GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

Catherinestown House,
Hazelhatch Road,
Newcastle,
Co. Dublin.
D22 YD52

Tel: 01 601 5175 / 5176
Email: info@gii.ie
Web: www.gii.ie

Ground Investigations Ireland

Cornamaddy Athlone Northern Site

Glenveagh Properties

Ground Investigation Report

December 2022

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

Catherinestown House,
Hazelhatch Road,
Newcastle,
Co. Dublin.
D22 YD52

Tel: 01 601 5175 / 5176
Email: info@gii.ie
Web: www.gii.ie

DOCUMENT CONTROL SHEET

Project Title	Cornamaddy Athlone Northern Site
Client	Glenveagh Properties
Engineer	AKM Design
Project No	12205-09-22
Document Title	Ground Investigation Report

Rev.	Status	Author(s)	Reviewed By	Approved By	Office of Origin	Issue Date
A	Final	C McParland	J Cashen	B Sexton	Dublin	14 December 2022

Ground Investigations Ireland Ltd. present the results of the fieldworks and laboratory testing in accordance with the specification and related documents provided by or on behalf of the client The possibility of variation in the ground and/or groundwater conditions between or below exploratory locations or due to the investigation techniques employed must be taken into account when this report and the appendices inform designs or decisions where such variation may be considered relevant. Ground and/or groundwater conditions may vary due to seasonal, man-made or other activities not apparent during the fieldworks and no responsibility can be taken for such variation. The data presented and the recommendations included in this report and associated appendices are intended for the use of the client and the client's geotechnical representative only and any duty of care to others is excluded unless approved in writing.

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

Catherinestown House,
Hazelhatch Road,
Newcastle,
Co. Dublin.
D22 YD52

Tel: 01 601 5175 / 5176
Email: info@gii.ie
Web: www.gii.ie

CONTENTS

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

Catherinestown House,
Hazelhatch Road,
Newcastle,
Co. Dublin.
D22 YD52
Tel: 01 601 5175 / 5176
Email: info@gii.ie
Web: www.gii.ie

APPENDICES

1.0 Preamble

On the instructions of AKM Design, a site investigation was carried out by Ground Investigations Ireland Ltd. (GII) in October 2022, at the site of the proposed residential development in Cornamaddy, Athlone, County Westmeath.

2.0 Overview

2.1. Background

It is proposed to construct a new residential development with associated services, access roads and car parking at the proposed site. At the time of the site investigation the site was predominantly greenfield however the southern portion of the site was previously used as a compound for neighbouring development. There was also a possible water treatment system located in the north of the site. The site is situated in Cornamaddy, east of Athlone Town, County Westmeath. The proposed construction is envisaged to consist of conventional and piled foundations and pavement make up with some local excavations forservices and plant.

2.2. Purpose and Scope

The purpose of the site investigation was to investigate subsurface conditions utilising a variety of investigative methods in accordance with the project specification. The scope of the work undertaken for this project included the following:

- Visit project site to observe existing conditions
- Carry out 19 No. Trial Pits to a maximum depth of 3.50m BGL
- Carry out 3 No. Soakaways to determine a soil infiltration value to BRE Digest 365
- Carry out 2 No. Percussive Boreholes to recover soil sample and to determine soil strength.
- Carry out 48 No. Dynamic Probes to determine soil strength/density characteristics
- Carry out 9 No. Plate bearing tests to determine the modulus of subgrade reaction and equivalent CBR values
- Geotechnical & Environmental Laboratory testing
- Report with recommendations

3.0 Subsurface Exploration

3.1. General

During the ground investigation a programme of intrusive investigation specified by the Consulting Engineer was undertaken to determine the sub surface conditions at the proposed site. Regular sampling and in-

situ testing were undertaken in the exploratory holes to facilitate the geotechnical descriptions and to enable laboratory testing to be carried out on the soil samples recovered during excavation and drilling.
The procedures used in this site investigation are in accordance with Eurocode 7 Part 2: Ground Investigation and testing (ISEN 1997 – 2:2007) and B.S. 5930:2015+A1:2020.

3.2. Trial Pits

The trial pits were excavated using a 14T tracked excavator at the locations shown in the exploratory hole location plan in Appendix 1. The locations were checked using a CAT scan to minimise the potential for encountering services during the excavation. The trial pits were sampled, logged, and photographed by a Geo-Environmental Engineer prior to backfilling with arisings. Notes were made of any services, inclusions, pit stability, groundwater encountered, and the characteristics of the strata encountered and are presented on the trial pit logs which are provided in Appendix 2 of this Report.

3.3. Soakaway Testing

The soakaway testing was carried out in selected trial pits at the locations shown in the exploratory hole location plan in Appendix 1. These pits were carefully excavated and filled with water to assess the infiltration characteristics of the proposed site. The pits were allowed to drain and the drop in water level was recorded over time as required by BRE Digest 365. The pits were logged prior to completing the soakaway test and were backfilled with arising's upon completion. The soakaway test results are provided in Appendix 3 of this Report.

3.4. Dynamic Probing

The dynamic probe tests (DPH) were carried out at the locations shown in the location plan in Appendix 1 in accordance with B.S. 1377: Part 9 1990. The test consists of mechanically driving a cone with a 50kg weight in 100mm intervals and monitoring the number of blows required. An equivalent Standard Penetration Test (SPT) 'N' value may be calculated by dividing the total number of blows over a 300mm drive length by 1.5. The dynamic probe logs are provided in Appendix 4 of this Report.

3.5. Percussive Boreholes

The percussive boreholes were carried out at the locations shown in the location plan in Appendix 1 using a Tecopsa SPT Tec 10 percussion drilling rig. The method consists of a 1m long steel tube with a cutting edge and an internal plastic liner which is mechanically driven into the ground utilising a 63.5kg weight falling a height of 760mm. Upon completion of the 1m sample, the tube is withdrawn, and the plastic liner removed and sealed for logging and sub sampling by a Geo-Environmental Engineer. The tube is replaced in the borehole and a subsequent 1m sample can be recovered. At the end of each metre, a standard penetration test (SPT) is the carried out. Occasionally outer casing or a reduced diameter tube is utilised to enable the window sample to progress in difficult drilling conditions. Geotechnical or environmental soil

samples can be recovered from each of the liners following logging. The borehole records are provided in Appendix 5 of this Report.

3.6. Surveying

The exploratory hole locations have been recorded using a KQGeo M8 GNSS System which records the coordinates and elevation of the locations to ITM as required by the project specification. The coordinates and elevations are provided on the exploratory hole logs in the appendices of this Report.

3.7. In-situ Plate Bearing Test

The plate bearing tests were carried out using a 457mm diameter plate at the locations shown on the site plan in Appendix 1. The plate was loaded in increments using a hydraulic jack and an excavator to provide a reaction and the displacement was monitored in accordance with BS1377 Part 9 using independently mounted digital strain gauges. The constrained modulus and equivalent CBR are calculated in accordance with HD29/75 and are provided on the test reports in Appendix 6 of this Report.

3.8. Laboratory Testing

Samples were selected from the exploratory holes for a range of geotechnical and environmental testing to assist in the classification of soils and to provide information for the proposed design.

Environmental & Chemical testing as required by the specification, including the Rilta Suite, pH and sulphate testing was carried out by Element Materials Technology Laboratory in the United Kingdom (UK). The Rilta suite testing includes both Solid Waste and Leachate Waste Acceptance Criteria.

Geotechnical testing consisting of moisture content, Atterberg limits, Particle Size Distribution (PSD), hydrometer, and California Bearing Ratio (CBR) tests were carried out by Professional Soils Laboratory (PSL) in the UK.

The results of the laboratory testing are included in Appendix 7 of this Report.

4.0 Ground Conditions

4.1. General

The ground conditions encountered during the investigation are summarised below with reference to in-situ and laboratory test results. The full details of the strata encountered during the ground investigation are provided in the exploratory hole logs included in the appendices of this report.

The sequence of strata encountered were consistent across the site and generally comprised;

- Topsoil / Peat
- Made Ground / Possible Made Ground
- Cohesive Deposits
- Granular Deposits

TOPSOIL: Topsoil was encountered in many of the exploratory holes and was present to a maximum depth of 0.40m BGL.

PEAT: Peat was encountered from ground level in most of the exploratory holes and was generally described as *dark brown slightly gravelly clayey pseudo fibrous PEAT.* At the locations of the trial pits and boreholes, the thickness of peat varied from 0.20m to 4.60m BGL. The results of the dynamic probes indicate the peat or very soft cohesive deposits may extend to depths of over 6.00m BGL.

MADE GROUND: Made Ground deposits were encountered in exploratory holes TP-01, TP-02, TP-11, and TP-12, and were present to depths ranging from 0.50m to 1.20m BGL. These deposits were described generally as greyish *brown / brown slightly sandy gravelly silty Clay with occasional cobbles and boulders* and contained *rare fragments of plastic.* TP-01 had the most anthropogenic material with *occasional fragments of metal, timber, concrete, and steel* noted. In addition to this, possible made ground deposits were noted to a maximum depth of 1.50m BGL. No anthropogenic material was observed within the possible made ground deposits.

COHESIVE DEPOSITS: Cohesive deposits were encountered beneath the Peat and were described typically as *grey / grey mottled brown slightly sandy slightly gravelly silty CLAY or a Grey slightly sandy slightly gravelly clayey SILT with occasional to many cobbles and boulders*. The secondary sand and gravel constituents varied across the site and with depth, with granular lenses occasionally present in the glacial till matrix. These deposits had occasional (<5%), some (5%-20%) or many (20%-50%) cobble and boulder content, where noted on the exploratory hole logs.

GRANULAR DEPOSITS: Granular deposits were encountered beneath the cohesive deposits at TP-09, TP-11, TP-18, and TP-19. These were typically described as g*rey slightly sandy slightly clayey slightly silty subangular to subrounded fine to coarse GRAVEL with many cobbles or grey / greyish brown slightly*

gravelly clayey silty fine to coarse SAND. The secondary sand/gravel and fines constituents varied across the site and with depth, while occasional (<5%), some (5%-20%) or many (20%-50%) cobble and boulder content was also present, where noted on the exploratory hole logs. It should be noted that many of the trial pits where granular deposits or groundwater were encountered, experienced instability. This was described either as side wall spalling or as side wall collapse in the remarks section at the base of the trial pit logs.

4.2. In-situ Strength Testing

The correlated DPH blow counts indicate that the overburden deposits are very soft, soft, or soft to firm to depths of 1.00m to 6.30m BGL.

4.3. Groundwater

Groundwater strikes are noted on the exploratory hole logs where they occurred. We would point out that these exploratory holes did not remain open for sufficiently long periods of time to establish the hydrogeological regime and groundwater levels would be expected to vary with time of year, rainfall, nearby construction, and other factors.

4.4. Laboratory Testing

4.4.1. Geotechnical Laboratory Testing

To be included in final report.

4.4.2. Chemical Laboratory Testing

To be included in final report.

4.4.3. Environmental Laboratory Testing

A number of samples were analysed for a suite of parameters which allows for the assessment of the sampled material in terms of total pollutant content for classification of materials as *hazardous* or *non-hazardous*. The suite also allows for the assessment of the sampled material in terms of suitability for placement at licenced landfills (inert, stable non-reactive, hazardous etc.). The parameter list for the suite includes analysis of the solid samples for arsenic, barium, cadmium, chromium, copper, cyanide, lead, nickel, mercury, zinc, speciated aliphatic and aromatic petroleum hydrocarbons, pH, sulphate, sulphide, moisture content, soil organic matter and an asbestos screen.

The suite also includes those parameters specified in the EU Council Decision establishing criteria for the acceptance of waste at Landfills (Council Decision 2003/33/EC), which for the solid samples are total organic carbon (TOC), speciated aliphatic and aromatic petroleum hydrocarbons, BTEX, phenol, polychlorinated biphenyls (PCB) and PAH.

As part of the suite a leachate is generated from the solid sample, which is analysed for antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, chloride, fluoride, soluble sulphate, sulphide, phenols, dissolved organic carbon (DOC) and total dissolved solids (TDS). While the laboratory report provides a comparison with the waste acceptance criteria limits it does not provide a waste classification of the material sampled nor does it comment on any potentially hazardous properties of the materials tested. The possibility for contamination, not revealed by the testing undertaken should be borne in mind particularly where Made Ground deposits are present, or the previous site use or location indicate a risk of environmental variation. The waste classification report is included under the cover of a separate report by Ground Investigations Ireland.

5.0 Recommendations & Conclusions

5.1. General

The recommendations given and opinions expressed in this report are based on the findings as detailed in the exploratory hole records. Where an opinion is expressed on the material between exploratory hole locations, this is for guidance only and no liability can be accepted for its accuracy. No responsibility can be accepted for conditions which have not been revealed by the exploratory holes. Limited information has been provided at the ground investigation stage and any designs based on the recommendations or conclusions should be completed in accordance with the current design codes, taking into account the variation and the specific details contained within the exploratory hole logs.

5.2. Foundations

Due to the presence of Peat and very soft cohesive deposits over a significant portion of the site, a specific assessment with respect to the development should be carried out. The Peat and very soft cohesive deposits are in places very deep, such that that conventional foundation and ground improvement solutions become very difficult to construct. Piing is an option however the construction of roads, car parking and gardens may also require to be piled such that the settlement between the houses and the footpaths & roads remains within tolerable limits. The mobilisation of heavy equipment will also require significant engineering input into the design of working platforms to provide a stable base for cranes or piling equipment. The below table presents the locations where the depth of very soft deposits is significant (>1.0m BGL) and/or the depth to a suitable bearing stratum may be problematic (>2.0m BGL).

Exploratory Hole	"0" N100 blow count	"4" N100 blow count	Comment
No.	m BGL	m BGL	
BH-01	>2.7	>2.7	
BH-02	>4.6	>4.6	
DP-01	1.5	1.5	
DP-07	3.2	4.4	
DP-08	6.1	6.3	
DP-09	4.9	6	
DP-23	2.6	2.7	
DP-25	2.9	3	
DP-26	0.9	1.3	
DP-27	1.1	1.4	
DP-28	1.8	1.9	
DP-29	0.6	2.6	
DP-30	1.6	2.7	
DP-31	2.4	2.6	
DP-36	1.2	2.6	
DP-39	1.7	3.8	
DP-46	1.1	1.8	

At some locations, where granular or cohesive deposits are present at a shallow depth, an allowable bearing capacity of 80 kN/m^2 is available for conventional strip or pad foundations. The presence of cobbles and boulders in this stratum may have resulted in shallow refusals at a number of locations. The depth of the proposed foundations should be assessed for excavation stability, which is noted on the trial pit logs. Where loose, soft or very soft deposits are present at a shallow depth these should be excavated and replaced with appropriately compacted granular fill or the slab suspended.

Piled foundations are recommended where the thickness of peat or soft deposits exceed conventional levels and may be required for the road and service network in the affected areas, to prevent deformation from excessive total and differential settlement. Consultation with a specialist piling contractor is recommended to determine the most suitable pile design. Negative skin friction from the very soft peat and/or cohesive deposits should be considered in the pile design due to the possibility of loading from working platforms or the adjacent pavement make up.

Exploratory Hole	ABC	Depth	Comment	Exploratory Hole	ABC	Depth	Comment
No.	kN/m^2	m BGL		No.	kN/m^2	m BGL	
DP-02	80	1	Shallow Refusal	DP-22	80	0.8	
DP-03	80	1.9		DP-24	80	1.2	
DP-04	80	1.6		DP-32	80	0.8	Shallow Refusal
DP-05	80	1		DP-33	80	0.8	Shallow Refusal
DP-06	80	1.2		DP-34	80	0.8	Shallow Refusal
DP-10	80	0.8	Shallow Refusal	DP-35	80	0.8	Shallow Refusal
DP-11	80	1.1	Shallow Refusal	DP-37	80	0.8	
DP-12	80	0.8		DP-38	80	0.8	
DP-13	80	0.8	Shallow Refusal	DP-40	80	0.8	Shallow Refusal
DP-14	80	1.7		DP-41	80	0.8	Shallow Refusal
DP-15	80	1.8		DP-42	80	0.8	Shallow Refusal
DP-16	80	1.2		DP-43	80	0.8	Shallow Refusal
DP-17	80	0.8		DP-44	80	0.8	
DP-18	80	0.8		DP-45	80	0.8	
DP-19	80	0.8		DP-47	80	1.9	
DP-20	80	1.2		DP-48	80	0.8	
DP-21	80	0.8					

The possibility for variation in the depth of the made ground in the vicinity of these foundations should be considered and foundation inspections should be carried out. Any soft spots encountered at the proposed foundation depths should be excavated and replaced with lean mix concrete.

In any part of the site, should part of the foundation be on both granular and cohesive deposits we would recommend that all the foundations of the unit in question be lowered to the competent deeper stratum or suitably reinforced to avoid problems with differential settlement.

Ground bearing floor slabs are recommended to be based on the firm cohesive deposits or medium dense granular deposits, with an appropriate depth of compacted hardcore specified by the consulting engineer and in accordance with the limits and guidelines in SR21:2014 +A1:2016 and/or NRA SRW CL808 Type E granular stone fill. Where the depth of Made Ground, peat or soft deposits deposits exceeds 0.90m, and/or piling is proposed, then suspended floor slabs should be considered.

5.3. External Pavements

The proposed pavements are recommended to be designed in accordance with the CBR test results included in the Appendices of this Report. The low CBR test results indicate that a capping layer or a sufficient depth of crushed stone fill may be required. Plate bearing tests are recommended at the time of construction to verify the design assumptions for the proposed pavement make up and to verify adequate compaction has been achieved.

The presence of peat across much of the site should also be noted by the designer. Where the material is too thick to be excavated and replaced, piling techniques may need to be utilised to prevent deformation from excessive settlement of the road and service network. The use of a geogrid and separation membrane may improve the performance of the proposed pavement and enable a more economical pavement design to be achieved, a specialist supplier is recommended to advise of the required strength, depth, and type of geotextile for the proposed design.

5.4. Excavations

Short term temporary excavations in the cohesive deposits will remain stable for a limited time only and will require to be appropriately battered or the sides supported if the excavation is below 1.25m BGL or is required to permit man entry. Excavations in the Made Ground, Peat or soft Cohesive Deposits will require to be appropriately battered or the sides supported due to the low strength of these deposits. Any excavations which penetrate the granular deposits will require to be appropriately battered or the sides supported and are likely to require dewatering due to the groundwater seepages noted in the exploratory hole logs in the Appendices of this Report. The groundwater and stability noted on the trial pit logs should be consulted when determining the most appropriate construction methods for excavations.

Any waste material to be removed off site should be disposed of to a suitably licenced landfill. The environmental testing completed during the ground investigation is reported under the cover of a separate GII Waste Classification Report.

5.5. Soakaway Design

At the locations of IT-01, IT-02 and IT-03 the water level dropped too slowly to allow calculation of the soil infiltration rate. These locations are therefore not recommended as suitable for soakaway design and construction.

The recommendations provided in this report should be verified in the design of the proposed buildings, using the full details of the loading conditions and taking into consideration the allowable tolerable settlements/movements that the building can accommodate. The founding strata should be inspected and verified by a suitably qualified engineer prior to construction of the building foundations.

APPENDIX 1 - Figures

Site Location

Indicative Site Boundary

Client:

Glenveagh

Project Code:

12205-09-22

Project Title:

Cornamaddy Athlone Northern Site

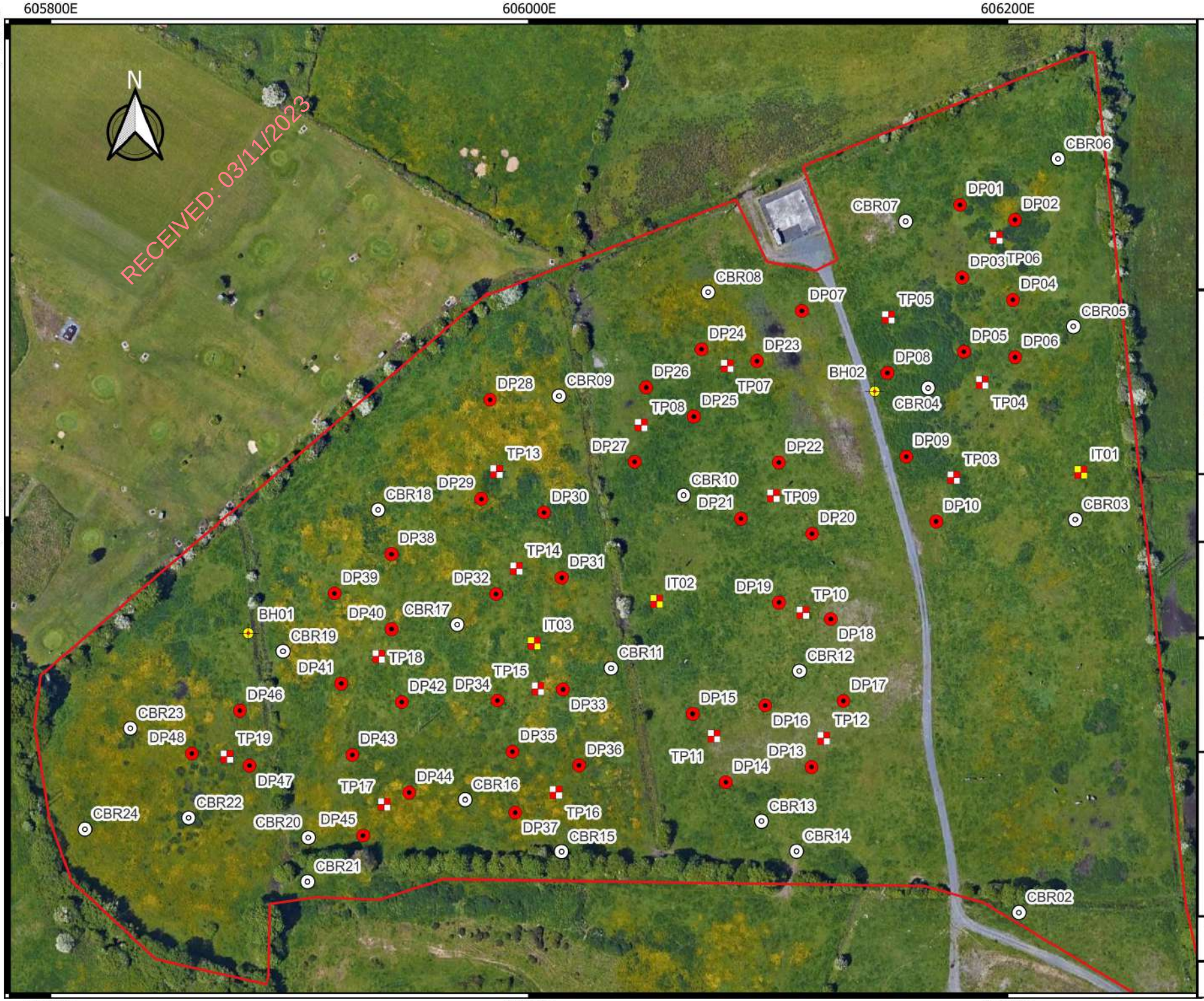
Drawing Title:

Figure 1 Site Location

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental
Ground Investigations Ireland Ltd.
Catherinstown House,
Hazelhatch Road,
Newcastle, Co. Dublin
www.gii.ie 01-6015175/5176

0 60 120 180 240 300 m

Drawn By:	Date:
JC	12-12-2022



- Indicative Site Boundary
- Trial Pit
- Soakaway Pit
- Dynamic Probe
- CBR
- Borehole

Client:

Glenveagh

Project Code:
12205-09-22

Project Title:
Cornamaddy Athlone Northern Site

Drawing Title:
Figure 2
Site Investigation Points 1 of 2

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental
Ground Investigations Ireland Ltd.
Catherinstown House,
Hazelhatch Road,
Newcastle, Co. Dublin
www.gii.ie 01-6015175/5176

0 15 30 45 60 75 m

Drawn By:	Date:
JC	12-12-2022

Indicative Site Boundary
Trial Pit
Soakaway Pit
Dynamic Probe
CBR
Borehole

Client:

Glenveagh

Project Code:
12205-09-22

Project Title:
Cornamaddy Athlone Northern Site

Drawing Title:
Figure 3
Site Investigation Points 2 of 2

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental
Ground Investigations Ireland Ltd.
Catherinstown House,
Hazelhatch Road,
Newcastle, Co. Dublin
www.gii.ie 01-6015175/5176

0 15 30 45 60 75 m

Drawn By:	Date:
JC	12-12-2022

APPENDIX 2 – Trial Pit Records

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-01
Machine : 14T Tracked excavator **Method :** Trial Pit	**Dimensions** 5.30m x 1.8m x 1.5m (L x W x D)	**Ground Level (mOD)** 44.01	**Client** AKM Design
	Location 606441.3 E 742904.1 N	**Dates** 24/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.60	ES				(0.60)	MADE GROUND: Greyish brown slightly sandy gravelly silty Clay with occasional cobbles and boulders and with occasional fragments of metal, timber, plastic, concrete and steel.		
0.50	B			43.41	0.60	MADE GROUND: Grey fine to coarse Sand		
				43.21	(0.20) 0.80	Possible MADE GROUND: Firm orangish brown slightly sandy slightly gravelly silty Clay with occasional cobbles and boulders		
1.50	B			42.51	(0.70) 1.50	Complete at 1.50m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit backfilled upon completion
Trial pit terminated due to potentially encountering services

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-01

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-02
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 4.90m 1.80m x 3.00m (L x W x D)	**Ground Level (mOD)** 42.46	**Client** AKM Design	**Job Number** 12205-09-22
	Location 606337.1 E 742950.2 N	**Dates** 24/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.90	ES				(0.90)	MADE GROUND: Greyish brown slightly sandy slightly gravelly silty Clay with occasional cobbles and boulders and with rare fragments of plastic		
0.50	B		Seepage(1) at 0.90m.	41.56	0.90	Very soft dark brown clayey SILT		▽1
				41.36	(0.20) 1.10	Firm to stiff grey mottled brown slightly sandy slightly gravelly silty CLAY		
1.50	B				(1.20)			
				40.16	2.30	Stiff grey slightly sandy slightly gravelly silty CLAY with occasional cobbles and boulders		
					(0.70)			
				39.46	3.00	Complete at 3.00m		

Plan

Remarks

Groundwater encountered at 0.90m BGL; Seepage
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP	12205-09-22.TP-02

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-03
Machine : 14T Tracked excavator **Method :** Trial Pit	**Dimensions** 5.10m x 1.80m x 3.00m (L x W x D)	**Ground Level (mOD)** 40.50	**Client** AKM Design	**Job Number** 12205-09-22
	Location 606177.4 E 743216.1 N	**Dates** 21/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(1.40)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT with occasional boulders		
1.40-2.10	ES		Fast Ingress(1) at 1.50m.	39.10	1.40	Very soft grey slightly gravelly clayey SILT with occasional organic fibres		▽1
					(0.70)			
2.00	B			38.40	2.10	Very soft light grey slightly gravelly clayey SILT with occasional organic fibres		
					(0.40)			
				38.00	2.50	Firm to stiff grey slightly sandy slightly gravelly silty CLAY with many cobbles and boulders		
					(0.50)			
				37.50	3.00	Complete at 3.00m		

Plan

Remarks

Groundwater encountered at 1.50m BGL; Fast Ingress
Trial pit unstable; side walls spalling
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-03

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-04
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.00m x 1.80m x 1.50m (L x W x D)	**Ground Level (mOD)** 40.41	**Client** AKM Design
	Location 606189.4 E 743255.9 N	**Dates** 21/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
			Fast Ingress(1) at 0.70m.		(0.50)	Possible MADE GROUND: Dark brown slightly gravelly clayey pseudo fibrous Peat with many cobbles and boulders		
				39.91	0.50			
					(0.30)	Possible MADE GROUND: Orangish brown slightly sandy slightly gravelly silty Clay with occasional cobbles and boulders		▽1
				39.61	0.80			
					(0.70)	Soft grey slightly sandy gravelly clayey SILT with many cobbles and boulders		
				38.91	1.50	Terminated at 1.50m		

Plan

Remarks

Groundwater encountered at 0.70m BGL; Fast Ingress
Trial pit unstable; side walls spalling
Trial pit backfilled upon completion
Trial pit terminated due to groundwater obscuring view

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-04

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-05
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.20m x 1.80m x 2.70m (L x W x D)	**Ground Level (mOD)** 40.34	**Client** AKM Design
	Location 606150.1 E 743283.1 N	**Dates** 21/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.75)	MADE GROUND: Dark brown slightly gravelly clayey pseudo fibrous Peat with rare fragments of timber and plastic		
				39.59	0.75	Very soft light grey slightly gravelly SILT with occasional cobbles and boulders		
			Fast Ingress(1) at 1.20m.		(0.55)			▽1
1.30-2.00 1.50	ES B			39.04	1.30	Very soft grey slightly sandy slightly gravelly silty CLAY with occasional cobbles and boulders		
					(0.70)			
				38.34	2.00	Very soft slightly sandy gravelly clayey SILT with many cobbles and boulders		
2.50	B				(0.70)			
				37.64	2.70	Complete at 2.70m		

Plan

Remarks

Groundwater encountered at 1.20m BGL; Fast Ingress
Trial pit unstable; side walls spalling
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-05

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-06
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.40m x 1.80m x 3.40m (L x W x D)	**Ground Level (mOD)** 40.15	**Client** AKM Design	**Job Number** 12205-09-22
	Location 606195.3 E 743316.4 N	**Dates** 21/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(1.00)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT		
1.00-2.70	ES		Fast Ingress(1) at 1.20m.	39.15	1.00	Very soft light grey clayey SILT with organic fibres		▽1
					(1.70)			
				37.45	2.70	Very soft slightly sandy slightly gravelly silty CLAY with occasional cobbles and boulders		
					(0.70)			
3.40	B			36.75	3.40	Complete at 3.40m		

Plan

Remarks

Groundwater encountered at 1.20m BGL; Fast Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-06

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-07
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.50m x 1.80m x 3.00m (L x W x D)	**Ground Level (mOD)** 40.32	**Client** AKM Design	**Job Number** 12205-09-22
	Location 606082.8 E 743262.8 N	**Dates** 20/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(1.10)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT		
0.70	B		Medium Ingress(1) at 0.70m.					▽1
1.10-2.30	ES		Medium Ingress(2) at 1.30m.	39.22	1.10	Very soft light grey clayey SILT with organic fibres		▽2
1.70	B				(1.20)			
				38.02	2.30	Firm grey silty CLAY with occasional cobbles and rare boulders		
2.70	B				(0.70)			
				37.32	3.00	Complete at 3.00m		

Plan

Remarks

Groundwater encountered at 0.70m BGL and 1.30m BGL; Medium Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-07

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-08
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.00m x 1.80m x 1.70m (L x W x D)	**Ground Level (mOD)** 40.46	**Client** AKM Design
	Location 606046.8 E 743238.1 N	**Dates** 20/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.75)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT		
				39.71	0.75			
			Fast Ingress(1) at 0.80m.		(0.35)	Soft to firm orangish brown slightly sandy gravelly silty CLAY with many cobbles and boulders		▽1
				39.36	1.10			
					(0.30)	Soft to firm grey slightly sandy slightly gravelly clayey SILT with occasional cobbles and rare boulders		
				39.06	1.40			
1.50	B				(0.30)	Firm grey slightly sandy slightly gravelly clayey SILT with occasional cobbles and rare boulders		
				38.76	1.70			
						Terminated at 1.70m		

Plan

Remarks

Groundwater encountered 0.80m BGL; Fast Ingress
Trial pit unstable; side walls collapsed
Trial pit backfilled upon completion
Trial pit terminated due to groundwater obscuring view

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-08

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-09
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.10m x 1.80m x 2.80m (L x W x D)	**Ground Level (mOD)** 40.68	**Client** AKM Design
	Location 606102.1 E 743208.5 N	**Dates** 20/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	Peaty TOPSOIL		
				40.48	0.20			
					(0.20)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT		
				40.28	0.40			
					(0.80)	Soft to firm grey mottled brown slightly sandy slightly gravelly clayey SILT with occasional cobbles and boulders		
			Medium Ingress(1) at 1.00m.					▽1
				39.48	1.20			
1.50	B					Firm grey slightly sandy gravelly silty CLAY with many cobbles and boulders		
					(1.10)			
				38.38	2.30			
2.50	B					Medium dense grey slightly gravelly clayey silty fine to coarse SAND with many cobbles and boulders		
					(0.50)			
				37.88	2.80			
						Complete at 2.80m		

Plan

Remarks

Groundwaer encountered at 1.00m BGL; Medium Ingress
Trial pit unstable; side walls collapsed
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-09

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-10
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.00m x 1.80m x 2.70m (L x W x D)	**Ground Level (mOD)** 42.26	**Client** AKM Design
	Location 606114.4 E 743159.7 N	**Dates** 20/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	Peaty TOPSOIL		
0.20-0.80	ES			42.06	0.20	Possible MADE GROUND: Grey mottled brown sandy slightly gravelly silty Clay		
0.50	B				(0.60)			
				41.46	0.80	Firm grey mottled brown slightly sandy slightly gravelly clayey SILT with occasional cobbles and boulders		
					(0.70)			
				40.76	1.50	Firm greyish brown slightly sandy gravelly silty CLAY with many cobbles and boulders		
2.00	B				(1.20)			
				39.56	2.70	Complete at 2.70m		

Plan

Remarks

No groundwater encountered
Trial pit unstable; side walls spalling
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-10

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-11
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.40m x 1.80m x 2.70m (L x W x D)	**Ground Level (mOD)** 41.00	**Client** AKM Design
	Location 606077.3 E 743108 N	**Dates** 20/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	Peaty TOPSOIL		
0.20-0.50	ES			40.80	0.20	MADE GROUND: Brown slightly sandy gravelly silty Clay. (Reworked)		
					(0.30)			
				40.50	0.50	Possible MADE GROUND: Dark brown slightly gravelly clayey pseudo fibrous PEAT with occasional fragments of wood		
					(0.30)			
			Fast Ingress(1) at 0.80m.	40.20	0.80	Very soft grey silty CLAY with occasional cobbles and rare boulders		▽1
1.00	B							
					(0.90)			
				39.30	1.70	Firm grey silty CLAY with occasional cobbles and rare boulders		
					(0.65)			
				38.65	2.35	Medium dense grey slightly sandy silty clayey subangular to subrounded fine to coarse GRAVEL		
2.50	B				(0.35)			
				38.30	2.70	Complete at 2.70m		

Plan

Remarks

Groundwater encountered at 0.80m BGL; Fast Ingress
Trial pit unstable; side walls spalling
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-11

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-12
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.00m x 1.80m x 3.00m (L x W x D)	**Ground Level (mOD)** 43.29	**Client** AKM Design
	Location 606123.1 E 743107.2 N	**Dates** 20/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	Peaty TOPSOIL		
0.20-1.20	ES			43.09	0.20	MADE GROUND: Brown slightly sandy slightly gravelly silty Clay with rare fragments of plastic.		
0.70	B				(1.00)			
				42.09	1.20	Firm brown slightly sandy slightly gravelly silty CLAY with occasional cobbles and boulders		
					(0.60)			
				41.49	1.80	Stiff brown slightly sandy gravelly silty CLAY with many cobbles and boulders		
2.50	B				(1.20)			
				40.29	3.00	Complete at 3.00m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-12

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-13
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.50m x 1.80m x 2.60 (L x W x D)	**Ground Level (mOD)** 40.22	**Client** AKM Design
	Location 605986.4 E 743218.6 N	**Dates** 20/10/2022	**Engineer**

Job Number	Sheet
12205-09-22	1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.60)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT with rootlets		
			Fast Ingress(1) at 0.60m.	39.62	0.60			▽1
					(0.15)	Very soft orangish brown slightly sandy gravelly silty CLAY with many cobbles and boulders		
0.75-2.00	ES			39.47	0.75			
1.00	B					Very soft grey clayey SILT with rare cobbles		
					(1.25)			
				38.22	2.00			
						Very soft slightly sandy gravelly clayey SILT with many cobbles and boulders		
2.30	B				(0.60)			
				37.62	2.60			
						Complete at 2.60m		

Plan

Remarks

Groundwater encountered at 0.60m BGL; Fast Ingress
Trial pit unstable; side walls spalling
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-13

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-14
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.40m x 1.80m 3.00m (L x W x D)	**Ground Level (mOD)** 41.82	**Client** AKM Design	**Job Number** 12205-09-22
	Location 605994.6 E 743178.1 N	**Dates** 20/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.40)	TOPSOIL		
0.50	B			41.42	0.40	Firm grey mottled brown slightly sandy slightly gravelly silty CLAY with occasional cobbles and boulders		
					(0.90)			
1.50	B			40.52	1.30	Firm grey mottled brown slightly sandy gravelly silty CLAY with many cobbles and boulders		
					(1.20)			
				39.32	2.50	Firm to stiff grey mottled brown slightly sandy gravelly silty CLAY with many cobbles and boulders		
					(0.50)			
				38.82	3.00	Complete at 3.00m		

Plan

Remarks

No groundwater encountered
Trial pit unstable; side walls spalling
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-14

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-15
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.50m x 1.80m x 3.00m (L x W x D)	**Ground Level (mOD)** 41.92	**Client** AKM Design	**Job Number** 12205-09-22
	Location 606003.6 E 743127.9 N	**Dates** 20/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	TOPSOIL		
0.30-0.70	ES			41.62	0.30	Soft greyish brown slightly sandy gravelly silty CLAY with occasional cobbles and rare boulders		
0.50	B				(0.40)			
				41.22	0.70	Firm grey mottled brown slightly sandy gravelly clayey SILT with occasional cobbles and boulders		
					(0.80)			
				40.42	1.50	Firm grey mottled brown slightly sandy gravelly clayey SILT with many cobbles and boulders		
					(0.70)			
				39.72	2.20	Firm greyish brown slightly sandy gravelly silty CLAY with many cobbles and boulders		
					(0.80)			
3.00	B			38.92	3.00	Complete at 3.00m		

Plan

Remarks

No groundwater encountered
Trial pit unstable; side walls spalling
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-15

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-16
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.30m x 1.80m x 2.40m (L x W x D)	**Ground Level (mOD)** 40.43	**Client** AKM Design
	Location 606011.3 E 743084.5 N	**Dates** 20/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.50)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT		
			Fast Ingress(1) at 0.50m.	39.93	0.50			▽1
					(0.70)	Very soft light grey slightly sandy slightly gravelly silty CLAY with occasional cobbles		
				39.23	1.20			
1.70	B				(1.00)	Very soft grey silty CLAY with occasional cobbles		
				38.23	2.20			
					(0.20)	Firm grey slightly sandy slightly gravelly silty CLAY with many cobbles and boulders		
				38.03	2.40			
						Terminated at 2.40m		

Plan

Remarks

Groundwater encountered at 0.50m BGL; Fast Ingress
Trial pit unstable; side walls collapsed
Trial pit backfilled upon completion
Terminated due to trial pit collapse

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-16

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-17
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.30m x 1.80m x 3.00m (L x W x D)	**Ground Level (mOD)** 41.84	**Client** AKM Design	**Job Number** 12205-09-22
	Location 605939.4 E 743079.5 N	**Dates** 20/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	TOPSOIL		
0.20-1.40	ES			41.64	0.20	Firm grey mottled brown slightly sandy slightly gravelly silty CLAY with occasional cobbles		
0.50	B				(1.20)			
				40.44	1.40	Firm to stiff grey mottled brown slightly sandy slightly gravelly silty CLAY with many cobbles and occasional boulders		
					(0.80)			
				39.64	2.20	Firm to stiff grey slightly silty sandy gravelly CLAY with many cobbles and boulders		
2.50	B				(0.80)	Multiple sand lens encountered between 2.20m to 3.00m BGL		
			Seepage(1) at 3.00m.	38.84	3.00	Complete at 3.00m		▽1

Plan

Remarks

Groundwater encountered at 3.00m BGL; Seepage
Trial pit unstable; side walls spalling
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-17

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-18
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.00m x 1.80m x 3.00m (L x W x D)	**Ground Level (mOD)** 43.08	**Client** AKM Design	**Job Number** 12205-09-22
	Location 605937.1 E 743141.4 N	**Dates** 20/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	TOPSOIL		
				42.88	0.20	Soft brown slightly sandy slightly gravelly CLAY		
					(0.30)			
0.50-1.10	ES			42.58	0.50	Medium dense greyish brown slightly clayey gravelly silty fine to coarse SAND with occasional cobbles and boulders		
					(0.60)			
1.00	B			41.98	1.10	Firm to stiff grey mottled brown slightly sandy slightly gravelly silty CLAY with many cobbles and boulders		
					(0.60)			
				41.38	1.70	Stiff grey sandy gravelly slightly clayey SILT with many cobbles and boulders		
2.00	B							
					(1.30)			
				40.08	3.00	Complete at 3.00m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-18

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** TP-19
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 5.50m x 1.80m x 2.70m (L x W x D)	**Ground Level (mOD)** 40.61	**Client** AKM Design
	Location 605873.7 E 743099.5 N	**Dates** 20/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.70)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT with occasional fragments of wood		
0.70-1.40	ES		Seepage(1) at 0.60m.	39.91	0.70	Very soft light grey slightly sandy slightly gravelly clayey SILT with many cobbles and boulders		▽1
1.00	B				(0.70)			
			Fast Ingress(2) at 1.50m.	39.21	1.40	Soft dark grey slightly sandy slightly gravelly clayey SILT with many cobbles and boulders		▽2
					(0.50)			
2.00	B			38.71	1.90	Stiff to very stiff dark grey slightly sandy slightly gravelly clayey SILT with many cobbles and boulders		
					(0.40)			
				38.31	2.30	Medium dense dark grey slightly sandy slightly clayey slightly silty subangular to subrounded fine to coarse GRAVEL with many cobbles and boulders		
					(0.40)			
				37.91	2.70	Complete at 2.70m		

Plan

Remarks

Groundwater encountered at 0.60m and 1.50m BGL; Seepage and Fast Ingress
Trial pit unstable; side walls spalling
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.TP-19

