Appendix 11.Land, Soils and Geology

11.1 Ground Investigation Report (PGL, 2025) with Geophysical Survey (Terra Survey company) (Report Ref: P25025_Gp_Rp_Rev03) appended (pg 185).

Our Ref: SR/Rp/P25025

11th August, 2025.

ATKINS REALIS

Cork Airport Business Park,
Kinsale Rd, Building 2200,
Cork,
Ireland

Re: Ireland Gas Peaker Plant, Co. Galway, Site Investigation, Factual report

In September, 2024, Priority Geotechnical Ltd. (PGL), were requested by Bord Gais Energy Limited (BGE), to undertake a site investigation for the proposed Open Cycle Gas Turbine (OCGT) power station in Pollnagroagh Rathmorrissy, Athenry, Co. Galway.

The scope of works as determined by AtkinsRealis comprised of;

- 4Nr. Cable percussion boreholes;
- 4Nr. Rotary boreholes;
- 17Nr. trial pits;
- 2Nr. soakaway BRE 365 tests;
- 17Nr. CBR tests;
- Geophysical testing;
- All associated sampling;
- Laboratory testing and
- Associated reporting.

Fieldworks

The intrusive works were carried between the 17th February, 2025 and 19th March, 2025 under the supervision of PGL, Engineering Geologist(s); in accordance with the contract specification (BS EN 1997-2: 2007) and the relevant British Standards (BS 5930 (2015) Code of Practice for Site Investigation and BS 1377, Method of Tests for Soil for Civil Engineering Purposes, *in situ* Tests Parts 1 to 9.

The non-intrusive geophysical works were carried out by Terra Survey on behalf of PGL. The survey was carried out between the 17th and 25th March and consisted of 08Nr. ERT profiles over a total survey length of 3515m. The findings are accompanying this factual report.

Trial pit excavations

A total of nineteen (17) trial pits were excavated to depths of 0.9m below existing ground level (bgl) to 3.1m bgl using a 13t tracked mini-excavator. Two (02) soakaway pits were excavated to allow for BRE365 percolation testing. The exploratory records accompany this factual report.

Location	Final depth, m bgl	Stability remarks	Groundwater, m bgl
SA01	1.60	Good	None encountered.
SA02	1.00	Good	None encountered.
TP01	1.20	Good	None encountered.
TP02	2.7	Good	None encountered.

Location	Final depth, m bgl	Stability remarks	Groundwater,
			m bgl
TP03	3.1	Moderate	None encountered.
TP04	0.9	Good	None encountered.
TP05	2.1	Good	None encountered.
TP06	3.00	Good	None encountered.
TP07	1.10	Good	None encountered.
TP08	2.70	Good	None encountered.
TP09	2.30	Good	None encountered.
TP10	2.40	Good	None encountered.
TP11	1.30	Good	None encountered.
TP12	2.10	Moderate	None encountered.
TP13	1.20	Good	None encountered.
TP14	2.50	Good to moderate	None encountered.
TP15	1.20	Good	None encountered.
TP16	1.90	Good	None encountered.
TP17	2.80	Good	None encountered.

Excavations were backfilled with their arisings.

 ARISINGS Backfill

Boreholes

Seven (7) cable percussion boreholes were drilled to depths 0.7m below existing ground level (bgl) to 1.0m bgl using PGL's Dando 2000 Rig and 200mm diameter casing. The boreholes terminated after one (1) hour chiselling without progress. The logs are accompanying this factual report.

Location	Final depth, m bgl
BH01	0.7
BH02	1.0
BH02A	0.8
BH02B	1.0
BH03	0.8
BH03B	0.8
BH04	0.7

Location	Chiselling, m bgl		Duration hh:mm
	from	to	
BH01	0.4	0.7	01:00
BH02	0.4	1.0	01:00
BH02A	0.6	0.8	01:00
BH02B	0.6	1.0	01:00
BH03	0.6	0.8	01:00
BH03B	0.6	0.8	01:00

Four (4) rotary borehole was advanced to depths between 7.0m below ground level (bgl) to 9.9m below ground level (bgl) using PGL's Soilmec SM 8G rotary rig and 131mm diameter casing; 76mm core. The logs are accompanying this factual report.

