9.50 4.00 20 11 1 Nο Rapid **GROUNDWATER PROGRESS** Hole Depth to Water Casing **INSTALLATION DETAILS** Comments Date Depth Depth Tip Depth RZ Top RZ Base Туре 05-10-23 10.70 1.00 10.70 50mm SP REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp out. Sample P - Undisturbed Piston Sample W - Water Sample ntal Sample (Jar + Vial + Tub)



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|--|---|------------------------|-------------------------|---------------------------------|-----------------------|--------------------|-----------|-----------|---------------|---|----------------|--------------------------------|--------------------|--|----------------------|--|
| COI | NTRACT | r Sea (| Gardens, | Bray | | | | | | | | BOREH SHEET | | D. BH307 Sheet 2 of 2 | <u> </u> | |
| CO-ORDINATES 726,513.11 E RIG TYPE 719,151.54 N BOREHO GROUND LEVEL (m AOD) 2.06 | | | | | | | LE DIAM | • | nm) 2 | Dando 20 200 11.30 | DATE C | OMMEN | NCED 04/10/2023 | | | |
| , - 1 | | | | | | PT HAMI NERGY I | | | | | | BORED BY P.Thomas PROCESSED BY | | | | |
| | | | | | | | | | | | Sam | ples | | 2 | 4 | |
| Depth (m) | | | Desc | cription | | | Legend | Elevation | Depth (m) | Ref. Number | Sample Type | Depth (m) | Recovery | Field Test Results | Standpipe Details | |
| 10 | Dense | grey fine tes and occa | to coarse asional bo | GRAVEL v oulders <i>(col</i> | vith some ntinued) | | | | | AA192103 AA192104 | | 10.00 | | N = 62 (7, 6, 12, 15, 17, 18) | 0 0 | |
| 11 | Obstru | iction Borehole | at 11 20 . | | | | | -9.24 | 11.30 | | | | | N = 50/75 mm (25, 29, 50) | | |
| 12 | End of | Borenole | at 11.30 i | п | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | |
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| 17 | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | |
| НД | RD STE | PATA BOR | ING/CHIS | FLLING | | | T | | | | | | | VATER STRIKE DE | TAII S | |
| | HARD STRATA BORING/CHISELLING rom (m) To (m) Time Comments | | | | | | Wate | | | Sealed | Rise | | ïme | Comments | | |
| 1 | .1 | 1.5 | (h) 1 1.5 2 | | | | Strik | e De | epth | At | <u>To</u> | 1 (1 | min) | | | |
| INS | TALLA1 | TION DETA | AILS | | | | Dat | te | Hole Depth | Casing Depth | Der | oth to ater | GF Comme | ROUNDWATER PRO ents | OGRES | |
| | Date 10-23 | Tip Depth 10.70 | 1.00 | RZ Base 10.70 | Type 50mm S | SP. | | | - p- sr 1 | - 2011 | | | | | | |
| REM | MARKS | CAT scar out . | nned locat | ion and ha | nd dug insp | ection pi | it was ca | ırried | B - Bulk D | le Legeno Disturbed (tub) Disturbed e Bulk Disturbeo ironmental Sam | d | Viol + Tub) | Sam P - U | Undisturbed 100mm Diameter ple Judisturbed Piston Sample Water Sample | | |



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GEOTECHNICAL BORING RECORD

REPORT NUMBER

24991

BOREHOLE NO. BH308 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,401.68 E DATE COMMENCED 13/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,235.32 N DATE COMPLETED 14/10/2023 **GROUND LEVEL (m AOD)** 3.82 **BOREHOLE DEPTH (m)** 12.60 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P Thomas **ENGINEER PROCESSED BY** OF.C Atkins **ENERGY RATIO (%)** Samples Standpipe Details (E Depth (m) Elevation Sample Type Recovery Ref. Number Field Test Depth (Legend Description Depth (m) Results - 0 TOPSOIL 11/ 0.20 3.62 Firm brown sandy SILT/CLAY with some gravel and X occasional roots ____ ____ 2.82 1.00 N = 14AA197085 1.00 Soft brown sandy SILT/CLAY with some gravel (3, 4, 4, 4, 3, 3)-XO _ 0. X N = 8 (2, 3, 3, 2, 2, 1) - → -2 AA197086 В 2.00 1.52 2.30 Loose grey silty SAND × 1.02 2.80 × Very soft grey very sandy SILT with some organic ·× N = 4 (1, 0, 1, 1, 1, 1) -3 AA197087 В 3.00 fibres 14/ × × × × × N = 6 (1, 1, 2, 2, 1, 1) AA197088 В 4.00 4 × × <u>''</u> × × × ×. AA197089 U 4.50 100%rec ×. × /W/ N = 3 (1, 0, 1, 0, 1, 1) × × AA197090 В 5.00 5 × ·× × AA197091 U 5.50 90%rec -2.08 5.90 0000 Loose grey fine to coarse GRAVEL N = 1(1, 0, 0, 1, 0, 0) AA197092 В 6.00 6 -2.38 6.20 Loose grey silty SAND N = 5 (1, 0, 1, 1, 1, 2) AA197093 В 7.00 N = 4 (1, 0, 1, 1, 1, 1) AA197094 В 8 00 8 AA197095 U 8.50 100%rec <u>-5.2</u>8 9.10 AA197096 В 9.00 9 (1, 0, 1, 0, 1, 2) °/ °/ ° Loose grey fine to coarse GRAVEL (Blowing back to -5.48 9.30 Firm grey/brown SILT/CLAY with occasional fibres HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 12.2 12.6 5.90 5.90 6.20 4.70 Slow 1.5 20 9.10 9.30 9.10 4.50 20 Moderate **GROUNDWATER PROGRESS** Hole Depth to Water Casing **INSTALLATION DETAILS** Comments Date Depth Depth Tip Depth RZ Top RZ Base Туре REMARKS 2.25hrs moving rig into position .CAT scanned location and Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp hand dug inspection pit was carried out . Blowing fines noted . Sample P - Undisturbed Piston Sample W - Water Sample ntal Sample (Jar + Vial + Tub)



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GEOTECHNICAL BORING RECORD

REPORT NUMBER

24991

BOREHOLE NO. BH308 CONTRACT Sea Gardens, Bray SHEET Sheet 2 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,401.68 E DATE COMMENCED 13/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,235.32 N DATE COMPLETED 14/10/2023 **GROUND LEVEL (m AOD)** 3.82 **BOREHOLE DEPTH (m)** 12.60 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P Thomas **ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details Depth (m) Depth (m) Elevation Ref. Number Sample Recovery Field Test Legend Description Depth (m) Results × × × AA19709 10.00 N = 11 (1, 0, 2, 2, 3, 4) Firm grey/brown SILT/CLAY with occasional fibres (continued) <u>×</u> -6.88 10.70 Dense grey fine to coarse silty GRAVEL -7.28 11.10 N = 40AA197098 11.00 (5, 8, 8, 10, 10, 12) Very stiff brown sandy gravelly silty CLAY with occasional cobbles AA197099 В 11.50 -7.98 11.80 Dense grey fine to coarse GRAVEL with some N = 50 (4, 7, 10, 11, 14, 15) 12 cobbles and occasional boulders -8.78 12.60 AA197100 В 12.50 Obstruction End of Borehole at 12.60 m 13 14 15 16 17 18 19 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 12.2 12.6 11.80 11.80 4.50 20 Moderate No 1.5 **GROUNDWATER PROGRESS** Hole Depth to Water Casing **INSTALLATION DETAILS** Comments Date Depth Depth Tip Depth RZ Top RZ Base Туре REMARKS 2.25hrs moving rig into position .CAT scanned location and Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp hand dug inspection pit was carried out . Blowing fines noted . Sample P - Undisturbed Piston Sample W - Water Sample ntal Sample (Jar + Vial + Tub)



REPORT NUMBER

24991

BOREHOLE NO. BH309 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,395.31 E DATE COMMENCED 26/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,161.66 N DATE COMPLETED 27/10/2023 **GROUND LEVEL (m AOD)** 3.55 **BOREHOLE DEPTH (m)** 13.50 SPT HAMMER REF. NO. P.Allan **CLIENT** Ballymore Group **BORFD BY ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details (E Depth (m) Elevation Sample Type Recovery Ref. Number Field Test Legend Depth (Description Depth (m) Results - 0 TOPSOIL 11/ 1/1/ 0.20 3.35 Brown sandy SILT/CLAY 3.15 0.40 AA197101 В 0.50 Very soft brown sandy SILT/CLAY with occasional -XO ___X 0. AA191709 1.00 (1, 0, 0, 1, 0, 1) ___ ō 9 1.55 2.00 N = 1 (1, 0, 0, 0, 1, 0) AA191710 В 2.00 Very soft brown SILT/CLAY _× 0.55 3.00 AA191711 В 3.00 Very soft grey very sandy SILT (1, 0, 0, 0, 1, 0) ·× × · × .× . × × AA191712 70%rec 4.00 4 × N = 1(1, 0, 0, 0, 0, 1) AA191713 В 5.00 5 -2.45 6.00 AA191714 100%rec U 6.00 × 1/ <u>√\ /</u> × Very soft grey/brown silty PEAT \\ \\ \\ <u>\/ /,</u> 11/ X11/ -3.45 7.00 N = 2(1, 0, 0, 1, 0, 1) AA191715 В 7.00 Very soft grey SILT × AA191716 U 8 00 100%red 8 × AA191717 В 9.00 9 (1, 0, 1, 0, 0, 1) × -5.95 9.50 71/ 11/× Very soft grey/brown silty PEAT V, 11, HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 12.6 12.9 4.50 4.50 4.00 Slow No 20 1 IGSL.GDT 26/3/24 1 13.3 13.5 **GROUNDWATER PROGRESS** Hole Depth to Water Casing **INSTALLATION DETAILS** Comments Date GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 24991. BH LOG REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp out. Sample P - Undisturbed Piston Sample W - Water Sample IGSL ntal Sample (Jar + Vial + Tub)



REPORT NUMBER

24991

BOREHOLE NO. BH309 CONTRACT Sea Gardens, Bray SHEET Sheet 2 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,395.31 E DATE COMMENCED 26/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,161.66 N DATE COMPLETED 27/10/2023 **GROUND LEVEL (m AOD)** 3.55 **BOREHOLE DEPTH (m)** 13.50 SPT HAMMER REF. NO. P.Allan **CLIENT** Ballymore Group **BORFD BY ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details Depth (m) Depth (m) Elevation Ref. Number Recovery Sample Field Test Legend Description Depth (m) Results AA191718 10.00 - 10 Very soft grey/brown silty PEAT (continued) (1, 0, 1, 1, 1, 2) -6.85 10.40 Medium dense to dense grey very sandy GRAVEL with occasional cobbles (Possibly very gravelly SAND) N = 28 AA191719 11.00 (3, 3, 4, 6, 9, 9)-7.95 11.50 Dense brown fine to coarse GRAVEL with some N = 46 (3, 6, 8, 8, 15, 15) AA191720 В 12.00 90000 N = 50/225 mm (6, 6, 11, 17, 22) AA191721 13 В 13.00 -9.95 13.50 N = 50/150 mm Obstruction (20, 5, 40, 10) End of Borehole at 13.50 m 14 15 16 17 18 19 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 12.6 12.9 10.40 10.40 1.50 Rapid No 20 1 IGSL.GDT 26/3/24 1 13.3 13.5 **GROUNDWATER PROGRESS** Depth to Water Hole Casing **INSTALLATION DETAILS** Date Comments GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 24991. BH LOG REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp out. Sample P - Undisturbed Piston Sample W - Water Sample IGSL ental Sample (Jar + Vial + Tub)



REPORT NUMBER

24991

BOREHOLE NO. BH310 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,415.09 E DATE COMMENCED **BOREHOLE DIAMETER (mm)** 200 719,078.79 N DATE COMPLETED **GROUND LEVEL (m AOD)** 2.15 **BOREHOLE DEPTH (m)** 12.00 P.Allan SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details (E Depth (m) Elevation Ref. Number Recovery Sample Field Test Depth (Legend Description Depth (m) Type Results - 0 MADE GROUND (Comprised of compact stone roadfill) 1.65 0.50 AA197279 В 0.50 Soft grey/brown sandy SILT/CLAY with occasional $\overline{\times}$ gravel X N = 10AA197280 1.00 _____ (1, 2, 3, 3, 2, 2)---X 0.15 2.00 N = 8 (2, 3, 3, 2, 1, 2) AA197281 В 2.00 Loose brown very sandy GRAVEL AA197282 3 В 3.00 (1, 0, 1, 1, 2, 2) -1.75 3.90 × Very soft grey/brown peaty SILT N = 1 (1, 0, 0, 1, 0, 0) × AA197283 В 4.00 × 14/ × -2.35 4.50 Loose grey silty SAND N = 2(1, 0, 0, 1, 0, 1) AA197284 В 5.00 5 × × N = 1 (1, 0, 0, 1, 0, 0) AA197285 В 6.00 6 × -4.65 6.80 Soft grey/bown peaty SILT × AA197286 В 7.00 × (1, 0, 0, 0, 1, 0) <u>/</u>// × × × × × × × × × × × AA197287 U 8 00 50%rec 8 × × × × × × × /W/ × × N = 6× AA197288 В 9.00 9 (1, 2, 2, 2, 1, 1) × × × × 1/4/ × × × -7.85 10.00 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Water Time Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 10.9 2.00 2.00 1.00 20 Moderate 10.7 No 1 IGSL.GDT 26/3/24 1 10.00 10.00 No 2.30 20 Slow 12 11.7 **GROUNDWATER PROGRESS** Depth to Water Casing **INSTALLATION DETAILS** Comments Date GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 24991. BH LOG REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp out. Sample P - Undisturbed Piston Sample W - Water Sample IGSL ntal Sample (Jar + Vial + Tub)



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| | | | | | | | TYPE Dando 2000 REHOLE DIAMETER (mm) 200 REHOLE DEPTH (m) 12.00 | | | | | | | DATE COMMENCED DATE COMPLETED | | | |
| CL | CLIENT Ballymore Group SPT HAENGINEER Atkins ENERG | | | | | | ER RE | F. NO. | ' | 12.00 | | BORED | | P.Allan | | | |
| | | | | | | | - (| | | | | nples | | 1 32 | | | |
| Depth (m) | | | Des | cription | | | Legend | Elevation | Depth (m) | Ref. Number | Sample Type | 1 | | | Standpipe Details | | |
| 10 | Medio | um dense sional cob | to dense ç bles | | | | | AA197289 AA197290 | | 10.00 | | N = 19 (1, 2, 2, 3, 6, 8) N = 50/225 mm | | | | | |
| - - - - - - - | | | | | | 95° 80° 80° 80° 80° 80° 80° 80° 80° 80° 80 | | -9.85 | 12.00 | - | 5 | 11.00 | | (6, 8, 15, 15, 20) N = 50/75 mm | | | |
| . 12 | Obstr End o | ruction of Borehol | le at 12.00 | m | | | | | | | | | | (25, 50) | | | |
| 13 | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | |
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| H/ | ARD ST | RATA BO | RING/CHIS | SELLING | | | | | | | | | V | NATER STRIKE DETA | AILS | | |
| Fro | m (m) | To (m) | Time (h) | omments | | | Wate Strik | er Ca | sing S | Sealed At | Rise To | | Γime min) | Comments | | | |
| | 0.7 1.7 | 10.9 12 | 1 1 | | | | | | | | | | , | | | | |
| | | | | | | | | | Hole | Casing | De | nth to | | ROUNDWATER PRO | GRESS | | |
| | Date | Tip Dep | TAILS oth RZ Top | RZ Base | Туре | | Dat | | Hole Depth | Casing Depth | W | pth to ater | Comm | ents | | | |
| RE | MARKS | CAT sca | anned loca | tion and ha | nd dug inspect | ion pit | was ca | rried | LB - Bulk L | le Legeni Disturbed (tub) Disturbed e Bulk Disturbe ironmental San | d | + Vial + Tub | Sam P - I | - Undisturbed 100mm Diameter nple Undisturbed Piston Sample Water Sample | | | |