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-01

TP-01

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-01

TP-01

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-01

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-02

TP-02

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-02

TP-02

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-02

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-03

TP-03

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-03

TP-03

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-03

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-04

TP-04

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-04

TP-04

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-04

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-05

TP-05

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-05

TP-05

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-05

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-06

TP-06

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-06

TP-06

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-06

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-07

TP-07

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-07

TP-07

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-07

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-08

TP-08

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-08

TP-08

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-08

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-09

TP-09

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-09

TP-09

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-09

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-10

TP-10

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-10

TP-10

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-10

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-11

TP-11

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-11

TP-11

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-11

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-12

TP-12

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-12

TP-12

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-12

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-13

TP-13

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-13

TP-13

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-13

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-14

TP-14

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-14

TP-14

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-14

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-15

TP-15

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-15

TP-15

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-15

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-16

TP-16

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-16

TP-16

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-16

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-17

TP-17

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-17

TP-17

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-17

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-18

TP-18

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-18

TP-18

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-18

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-19

TP-19

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-19

TP-19

Cornamaddy Athlone Northern Site – Trial Pit Photographs

TP-19

APPENDIX 3 – Soakaway Testing Records

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

Catherinestown House,
Hazelhatch Road,
Newcastle,
Co. Dublin.
D22 YD52

Tel: 01 601 9175 / 5176
Email: info@gii.ie
Web: www.gii.ie

IT01

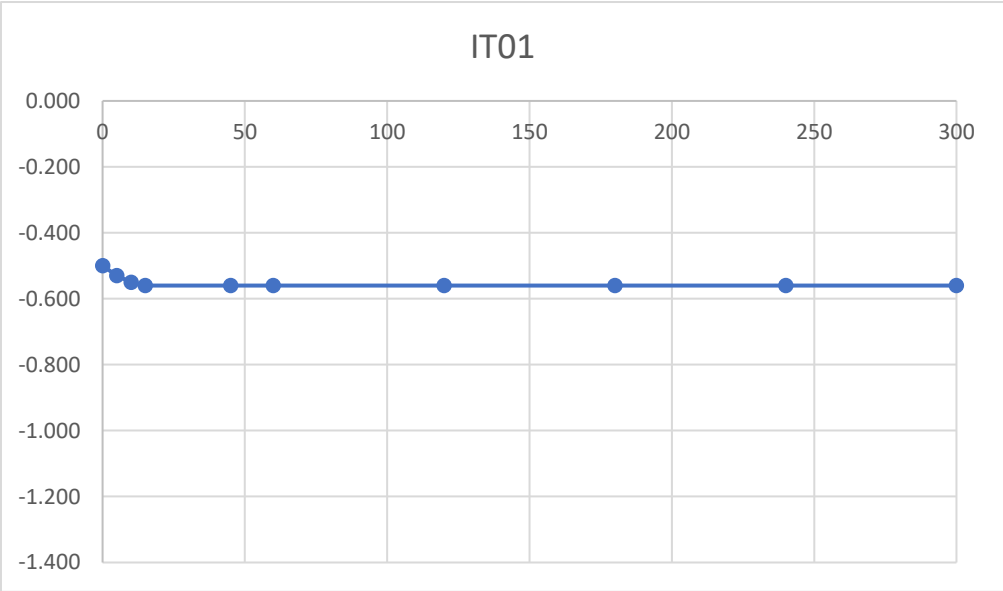
Soakaway Test to BRE Digest 365

Trial Pit Dimensions: 2.50m x 1.80m x 1.50m (L x W x D)

Date	Time	Water level (m bgl)
21/10/2022	0	-0.500
21/10/2022	5	-0.530
21/10/2022	10	-0.550
21/10/2022	15	-0.560
21/10/2022	45	-0.560
21/10/2022	60	-0.560
21/10/2022	120	-0.560
21/10/2022	180	-0.560
21/10/2022	240	-0.560
21/10/2022	300	-0.560

***Soakaway - Pit Backfilled**

Start Depth	Depth of Pit	Difference	75% Full	25% Full
0.500	1.500	1.000	0.750	1.250



GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

Cotherinestown House,
Hazelhatch Road,
Newcastle,
Co. Dublin,
D22 YD52

Tel: 01 601 5175 / 5176
Email: info@gii.ie
Web: www.gii.ie

IT02

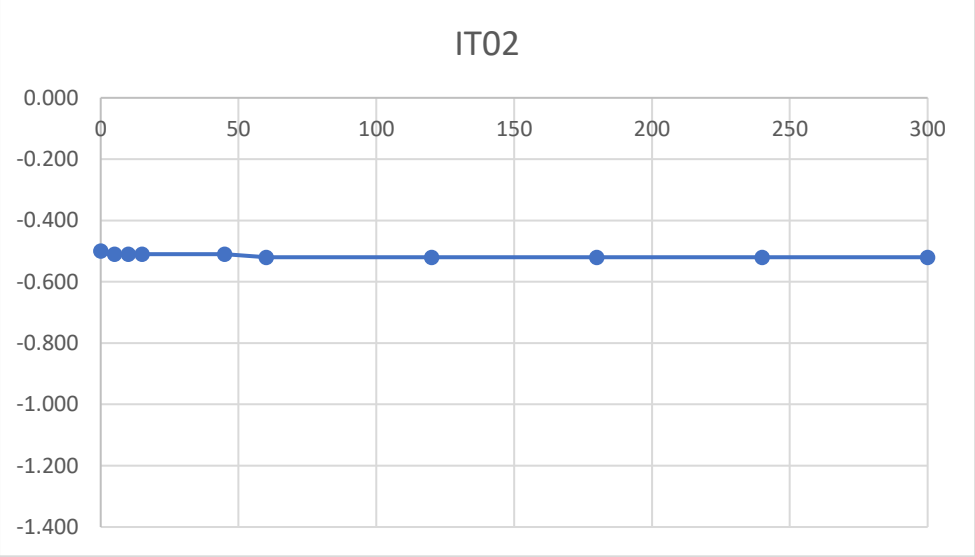
Soakaway Test to BRE Digest 365

Trial Pit Dimensions: 2.60m x 1.80m x 1.60m (L x W x D)

Date	Time	Water level (m bgl)
21/10/2022	0	-0.500
21/10/2022	5	-0.510
21/10/2022	10	-0.510
21/10/2022	15	-0.510
21/10/2022	45	-0.510
21/10/2022	60	-0.520
21/10/2022	120	-0.520
21/10/2022	180	-0.520
21/10/2022	240	-0.520
21/10/2022	300	-0.520

***Soakaway - Pit Backfilled**

Start Depth	Depth of Pit	Difference	75% Full	25% Full
0.500	1.600	1.100	0.775	1.325



GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

Catherinestown House,
Hazelhatch Road,
Newcastle,
Co. Dublin,
D22 YD52

Tel: 01 601 5176 / 5176
Email: info@gii.ie
Web: www.gii.ie

IT03

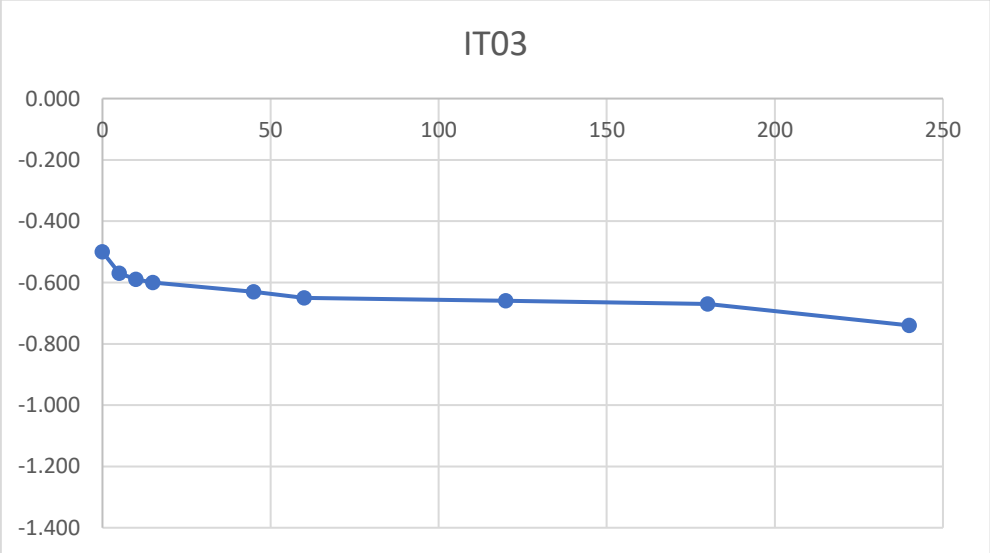
Soakaway Test to BRE Digest 365

Trial Pit Dimensions: 2.40m x 1.80m x 1.40m (L x W x D)

Date	Time	Water level (m bgl)
21/10/2022	0	-0.500
21/10/2022	5	-0.570
21/10/2022	10	-0.590
21/10/2022	15	-0.600
21/10/2022	45	-0.630
21/10/2022	60	-0.650
21/10/2022	120	-0.660
21/10/2022	180	-0.670
21/10/2022	240	-0.740
21/10/2022	300	-0.780

***Soakaway - Pit Backfilled**

Start Depth	Depth of Pit	Difference	75% Full	25% Full
0.500	1.400	0.900	0.725	1.175



Cornamaddy Athlone Northern Site – Soakaway Photographs

IT-01

IT-01

Cornamaddy Athlone Northern Site – Soakaway Photographs

IT-01

IT-01

Cornamaddy Athlone Northern Site – Soakaway Photographs

IT-01

IT-01

Cornamaddy Athlone Northern Site – Soakaway Photographs

IT-02

IT-02

Cornamaddy Athlone Northern Site – Soakaway Photographs

IT-02

IT-02

Cornamaddy Athlone Northern Site – Soakaway Photographs

IT-02

IT-02

Cornamaddy Athlone Northern Site – Soakaway Photographs

IT-03

IT-03

Cornamaddy Athlone Northern Site – Soakaway Photographs

IT-03

IT-03

Cornamaddy Athlone Northern Site – Soakaway Photographs

IT-03

IT-03

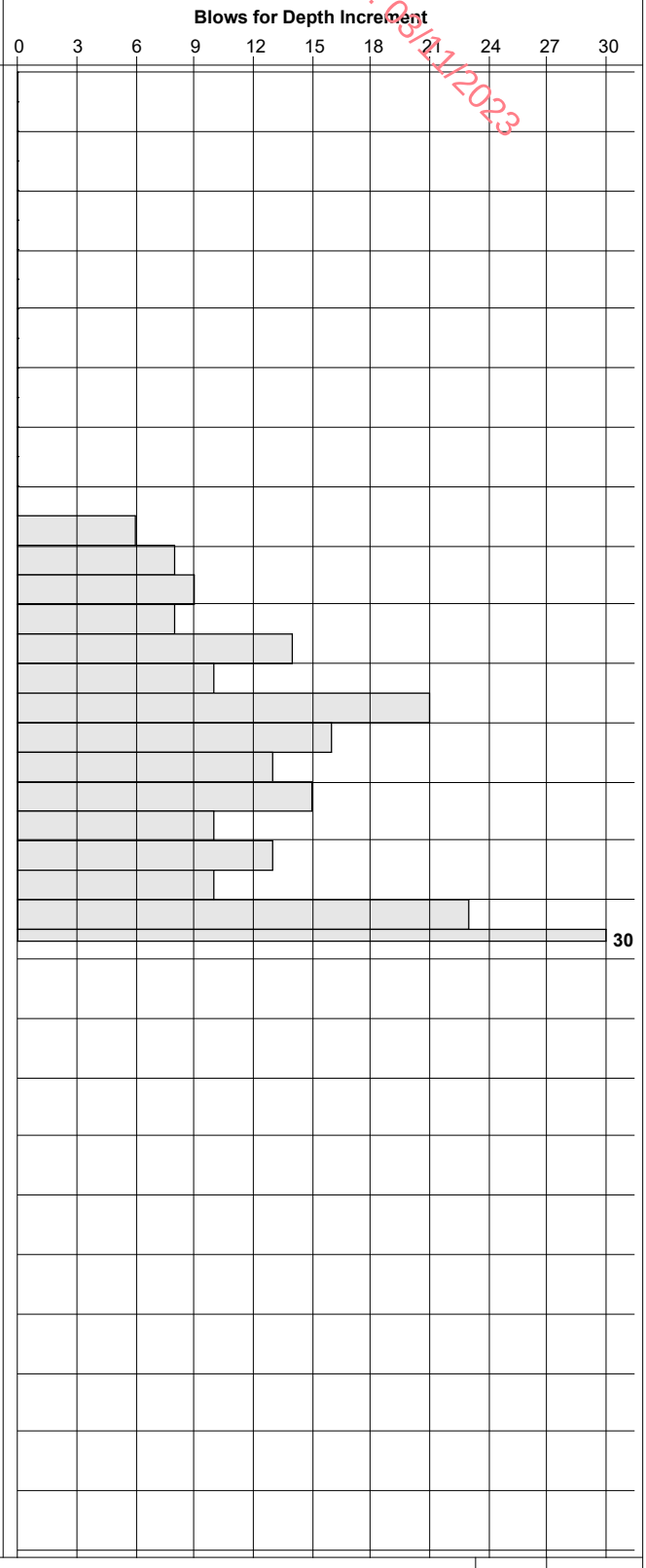
APPENDIX 4 – Dynamic Probe Records

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-01

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.20	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606180.2 E 743330.8 N	21/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.20	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.70	0.50
0.60-0.70	0			
0.70-0.80	0			
0.80-0.90	0			
0.90-1.00	0			
1.00-1.10	0		39.20	1.00
1.10-1.20	0			
1.20-1.30	0			
1.30-1.40	0			
1.40-1.50	0			
1.50-1.60	6		38.70	1.50
1.60-1.70	8			
1.70-1.80	9			
1.80-1.90	8			
1.90-2.00	14			
2.00-2.10	10		38.20	2.00
2.10-2.20	21			
2.20-2.30	16			
2.30-2.40	13			
2.40-2.50	15			
2.50-2.60	10		37.70	2.50
2.60-2.70	13			
2.70-2.80	10			
2.80-2.90	23			
2.90-2.94	30		37.20	3.00
			36.70	3.50
			36.20	4.00
			35.70	4.50
			35.20	5.00



Remarks
Refusal at 2.94m BGL

Scale (approx)	Logged By
1:25	CMP

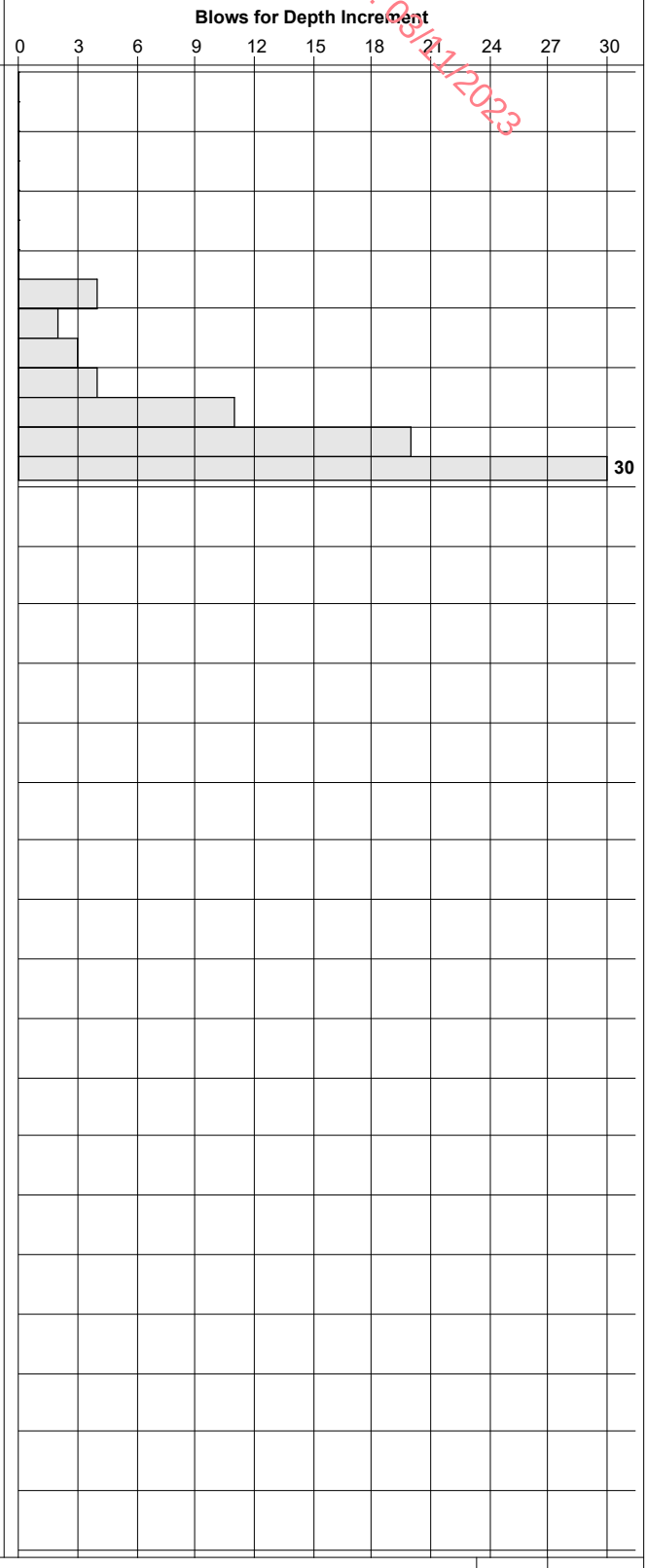
Figure No.
12205-09-22.DP-01

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-02

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.16	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606203.1 E 743324.5 N	21/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.16	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.66	0.50
0.60-0.70	0			
0.70-0.80	4			
0.80-0.90	2			
0.90-1.00	3			
1.00-1.10	4		39.16	1.00
1.10-1.20	11			
1.20-1.30	20			
1.30-1.38	30			
			38.66	1.50
			38.16	2.00
			37.66	2.50
			37.16	3.00
			36.66	3.50
			36.16	4.00
			35.66	4.50
			35.16	5.00



Remarks
Refusal at 1.38m BGL

Scale (approx)	Logged By
1:25	CMP

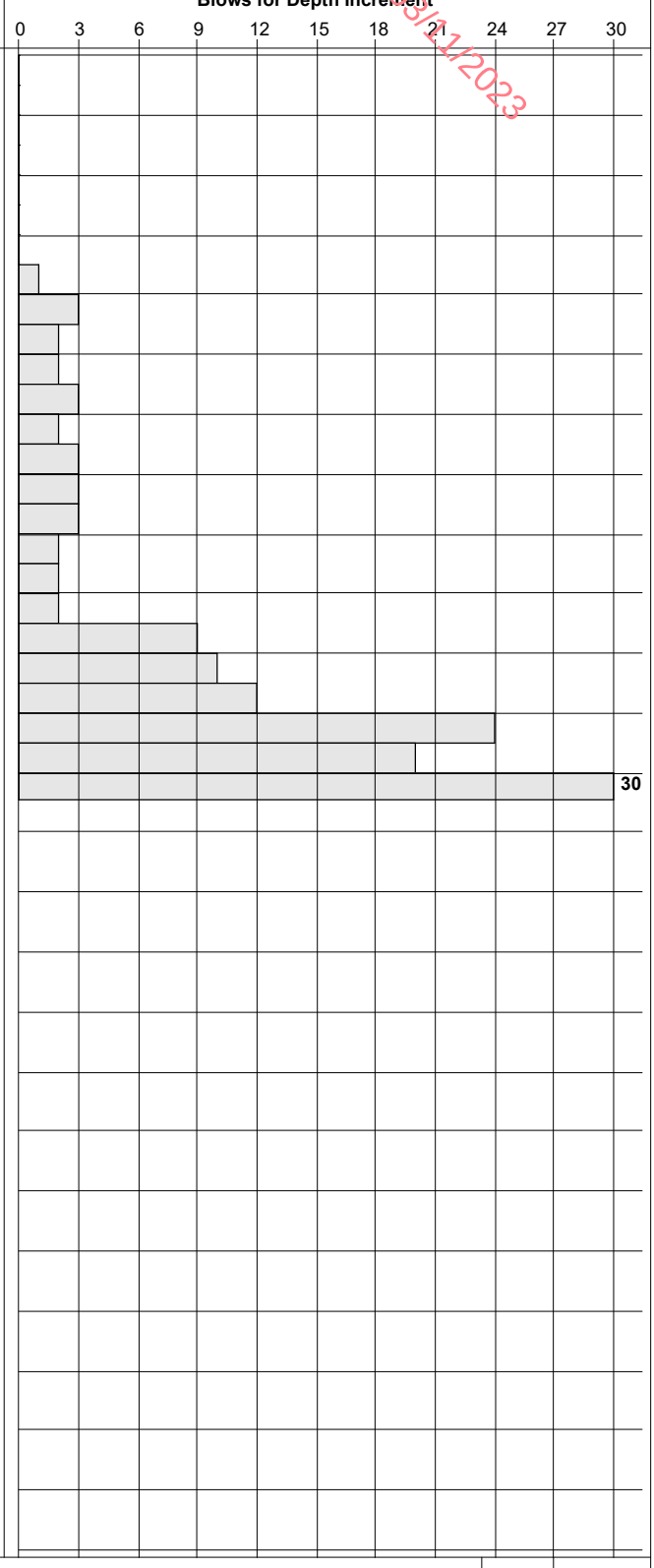
Figure No.
12205-09-22.DP-02

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-03

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.43	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606181 E 743300.3 N	21/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.43	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.93	0.50
0.60-0.70	0			
0.70-0.80	1			
0.80-0.90	3			
0.90-1.00	2			
1.00-1.10	2		39.43	1.00
1.10-1.20	3			
1.20-1.30	2			
1.30-1.40	3			
1.40-1.50	3			
1.50-1.60	3		38.93	1.50
1.60-1.70	2			
1.70-1.80	2			
1.80-1.90	2			
1.90-2.00	9			
2.00-2.10	10		38.43	2.00
2.10-2.20	12			
2.20-2.30	24			
2.30-2.40	20			
2.40-2.49	30		37.93	2.50
			37.43	3.00
			36.93	3.50
			36.43	4.00
			35.93	4.50
			35.43	5.00



Remarks
Refusal at 2.49m BGL

Scale (approx)	Logged By
1:25	CMP

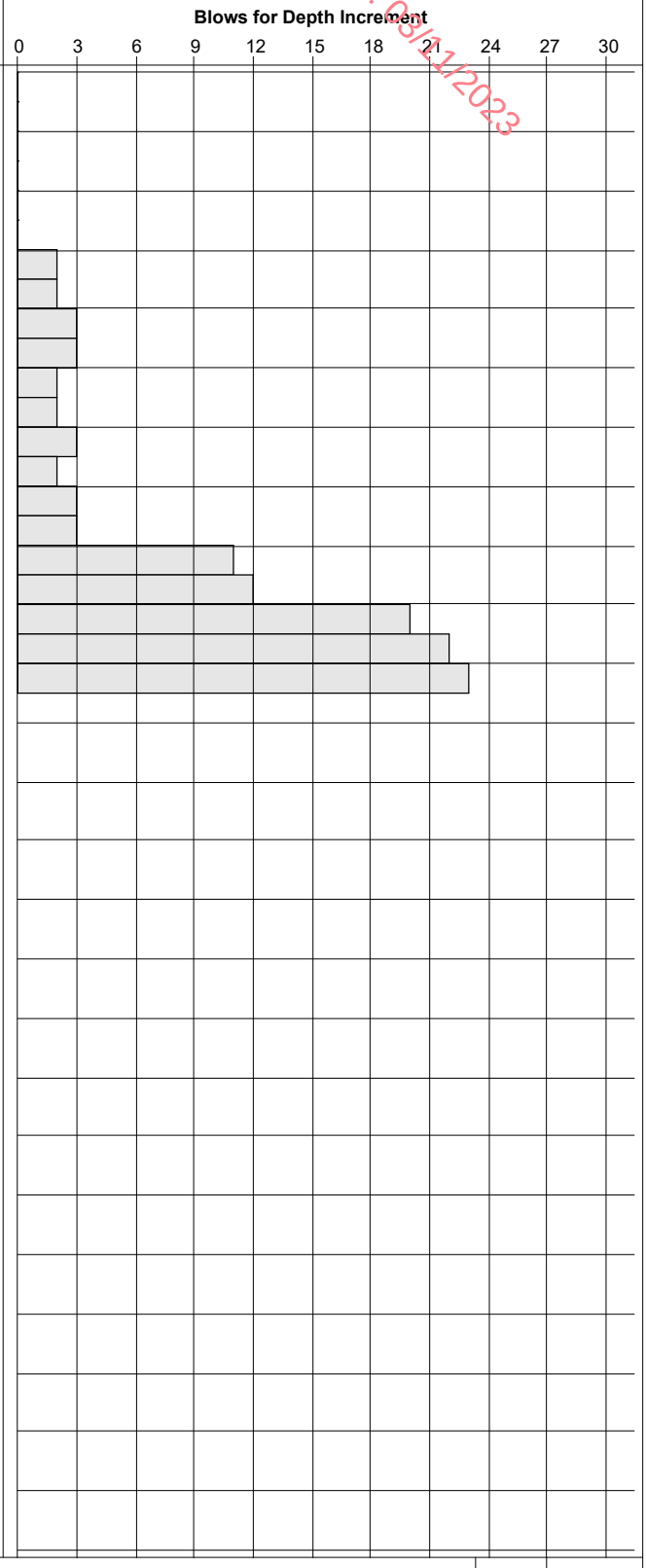
Figure No.
12205-09-22.DP-03

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-04

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.39	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606202.3 E 743291.1 N	21/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.39	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.89	0.50
0.60-0.70	2			
0.70-0.80	2			
0.80-0.90	3			
0.90-1.00	3			
1.00-1.10	2		39.39	1.00
1.10-1.20	2			
1.20-1.30	3			
1.30-1.40	2			
1.40-1.50	3			
1.50-1.60	3		38.89	1.50
1.60-1.70	11			
1.70-1.80	12			
1.80-1.90	20			
1.90-2.00	22			
2.00-2.10	23		38.39	2.00
			37.89	2.50
			37.39	3.00
			36.89	3.50
			36.39	4.00
			35.89	4.50
			35.39	5.00



Remarks
Refusal at 2.10m BGL

Scale (approx)	Logged By
1:25	CMP

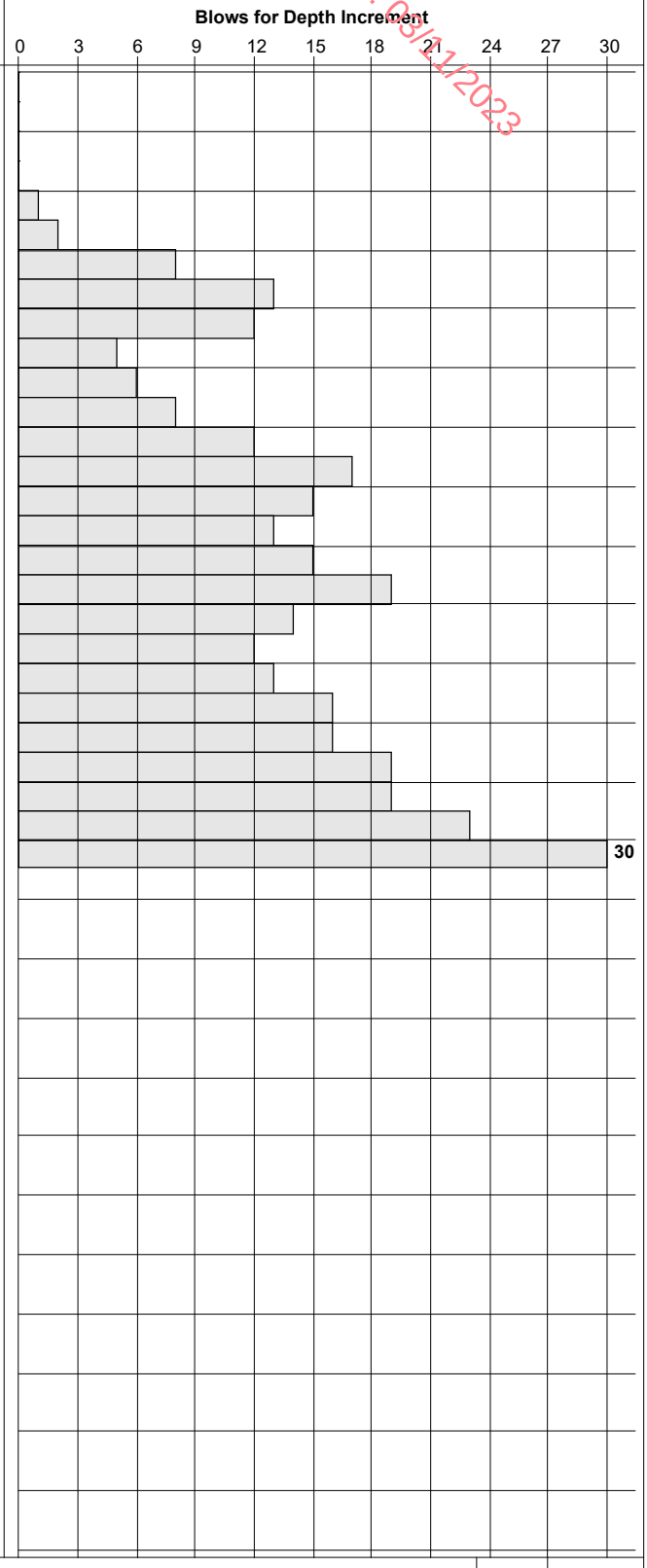
Figure No.
12205-09-22.DP-04

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-05

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.49	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606181.7 E 743269.3 N	21/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.49	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	1			
0.50-0.60	2		39.99	0.50
0.60-0.70	8			
0.70-0.80	13			
0.80-0.90	12			
0.90-1.00	5			
1.00-1.10	6		39.49	1.00
1.10-1.20	8			
1.20-1.30	12			
1.30-1.40	17			
1.40-1.50	15			
1.50-1.60	13		38.99	1.50
1.60-1.70	15			
1.70-1.80	19			
1.80-1.90	14			
1.90-2.00	12			
2.00-2.10	13		38.49	2.00
2.10-2.20	16			
2.20-2.30	16			
2.30-2.40	19			
2.40-2.50	19			
2.50-2.60	23		37.99	2.50
2.60-2.69	30			
			37.49	3.00
			36.99	3.50
			36.49	4.00
			35.99	4.50
			35.49	5.00



Remarks
Refusal at 2.69m BGL

Scale (approx)	Logged By
1:25	CMP

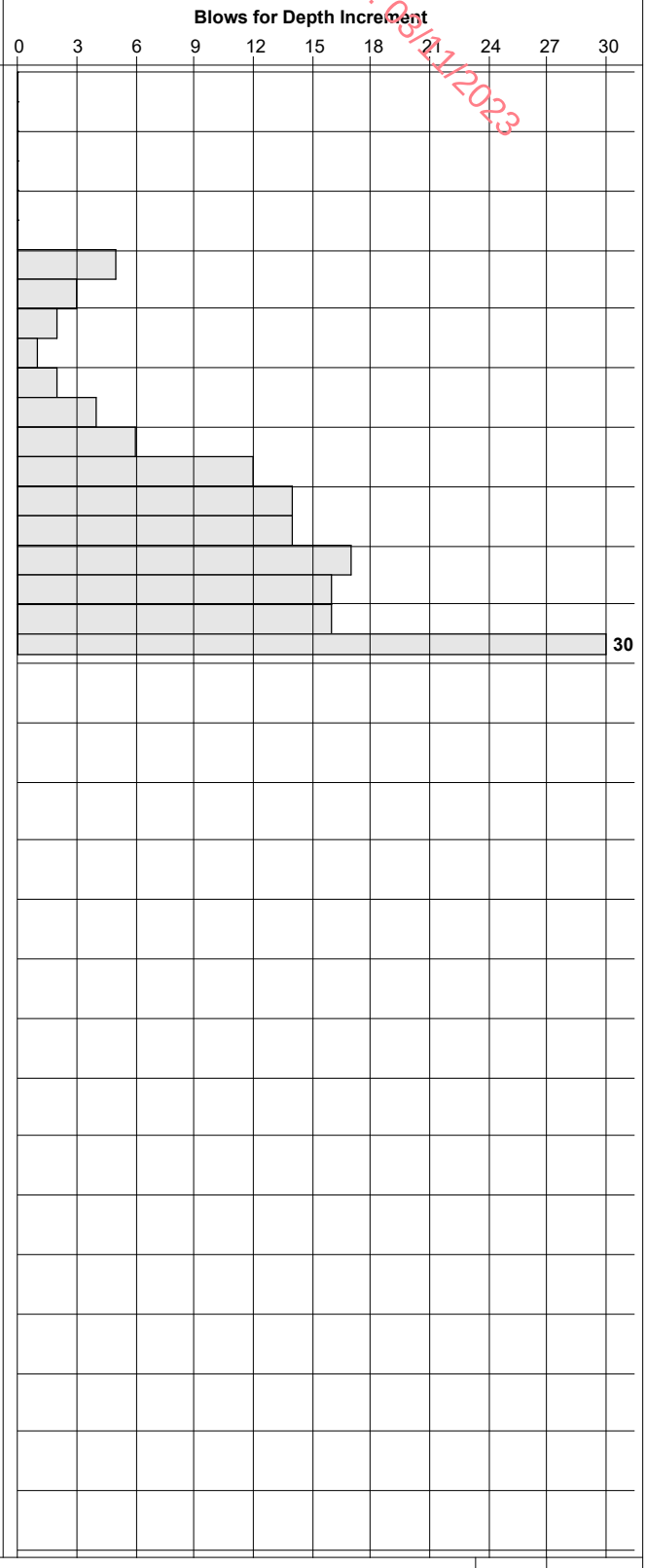
Figure No.
12205-09-22.DP-05

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-06

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.39	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606203.2 E 743267.1 N	21/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.39	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.89	0.50
0.60-0.70	5			
0.70-0.80	3			
0.80-0.90	2			
0.90-1.00	1			
1.00-1.10	2		39.39	1.00
1.10-1.20	4			
1.20-1.30	6			
1.30-1.40	12			
1.40-1.50	14			
1.50-1.60	14		38.89	1.50
1.60-1.70	17			
1.70-1.80	16			
1.80-1.90	16			
1.90-1.97	30		38.39	2.00
			37.89	2.50
			37.39	3.00
			36.89	3.50
			36.39	4.00
			35.89	4.50
			35.39	5.00



Remarks
Refusal at 1.97m BGL

Scale (approx)	Logged By
1:25	CMP

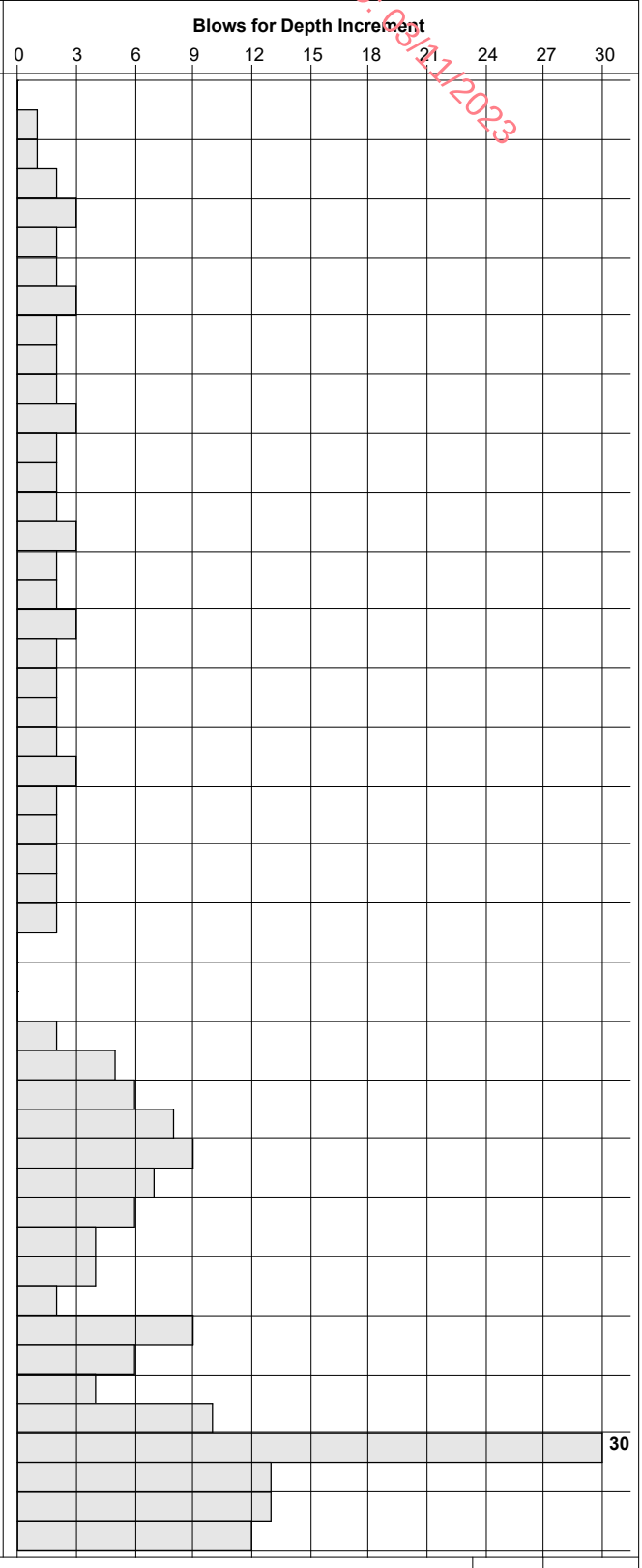
Figure No.
12205-09-22.DP-06

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-07

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.15	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606114 E 743286.4 N	19/10/2022		1/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.15	0.00
0.10-0.20	1			
0.20-0.30	1			
0.30-0.40	2			
0.40-0.50	3			
0.50-0.60	2		39.65	0.50
0.60-0.70	2			
0.70-0.80	3			
0.80-0.90	2			
0.90-1.00	2			
1.00-1.10	2		39.15	1.00
1.10-1.20	3			
1.20-1.30	2			
1.30-1.40	2			
1.40-1.50	2			
1.50-1.60	3		38.65	1.50
1.60-1.70	2			
1.70-1.80	2			
1.80-1.90	3			
1.90-2.00	2			
2.00-2.10	2		38.15	2.00
2.10-2.20	2			
2.20-2.30	2			
2.30-2.40	3			
2.40-2.50	2			
2.50-2.60	2		37.65	2.50
2.60-2.70	2			
2.70-2.80	2			
2.80-2.90	2			
2.90-3.00	0			
3.00-3.10	0		37.15	3.00
3.10-3.20	0			
3.20-3.30	2			
3.30-3.40	5			
3.40-3.50	6			
3.50-3.60	8		36.65	3.50
3.60-3.70	9			
3.70-3.80	7			
3.80-3.90	6			
3.90-4.00	4			
4.00-4.10	4		36.15	4.00
4.10-4.20	2			
4.20-4.30	9			
4.30-4.40	6			
4.40-4.50	4			
4.50-4.60	10		35.65	4.50
4.60-4.70	30			
4.70-4.80	13			
4.80-4.90	13			
4.90-5.00	12		35.15	5.00



Remarks
Refusal at 6.68m BGL

Scale (approx)	Logged By
1:25	CMP

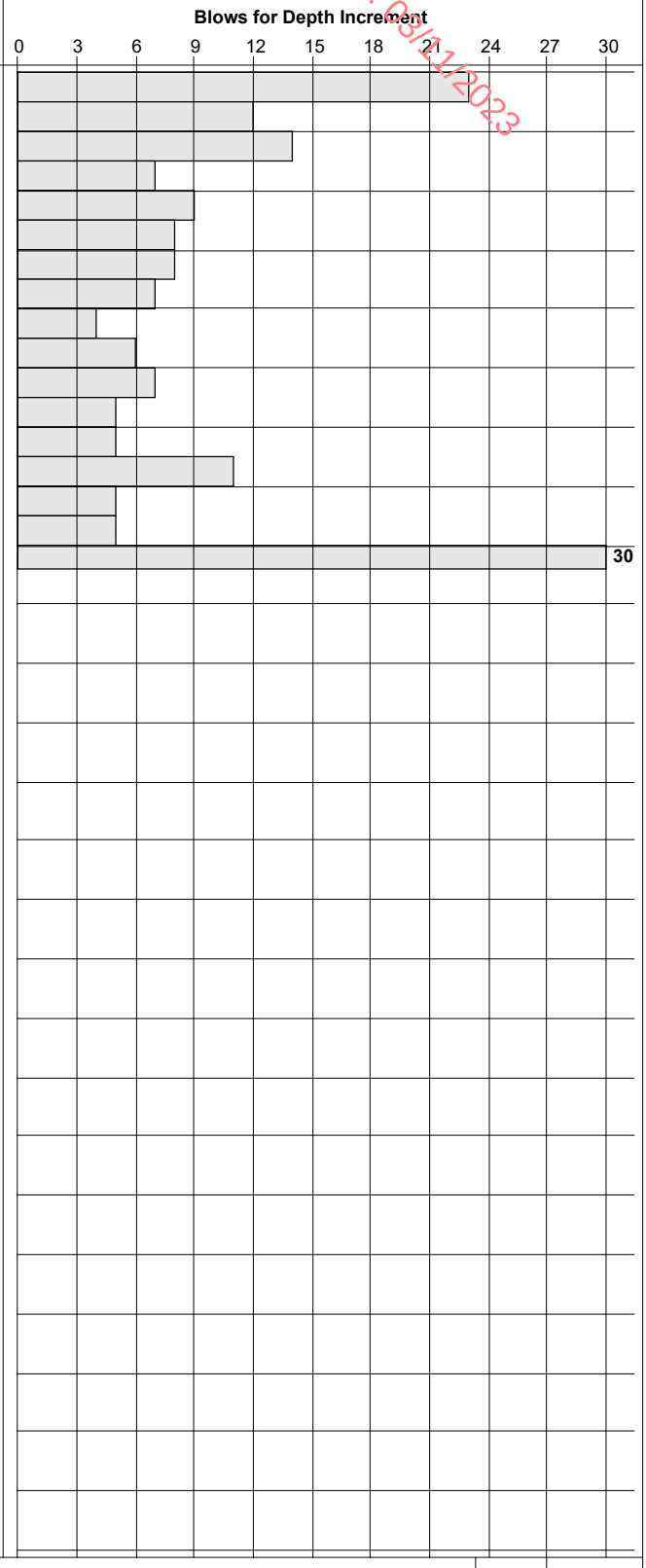
Figure No.
12205-09-22.DP-07

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-07

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.15	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606114 E 743286.4 N	19/10/2022		2/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
5.00-5.10	23		35.15	5.00
5.10-5.20	12			
5.20-5.30	14			
5.30-5.40	7			
5.40-5.50	9			
5.50-5.60	8		34.65	5.50
5.60-5.70	8			
5.70-5.80	7			
5.80-5.90	4			
5.90-6.00	6			
6.00-6.10	7		34.15	6.00
6.10-6.20	5			
6.20-6.30	5			
6.30-6.40	11			
6.40-6.50	5			
6.50-6.60	5		33.65	6.50
6.60-6.68	30			
			33.15	7.00
			32.65	7.50
			32.15	8.00
			31.65	8.50
			31.15	9.00
			30.65	9.50
			30.15	10.00