Location	Final depth, m bgl
RC01	7.0
RC02	8.6
RC03	8.3
RC04	9.9

Backfill details are displayed graphically on the accompanying borehole logs and detailed as follows:

GRAVEL Backfill to installation/ borehole

uPVC slotted pipe

ARISINGS Backfill

BENTONITE Backfill to installation/ borehole

Sampling

A total of forty eight (48) bulk disturbed samples (B), twenty two (22) environmental samples (ENV), thirty three (33) small disturbed samples (D) and 28.8 lin.m of core were recovered from the exploratory locations in accordance with Geotechnical Investigation and Sampling – Sampling Methods and Groundwater Measurements (EN ISO 22475-1:2006).

In-situ testing

Cone penetrometer test

Seventeen (17) Transport Research Laboratory, TRL dynamic cone penetrometer tests, TRL DCP (8kg drop weight, 575mm drop height) were carried out during the period of investigation. DCP probes were advanced to refusal depths to establish (unadjusted) *in situ* California Bearing Ratio, CBR using both the Kleyn and TII DN-PAV-03021 equations. (*An adjustment factor of 0.5 is recommended*). The test data accompany the relevant trial pit excavation, presented within this factual report.

Location	Final depth, m bgl
DCP TP01	0.553
DCP TP02	0.465
DCP TP03	0.307
DCP TP04	0.461
DCP TP05	0.532
DCP TP06	0.685
DCP TP07	0.526
DCP TP08	0.711
DCP TP09	0.587
DCP TP10	0.578
DCP TP11	0.387
DCP TP12	0.482
DCP TP13	0.480
DCP TP14	0.331
DCP TP15	0.335
DCPTP16	0.488
DCP TP17	0.483

Standard penetration test

Seven (7) number standard penetration tests, N_{SPT} values, were carried out in the boreholes using the 60^{o} solid cone in the place of the split spoon in accordance with Geotechnical Investigation and Testing, Part 3 Standard penetration test, BS EN ISO 22476-3:2005+A1:2011. The test data accompany the relevant borehole records, presented within this factual report.

BRE 365 Soakaway test

Two (2) infiltration/ soakaway tests were undertaken in general accordance with BRE Digest 365, Soakaway Design (2003/ 2007); a single (1) cycle was completed at TP SA01 and three (3) cycles were competed at TP SA 02, within the duration of the working day. The data from the testing accompanies the relevant exploratory records accompanying this report.

Location	Test depth, m bgl	Infiltration coefficient, ms^{-1}
SA 01	1.6	*2.18 x E-04*
SA 02	1.0	*5.33 x E-05*
		6.09 x E-05
		5.33 x E-05

Location plan

The 'as built' exploration locations were surveyed to the Ordinance Survey Irish Transverse Mercator system of co-ordinates (ITM) and elevations to Malin Head datum and shown on the relevant exploratory logs and the exploratory location plan accompanying this factual report.

Location	Easting	Northing	Elevation, mOD Malin	Depth, m bgl	Date, dd/mm/yyyy
BH01	546568.7	728295.2	55.9	0.7	19/02/2025
BH02	546607.6	728169.4	55.2	1	17/02/2025
BH02A	546607.2	728168	55.24	0.8	18/02/2025
BH02B	546603.7	728172.8	55.28	1	18/02/2025
BH03	546619.9	728228.3	56.33	0.8	18/02/2025
BH03B	546624.6	728244.2	56.39	0.8	19/02/2025
BH04	546697.2	728187.1	54.56	0.7	19/02/2025
RC01	546568.7	728295.2	55.87	7	03/03/2025
RC02	546607.6	728169.4	55.2	8.6	28/02/2025
RC03	546619.8	728227.9	56.37	8.3	28/02/2025
RC04	546697.2	728187.1	54.56	9.9	25/02/2025
SA01	546726.4	728214	52.17	1.6	27/02/2025
SA02	546540.6	728314.6	55.8	1	27/02/2025
TP01	546525.1	728259.6	56.21	1.2	26/02/2025
TP02	546667.6	728266.9	54.43	2.7	25/02/2025
TP03	546705.8	728222	52.31	3.1	25/02/2025
TP04	546657.2	728216.6	55.73	0.9	25/02/2025