GEOTECHNICAL BORING RECORD

REPORT NUMBER

24991

BOREHOLE NO. BH311 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,395.31 E DATE COMMENCED 06/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,161.66 N DATE COMPLETED 07/10/2023 **GROUND LEVEL (m AOD)** 3.72 **BOREHOLE DEPTH (m)** 11.00 Ballymore Group SPT HAMMER REF. NO. P.Allan **CLIENT BORFD BY ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details Depth (m) Depth (m) Elevation Recovery Sample Type Ref. Number Field Test Legend Description Depth (m) Results - 0 TOPSOIL 11/ 0.20 3.52 Very soft brown sandy SILT/CLAY AA197251 В 0.50 N = 6 (1, 0, 1, 1, 2, 2) AA197252 1.00 1.72 2.00 N = 1 (1, 0, 0, 1, 0, 0) AA197253 В 2.00 Very soft grey SILT AA197254 3 В 3.00 (1, 0, 0, 0, 0, 1) AA197255 N = 1 (1, 0, 0, 1, 0, 0) В 4.00 4 × -1.28 5.00 AA197256 U 5.00 100%red Very soft grey/brown peaty SILT × × <u>/</u>}/ × × × '/' × × × AA197257 N = 1(1, 0, 0, 1, 0, 0) × В 6.00 6 × × × × × × × × W. AA197258 U 7.00 100%red × × × -3.78 7.50 Very soft grey SILT N = 3 (1, 0, 1, 0, 1, 1) AA197259 В 8 00 AA197260 U 100%rec 9.00 9 × × -5.98 9.70 800 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 10.3 10.5 7.50 4.00 20 Moderate 7.50 No 1 IGSL.GDT 26/3/24 2 9.70 20 10.9 9.70 No 4.00 Moderate 11 **GROUNDWATER PROGRESS** Hole Casing Depth to Water **INSTALLATION DETAILS** Comments Date Depth Depth Tip Depth RZ Top RZ Base Туре 24991. BH LOG REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp out. Sample P - Undisturbed Piston Sample W - Water Sample IGSL ntal Sample (Jar + Vial + Tub)



GEOTECHNICAL BORING RECORD

REPORT NUMBER

24991

BOREHOLE NO. **BH311** CONTRACT Sea Gardens, Bray SHEET Sheet 2 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,395.31 E DATE COMMENCED 06/10/2023 **BOREHOLE DIAMETER (mm)** 200 719,161.66 N DATE COMPLETED 07/10/2023 **GROUND LEVEL (m AOD)** 3.72 **BOREHOLE DEPTH (m)** 11.00 P.Allan SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORED BY ENGINEER ENERGY RATIO (%) PROCESSED BY** Ĵ-jC Atkins Samples Standpipe Details Depth (m) Depth (m) Elevation Recovery Ref. Number Sample Type Field Test Legend Description Depth (m) Results 0000 AA19726 10.00 N = 44 Dense grey very sandy GRAVEL with occasional (5, 6, 10, 10, 12, 12) cobbles (Possibly very gravelly Sand) (continued) -7.28 11.00 N = 50/150 mm (18, 7, 40, 10) Obstruction End of Borehole at 11.00 m 12 13 14 15 16 17 18 19 HARD STRATA BORING/CHISELLING **WATER STRIKE DETAILS** Water Time Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth Αt То (min) 10.3 10.5 1 IGSL.GDT 26/3/24 2 10.9 11 **GROUNDWATER PROGRESS** Depth to Water Hole Casing **INSTALLATION DETAILS** Date Comments 24991.GPJ Depth Depth Tip Depth RZ Top RZ Base Туре 07-10-23 11.00 4.00 End of BH Nil BH LOG REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend D - Small Disturbed (tub)
B - Bulk Disturbed
LB - Large Bulk Disturbed
Env - Environmental Sample (Jar + Vial + Tub) UT - Undisturbed 100mm Diameter out. Sample P - Undisturbed Piston Sample W - Water Sample GSL



IGSL.GDT 26/3/24

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GEOTECHNICAL BORING RECORD

REPORT NUMBER

24991

BOREHOLE NO. **BH312** CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,273.70 E DATE COMMENCED 09/11/2023 **BOREHOLE DIAMETER (mm)** 200 719,149.65 N DATE COMPLETED 11/11/2023 **GROUND LEVEL (m AOD)** 4.14 **BOREHOLE DEPTH (m)** 10.60 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORED BY** P Allan **ENERGY RATIO (%) ENGINEER PROCESSED BY** Atkins J-C Samples Standpipe Details Depth (m) Depth (m) Elevation Sample Type Recovery Ref. Number Field Test Legend Description Depth (m) Results - 0 TOPSOIL 11/ 3.84 0.30 Very soft brown sandy SILT/CLAY AA192495 В 0.50 AA192496 1.00 70%rec N = 5(1, 0, 1, 1, 1, 2) AA192497 В 2.00 2 1.14 3.00 AA192498 В 3.00 Very soft grey sandy SILT (1, 0, 0, 1, 0, 0)AA192499 U 70%rec 4.00 4 N = 1 (1, 0, 0, 1, 0, 0) AA192500 В 5.00 5 -1.86 6.00 AA192501 U 6.00 80%rec Very soft brown SILT × × × N = 5 (1, 0, 1, 1, 1, 2) AA192502 В 7.00 × × -3.86 8.00 AA192503 U 8 00 100%red Very soft grey sandy SILT N = 2AA192504 В 9.00 9 (1, 0, 0, 1, 0, 1) -5.36 9.50 8 Dense brown GRAVEL with some cobbles 0 0 HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth Αt То (min) 10.2 10.5 2 No water strike **GROUNDWATER PROGRESS** Hole Depth to Water Casing **INSTALLATION DETAILS** Comments Date Depth Depth Date Tip Depth RZ Top RZ Base Туре 11-11-23 10.50 50mm SP 1.50 10.50 REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp out. P - Undisturbed Piston Sample W - Water Sample ntal Sample (Jar + Vial + Tub)



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| СО | NTRAC | T Se | a Garder | ns, Bray | | | | | | | | BOREH SHEET | | О. | BH312 Sheet 2 of 2 | |
| | -ORDIN OUND | IATES LEVEL (1 | 719 | i,273.70 E i,149.65 N 4.14 | | TYPE EHOLE D EHOLE D | | | nm) 2 | Dando 20 200 10.60 | 000 | DATE (| COMME | | 09/11/2023 | |
| | ENT GINEER | | Illymore G | Group | 1 | HAMMER | | | | | | BOREI PROCE | | BY X | P.Allan | |
| _ | | | | | | | | | | | Sam | nples | | | 2 | 4) |
| Depth (m) | | | D | escription | | Legend |))) ; | Elevation | Depth (m) | Ref. Number | Sample Type | Depth | | S D D D D D D D D D D D D D D D D D D D | Field Test Results | Standpipe Details |
| 10 | | e brown <i>nued)</i> | GRAVEL | with some co | bbles | 800 | 90 . | -6.36 | 10.50 | AA192505 | В | 10.00 | | | N = 50/150 mm (10, 15, 20, 30) N = 50/75 mm | |
| 111 12 13 13 14 15 16 17 17 17 18 | End o | of Boreho | ole at 10.6 | 60 m | | | | | | | | | | | (25, 50) | |
| 19 | | | | | | | | | | | | | | | | |
| | | | ORING/CI Time | HISELLING | | 1 | Nater | Co | eina l | Sealed | Rise | | Time | | R STRIKE DET | AILS |
| | m (m) 0.2 | To (m) | (h) 2 | Comments | | | Strike | | sing S epth | At | To | | min) | | ments | |
| | | | | | | | | | | | | | | No | water strike | |
| | | TIEN == | | | | | | | Hole | Casing | Dei | nth to | | | IDWATER PRO | GRESS |
| | TALLA Date | Tip De | | op RZ Base | Туре | | Date | | Depth | Depth | W | pth to ater | Comm | nents | | |
| 11 | -11-23 | 10.50 | 1.50 | 0 10.50 | 50mm SP | | | | | | | | | | | |
| REI | MARKS | Out. | canned lo | ocation and ha | nd dug inspect | ion pit wa | s carri | ied | LB - Bulk L | le Legen Disturbed (tub Disturbed e Bulk Disturbe ironmental Sar | ed | ⊦ Vial + Tub | Sai P - | mple | rbed 100mm Diameter bed Piston Sample ample | |



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REPORT NUMBER

24991

BOREHOLE NO. BH313 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 1 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,223.34 E DATE COMMENCED 14/11/2023 **BOREHOLE DIAMETER (mm)** 200 719,195.19 N DATE COMPLETED 14/11/2023 **GROUND LEVEL (m AOD)** 3.41 **BOREHOLE DEPTH (m)** 9.70 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P.ALLAN **ENGINEER PROCESSED BY** OF.C Atkins **ENERGY RATIO (%)** Samples Standpipe Details (E Depth (m) Elevation Ref. Number Recovery Field Test Sample Depth (Legend Description Depth (m) Type Results - 0 TOPSOIL · \1/ 3.31 0.10 -XO-_ Soft brown sandy SILT/CLAY with occasional gravel X AA204379 В 0.50 0. -X· - X N = 9AA204380 В 1.00 (1, 2, 2, 2, 2, 3) -X 1.91 1.50 Loose brown very sandy GRAVEL (Possibly very gravelly Sand) N = 5 (1, 0, 1, 1, 1, 2) AA204381 В 2.00 0.41 3.00 AA204382 3 В 3.00 Loose grey peaty GRAVEL (1, 0, 0, 1, 0, 1) 0000 000 °0 = -0.29 3.70 Very soft grey SILT × × N = 1 (1, 0, 0, 0, 0, 1) AA204383 В 4.00 4 × × × × × × × × × -1.59 5.00 AA204384 U 5.00 100%rec Very soft hrey sandy SILT ·× · × × .× × × × × × × × AA204385 U 6.00 60%rec 6 × × × ×· × × × . × × × × × AA204386 В 7.00 N = 1(1, 0, 0, 1, 0, 0) × × × × ·× × -4.39 7.80 Dense grey very sandy fine to coarse GRAVEL with N = 32occasional cobbles (Possibly very gravelly Sand) AA204387 В 8 00 (3, 4, 6, 8, 9, 9) 000 000 N = 50/225 mmAA204388 В 9.00 9 (9, 10, 15, 20, 15) 80.00 -6.29 9.70 N = 50/75 mmObstruction (25, 40, 50)HAREDISTRATA BORING! CHISELLING WATER STRIKE DETAILS Time Water Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 9 0.50 Slow 8.8 0.75 1.50 1.50 No 20 9.7 94 1 **GROUNDWATER PROGRESS** Depth to Water Hole Casing **INSTALLATION DETAILS** Date Comments Depth Depth Tip Depth RZ Top RZ Base Туре 15-11-23 9.70 4.00 End of BH Nil REMARKS 2.5hrs standing on access to BH.CAT scanned location and Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp hand dug inspection pit was carried out. Sample P - Undisturbed Piston Sample W - Water Sample ntal Sample (Jar + Vial + Tub)



IGSL.GDT 26/3/24

GPJ

24991.

BH LOG

IGSL

GEOTECHNICAL BORING RECORD

REPORT NUMBER

24991

BOREHOLE NO. BH314 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,300.42 E DATE COMMENCED 08/11/2023 **BOREHOLE DIAMETER (mm)** 200 719,010.17 N DATE COMPLETED 09/11/2023 **GROUND LEVEL (m AOD)** 2.01 **BOREHOLE DEPTH (m)** 12.10 SPT HAMMER REF. NO. P.Allan **CLIENT** Ballymore Group **BORFD BY ENERGY RATIO (%) ENGINEER PROCESSED BY** OF.C Atkins Samples Standpipe Details (E Depth (m) Elevation Ref. Number Sample Recovery Field Test Depth (Description Legend Depth (m) Type Results - 0 TOPSOIL .\\ / 0.20 1.81 MADE GROUND (Comprised of gravel with brick AA167259 В 0.50 fragments) 1.01 1.00 N = 25 AA167260 1.00 Loose to medium dense brown very sandy GRAVEL (2, 3, 6, 8, 6, 5)(Possibly very gravelly Sand) N = 7 (1, 2, 2, 2, 2, 1) AA167261 В 2.00 2 N = 16AA167262 3 В 3.00 (3, 4, 6, 3, 4, 3) 0000 -1.99 4.00 N = 3 (1, 0, 1, 1, 0, 1) X AA167263 В 4.00 Very soft grey/brown peaty SILT × × 14/ × × × × ½/ // × × AA167264 U 5.00 30%rec 5 × × × × <u>′1,</u> × × × × × × M AA167265 N = 1(1, 0, 0, 1, 0, 0) В 6.00 6 × × × × × × 14/ × × × AA167266 U 7.00 70%rec × -5.49 7.50 Very soft grey sandy SILT × AA167267 В 8 00 8 (1, 0, 0, 1, 1, 2) × -6.49 8.50 × Very soft grey gravelly SILT <u>×</u>o[×] -6.99 9.00 N = 28AA167268 В 9.00 9 Medium dense to dense grey GRAVEL with some (2, 2, 3, 6, 8, 11) cobbles HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Water Time Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 0.6 0.8 2.00 2.00 1.40 20 Moderate 0.5 No 5.00 1.00 10.7 5.00 No 20 Slow 10.9 0.75 12.1 118 1 **GROUNDWATER PROGRESS** Hole Depth to Water Casing **INSTALLATION DETAILS** Comments Date Depth Depth Tip Depth RZ Top RZ Base Туре REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp out. Sample P - Undisturbed Piston Sample W - Water Sample ntal Sample (Jar + Vial + Tub)



GEOTECHNICAL BORING RECORD

REPORT NUMBER

24991

BOREHOLE NO. BH314 CONTRACT Sea Gardens, Bray SHEET Sheet 2 of 2 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,300.42 E DATE COMMENCED 08/11/2023 **BOREHOLE DIAMETER (mm)** 200 719,010.17 N DATE COMPLETED 09/11/2023 **GROUND LEVEL (m AOD)** 2.01 **BOREHOLE DEPTH (m)** 12.10 SPT HAMMER REF. NO. P.Allan **CLIENT** Ballymore Group **BORED BY ENGINEER ENERGY RATIO (%) PROCESSED BY** Ĵ-jC Atkins Samples Standpipe Details Depth (m) Depth (m) Elevation Recovery Ref. Number Sample Type Field Test Legend Description Depth (m) Results AA16726 10.00 N = 26 Medium dense to dense grey GRAVEL with some (3, 4, 6, 6, 6, 8) cobbles (continued) N = 50 (6, 8, 10, 15, 15, 10) AA167270 В 11.00 11 N = 50/150 mm (10, 15, 30, 20) -10.09 12.10 12 Obstruction End of Borehole at 12.10 m 13 14 15 16 17 18 19 HARD STRATA BORING/CHISELLING **WATER STRIKE DETAILS** Water Time Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 0.6 0.8 0.5 IGSL.GDT 26/3/24 10.7 10.9 0.75 12.1 118 1 **GROUNDWATER PROGRESS** Depth to Water Hole Casing **INSTALLATION DETAILS** Comments Date 24991.GPJ Depth Depth Tip Depth RZ Top RZ Base Туре BH LOG REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend D - Small Disturbed (tub)
B - Bulk Disturbed
LB - Large Bulk Disturbed
Env - Environmental Sample (Jar + Vial + Tub) UT - Undisturbed 100mm Diamete out. Sample P - Undisturbed Piston Sample W - Water Sample GSL



IGSL.GDT 26/3/24

GPJ

24991.