Remarks

Scale (approx)	Logged By
1:25	CMP

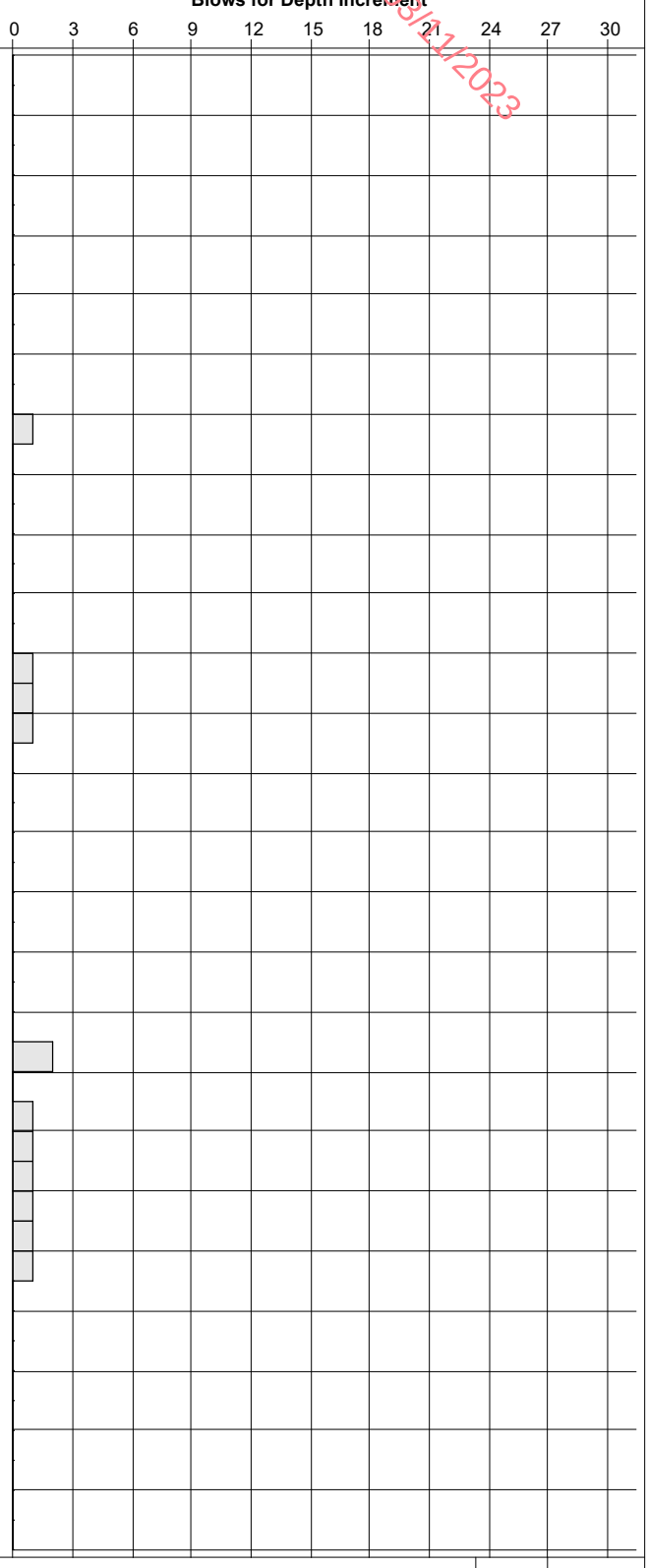
Figure No.
12205-09-22.DP-07

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-08

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.34	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606149.8 E 743260.5 N	21/10/2022		1/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.34	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.84	0.50
0.60-0.70	0			
0.70-0.80	0			
0.80-0.90	0			
0.90-1.00	0			
1.00-1.10	0		39.34	1.00
1.10-1.20	0			
1.20-1.30	1			
1.30-1.40	0			
1.40-1.50	0			
1.50-1.60	0		38.84	1.50
1.60-1.70	0			
1.70-1.80	0			
1.80-1.90	0			
1.90-2.00	0			
2.00-2.10	1		38.34	2.00
2.10-2.20	1			
2.20-2.30	1			
2.30-2.40	0			
2.40-2.50	0			
2.50-2.60	0		37.84	2.50
2.60-2.70	0			
2.70-2.80	0			
2.80-2.90	0			
2.90-3.00	0			
3.00-3.10	0		37.34	3.00
3.10-3.20	0			
3.20-3.30	0			
3.30-3.40	2			
3.40-3.50	0			
3.50-3.60	1		36.84	3.50
3.60-3.70	1			
3.70-3.80	1			
3.80-3.90	1			
3.90-4.00	1			
4.00-4.10	1		36.34	4.00
4.10-4.20	0			
4.20-4.30	0			
4.30-4.40	0			
4.40-4.50	0			
4.50-4.60	0		35.84	4.50
4.60-4.70	0			
4.70-4.80	0			
4.80-4.90	0			
4.90-5.00	0		35.34	5.00



Remarks
Refusal at 6.97m BGL

Scale (approx)	Logged By
1:25	CMP

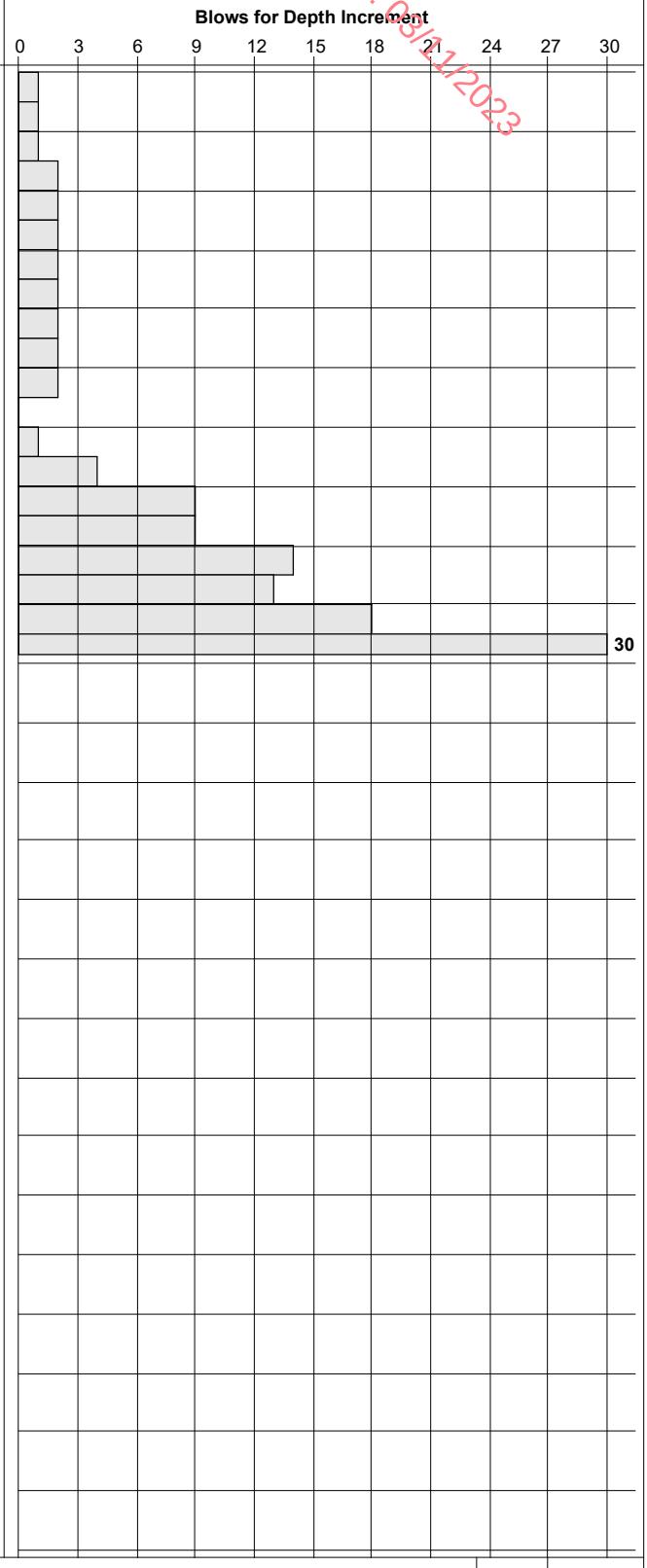
Figure No.
12205-09-22.DP-08

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-08

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.34	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606149.8 E 743260.5 N	21/10/2022		2/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
5.00-5.10	1		35.34	5.00
5.10-5.20	1			
5.20-5.30	1			
5.30-5.40	2			
5.40-5.50	2			
5.50-5.60	2		34.84	5.50
5.60-5.70	2			
5.70-5.80	2			
5.80-5.90	2			
5.90-6.00	2			
6.00-6.10	2		34.34	6.00
6.10-6.20	0			
6.20-6.30	1			
6.30-6.40	4			
6.40-6.50	9			
6.50-6.60	9		33.84	6.50
6.60-6.70	14			
6.70-6.80	13			
6.80-6.90	18			
6.90-6.97	30		33.34	7.00
			32.84	7.50
			32.34	8.00
			31.84	8.50
			31.34	9.00
			30.84	9.50
			30.34	10.00



Remarks

Scale (approx)	Logged By
1:25	CMP

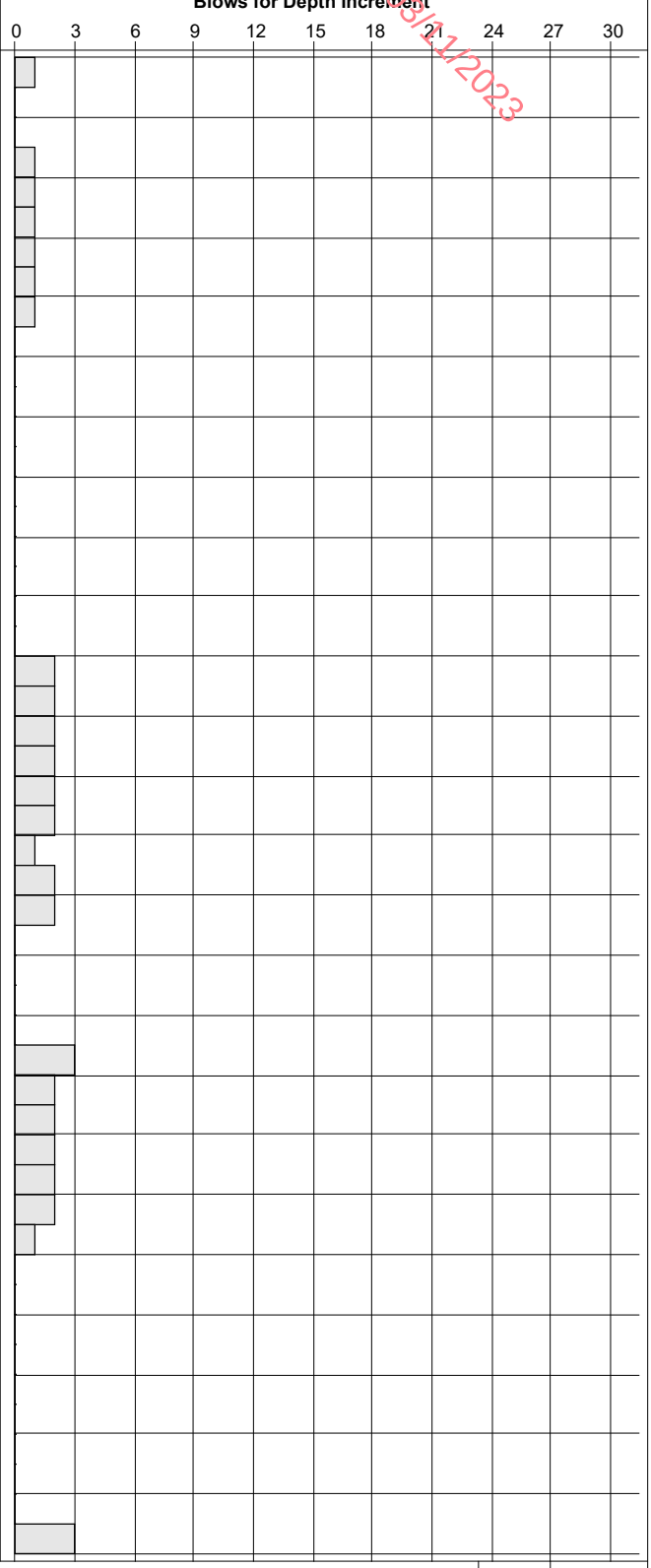
Figure No.
12205-09-22.DP-08

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-09

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.51	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606157.7 E 743225.5 N	21/10/2022		1/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	1		40.51	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	1			
0.40-0.50	1			
0.50-0.60	1		40.01	0.50
0.60-0.70	1			
0.70-0.80	1			
0.80-0.90	1			
0.90-1.00	0			
1.00-1.10	0		39.51	1.00
1.10-1.20	0			
1.20-1.30	0			
1.30-1.40	0			
1.40-1.50	0			
1.50-1.60	0		39.01	1.50
1.60-1.70	0			
1.70-1.80	0			
1.80-1.90	0			
1.90-2.00	0			
2.00-2.10	2		38.51	2.00
2.10-2.20	2			
2.20-2.30	2			
2.30-2.40	2			
2.40-2.50	2			
2.50-2.60	2		38.01	2.50
2.60-2.70	1			
2.70-2.80	2			
2.80-2.90	2			
2.90-3.00	0			
3.00-3.10	0		37.51	3.00
3.10-3.20	0			
3.20-3.30	0			
3.30-3.40	3			
3.40-3.50	2			
3.50-3.60	2		37.01	3.50
3.60-3.70	2			
3.70-3.80	2			
3.80-3.90	2			
3.90-4.00	1			
4.00-4.10	0		36.51	4.00
4.10-4.20	0			
4.20-4.30	0			
4.30-4.40	0			
4.40-4.50	0			
4.50-4.60	0		36.01	4.50
4.60-4.70	0			
4.70-4.80	0			
4.80-4.90	0			
4.90-5.00	3		35.51	5.00



Remarks
Refusal at 7.10m BGL

Scale (approx)	Logged By
1:25	CMP

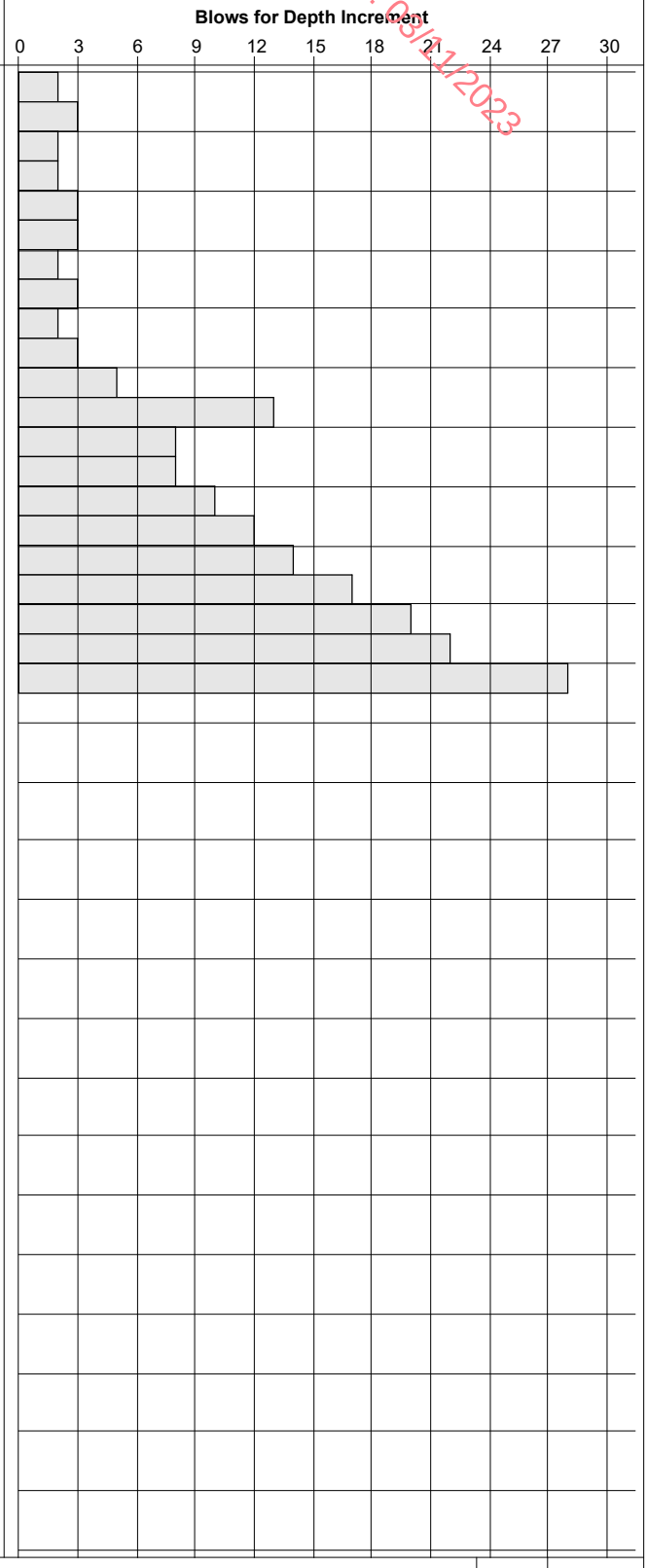
Figure No.
12205-09-22.DP-09

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-09

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.51	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606157.7 E 743225.5 N	21/10/2022		2/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
5.00-5.10	2		35.51	5.00
5.10-5.20	3			
5.20-5.30	2			
5.30-5.40	2			
5.40-5.50	3			
5.50-5.60	3		35.01	5.50
5.60-5.70	2			
5.70-5.80	3			
5.80-5.90	2			
5.90-6.00	3			
6.00-6.10	5		34.51	6.00
6.10-6.20	13			
6.20-6.30	8			
6.30-6.40	8			
6.40-6.50	10			
6.50-6.60	12		34.01	6.50
6.60-6.70	14			
6.70-6.80	17			
6.80-6.90	20			
6.90-7.00	22			
7.00-7.10	28		33.51	7.00
			33.01	7.50
			32.51	8.00
			32.01	8.50
			31.51	9.00
			31.01	9.50
			30.51	10.00



Remarks

Scale (approx)	Logged By
1:25	CMP

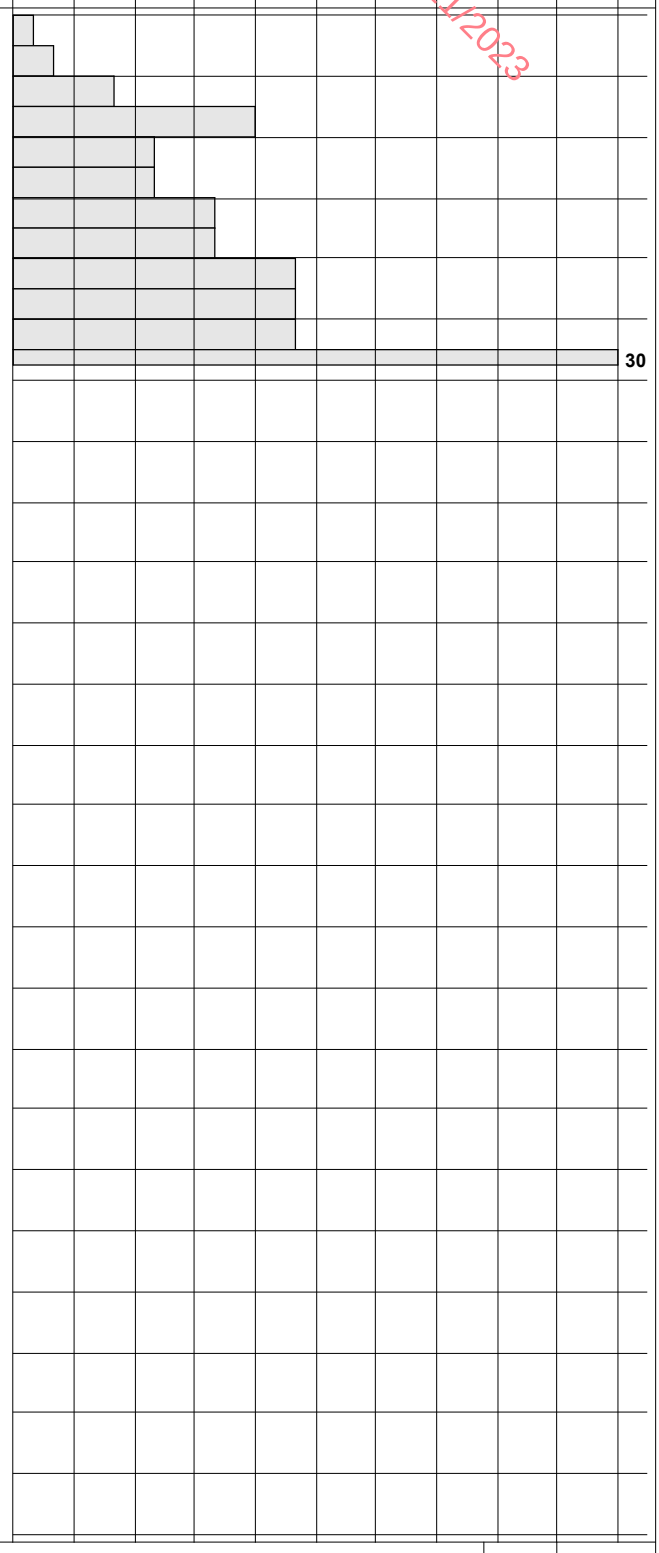
Figure No.
12205-09-22.DP-09

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-10

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	41.00	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606170.2 E 743198.4 N	21/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	1		41.00	0.00
0.10-0.20	2			
0.20-0.30	5			
0.30-0.40	12			
0.40-0.50	7		40.50	0.50
0.50-0.60	7			
0.60-0.70	10			
0.70-0.80	10			
0.80-0.90	14			
0.90-1.00	14		40.00	1.00
1.00-1.10	14			
1.10-1.15	30			
			39.50	1.50
			39.00	2.00
			38.50	2.50
			38.00	3.00
			37.50	3.50
			37.00	4.00
			36.50	4.50
			36.00	5.00



Remarks
Refusal at 1.15m BGL

Scale (approx)	Logged By
1:25	CMP

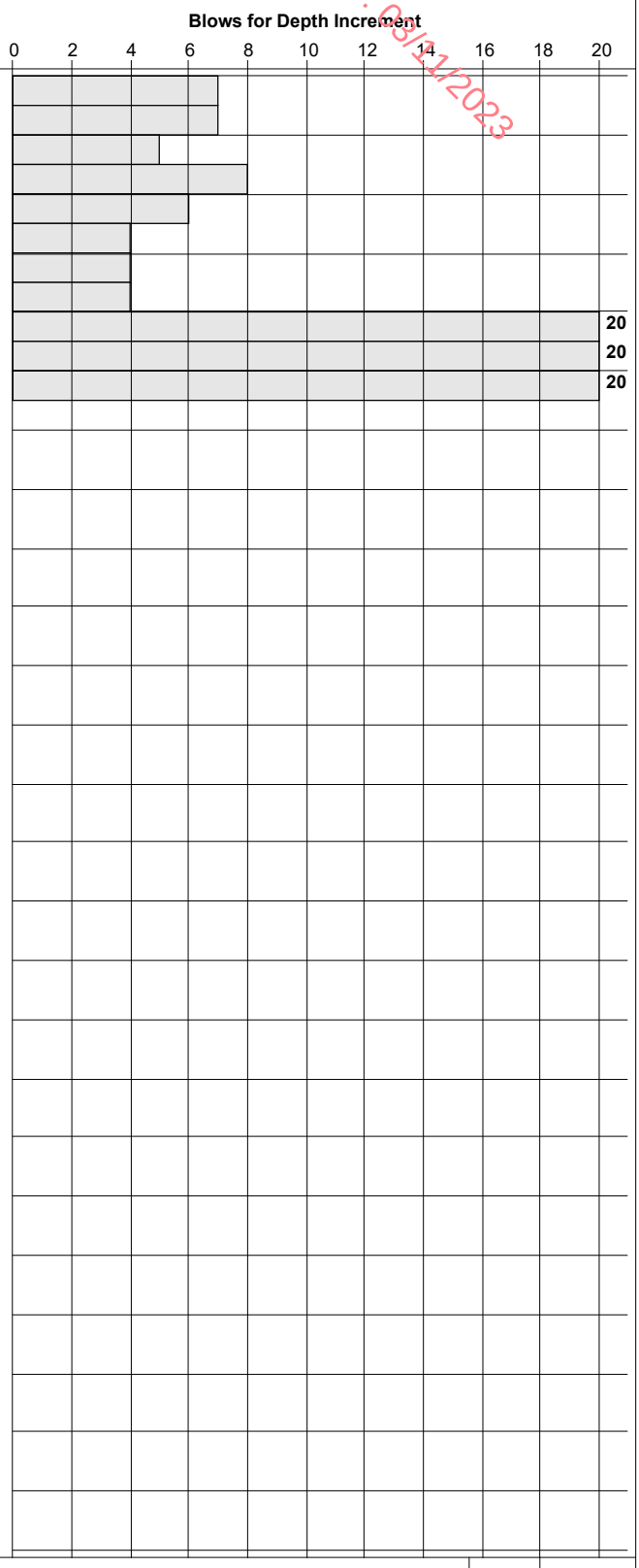
Figure No.
12205-09-22.DP-10

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-11

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	42.92	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606352.4 E 742943.6 N	21/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	7		42.92	0.00
0.10-0.20	7			
0.20-0.30	5			
0.30-0.40	8			
0.40-0.50	6			
0.50-0.60	4		42.42	0.50
0.60-0.70	4			
0.70-0.80	4			
0.80-0.90	20			
0.90-1.00	20			
1.00-1.10	20		41.92	1.00
			41.42	1.50
			40.92	2.00
			40.42	2.50
			39.92	3.00
			39.42	3.50
			38.92	4.00
			38.42	4.50
			37.92	5.00



Remarks
Refusal at 1.10m BGL

Scale (approx)	Logged By
1:25	CMP

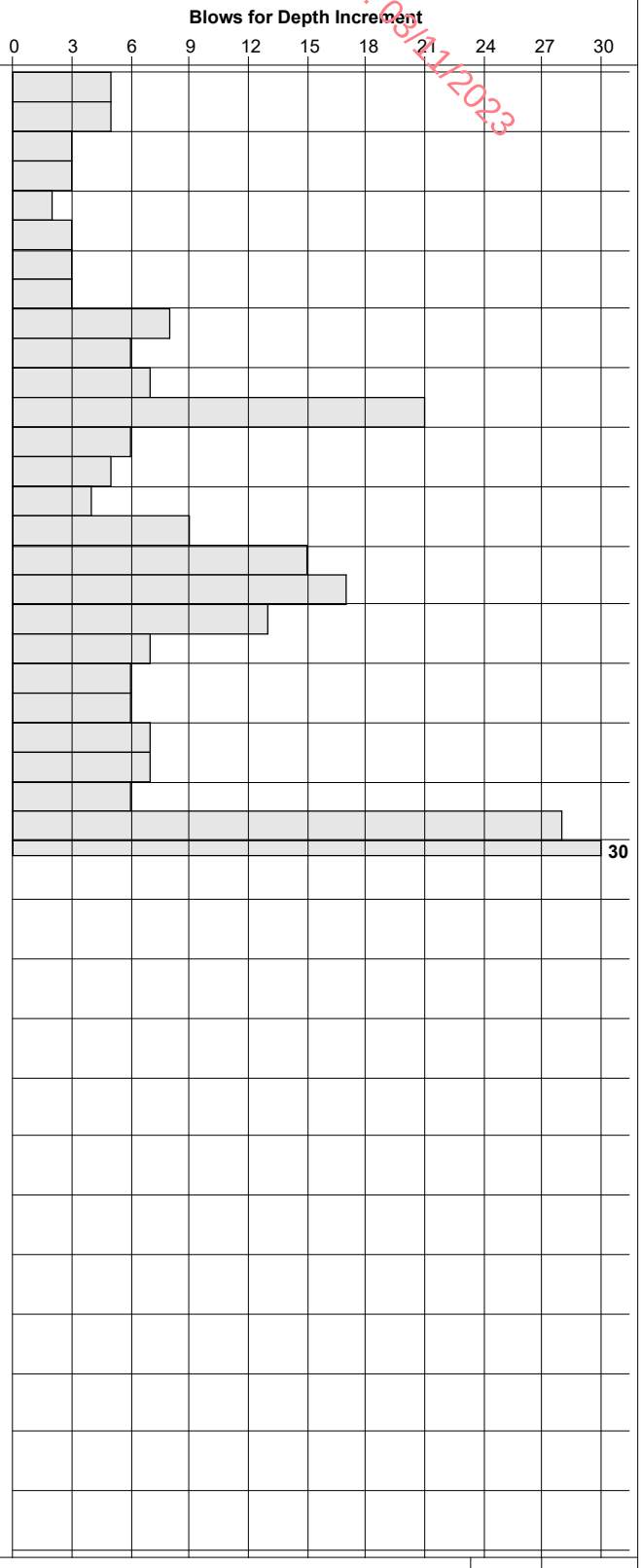
Figure No.
12205-09-22.DP-11

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-12

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	44.30	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606427.7 E 742916.5 N	21/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	5		44.30	0.00
0.10-0.20	5			
0.20-0.30	3			
0.30-0.40	3			
0.40-0.50	2			
0.50-0.60	3		43.80	0.50
0.60-0.70	3			
0.70-0.80	3			
0.80-0.90	8			
0.90-1.00	6			
1.00-1.10	7		43.30	1.00
1.10-1.20	21			
1.20-1.30	6			
1.30-1.40	5			
1.40-1.50	4			
1.50-1.60	9		42.80	1.50
1.60-1.70	15			
1.70-1.80	17			
1.80-1.90	13			
1.90-2.00	7			
2.00-2.10	6		42.30	2.00
2.10-2.20	6			
2.20-2.30	7			
2.30-2.40	7			
2.40-2.50	6			
2.50-2.60	28		41.80	2.50
2.60-2.65	30			
			41.30	3.00
			40.80	3.50
			40.30	4.00
			39.80	4.50
			39.30	5.00



Remarks
Refusal at 2.65m BGL

Scale (approx)	Logged By
1:25	CMP

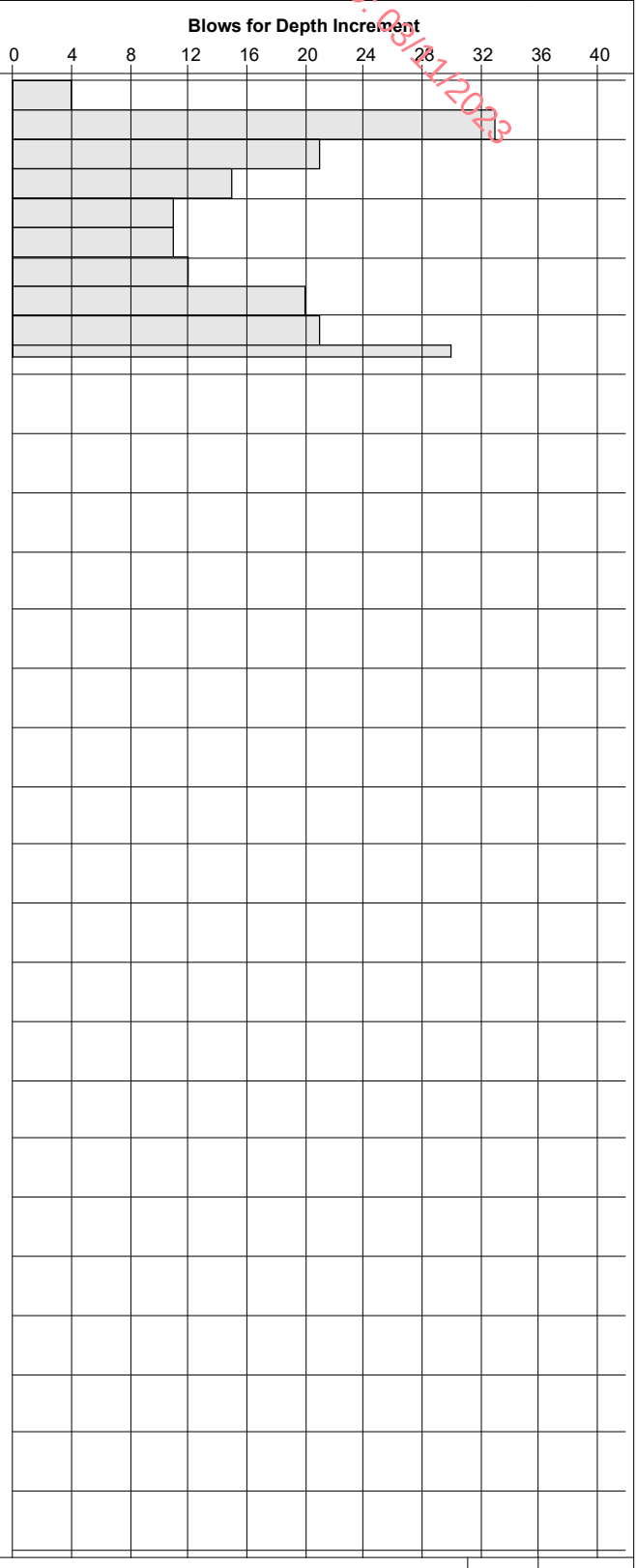
Figure No.
12205-09-22.DP-12

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-13

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	42.87	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606118 E 743095.8 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	4		42.87	0.00
0.10-0.20	33			
0.20-0.30	21			
0.30-0.40	15			
0.40-0.50	11			
0.50-0.60	11		42.37	0.50
0.60-0.70	12			
0.70-0.80	20			
0.80-0.90	21			
0.90-0.94	30		41.87	1.00
			41.37	1.50
			40.87	2.00
			40.37	2.50
			39.87	3.00
			39.37	3.50
			38.87	4.00
			38.37	4.50
			37.87	5.00



Remarks
Refusal at 0.94m BGL

Scale (approx)	Logged By
1:25	CMP

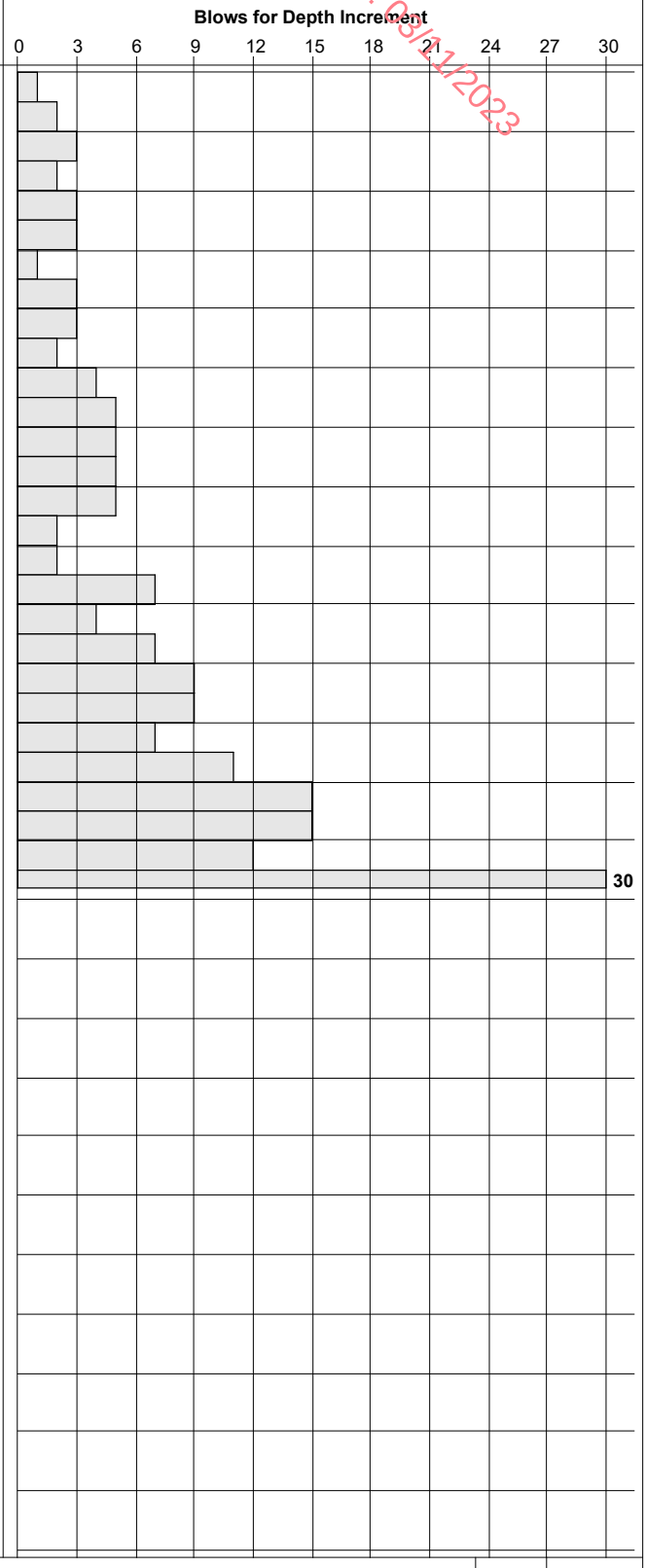
Figure No.
12205-09-22.DP-13

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-14

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.91	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606082.3 E 743089.4 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	1		40.91	0.00
0.10-0.20	2			
0.20-0.30	3			
0.30-0.40	2			
0.40-0.50	3			
0.50-0.60	3		40.41	0.50
0.60-0.70	1			
0.70-0.80	3			
0.80-0.90	3			
0.90-1.00	2			
1.00-1.10	4		39.91	1.00
1.10-1.20	5			
1.20-1.30	5			
1.30-1.40	5			
1.40-1.50	5			
1.50-1.60	2		39.41	1.50
1.60-1.70	2			
1.70-1.80	7			
1.80-1.90	4			
1.90-2.00	7			
2.00-2.10	9		38.91	2.00
2.10-2.20	9			
2.20-2.30	7			
2.30-2.40	11			
2.40-2.50	15			
2.50-2.60	15		38.41	2.50
2.60-2.70	12			
2.70-2.76	30			
			37.91	3.00
			37.41	3.50
			36.91	4.00
			36.41	4.50
			35.91	5.00



Remarks
Refusal at 2.76m BGL

Scale (approx)	Logged By
1:25	CMP

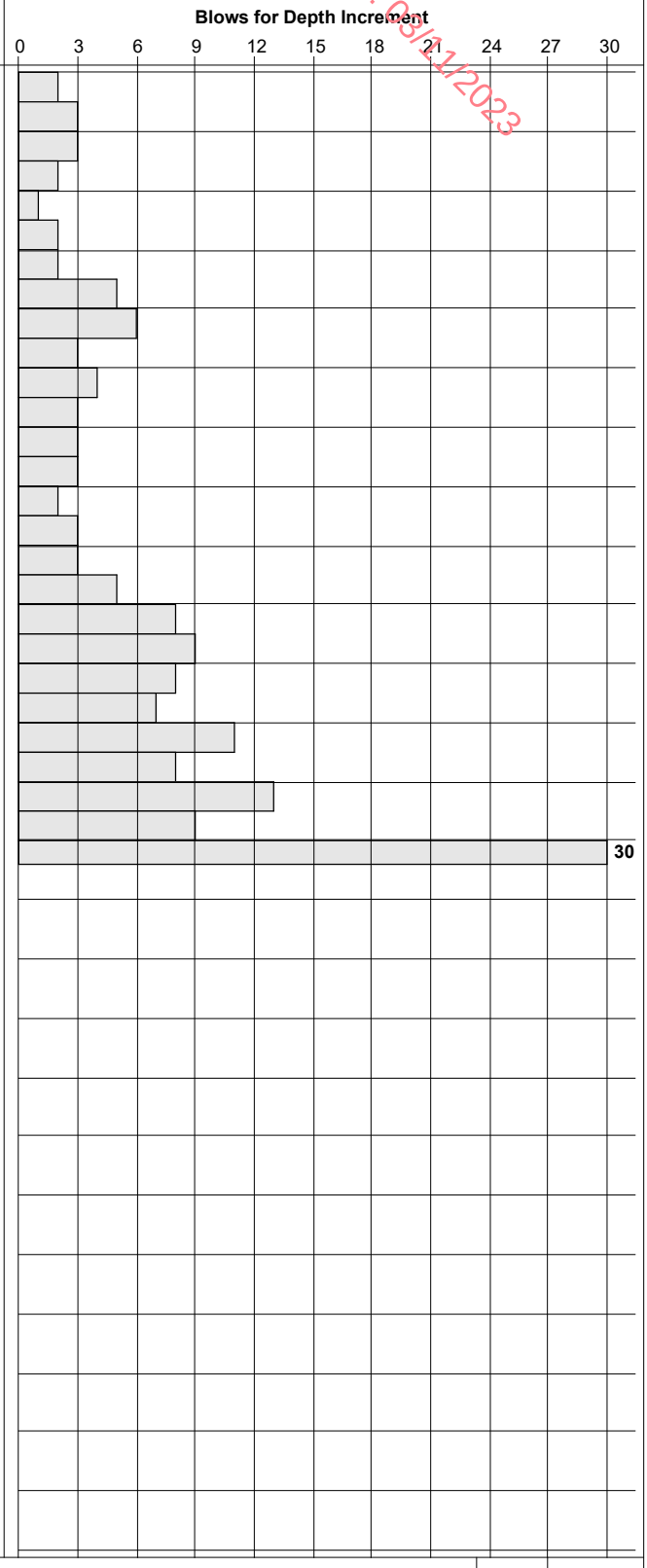
Figure No.
12205-09-22.DP-14

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-15

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.99	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606068.4 E 743118 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	2		40.99	0.00
0.10-0.20	3			
0.20-0.30	3			
0.30-0.40	2			
0.40-0.50	1			
0.50-0.60	2		40.49	0.50
0.60-0.70	2			
0.70-0.80	5			
0.80-0.90	6			
0.90-1.00	3			
1.00-1.10	4		39.99	1.00
1.10-1.20	3			
1.20-1.30	3			
1.30-1.40	3			
1.40-1.50	2			
1.50-1.60	3		39.49	1.50
1.60-1.70	3			
1.70-1.80	5			
1.80-1.90	8			
1.90-2.00	9			
2.00-2.10	8		38.99	2.00
2.10-2.20	7			
2.20-2.30	11			
2.30-2.40	8			
2.40-2.50	13			
2.50-2.60	9		38.49	2.50
2.60-2.68	30			
			37.99	3.00
			37.49	3.50
			36.99	4.00
			36.49	4.50
			35.99	5.00