Location	Easting	Northing	Elevation, mOD	Depth,	Date, dd/mm/yyyy
TP05	546580.2	728181.2	55.57	2.1	25/02/2025
TP06	546591	728319.2	55.42	3	26/02/2025
TP07	546837.8	728284.5	53.56	1.1	26/02/2025
TP08	546837.8	728284.5	53.56	2.7	27/02/2025
TP09	546953.4	728403.6	53.22	2.3	27/02/2025
TP10	547143.6	728580.8	50.46	2.4	27/02/2025
TP11	547361.4	728687.2	52.72	1.3	28/02/2025
TP12	547477.8	728655.3	56.74	2.1	28/02/2025
TP13	547586	728517.1	53.27	1.2	28/02/2025
TP14	546544.1	728517.1	53.35	2.5	26/02/2025
TP15	546627.2	728782.9	47.79	1.2	26/02/2025
TP16	546669.6	728937.8	45.74	1.9	26/02/2025
TP17	546793	729177.2	46.06	2.8	27/02/2025

Laboratory testing

All samples were transported to Priority Geotechnical's laboratory in Midleton, Co. Cork examined, logged and prepared for scheduled testing. Laboratory testing was scheduled by Atkins Realis and carried out by PGL, in accordance with BS1377 (1990), Methods of test for soils for civil engineering purposes and the ISRM suggested methods for rock characterisation, testing and monitoring. Specialist chemical testing was undertaken by Eurofins (UK) on behalf of PGL. The laboratory test results were presented within this, the factual report and are summarised as follows:

Type	Quantity, Nr.	Remarks
Natural moisture content	01	18%
Atterberg limits	11	Liquid Limit, LL 20% to 50%
		Plastic Limit, PL 14% to 33% incl. non plastic soils
		Plasticity Index, PI 5to 21
Particle size distribution	23	No hydrometer on fine soils
Point load index, I_{S50}	09	2.2 MPa to 5.5MPa
Unconfined compressive strength, UCS	07	69.45MPa to 409.30MPa
Environmental	09	See attached results

Please note that all samples and core shall be retained for a period no longer than 28 days from the date of this report. Thereafter all remaining samples shall be appropriately disposed of unless a written instruction to the contrary is received by PGL prior to the date of this reporting and within the 28 day period outlined above. Laboratory testing will result in a reduction of sample quantity and in some cased the use of the full sample mass. Samples already tested may not be suitable or available for further testing.

Ground and groundwater conditions

The full details of the ground conditions encountered are provided for on the exploratory records accompanying this factual report. The records provide descriptions, in accordance with BS 5930 (2015) and Eurocode 7, Geotechnical Investigation and Testing, Identification and classification of soils, Part 1, Identification and description (EN ISO 14688-1: 2002),– Identification and Classification of Soil, Part 2: Classification Principles (EN ISO 14688-2:2004) and Identification and Classification of Rock, Part 1: Identification & Description (EN ISO 14689-1:2004) of the materials encountered, *in situ* testing and details of the samples taken, together with any observations made during the site investigation.

Topsoil 0.1m to 0.4m thick overlay slightly sandy slightly gravelly CLAY with low Cobble content and boulder content and silty sandy GRAVEL with low Boulder content to a depth of 3.1m below existing ground level (bgl); LIMESTONE was encountered between 0.7m to 9.9m bgl at RC01 – RC04.

Groundwater levels may be subject to diurnal, seasonal and climatic variations and can also be affected by drainage conditions etc. The duration trial pit excavations remain open may not be sufficient to allow for low volume flow to present, low volume flow may be cut off by borehole casings in cohesive deposits.

Groundwater was encountered between 5.2m and 6.5m bgl.