BH LOG

IGSL

GEOTECHNICAL BORING RECORD

REPORT NUMBER

24991

BOREHOLE NO. BH315 CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 1 **RIG TYPE** Dando 2000 **CO-ORDINATES** 726,059.55 E DATE COMMENCED 16/11/2023 **BOREHOLE DIAMETER (mm)** 200 719,147.54 N DATE COMPLETED 17/11/2023 **GROUND LEVEL (m AOD)** 4.08 **BOREHOLE DEPTH (m)** 9.00 SPT HAMMER REF. NO. **CLIENT** Ballymore Group **BORFD BY** P Allan **ENGINEER PROCESSED BY** OF.C Atkins **ENERGY RATIO (%)** Samples Standpipe Details (E Depth (m) Elevation Ref. Number Sample Recovery Field Test Depth (Legend Description Depth (m) Type Results - 0 TOPSOIL 11. 3.98 0.10 Very soft to soft brorown sandy SILT/CLAY AA197272 В 0.50 AA197273 В 1.00 (1, 0, 1, 2, 1, 0) AA197274 U 2.00 50%rec 2 1.38 2.70 Very soft grey sandy SILT 1.08 3.00 0000 AA197275 -3 В 3.00 Very soft brown very sandy GRAVEL (Possibly very (1, 1, 2, 1, 2, 1) gravelly Sand) 0000 0.0.0 N = 2 (1, 0, 0, 1, 0, 1) AA197276 В 4.00 4 0.00 -0.92 5.00 N = 1 (1, 0, 0, 1, 0, 0) AA197277 В 5.00 Very soft grey SILT × × × × × × × × × × AA197278 U 6.00 90%rec 6 × × × × × × × × × × -2.92 7.00 N = 8 (1, 0, 1, 2, 2, 3) AA197279 В 7.00 Loose grey silty GRAVEL -3.42 7.50 Dense grey/brown GRAVEL with some cobbles N = 50/150 mm (8, 15, 30, 20) AA197280 В 8 00 8 000 -4.92 9.00 N = 50/75 mm9 Obstruction (25, 50) End of Borehole at 9.00 m HARD STRATA BORING/CHISELLING WATER STRIKE DETAILS Water Time Casing Sealed Rise Time From (m) To (m) Comments Comments (h) Strike Depth At То (min) 3.00 3.00 1.00 Moderate 7.6 8 No 20 1 7.00 7.00 No 2.50 20 Moderate 9 8 7 1 **GROUNDWATER PROGRESS** Hole Depth to Water Casing **INSTALLATION DETAILS** Comments Date Depth Depth Tip Depth RZ Top RZ Base Туре REMARKS CAT scanned location and hand dug inspection pit was carried Sample Legend UT - Undisturbed 100mm Diamete D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Samp out. Sample P - Undisturbed Piston Sample W - Water Sample ntal Sample (Jar + Vial + Tub)

River Quarter, Bray Factual Report

PRCENED. 24/03/2025

Appendix 2 Rotary Corehole Records

Report No. 24991 14 | P a g e



REPORT NUMBER

| CO-ORDINATES 726,501.96 E 719,299.82 N GROUND LEVEL (mOD) 2.49 RIG TYPE LUSH Air/Mist INCLINATION (deg) -90 CLIENT Ballymore Group INCLINATION (deg) -90 CORE DIAMETER (mm) 78 RIG TYPE LUSH Air/Mist INCLINATION (deg) -90 CORE DIAMETER (mm) 78 DATE DRILLED BY LOGGED BY CORE DIAMETER (mm) 78 DRILLED BY LOGGED BY CORE DIAMETER (mm) 78 CORE DIAMETER (mm) 78 DRILLED BY LOGGED BY CORE DIAMETER (mm) 78 CORE DIAMETER (mm) 78 DRILLED BY LOGGED BY CORE DIAMETER (mm) 78 SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SAND SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SAND SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SAND SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SLIT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SLIT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SLIT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SLIT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SLIT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SLIT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SLIT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SLIT | 302 pet 1 of 3 01/2024 01/2024 GSL - JK O' Shea |
|--|--|
| CO-ORDINATES 728,501.96 E 719,299.82 N RIG TYPE FLUSH Air/Mist DATE LOGGED 22/0 GROUND LEVEL (mOD) 2.49 RIG TYPE FLUSH Air/Mist DATE LOGGED 22/0 CLIENT BAllymore Group INCLINATION (deg) -90 DRILLED BY LOGGED BY CORE DIAMETER (mm) 78 DRILLED BY LOGGED BY LOGGED BY CORE DIAMETER (mm) 78 DRILLED BY LOGGED | 01/2024 01/2024 GSL - JK |
| CLIENT Ballymore Group Alkins NCLINATION (deg) CORE DIAMETER (mm) 78 LOGGED BY LO | |
| SYMMETRIX DRILLING: No recovery, observed by driller as returns of CLAY 1.50 0.99 2 2 3.00 -0.51 3 3 3 3 3 3 3 3 3 3 4 4 4 4 5 5 5 5 5 6 5 5 7 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 |) O Gliea |
| as returns of CLAY SYMMETRIX DRILLING: No recovery, observed by driller as returns of sandy CLAY SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SAND SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SAND SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SILT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SILT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SILT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SILT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SILT SYMMETRIX DRILLING: No recovery, observed by driller as returns of CLAY | Standpipe Details |
| 3.00 -0.51 SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SAND SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SILT SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SILT SYMMETRIX DRILLING: No recovery, observed by driller as returns of CLAY SYMMETRIX DRILLING: No recovery, observed by driller as returns of CLAY | |
| SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey SILT 7. SYMMETRIX DRILLING: No recovery, observed by driller as returns of CLAY 7.50 -5.01 | |
| 7 SYMMETRIX DRILLING: No recovery, observed by driller as returns of CLAY | |
| as returns of CLAY | |
| 9 | |
| | TRIKE DETAILS |
| Hole cased from 0.00-21.00m. Water Strike Depth At To To Commen No water | nts er strike recorde |
| | WATER DETAIL |
| NSTALLATION DETAILS Date Hole Depth Depth Depth Depth Depth Depth Depth Water Comments Date Tip Depth RZ Top RZ Base Type O1-02-24 23.50 21.00 2.95 Water levels recorded drilling. | 5 mins after end of |



REPORT NUMBER

| | ලුව | L / | | | | | | | | | | | | | 27 | 99 | ' |
|--------------------|--------------------|------------|-----------------------|-------------------------------|------------------------------------|-----------------|-------------|---|----------------|---------------------------|-----------------------|-------------------|----------|-----------|--------------------|-------------------|----------------------------------|
| COI | NTR | ACT | S | ea G | ardens, Bray | | | | | | | | LHOLE I | NO | RC30 | | |
| | | DINA. | | / O.I | 726,501.96 E 719,299.82 N | | | RIG TYPE | | | T-440 | I | DRILLE | | 28/01/2 28/01/2 | 2024 | |
| CLI | ENT SINE | | В | (mOl allym tkins | ore Group | | | FLUSH INCLINATION (d CORE DIAMETE | | n) | Air/Mist -90 78 | DRILI | LED BY | <u> </u> | | Jk | (|
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Fracture Spacing Log (mm) | Non-intact Zone | Legend | | | Descripti | ion | | | Depth (m) | Elevation | Standpipe Details | SPT (N Value) |
| 10 | | | | | | | | SYMMETRIX D as returns of Cl | _AY (d | continued) | | | 1 | 11.70 | 0 | 0 0 | |
| 12 | | | | | | | | SYMMETRIX D as returns of sa | RILLI ndy G | NG: No rec GRAVEL | overy, obs | erved by di | riller | | 0 | | |
| 114 | | | | | | | | SYMMETRIX D as returns of GI | RILLI | NG: No rec | overy, obse | erved by dr | riller 1 | 15.30 | -12.81 ° | | |
| 16 | | | | | | | 000 | SYMMETRIX D as returns of Cl | RILLI | | overy, obs | erved by dr | riller | 16.00 | | | N = 39 |
| 17 | | | | | | | | | | | | | | | 0 | | (4, 7, 8, 9, 11) |
| 18 | | | | | | | | | | | | | | | 0 | | N = 32 (5, 10, 7, 11, 6) |
| 25-7 | MA P | V-0 | | | | | 0 | SYMMETRIX D as returns of sa | RILLI ndy g | NG: No rec ravelly CLA | overy, obs Y | erved by dr | | | -17.01 o | ° | N = 43 (9, 7, 9, 1 11, 10) |
| | MAR e cas | | rom (| 0.00-2 | 21.00m. | | | Wa | iter | Casing | Sealed | Rise | Time | | mments | ine [| DETAILS |
| | | | | | | | | Str | ıke | Depth | At | То | (min) | | | strike | recorde |
| | | | | | | | | | | | | | | GRO | UNDWA | TER | DETAIL |
| | | | | ETAI | | | | | ate | Hole Depth | Casing Depth | Depth to Water | | | | | |
| | Date -02-2 | | ip Do 22 .0 | | RZ Top RZ Bas 1.00 22.00 | | Typ 50mm | | 02-24 | 23.50 | 21.00 | 2.95 | Water le | | ecorded 5 m | nins aft | er end of |



REPORT NUMBER

| CONTRACT | Sea G | Sardens, B | Iray | | | | | | | DANA SHEE | ,HOLE | NO | RC: | 302 et 3 of | 3 |
|--|--------------------------|---------------------------------|--------------------------|-----------------|-------------|--|---|---|---------------------------------|----------------------------|-------------------|----------------|------------------|--------------------|------------------------------|
| CO-ORDINAT | | 726,501 719,299 D) | 1.96 E 9.82 N 2.49 | | | RIG TYPE FLUSH | | | T-440 Air/Mist | DATE | DRILLI LOGGI | | 28/0 | 1/2024 1/2024 | |
| CLIENT ENGINEER | Ballyn Atkins | nore Group | р | | | INCLINATION CORE DIA | | n) | -90 78 | | ED BY | | X | SL - JI O' Sh | |
| Downhole Depth (m) Core Run Depth (m) T.C.R.% | S.C.R.% R.Q.D.% | Fract Spac Log (mn | eing g n) | Non-intact Zone | Legend | | | Descripti | | | | Depth (m) | Elevation | Standpipe Detail | SPT (N Value) |
| - 20 | | | | | | SYMMETI as returns | RIX DRILLI of sandy g | NG: No rec ravelly CLA | overy, obs Y <i>(continu</i> | erved by dr e <i>d)</i> | | 04.50 | | | N = 28/75 mm (27, 23, 28) |
| 21.70 | 10 0 | <u></u> | | | | \as returns Weak, stru (Greywack | of weather uctureless, ke) modera | NG: No recorded ROCK green fine-options tely weather non-intact | grained SA | | iller | 21.50 21.70 | -19.01 -19.21 | | |
| 23.50 | 17 17 | _ | | | | fractures a smeared, irregular. | are irregula locally mod | osely space rApertures a lerately iron at 23.50 m | are open, l -oxide stai | ocally clay | ıre | <u>23.50</u> | -21.01 | | |
| 25 25 26 27 28 29 Page | om 0.00- | -21.00m. | | | | | Water Strike | Casing Depth | Sealed At | Rise To | Time (min) | | TER SI | | DETAILS |
| REMARKS Hole cased fr | | | | | | | Camo | Бори | 7 11 | | ·····/ | | | | recorded |
| INSTALLATIO | N DETA | ILS | | | | | Date | Hole Depth | Casing Depth | Depth to Water | Com | ment | 5 | | |
| Date T 01-02-24 | ip Depth 22.00 | 1.00 | RZ Base 22.00 | | Typ 50mm | | 01-02-24 | 23.50 | 21.00 | 2.95 | Water drilling | | ecorded | 5 mins af | ter end of |



REPORT NUMBER

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|--|---------|---------------|---------------------------------|--------------------------|-----------------|---------------------|-----------------------|-----------------------|------------------------|--------------------------|------------------------|---------------------|-------------|-----------|-------------------------------|---------------|
| CONTRAC | Γ Se | ea G | ardens, E | Bray | | | | | | | 1 14 | I,HOLE | NO | RC | | |
| CO-ORDIN | | (mOI | 726,419 719,290 D) | 5.29 E 6.09 N 3.38 | | | RIG TYPE FLUSH | | | T-440 Air/Mist | DAT | TE DRILL TE LOGG | < \ | 02/0 | et 1 of 3 2/2024 2/2024 | |
| CLIENT ENGINEER | | allym kins | nore Grou | ıp | | | INCLINATION | ON (deg) METER (mı | m) | -90 78 | I | LLED BY | | | SSL - Jk O' She | |
| Downhole Depth (m) Core Run Depth (m) | S.C.R.% | R.Q.D.% | Frac Spac Lo (mi | cing og m) | Non-intact Zone | Legend | | | Descripti | on | | | Depth (m) | Elevation | Standpipe Detail | SPT (N Value) |
| 0 | from 0 | | | | | | SYMMETI as returns | RIX DRILLI | NG: No reco | overy, obs | served by | driller | 9.00 WA7 | mmen | FRIKE E | DETAILS |
| | | | | | | | | | | | | | N | o wate | er strike | recorded |
| | | | | | | | | | | | | | GRO | DUND | VATER | DETAILS |
| Date | Tip De | epth | RZ Top | | | Type 50mm | | Date 06-02-24 | Hole Depth 25.00 | Casing Depth 22.30 | Depth Wate 20.30 | | | | 5 mins aft | er end of |
| 06-02-24 | 25.0 | U | 1.00 | 16.00 | | mmuc | 9P | | | | | | | | | |



REPORT NUMBER

| | <u></u> | / | | | | | | | | | | | | | | | | |
|---------------------|-----------------------|---------|-----------------------|----------------|-------------------|------------------|-----------------|--------------------|-----------------------|-------------------------|---------------------------|-------------------|---------------|-------------------|-----------|-----------|-----------------------|------------------------------------|
| СО | NTR | ACT | S | ea G | ardens, E | Bray | | | | | | | 1 14 | A.HOLE | NO | RC: | 304 et 2 of | 3 |
| СО | -ORI | DINA | TES | | 726,419 719,29 | 5.29 E 6.09 N | | | | | | | | E DRILL | .ED | | 2/202 | |
| GR | OUN | ID LE | VEL | (mOl | | 3.38 | | | RIG TYPE FLUSH | | | T-440 Air/Mist | DAT | E LOGG | ED) | 06/0 | 2/202 | 4 |
| | ENT GINE | | | allyn tkins | nore Grou | р | | | INCLINATION CORE DIA | | m) | -90 78 | - 1 | LLED BY | | X | SL - J O' Sh | |
| | | | | .Q.D.% | Frac | ture | ne | | CORE DIA | WEIER (IIII | | 70 | LOC | JGED B1 | | 45 | 5 | |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | 2 | Spac Lo (mi | m) | Non-intact Zone | Legend | | | Descript | tion | | | Depth (m) | Elevation | Standpipe Details | |
| - 10 | | | | | | | | | SYMMETI as returns | RIX DRILLI of CLAY (| ING: No rec continued) | covery, obs | served by | driller | | | | |
| - - - 11 | | | | | | | | | | | | | | | 11 05 | 7.07 | | |
| - | | | | | | | | 0000 | SYMMETI as returns | RIX DRILLI of CLAY | ING: No red | covery, obs | served by | driller | 11.25 | | | |
| 12 | | | | | | | | 0 . | SYMMETI | RIX DRILLI | ING: No red | covery, obs | served by | driller | 12.00 | -8.62 | | |
| - | | | | | | | | a | as returns | of gravelly | SAND | | | | | | | |
| - - - 13 | | | | | | | | a | | | | | | | | | | |
| - 13 - - | | | | | | | | 0 | | | | | | | | | | |
| | | | | | | | | 0 | | | | | | | | | | N = 43 (5, 7, 9, 11, 11, 12) |
| 14 | | | | | | | | o | | | | | | | | | | 11, 12) |
| | | | | | | | | 0 . | | | | | | | | | | |
| - - - - 15 | | | | | | | | 0. | | | | | | | | | | N = 45 |
| - | | | | | | | | | | | | | | | | | | (3, 7, 9, 11, 12, 13) |
| | | | | | | | | 0 . | | | | | | | | | | |
| 16 | | | | | | | | 0 | | | | | | | 16.30 | -12.92 | lo Ho | |
| | | | | | | | | | SYMMETI as returns | RIX DRILLI of CLAY | ING: No red | covery, obs | served by | driller | | | 0 0 | N = 46 |
| - - - 17 | | | | | | | | | | | | | | | | | 0 0 | (5, 6, 9, 10, 12, 15) |
| - '' | | | | | | | | | | | | | | | | | 0 0 | |
| | | | | | | | | | | | | | | | | | 0 0 | |
| - - 18 | | | | | | | | | | | | | | | | | 0 0 | N = 51 (5, 7, 11, 13, |
| | | | | | | | | | | | | | | | | | 0 0 | 13, 14) |
| - - - - 19 | | | | | | | | | | | | | | | | | 0 0 | |
| - 18 - - | | | | | | | | | | | | | | | | | 0 0 | |
| - | | | | | | | | | | | | | | | | | 0 0 | N = 54 (7, 9, 11, 13, |
| | MAR | | 1 | | l . | | | - | | | | | | | WAT | TER ST | RIKE | DETAILS |
| Hol | e ca | sed 1 | from (| 0.00- | 22.30m. | | | | | Water Strike | Casing Depth | Sealed At | Rise To | Time (min) | Со | mmen | ts | |
| | | | | | | | | | | | | | | | N | o wate | r strik | e recorded |
| | | | | | | | | | | | | | | | GRO | DUNDV | VATE | R DETAILS |
| | | | ON D | | | | | | | Date | Hole Depth | Casing Depth | Depth Wate | to Com | nment | S | | |
| _ | Date -02- 2 | | Tip D 25 .0 | | RZ Top 1.00 | RZ Base 16.00 | | Typ 50mm | | 06-02-24 | 25.00 | 22.30 | 20.30 | Water drilling | | ecorded | 5 mins a | ifter end of |
| L | | | | | - * | | | | | | | | | | | | | |