Remarks
Refusal at 2.68m BGL

Scale (approx)	Logged By
1:25	CMP

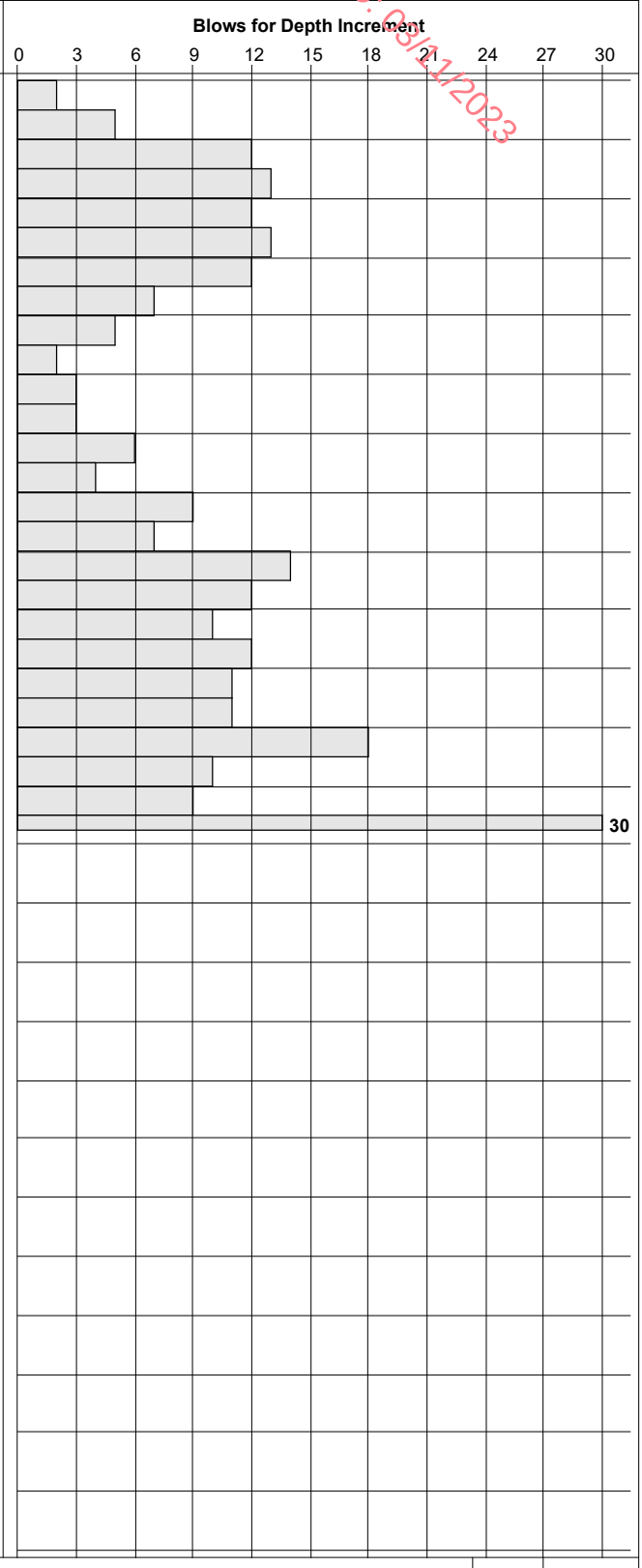
Figure No.
12205-09-22.DP-15

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-16

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	41.82	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606098.8 E 743121.5 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	2		41.82	0.00
0.10-0.20	5			
0.20-0.30	12			
0.30-0.40	13			
0.40-0.50	12			
0.50-0.60	13		41.32	0.50
0.60-0.70	12			
0.70-0.80	7			
0.80-0.90	5			
0.90-1.00	2			
1.00-1.10	3		40.82	1.00
1.10-1.20	3			
1.20-1.30	6			
1.30-1.40	4			
1.40-1.50	9			
1.50-1.60	7		40.32	1.50
1.60-1.70	14			
1.70-1.80	12			
1.80-1.90	10			
1.90-2.00	12			
2.00-2.10	11		39.82	2.00
2.10-2.20	11			
2.20-2.30	18			
2.30-2.40	10			
2.40-2.50	9			
2.50-2.55	30		39.32	2.50
			38.82	3.00
			38.32	3.50
			37.82	4.00
			37.32	4.50
			36.82	5.00



Remarks
Refusal at 2.55m BGL

Scale (approx)	Logged By
1:25	CMP

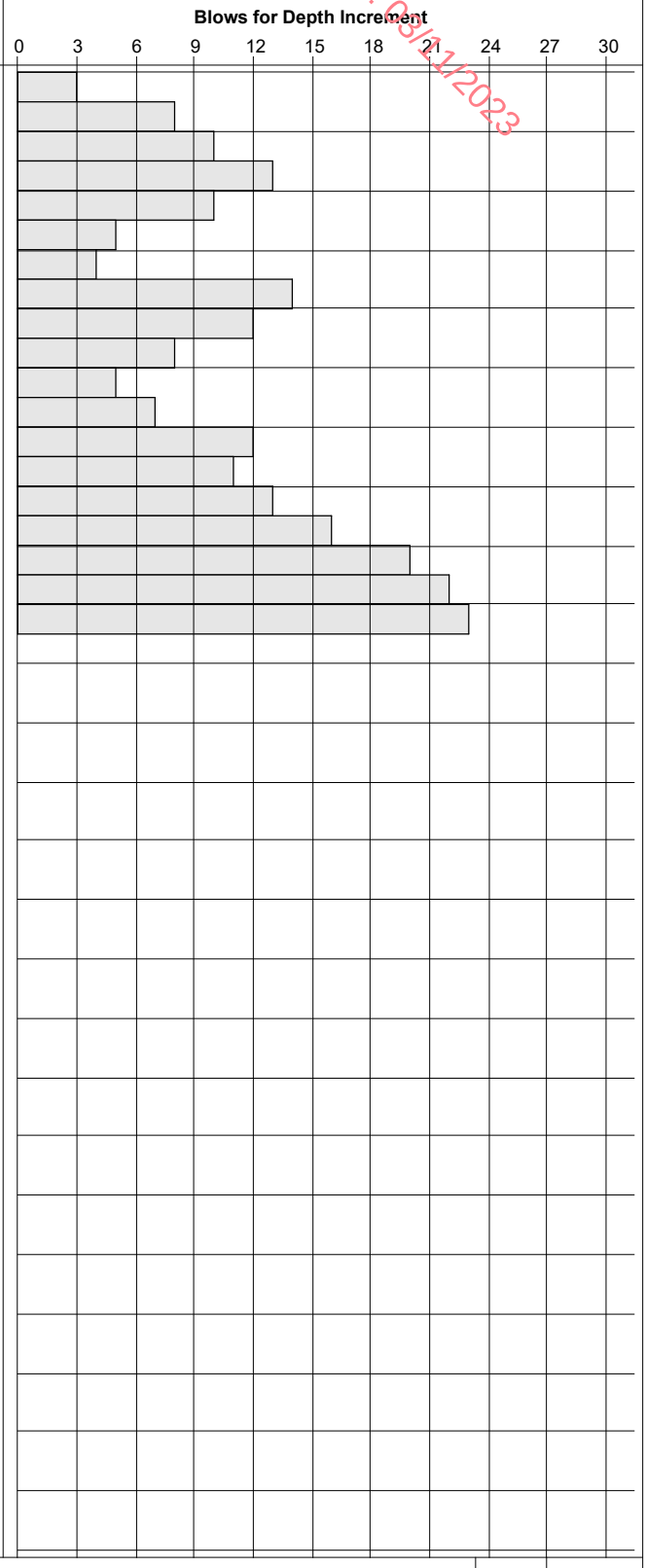
Figure No.
12205-09-22.DP-16

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-17

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	43.65	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606131.4 E 743123.4 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	3		43.65	0.00
0.10-0.20	8			
0.20-0.30	10			
0.30-0.40	13			
0.40-0.50	10			
0.50-0.60	5		43.15	0.50
0.60-0.70	4			
0.70-0.80	14			
0.80-0.90	12			
0.90-1.00	8			
1.00-1.10	5		42.65	1.00
1.10-1.20	7			
1.20-1.30	12			
1.30-1.40	11			
1.40-1.50	13			
1.50-1.60	16		42.15	1.50
1.60-1.70	20			
1.70-1.80	22			
1.80-1.90	23			
			41.65	2.00
			41.15	2.50
			40.65	3.00
			40.15	3.50
			39.65	4.00
			39.15	4.50
			38.65	5.00



Remarks
Refusal at 1.90m BGL

Scale (approx)	Logged By
1:25	CMP

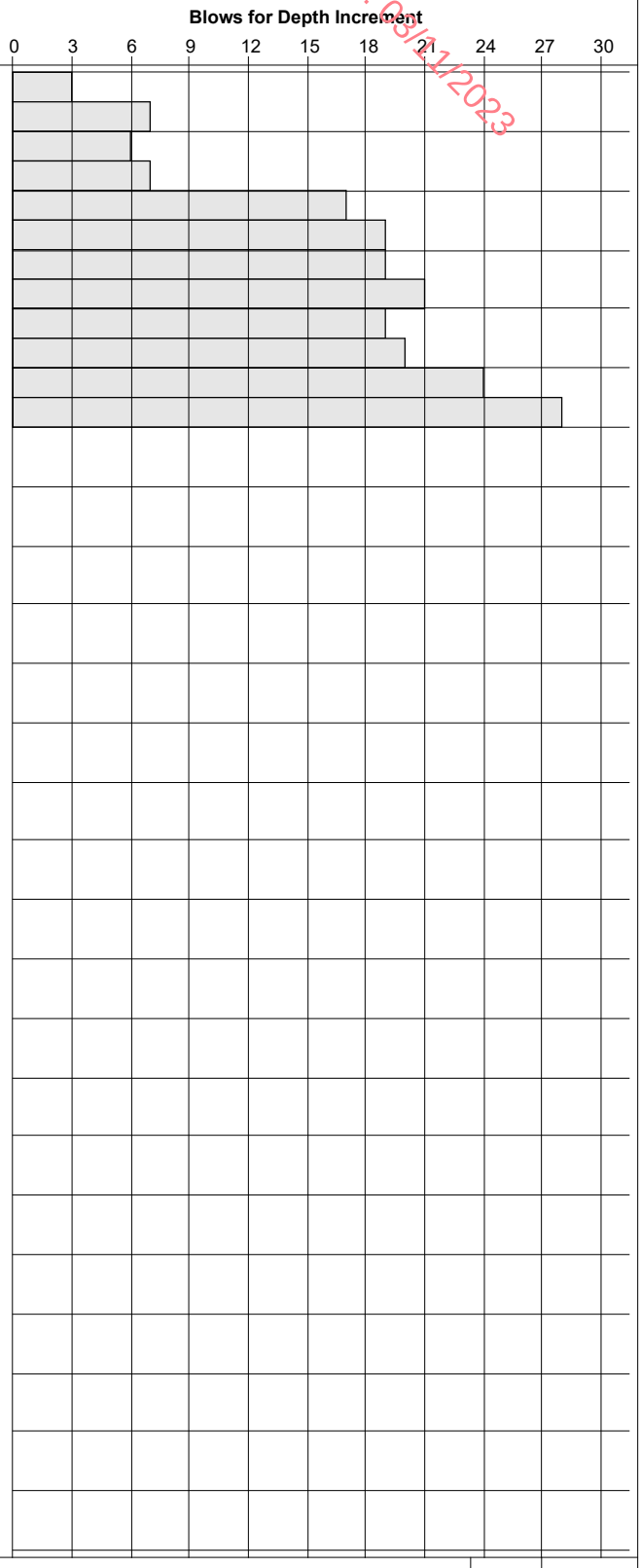
Figure No.
12205-09-22.DP-17

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-18

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	42.63	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606126.1 E 743157.6 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	3		42.63	0.00
0.10-0.20	7			
0.20-0.30	6			
0.30-0.40	7			
0.40-0.50	17			
0.50-0.60	19		42.13	0.50
0.60-0.70	19			
0.70-0.80	21			
0.80-0.90	19			
0.90-1.00	20			
1.00-1.10	24		41.63	1.00
1.10-1.20	28			
			41.13	1.50
			40.63	2.00
			40.13	2.50
			39.63	3.00
			39.13	3.50
			38.63	4.00
			38.13	4.50
			37.63	5.00



Remarks
Refusal at 1.20m BGL

Scale (approx)	Logged By
1:25	CMP

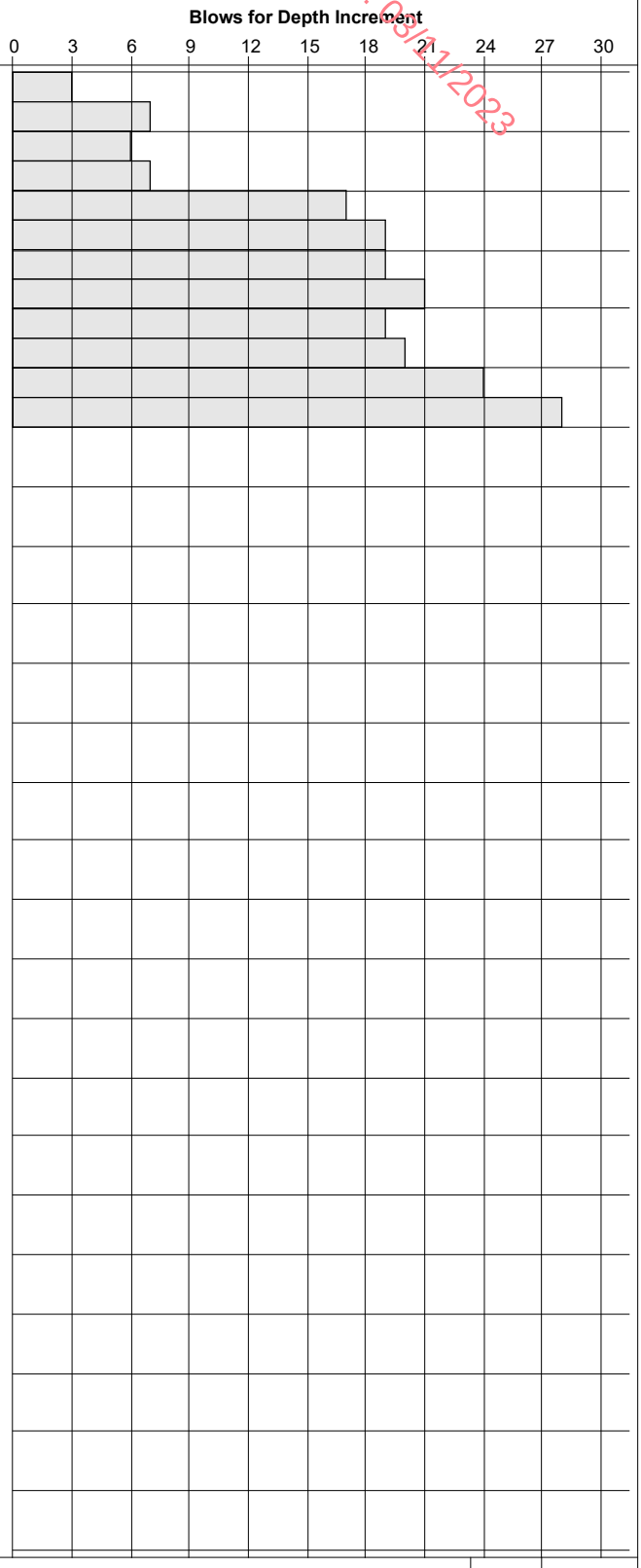
Figure No.
12205-09-22.DP-18

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-19

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	41.91	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606104.4 E 743164.5 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	3		41.91	0.00
0.10-0.20	7			
0.20-0.30	6			
0.30-0.40	7			
0.40-0.50	17			
0.50-0.60	19		41.41	0.50
0.60-0.70	19			
0.70-0.80	21			
0.80-0.90	19			
0.90-1.00	20			
1.00-1.10	24		40.91	1.00
1.10-1.20	28			
			40.41	1.50
			39.91	2.00
			39.41	2.50
			38.91	3.00
			38.41	3.50
			37.91	4.00
			37.41	4.50
			36.91	5.00



Remarks
Refusal at 1.20m BGL

Scale (approx)	Logged By
1:25	CMP

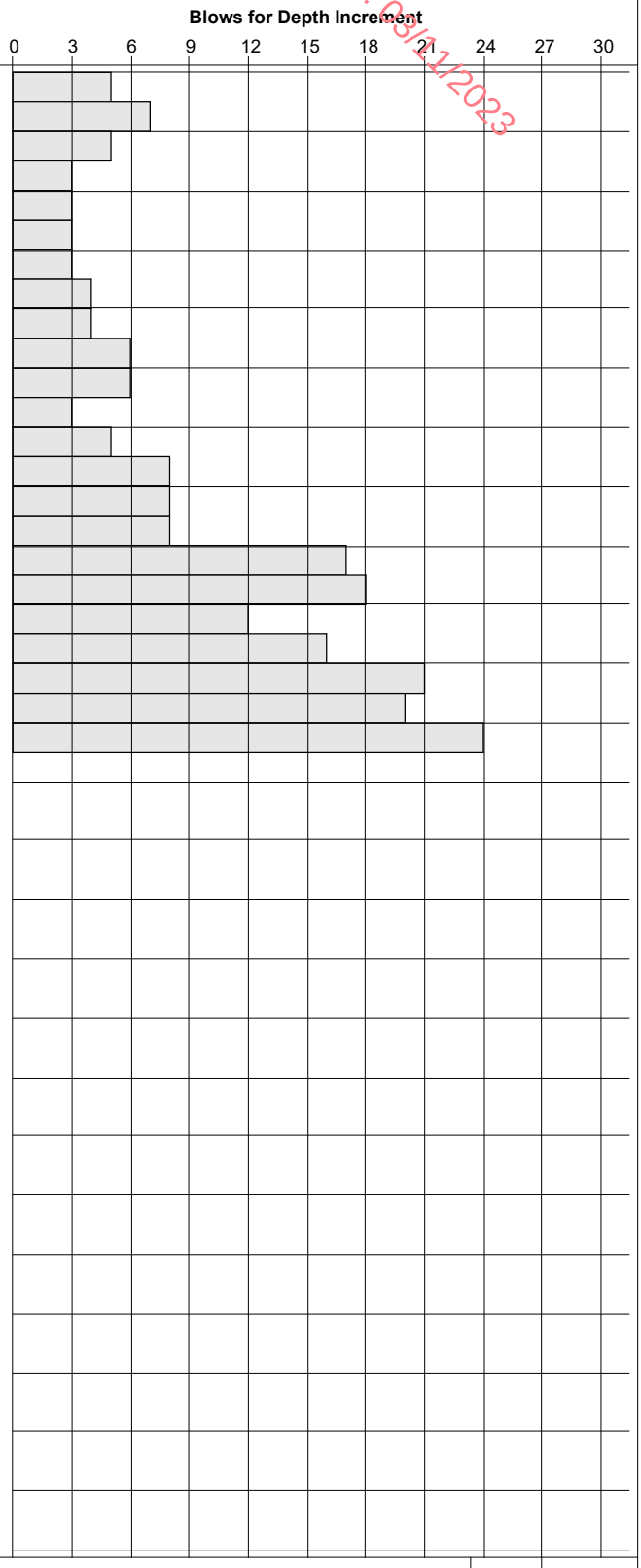
Figure No.
12205-09-22.DP-19

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-20

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	41.22	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606118.2 E 743193.3 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	5		41.22	0.00
0.10-0.20	7			
0.20-0.30	5			
0.30-0.40	3			
0.40-0.50	3			
0.50-0.60	3		40.72	0.50
0.60-0.70	3			
0.70-0.80	4			
0.80-0.90	4			
0.90-1.00	6			
1.00-1.10	6		40.22	1.00
1.10-1.20	3			
1.20-1.30	5			
1.30-1.40	8			
1.40-1.50	8			
1.50-1.60	8		39.72	1.50
1.60-1.70	17			
1.70-1.80	18			
1.80-1.90	12			
1.90-2.00	16			
2.00-2.10	21		39.22	2.00
2.10-2.20	20			
2.20-2.30	24			
			38.72	2.50
			38.22	3.00
			37.72	3.50
			37.22	4.00
			36.72	4.50
			36.22	5.00



Remarks
Refusal at 2.30m BGL

Scale (approx)	Logged By
1:25	CMP

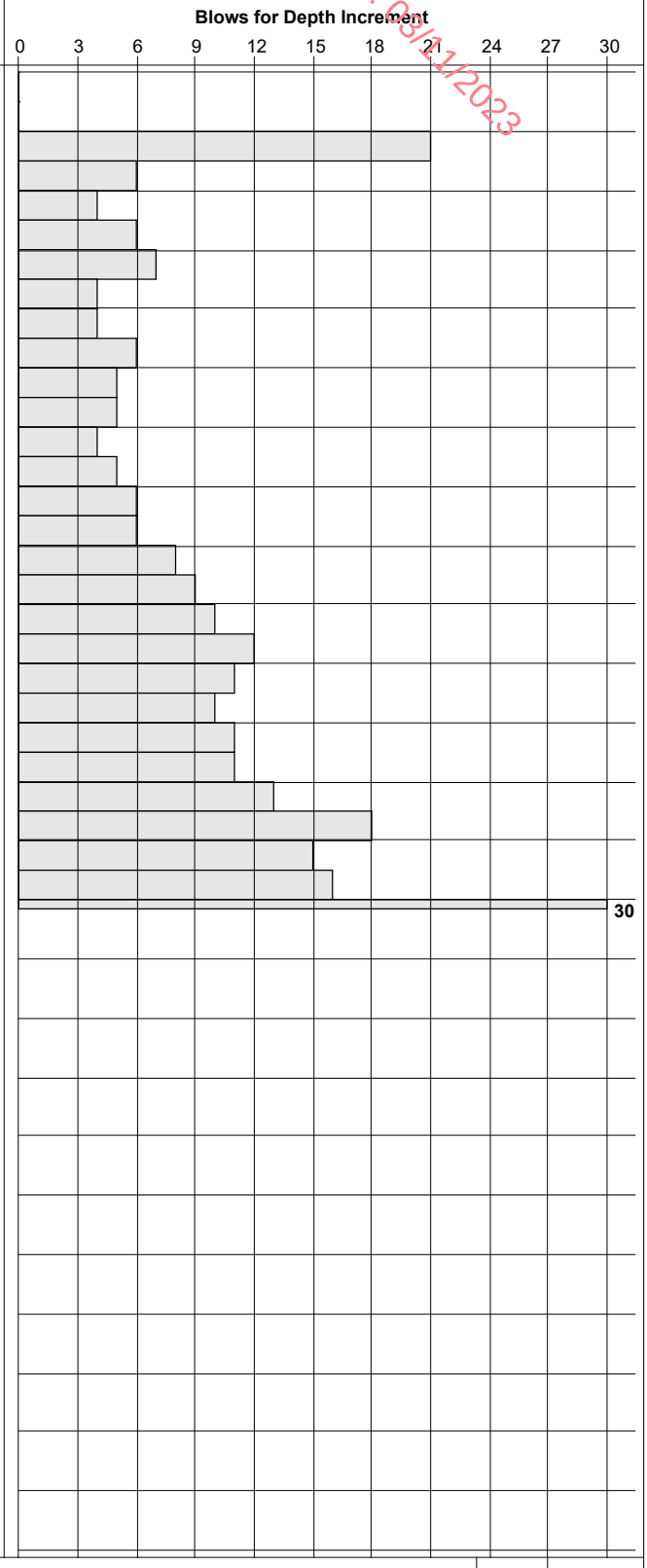
Figure No.
12205-09-22.DP-20

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-21

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.73	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606088.6 E 743199.6 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.73	0.00
0.10-0.20	0			
0.20-0.30	21			
0.30-0.40	6			
0.40-0.50	4			
0.50-0.60	6		40.23	0.50
0.60-0.70	7			
0.70-0.80	4			
0.80-0.90	4			
0.90-1.00	6			
1.00-1.10	5		39.73	1.00
1.10-1.20	5			
1.20-1.30	4			
1.30-1.40	5			
1.40-1.50	6			
1.50-1.60	6		39.23	1.50
1.60-1.70	8			
1.70-1.80	9			
1.80-1.90	10			
1.90-2.00	12			
2.00-2.10	11		38.73	2.00
2.10-2.20	10			
2.20-2.30	11			
2.30-2.40	11			
2.40-2.50	13			
2.50-2.60	18		38.23	2.50
2.60-2.70	15			
2.70-2.80	16			
2.80-2.83	30			
			37.73	3.00
			37.23	3.50
			36.73	4.00
			36.23	4.50
			35.73	5.00



Remarks
Refusal at 2.83m BGL

Scale (approx)	Logged By
1:25	CMP

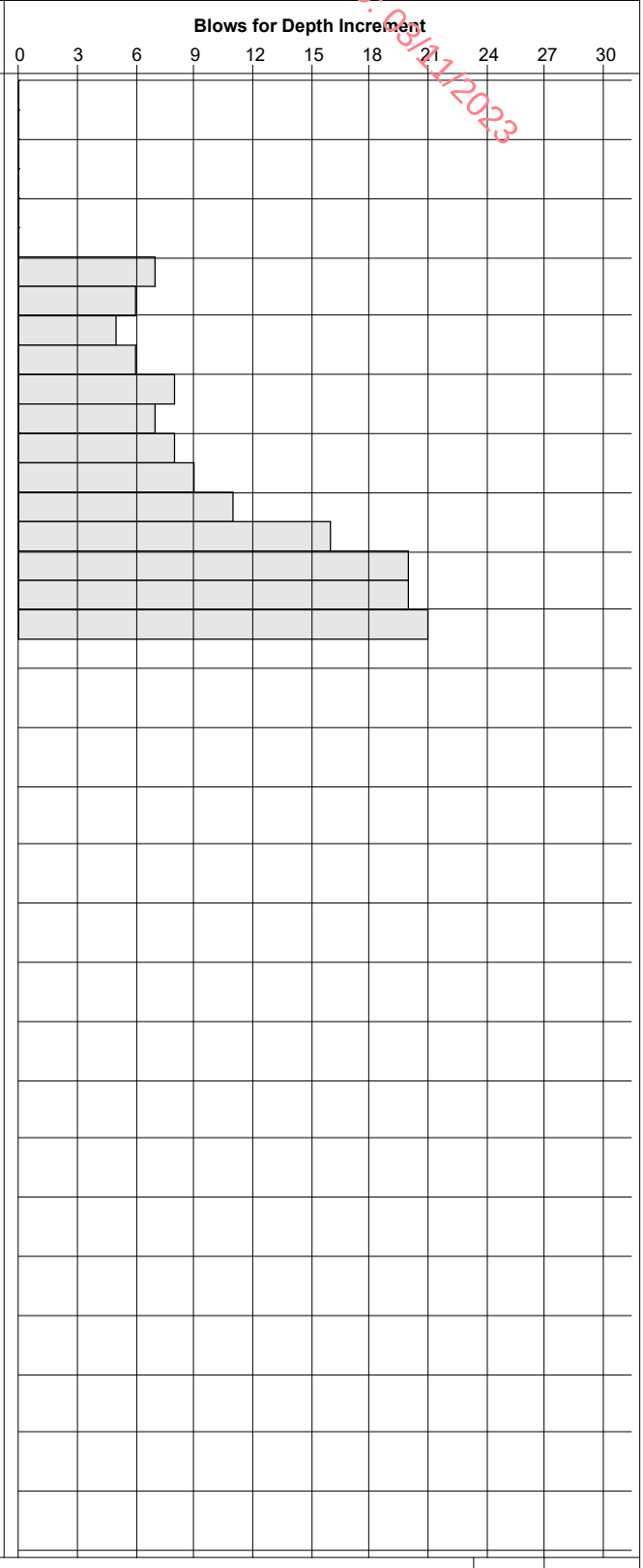
Figure No.
12205-09-22.DP-21

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-22

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.53	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606104.4 E 743223.1 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.53	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		40.03	0.50
0.60-0.70	7			
0.70-0.80	6			
0.80-0.90	5			
0.90-1.00	6			
1.00-1.10	8		39.53	1.00
1.10-1.20	7			
1.20-1.30	8			
1.30-1.40	9			
1.40-1.50	11			
1.50-1.60	16		39.03	1.50
1.60-1.70	20			
1.70-1.80	20			
1.80-1.90	21			
			38.53	2.00
			38.03	2.50
			37.53	3.00
			37.03	3.50
			36.53	4.00
			36.03	4.50
			35.53	5.00



Remarks
Refusal at 1.90m BGL

Scale (approx)	Logged By
1:25	CMP

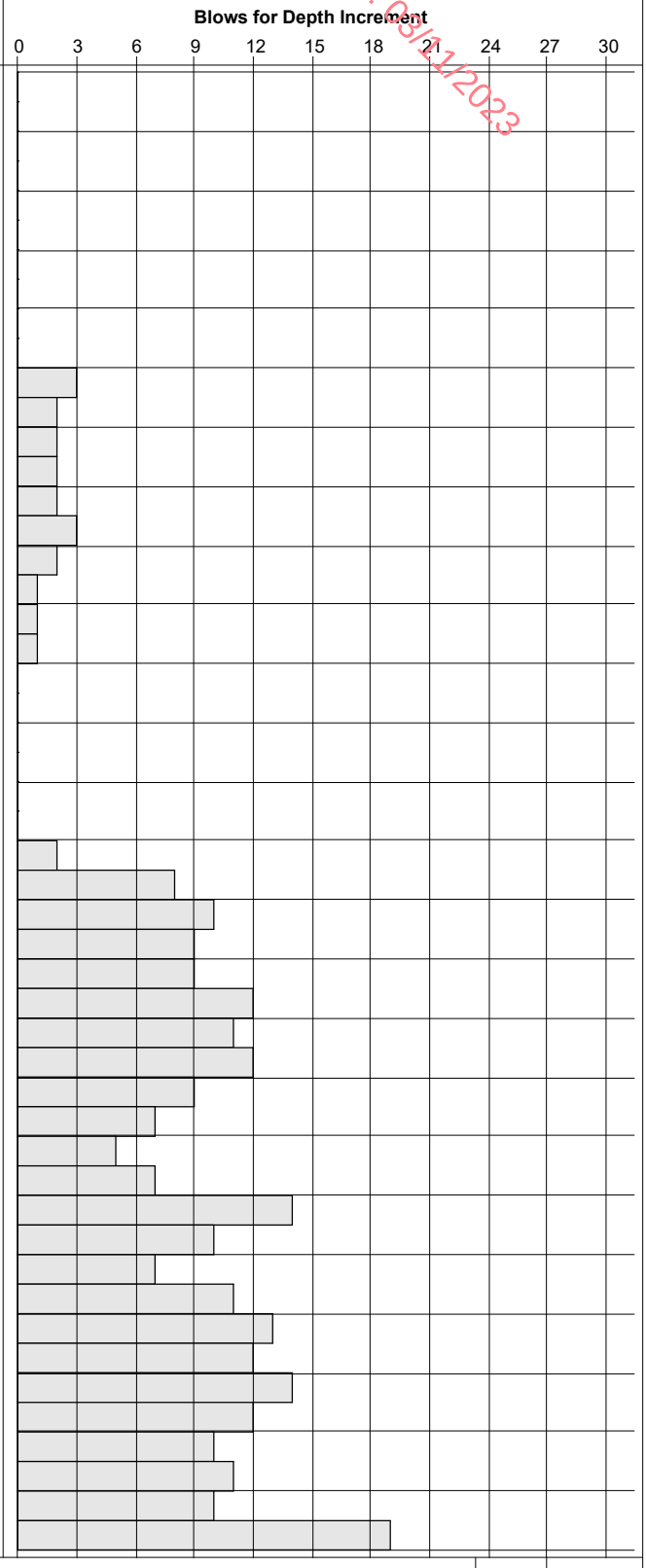
Figure No.
12205-09-22.DP-22

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-23

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.24	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606095.2 E 743265.5 N	19/10/2022		1/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.24	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.74	0.50
0.60-0.70	0			
0.70-0.80	0			
0.80-0.90	0			
0.90-1.00	0			
1.00-1.10	3		39.24	1.00
1.10-1.20	2			
1.20-1.30	2			
1.30-1.40	2			
1.40-1.50	2			
1.50-1.60	3		38.74	1.50
1.60-1.70	2			
1.70-1.80	1			
1.80-1.90	1			
1.90-2.00	1			
2.00-2.10	0		38.24	2.00
2.10-2.20	0			
2.20-2.30	0			
2.30-2.40	0			
2.40-2.50	0			
2.50-2.60	0		37.74	2.50
2.60-2.70	2			
2.70-2.80	8			
2.80-2.90	10			
2.90-3.00	9			
3.00-3.10	9		37.24	3.00
3.10-3.20	12			
3.20-3.30	11			
3.30-3.40	12			
3.40-3.50	9			
3.50-3.60	7		36.74	3.50
3.60-3.70	5			
3.70-3.80	7			
3.80-3.90	14			
3.90-4.00	10			
4.00-4.10	7		36.24	4.00
4.10-4.20	11			
4.20-4.30	13			
4.30-4.40	12			
4.40-4.50	14			
4.50-4.60	12		35.74	4.50
4.60-4.70	10			
4.70-4.80	11			
4.80-4.90	10			
4.90-5.00	19		35.24	5.00



Remarks
Refusal at 5.15m BGL

Scale (approx)	Logged By
1:25	CMP

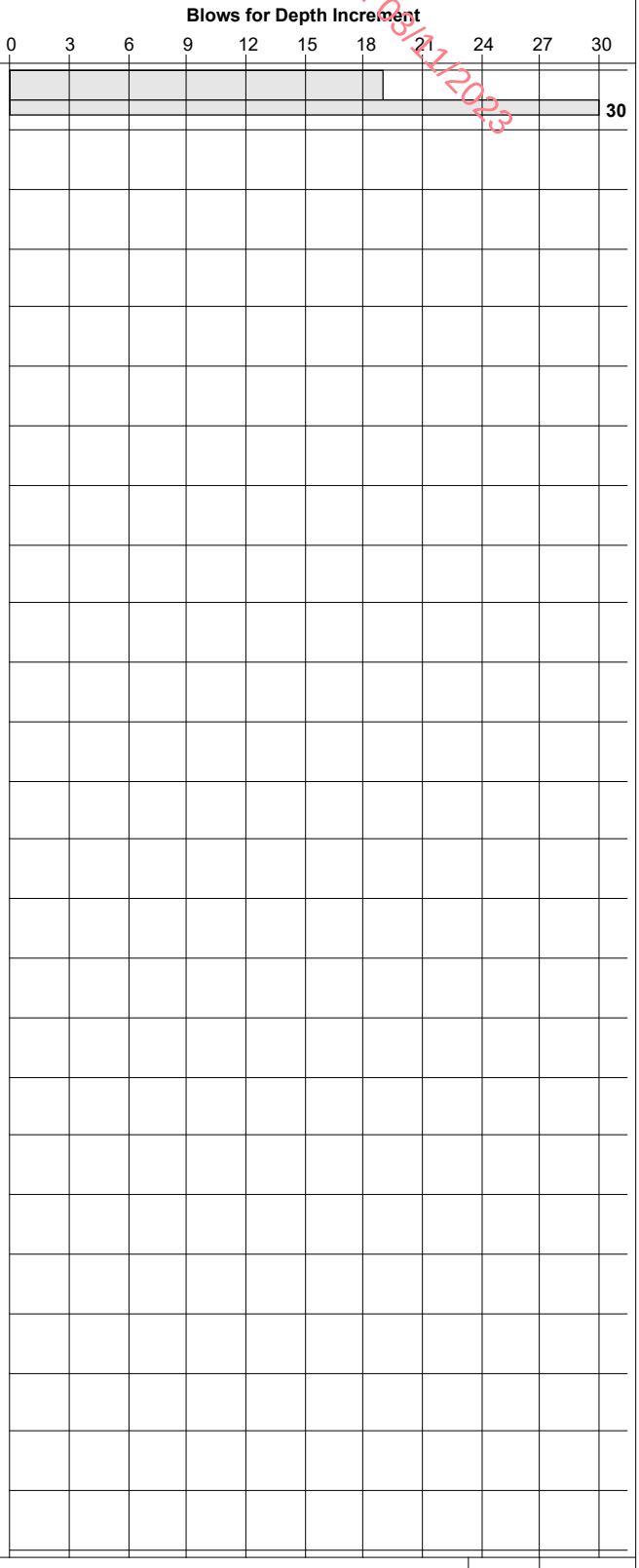
Figure No.
12205-09-22.DP-23

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-23

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.24	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606095.2 E 743265.5 N	19/10/2022		2/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
5.00-5.10	19		35.24	5.00
5.10-5.15	30		34.74	5.50
			34.24	6.00
			33.74	6.50
			33.24	7.00
			32.74	7.50
			32.24	8.00
			31.74	8.50
			31.24	9.00
			30.74	9.50
			30.24	10.00



Remarks

Scale (approx)	Logged By
1:25	CMP

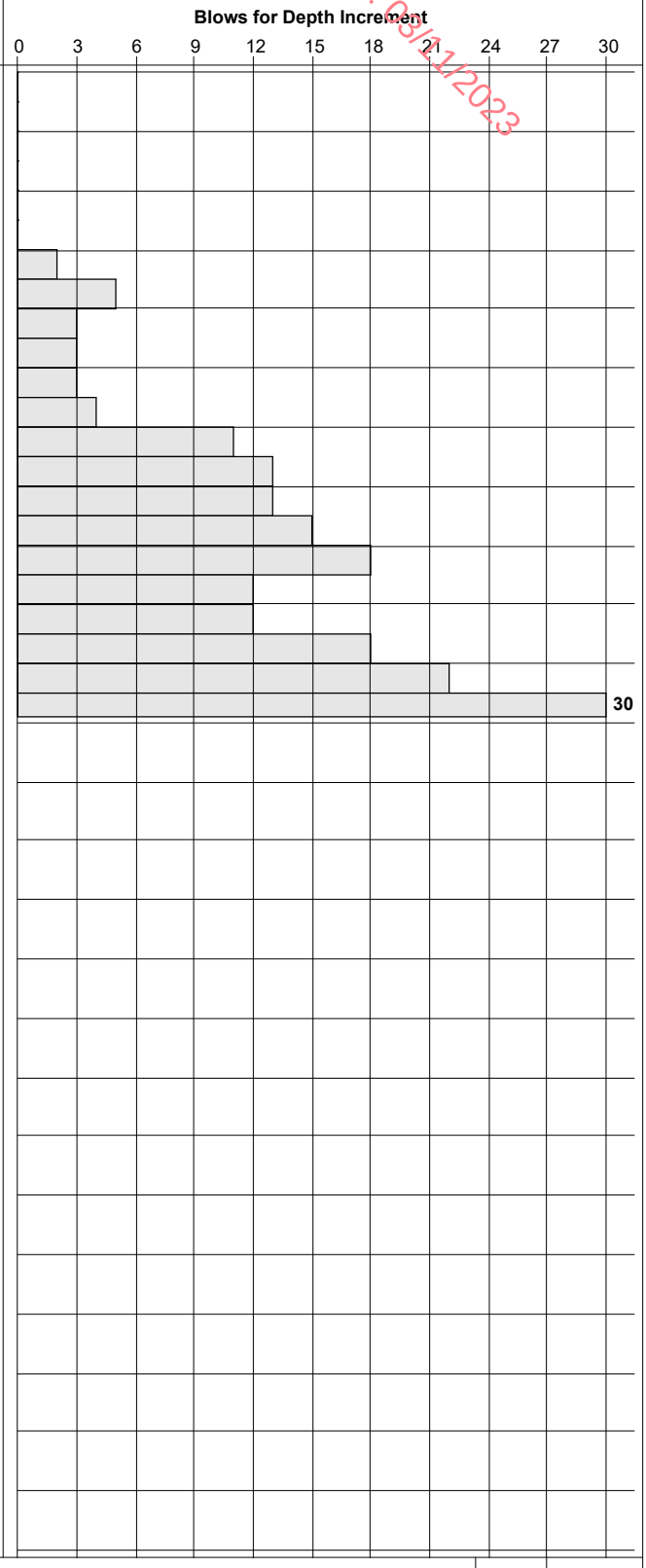
Figure No.
12205-09-22.DP-23

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-24

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.45	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606072.1 E 743270.4 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.45	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.95	0.50
0.60-0.70	2			
0.70-0.80	5			
0.80-0.90	3			
0.90-1.00	3			
1.00-1.10	3		39.45	1.00
1.10-1.20	4			
1.20-1.30	11			
1.30-1.40	13			
1.40-1.50	13			
1.50-1.60	15		38.95	1.50
1.60-1.70	18			
1.70-1.80	12			
1.80-1.90	12			
1.90-2.00	18			
2.00-2.10	22		38.45	2.00
2.10-2.18	30			
			37.95	2.50
			37.45	3.00
			36.95	3.50
			36.45	4.00
			35.95	4.50
			35.45	5.00



Remarks
Refusal at 2.18m BGL

Scale (approx)	Logged By
1:25	CMP

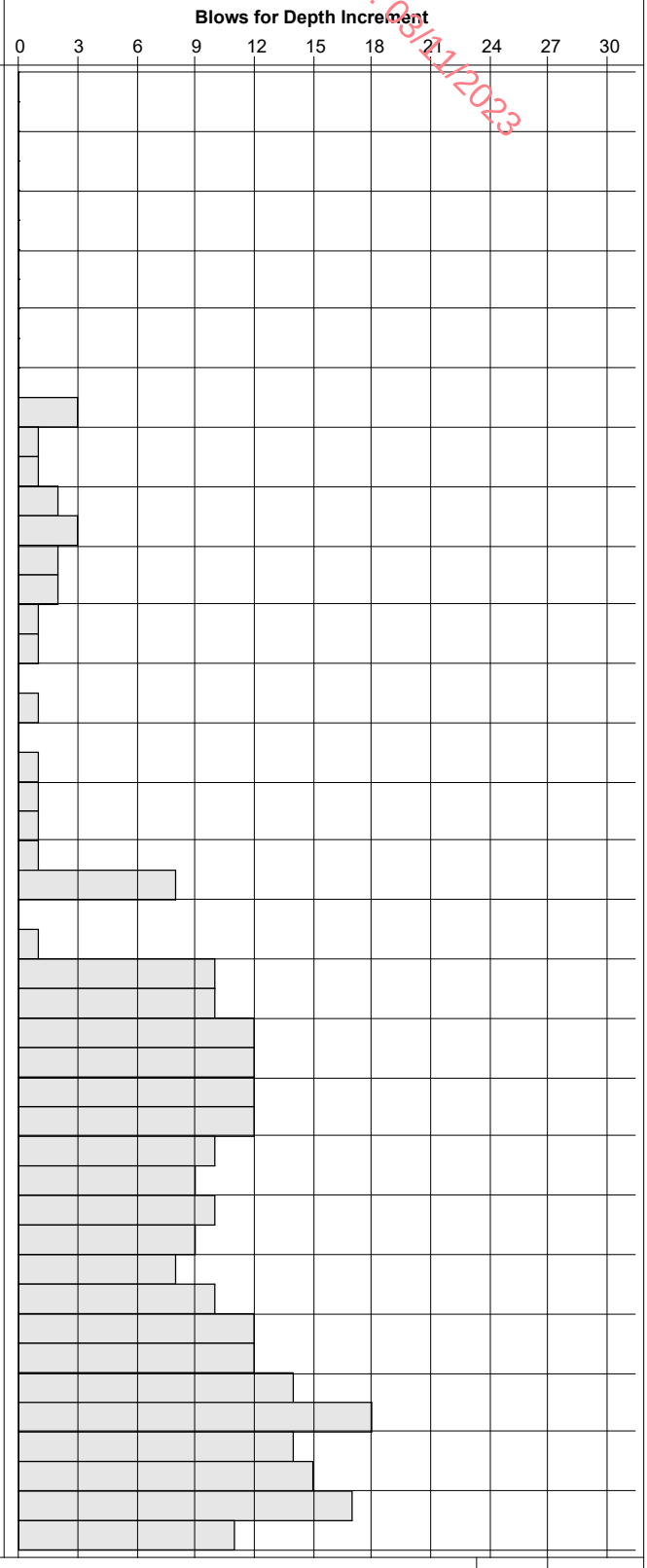
Figure No.
12205-09-22.DP-24

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-25

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.46	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606068.8 E 743242.3 N	19/10/2022		1/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.46	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.96	0.50
0.60-0.70	0			
0.70-0.80	0			
0.80-0.90	0			
0.90-1.00	0			
1.00-1.10	0		39.46	1.00
1.10-1.20	3			
1.20-1.30	1			
1.30-1.40	1			
1.40-1.50	2			
1.50-1.60	3		38.96	1.50
1.60-1.70	2			
1.70-1.80	2			
1.80-1.90	1			
1.90-2.00	1			
2.00-2.10	0		38.46	2.00
2.10-2.20	1			
2.20-2.30	0			
2.30-2.40	1			
2.40-2.50	1			
2.50-2.60	1		37.96	2.50
2.60-2.70	1			
2.70-2.80	8			
2.80-2.90	0			
2.90-3.00	1			
3.00-3.10	10		37.46	3.00
3.10-3.20	10			
3.20-3.30	12			
3.30-3.40	12			
3.40-3.50	12			
3.50-3.60	12		36.96	3.50
3.60-3.70	10			
3.70-3.80	9			
3.80-3.90	10			
3.90-4.00	9			
4.00-4.10	8		36.46	4.00
4.10-4.20	10			
4.20-4.30	12			
4.30-4.40	12			
4.40-4.50	14			
4.50-4.60	18		35.96	4.50
4.60-4.70	14			
4.70-4.80	15			
4.80-4.90	17			
4.90-5.00	11		35.46	5.00