Location	Groundwater strike, m bgl	Remarks
BH01	-	Dry
BH02	-	Dry
BH02A	-	Dry
BH02B	-	Dry
BH03	-	Dry

Location	Groundwater strike, m bgl	Remarks
BH03B	-	Dry
BH04	-	Dry
RC01	5.2	See shift data.
RC02	6.5	See shift data.
RC03	6.0	See shift data.
RC04	5.9	See shift data.
SA01	-	None encountered.
SA02	-	None encountered.
TP01	-	None encountered.
TP02	-	None encountered.
TP03	-	None encountered.
TP04	-	None encountered.
TP05	-	None encountered.
TP06	-	None encountered.
TP07	-	None encountered.
TP08	-	None encountered.
TP09	-	None encountered.
TP10	-	None encountered.
TP11	-	None encountered.
TP12	-	None encountered.
TP13	-	None encountered.
TP14	-	None encountered.
TP15	-	None encountered.
TP16	-	None encountered.
TP17	-	None encountered.

The groundwater regime should be assessed from standpipe well installations, where available. Three (03) 50mm dia. HPDE standpipe was constructed to allow for groundwater monitoring. The details are summarised as follows:

Location	Depth Top (m bgl)	Depth Base (m bgl)	Diameter (mm)	Pipe Type
RC01	0.00	4.00	50	PLAIN
	4.00	7.00	50	SLOTTED
RC03	0.00	5.30	50	PLAIN
	5.30	8.30	50	SLOTTED
RC04	0.00	8.50	50	PLAIN
	8.50	22.20	50	SLOTTED

Groundwater was monitored as follows:

Location	Depth to groundwater, m bgl		
	29/05/2025	dd/mm/yyyy	dd/mm/yyyy
BH01	Dry		
BH02	7.25		
BH03	7.13		
BH04	5.94		

Should you have any queries in relation to the data collected and presented herein, please do not hesitate to contact our office.

Yours sincerely,
For **Priority Geotechnical,**

Sarah Rice BSc

This report has been prepared for the Employer and their Representative as outline, herein. The information should not be used without their prior written permission. PGL accepts no responsibility or liability for this document being used other than for the purposes for which it was intended.

No responsibility can be held by PGL for ground conditions between exploratory locations. The exploratory logs provide for ground profiles and configuration of strata relevant to the investigation depths achieved during the fieldworks.

Caution shall be taken when extrapolating between such exploratory locations. No liability is accepted for ground conditions extraneous to the exploratory locations.

This report may be subject to change where further information becomes available.

No account has been taken of potential subsidence or ground movement due to mineral extraction, mining works or karstification below or in proximity to the site, unless specifically addressed.

KEY TO SYMBOLS ON EXPLORATORY HOLE RECORDS

GENERAL

m	Meter
mm	Millimetres
BGL	Below existing ground level
mOD	Level to OD Malin
TP	Trial Pit
ST	Slit Trench
CP	Cable Percussion Borehole
RC	Rotary Cored Borehole
IP	Inspection Pit
FP	Foundation Pit
DP	Dynamic Probe
Geobore S	Geobore S Borehole

SAMPLES

B	Bulk disturbed sample
D	Small disturbed sample
U	Undisturbed sample
WS	Dynamic sample/ window sample
ENV	Environmental sample
SPLTLS	Split spoon sample
CBR	California Bearing Ratio mould sample

RECOVERY AND ROCK QUALITY

TCR %	Total Core Recovery (% of Core Run)
SCR %	Solid Core Recovery (length of core having at least one full diameter as % of core run) RQD
RQD %	Rock Quality Designation (length of solid core greater than 100mm as % of core run)
FI	Fracture Index (Measured over length of core run)
NI	Non intact
AVG	Average distance between fractures
MAX	Maximum distance between fractures
MIN	Minimum distance between fractures