REPORT NUMBER

| | | _ | | | | | | | | | | | | | | | | |
|---|--------------------|---------|---------|----------------|--------------------------|------------------|-----------------|--------------------|--------------------------------------|--|--|--------------------|----------------|-------------|--|-----------|--------------------|-------------------------------------|
| СО | NTR | ACT | S | ea G | ardens, E | Bray | | | | | | | DRII —— SHE | LHOLE ET | NO | RC: | 304 et 3 of | 3 |
| со | -ORE | OINA | TES | | 726,41 719,29 | 5.29 E 6 09 N | | | | | | - | | E DRILL | .ED | | 2/2024 | |
| GR | OUN | D LE | VEL | (mOl | | 3.38 | | | RIG TYPE FLUSH | | | T-440 Air/Mist | DAT | E LOGÓ | ED. | 06/0 | 2/2024 | ļ |
| | IENT GINE | FR | | allym tkins | nore Grou | ıp | | | INCLINATION CORE DIA | | m) | -90 78 | | LED B | | X | SL - J O' Sh | |
| | | | | | | | | | CORE DIA | IMETER (IIII | , | 70 | 1200 | OLD D | <u>. </u> | | 2 | Ca |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Frac Spac Lo (m | cing og m) | Non-intact Zone | Legend | | | Descript | | | | Depth (m) | Elevation | Standpipe Details | SPT (N Value) |
| - 20 | | | | | | | | | SYMMETI as returns | RIX DRILLI of CLAY (| NG: No rec continued) | overy, obs | erved by o | Iriller | 04.00 | 47.00 | 0 0 | |
| 21 | | | | | | | | | SYMMETI as returns | RIX DRILLI of sandy 0 | NG: No rec | overy, obs | erved by o | Iriller | | -17.62 | 0 0 | N = 54 (9, 9, 19, 11, 12, 12) |
| - 23 | 22.20 23.30 | 64 | 0 | 0 | | , | | | (Greywack Core Pred Discontinu | ke) modera dominantely uities are cl | green fine- tely weather non-intact osely space rApertures | ered ed, smooth | to rough, | | 22.20 | -18.82 | 0 0 | N = 55/150 mm (9, 17, 23, 32) |
| 24 | 24.10 | 100 | 6 | 0 | | , | | | | | derately iror | | | | | | 0 0 | |
| - 25 | 25.00 | 100 | 8 | 0 | | | | | End (| of Borehole | e at 25.00 m | 1 | | | 25.00 | -21.62 | | |
| 26 - 26 - 27 - 27 - 28 - 29 - 29 - 29 - 29 - 29 - 29 - 29 | MAR | ĸs | | | | | | | | | | | | | WAT | FER S | TRIKE | DETAILS |
| Ho | | | rom (| 0.00- | 22.30m. | | | | | Water | Casing | Sealed | Rise | Time | Co | mmen | | DETAILS |
| CSL RC FI 10M 24991.GPJ GSL.GDT 26/3/24 | | | | | · | | | | | Strike | Depth | At | То | (min) | N | o wate | er strike | e recorded |
| M INC | TALI | LATI | ON D | ETAI | ILS | | | | | Date | Hole | Casing | Depth to | O Cor | GRO | | VAIER | RDETAILS |
| OS RC FI | Date -02-2 | - | | epth | RZ Top 1.00 | RZ Base 16.00 | | Tyr 50mm | | 06-02-24 | 25.00 | 22.30 | 20.30 | | r levels r | | 5 mins a | fter end of |



REPORT NUMBER

| CO-ORDINATES | | | | | | | | | | 3几/ | ලිපි | |
|--|--|-------------|-------------|------------|-----------------|-----------------|-------------------|--------|---------|---------|--------------------|-----------------|
| CO-ORDINATES 726, 401.68 E 719, 253.28 N 719, 253.28 | | | | | | Bray | ardens, B | ea G | Se | ACT | NTR | СО |
| REMARKS Rem | DATE DRILLED 08 | | | | | 5.32 N | 719,235 | (mO[| | | | |
| SYMMETRIX DRILLING: No recovery, observed by driller as returns of sandy CLAY SYMMETRIX DRILLING: No recovery, observed by driller as returns of CLAY SYMMETRIX DRILLING: No recovery, observed by driller as returns of CLAY Water Casing Sealed Rise WATER STRIKE WATER STRIKE Buttle Depth At To Time Comments 11.80 11.80 Slow | DRILLED BY | -90 | | INCLINATI | | р | ore Grou | - | | | | |
| as returns of sandy CLAY SYMMETRIX DRILLING: No recovery, observed by driller as returns of CLAY SYMMETRIX DRILLING: No recovery, observed by driller SYMMETRIX DRILLING: No recovery, observed by driller SYMMETRIX DRILLING: No recovery, observed by driller Water Casing Sealed Rise Time (min) Comments 11.80 11.80 Slow Slow | | · | | I | Non-intact Zone | cing g m) | Spac Lo (mr | | S.C.R.% | T.C.R.% | Core Run Depth (m) | |
| Hole cased from 0.00-21.00m. Water Strike Depth At To Comments 11.80 11.80 Slow | 2.80 1.0 | , | of sandy Cl | as returns | | | | | | | | 3 3 4 4 5 5 6 6 |
| GROUNDWATE | ed Rise Time To (min) Comme | epth At | Strike | | | | 21.00m. |).00-2 | from 0 | | | |
| INSTALLATION DETAILS Date Hole Casing Depth to Comments | | Hole Casing | D-4: | | | | | CT 4 · | 01.5 | 1 AT. | TA: | IN 10 |
| Date Hole Depth Casing Depth to Water | epth Water Comments 1.00 3.20 Water levels record | Depth Depth | | | | | RZ Top | epth | Tip De | e - | Date | |



REPORT NUMBER

| /।ଉଧ | 느/ | | | | | | | | | | | | | | | | |
|---------------------------------------|------------|---------|---------------|---------------------------|------------------|-----------------|-------------|-----------------------|--|------------------------|-------------------|---------------|---------|-----------|-----------|-------------------|---|
| CONTRA | CT | Se | ea G | ardens, E | Bray | | | | | | | DAI SHE | A HOLE | NO | RC: | 308 et 2 of | 2 |
| CO-ORD | INA | ΓES | | 726,40° 719,23 | 1.68 E 5.32 N | | | DIO 7.77 | | | T 4.00 | DAT | E DRILL | | | 2/2024 | |
| GROUNI |) LE | VEL (| mOE | | 3.82 | | | RIG TYPE FLUSH | | | T-440 Air/Mist | DAT | E LOGG | ÈØ) | 09/0 | 2/2024 | 1 |
| CLIENT ENGINEE | - D | | allym kins | ore Grou | ıp | | | INCLINATION CORE DIAI | | m) | -90 78 | I | LLED BY | | X | SL - J O' Sh | |
| | | Au | KIIIS | | | | | CORE DIAI | WETER (IIII | 11) | 10 | LOG | GED B1 | | <u> </u> | S | lea |
| Downhole Depth (m) Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Frac Spac Lo (mi | cing og m) | Non-intact Zone | Legend | | | Descript | | | | Depth (m) | Elevation | Standpipe Details | SPT (N Value) |
| -11 -11 -12 | | | | | | | | as returns | RIX DRILLI of CLAY (c RIX DRILLI of sandy G | continued) NG: No rec | • | | | 11.80 | -7.98 | | |
| 14 | | | | | | | | SYMMETF | RIX DRILLI | NG: No rec | overy, obs | erved by | driller | 14.80 | -10.98 | | N = 45 (4, 7, 10, 11, 12, 12) |
| 15 | | | | | | | | as returns | of CLAY | | | | | | | | N = 40 (3, 6, 5, 9, 15 11) N = 46 (4, 5, 9, 7, 15 |
| 17 | | | | | | | | | | | | | | | | | N = 49 (5, 9, 10, 12, 13, 14) |
| 19 | | | | | | | 0000 | | RIX DRILLI of sandy G | | overy, obs | erved by (| | | -15.48 | | N = 56 (6, 9, 17, 16 11, 12) |
| REMARK Hole cas | | rom 0 | | 21 00m | | | | | Water | Casing | Sealed | Rise | Time | | | | DETAILS |
| TIOIE CAS | ocu II | OIII U | .00-2 | ∠ i.VUIII. | | | | | Strike 11.80 | Depth 11.80 | At | To | (min) | | Slow | | DETAILO |
| INSTALL | ΛT14 | ים ואכ | ETAI | 1 8 | | | | | Date | Hole | Casing | Depth t | 0 000 | GRC | | VATE | RDETAILS |
| Date | Т | ip De | epth | RZ Top | | | Typ 50mm | | 09-02-24 | Depth 23.50 | 21.00 | Water 3.20 | | levels re | | 5 mins a | fter end of |
| 09-02-2 | 4 | 23.50 | ۱ ۲ | 10.00 | 23.50 | | SUMM | 137 | | | | | | • | | | |



REPORT NUMBER

| | 35 | ֈ/ | | | | | | | | | | | | | | _ | 100 | • |
|--------------------|---------------------------|---------|----------------|---------|-------------------------|------------------|-----------------|-------------|------------------------|---------------------------|---|------------------------|---------------|-------------------|---------------|-----------|-----------------------------|--------------------------------------|
| CON | TR/ | ACT | S | ea G | ardens, E | Bray | | | | | | | | A.HOLE | NO | RC | | |
| CO-C | | | TES VEL | (mOl | 726,40 719,23 | | | | RIG TYPE FLUSH | | | T-440 Air/Mist | DAT | E DRILL E LOGG | < \ | 08/0 | et 3 of 2/2024 2/2024 | |
| CLIE ENGI | NT | | В | | nore Grou | ıp | | | INCLINATI | ON (deg) METER (mr | | -90 78 | I | LLED BY | | X | SL - JI | |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Frac Spa Lc (m | cing og m) | Non-intact Zone | Legend | | | Descripti | on | | | Depth (m) | Elevation | Standpipe Detail | SPT (N Value) |
| 20 | 1.00 | | | | | · | | 000 | as returns | RIX DRILLI of sandy G | NG: No reco GRAVEL <i>(co.</i> | overy, obs ntinued) | erved by | | 21 00 | -17.18 | 0 0 0 | |
| 21 | Ī | 64 | 0 | 0 | | | | | (Greywack Core Pred | ke) modera dominantely | green fine-g tely weather non-intact | red | | NE | 21.00 | 17.10 | 0 0 | N = 51/15 mm (11, 17, 2 28) |
| 22 22 | | 88 | 0 | 0 | _ | | | | fractures a | are irregula | osely space rApertures a lerately iron- | are open, | locally cla | y | | | | |
| | 2.50 __ 2.90 | 100 | 0 | 0 | - | | | | irregular. | ,50 | , | | | = | | | | |
| 3 | 2.90 | 100 | 42 | 23 | _ | | | | | | | | | | | | | |
| 23 | 3.50 | | | | | | Z | | End | of Borehole | at 23.50 m | | | | 23.50 | -19.68 | | |
| 77 88 89 | | | | | | | | | | | | | | | | | | |
| EM. | ARI | رم | | | | | | | | | | | | | \\\\\ | ED 61 | DIKE I | DETAILS |
| | | | rom (| 0.00- | 21.00m. | | | | | Water Strike | Casing Depth | Sealed At | Rise To | Time (min) | | mmen | | |
| | | | | | | | | | | 11.80 | 11.80 | | |) | CD | Slow | N/A TES | DETAIL |
| NST | ALL | _ATI | ON D | ETA | ILS | | | | | Date | Hole | Casing | Depth Wate | to Com | GRO | | VATER | DETAIL |
| D 09-0 | ate)2-2 | | Γip Do 23.5 | | RZ Top 10.00 | RZ Base 23.50 | | Typ 50mm | | 09-02-24 | 23.50 | 21.00 | 3.20 | | | ecorded | 5 mins af | ter end of |
| | | | | | | | | | | | | | | | | | | |



REPORT NUMBER

| O | ී | டி | | | 0_0 | | | , (<u> </u> | | | | | | | 2 | 499 |)1 |
|--------------------|-----------------------|--------------|---------|--------------------|------------------------------------|-----------------|---------|-----------------------|----------------------|-----------------------------|-------------------------|---------------------------|-----------------|-----------|-----------|-------------------|---------------|
| | | ACT DINA | | ea G | 726,395.31 E | | | | | | | SHE | ~~ | | | et 1 of | |
| | | | | , _ | 719,161.66 N | | | RIG TYPE | | | T-440 | I | DRILLE LOGGE | | | 2/2024 2/2024 | |
| | DUN ENT | | | (mOl | D) 3.55 nore Group | | | FLUSH | ON (-1) | | Air/Mist | | LED BY | <u> </u> | _ | SL - J | |
| | SINE | | | tkins | iore Group | | | INCLINATION CORE DIAI | | m) | -90 78 | | GED BY | | X | O' Sh | |
| ٦ | n) | | | | | | | | | | | · | | | 9 | 500 | |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Fracture Spacing Log (mm) | Non-intact Zone | Legend | | | Descrip | tion | | | Depth (m) | Elevation | Standpipe Details | SPT (N Value) |
| 0 | | | | | | | | driller as r | eturns of: | OTION PIT . , 0.30-1.20r | - No recove n - Sand | ery, observ | ed by | | | | |
| 1 | | | | | | | | SVMMETI | DIY DDII I | ING: No rec | covery, obs | erved by d | | 1.20 | 1 | | |
| | | | | | | | 0 . | as returns | of SAND | | covery, obs | | <i>\</i> | 1.50 | 2.05 | | |
| 2 | | | | | | | 0 | as returns | of gravelly | / SAND | covery, obs | ervea by a | riller | | | | |
| 3 | | | | | | | 0 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | 0 . | | | | | | | 4 30 | -0.75 | | |
| | | | | | | | | SYMMETI as returns | RIX DRILL of CLAY | ING: No red | covery, obs | erved by d | riller | 1.00 | 0.70 | | |
| | | | | | | | | do rotarrio | 01 02711 | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
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| | ИAR | | | | ı | | | ı | | | | | | WA | TER ST | RIKE | DETAILS |
| lol 0.00 | e cas)-1.2 | sed f 20m | rom | 0.00- | 20.00m. Hand-du | g Ins | pectio | n pit | Water Strike | Casing Depth | Sealed At | Rise To | Time (min) | Со | mmen | ts | |
| | | | | | | | | | 10.30 | 10.30 | | | | | Slow | | |
| NIC. | TA! | 1 AT' | - 14O | CT A | ıı e | | | | Data | Hole | Casing | Depth to |) (0.5.7.1 | | | VATER | RDETAIL |
| | T AL I Date | | | ETA epth | RZ Top RZ Base | е | Тур | oe . | Date 15-02-24 | Depth 22.00 | Depth 20.00 | Depth to Water 3.85 | Water | ment: | | 5 mins at | fter end of |
| | | 1 | _,: _ | | | | . , , , | | 1 | | | | drilling | | | | •• |



REPORT NUMBER

| | ලුවු | L / | | | | | | | | | | | | | _ | 498 | ' 1 |
|--------------------|-----------------------|------------|---------|---------|------------------------------------|-----------------|---|-----------------------|-------------------------|-----------------------|-------------------|-------------------|----------|--------------|------------------|-------------------|---------------------------------|
| COI | NTR/ | ACT | S | ea G | ardens, Bray | | | | | | | 1 3 | HOLE | NO | RC | | |
| 20- | ORE | OINA | TES | | 726,395.31 E | | | | | | | SHEE | DRILL | ED | | et 2 of 2/2024 | |
| GRO | OUN | D LE | VEL | (mOl | 719,161.66 N 2) 3.55 | | | RIG TYPE FLUSH | | | T-440 Air/Mist | l l | LOGG | | | 2/2024 | |
| | ENT | | | - | nore Group | | | INCLINATION | | | -90 | l l | ED BY | | X | SL - J | |
| | SINE | ER | A | tkins | | | Π | CORE DIAI | METER (m | m) | 78 | LOGO | SED BY | | CB | O' Sh | ea |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Fracture Spacing Log (mm) | Non-intact Zone | Legend | | | Descript | ion | | | Depth (m) | Elevation | Standpipe Detaile | SPT (N Value) |
| 11 | | | | | | | 000000000000000000000000000000000000000 | SYMMETF as returns | RIX DRILL of sandy (| ING: No rec GRAVEL | covery, obse | erved by dr | iller | 10.30 | -6.75 | | |
| 12 | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | N = 41 (5, 9, 7, 11, 11 |
| 15 | | | | | | | 000000000000000000000000000000000000000 | SYMMETF as returns | RIX DRILL of CLAY | ING: No rec | covery, obse | erved by di | | 15.55 | -12.00 | | N = 50 (3, 9, 11, 11, 13 |
| 17 | | | | | | | | | | | | | | | | | N = 47 (5, 7, 13, 10, 13) |
| 18 | | | | | | | 000 | SYMMETF as returns | RIX DRILL | ING: No rec | covery, obse | erved by dr | | <u>18.75</u> | -15.20 | | N = 56 (5, 8, 12, 15, 16 |
| | 20.00 MAR I | | | | | | 000 | SYMMET | RIX DRILL | ING: No red | covery, obse | erved by dr | iller | 20.00 | -15.95 -16.45 | | N = 58/2 mm (7, 13, 17, |
| Hole | e cas | sed f | rom (| 0.00- | 20.00m. Hand-du | ıg Ins | pectio | n pit | Water | Casing | Sealed | Rise | Time | | mmen | | DE I AILS |
| J.U(|)-1.2 | :Um | | | | | | | Strike 10.30 | 10.30 | At | То | (min) | CP(| Slow | VATE | DETAIL |
| NS. | ΤΔΙΙ | ΔΤΙ | ח אס | ETA | ıs | | | | Date | Hole | Casing | Depth to Water | Com | GRO | | VAIER | RDETAIL |
| | Date | | | | RZ Top RZ Bas | e | Туј | oe | 15-02-24 | Depth 22.00 | Depth 20.00 | Water 3.85 | Water | levels r | | 5 mins at | fter end of |
| | | | | | | | | | | | | I | drilling | J. | | | |