Remarks
Refusal at 5.54m BGL

Scale (approx)	Logged By
1:25	CMP

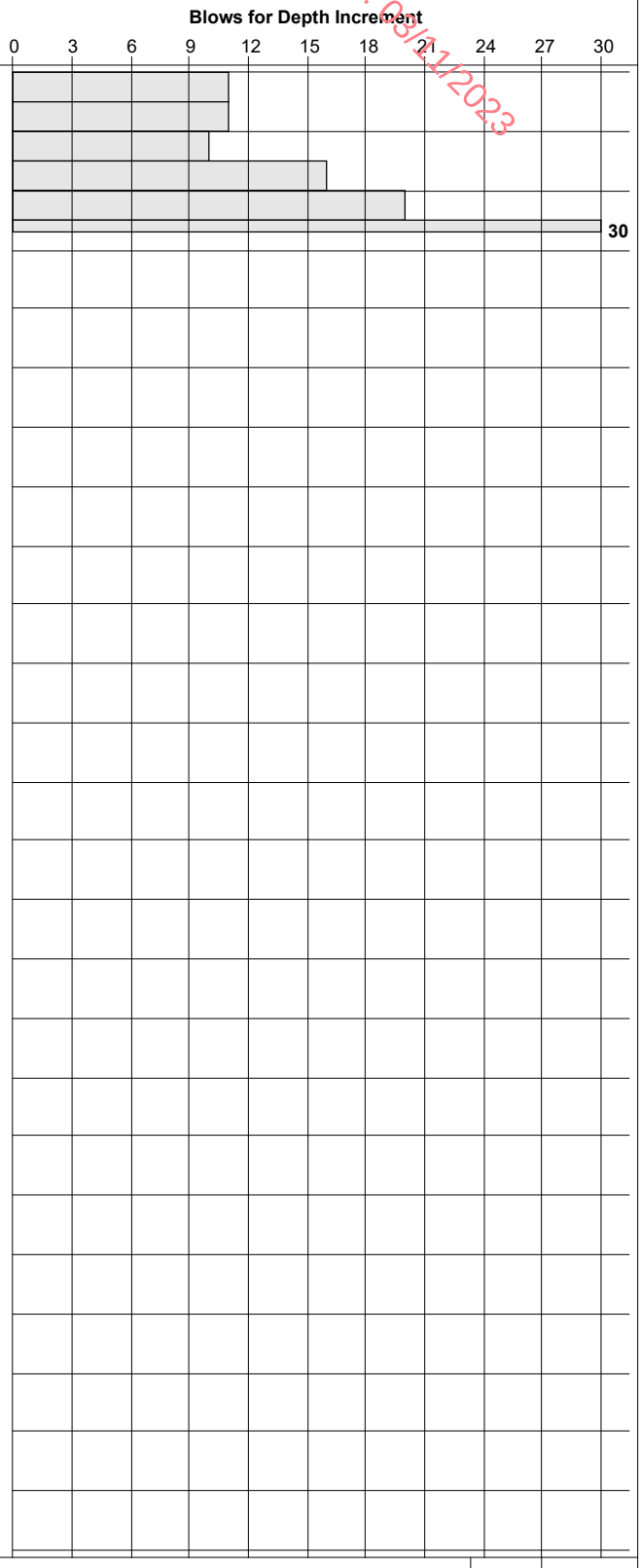
Figure No.
12205-09-22.DP-25

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-25

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.46	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606068.8 E 743242.3 N	19/10/2022		2/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
5.00-5.10	11		35.46	5.00
5.10-5.20	11			
5.20-5.30	10			
5.30-5.40	16			
5.40-5.50	20			
5.50-5.54	30		34.96	5.50
			34.46	6.00
			33.96	6.50
			33.46	7.00
			32.96	7.50
			32.46	8.00
			31.96	8.50
			31.46	9.00
			30.96	9.50
			30.46	10.00



Remarks

Scale (approx)	Logged By
1:25	CMP

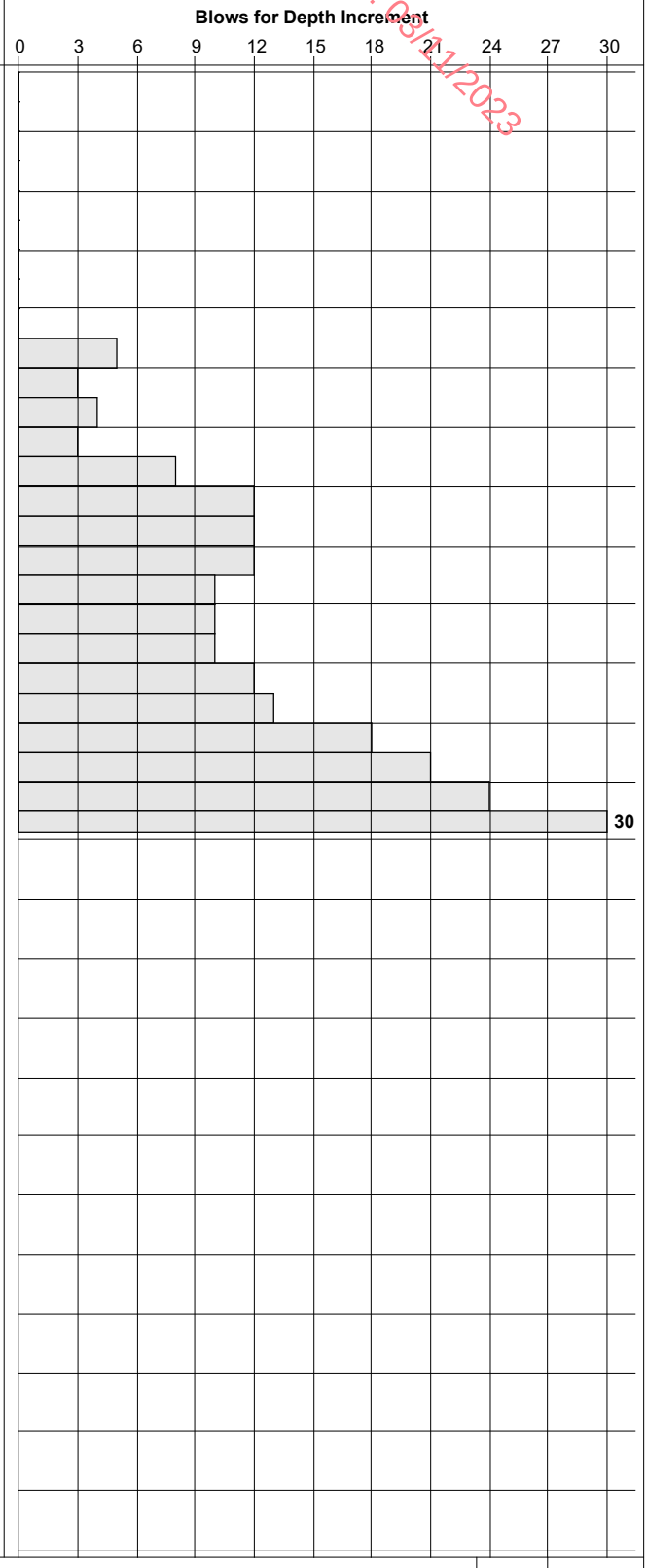
Figure No.
12205-09-22.DP-25

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-26

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.60	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606048.9 E 743254.4 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.60	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		40.10	0.50
0.60-0.70	0			
0.70-0.80	0			
0.80-0.90	0			
0.90-1.00	5			
1.00-1.10	3		39.60	1.00
1.10-1.20	4			
1.20-1.30	3			
1.30-1.40	8			
1.40-1.50	12			
1.50-1.60	12		39.10	1.50
1.60-1.70	12			
1.70-1.80	10			
1.80-1.90	10			
1.90-2.00	10			
2.00-2.10	12		38.60	2.00
2.10-2.20	13			
2.20-2.30	18			
2.30-2.40	21			
2.40-2.50	24			
2.50-2.57	30		38.10	2.50
			37.60	3.00
			37.10	3.50
			36.60	4.00
			36.10	4.50
			35.60	5.00



Remarks
Refusal at 2.57m BGL

Scale (approx)	Logged By
1:25	CMP

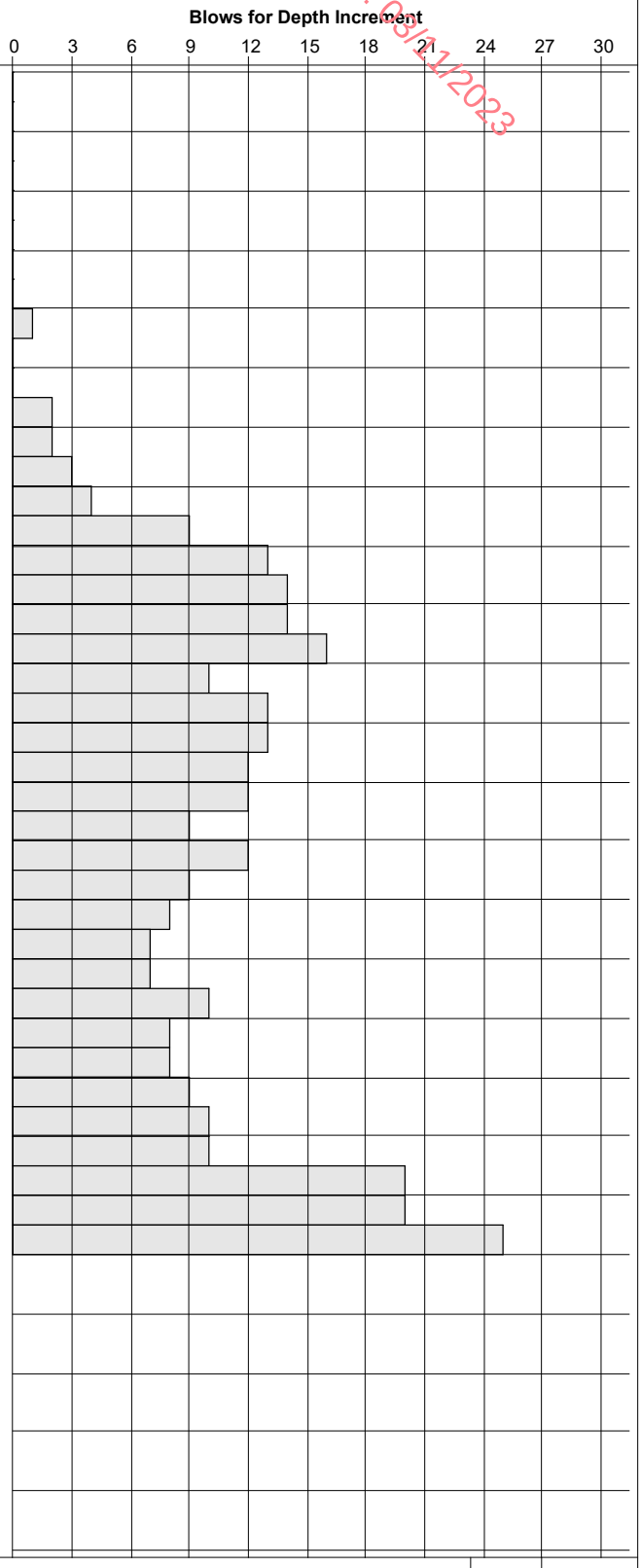
Figure No.
12205-09-22.DP-26

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-27

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.45	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606044.1 E 743223.3 N	19/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.45	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.95	0.50
0.60-0.70	0			
0.70-0.80	0			
0.80-0.90	1			
0.90-1.00	0			
1.00-1.10	0		39.45	1.00
1.10-1.20	2			
1.20-1.30	2			
1.30-1.40	3			
1.40-1.50	4			
1.50-1.60	9		38.95	1.50
1.60-1.70	13			
1.70-1.80	14			
1.80-1.90	14			
1.90-2.00	16			
2.00-2.10	10		38.45	2.00
2.10-2.20	13			
2.20-2.30	13			
2.30-2.40	12			
2.40-2.50	12			
2.50-2.60	9		37.95	2.50
2.60-2.70	12			
2.70-2.80	9			
2.80-2.90	8			
2.90-3.00	7			
3.00-3.10	7		37.45	3.00
3.10-3.20	10			
3.20-3.30	8			
3.30-3.40	8			
3.40-3.50	9			
3.50-3.60	10		36.95	3.50
3.60-3.70	10			
3.70-3.80	20			
3.80-3.90	20			
3.90-4.00	25		36.45	4.00
			35.95	4.50
			35.45	5.00



Remarks
Refusal at 4.00m BGL

Scale (approx)	Logged By
1:25	CMP

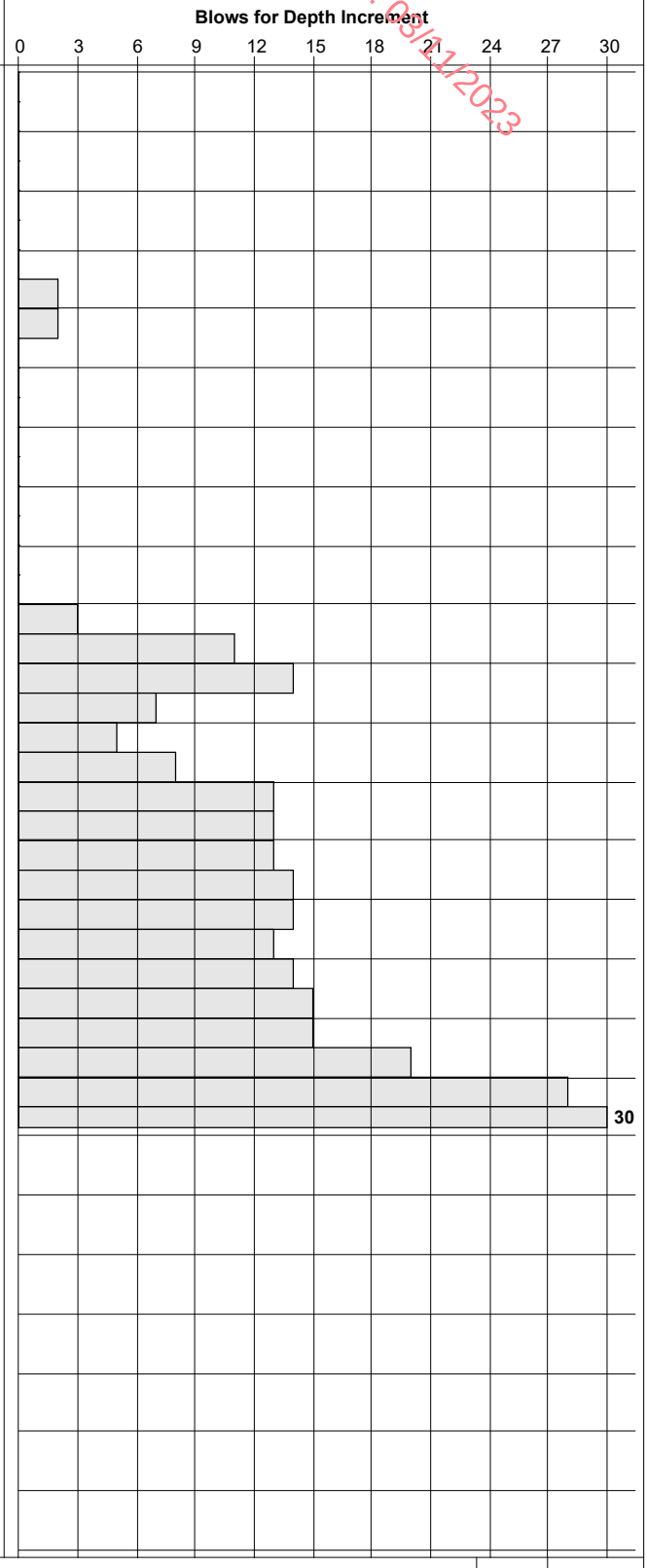
Figure No.
12205-09-22.DP-27

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-28

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.26	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605983.7 E 743249.3 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.26	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.76	0.50
0.60-0.70	0			
0.70-0.80	2			
0.80-0.90	2			
0.90-1.00	0			
1.00-1.10	0		39.26	1.00
1.10-1.20	0			
1.20-1.30	0			
1.30-1.40	0			
1.40-1.50	0			
1.50-1.60	0		38.76	1.50
1.60-1.70	0			
1.70-1.80	0			
1.80-1.90	3			
1.90-2.00	11			
2.00-2.10	14		38.26	2.00
2.10-2.20	7			
2.20-2.30	5			
2.30-2.40	8			
2.40-2.50	13			
2.50-2.60	13		37.76	2.50
2.60-2.70	13			
2.70-2.80	14			
2.80-2.90	14			
2.90-3.00	13			
3.00-3.10	14		37.26	3.00
3.10-3.20	15			
3.20-3.30	15			
3.30-3.40	20			
3.40-3.50	28			
3.50-3.57	30		36.76	3.50
			36.26	4.00
			35.76	4.50
			35.26	5.00



Remarks
Refusal at 3.57m BGL

Scale (approx)	Logged By
1:25	CMP

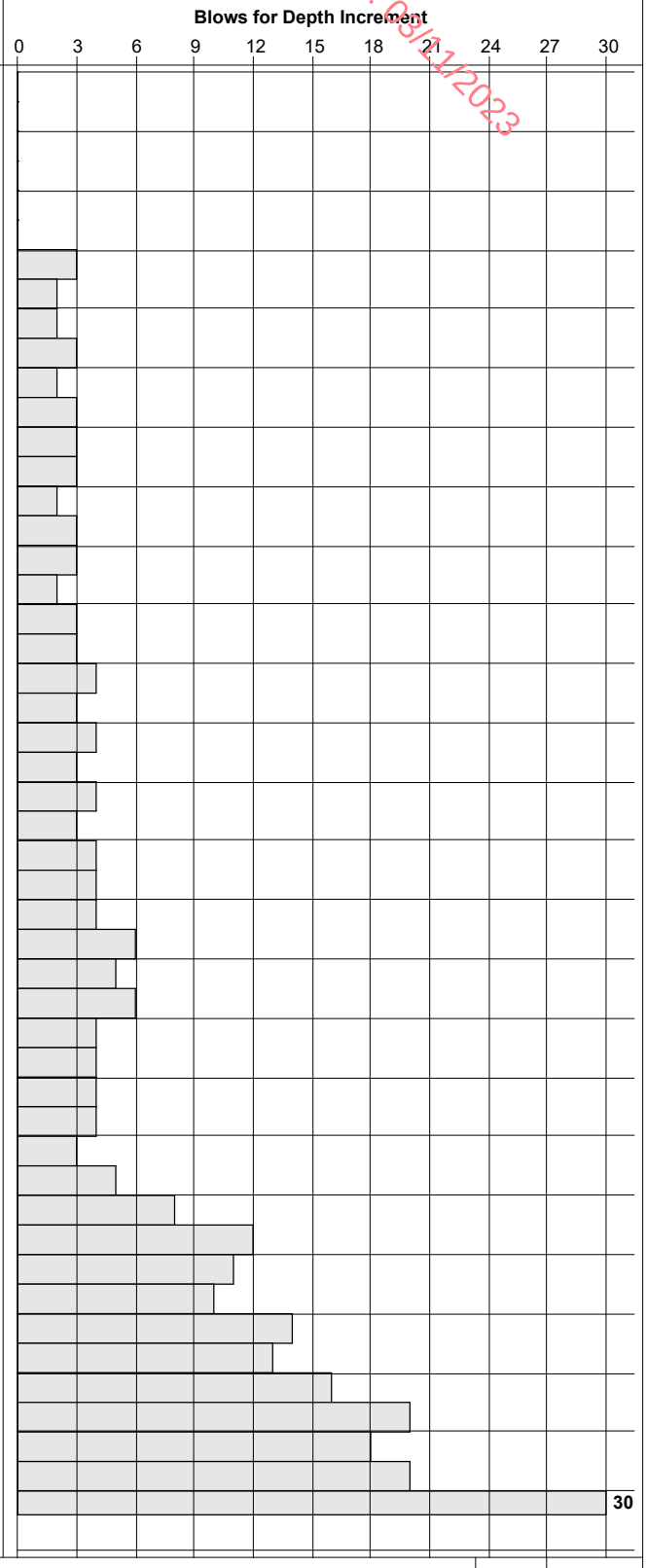
Figure No.
12205-09-22.DP-28

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-29

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.24	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605980 E 743207.8 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.24	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.74	0.50
0.60-0.70	3			
0.70-0.80	2			
0.80-0.90	2			
0.90-1.00	3			
1.00-1.10	2		39.24	1.00
1.10-1.20	3			
1.20-1.30	3			
1.30-1.40	3			
1.40-1.50	2			
1.50-1.60	3		38.74	1.50
1.60-1.70	3			
1.70-1.80	2			
1.80-1.90	3			
1.90-2.00	3			
2.00-2.10	4		38.24	2.00
2.10-2.20	3			
2.20-2.30	4			
2.30-2.40	3			
2.40-2.50	4			
2.50-2.60	3		37.74	2.50
2.60-2.70	4			
2.70-2.80	4			
2.80-2.90	4			
2.90-3.00	6			
3.00-3.10	5		37.24	3.00
3.10-3.20	6			
3.20-3.30	4			
3.30-3.40	4			
3.40-3.50	4			
3.50-3.60	4		36.74	3.50
3.60-3.70	3			
3.70-3.80	5			
3.80-3.90	8			
3.90-4.00	12			
4.00-4.10	11		36.24	4.00
4.10-4.20	10			
4.20-4.30	14			
4.30-4.40	13			
4.40-4.50	16			
4.50-4.60	20		35.74	4.50
4.60-4.70	18			
4.70-4.80	20			
4.80-4.88	30			
			35.24	5.00



Remarks
Refusal at 4.88m BGL

Scale (approx)	Logged By
1:25	CMP

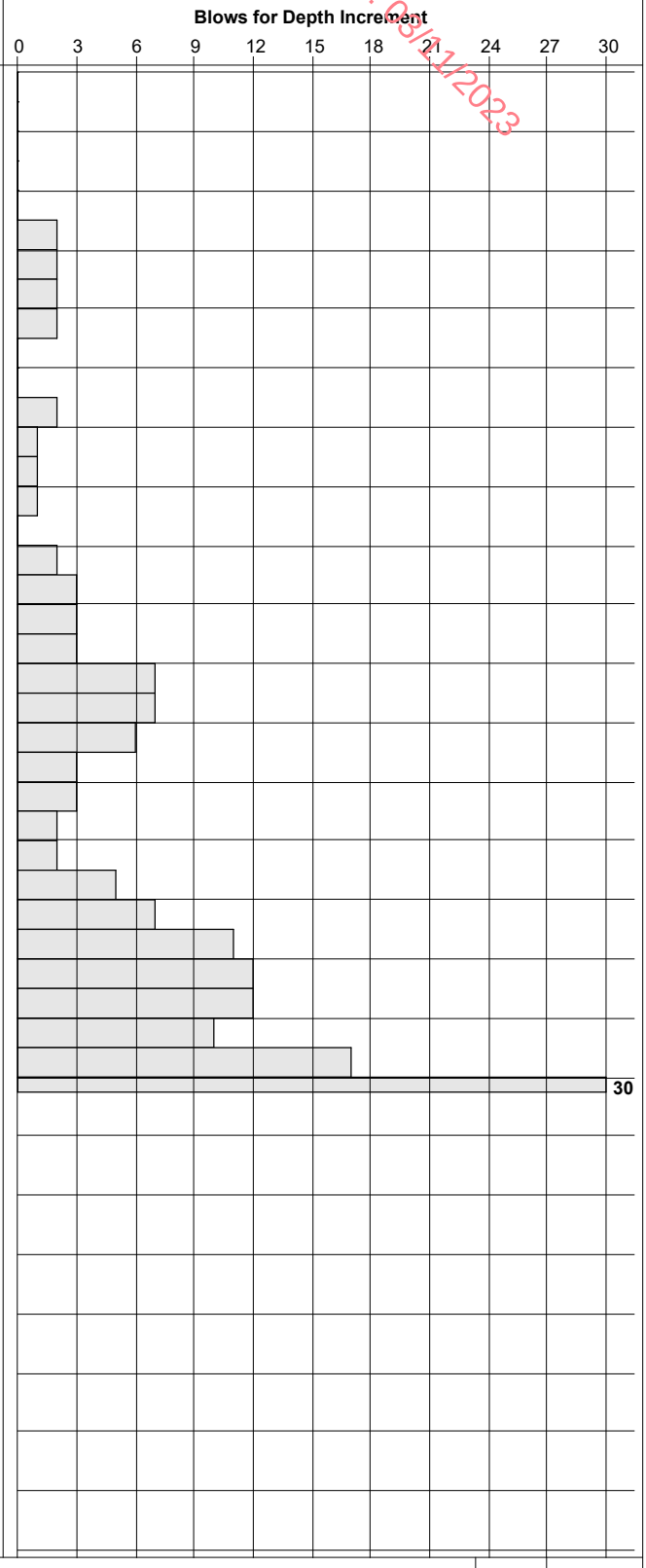
Figure No.
12205-09-22.DP-29

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-30

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.58	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606006.2 E 743202.2 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.58	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	2		40.08	0.50
0.60-0.70	2			
0.70-0.80	2			
0.80-0.90	2			
0.90-1.00	0			
1.00-1.10	0		39.58	1.00
1.10-1.20	2			
1.20-1.30	1			
1.30-1.40	1			
1.40-1.50	1			
1.50-1.60	0		39.08	1.50
1.60-1.70	2			
1.70-1.80	3			
1.80-1.90	3			
1.90-2.00	3			
2.00-2.10	7		38.58	2.00
2.10-2.20	7			
2.20-2.30	6			
2.30-2.40	3			
2.40-2.50	3			
2.50-2.60	2		38.08	2.50
2.60-2.70	2			
2.70-2.80	5			
2.80-2.90	7			
2.90-3.00	11			
3.00-3.10	12		37.58	3.00
3.10-3.20	12			
3.20-3.30	10			
3.30-3.40	17			
3.40-3.45	30		37.08	3.50
			36.58	4.00
			36.08	4.50
			35.58	5.00



Remarks
Refusal at 3.45m BGL

Scale (approx)	Logged By
1:25	CMP

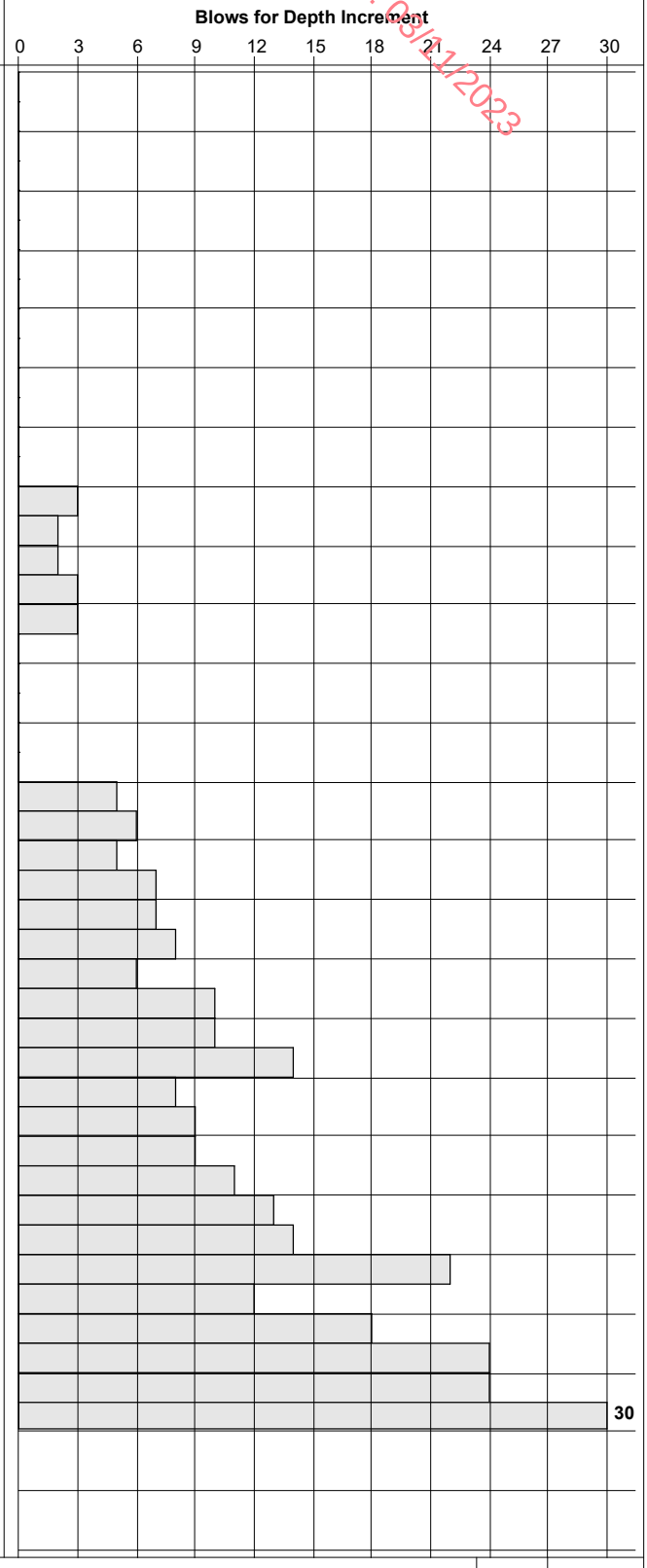
Figure No.
12205-09-22.DP-30

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-31

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	41.15	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606013.6 E 743174.9 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		41.15	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		40.65	0.50
0.60-0.70	0			
0.70-0.80	0			
0.80-0.90	0			
0.90-1.00	0			
1.00-1.10	0		40.15	1.00
1.10-1.20	0			
1.20-1.30	0			
1.30-1.40	0			
1.40-1.50	3			
1.50-1.60	2		39.65	1.50
1.60-1.70	2			
1.70-1.80	3			
1.80-1.90	3			
1.90-2.00	0			
2.00-2.10	0		39.15	2.00
2.10-2.20	0			
2.20-2.30	0			
2.30-2.40	0			
2.40-2.50	5			
2.50-2.60	6		38.65	2.50
2.60-2.70	5			
2.70-2.80	7			
2.80-2.90	7			
2.90-3.00	8			
3.00-3.10	6		38.15	3.00
3.10-3.20	10			
3.20-3.30	10			
3.30-3.40	14			
3.40-3.50	8			
3.50-3.60	9		37.65	3.50
3.60-3.70	9			
3.70-3.80	11			
3.80-3.90	13			
3.90-4.00	14			
4.00-4.10	22		37.15	4.00
4.10-4.20	12			
4.20-4.30	18			
4.30-4.40	24			
4.40-4.50	24			
4.50-4.59	30		36.65	4.50
			36.15	5.00



Remarks
Refusal at 4.59m BGL

Scale (approx)	Logged By
1:25	CMP

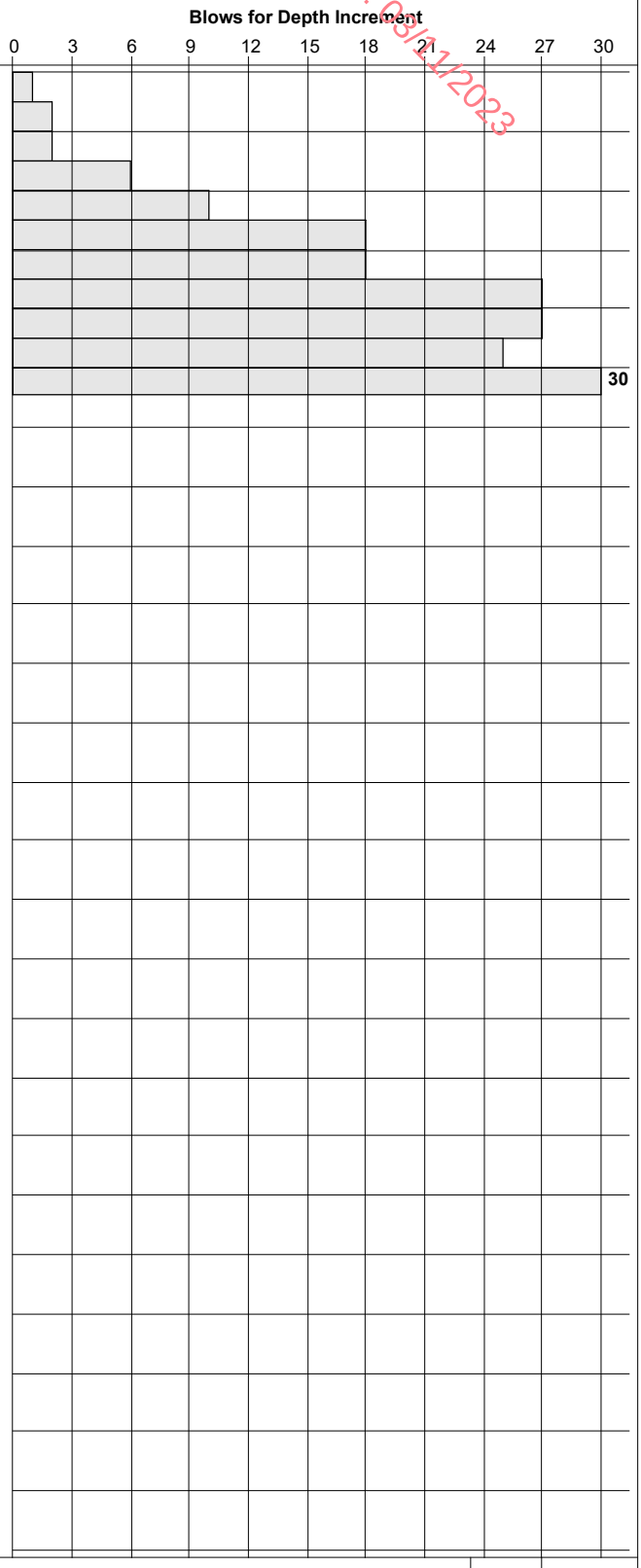
Figure No.
12205-09-22.DP-31

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-32

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	42.76	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605986.2 E 743168.1 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	1		42.76	0.00
0.10-0.20	2			
0.20-0.30	2			
0.30-0.40	6			
0.40-0.50	10			
0.50-0.60	18		42.26	0.50
0.60-0.70	18			
0.70-0.80	27			
0.80-0.90	27			
0.90-1.00	25			
1.00-1.09	30		41.76	1.00
			41.26	1.50
			40.76	2.00
			40.26	2.50
			39.76	3.00
			39.26	3.50
			38.76	4.00
			38.26	4.50
			37.76	5.00



Remarks
Refusal at 1.09m BGL

Scale (approx)	Logged By
1:25	CMP

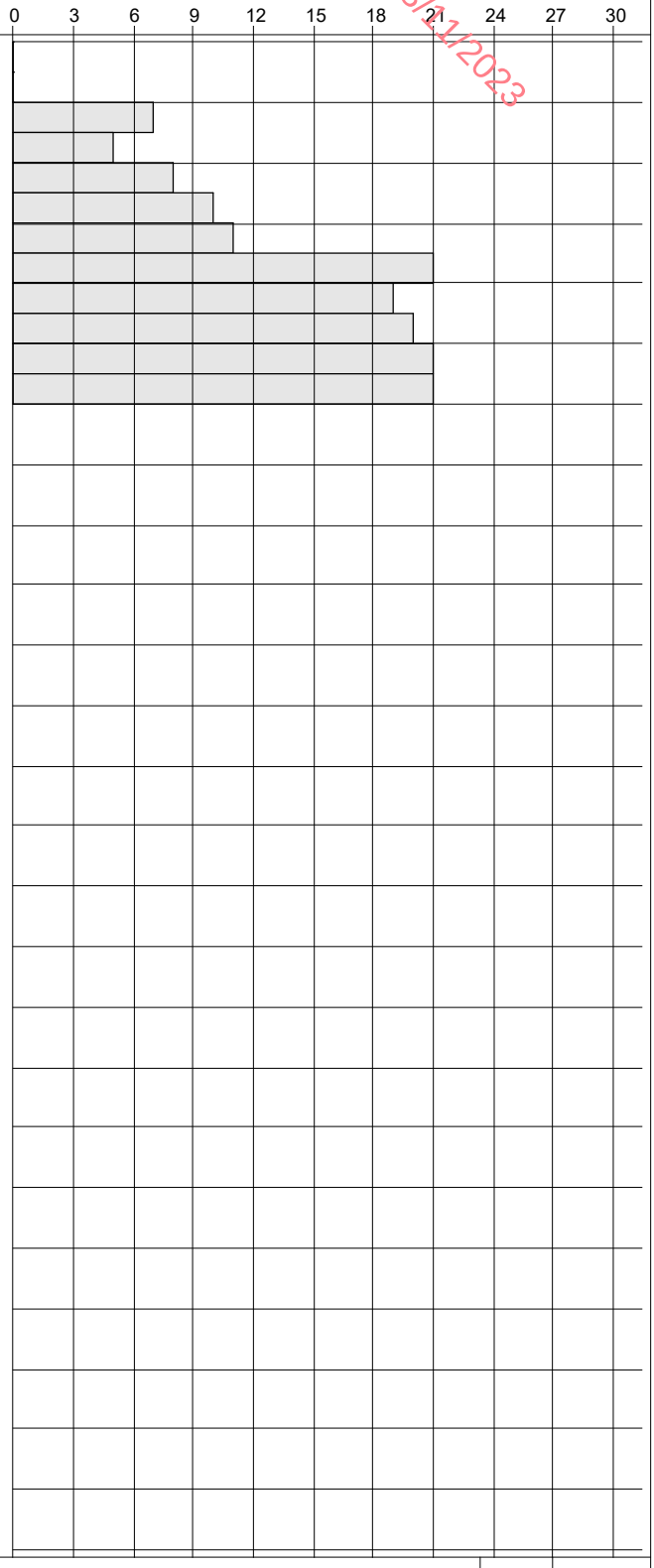
Figure No.
12205-09-22.DP-32

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-33

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.99	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606014.1 E 743128.2 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.99	0.00
0.10-0.20	0			
0.20-0.30	7			
0.30-0.40	5			
0.40-0.50	8			
0.50-0.60	10		40.49	0.50
0.60-0.70	11			
0.70-0.80	21			
0.80-0.90	19			
0.90-1.00	20			
1.00-1.10	21		39.99	1.00
1.10-1.20	21			
			39.49	1.50
			38.99	2.00
			38.49	2.50
			37.99	3.00
			37.49	3.50
			36.99	4.00
			36.49	4.50
			35.99	5.00



Remarks
Refusal at 1.20m BGL

Scale (approx)	Logged By
1:25	CMP

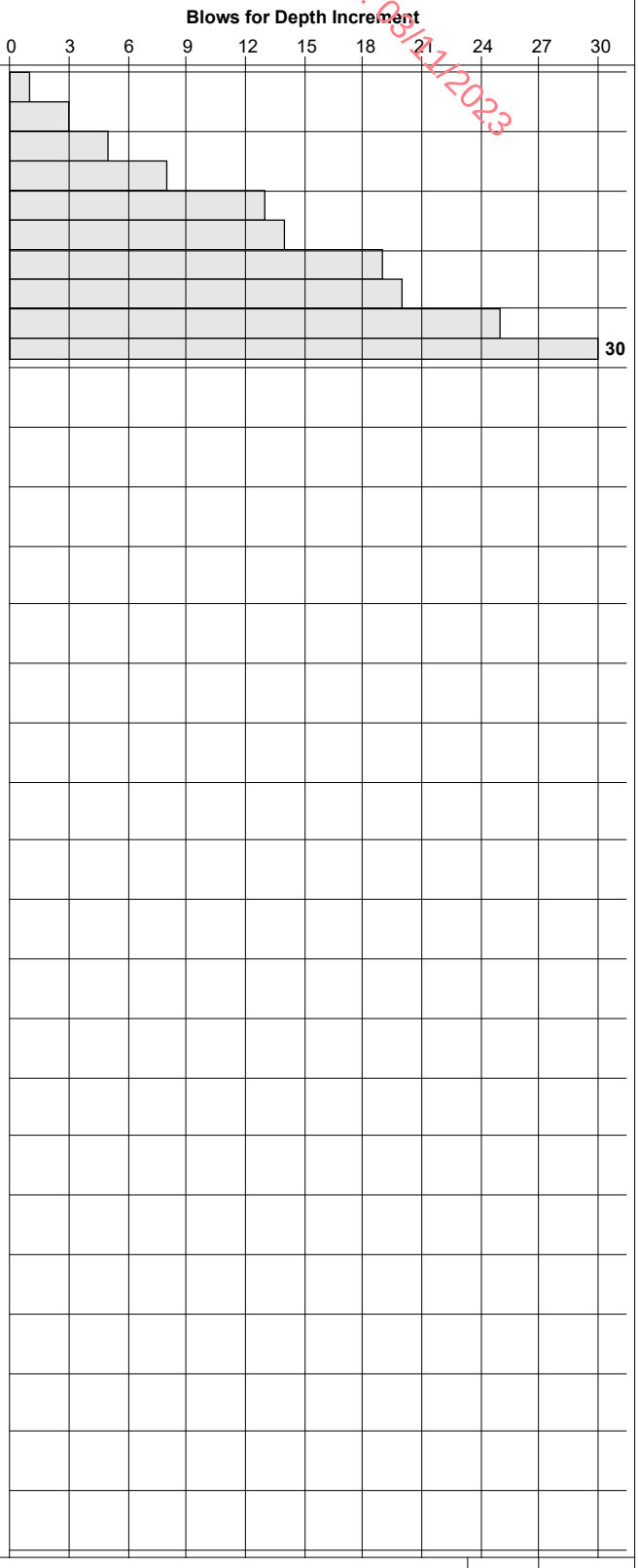
Figure No.
12205-09-22.DP-33

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-34

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	43.16	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605986.8 E 743123.6 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	1		43.16	0.00
0.10-0.20	3			
0.20-0.30	5			
0.30-0.40	8			
0.40-0.50	13			
0.50-0.60	14		42.66	0.50
0.60-0.70	19			
0.70-0.80	20			
0.80-0.90	25			
0.90-0.97	30		42.16	1.00
			41.66	1.50
			41.16	2.00
			40.66	2.50
			40.16	3.00
			39.66	3.50
			39.16	4.00
			38.66	4.50
			38.16	5.00