REPORT NUMBER

| | 33 | ይ/ | | | | | | | | | | | 2498 | , , |
|--------------------|--------------------|------------|---------|---------|------------------------------------|--|----------|--|--------------------------------|-------------------|------------|-----------|-----------------------|---------------|
| 201 | NTR/ | ACT | S | ea G | ardens, Bray | | | | | () | HOLE NO | | C309 | |
| :0- | ORD | INA | ΓES | | 726,395.31 E | | | | | SHEET DATE | DRILLED | | neet 3 of 3/02/202 | |
| GRO | DUNI | D LE | VEL | (mOI | 719,161.66 N 2) 3.55 | | | RIG TYPE FLUSH | T-440 Air/Mist | | LOGGED | | 5/02/202 | |
| | ENT | | | | ore Group | | | INCLINATION (deg) | -90 | DRILL | ED BY | 2 | IGSL - J | IK |
| NG | INE | ER | A | tkins | <u> </u> | | <u> </u> | CORE DIAMETER (mm) | 78 | LOGG | ED BY | ~~ | O' Sh | nea |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Fracture Spacing Log (mm) | Non-intact Zone | Legend | Desc | iption | | Don'th (m) | Elevation | Standpipe Detaile | SPT (N Value) |
| 20 | 20.80 | 100 | 0 | 0 | | | | Weak, structureless, green fii (Greywacke) moderately wea Core Predominantely non-inta | ne-grained SA thered act | NDSTONE | | | | 24) |
| 21 | | 100 | 9 | 0 | | | | | | | | | | |
| | 22.00 | | | | | (\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | | | | | 22 | 00-18.4 | 45 | |
| 22 | 00.عـ | | | | | /\ | | End of Borehole at 22.00 |) m | | | - 10.4 | | |
| | | | | | | | | | | | | | | |
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| 23 | | | | | | | | | | | | | | |
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| 24 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |
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| 26 | | | | | | | | | | | | | | |
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| 29 | | | | | | | | | | | | | | |
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|) | /IARI | / 6 | | | | | | | | | | /ATER | OTDIVE | DETAIL |
| lole | e cas | sed fr | rom (| 0.00-2 | 20.00m. Hand-d | ug Insi | oectio | n pit Water Casing | | | Time | Comme | | DETAILS |
| 0.00 |)-1.2 | 0m | | | | · | | Strike Depth 10.30 10.30 | At | То | (min) | Slo | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | Data Holi | e Casing | Donth to | | | DWATE | R DETAIL |
| | | | | ETAI | | | | Date Dep | h Depth | Depth to Water | Comme | | | |
| ſ | Date | 1.1 | in D | enthl | RZ Top RZ Ba | 192 | Ty | e 15-02-24 22.0 | 20.00 | 3.85 | Water leve | | | |



REPORT NUMBER

| (IGSL | / | | | | | | | | | | | | | _ | 499 | 1 |
|--------------------|---------|---------|------------------|---------|-----------------|--------|----------------------|--|-----------|-----------------------|---------------------------------------|-------------------|-------------|-----------|-------------------|---------------|
| CONTRAC | T 8 | Sea G | Sardens, I | Bray | | | | | | | · · · · · · · · · · · · · · · · · · · | 4.HOLE | NO | RC | | |
| CO-ORDIN | ATES | | 726,41 | 5.09 E | | | | | | | SHE | ~~ | | | et 1 of : | |
| GROUND I | | | 719,07 | | | | RIG TYPE | | | T-440 | | E DRILL E LOGG | <i>x</i> \ | | 3/2024 3/2024 | |
| CLIENT | | | טי) nore Grou | | | | FLUSH INCLINATION | ON (deg) | | Air/Mist -90 | | LLED BY | | | SL - Jł | |
| ENGINEER | | Atkins | | · | | | CORE DIA | | | 78 | | GED BY | | | O' She | |
| Core Run Depth (m) | S.C.R.% | R.Q.D.% | Spa Lo | m) | Non-intact Zone | Legend | | | Descripti | | | | Depth (m) | Elevation | Standpipe Details | SPT (N Value) |
| 0 | d from | 0.00- | | | | ection | SYMMETI as returns | eturns of: m - Gravel, RIX DRILLI of CLAY | | - Concrete overy, obs | Rise | Time | WAT | -7.55 | | DETAILS |
| 0.00-1.20n | n | | | | | | | 9.70 | 9.70 | At | То | (min) | | Slow | | DETAILO |
| INSTALLA | TION I | DETA | JLS | | | | | Date | Hole | Casing | Depth t Water | o Con | nment | | VAIEK | DETAILS |
| Date | | | RZ Top | RZ Base | | Тур | e | Date | Depth | Depth | Water | . 5011 | | | | |
| | | • | | | | | | | | | | | | | | |



IGSL RC FI 10M 24991.GPJ IGSL.GDT 26/3/24

GEOTECHNICAL CORE LOG RECORD

REPORT NUMBER

| /U | <u>ි</u> බව | <u>L</u> / | | | | | | | | | | | | | | | | |
|--------------------|--------------------|------------|--------------|---------|----------------------------------|-----------------|-----------------|--------|---|--|---|---|-------------------------------------|-------------------------------------|-----------|----------------------------|--------------------|---|
| СО | NTR | ACT | S | ea G | ardens, E | Bray | | | | | | | DAIL. | LHOLE | NO | RC3 | 810 et 2 of 3 | 3 |
| | | DINAT | TES VEL (| (mOI | 726,415 719,078)) | | | | RIG TYPE FLUSH | | | T-440 Air/Mist | DATE | DRILLE LOGG | | 01/03 | 3/2024 3/2024 | |
| CLI | ENT | | Ва | | ore Grou | р | | | INCLINATION CORE DIAM | | n) | -90 78 | l | LED BY GED BY | | X /_ | SL - JI O' Sh | |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Frac Spac Lo (mi | eing g n) | Non-intact Zone | Legend | | | Descript | tion | | | Depth (m) | Elevation | Standpipe Details | SPT (N Value) |
| 112 12 13 | | | | | | | | | as returns | RIX DRILLIN of gravelly | SAND (col | ntinuėd) | | | 14.15 | -12.00 | | N = 45 (4, 5, 7, 17, 11, 10) N = 53 (6, 9, 11, 12, 15, 15) |
| 18 | 17.70 | 100 | 85 | 52 | | | | | as returns SYMMETF as returns Medium st blueish gre fresh to loo Discontinu locally rou moderatel | RIX DRILLIN of GRAVEL RIX DRILLIN of weathers rong to stro een, fine-gra cally slightly lities are me gh, fracture y open, loca stained. Dip | NG: No reced ROCK Ing, mediu ained, SAN weathere edium to cl s are plane ally clay sn | m to thinly I NDSTONE d. osely space ar. Aperture neared, loca | beddded, (Greywack ed, smooth | riller riller se), n to to to ately | 17.55 | -15.00 -15.40 -15.55 | | N = 51 (5, 7, 12, 10, 15, 14) |
| RE | MAR | KS | | | | | | | | | | | | | WAT | ER ST | RIKE | DETAILS |
| | | | rom C | 0.00- | 17.70m. l | Hand-du | g Insp | ectio | n pit | Water | Casing | Sealed | Rise | Time | Со | mment | s | |
| 0.0 | 0-1.2 | :0m | | | | | | | | Strike 9.70 | 9.70 | At | То | (min) | | Slow | | DETAILS |
| ING | ΤΔΙΙ | ΔΤΙ | ON D | FΤΔΙ | I S | | | | | Date | Hole | Casing | Depth to Water | Com | ments | | ., . : = 1\ | JE I AILU |
| | Date | | | | RZ Top | RZ Base | 9 | Тур | oe | Date | Depth | Depth | Water | 0011 | mone | | | |



REPORT NUMBER

| | ଓସ | 3L/ | | | | | | | | | | | | | | _ | 433 | 1 |
|--------------------|--------------------|---------|---------|----------|------------------------|---------|-----------------|----------|--------------------|----------------|---------------|-----------------|------------------|-------------------|---------------|-----------|-------------------|---------------|
| СО | NTR | ACT | S | ea G | Sardens, I | Bray | | | | | | | DRI | L,HOLE | NO | RC | 310 | |
| .O | -ORI | DINA | TES | | 726,41 | 5 09 F | | | | | | | | ET. | | | et 3 of | |
| | | | | ···· | 719,07 | 8.79 N | | | RIG TYPE | | | T-440 | | E DRILL E LOGG | <i>x</i> \ | | 3/2024 3/2024 | |
| | IENT | | EVEL | | D) nore Grou | 2.15 | | | FLUSH INCLINATI | ON (dog) | | Air/Mist -90 | | LLED BY | - | | SSL - JI | |
| | GINE | | | tkins | | ıρ | | | CORE DIA | | m) | -90 78 | | GED BY | | | O' Sh | |
| m) | (n | | | | | | | | | | | | | | | 0), | J) | |
| Downhole Depth (m) | Core Run Depth (m) | %: | % | % | Frac | ture | ne | | | | | | | | | | Standpipe Detaila | |
| e De | Del | T.C.R.% | S.C.R.% | Q.D.% | Spa | cing | Non-intact Zone | | | | Descripti | ion | | | | _ | e De | SPT (N Value) |
| nhol | Rur | - | 0 | 2 | (m | m) | inta | pus | | | | | | | Depth (m) | Elevation | dpip | Ź |
| Dow | Core | | | | 0 250 | 500 | Non- | Legend | | | | | | | Dept | Elev | Stan | SPT |
| 20 | l | 100 | 49 | 19 | | | | | | | | | | | | | | |
| | | | | | | | 4 | 1:::: | | | | | | | 00.70 | 40.55 | | |
| | 20.70 |) | | | | | | | End | of Borehole | e at 20.70 m | | | | 20.70 | -18.55 | | |
| 21 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
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| 28 | | | | | | | | | | | | | | | | | | |
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| ?F | MAR | KS | | <u> </u> | | | | <u> </u> | | | | | | | WAT | FR ST | RIKF | DETAILS |
| lol | le ca | sed | from | 0.00- | ·17.70m. | Hand-du | g Ins | oectio | n pit | Water | | Sealed | Rise | Time | | mmen | | CT I AILO |
| 0.0 | 0-1.2 | 20m | | | | | | | | Strike 9.70 | Depth 9.70 | At | То | (min) | 33 | Slow | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | GRO | DUNDV | VATER | DETAILS |
| NS | STAL | LAT | ION D | ETA | ILS | | | | | Date | Hole Depth | Casing Depth | Depth t Water | Con | nments | 8 | | |
| _ | Date |) | Tip D | epth | RZ Top | RZ Base | е | Ту | ре | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
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REPORT NUMBER

| /II | <u>අ</u> ව | 5/ | | | | | | | | | | | | | | | | |
|--|--------------------|---------|---------|---------|---|--------------------------|-----------------|--------|-----------------------------------|---------------------------|-----------------|-----------------------|---------------|-------------------|-----------|-----------|-------------------|---------------|
| COI | NTR | ACT | S | ea G | ardens, E | Bray | | | | | | | DRI SHE | A,HOLE | NO | RC3 | 313 et 1 of | 3 |
| | | DINA | TES | (mOl | 726,22 719,19 | 3.34 E 5.19 N 3.41 | | | RIG TYPE | | | T-440 | DAT | E DRILL E LOGG | | 27/0 | 2/2024 2/2024 | ļ |
| CLI | ENT | | В | | nore Grou | | | | FLUSH INCLINATION CORE DIAI | | n) | Air/Mist -90 78 | | LLED BY | | | SL - JI O' Sh | |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Frac Spa Lc (m ₀ 250 | cing og m) | Non-intact Zone | Legend | | | Descript | | | | Depth (m) | Elevation | Standpipe Detaile | SPT (N Value) |
| - 1 - 2 - 3 - 4 - 5 - 6 | | | | | | | | | SYMMETI as returns | RIX DRILLI of gravelly | NG: No rec | overy, obs | erved by | driller | 8.80 | -0.14 | | |
| | //AR | | | 2.00 | 04.00 | | | - | 1 | Water | Casina | Sealad | Rise | Time | | | | DETAILS |
| Hole | e cas | sed f | rom (| -00.ں | 21.00m. | | | | | Water Strike | Casing Depth | Sealed At | Rise To | Time (min) | N | | r strike | recorded |
| IVIG. | TAI 1 | I ATI | ON D | ETA | II S | | | | | Data | Hole | Casing | Depth 1 | to Com | GRC | | VATER | DETAILS |
| | Date | | | | RZ Top | RZ Base | е | Тур | ре | 28-02-24 | Depth 23.55 | 21.00 | Water 2.40 | . 0011 | levels re | | 5 mins af | ter end of |
| | | | | | | | | | | | | | | | | | | |



24991.GPJ IGSL.GDT

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IGSL

GEOTECHNICAL CORE LOG RECORD

REPORT NUMBER

24991

DRILLHOLE NO **RC313** CONTRACT Sea Gardens, Bray SHEET Sheet 2 of 3 **CO-ORDINATES** 726,223.34 E DATE DRILLED 27/02/2024 719,195.19 N **RIG TYPE** T-440 DATE LOGGED 28/02/2024 **GROUND LEVEL (mOD)** 3.41 **FLUSH** Air/Mist Ballymore Group INCLINATION (deg) **CLIENT** -90 DRILLED BY IGSL - JK **ENGINEER** Atkins **LOGGED BY** 🔼 O' Shea **CORE DIAMETER (mm)** 78 Downhole Depth (m) <u>E</u> Standpipe Details Run Depth (T.C.R.% S.C.R.% Non-intact Zone Fracture R.Q.D. SPT (N Value) Spacing Description Log (E Elevation (mm) Legend Depth (Core 250 500 10 SYMMETRIX DRILLING: No recovery, observed by driller 00 00 as returns of sandy GRAVEL (continued) 10.50 -7.09 SYMMETRIX DRILLING: No recovery, observed by driller 10.90 -7.49 as returns of CLAY 0 SYMMETRIX DRILLING: No recovery, observed by driller 11 as returns of gravelly SAND 0 12.00 -8.59 12 0.0 SYMMETRIX DRILLING: No recovery, observed by driller 00 as returns of sandy GRAVEL 000 00 000 13 13.50 -10.09 SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey sandy GRAVEL 15.00 -11.59 N = 51 (5, 9, 11, 12, 13, 15) 15 SYMMETRIX DRILLING: No recovery, observed by driller as returns of gravelly CLAY 16 N = 61 (4, 11, 12, 15, 16, 18) 17 N = 41 (3, 5, 9, 10, 11, 11) 18 19 0 19.50 -16.09 N = 53 (5, 9, 11, 12, 15, 15) SYMMETRIX DRILLING: No recovery, observed by driller 0.0 as returns of sandy GRAVEL 00 **REMARKS** WATER STRIKE DETAILS Water Casing Sealed Rise Time Hole cased from 0.00-21.00m. Comments Strike Depth Αt То (min) No water strike recorded **GROUNDWATER DETAILS** Depth to Water Hole Casing **INSTALLATION DETAILS** Date Comments Depth Depth Date Tip Depth RZ Top RZ Base 28-02-24 Type 23.55 21.00 2.40 Water levels recorded 5 mins after end of



REPORT NUMBER

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|--------------------|--------------------|---------|---------|----------------|--|-------------------|--------|---|-------------------|-------------------|-------------------|-----------|-----------|-------------------|---------------|
| | NTR/ | | | ea G | ardens, Bray | | | | | DANA, | HOLE NO | <u> </u> | RC3 | 13 t 3 of 3 | 3 |
| | | D LE | | (mOl | 726,223.34 E 719,195.19 N D) 3.41 | | | | T-440 Air/Mist | DATE [| DRILLED LOGGED | | | 2/2024 2/2024 | |
| | ENT | ER | | allym tkins | nore Group | | | INCLINATION (deg) | -90 78 | DRILLE LOGGE | | · ~ | X | SL - Jk O' She | |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Fracture Spacing Log (mm) | Non-intact Zone | Legend | Descriptio | on | | (m) 4400 C | Depin (m) | Elevation | Standpipe Detail | SPT (N Value) |
| 20 | | | | | | | °/ 0 | SYMMETRIX DRILLING: No records returns of weathered ROCK | very, obser | ved by dril | 20 ller | .20 | -16.79 | | |
| | 21.00 | | | | | | | | | | 21 | .00 | -17.59 | | |
| 21 | | 100 | 0 | 0 | | | | Weak, structureless, green fine-gr (Greywacke) moderately weathers Core Predominantely non-intact | rained SAN ed | IDSTONE | | | | | |
| 22 | 22.20 | | | | | | | Discontinuities are closely spaced fractures are irregularApertures an | re open, lo | cally clay | | | | | |
| | | 400 | _ | | | | | smeared, locally moderately iron-cirregular. | oxide staine | ea. ⊔ips ar | е | | | | |
| 23 | | 100 | 5 | 0 | | | | | | | | | 00.44 | | |
| | 23.55 | | | | 1 | <u>(</u> \\ ? \\\ | | End of Borehole at 23.55 m | | | 23 | .55 | -20.14 | | |
| 24 | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | | | | |
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| REI | /IARI | KS | | <u> </u> | | | | | | | | VAT | ER ST | RIKE [| ETAILS |
| lol | e cas | sed fr | rom (| 0.00- | 21.00m. | | | Water Casing S Strike Depth | Sealed At | | Time (min) | Cor | nment | s | |
| | | | | | | | | | | | | No | o watei | strike | recorde |
| | | | | | | | | | | | | RO | UNDW | /ATER | DETAII |
| | TA: ' | _ATIC | 71.0 | ETA | II 6 | | | Date Hole | Casing | Depth to Water | Comme | | | | DEIAIL |



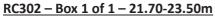
REPORT NUMBER

| | විපි ITR/ | ACT | S | ea G | ardens, Bray | | | | | | | DRI | HOLE | NO | RC | 314 | |
|--------------------|--------------------|---------|---------|------------------------|------------------------------------|-----------------|---------|-----------------------------------|---------------------------|-------------------------|--------------------------|----------------------------|------------------|-----------|-----------|-----------------------------|---------------|
| | | DINA | TES | | 726,300.42 E 719,010.17 N | | | RIG TYPE | | | T-440 | I | DRILLE | | 29/0 | et 1 of 2/2024 3/2024 | ļ |
| LIE | NT INE | | В | (mOl allym tkins | onore Group | | | FLUSH INCLINATION CORE DIAI | | m) | Air/Mist -90 78 | DRIL | LED BY GED BY | <u> </u> | J IG | SL - J O' Sh | K |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Fracture Spacing Log (mm) | Non-intact Zone | Legend | | | Descript | ion | | | Depth (m) | Elevation | Standpipe Detail | SPT (N Value) |
| 1 | | | | | | | | driller as r 0.00-1.20r | eturns of: n - Gravell | | | | | 1.20 | 0.81 | | |
| 2 | | | | | | | | SYMMETF as returns | RIX DRILL of sandy (| NG: No red GRAVEL | covery, obs | erved by di | | 2.00 | 0.00 | | |
| 3 | | | | | | | | SYMMETF as returns | RIX DRILL of gravelly | NG: No rec | covery, obs | erved by di | riller | 2.90 | -0.89 | | |
| 5 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | SYMMETF as returns | RIX DRILL of gravelly | NG: No rec | covery, obs | erved by di | | 9.00 | -6.99 | | |
| EM | IARI | ĸe | | | | | 0 . | | | | | | | \A/AT | TED ST | DIVE | DETAILS |
| lole | | sed f | rom (| 0.00- | 13.30m. Hand-du | ıg Ins | pection | n pit | Water Strike 9.00 | Casing Depth 9.00 | Sealed At | Rise To | Time (min) | | mmen | | DETAILS |
| | | | | | | | | | | | | | | GRO | DUNDV | VATER | R DETAIL |
| | ALI ate | | | epth | RZ Top RZ Bas | е | Тур | oe . | Date 01-03-24 | Hole Depth 16.00 | Casing Depth 13.30 | Depth to Water 11.10 | | ments | | 5 mins at | fter end of |



REPORT NUMBER

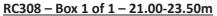
| ावश्र | | | | | | | | | | | | | | _ | | • |
|--|---------|-----------------------|---|------------------|-----------------|--------|--|---|--|--|--|---------------------------|----------------|------------------|----------------------|---------------|
| CONTRAC | | Sea G | Sardens, E | Bray | | | | | | | DRIMA SHEE | LHOLE | NO | RC3 | 314 et 2 of : | 2 |
| CO-ORDIN | | | 726,30 719,01 | 0.17 N | | | RIG TYPE | | | T-440 | DATE | DRILL | \sim | | 2/2024 | |
| GROUND I | | • | • | 2.01 | | | FLUSH | | | Air/Mist | | LOGG | ••• | | 3/2024 | |
| CLIENT | | Ballyn Atkins T | nore Grou | ıp | | | CORE DIA | | n) | -90 78 | | LED BY GED BY | | X | SL - JI O' Sh | |
| Downhole Depth (m) Core Run Depth (m) | S.C.R.% | R.Q.D.% | Frac Spa Lc (m 0 ²⁵⁰ | cing og m) | Non-intact Zone | Legend | | | Descripti | on | | | Depth (m) | Elevation | Standpipe Details | SPT (N Value) |
| 10 | 00 43 | 0 28 16 | | | | | SYMMETI as returns Medium s blueish gr (Greywacl Discontinu locally rou moderatel iron-oxide | RIX DRILLI of weather trong to streen to dark ke), fresh to uities are m igh, fracture y open, loc stained. Di | NG: No receded ROCK ong, mediur purple, fine locally slig edium to cless are plana ally clay sm ps are 40° at 16.00 m | overy, obse n to thinly le-grained, s htly weather osely space ir. Aperture eared, loca & locally 60 | erved by dr Deddded, SANDSTO ered. ed, smooth es are tight ally modera | nto to ately ar. | 13.30 | -10.74 -11.29 | | |
| REMARKS | | | | | | | | | | | | | WAT | TER ST | RIKE I | DETAILS |
| Hole cased 0.00-1.20n | | 0.00- | 13.30m. | Hand-dug | Insp | ectio | n pit | Water Strike | Casing Depth | Sealed At | Rise To | Time (min) | Со | mment | ts | |
| REMARKS Hole cased 0.00-1.20m | 1 | | | | | | | 9.00 | 9.00 | 7.10 | | (11/111) | | Slow | | |
| 247 | | | | | | | | | Шого | Cocina | Donth 4 | | | | VATER | DETAILS |
| INSTALLA | | | | | | | | Date | Hole Depth | Casing Depth | Depth to Water | _ | ments | | | |
| Date Date | Tip C | epth | RZ Top | RZ Base | | Тур | oe | 01-03-24 | 16.00 | 13.30 | 11.10 | Water drilling | | ecorded ! | 5 mins af | ter end of |





RC304 - Box 1 of 1 - 22.20-25.00m







RC309 - Box 1 of 1 - 20.00-22.00m



RC310 - Box 1 of 1 - 17.70-20.70m



RC313 - Box 1 of 1 - 21.00-23.35m



RC314 - Box 1 of 1 - 13.30-16.00m



River Quarter, Bray Factual Report

PRCENED. 24/03/2025

Appendix 3

Monitoring Well Record

Report No. 24991 15 | P a g e



OPEN HOLE DRILLING RECORD

REPORT NUMBER

| | <u>.</u> ලව | <u> </u> | | | | | | | | | | | | | | | | |
|---------------------------------------|---|--|------------------------------|-------------------------------|---|--------------------------------|-----------------------|--|---------------------|------------------------------|-----------------------------|--------------------------|--------------------|---------------|-------------|--------------|-------------------------|---------------|
| со | NTR | ACT | S | Sea G | Sardens | , Bray | | | | | | | DRII SHE | AHOLE ET | NO | ROI Shee | H03 et 1 of 2 | |
| СО | -ORE | OINA | TES | | 726,3 719,2 | 346.07 246.23 | E N | | | | | | DAT | E DRILL | | 12/0 | 2/2024 | |
| GR | OUN | D LE | EVEL | (mO | | 3. | | | RIG TYF | | | T-440 | DAT | E LOGG! | ED . | 13/0 | 2/2024 | |
| l | ENT GINE | | | Ballyn ktkins | nore Gr | oup | | | | ATION (deg) IAMETER (mr | | -90 78 | DRIL | LED BY | | Z/G | SL - JK | |
| Downhole Depth (m) | Core Run Depth (m) | T.C.R.% | S.C.R.% | R.Q.D.% | Fracture Zones (m) | (wm) sey Fracture show Spacing | 0 | Fracture Spacing Log (mm) | | | Desc | cription | | | Depth (m) | Elevation | Standpipe Detail | SPT (N Value) |
| 0 | 1.50 | 0 | 0 | 0 | | | | | | SYMMETRIX by driller as | K DRILLING returns of sa | : No recov ndy CLAV | very, obsei V | | 1.50 | | | |
| 2 | 3.00 | 0 | 0 | 0 | | | | | | SYMMETRIX by driller as i | K DRILLING returns of SA | : No recov | very, obsei | rved | 3.00 | 1.68 | | |
| - 3 | 4.50 | 0 | 0 | 0 | | | | | | SYMMETRIX by driller as i | CDRILLING returns of sa | : No recov ndy GRA' | very, obsei VEL | rved | 3.00 | 0.18 | | |
| 5 | 6.00 | 0 | 0 | 0 | - | | | | | SYMMETRIX | (DRILLING | : No recov | very, obsei | | 5.80 | -2.62 | | |
| 7 | 7.50 | 0 | 0 | 0 | - | | | | | by driller as | returns of Cl | _AY | | | | | | |
| 8 | 9.00 | 0 | 0 | 0 | - | | | | | | | | | | | | | |
| 10 | 10.50 | 0 | 0 | 0 | - | | | | | SYMMETRIX by driller as i | K DRILLING returns of gr | : No recov avelly SAI | very, obsei ND | | 9.80 | -6.62 | | |
| RE | MAR | KS | | 1 | | | | | a | | | | | | WAT | ER ST | RIKE D | ETAILS |
| Rock sam fragr poss cond | k and s ples ca ments o sible. S dition/s | soil de an be of 2 to similar tructu | heavily 3 mm ly, it is | disturt are red not pos | bed and fr covered. A ssible to a | agmented ccurate d | l, with a escripti | drilling returns. I loss of fines. Tons are not, the soil stratification | ГурісаІ erefore, | Water Strike 9.80 | Casing Depth 9.80 | Sealed At | Rise To | Time (min) | Со | mmen Slow | ts | |
| INIC | TAI | I AT | ION E |)FT^ | II S | | | | | Data | Hole | Casing | Depth t | 0 Com | GRO | | VATER | DETAILS |
| | Date -02-2 | | | epth | RZ To 9.80 | p RZ E | | Type 50mm | | 13-02-24 | Depth 20.00 | 20.00 | Water 8.40 | Oom | levels r | | 5 mins afte | er end of |
| REI Rock sam fragr poss cond Hole INS | | | | - | | | | | | | | | | | | | | |



OPEN HOLE DRILLING RECORD

REPORT NUMBER

| | ලව | L / | | | | | | | | | | | | | | | 499 | 1 |
|--------------------|-------------------|---------------------|--------------------|----------------|--------------------|---------------------|-----------|---|----------|------------------------------|----------------------------|--------------------------|-------------------|-------------|---------------|-----------|---------------------|---------------|
| СО | NTR | ACT | S | ea G | ardens | , Bray | | | | | | | | HOLE | NO | ROI | | • |
| СО | -ORE | DINA | TES | | 726, | 346.07 | E | | | | | | SHE | E DRILL | ΕD | | et 2 of : 2/2024 | |
| GR | OUN | D LE | VEL | (mO | | 246.23 3. | | | RIG TYPI | | | T-440 | | E LOGG | < \ | | 2/2024 | |
| | ENT GINE | | | allyn tkins | nore Gr | oup | | | | TION (deg) AMETER (mr | n) | -90 78 | DRIL | LED BY | (| Z JG | SL - JI | < |
| | | | | | | | | | | | , | | ı | | | 0 | 500 | |
| Downhole Depth (m) | Run Depth (m) | T.C.R.% | .C.R.% | R.Q.D.% | Fracture Zones (m) | Fracture Spacing | | Fracture Spacing | | | Des | cription | | | | | Standpipe Detaile | llue) |
| nhole | Run |). | S) | <u>~</u> | ture Z | 正 Si Min | | Log (mm) | pue | | DCS | сприоп | | | Depth (m) | Elevation | dpipe | SPT (N Value) |
| Dow | Core | | | | Frac | Avg Max (mm) | 0 | 250 500 | Legend | | | | | | Dept | Elev | | SPT |
| - 11 | | 0 | 0 | 0 | | | | | 0 . | SYMMETRIX by driller as i | CDRILLING returns of gr | : No recov | ery, obser | ved ued) | | | | |
| Ē | 12.00 | | | | | | | | 0 . | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | |
| Ē | | 0 | 0 | 0 | | | | | | | | | | | | | | |
| F 13 | 13.50 | | | | | | | | 0 | | | | | | | | 0 0 | |
| E | | | | | | | | | 0 | | | | | | | | | |
| 14 | | 0 | 0 | 0 | | | | | 0 . | | | | | | | | | |
| 15 | 15.00 | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | |
| E | | 0 | 0 | 0 | | | | | 0 . | | | | | | | | | |
| 16 | 16.50 | | | | | | | | 0 . | | | | | | | | 0 0 0 0 | |
| Ē | | | | | | | | | 0 | | | | | | | | | |
| 17 | | 0 | 0 | 0 | | | | | | | | | | | | | | |
| Ē | 18.00 | | | | | | | | | | | | | | | | | |
| F 18 | | | | | | | | | 0 | | | | | | | | | |
| Ē | | 0 | 0 | 0 | | | | | - | SYMMETRIX | K DRILLING | 3: No recov | ery, obser | ved | 18.80 | -15.62 | | |
| 19 | 19.50 | | | | | | | | | by driller as ı | returns of g | ravelly CLA | AY | | | | | |
| | 20.00 | 0 | 0 | 0 | | | | | _° | | | | | | 20.00 | | | |
| 20 | | | | | | | | | | End of I | Borehole at | 20.00 m | | | | -16.82 | | |
| Ė | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | |
| 47/C/O7 | | | | | | | | | | | | | | | | | | |
| Roc | MAR k and s | soil de | scriptio | ns are | based or | examina | tion of c | drilling returns. To | These | Water | Casing | Sealed | Rise | Time | | mmen | | DETAILS |
| poss | nents sible. S | of 2 to Similarl | 3 mm y, it is ı | are red | covered. A | ccurate d | escripti | ons are not, the soil stratification | erefore, | Strike 9.80 | Depth 9.80 | At | То | (min) | | Slow | | |
| -1 | dition/s cased | | e. 0.00-2 | 0.00m. | | | | | | | | | | | | | | |
| <u> </u> | | | | | | | | | | | | | | | GRO | DUNDV | VATER | DETAILS |
| INS | TAL Date | | ON D | | ILS RZ To | n R7 E | Base | Type | <u> </u> | Date 13-02-24 | Hole Depth | Casing Depth 20.00 | Depth to Water | Con | nment | | 5 mine of | ter end of |
| | -02-2 | | 18.8 | | 9.80 | | .80 | 50mm S | | 13-02-24 | 20.00 | 20.00 | 8.40 | drillin | g. | ecoraea : | Julius at | ter end of |
| ≃∟ | | | | | | | | | | | | | 1 | | | | | |

River Quarter, Bray Factual Report

PRCENED. 24/03/2025

Appendix 4

Trial Pit Records

Report No. 24991 16 | P a g e

| ES pueßen | 719,28 2.06 (a) | 16.05 E 81.14 N Elevation | Water Strike | SHEET DATE ST. DATE ST. DATE CO EXCAVA' METHOD | ARTED MPLET | 16/01 FED 16/01 | t 1 of 1 /2024 /2024 Excavat | |
|----------------|-----------------------|---------------------------------|--------------|--|----------------|-------------------------------------|---------------------------------------|----------------------------|
| FEL (m) | 719,28 2.06 | Revation | Water Strike | DATE ST. DATE CO EXCAVA METHOD | TION | 16/01 FED 16/01 | /2024 /2024 Excavat | |
| Pegend Legend | #1(E) 0.20 | | Water Strike | METHOD | | , XO3 |)) | |
| 7/1/2 7/1/2 | 0.20 | | Water Strike | | Sample | s |) See | ter |
| 7/1/2 7/1/2 | 0.20 | | Water Strike | imple | | | Δ. | L e |
| | 0.20 | 1.86 | | S & | Туре | Depth | Vane Test (KPa) | Hand Penetrometer (KPa) |
| | 1.30 | 1.66 1.36 1.16 0.76 | (Moderate) | AA220663 AA220664 AA220665 | ВВВ | 0.40-0.40 0.60-0.60 1.10-1.10 | 50 25 | |
| | | | | | | | | |

IGSL TP LOG 24991.GPJ IGSL.GDT 26/3/24

Stability Poor from 0.80m

General Remarks
Pit footprint scanned using cable avoidance tool [CAT]. Pit backfilled with arisings. TP terminated due to water strike.