Remarks
Refusal at 0.97m BGL

Scale (approx)	Logged By
1:25	CMP

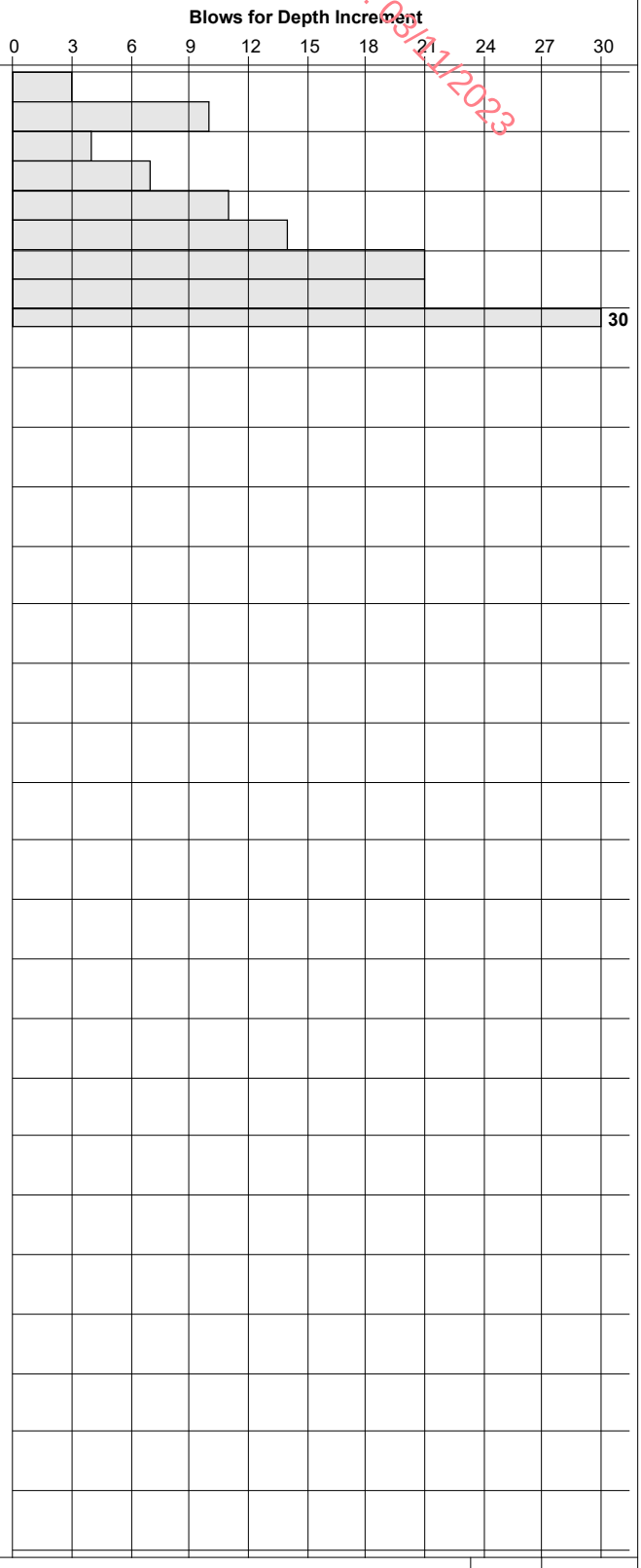
Figure No.
12205-09-22.DP-34

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-35

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	41.97	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605993 E 743102.2 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	3		41.97	0.00
0.10-0.20	10			
0.20-0.30	4			
0.30-0.40	7			
0.40-0.50	11			
0.50-0.60	14		41.47	0.50
0.60-0.70	21			
0.70-0.80	21			
0.80-0.86	30			
			40.97	1.00
			40.47	1.50
			39.97	2.00
			39.47	2.50
			38.97	3.00
			38.47	3.50
			37.97	4.00
			37.47	4.50
			36.97	5.00



Remarks
Refusal at 0.86m BGL

Scale (approx)	Logged By
1:25	CMP

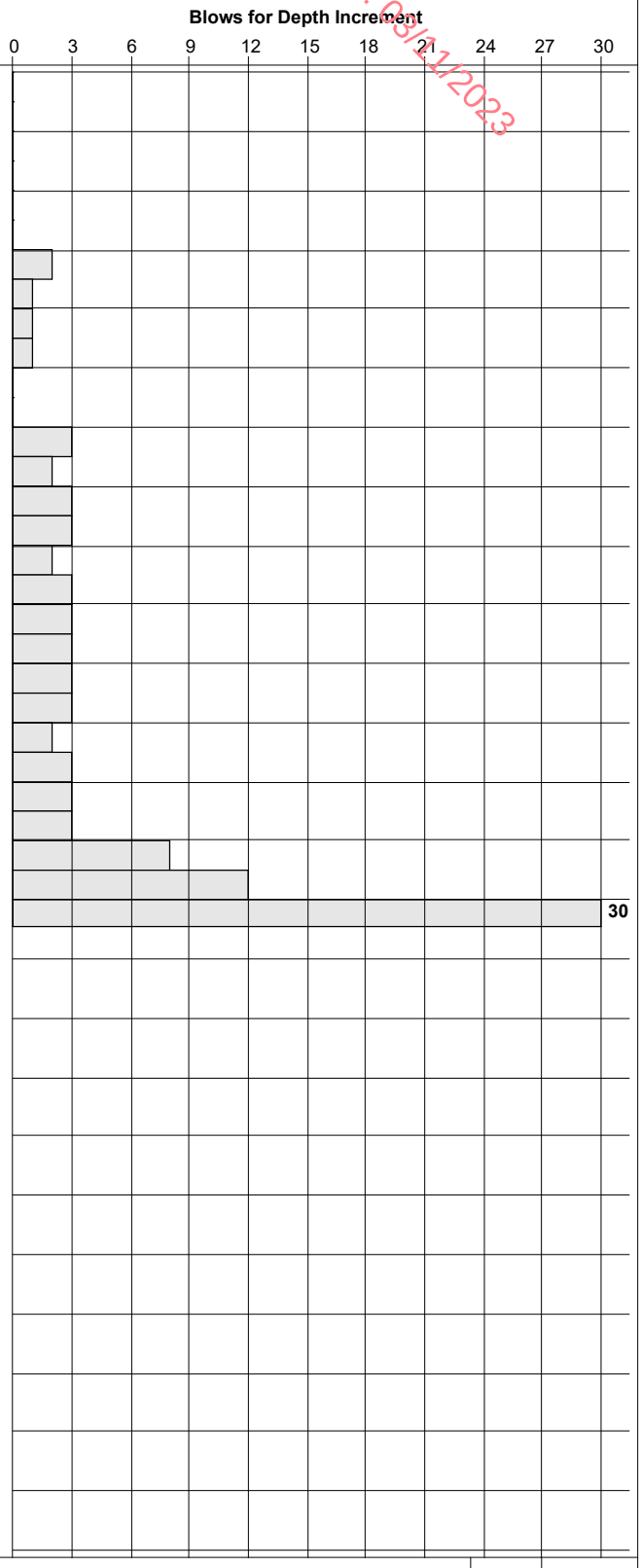
Figure No.
12205-09-22.DP-35

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-36

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.42	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	606020.9 E 743096.4 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.42	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.92	0.50
0.60-0.70	2			
0.70-0.80	1			
0.80-0.90	1			
0.90-1.00	1			
1.00-1.10	0		39.42	1.00
1.10-1.20	0			
1.20-1.30	3			
1.30-1.40	2			
1.40-1.50	3			
1.50-1.60	3		38.92	1.50
1.60-1.70	2			
1.70-1.80	3			
1.80-1.90	3			
1.90-2.00	3			
2.00-2.10	3		38.42	2.00
2.10-2.20	3			
2.20-2.30	2			
2.30-2.40	3			
2.40-2.50	3			
2.50-2.60	3		37.92	2.50
2.60-2.70	8			
2.70-2.80	12			
2.80-2.89	30			
			37.42	3.00
			36.92	3.50
			36.42	4.00
			35.92	4.50
			35.42	5.00



Remarks
Refusal at 2.89m BGL

Scale (approx)	Logged By
1:25	CMP

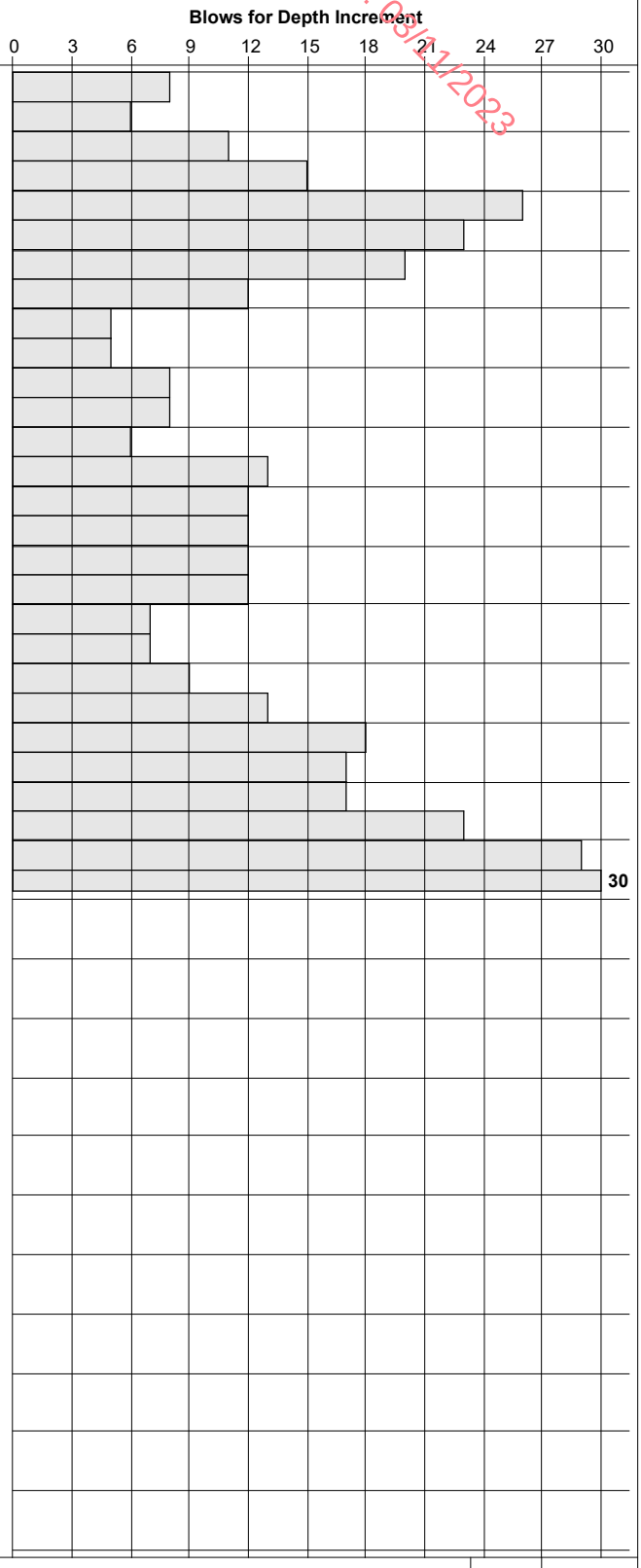
Figure No.
12205-09-22.DP-36

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-37

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	41.06	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605994.2 E 743076.8 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	8		41.06	0.00
0.10-0.20	6			
0.20-0.30	11			
0.30-0.40	15			
0.40-0.50	26			
0.50-0.60	23		40.56	0.50
0.60-0.70	20			
0.70-0.80	12			
0.80-0.90	5			
0.90-1.00	5			
1.00-1.10	8		40.06	1.00
1.10-1.20	8			
1.20-1.30	6			
1.30-1.40	13			
1.40-1.50	12			
1.50-1.60	12		39.56	1.50
1.60-1.70	12			
1.70-1.80	12			
1.80-1.90	7			
1.90-2.00	7			
2.00-2.10	9		39.06	2.00
2.10-2.20	13			
2.20-2.30	18			
2.30-2.40	17			
2.40-2.50	17			
2.50-2.60	23		38.56	2.50
2.60-2.70	29			
2.70-2.77	30			
			38.06	3.00
			37.56	3.50
			37.06	4.00
			36.56	4.50
			36.06	5.00



Remarks
Refusal at 2.77m BGL

Scale (approx)	Logged By
1:25	CMP

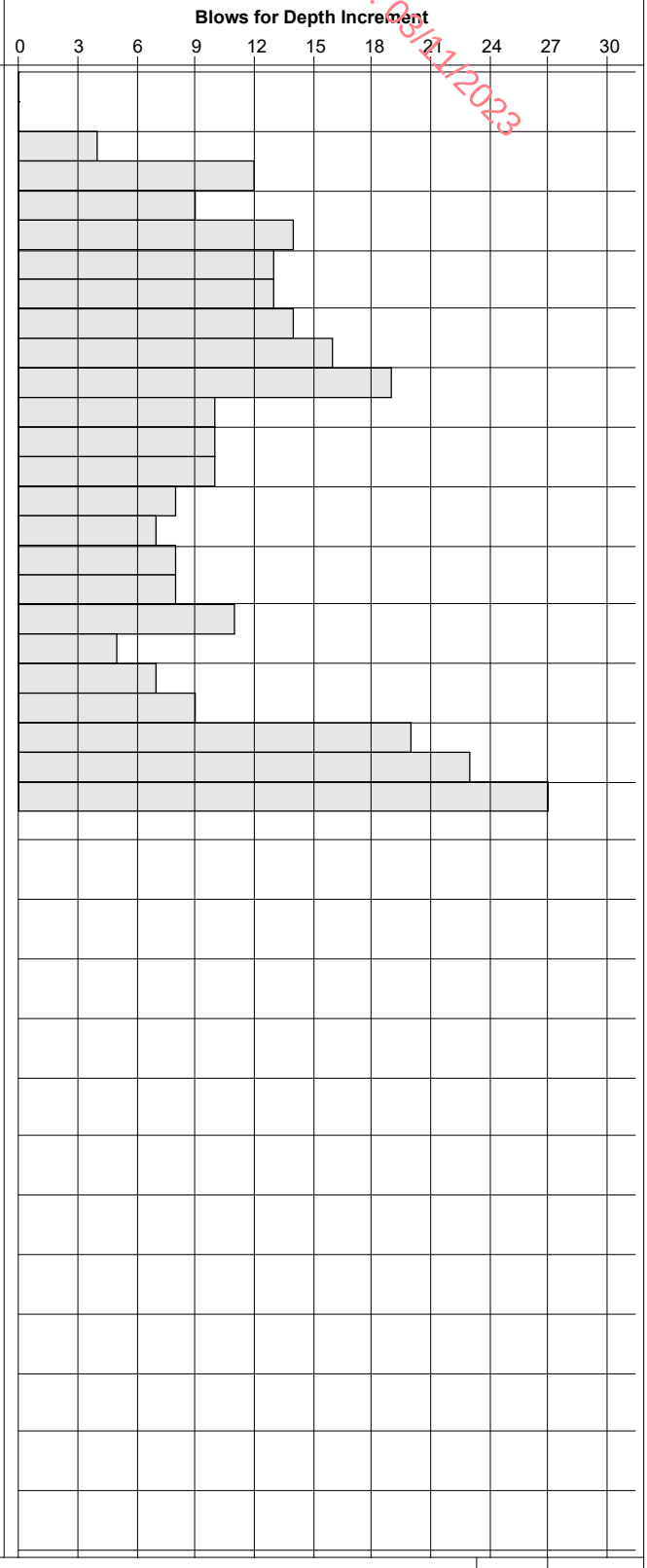
Figure No.
12205-09-22.DP-37

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-38

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.90	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605942.5 E 743184.8 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.90	0.00
0.10-0.20	0			
0.20-0.30	4			
0.30-0.40	12			
0.40-0.50	9			
0.50-0.60	14		40.40	0.50
0.60-0.70	13			
0.70-0.80	13			
0.80-0.90	14			
0.90-1.00	16			
1.00-1.10	19		39.90	1.00
1.10-1.20	10			
1.20-1.30	10			
1.30-1.40	10			
1.40-1.50	8			
1.50-1.60	7		39.40	1.50
1.60-1.70	8			
1.70-1.80	8			
1.80-1.90	11			
1.90-2.00	5			
2.00-2.10	7		38.90	2.00
2.10-2.20	9			
2.20-2.30	20			
2.30-2.40	23			
2.40-2.50	27		38.40	2.50
			37.90	3.00
			37.40	3.50
			36.90	4.00
			36.40	4.50
			35.90	5.00



Remarks
Refusal at 2.50m BGL

Scale (approx)	Logged By
1:25	CMP

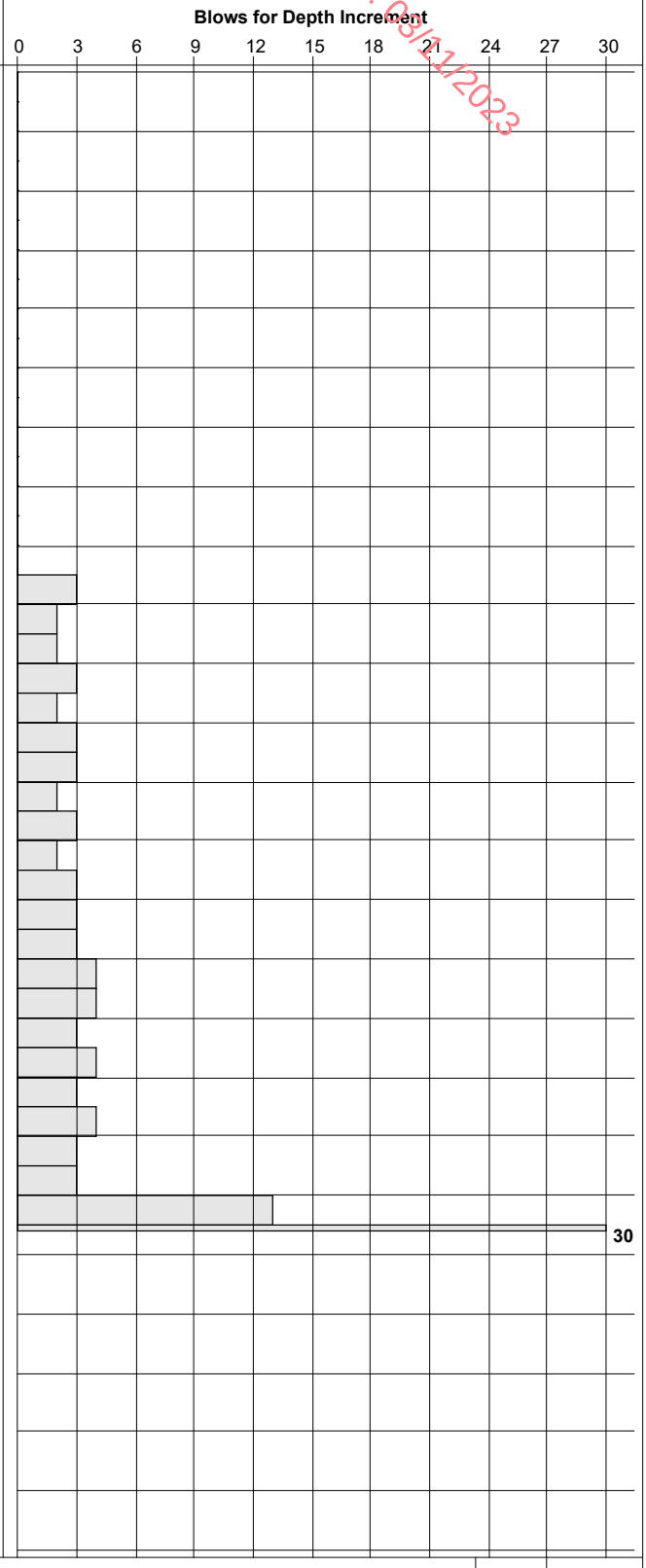
Figure No.
12205-09-22.DP-38

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-39

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.42	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605918.7 E 743168.4 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.42	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		39.92	0.50
0.60-0.70	0			
0.70-0.80	0			
0.80-0.90	0			
0.90-1.00	0			
1.00-1.10	0		39.42	1.00
1.10-1.20	0			
1.20-1.30	0			
1.30-1.40	0			
1.40-1.50	0			
1.50-1.60	0		38.92	1.50
1.60-1.70	0			
1.70-1.80	3			
1.80-1.90	2			
1.90-2.00	2			
2.00-2.10	3		38.42	2.00
2.10-2.20	2			
2.20-2.30	3			
2.30-2.40	3			
2.40-2.50	2			
2.50-2.60	3		37.92	2.50
2.60-2.70	2			
2.70-2.80	3			
2.80-2.90	3			
2.90-3.00	3			
3.00-3.10	4		37.42	3.00
3.10-3.20	4			
3.20-3.30	3			
3.30-3.40	4			
3.40-3.50	3			
3.50-3.60	4		36.92	3.50
3.60-3.70	3			
3.70-3.80	3			
3.80-3.90	13			
3.90-3.92	30		36.42	4.00
			35.92	4.50
			35.42	5.00



Remarks
Refusal at 3.92m BGL

Scale (approx)	Logged By
1:25	CMP

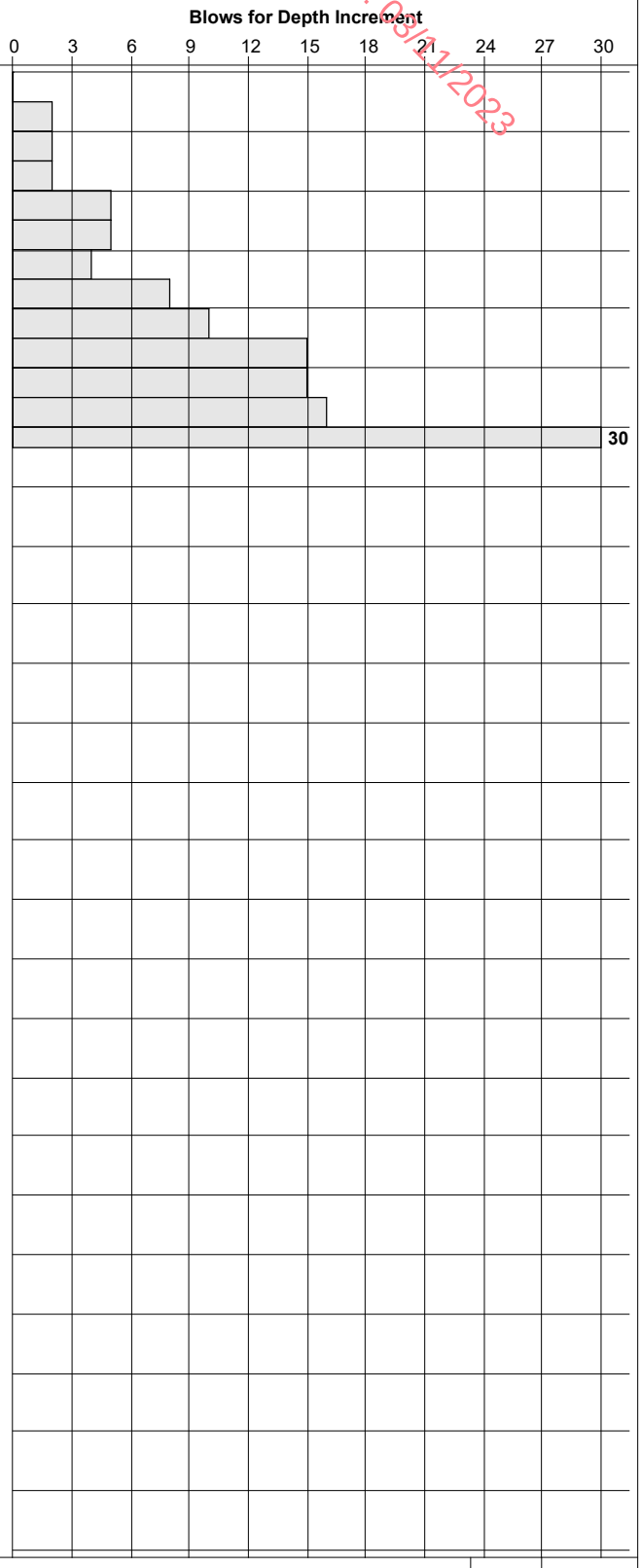
Figure No.
12205-09-22.DP-39

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-40

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	42.86	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605942.5 E 743153.4 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		42.86	0.00
0.10-0.20	2			
0.20-0.30	2			
0.30-0.40	2			
0.40-0.50	5		42.36	0.50
0.50-0.60	5			
0.60-0.70	4			
0.70-0.80	8			
0.80-0.90	10			
0.90-1.00	15		41.86	1.00
1.00-1.10	15			
1.10-1.20	16			
1.20-1.27	30			
			41.36	1.50
			40.86	2.00
			40.36	2.50
			39.86	3.00
			39.36	3.50
			38.86	4.00
			38.36	4.50
			37.86	5.00



Remarks
Refusal at 1.27m BGL

Scale (approx)	Logged By
1:25	CMP

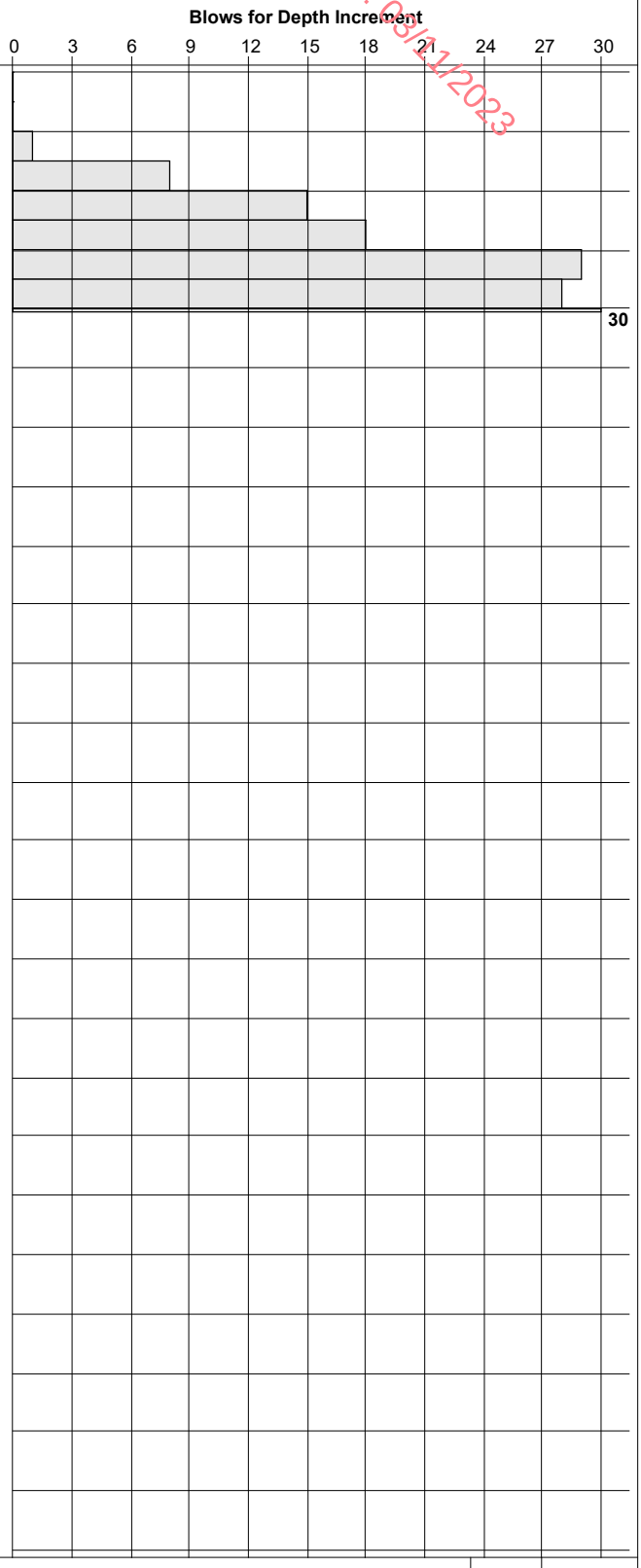
Figure No.
12205-09-22.DP-40

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-41

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	41.40	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605921.4 E 743130.7 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		41.40	0.00
0.10-0.20	0			
0.20-0.30	1			
0.30-0.40	8			
0.40-0.50	15		40.90	0.50
0.50-0.60	18			
0.60-0.70	29			
0.70-0.80	28			
0.80-0.81	30		40.40	1.00
			39.90	1.50
			39.40	2.00
			38.90	2.50
			38.40	3.00
			37.90	3.50
			37.40	4.00
			36.90	4.50
			36.40	5.00



Remarks
Refusal at 0.81m BGL

Scale (approx)	Logged By
1:25	CMP

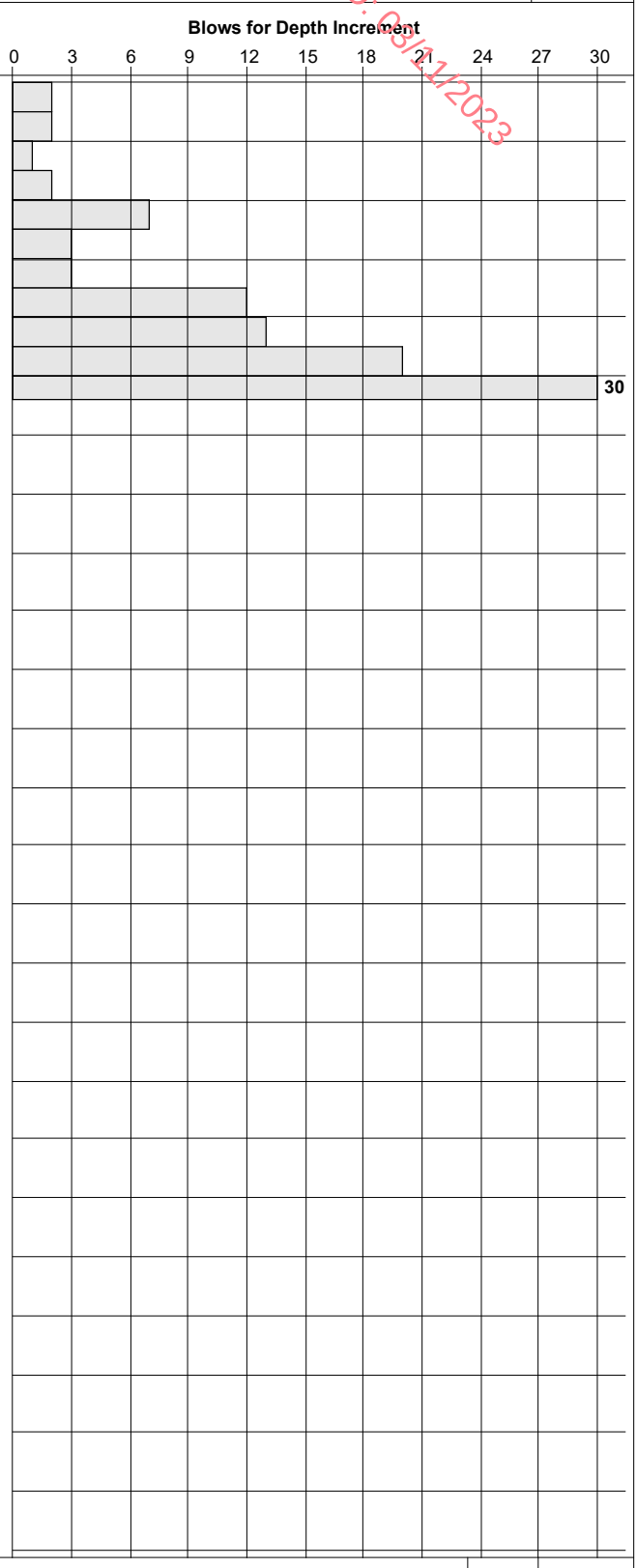
Figure No.
12205-09-22.DP-41

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-42

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	43.33	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605946.8 E 743122.9 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	2		43.33	0.00
0.10-0.20	2			
0.20-0.30	1			
0.30-0.40	2			
0.40-0.50	7			
0.50-0.60	3		42.83	0.50
0.60-0.70	3			
0.70-0.80	12			
0.80-0.90	13			
0.90-1.00	20			
1.00-1.08	30		42.33	1.00
			41.83	1.50
			41.33	2.00
			40.83	2.50
			40.33	3.00
			39.83	3.50
			39.33	4.00
			38.83	4.50
			38.33	5.00



Remarks
Refusal at 1.08m BGL

Scale (approx)	Logged By
1:25	CMP

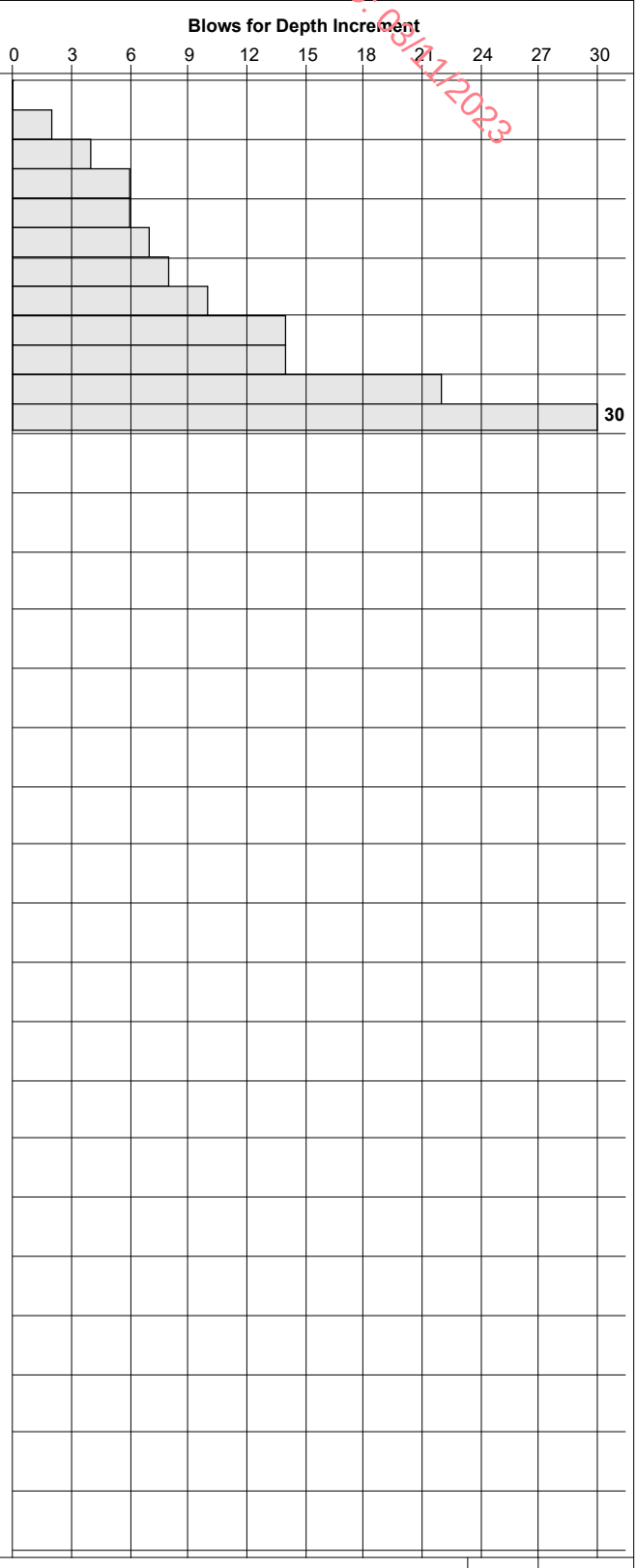
Figure No.
12205-09-22.DP-42

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-43

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	42.69	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605926.1 E 743100.8 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		42.69	0.00
0.10-0.20	2			
0.20-0.30	4			
0.30-0.40	6			
0.40-0.50	6			
0.50-0.60	7		42.19	0.50
0.60-0.70	8			
0.70-0.80	10			
0.80-0.90	14			
0.90-1.00	14			
1.00-1.10	22		41.69	1.00
1.10-1.19	30			
			41.19	1.50
			40.69	2.00
			40.19	2.50
			39.69	3.00
			39.19	3.50
			38.69	4.00
			38.19	4.50
			37.69	5.00



Remarks
Refusal at 1.19m BGL

Scale (approx)	Logged By
1:25	CMP

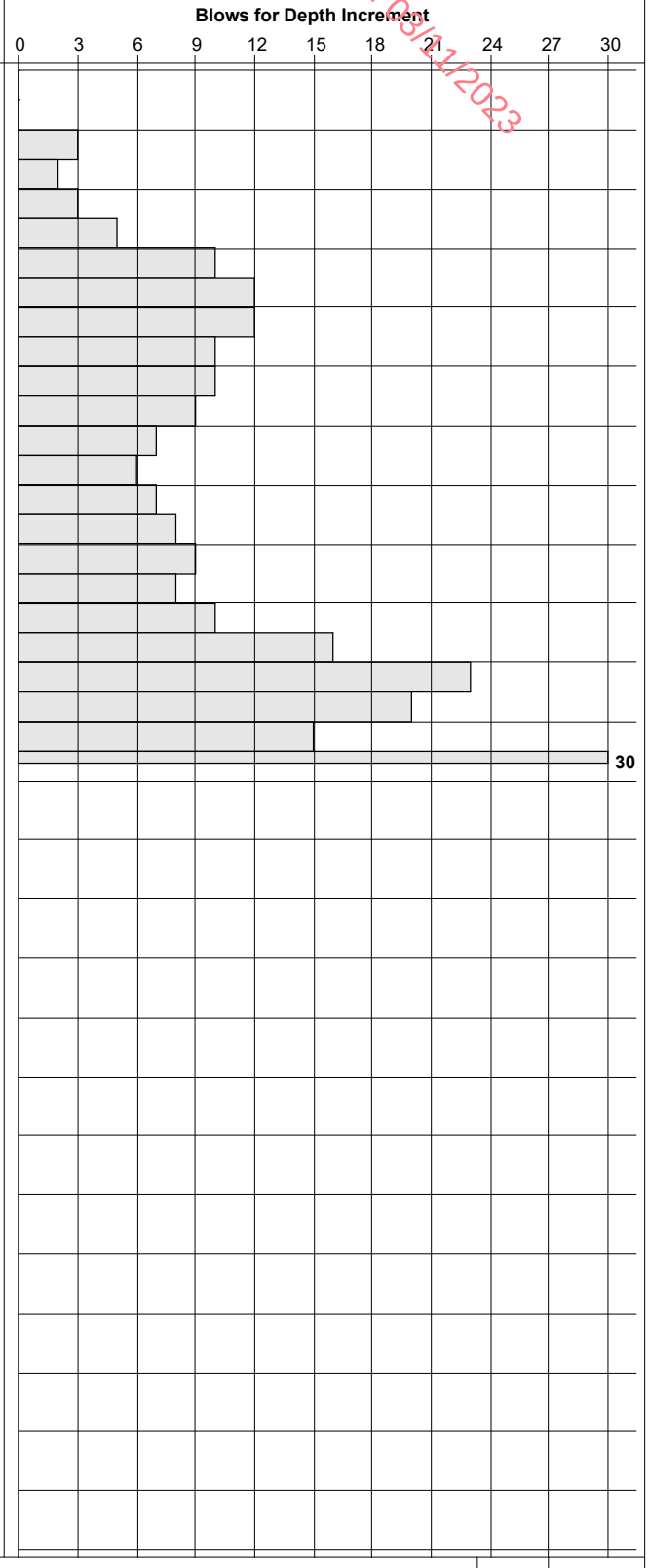
Figure No.
12205-09-22.DP-43

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-44

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	42.20	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605949.9 E 743085.1 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		42.20	0.00
0.10-0.20	0			
0.20-0.30	3			
0.30-0.40	2			
0.40-0.50	3			
0.50-0.60	5		41.70	0.50
0.60-0.70	10			
0.70-0.80	12			
0.80-0.90	12			
0.90-1.00	10			
1.00-1.10	10		41.20	1.00
1.10-1.20	9			
1.20-1.30	7			
1.30-1.40	6			
1.40-1.50	7			
1.50-1.60	8		40.70	1.50
1.60-1.70	9			
1.70-1.80	8			
1.80-1.90	10			
1.90-2.00	16			
2.00-2.10	23		40.20	2.00
2.10-2.20	20			
2.20-2.30	15			
2.30-2.34	30			
			39.70	2.50
			39.20	3.00
			38.70	3.50
			38.20	4.00
			37.70	4.50
			37.20	5.00



Remarks
Refusal at 2.34m BGL

Scale (approx)	Logged By
1:25	CMP

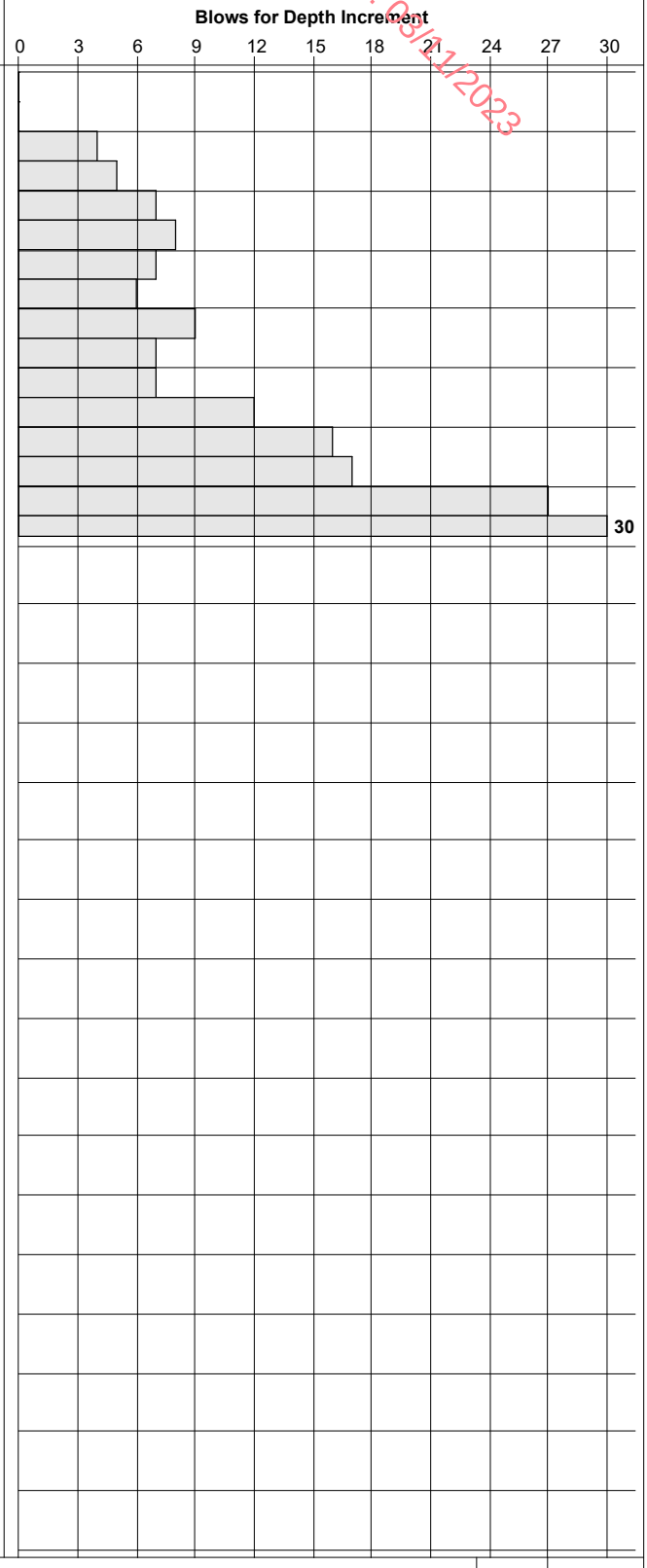
Figure No.
12205-09-22.DP-44

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-45

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	41.30	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605930.6 E 743067.1 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		41.30	0.00
0.10-0.20	0			
0.20-0.30	4			
0.30-0.40	5			
0.40-0.50	7		40.80	0.50
0.50-0.60	8			
0.60-0.70	7			
0.70-0.80	6			
0.80-0.90	9			
0.90-1.00	7		40.30	1.00
1.00-1.10	7			
1.10-1.20	12			
1.20-1.30	16			
1.30-1.40	17			
1.40-1.50	27		39.80	1.50
1.50-1.57	30			
			39.30	2.00
			38.80	2.50
			38.30	3.00
			37.80	3.50
			37.30	4.00
			36.80	4.50
			36.30	5.00