| | BSL | | TRIAL PIT I | RECO | RD | | | | | REPORT N | имвек 991 | |
|--------------|---|---|-------------------------|----------|--------------|--------------------|--------------|------------------|----------|------------------------|------------------------------|-------------------------|
| CON | TRACT | Sea Gardens, Bray | | | | | | TRIAL PI | T NO. | TP3 | | |
| LOG | GED BY | I.C&O.K | CO-ORDINAT | ES | | 72.65 E 01.40 N | | DATE ST | | 17/0 | t 1 of 1 1/2024 1/2024 | |
| CLIE ENGI | NT NEER | Ballymore Group Atkins | GROUND LEV | /EL (m) | 3.00 | | | EXCAVA METHOD | | JCB | Excavat | tor |
| | | | | | | | | | Sample | s L | 25° | neter |
| | | Geotechnical Description | ו | Legend | Depth (m) | Elevation | Water Strike | Sample Ref | Type | Depth | Vane Test (KPa) | Hand Penetrometer (KPa) |
| 0.0 | rootlets. | IL. Soft to firm brown slightly sand Sand is fine. | / | <u> </u> | 0.15 | 2.85 | | | | | | |
| | Firm bro | own slightly sandy very silty CLAY | . Sand is fine. | | 0.70 | 0.00 | | | Env | 0.60-0.60 | 50 60 | |
| 1.0 | Soft to firm orangish brown slightly sandy very Sand is fine. | | very silty CLAY. | | 0.70 | 2.30 | | AA220676 | В | 0.60-0.60 | | |
| 2.0 | Light bro | own slightly silty slightly clayey SA e. | AND. Sand is fine | | 1.65 | 1.35 | (Slow) | AA220677 | Env B | 1.70-1.70 1.70-1.70 | | |
| | Firm gre Frequer | ey sandy SILT/CLAY. Sant is fine it organic fragments. Strong orga | to medium. nic odor. | | 2.60 | 0.40 | 2 | AA220678 | Env B | 2.60-2.60 2.60-2.60 | | |
| 3.0 | End of 1 | rial Pit at 3.00m | | <u> </u> | 3.00 | 0.00 | (Slow) | | | | | |

Groundwater Conditions
Slow water ingress at 1.90m and 3.00m

4.0

Groundwater Conditions
Slow water ingress at 1.90m and 3.00m

Stability
Poor from 0.60m

General Remarks
Pit footprint scanned using cable avoidance tool [CAT]. Pit backfilled with arisings. TP terminated due to sidewall collapse. TP has been moved 30.00m to South from its original location due to stockpile.

| Expra, | \ |
|--------|---|
| IGSL | |

TRIAL PIT RECORD

REPORT NUMBER

24991

TRIM, PIT NO. CONTRACT **TP303** Sea Gardens, Bray SHEET Sheet 1 of 1 **CO-ORDINATES** 726.447.24 E DATE STARTED 16/01/2024 **LOGGED BY** I.C&O.K 719,243.63 N DATE COMPLETED 16/01/2024 GROUND LEVEL (m) 3.30 **EXCAVATION** JCB Excavator CLIENT Ballymore Group **METHOD ENGINEER** Atkins Samples Penetrometer Vane Test (KPa) Nater Strike Geotechnical Description Elevation Sample Ref Legend Depth (m) Depth Hand I (KPa) Type TOPSOIL. Soft to firm brown slightly sandy clay with rootlets. Sand is fine 0.20 3.10 Soft to firm orangish brown slightly sandy CLAY with 50 roots. Sand is fine. 0.50 2.80 Soft orangish brown very sandy SILT/CLAY. Sand is fine 26 to medium. (Possible very silty very clayey sand). AA220666 В 0.60-0.60 0.70 2.60 25 Orangish brown slightly silty slightly clayey SAND. Sand is 0.90 2.40 fine to coarse. Firm to stiff light brown mottled black very sandy SILT/CLAY. Sand is fine. 1.0 AA220667 В 1.10-1.10 1.50 1.80 Stiff light brown mottled orange sandy SILT/CLAY. Sand is fine. AA220668 В 1.90-1.90 2.0 2.20 1 10 Soft grey slightly sandy slightly clayey SILT. Sant is fine to ·× × medium. Frequent organic fragments. Strong organic odor. × Χ. AA220669 В 2.80-2.80 X. × × 3.0 × × × × AA220672 3.90-3.90 В 4.00 -0.70 4.0 Soft grey sandy slightly clayey SILT. Sant is fine to ·× medium. Frequent organic fragments. Strong organic .<u>×</u> odor. × 4.60 -1.30End of Trial Pit at 4.60m AA220673 4.60-4.60 В **Groundwater Conditions** Seapage at 3.20m 26/3/24

Stability Poor from 1.00m

GDT.

GPJ IGSL

TP LOG . TS9

General Remarks

Pit footprint scanned using cable avoidance tool [CAT]. Pit backfilled with arisings.

| IG | | Т | RIAL PIT I | RECO | RD | | | | | REPORT NO | имвек 991 | |
|-------------|---|--|---------------------------------|---------------------------------------|--------------|--------------------|--------------|------------------|----------|------------------------|---------------------|----------------------------|
| CONT | RACT | Sea Gardens, Bray | | | | | | TRIAL PI | T NO. | TP3 | 04 et 1 of 1 | |
| LOGG | SED BY | I.C&O.K | CO-ORDINATI | ES | | 08.33 E 14.52 N | | DATE ST | - < | 1 6/01 | 1/2024 | |
| CLIEN | | Ballymore Group Atkins | GROUND LEV | /EL (m) | 1.71 | | | EXCAVA METHOD | | JCB I | Excavat | tor |
| | | | | | | | | | Sample | es | | neter |
| | clay with red brick and concrete pieces, pla | | | Legend | Depth (m) | Elevation | Water Strike | Sample Ref | Туре | Depth | Vane Test (KPa) | Hand Penetrometer (KPa) |
| 0.0 | topsoil v | with rootlets. Sand is fine. | / | | 0.15 | 1.56 | | | | | | |
| - | MADE GROUND. Brownish grey very sandy very grave clay with red brick and concrete pieces, plastic and glas fragments. Made ground contains more than 2% non natural material. | | tic and glass n 2% non | | 0.60 | 1.11 | | | Env | 0.60-0.60 | | |
| 1.0 | red brick fragmer | natural material. MADE GROUND. Grey very sandy very gravelly clay will ed brick and concrete pieces, plastic and glass fragments. Concrete pieces up to 200mm. Made ground contains more than 2% non natural material. | | | 1.05 | 0.66 | 1 | AA220672 | В | 0.60-0.60 | | |
| | with cor | GROUND. Orange very sandy very g ncrete fragments. Strong organic odd contains less than 2% non natural m | or. Made 🌖 / | * <u>*</u> * * * * | 1.15 | 0.56 | (Seepage) | AA220673 | Env B | 1.05-1.15 1.15-1.20 | | |
| - - - | | irm grey slighlty sandy clayey SILT. S n. Frequent organic fragments. Strong | | X | | | | | | | | |
| 2.0 | | AGOT. | | × × × × × × × × × × × × × × × × × × × | | | | | | | | |
| - - | | | | × × × × × × × × × × × × × × × × × × × | | | 2 | AA220674 | В | 2.50-2.50 | | |
| 3.0 | coarse. | irm grey sandy gravelly clayey SILT. Gravel is fine to medium, subrounde fragments. Strong organic odor. | Sant is fine to ed. Frequent | × × × × × × × × × × × × × × × × × × × | 3.00 | -1.29 | (Moderate) | A A 220675 | B | 3 30 3 30 | | |

3.50

-1.79

AA220675

3.30-3.30

End of Trial Pit at 3.50m

Groundwater Conditions
Seepage at 1.20m. Moderate water ingress at 3.00m

4.0

Groundwater Conditions
Seepage at 1.20m. Moderate water ingress at 3.00m

Stability
Good

General Remarks
Pit footprint scanned using cable avoidance tool [CAT]. Pit backfilled with arisings. TP terminated due to water strike. TP has been moved 8.00m to East from its orginal location due to underground services and tarmac surface.

| | | | | | | | | | | DEDORT N | IMPER | |
|----------|------------------------------------|---|--|--------|--------------|--------------------|--------------|-----------------|----------|------------------------|---------------------------------------|----------------------------|
| | BSL | т | RIAL PIT F | RECO | RD | | | | | REPORT N | омвек 991 | |
| CON | TRACT | Sea Gardens, Bray | | | | | | TRIAL, P | PIT NO. | TP3 | 05 et 1 of 1 | |
| LOG | GED BY | I.C&O.K | CO-ORDINATI | ES | | 96.14 E 48.98 N | | DATE S | - / / | | 1/2024 1/2024 | |
| CLIE | NT NEER | Ballymore Group Atkins | GROUND LEV | ÆL (m) | 4.26 | | | EXCAVA METHO | | JCB | Excavat | or |
| | | | | | | | | | Sample | s | S S S S S S S S S S S S S S S S S S S | meter |
| | | Geotechnical Description | | Legend | Depth (m) | Elevation | Water Strike | Sample Ref | Туре | Depth | Vane Test (KPa) | Hand Penetrometer (KPa) |
| 0.0 | topsoil v Made gr Soft to fi | GROUND. Soft to firm dark brown sa with plastic fragments. Sand is fine to cound contains less than 2% non nat firm orangish brown slightly sandy sli AY. Sand if fine coarse. Gravel is fine | o medium. tural material. ghtly gravelly | | 0.30 | 3.96 | | | | | 55 35 | |
| - 1.0 | End of 1 | rial Pit at 1.00m | | | 1.00 | 3.26 | (Rapid) | AA220679 | Env B | 0.60-0.60 0.60-0.60 | 12 | |
| · · · · | | | | | | | | | | | | |
| 2.0 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 3.0 | | | | | | | | | | | | |

Groundwater Conditions
Rapid water ingress at 0.95m (water level rose up to 0.80m).

4.0

Groundwater Conditions
Rapid water ingress at 0.95m (water level rose up to 0.80m).

Stability
Good

General Remarks
Pit footprint scanned using cable avoidance tool [CAT]. Pit backfilled with arisings. TP terminated due to water strike. TP305 has been moved 1.00m from its original location and reopen as a TP305A.

| IGSL | 1 | RIAL PIT | RECO | RD | | | | | REPORT NO | _{ЈМВЕК} 991 | |
|----------------------------|---|---|---------|--|----------------------|--------------|----------------------|----------------------|--|-------------------------|-------------------------|
| CONTRAC | T Sea Gardens, Bray | | | | | | TRIAL P | IT NO. | TP3 | 05A et 1 of 1 | |
| LOGGED I | BY I.C&O.K | CO-ORDINAT | ES | | 96.14 E 48.98 N | | DATE ST | |) 17/01 | 1/2024 | |
| CLIENT ENGINEER | Ballymore Group | GROUND LEV | /EL (m) | 4.26 | | | EXCAVA METHOD | | JCB I | Excava | tor |
| | | | | | | | | Sample | es ? | 2 | eter |
| | Geotechnical Description | | Legend | Depth (m) | Elevation | Water Strike | Sample Ref | Туре | Depth | Vane Test (KPa) | Hand Penetrometer (KPa) |
| Soft slity 1.0 Ligh coal | DE GROUND. Soft to firm dark brown so it with plastic fragments. Sand is fine to the ground contains less than 2% non not to firm orangish brown slightly sandy sl CLAY. Sand if fine coarse. Gravel is fine to brown/grey silty clayey SAND. Sand is se. In to stiff light brown mottled orange and dy SILT/CLAY. Sand is fine to medium. | o medium. Itural material. ightly gravelly e to medium. | | 0.30 1.20 1.50 | 3.96 3.06 2.76 | | AA220680 AA220681 | Env B Env B | 1.20-1.30 1.20-1.30 1.60-1.60 1.60-1.60 | | |
| Firm pocl | t grey slightly silty slightly clayey SAND parse. In to stiff grey sandy SILT/CLAY with free kets and frequent organic fragments. Stor. of Trial Pit at 3.00m | quent sand | | 2.302.703.00 | 1.96 1.56 1.26 | | AA220682 AA220683 | Env | 2.50-2.50 2.50-2.50 2.70-2.70 2.70-2.70 | | |

Groundwater Conditions
Seapage at 3.00m

4.0

Groundwater Conditions
Seapage at 3.00m

Stability
Poor from 1.00m

General Remarks
Pit footprint scanned using cable avoidance tool [CAT]. Pit backfilled with arisings. TP terminated due to sidewall collapse.

| IGSL | Т | RIAL PIT I | RECO | RD | | | | | REPORT NU | | |
|-----------------------|--|------------------------|---------|--------------|--------------------|--------------|------------------|----------|------------------------|-----------------------|-------------------|
| ONTRACT | Sea Gardens, Bray | | | | | | TRIAL, PI | IT NO. | TP30 |)6 t 1 of 1 | |
| OGGED BY | I.C&O.K | CO-ORDINAT | ES | | 59.44 E 43.75 N | | DATE ST | - X \ |) 17/01 | /2024 /2024 | |
| LIENT NGINEER | Ballymore Group Atkins | GROUND LEV | /EL (m) | 4.11 | | | EXCAVA METHOD | | JCB E | Excavat | tor |
| | | | | | | | , | Sample | es 💎 | | neter |
| | Geotechnical Description | | Legend | Depth (m) | Elevation | Water Strike | Sample Ref | Туре | Depth | Vane Test (KPa) | Hand Penetrometer |
| topsoil v | GROUND. Soft to firm dark brown sa with plastic fragments. Sand is fine to round contains more than 2% non na I. | medium. | | 0.30 | 3.81 | | | | | 50 | |
| sandy s | GROUND. Soft to firm orangish brow lightly gravelly slity clay with red brick fine coarse. Gravel is fine to medium contains less than 2% non natural m | r fragments. . Made | | 0.60 | 3.51 | | AA220684 | Env B | 0.50-0.60 0.50-0.60 | 50 | |
| Soft to f sandy S | irm light brown mottled orange and b | lack slightly | | | | | AA220685 | Env B | 1.20-1.30 1.20-1.30 | 30 | |
| | ery silty very clayey SAND. Sand is fir | | | 2.10 | 2.01 | | AA220686 | Env B | 2.10-2.30 2.10-2.30 | | |
| Firm to pockets odor. | stiff grey sandy SILT/CLAY with freqi . Frequent organic fragments. Stronզ | uent sand g organic | | 3.10 | 1.71 | + | AA220687 | Env B | 2.90-2.90 2.90-2.90 | | |
| Grev sli | ghtly silty slightly clavey SAND, Sand | is fine to | · · · · | 3.10 | 1.01 | (Moderate) | | _ | | | |

3.30

0.81

AA220688

Env

В

3.30-3.30 3.30-3.30

Groundwater Conditions

Moderate water ingress at 3.10m

End of Trial Pit at 3.30m

Grey slightly silty slightly clayey SAND. Sand is fine to coarse. Frequent organic fragments. Strong organic odor.

4.0

Stability Poor from 1.00m

General Remarks
Pit footprint scanned using cable avoidance tool [CAT]. Pit backfilled with arisings. TP terminated due to sidewall collapse. TP has been moved 30.00m to East from its orginal location due to lack of access at the construction site.

IGSL TP LOG 24991.GPJ IGSL.GDT 26/3/24



PHOTOGRAPHY RECORD





TP301 Spoil







PHOTOGRAPHY RECORD





TP302 Spoil







PHOTOGRAPHY RECORD





TP303 Spoil







PHOTOGRAPHY RECORD





TP304 Spoil







PHOTOGRAPHY RECORD





TP305 Spoil







PHOTOGRAPHY RECORD

TP305A





TP305A Spoil







PHOTOGRAPHY RECORD

TP306





TP306 Spoil





River Quarter, Bray Factual Report

PRCENED. 24/03/2025

Appendix 5 Window Sample Records

Report No. 24991 17 | P a g e



REPORT NUMBER

24991

| | 995/ | | | | | | | | | | | |
|------------------|---|---------------|--------|--------------|--------------|--------------|----------------------------|--------------|-----------|------------------------|-------------------|-----------|
| | TRACT Sea Gardens, Bray | | | | | | BH NO. SHEET | | | WS06 Sheet 1 | | |
| | 726,248.92 E 719,114.96 N UND LEVEL (mOD) 3.88 | | | | | | DATE LO | | | 09/01/20 09/01/20 | | |
| CLIE | , - 1 | | | | | | DRILLE | | . 5x | IGSL | | |
| ENG | NEER Atkins | | | | | | LOGGE | D BY | | O K | Sampl | 00 |
| Depth (m) | Geotechnical Description | | Legend | Depth (m) | Elevation | Water Strike | Depth of Sample Run (m) | Recovery (%) | Blowcount | Ref. Number | Sample Cycle Type | Depth (m) |
| 0.0 | TOPSOIL: Soft to firm dark brown CLAY. | | 11/. | | _ | | 0.00-1.00 | 75 | _ | | | |
| | Firm to stiff brown sandy CLAY. Sand is fine to medium. | | | 0.30 | 3.58 | | | | | | | |
| 1.0 | Very dense brown slightly clayey SAND. Sand is fine to me Very dense orangish brown slightly clayey SAND. Sand is | | | 0.90 1.00 | 2.98 2.88 | _ | 1.00-2.00 | 65 | | | | |
| - | medium. Very dense orangish brown slightly silty clayey SAND. Sar medium. | | | 1.30 | 2.58 | | | | | | | |
| - | Firm grey mottled orange very slightly sandy silty CLAY. S to medium. | Sand is fine | | 1.55 | 2.33 | | | | | | | |
| 2.0 | Soft grey silty CLAY. | 2 | | 2.20 | 1.68 | | 2.00-3.00 | 100 | | | | |
| 3.0 | Firm grey silty CLAY Final Depth 3.00m | >>>> | | 2.90 3.00 | 0.98 0.88 | _ | | | | | | |
| IGSL.GDT 15/1/24 | | | | | | | | | | | | |
| | eral Remarks well installation at 3m bgl. Gas valves inserted to t | top of pipe a | at al | l locatior | ns of gas | wells. | | | | | | |
| Insta Gas | llations well instalation | | | | | | | | | | | |



REPORT NUMBER

24991

BH NO. WS06B CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **CO-ORDINATES** 726,480.45 E DATE DRILLED 09/01/2024 719,178.82 N DATE LOGGED 09/01/2024 **GROUND LEVEL (mOD)** 1.77 **DRILLED BY CLIENT** Ballymore Group **IGSL ENGINEER LOGGED BY** Atkins **Q**K Samples Depth of Sample Run (m) % Water Strike Geotechnical Description Blowcount Recovery Depth (m) Elevation Ref. Number Ξ Sample Type Depth (m) Depth (m) 0.0 0.00-1.00 60 TOPSOIL: Soft dark brown slightly sandy CLAY with rare roothair. 0.20-0.40 ENV 0.40 1.37 Firm to stiff greyish brown slightly gravelly sandy CLAY with orangish brown sandy pockets. Sand is fine to medium. Gravel is fine, ENV 0.40-0.60 subangular. 1.00 0.77 1.0 Firm brownish grey mottled orange slightly silty sandy CLAY. Sand is 1.00-2.00 70 1.25 0.52 Soft to firm brownish grey mottled orange slightly silty sandy CLAY. Sand is fine. 1.40-1.70 ENV 1.50 0.27 Firm grey slightly silty sandy CLAY. Sand is fine. 2.00 -0.23 2.0 Soft to firm brown mottled grey slightly sandy slightly silty CLAY. 2.00-3.00 100 ENV 2.40-2.70 2.50 -0.73Firm grey slightly sandy slightly silty CLAY. Sand is fine. 3.00 -1.23 3.0 Dense grey slightly clayey slightly silty SAND. Sand is fine to coarse. 3.00-4.00 85 Moist recovered ENV 3.40-3.70 15/1/24 GDT

General Remarks

IGSL.

WS WITH DISCRETE SAMPLES 24991.GPJ

Water installation at 4m bgl. All installs with gravels, bentonite and stand up covers concreted in.

Installations

Water monitoring installation

| | SSL | | WI | NDOW | SAMPI | LE REC | OR | D | | REP | 249 | | ł |
|---------------|---|--------------|--------|--------------|----------------|--------------|-----|----------------------------|--------------|-----------|---------------------------------|---------------------|---------------|
| CON | TRACT Sea Gardens, Bray | | | | | | | BH NO. | | | NS06E | | |
| | 726,480.45 E 719,178.82 N UND LEVEL (mOD) 1.77 | | | | | | | DATE DE | |) (| Sheet 2 09/01/20 09/01/20 |)24 | |
| CLIE | | | | | | | | DRILLEI | | . Sa | IGSL OK | | |
| Depth (m) | Geotechnical Description | | Legend | Depth (m) | Elevation | Water Strike | | Depth of Sample Run (m) | Recovery (%) | Blowcount | | Sample Çdus Type | Ses Depth (m) |
| 4.0 | Dense grey slightly silty clayey SAND. Sand is fine to | coarse. | | 4.60 | -2.83 | | 4.0 | 00-5.00 | 95 | | | ENV | 4.40-4.70 |
| | Dense grey slightly clayey slightly silty SAND. Sand is coarse. | s is fine to | | 4.85 5.00 | -3.08 -3.23 | | | | | | | | |
| 5.0 | Final Depth 5.00m | | | | | | | | | | | | |
| 6.0 | | | | | | | | | | | | | |
| 7.0 - - | | | | | | | | | | | | | |

General RemarksWater installation at 4m bgl. All installs with gravels, bentonite and stand up covers concreted in.

WS WITH DISCRETE SAMPLES 24991.GPJ IGSL.GDT 15/1/24 Installations Water monitoring installation



REPORT NUMBER

24991

BH NO. WS07A CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 1 **CO-ORDINATES** 726,361.66 E DATE DRILLED 10/01/2024 719,094.26 N DATE LOGGED 10/01/2024 **GROUND LEVEL (mOD)** 1.69 **DRILLED BY CLIENT** Ballymore Group **IGSL ENGINEER LOGGED BY** Atkins **Q**K Samples Depth of Sample Run (m) % Water Strike Geotechnical Description Blowcount Recovery Depth (m) Elevation Ξ Ref. Number Sample Type Depth (m) Depth (m) 0.0 TOPSOIL: Soft to firm dark brown slightly sandy CLAY with rare roothair. 0.00-1.00 100 0.30 1.39 MADE GROUND comprised of firm dark brown slightly sandy slightly gravelly CLAY with rare small brick fragments. 0 0.50 1.19 Stiff brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium, subangular to subrounded. 0.80 0.89 Dense greyish brown slightly gravelly clayey SAND. Sand is fine to medium. Gravel is fine to medium, subangular to subrounded. 1.00 0.69 1.0 Dense dark grey clayey SAND. Sand is fine to coarse. 1.00-2.00 30 2.00 -0.31 2.0 Loose grey clayey SAND. Sand is fine to medium. 2.00-3.00 100 Soft grey slightly gravelly silty CLAY with inclusions of organic material eg. decomposed wood. Gravel is fine to medium, subangular to subrounded. (Olfactory scent of organics in the sample). 2.40 -0.71 -XG -X--<u>ō</u>, -X-3.00 -1.31 3.0 Final Depth 3.00m 15/1/24 GDT **General Remarks**

Gas well installation at 3m bgl. Gas valves inserted to top of pipe at all locations of gas wells.

Installations

IGSL.

WS WITH DISCRETE SAMPLES 24991.GPJ

Gas well instalation



REPORT NUMBER

24991

BANO. WS07B CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **CO-ORDINATES** 726,387.31 E DATE DRILLED 10/01/2024 719,107.44 N DATE LOGGED 10/01/2024 **GROUND LEVEL (mOD)** 2.17 **DRILLED BY CLIENT** Ballymore Group **IGSL ENGINEER LOGGED BY** Atkins **Q**K Samples Depth of Sample Run (m) % Water Strike Geotechnical Description Blowcount Recovery Depth (m) Elevation Ref. Number Ξ Sample Type Depth (m) Depth (m) 0.0 TOPSOIL: Soft to firm dark brown slightly sandy CLAY with rare roothair. 0.00-1.00 80 0.20 1.97 <u></u> Firm to stiff brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is fine to medium, subangular to subrounded. ENV 0.40-0.70 1.0 1.00-2.00 60 1.10-1.20 FNV 0_ 1.40 0.77 Very soft dark grey slightly sandy slightly gravelly silty CLAY. Sand is fine. Gravel is fine to medium, subangular to subrounded. ____ 1.70-1.90 <u>_</u> 2.00 0.17 Dense grey gravelly silty clayey SAND. Sand is fine to medium. Gravel is fine to medium, subangular to subrounded. 2.0 0 2.00-3.00 75 σ 2.40 -0.23 Dense slightly gravelly silty clayey SAND. Sand is fine to medium. Gravel is fine, subangular to subrounded. (Olfactory scent of ENV 2.40-2.70 organics in the sample). 3.00 -0.83 3.0 Loose grey clayey gravelly SAND. Sand is fine to medium. Gravel is 6 3.00-4.00 50 fine to medium, subangular to subrounded. Moist recovered ENV 3.50-3.90

General Remarks

IGSL.GDT 15/1/24

WS WITH DISCRETE SAMPLES 24991.GPJ

Water installation at 5m bgl. All installs with gravels, bentonite and stand up covers concreted in.

Installations

Water monitoring installation

| | BSL | | WI | NDOW | SAMPI | _E REC | ORD |) | | REP | ORT NU 249 | | R |
|-----------|---|-------|--------|------------------------------|----------------------------------|--------------|-----------------|-----------------|--------------|-----------|-------------------------|---------------------|-----------|
| CON | TRACT Sea Gardens, Bray | | | | | | | SHEET | l . | | WS07E Sheet 2 | | |
| | 726,387.31 E 719,107.44 N OUND LEVEL (mOD) 2.17 | | | | | | | DATE D | |) ' | 10/01/20 10/01/20 |)24 | |
| CLIE | | | | | | | - 1 | DRILLE LOGGE | | . 45 4 | IGSL OK | | |
| Depth (m) | Geotechnical Description | | Legend | Depth (m) | Elevation | Water Strike | Denth of Samula | Run (m) | Recovery (%) | Blowcount | | Sample Code Type | |
| 4.0 | Loose grey slightly gravelly clayey SAND. Sand is fine Gravel is fine to medium, subangular to subrounded. recovered Soft grey slightly sandy very silty CLAY. Sand is fine. recovered Soft to firm grey slightly sandy very silty CLAY. Sand is recovered Final Depth 5.00m | Moist | | 4.00 4.30 4.90 5.00 | -1.83 -2.13 -2.73 -2.83 | | 4.00 | 0-5.00 | 90 | | | ENV | 4.50-4.70 |

General RemarksWater installation at 5m bgl. All installs with gravels, bentonite and stand up covers concreted in.

WS WITH DISCRETE SAMPLES 24991.GPJ IGSL.GDT 15/1/24 Installations Water monitoring installation



REPORT NUMBER

24991

BH NO. WS08A Sea Gardens, Bray SHEET Sheet 1 of 1 **CO-ORDINATES** 726,248.92 E DATE DRILLED 11/01/2024 719,114.96 N DATE LOGGED 11/01/2024 **GROUND LEVEL (mOD)** 3.88 **CLIENT DRILLED BY IGSL** Ballymore Group **ENGINEER LOGGED BY** Atkins **Q**K Samples Depth of Sample Run (m) Recovery (%) Water Strike Geotechnical Description Blowcount Depth (m) Elevation Ref. Number Sample Type Depth (m) Depth (m) 0.0 100 TOPSOIL: Soft to firm brown slightly sandy CLAY with rare roothair. 0.00-1.00 0.80 3.08 Firm to stiff brown CLAY. 1.0 1.00-2.00 100 1.20 2.68 Soft to firm brown sandy CLAY 1.55 2.33 0 Firm to stiff brown mottled grey slightly gravelly slightly sandy CLAY. 2.00 1.88 2.0 <u>-</u> Firm light brown slightly sandy slightly gravelly CLAY. 2.00-3.00 40 3.00 0.88 3.0 Final Depth 3.00m

Gas well installation at 3m bgl. Gas valves inserted to top of pipe at all locations of gas wells.

Installations

WS WITH DISCRETE SAMPLES 24991.GPJ IGSL.GDT 15/1/24

Gas well instalation



REPORT NUMBER

24991

BANO. WS08B CONTRACT Sea Gardens, Bray SHEET Sheet 1 of 2 **CO-ORDINATES** 726,276.96 E 10/01/2024 DATE DRILLED 719,115.02 N DATE LOGGED 10/01/2024 **GROUND LEVEL (mOD)** 3.91 **DRILLED BY CLIENT** Ballymore Group **IGSL ENGINEER LOGGED BY** Atkins **Q**K Samples Depth of Sample Run (m) % Water Strike Geotechnical Description Blowcount Recovery Depth (m) Elevation Ref. Number Ξ Sample Type Depth (m) Depth (m) 0.0 100 TOPSOIL: Soft to firm brown slightly sandy CLAY with rare roothair. 0.00-1.00 0.50-0.80 0.85 3.06 Firm to stiff brown CLAY with rare roothair. 1.00 2.91 Firm brown to redish brown slightly sandy silty CLAY. Sand is fine to medium. Sandband encountered between 1.3 to 1.4m 1.00-2.00 85 -X-1.40-1.70 ENV ×-1.90 2.01 0 Loose brown/grey slightly gravelly SAND. Sand is fine to medium. 2.00 1.91 Gravel is fine to medium, subangular to subrounded. 2.0 9 2.00-3.00 70 Medium loose greyish brown slightly gravelly slightly clayey slightly silty SAND. Sand is fine to coarse. Gravel is fine, subangular to subrounded. σ ENV 2.50-2.80 3.00 0.91 3.0 Medium loose redish brown to greyish brown slightly gravelly slightly 3.00-4.00 85 clayey slightly silty SAND. Sand is fine to coarse. Gravel is fine, subangular to subrounded. 6 ENV 3.50-3.80 15/1/24

General Remarks

GDT IGSL.

WS WITH DISCRETE SAMPLES 24991.GPJ

Water installation at 4m bgl. All installs with gravels, bentonite and stand up covers concreted in.

Installations

Water monitoring instalation

| ./ | | VVII | NDOW | SAMPL | E RECO | ORD | | | 249 | 01 | |
|---|---|--|---|--|---|---|--|--|--|--|--|
| 7 | | | | | | BH NO. | | | | | |
| NATES 726,276.96 E | | | | | | SHEET | RILLEC | 5 | | of 2 | |
| LEVEL (mOD) 3.91 | | | | | | DATE LO | OGGE | | 10/01/20 | | |
| | | | | | | | | X | ⊘ yk | | |
| Geotechnical Description | | Legend | Depth (m) | Elevation | Water Strike | Depth of Sample Run (m) | Recovery (%) | Blowcount | Ref. Number | Sample Cycles Type | |
| se greyish brown slightly gravelly slightly clayey ID. Sand is fine to coarse. Gravel is fine subanç | slightly silty gular | 6 6 6 | 4.00 | -0.09 | | 4.00-5.00 | 80 | | | ENV | 4.50-4 |
| I Depth 5.00m | | | 5.00 | -1.09 | | | | | | | |
| | | | | | | | | | | | |
| temarks tallation at 4m bgl. All installs with grave | els, bentonite and | d sta | and up co | overs con | creted in. | | | | | | |
| | T19,115.02 N LEVEL (mOD) 3.91 Ballymore Group R Atkins Geotechnical Description see greyish brown slightly gravelly slightly clayey ID. Sand is fine to coarse. Gravel is fine subang II Depth 5.00m | T19,115.02 N LEVEL (mOD) Ballymore Group R Atkins Geotechnical Description se greyish brown slightly gravelly slightly clayey slightly slity ID. Sand is fine to coarse. Gravel is fine subangular Id Depth 5.00m | T19,115.02 N Ballymore Group R Atkins Geotechnical Description Geotechnical Description Geotechnical Description July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular July Sand is fine to coarse. Gravel is fine subangular | T19,115.02 N Ballymore Group Atkins Geotechnical Description Geotechnical Description Geotechnical Description Geotechnical Description July 15,02 N July 16,03 N July 16,04 N July 16,04 N July 16,05 N July 16 | T19,115.02 N Ballymore Group Atkins Geotechnical Description Geotechnical Description Geotechnical Description Geotechnical Description Geotechnical Description Geotechnical Description July Geographic Geotechnical Description July | T19,115,02 N Ballymore Group R Altkins Geotechnical Description Geotechnical Description Geotechnical Description Geotechnical Description Geotechnical Description July July July July July July July July | ASTES 726,276,96 E 719,115,02 N LEVEL (mOD) 3.91 Ballymore Group R Alkins Geotechnical Description Geotechnical Descrip | ATES 726,276.96 E 719,115.02 N LEVEL (m/OD) 3.91 Ballymore Group R Atkins Geotechnical Description Geotechnical Descrip | ATES 726,276.96 E 719.115.02 N LEVEL (mOD) 3.91 Ballymore Group Atkins Geotechnical Description Geotechnical Descriptio | ANTES 728,276.96 E 719,115.02 N LEVEL (MOD) 3.91 Ballymore Group 3.91 Geotechnical Description | ATES 726,276.96 E 71,115.02 N LEVEL (mOD) 3.91 Ballymore Group 8 Adkins Geotechnical Description 9 Ge |

WS06A GL – 3m



WS06B GL – 5m



WS07A GL – 3m



WS07B GL – 5m



WS08A GL – 3m