Remarks
Refusal at 1.57m BGL

Scale (approx)	Logged By
1:25	CMP

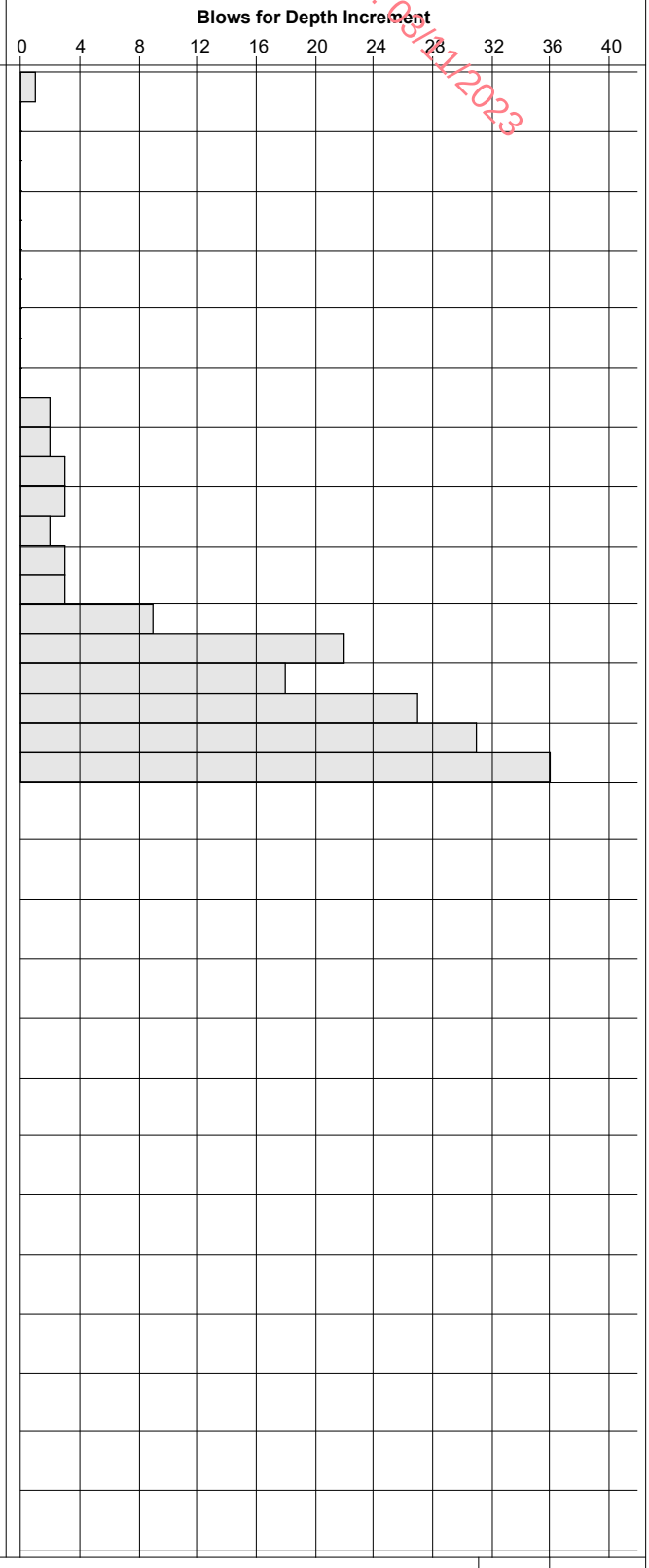
Figure No.
12205-09-22.DP-45

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-46

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.54	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605879.1 E 743119.4 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	1		40.54	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		40.04	0.50
0.60-0.70	0			
0.70-0.80	0			
0.80-0.90	0			
0.90-1.00	0			
1.00-1.10	0		39.54	1.00
1.10-1.20	2			
1.20-1.30	2			
1.30-1.40	3			
1.40-1.50	3			
1.50-1.60	2		39.04	1.50
1.60-1.70	3			
1.70-1.80	3			
1.80-1.90	9			
1.90-2.00	22			
2.00-2.10	18		38.54	2.00
2.10-2.20	27			
2.20-2.30	31			
2.30-2.40	36			
			38.04	2.50
			37.54	3.00
			37.04	3.50
			36.54	4.00
			36.04	4.50
			35.54	5.00



Remarks
Refusal at 2.40m BGL

Scale (approx)	Logged By
1:25	CMP

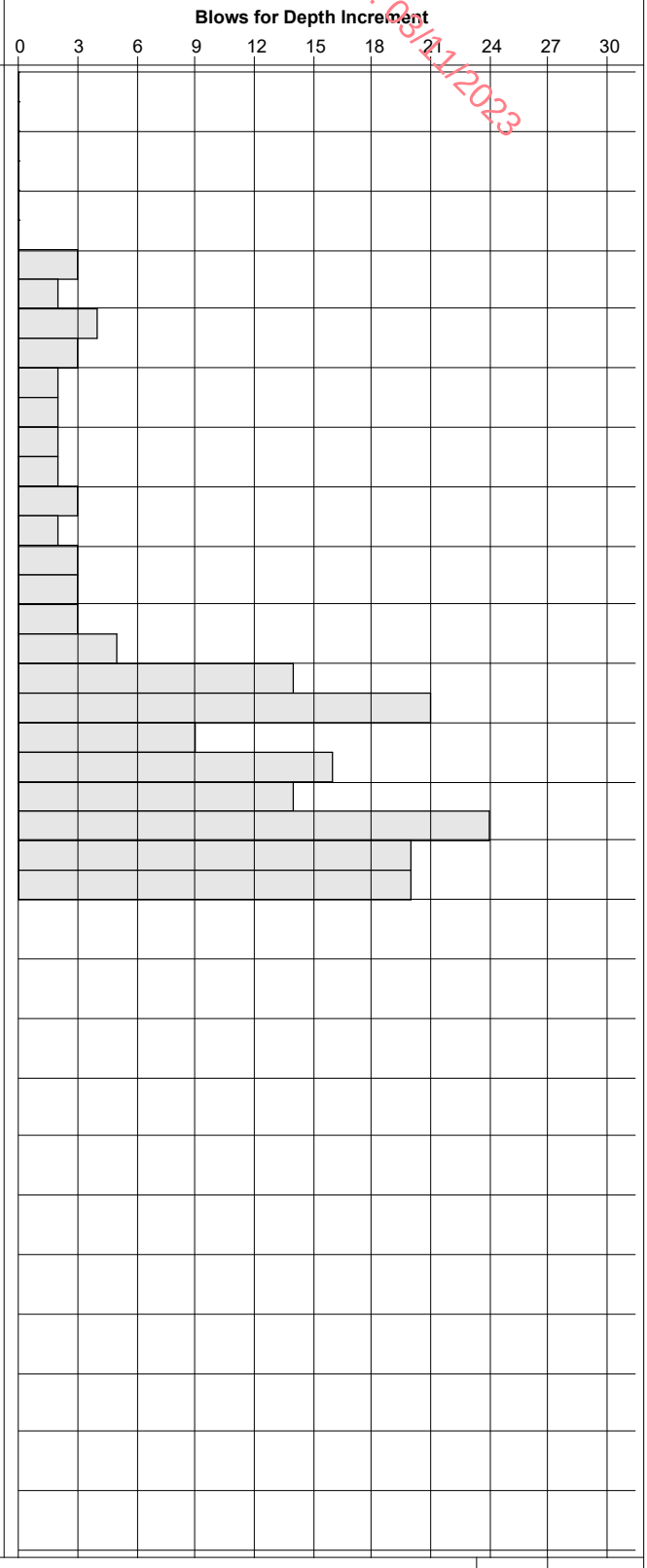
Figure No.
12205-09-22.DP-46

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-47

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.74	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605883.2 E 743096.4 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.74	0.00
0.10-0.20	0			
0.20-0.30	0			
0.30-0.40	0			
0.40-0.50	0			
0.50-0.60	0		40.24	0.50
0.60-0.70	3			
0.70-0.80	2			
0.80-0.90	4			
0.90-1.00	3			
1.00-1.10	2		39.74	1.00
1.10-1.20	2			
1.20-1.30	2			
1.30-1.40	2			
1.40-1.50	3			
1.50-1.60	2		39.24	1.50
1.60-1.70	3			
1.70-1.80	3			
1.80-1.90	3			
1.90-2.00	5			
2.00-2.10	14		38.74	2.00
2.10-2.20	21			
2.20-2.30	9			
2.30-2.40	16			
2.40-2.50	14			
2.50-2.60	24		38.24	2.50
2.60-2.70	20			
2.70-2.80	20			
			37.74	3.00
			37.24	3.50
			36.74	4.00
			36.24	4.50
			35.74	5.00



Remarks
Refusal at 2.80m BGL

Scale (approx)	Logged By
1:25	CMP

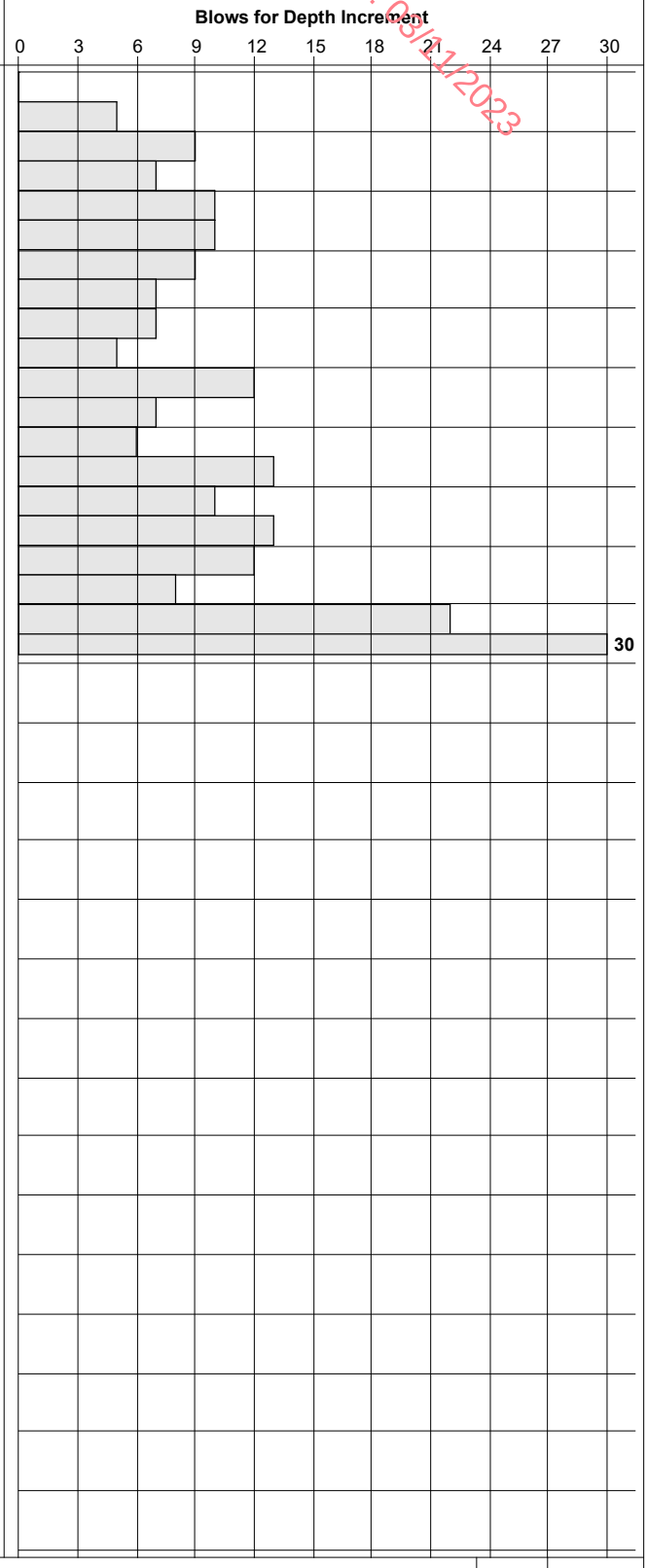
Figure No.
12205-09-22.DP-47

Ground Investigations Ireland Ltd
www.gii.ie

Site	Probe Number
Cornamaddy Athlone Northern Site	DP-48

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic Probe Heavy (DPH), Hammer Drop Height 500mm, Hammer Weight 50Kg	Diameter 43.70mm	40.58	AKM Design	12205-09-22
	Location	**Dates**	**Engineer**	**Sheet**
	605859 E 743101.4 N	20/10/2022		1/1

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
0.00-0.10	0		40.58	0.00
0.10-0.20	5			
0.20-0.30	9			
0.30-0.40	7			
0.40-0.50	10			
0.50-0.60	10		40.08	0.50
0.60-0.70	9			
0.70-0.80	7			
0.80-0.90	7			
0.90-1.00	5			
1.00-1.10	12		39.58	1.00
1.10-1.20	7			
1.20-1.30	6			
1.30-1.40	13			
1.40-1.50	10			
1.50-1.60	13		39.08	1.50
1.60-1.70	12			
1.70-1.80	8			
1.80-1.90	22			
1.90-1.97	30		38.58	2.00
			38.08	2.50
			37.58	3.00
			37.08	3.50
			36.58	4.00
			36.08	4.50
			35.58	5.00



Remarks
Refusal at 1.97m BGL

Scale (approx)	Logged By
1:25	CMP

Figure No.
12205-09-22.DP-48

APPENDIX 5 – Percussive Borehole Records

Ground Investigations Ireland Ltd
www.gii.ie

Site	Number
Cornamaddy Athlone Northern Site	BH-01

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Percussive Borehole	88mm to 2.70m	40.44	AKM Design	12205-09-22
	Location (dGPS) 605882.6 E 743151.4 N	**Dates** 20/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						Driller notes very soft PEAT		
1.00-1.45	SPT(C) N=0		1,0/0,0,0,0		(2.70)			
2.00-2.45	SPT(C) N=0		0,0/0,0,0,0					
2.70-2.70	SPT(C) 25*/0 50/0		25/50	37.74	2.70	Complete at 2.70m		

Remarks
No groundwater encountered

Scale (approx)	Logged By
1:50	RH

Figure No.
12205-09-22.BH-01

Ground Investigations Ireland Ltd
www.gii.ie

Site	Number
Cornamaddy Athlone Northern Site	BH-02

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Percussive Borehole	88mm to 3.00m 66mm to 4.60m	40.46	AKM Design	12205-09-22
	Location (dGPS) 606144.4 E 743252.6 N	**Dates** 20/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.10 0.10-1.00	B B			40.36	0.10	Very soft dark brown Peaty TOPSOIL with rootlets		
						Very soft dark brown mottled grey slightly clayey slightly gravelly pseudo fibrous spongy PEAT		
1.00-1.45 1.00-2.00	SPT(C) N=2 B		0,0/0,0,0,2		(2.10)			
2.00-2.45	SPT(C) N=0		0,0/0,0,0,0	38.26	2.20	Very soft black slightly gravelly pseudo fibrous spongy PEAT		
3.00-3.45 3.00-3.60	SPT(C) N=0 B		0,0/0,0,0,0		(2.10)			
3.60-4.00	B							
4.00-4.45 4.00-4.30 4.30-4.60	SPT(C) N=0 B B		0,0/0,0,0,0	36.16	4.30 (0.30)	Very soft grey slightly clayey SILT		
4.60-4.60	SPT(C) 25*/0 50/0		25/50	35.86	4.60	Complete at 4.60m		

Remarks
No groundwater encountered

Scale (approx)	Logged By
1:50	RH

Figure No.
12205-09-22.BH-02

Cornamaddy Athlone Northern Site – Percussive Borehole Photographs

BH-02

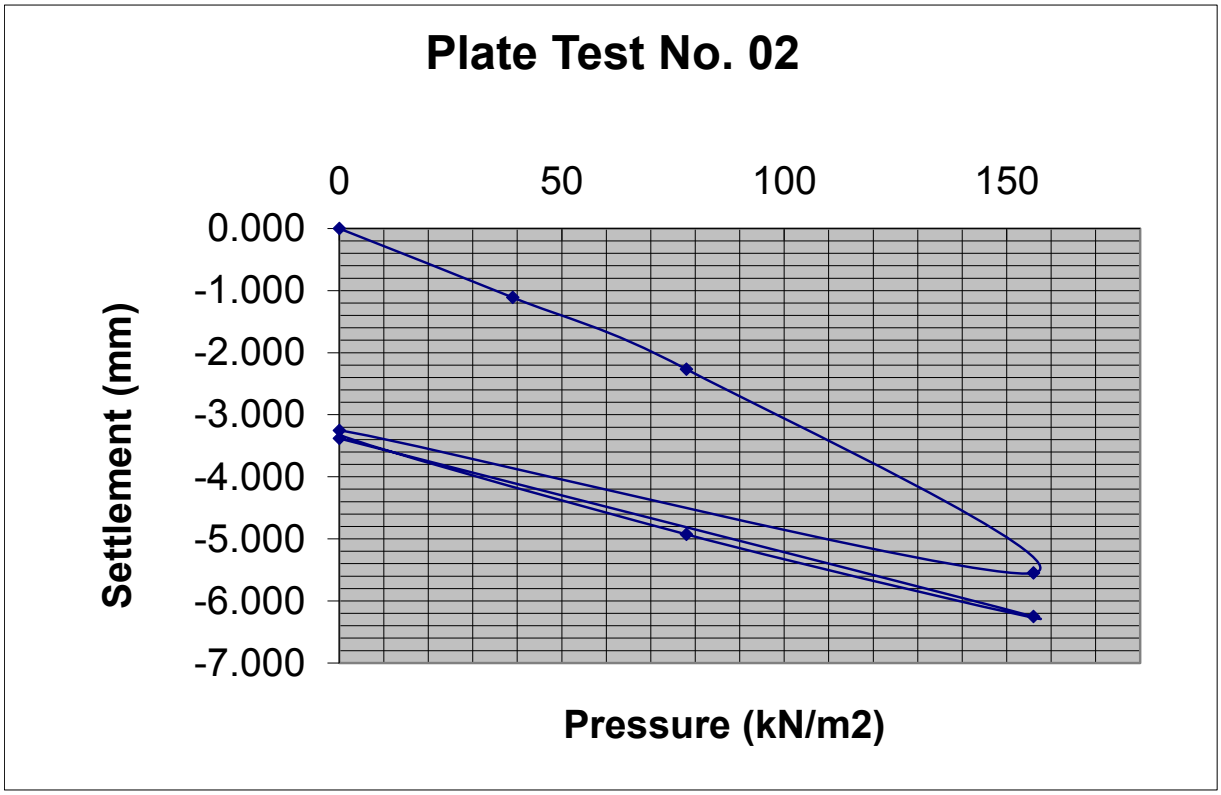
BH-02

APPENDIX 6 – Plate Testing Records

Applied Load	Gauge settlement
0	**0.000**
39	-1.111
78	-2.266
156	-5.551
0	-3.254
78	-4.9275
156	-6.252
0	-3.382

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Cornamaddy	**MATERIAL**	Possible MADE GROUND: Greyish brown slightly sandy gravelly silty CLAY with occasional cobbles and boulders
CONTRACT NO.	12205-09-22		
DATE	24/10/2022		
CLIENT	AKM Design	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-02	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **20.58 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **27.86 MN/m2/m**

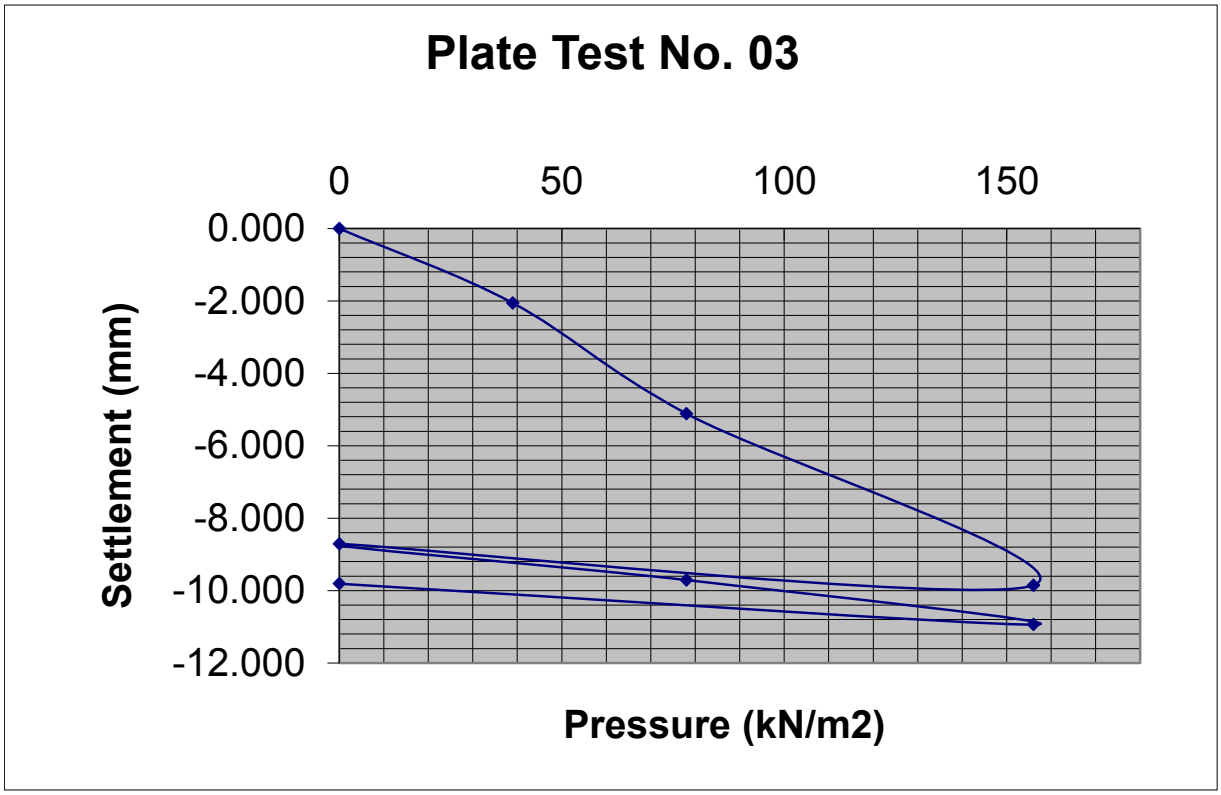
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **1.82 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **3.08 %**

Applied Load	Gauge settlement
0	**0.000**
39	-2.058
78	-5.111
156	-9.8525
0	-8.7125
78	-9.7075
156	-10.939
0	-9.81

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Cornamaddy	**MATERIAL**	Soft to firm grey slightly sandy gravelly silty CLAY with occasional cobbles
CONTRACT NO.	12205-09-22		
DATE	18/10/2022		
CLIENT	AKM Design	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-03	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **9.12 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **46.86 MN/m2/m**

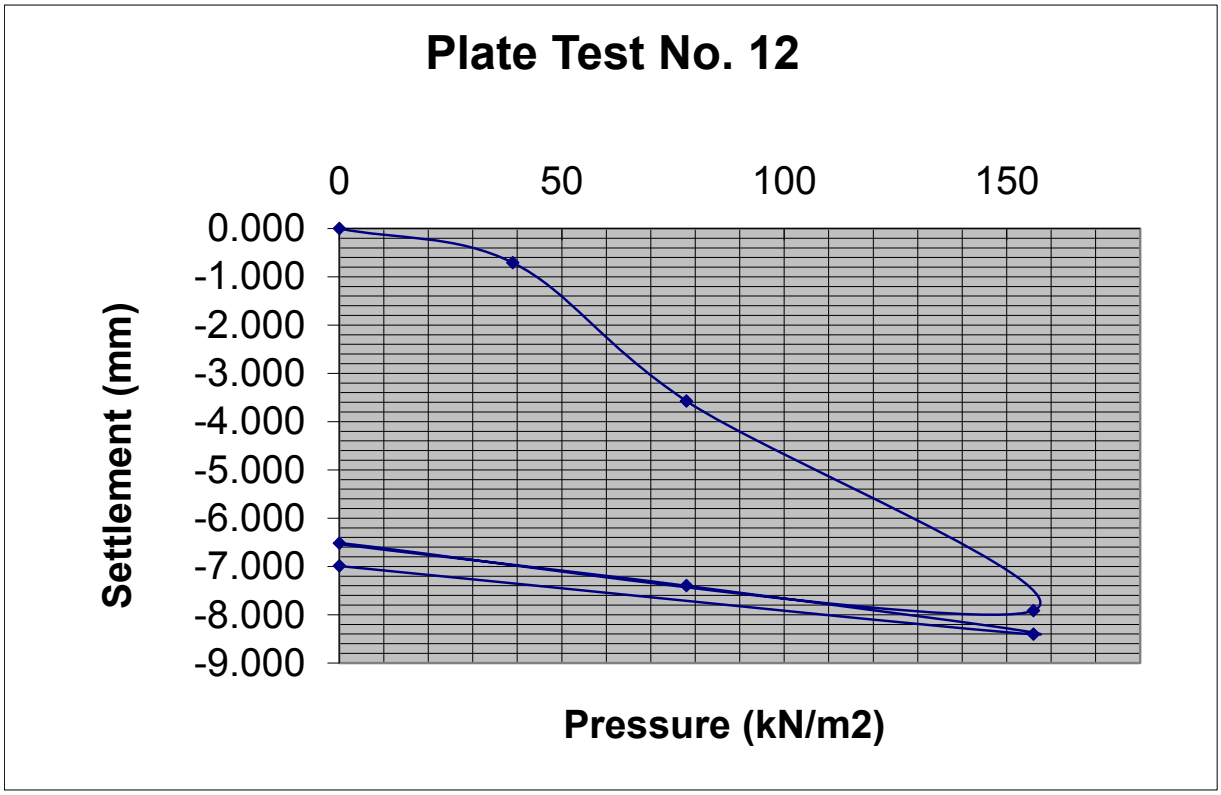
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **0.44 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **7.58 %**

Applied Load	Gauge settlement
0	**0.000**
39	-0.709
78	-3.5725
156	-7.915
0	-6.5165
78	-7.4
156	-8.4055
0	-6.99

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Cornamaddy	**MATERIAL**	Firm light brown slightly sandy slightly gravelly CLAY with occasional cobbles and boulders
CONTRACT NO.	12205-09-22		
DATE	18/10/2022		
CLIENT	AKM Design	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-12	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **13.05 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **52.77 MN/m2/m**

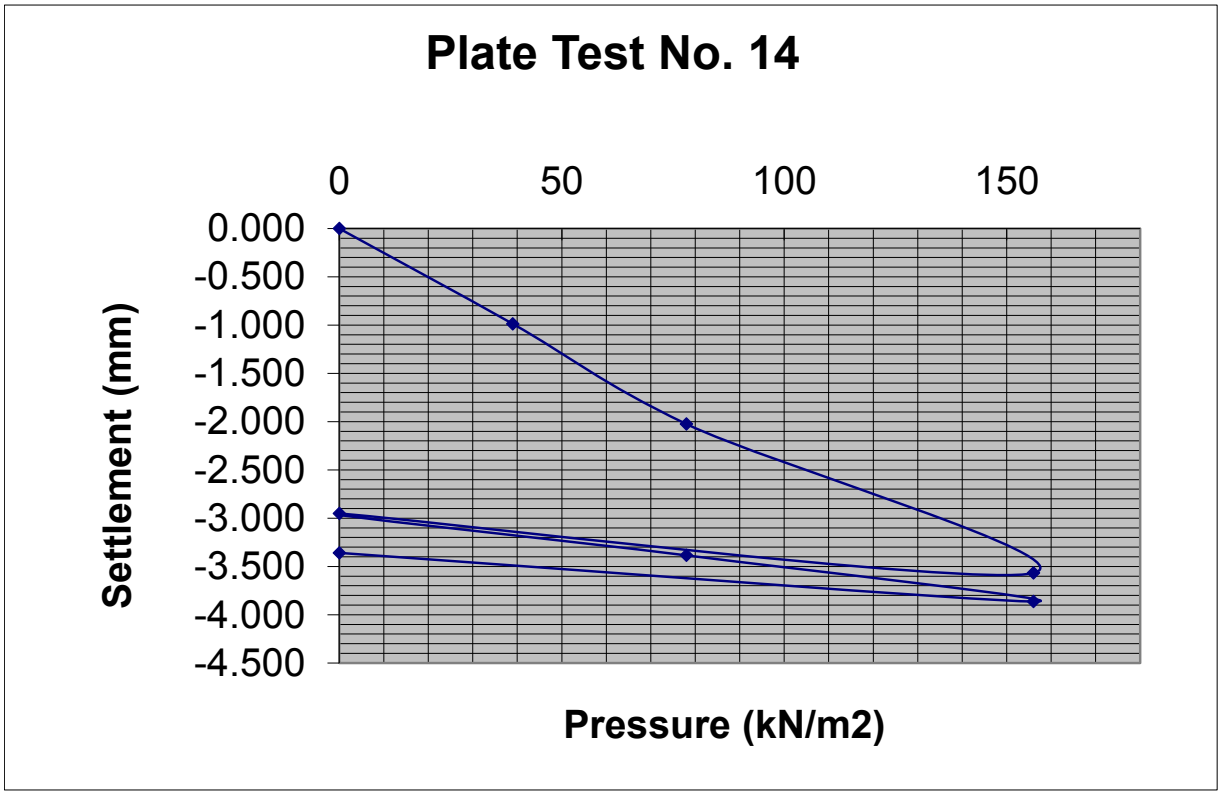
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **0.83 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **9.32 %**

Applied Load	Gauge settlement
0	**0.000**
39	-0.9875
78	-2.0245
156	-3.568
0	-2.9525
78	-3.385
156	-3.863
0	-3.359

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Cornamaddy	**MATERIAL**	Soft to firm grey mottled brown slightly sandy slightly gravelly CLAY with occasional cobbles
CONTRACT NO.	12205-09-22		
DATE	18/10/2022		
CLIENT	AKM Design	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-14	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **23.03 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **107.80 MN/m2/m**

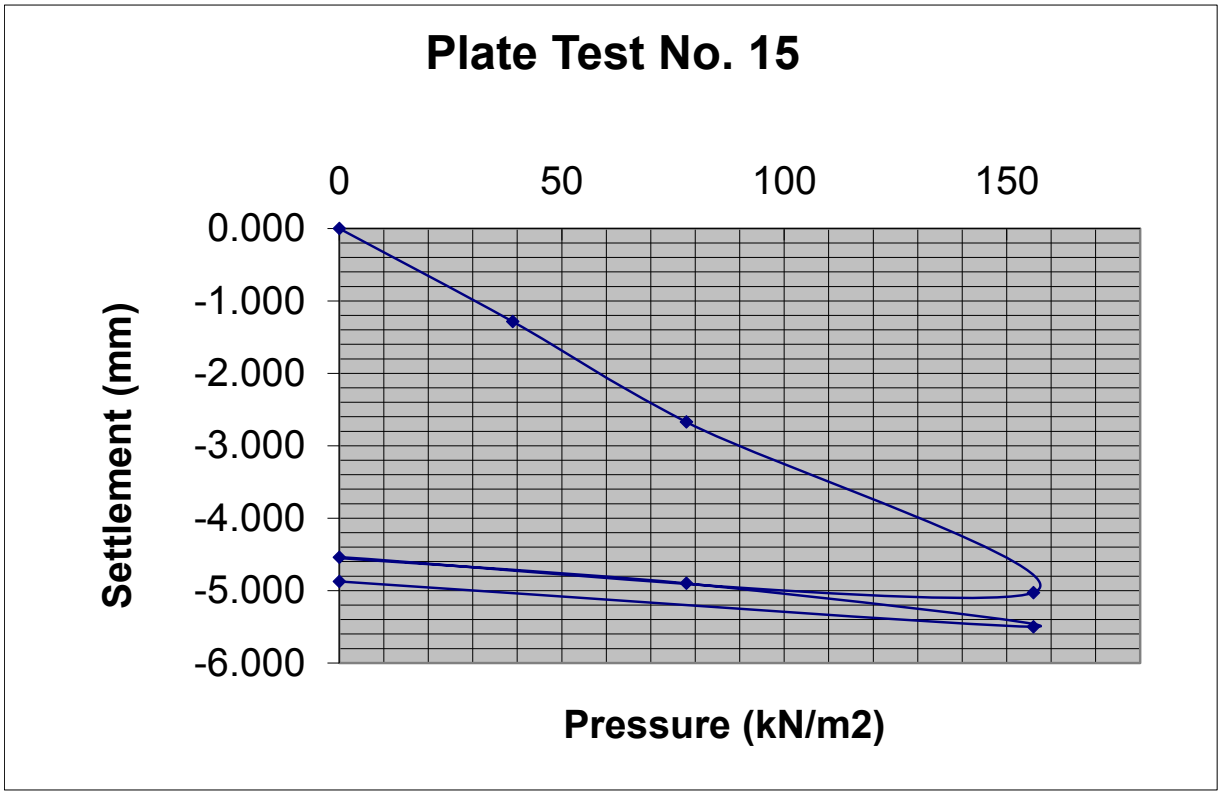
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **2.21 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **32.13 %**

Applied Load	Gauge settlement
0	**0.000**
39	-1.2865
78	-2.672
156	-5.0275
0	-4.5395
78	-4.9005
156	-5.499
0	-4.8735

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Cornamaddy	**MATERIAL**	Firm grey mottled brown slightly sandy slightly gravelly silty CLAY with occasional cobbles
CONTRACT NO.	12205-09-22		
DATE	21/10/2022		
CLIENT	AKM Design	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-15	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **17.45 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **129.15 MN/m2/m**

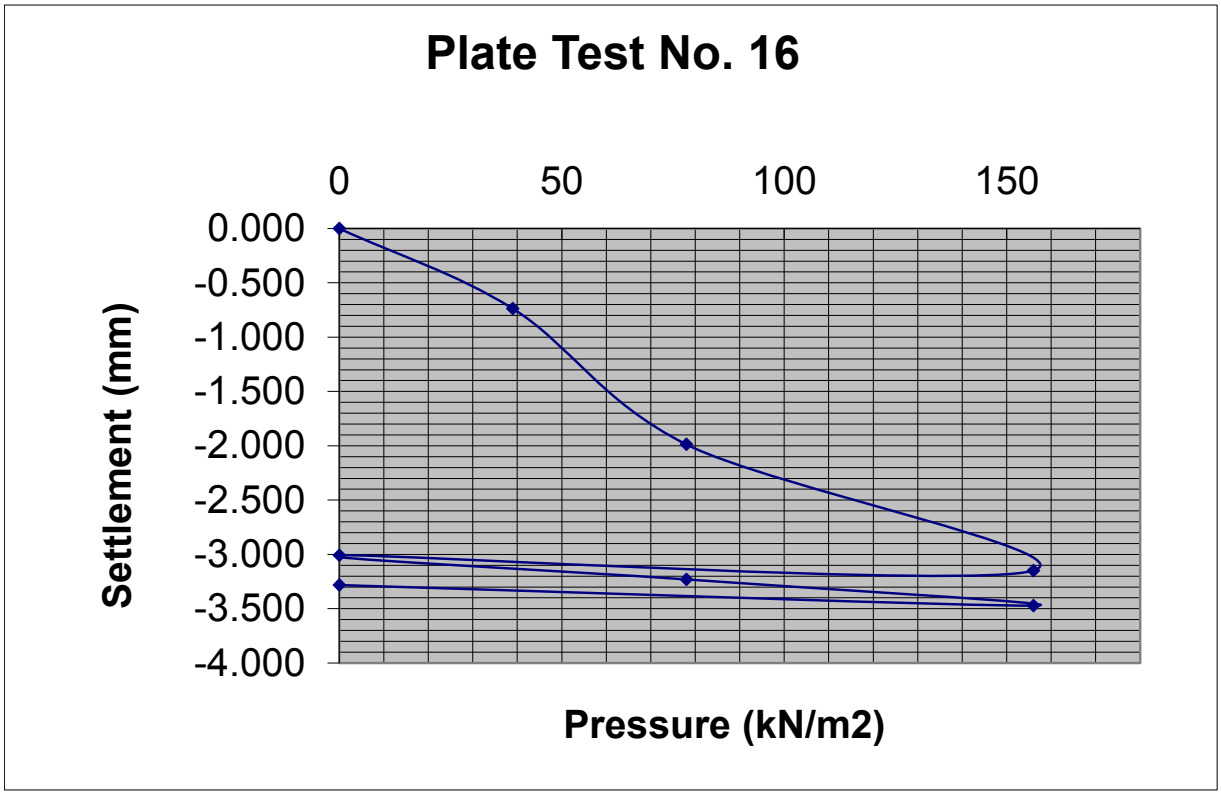
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **1.37 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **43.94 %**

Applied Load	Gauge settlement
0	**0.000**
39	-0.7375
78	-1.9875
156	-3.1485
0	-3.0075
78	-3.2305
156	-3.471
0	-3.282

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Cornamaddy	**MATERIAL**	Firm grey mottled brown slightly sandy slightly gravelly silty CLAY with occasional cobbles and boulders
CONTRACT NO.	12205-09-22		
DATE	21/10/2022		
CLIENT	AKM Design	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-16	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **23.46 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **209.07 MN/m2/m**

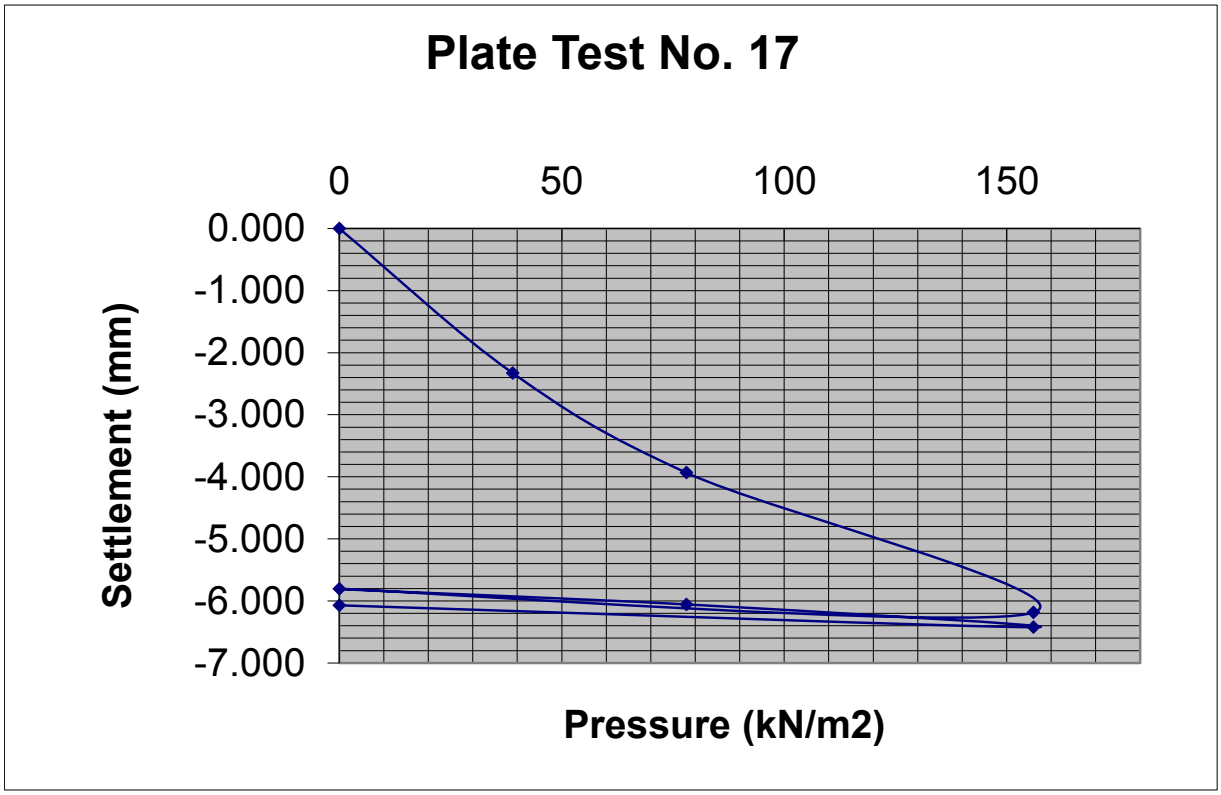
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **2.29 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **101.25 %**

Applied Load	Gauge settlement
0	**0.000**
39	-2.33
78	-3.934
156	-6.1865
0	-5.8035
78	-6.0555
156	-6.423
0	-6.07

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Cornamaddy	**MATERIAL**	Soft to firm brown slightly sandy slightly gravelly silty CLAY with occasional cobbles and boulders
CONTRACT NO.	12205-09-22		
DATE	24/10/2022		
CLIENT	AKM Design	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-17	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **11.85 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **185.01 MN/m2/m**

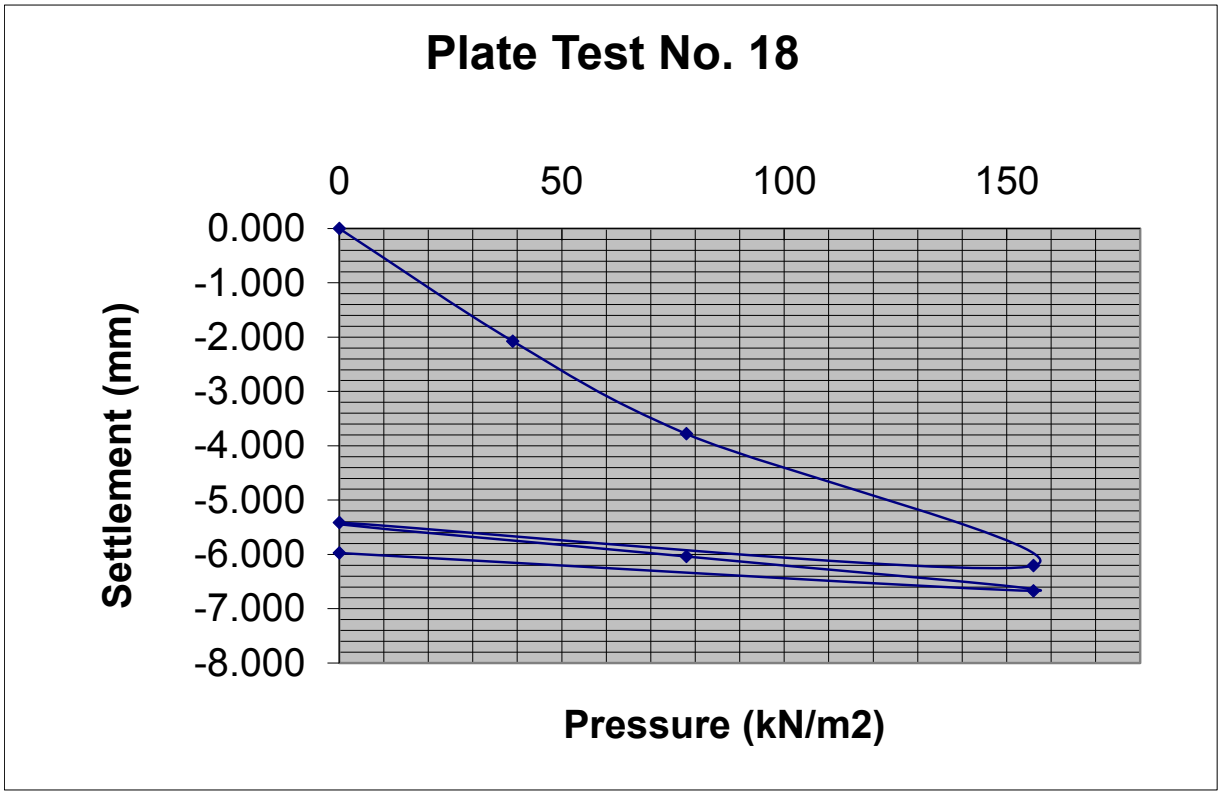
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **0.70 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **81.92 %**

Applied Load	Gauge settlement
0	**0.000**
39	-2.075
78	-3.781
156	-6.208
0	-5.4165
78	-6.038
156	-6.6705
0	-5.974

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Cornamaddy	**MATERIAL**	Soft to firm grey slightly sandy slightly gravelly silty CLAY with many cobbles and boulders
CONTRACT NO.	12205-09-22		
DATE	18/10/2022		
CLIENT	AKM Design	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-18	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **12.33 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **75.02 MN/m2/m**

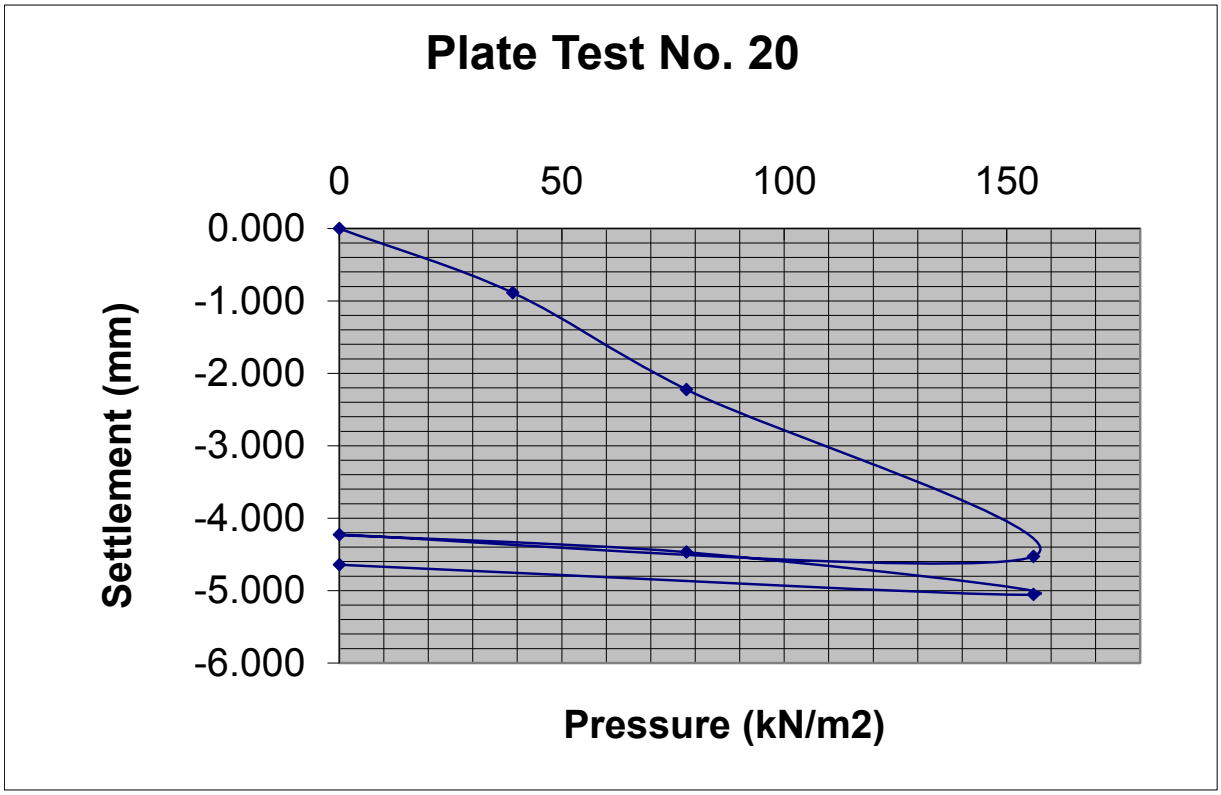
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **0.75 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **17.14 %**

Applied Load	Gauge settlement
0	**0.000**
39	-0.8875
78	-2.2225
156	-4.528
0	-4.2275
78	-4.4695
156	-5.0555
0	-4.643

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Cornamaddy	**MATERIAL**	Soft to firm grey mottled brown slightly sandy slightly gravelly silty CLAY with occasional cobbles
CONTRACT NO.	12205-09-22		
DATE	18/10/2022		
CLIENT	AKM Design	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-20	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **20.98 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **192.66 MN/m2/m**

Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **1.88 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **87.88 %**

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-01
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 3.00m x 1.80m x 0.60m (L x W x D)	**Ground Level (mOD)** 44.17	**Client** AKM Design	**Job Number** 12205-09-22
	Location 606395.3 E 742928.2 N	**Dates** 24/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.60)	MADE GROUND: Grey slightly sandy slightly silty clayey subangular to subrounded fine to coarse Gravel with occassional cobbles and boulders and with occasional fragments of plastic, metal and timber		
			Seepage(1) at 0.40m.					▽1
0.60	B			43.57	0.60	Complete at 0.60m		

Plan

Remarks

Groundwater encountered at 0.70m BGL; Seepage
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-01

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-04
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 4.70m x 2.10m x 1.80m (L x W x D)	**Ground Level (mOD)** 40.34	**Client** AKM Design
	Location 606166.8 E 743253.9 N	**Dates** 18/10/2022	**Engineer**

Job Number	Sheet
12205-09-22	1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
			Seepage(1) at 0.70m.		(1.50)	Very soft brown slightly gravelly clayey pseudo fibrous PEAT		▽1
1.60	B			38.84	1.50 (0.30)	Very soft grey slightly sandy slightly clayey SILT with occasional organic fibres		
				38.54	1.80	Complete at 1.80m		

Plan

Remarks

Groundwater encountered at 0.70m BGL; Seepage
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-04

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-05
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 3.90m x 2.10m x 1.70m (L x W x D)	**Ground Level (mOD)** 40.34	**Client** AKM Design
	Location 606227.5 E 743279.6 N	**Dates** 18/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
			Medium Ingress(1) at 0.70m.		(1.40)	Very soft brown slighty gravelly clayey pseudo fibrous PEAT with a tree stump. Strong organic odour encountered between GL to 1.40m		▽1
1.50	B			38.94	1.40	Very soft greenish grey slightly sandy slightly gravelly slightly clayey SILT with occasional cobbles and organic fibres		
				38.64	(0.30)			
					1.70	Complete at 1.70m		

Plan

Remarks

Groundwater encoutered at 0.70m BGL; Medium Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-05

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-06
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 3.00m x 2.10m x 0.90m (L x W x D)	**Ground Level (mOD)** 40.16	**Client** AKM Design
	Location 606221.1 E 743349.6 N	**Dates** 18/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.60)	Very soft brown slightly gravelly clayey pseudo fibrous PEAT with occasional cobbles		
				39.56	0.60			
0.70	B		Fast Ingress(1) at 0.70m.		(0.30)	Very soft grey slightly sandy slightly clayey gravelly SILT with many cobbles and boulders and with organic pockets		▽1
				39.26	0.90	Complete at 0.90m		

Plan

Remarks

Groundwater encountered at 0.70m BGL; Fast Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-06

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-07
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 4.20m x 2.10m x 1.20m (L x W x D)	**Ground Level (mOD)** 40.37	**Client** AKM Design
	Location 606157.4 E 743323.6 N	**Dates** 18/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.80)	Very soft brown slightly gravelly clayey pseudo fibrous PEAT		
			Fast Ingress(1) at 0.80m.	39.57	0.80			▽1
1.00	B				(0.40)	Very soft grey slightly sandy slightly gravelly slightly clayey SILT with occasional organic fibres		
				39.17	1.20	Complete at 1.20m		

Plan

Remarks

Groundwater encountered at 0.80m BGL; Fast Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-07

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-08
Machine : 5T tracked excavator **Method :** Trial Pit	**Dimensions** 4.80m x 2.10m x 1.00m (L x W x D)	**Ground Level (mOD)** 40.41	**Client** AKM Design	**Job Number** 12205-09-22
	Location 606074.8 E 743293.9 N	**Dates** 18/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.70)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT		
				39.71	0.70			
0.80	B		Fast Ingress(1) at 0.80m.		(0.30)	Very soft brownish grey slightly sandy slightly clayey SILT with many cobbles and boulders and with occasional organic fibres		▽1
				39.41	1.00	Complete at 1.00m		

Plan

Remarks

Groundwater encountered at 0.80m BGL; Fast Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-08

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-09
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 3.50m x 1.80m x 1.20m (L x W x D)	**Ground Level (mOD)** 40.17	**Client** AKM Design
	Location 606012.5 E 743250.6 N	**Dates** 24/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.60)	Very soft brown slightly gravelly clayey pseudo fibrous PEAT		
				39.57	0.60			
					(0.30)	Very soft to soft light grey slightly sandy slightly gravelly clayey SILT with occasional cobbles and boulders		
0.80	B		Seepage(1) at 0.80m.	39.27	0.90			▽1
					(0.30)	Soft to firm grey slightly sandy slightly gravelly silty CLAY with occasional cobbles and boulders		
				38.97	1.20			
						Complete at 1.20m		

Plan

Remarks

Groundwater encountered at 0.80m BGL; Seepage
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-09

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-10
Machine : 14T Tracked excavator **Method :** Trial Pit	**Dimensions** 4.90m x 2.10m x 1.20m (L x W x D)	**Ground Level (mOD)** 40.54	**Client** AKM Design
	Location 606064.6 E 743209.1 N	**Dates** 18/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.85)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT with occasional fragments of wood		
				39.69	0.85			
1.00	B		Fast Ingress(1) at 1.00m.		(0.35)	Very soft grey slightly sandy slightly clayey SILT with many cobbles and boulders and occasional organic fibres		▽1
				39.34	1.20	Complete at 1.20m		

Plan

Remarks

Groundwater encountered at 1.00m BGL; Fast Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-10

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-11
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 3.50m x 1.80m x 0.80m (L x W x D)	**Ground Level (mOD)** 40.45	**Client** AKM Design
	Location 606034.3 E 743136.8 N	**Dates** 24/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.50)	Very soft brown slightly gravelly clayey pseudo fibrous PEAT with occasional cobbles and boulders		
			Fast Ingress(1) at 0.50m.	39.95	0.50			▽1
					(0.30)	Grey slightly sandy slightly silty slightly clayey subangular to subrounded fine to coarse GRAVEL with many cobbles and boulders		
0.80	B			39.65	0.80	Complete at 0.80m		

Plan

Remarks

Groundwater encountered at 0.50m BGL; Fast Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-11

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-13
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 3.80m x 2.10m 0.80m (L x W x D)	**Ground Level (mOD)** 40.97	**Client** AKM Design	**Job Number** 12205-09-22
	Location 606097.1 E 743072.8 N	**Dates** 18/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.65)	Very soft dark brown slightly gravelly slightly clayey amorphous PEAT with rootlets and many boulders		
				40.32	0.65			
					(0.15)	Firm grey slightly sandy slightly gravelly silty CLAY with many cobbles and boulders		
0.80	B		Seepage(1) at 0.80m.	40.17	0.80	Complete at 0.80m		▽1

Plan

Remarks

Groundwater encountered at 0.80m BGL; Seepage
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-13

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-19
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 3.80m x 2.10m x 1.20m (L x W x D)	**Ground Level (mOD)** 40.44	**Client** AKM Design
	Location 605897.1 E 743143.8 N	**Dates** 18/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.80)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT		
			Fast Ingress(1) at 0.60m.					▽1
				39.64	0.80			
1.00	B				(0.40)	Very soft grey slightly sandy clayey SILT with occasional organic fibres		
				39.24	1.20			
						Complete at 1.20m		

Plan

Remarks

Groundwater encountered at 0.60m BGL; Fast Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-19

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-21
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 3.50m x 1.80m x 1.10m (L x W x D)	**Ground Level (mOD)** 41.06	**Client** AKM Design	**Job Number** 12205-09-22
	Location 605907.4 E 743047.5 N	**Dates** 21/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.60)	Very soft brown slightly gravelly clayey pseudo fibrous PEAT with occasional cobbles and boulders		
				40.46	0.60			
0.80	B		Medium Ingress(1) at 0.70m.		(0.50)	Soft to firm grey mottled brown slightly sandy slightly gravelly clayey SILT with occasional cobbles and boulders		▽1
				39.96	1.10	Complete at 1.10m		

Plan

Remarks

Groundwater encountered at 0.50m BGL; Fast Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-11

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-22
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 3.80m x 2.10m x 1.20m (L x W x D)	**Ground Level (mOD)** 40.63	**Client** AKM Design
	Location 605857.6 E 743074.1 N	**Dates** 18/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.80)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT with rootlets		
				39.83	0.80			
1.00	B		Fast Ingress(1) at 1.00m.		(0.40)	Soft to firm grey slightly sandy slightly gravelly silty CLAY with many cobbles and boulders		▽1
				39.43	1.20	Complete at 1.20m		

Plan

Remarks

Groundwater encountered at 1.00m BGL; Fast Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-22

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-23
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 3.90m x 2.10m x 1.50m (L x W x D)	**Ground Level (mOD)** 40.61	**Client** AKM Design
	Location 605833.3 E 743111.6 N	**Dates** 18/10/2022	**Engineer**
			Job Number 12205-09-22
			Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(1.30)	Very soft dark brown slightly gravelly clayey pseudo fibrous PEAT with occasional fragments of wood		
			Fast Ingress(1) at 1.20m.	39.31	1.30			▽1
					(0.20)	Soft grey slightly sandy slightly gravelly clayey SILT with occasional cobbles and occasional organic fibres		
1.50	B			39.11	1.50	Complete at 1.50m		

Plan

Remarks

Groundwater encountered at 1.20m BGL; Fast Ingress
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	CMP RH	12205-09-22.CBR-23

Ground Investigations Ireland Ltd
www.gii.ie

Site Cornamaddy Athlone Northern Site			**Trial Pit Number** CBR-24
Machine : 14T tracked excavator **Method :** Trial Pit	**Dimensions** 4.00m x 2.10m x1.00m (L x W x D)	**Ground Level (mOD)** 40.87	**Client** AKM Design	**Job Number** 12205-09-22
	Location 605814.4 E 743069.5 N	**Dates** 18/10/2022	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.70)	MADE GROUND: Dark brown slightly gravelly clayey pseudo fibrous Peat with occasional cobbles and boulders and with rootlets Encountered orange ceramic land drain at 0.40m BGL		
				40.17	0.70			
0.90	B				(0.30)	Possible MADE GROUND: Grey slightly gravelly clayey silty fine to coarse Sand with occasional cobbles and boulders		
				39.87	1.00	Complete at 1.00m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:50	CMP RH	12205-09-22.CBR-24

APPENDIX 7 – Laboratory Testing

Element Materials Technology
Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

P: +44 (0) 1244 833780
F: +44 (0) 1244 833781
W: www.element.com

Ground Investigations Ireland
Catherinestown House
Hazelhatch Road
Newcastle
Co. Dublin
Ireland

Attention :	James Cashen
Date :	10th November, 2022
Your reference :	12205-09-22
Our reference :	Test Report 22/17822 Batch 1
Location :	Cornamaddy Athlone Northern Site
Date samples received :	28th October, 2022
Status :	Final Report
Issue :	1

Fourteen samples were received for analysis on 28th October, 2022 of which twelve were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

Bruce Leslie
Project Manager

Element Materials Technology Environmental UK Limited
Registered in England and Wales
Registered Office: 3rd Floor Davidson Building, 5 Southampton Street, London WC2E 7HA
Company Registration No: 11371415

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen
EMT Job No: 22/17822

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-4	5-8	9-12	17-20	21-24	25-28	29-32	37-40	41-44	45-48	LOD/LOR	Units	Method No.
Sample ID	TP-01	TP-02	TP-03	TP-06	TP-07	TP-10	TP-11	TP-13	TP-15	TP-17			
Depth	0.00-0.60	0.00-0.90	1.40-2.10	1.00-2.70	1.10-2.30	0.20-0.80	0.20-0.50	0.75-2.00	0.30-0.70	0.20-1.40			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	24/10/2022	24/10/2022	21/10/2022	21/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022			
Antimony	1	<1	1	1	<1	1	<1	<1	<1	<1	<1	mg/kg	TM30/PM15
Arsenic #	7.5	5.7	2.3	6.3	9.0	5.6	4.5	14.9	3.2	20.0	<0.5	mg/kg	TM30/PM15
Barium #	45	35	17	60	27	13	16	45	15	69	<1	mg/kg	TM30/PM15
Cadmium #	1.1	0.9	0.5	1.3	0.8	0.7	0.7	1.8	0.5	1.2	<0.1	mg/kg	TM30/PM15
Chromium #	57.3	41.1	107.7	59.1	38.3	94.0	48.8	42.6	43.8	37.2	<0.5	mg/kg	TM30/PM15
Copper #	15	15	6	17	8	8	7	26	6	18	<1	mg/kg	TM30/PM15
Lead #	10	10	<5	10	6	8	<5	16	<5	11	<5	mg/kg	TM30/PM15
Mercury #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	mg/kg	TM30/PM15
Molybdenum #	3.3	2.4	6.4	3.4	3.0	5.6	3.0	3.4	2.7	3.5	<0.1	mg/kg	TM30/PM15
Nickel #	32.4	30.1	14.2	37.1	19.1	27.5	16.4	58.5	13.1	53.6	<0.7	mg/kg	TM30/PM15
Selenium #	<1	<1	1	1	<1	<1	<1	3	<1	<1	<1	mg/kg	TM30/PM15
Zinc #	57	50	23	74	35	44	28	104	17	75	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
PAH 6 Total #	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	101	96	94	95	93	97	93	98	94	95	<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	<30	221	<30	<30	<30	<30	<30	<30	mg/kg	TM5/PM8/PM16

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen
EMT Job No: 22/17822

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-4	5-8	9-12	17-20	21-24	25-28	29-32	37-40	41-44	45-48	LOD/LOR	Units	Method No.
Sample ID	TP-01	TP-02	TP-03	TP-06	TP-07	TP-10	TP-11	TP-13	TP-15	TP-17			
Depth	0.00-0.60	0.00-0.90	1.40-2.10	1.00-2.70	1.10-2.30	0.20-0.80	0.20-0.50	0.75-2.00	0.30-0.70	0.20-1.40			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	24/10/2022	24/10/2022	21/10/2022	21/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022			
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	<0.2	<0.2	119.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4	<4	<4	101	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26	<26	<26	221	<26	<26	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	<10	<10	299	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2	30.7	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4	<4	<4	24	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7	<7	25	40	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26	<26	<26	95	<26	<26	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52	<52	<52	316	<52	<52	<52	<52	<52	<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	<10	<10	71	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10	<10	23	29	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM36/PM12
Benzene#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM36/PM12
Toluene#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM36/PM12
PCB 28#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM17/PM8
PCB 52#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM17/PM8
PCB 101#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM17/PM8
PCB 118#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM17/PM8
PCB 138#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM17/PM8
PCB 153#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM17/PM8
PCB 180#	<5	<5	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	ug/kg	TM17/PM8
Total 7 PCBs#	<35	<35	<35	<35	<35	<35	<35	<35 SV	<35	<35	<35	ug/kg	TM17/PM8

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen
EMT Job No: 22/17822

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-4	5-8	9-12	17-20	21-24	25-28	29-32	37-40	41-44	45-48	LOD/LOR	Units	Method No.
Sample ID	TP-01	TP-02	TP-03	TP-06	TP-07	TP-10	TP-11	TP-13	TP-15	TP-17			
Depth	0.00-0.60	0.00-0.90	1.40-2.10	1.00-2.70	1.10-2.30	0.20-0.80	0.20-0.50	0.75-2.00	0.30-0.70	0.20-1.40			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	24/10/2022	24/10/2022	21/10/2022	21/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022			
Natural Moisture Content	18.3	15.2	32.7	78.4	42.9	16.3	10.5	26.1	6.4	17.0	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	15.5	13.2	24.7	43.9	30.0	14.0	9.5	20.7	6.0	14.5	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Chromium III	57.3	41.1	107.7	59.1	38.3	94.0	48.8	42.6	43.8	37.2	<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	0.33	0.14	0.55	2.70	0.96	0.12	0.31	0.52	0.06	0.20	<0.02	%	TM21/PM24
pH #	8.19	8.35	8.04	7.73	7.66	8.75	8.47	8.10	8.95	8.63	<0.01	pH units	TM73/PM11
Mass of raw test portion	0.1063	0.1012	0.1404	0.1534	0.1461	0.1057	0.0997	0.1192	0.1003	0.1053		kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09		kg	NONE/PM17

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen
EMT Job No: 22/17822

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	49-52	53-56									LOD/LOR	Units	Method No.
Sample ID	TP-18	TP-19											
Depth	0.50-1.10	0.70-1.40											
COC No / misc													
Containers	V J T	V J T											
Sample Date	20/10/2022	20/10/2022											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	28/10/2022	28/10/2022											
Antimony	<1	1									<1	mg/kg	TM30/PM15
Arsenic #	2.9	12.9									<0.5	mg/kg	TM30/PM15
Barium #	10	39									<1	mg/kg	TM30/PM15
Cadmium #	0.7	1.2									<0.1	mg/kg	TM30/PM15
Chromium #	50.1	57.9									<0.5	mg/kg	TM30/PM15
Copper #	3	16									<1	mg/kg	TM30/PM15
Lead #	<5	9									<5	mg/kg	TM30/PM15
Mercury #	<0.1	<0.1									<0.1	mg/kg	TM30/PM15
Molybdenum #	3.0	3.8									<0.1	mg/kg	TM30/PM15
Nickel #	13.0	55.4									<0.7	mg/kg	TM30/PM15
Selenium #	<1	4									<1	mg/kg	TM30/PM15
Zinc #	21	56									<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03									<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05									<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Phenanthrene #	<0.03	<0.03									<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Fluoranthene #	<0.03	<0.03									<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03									<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06									<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02									<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07									<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
PAH 6 Total #	<0.22	<0.22									<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	<0.64									<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05									<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02									<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1									<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	112	94									<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30									<30	mg/kg	TM5/PM8/PM16

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen
EMT Job No: 22/17822

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	49-52	53-56									LOD/LOR	Units	Method No.
Sample ID	TP-18	TP-19											
Depth	0.50-1.10	0.70-1.40											
COC No / misc													
Containers	V J T	V J T											
Sample Date	20/10/2022	20/10/2022											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	28/10/2022	28/10/2022											
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2									<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4									<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7									<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7									<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7									<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26									<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10									<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10									<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2									<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4									<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7									<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7									<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	<7	<7									<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26									<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52									<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10									<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10									<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5									<5	ug/kg	TM36/PM12
Benzene#	<5	<5									<5	ug/kg	TM36/PM12
Toluene#	<5	<5									<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5									<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5									<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5									<5	ug/kg	TM36/PM12
PCB 28#	<5	<5									<5	ug/kg	TM17/PM8
PCB 52#	<5	<5									<5	ug/kg	TM17/PM8
PCB 101#	<5	<5									<5	ug/kg	TM17/PM8
PCB 118#	<5	<5									<5	ug/kg	TM17/PM8
PCB 138#	<5	<5									<5	ug/kg	TM17/PM8
PCB 153#	<5	<5									<5	ug/kg	TM17/PM8
PCB 180#	<5	<5									<5	ug/kg	TM17/PM8
Total 7 PCBs#	<35	<35									<35	ug/kg	TM17/PM8

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen
EMT Job No: 22/17822

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	49-52	53-56									LOD/LOR	Units	Method No.
Sample ID	TP-18	TP-19											
Depth	0.50-1.10	0.70-1.40											
COC No / misc													
Containers	V J T	V J T											
Sample Date	20/10/2022	20/10/2022											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	28/10/2022	28/10/2022											
Natural Moisture Content	9.8	99.2									<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	8.9	49.8									<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3									<0.3	mg/kg	TM38/PM20
Chromium III	50.1	57.9									<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	0.06	2.33									<0.02	%	TM21/PM24
pH #	8.87	7.60									<0.01	pH units	TM73/PM11
Mass of raw test portion	0.0992	0.1813										kg	NONE/PM17
Mass of dried test portion	0.09	0.09										kg	NONE/PM17

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen
EMT Job No: 22/17822

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-4	5-8	9-12	17-20	21-24	25-28	29-32	37-40	41-44	45-48	LOD/LOR	Units	Method No.
Sample ID	TP-01	TP-02	TP-03	TP-06	TP-07	TP-10	TP-11	TP-13	TP-15	TP-17			
Depth	0.00-0.60	0.00-0.90	1.40-2.10	1.00-2.70	1.10-2.30	0.20-0.80	0.20-0.50	0.75-2.00	0.30-0.70	0.20-1.40			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	24/10/2022	24/10/2022	21/10/2022	21/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022			
Dissolved Antimony #	<0.002	<0.002	0.016	0.017	0.015	<0.002	<0.002	0.016	<0.002	<0.002	<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) #	<0.02	<0.02	0.16	0.17	0.15	<0.02	<0.02	0.16	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	0.0026	<0.0025	0.0064	0.0041	0.0087	<0.0025	<0.0025	0.0049	<0.0025	<0.0025	<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	0.026	<0.025	0.064	0.041	0.087	<0.025	<0.025	0.049	<0.025	<0.025	<0.025	mg/kg	TM30/PM17
Dissolved Barium #	0.008	0.004	0.021	0.032	0.032	<0.003	<0.003	0.023	<0.003	0.005	<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	0.08	0.04	0.21	0.32	0.32	<0.03	<0.03	0.23	<0.03	0.05	<0.03	mg/kg	TM30/PM17
Dissolved Cadmium #	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	TM30/PM17
Dissolved Chromium #	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) #	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	TM30/PM17
Dissolved Lead (A10) #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum #	0.003	0.003	0.031	0.028	0.100	<0.002	<0.002	0.074	<0.002	0.002	<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	0.03	0.03	0.31	0.28	1.00	<0.02	<0.02	0.74	<0.02	0.02	<0.02	mg/kg	TM30/PM17
Dissolved Nickel #	<0.002	<0.002	0.003	0.007	0.004	<0.002	<0.002	0.024	<0.002	<0.002	<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) #	<0.02	<0.02	0.03	0.07	0.04	<0.02	<0.02	0.24	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Selenium #	<0.003	<0.003	0.008	0.008	0.007	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) #	<0.03	<0.03	0.08	0.08	0.07	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM30/PM17
Dissolved Zinc #	<0.003	<0.003	0.003	0.003	<0.003	0.004	<0.003	<0.003	<0.003	0.003	<0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) #	<0.03	<0.03	0.03	<0.03	<0.03	0.04	<0.03	<0.03	<0.03	0.03	<0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF #	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM26/PM0
Fluoride	0.5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.4	<0.3	mg/l	TM173/PM0
Fluoride	5	<3	<3	<3	<3	<3	<3	<3	<3	4	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	1.3	0.8	23.1	53.9	46.3	0.7	<0.5	20.9	0.5	0.8	<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	13	8	231	539	463	7	<5	209	<5	8	<5	mg/kg	TM38/PM0
Chloride #	0.8	<0.3	0.7	1.1	1.2	0.4	<0.3	12.4	<0.3	0.4	<0.3	mg/l	TM38/PM0
Chloride #	8	<3	7	11	12	4	<3	124	<3	4	<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	<2	<2	8	10	9	<2	3	3	<2	<2	<2	mg/l	TM60/PM0
Dissolved Organic Carbon	<20	<20	80	100	90	<20	30	30	<20	<20	<20	mg/kg	TM60/PM0
pH	8.40	8.56	8.38	8.36	8.28	8.29	8.52	8.32	9.15	8.33	<0.01	pH units	TM73/PM0
Total Dissolved Solids #	48	<35	131	177	174	<35	63	130	<35	36	<35	mg/l	TM20/PM0
Total Dissolved Solids #	480	<350	1310	1769	1740	<350	630	1300	<350	360	<350	mg/kg	TM20/PM0

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen
EMT Job No: 22/17822

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	49-52	53-56									LOD/LOR	Units	Method No.
Sample ID	TP-18	TP-19											
Depth	0.50-1.10	0.70-1.40											
COC No / misc													
Containers	V J T	V J T											
Sample Date	20/10/2022	20/10/2022											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	28/10/2022	28/10/2022											
Dissolved Antimony #	<0.002	0.002									<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) #	<0.02	<0.02									<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	<0.0025	<0.0025									<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	<0.025	<0.025									<0.025	mg/kg	TM30/PM17
Dissolved Barium #	<0.003	0.016									<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	<0.03	0.16									<0.03	mg/kg	TM30/PM17
Dissolved Cadmium #	<0.0005	<0.0005									<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) #	<0.005	<0.005									<0.005	mg/kg	TM30/PM17
Dissolved Chromium #	<0.0015	<0.0015									<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) #	<0.015	<0.015									<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007									<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) #	<0.07	<0.07									<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005									<0.005	mg/l	TM30/PM17
Dissolved Lead (A10) #	<0.05	<0.05									<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum #	<0.002	0.012									<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	<0.02	0.12									<0.02	mg/kg	TM30/PM17
Dissolved Nickel #	<0.002	0.006									<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) #	<0.02	0.06									<0.02	mg/kg	TM30/PM17
Dissolved Selenium #	<0.003	<0.003									<0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) #	<0.03	<0.03									<0.03	mg/kg	TM30/PM17
Dissolved Zinc #	<0.003	<0.003									<0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) #	<0.03	<0.03									<0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF #	<0.00001	<0.00001									<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001									<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1									<0.1	mg/kg	TM26/PM0
Fluoride	<0.3	<0.3									<0.3	mg/l	TM173/PM0
Fluoride	<3	<3									<3	mg/kg	TM173/PM0
Sulphate as SO4 #	0.5	88.6									<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	<5	886									<5	mg/kg	TM38/PM0
Chloride #	<0.3	1.4									<0.3	mg/l	TM38/PM0
Chloride #	<3	14									<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	<2	6									<2	mg/l	TM60/PM0
Dissolved Organic Carbon	<20	60									<20	mg/kg	TM60/PM0
pH	9.03	8.35									<0.01	pH units	TM73/PM0
Total Dissolved Solids #	<35	267									<35	mg/l	TM20/PM0
Total Dissolved Solids #	<350	2670									<350	mg/kg	TM20/PM0

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen
EMT Job No: 22/17822

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-4	5-8	9-12	17-20	21-24	25-28	29-32	37-40	41-44	45-48	Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Sample ID	TP-01	TP-02	TP-03	TP-06	TP-07	TP-10	TP-11	TP-13	TP-15	TP-17						
Depth	0.00-0.60	0.00-0.90	1.40-2.10	1.00-2.70	1.10-2.30	0.20-0.80	0.20-0.50	0.75-2.00	0.30-0.70	0.20-1.40						
COC No / misc																
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	24/10/2022	24/10/2022	21/10/2022	21/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1	1	1	1						
Date of Receipt	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022	28/10/2022						
Solid Waste Analysis																
Total Organic Carbon #	0.33	0.14	0.55	2.70	0.96	0.12	0.31	0.52	0.06	0.20	3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025 SV	<0.025	<0.025	6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs #	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035 SV	<0.035	<0.035	1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	<30	<30	<30	<30	221	<30	<30	<30	<30	<30	500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	0.026	<0.025	0.064	0.041	0.087	<0.025	<0.025	0.049	<0.025	<0.025	0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	0.08	0.04	0.21	0.32	0.32	<0.03	<0.03	0.23	<0.03	0.05	20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	1	5	<0.005	mg/kg	TM30/PM17
Chromium #	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	0.03	0.03	0.31	0.28	1.00	<0.02	<0.02	0.74	<0.02	0.02	0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02	0.03	0.07	0.04	<0.02	<0.02	0.24	<0.02	<0.02	0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02	0.16	0.17	0.15	<0.02	<0.02	0.16	<0.02	<0.02	0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	<0.03	<0.03	0.08	0.08	0.07	<0.03	<0.03	<0.03	<0.03	<0.03	0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03	0.03	<0.03	<0.03	0.04	<0.03	<0.03	<0.03	0.03	4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	480	<350	1310	1769	1740	<350	630	1300	<350	360	4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	<20	<20	80	100	90	<20	30	30	<20	<20	500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	85.0	89.0	64.1	58.5	61.6	85.4	90.0	75.7	90.0	85.5	-	-	-	<0.1	%	NONE/PM4
Moisture Content 105C (% Dry Weight)	17.7	12.3	55.9	70.8	62.3	17.1	11.1	32.1	11.1	17.0	-	-	-	<0.1	%	PM4/PM0
pH #	8.19	8.35	8.04	7.73	7.66	8.75	8.47	8.10	8.95	8.63	-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	5	<3	<3	<3	<3	<3	<3	<3	<3	4	10	150	500	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	13	8	231	539	463	7	<5	209	<5	8	1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	8	<3	7	11	12	4	<3	124	<3	4	800	15000	25000	<3	mg/kg	TM38/PM0

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen
EMT Job No: 22/17822

Report : **EN12457_2**

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	49-52	53-56									Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Sample ID	TP-18	TP-19														
Depth	0.50-1.10	0.70-1.40														
COC No / misc																
Containers	V J T	V J T														
Sample Date	20/10/2022	20/10/2022														
Sample Type	Soil	Soil														
Batch Number	1	1														
Date of Receipt	28/10/2022	28/10/2022														
Solid Waste Analysis																
Total Organic Carbon #	0.06	2.33									3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025									6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs #	<0.035	<0.035									1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	<30	<30									500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	<0.22									-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64									100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	<0.025	<0.025									0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	0.16									20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	<0.005	<0.005									0.04	1	5	<0.005	mg/kg	TM30/PM17
Chromium #	<0.015	<0.015									0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07									2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001									0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	<0.02	0.12									0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	0.06									0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05									0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02									0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	<0.03	<0.03									0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03									4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	<350	2670									4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	<20	60									500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	91.1	49.7									-	-	-	<0.1	%	NONE/PM4
Moisture Content 105C (% Dry Weight)	9.8	101.0									-	-	-	<0.1	%	PM4/PM0
pH #	8.87	7.60									-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1									1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	<3	<3									10	150	500	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	<5	886									1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	<3	14									800	15000	25000	<3	mg/kg	TM38/PM0

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
22/17822	1	TP-01	0.00-0.60	1-4	No Interpretation Possible
22/17822	1	TP-02	0.00-0.90	5-8	No Interpretation Possible
22/17822	1	TP-03	1.40-2.10	9-12	No Interpretation Possible
22/17822	1	TP-06	1.00-2.70	17-20	No Interpretation Possible
22/17822	1	TP-07	1.10-2.30	21-24	Degraded Kerosene, possible Naturally Occurring Compounds
22/17822	1	TP-10	0.20-0.80	25-28	No Interpretation Possible
22/17822	1	TP-11	0.20-0.50	29-32	No Interpretation Possible
22/17822	1	TP-13	0.75-2.00	37-40	No Interpretation Possible
22/17822	1	TP-15	0.30-0.70	41-44	No Interpretation Possible
22/17822	1	TP-17	0.20-1.40	45-48	No Interpretation Possible
22/17822	1	TP-18	0.50-1.10	49-52	No Interpretation Possible
22/17822	1	TP-19	0.70-1.40	53-56	No Interpretation Possible

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

Where trace asbestos is reported the amount of asbestos will be <0.1%.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
22/17822	1	TP-01	0.00-0.60	4	Simon Postlewhite	08/11/2022	**General Description (Bulk Analysis)**	Brown soil/stones
					Simon Postlewhite	08/11/2022	**Asbestos Fibres**	NAD
					Simon Postlewhite	08/11/2022	**Asbestos ACM**	NAD
					Simon Postlewhite	08/11/2022	**Asbestos Type**	NAD
22/17822	1	TP-02	0.00-0.90	8	Matthew Turner	08/11/2022	**General Description (Bulk Analysis)**	Brown soil/Stone
					Matthew Turner	08/11/2022	**Asbestos Fibres**	NAD
					Matthew Turner	08/11/2022	**Asbestos ACM**	NAD
					Matthew Turner	08/11/2022	**Asbestos Type**	NAD
22/17822	1	TP-03	1.40-2.10	12	Matthew Turner	08/11/2022	**General Description (Bulk Analysis)**	Brown soil/Stone
					Matthew Turner	08/11/2022	**Asbestos Fibres**	NAD
					Matthew Turner	08/11/2022	**Asbestos ACM**	NAD
					Matthew Turner	08/11/2022	**Asbestos Type**	NAD
22/17822	1	TP-06	1.00-2.70	20	Matthew Turner	08/11/2022	**General Description (Bulk Analysis)**	Brown soil/Stone
					Matthew Turner	08/11/2022	**Asbestos Fibres**	NAD
					Matthew Turner	08/11/2022	**Asbestos ACM**	NAD
					Matthew Turner	08/11/2022	**Asbestos Type**	NAD
22/17822	1	TP-07	1.10-2.30	24	Simon Postlewhite	08/11/2022	**General Description (Bulk Analysis)**	Brown soil/stones
					Simon Postlewhite	08/11/2022	**Asbestos Fibres**	NAD
					Simon Postlewhite	08/11/2022	**Asbestos ACM**	NAD
					Simon Postlewhite	08/11/2022	**Asbestos Type**	NAD
22/17822	1	TP-10	0.20-0.80	28	Matthew Turner	08/11/2022	**General Description (Bulk Analysis)**	Brown soil/Stone
					Matthew Turner	08/11/2022	**Asbestos Fibres**	NAD
					Matthew Turner	08/11/2022	**Asbestos ACM**	NAD
					Matthew Turner	08/11/2022	**Asbestos Type**	NAD
22/17822	1	TP-11	0.20-0.50	32	Anthony Carman	08/11/2022	**General Description (Bulk Analysis)**	Brown Soil/Stones
					Anthony Carman	08/11/2022	**Asbestos Fibres**	NAD
					Anthony Carman	08/11/2022	**Asbestos ACM**	NAD
					Anthony Carman	08/11/2022	**Asbestos Type**	NAD
22/17822	1	TP-13	0.75-2.00	40	Simon Postlewhite	08/11/2022	**General Description (Bulk Analysis)**	Brown soil/stones
					Simon Postlewhite	08/11/2022	**Asbestos Fibres**	NAD
					Simon Postlewhite	08/11/2022	**Asbestos ACM**	NAD
					Simon Postlewhite	08/11/2022	**Asbestos Type**	NAD

Client Name: Ground Investigations Ireland
Reference: 12205-09-22
Location: Cornamaddy Athlone Northern Site
Contact: James Cashen

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
22/17822	1	TP-15	0.30-0.70	44	Anthony Carman	08/11/2022	**General Description (Bulk Analysis)**	Brown Soil/Stones
					Anthony Carman	08/11/2022	**Asbestos Fibres**	NAD
					Anthony Carman	08/11/2022	**Asbestos ACM**	NAD
					Anthony Carman	08/11/2022	**Asbestos Type**	NAD
22/17822	1	TP-17	0.20-1.40	48	Anthony Carman	08/11/2022	**General Description (Bulk Analysis)**	Brown Soil/Stones
					Anthony Carman	08/11/2022	**Asbestos Fibres**	NAD
					Anthony Carman	08/11/2022	**Asbestos ACM**	NAD
					Anthony Carman	08/11/2022	**Asbestos Type**	NAD
22/17822	1	TP-18	0.50-1.10	52	Matthew Turner	08/11/2022	**General Description (Bulk Analysis)**	Brown soil/Stone
					Matthew Turner	08/11/2022	**Asbestos Fibres**	NAD
					Matthew Turner	08/11/2022	**Asbestos ACM**	NAD
					Matthew Turner	08/11/2022	**Asbestos Type**	NAD
22/17822	1	TP-19	0.70-1.40	56	Matthew Turner	08/11/2022	**General Description (Bulk Analysis)**	Brown soil/Stone
					Matthew Turner	08/11/2022	**Asbestos Fibres**	NAD
					Matthew Turner	08/11/2022	**Asbestos ACM**	NAD
					Matthew Turner	08/11/2022	**Asbestos Type**	NAD

Client Name: Ground Investigations Ireland

Reference: 12205-09-22

Location: Cornamaddy Athlone Northern Site

Contact: James Cashen

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
22/17822	1	TP-03	1.40-2.10	9-12	PCB	Sample holding time exceeded
22/17822	1	TP-06	1.00-2.70	17-20	PCB	Sample holding time exceeded
22/17822	1	TP-07	1.10-2.30	21-24	PCB	Sample holding time exceeded
22/17822	1	TP-10	0.20-0.80	25-28	PCB	Sample holding time exceeded
22/17822	1	TP-11	0.20-0.50	29-32	PCB	Sample holding time exceeded
22/17822	1	TP-13	0.75-2.00	37-40	PCB	Sample holding time exceeded
22/17822	1	TP-15	0.30-0.70	41-44	PCB	Sample holding time exceeded
22/17822	1	TP-17	0.20-1.40	45-48	PCB	Sample holding time exceeded
22/17822	1	TP-18	0.50-1.10	49-52	PCB	Sample holding time exceeded
22/17822	1	TP-19	0.70-1.40	53-56	PCB	Sample holding time exceeded

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/17822

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 22/17822

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified BS 1377-3:1990/USEPA 160.1/3 (TDS/TS: 1971) Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes

EMT Job No: 22/17822

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060A (2002), APHA SMEWW 5310B:1999 22nd Edition, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.			AR	Yes
TM61	Determination of Mercury by Cold Vapour Atomic Fluorescence - WATERS: Modified USEPA Method 245.7, Rev 2, Feb 2005. SOILS: Modified USEPA Method 7471B, Rev.2, Feb 2007	PM0	No preparation is required.	Yes		AR	Yes

EMT Job No: 22/17822

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 9214 - 340.2 (EPA 1998)	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
NONE	No Method Code	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.			AR	
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.			AR	