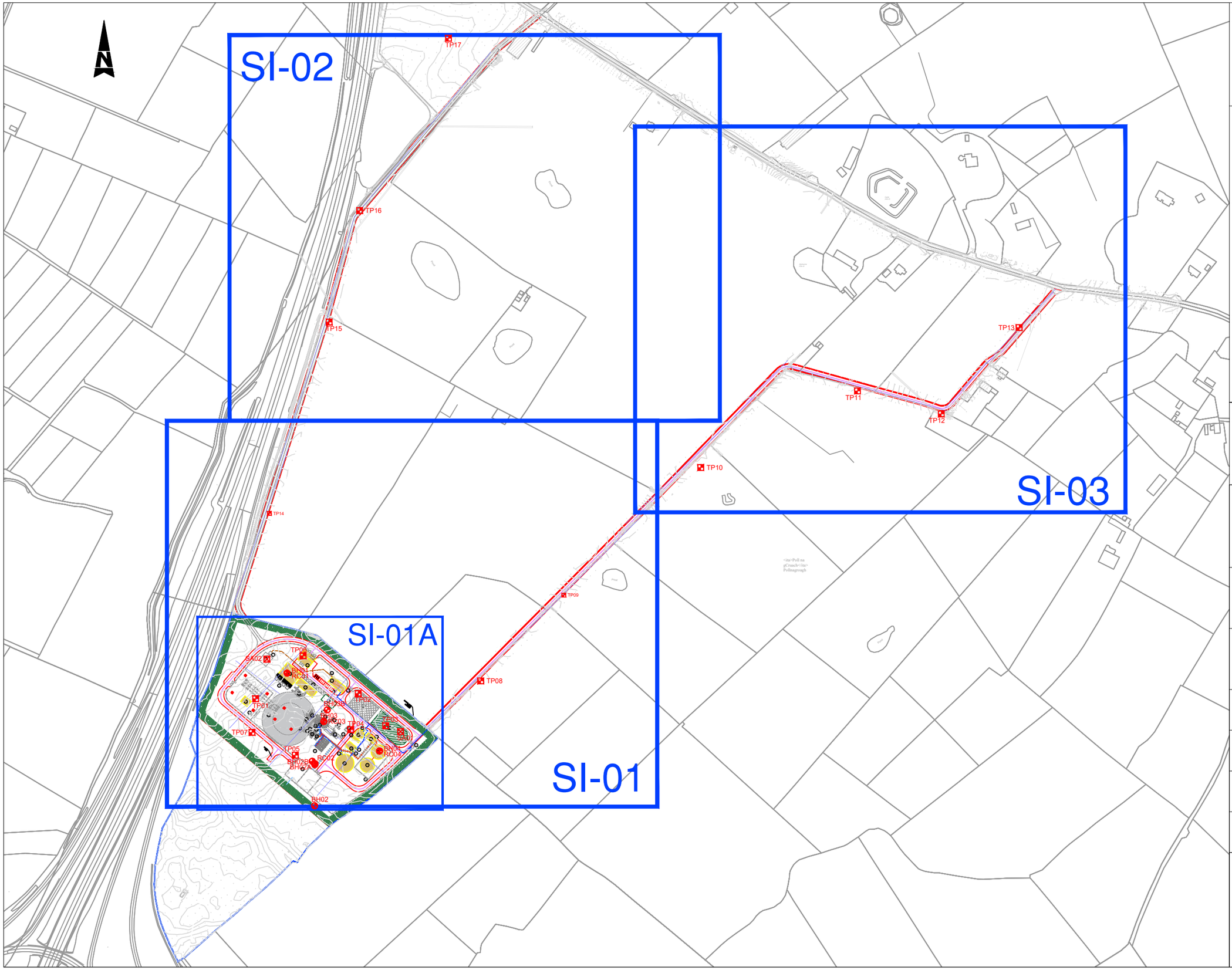
GROUNDWATER

Strike	
Level after standing	

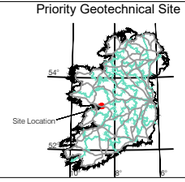
IN-SITU TESTING

N	Standard Penetration Test - Blows required to drive 300mm after seating drive
C	Standard Penetration Test - 60Cone
S	Standard Penetration Test – Split Spoon

Soil and rock descriptions are based on the guidance in BS5930:2015, The Code of Practice for Site Investigation



Priority Geotechnical Site



Note: The design layout as shown is an initial stage design, at the time of the GI, and the proposed site layout design has evolved since

JOB NAME:

Galway Peaker

Sheet Title:

Exploratory Location Layout

JOB NUMBER:

P25025

DRAWING NUMBER:

P25025-SI-A

DRAWN BY:

G.C.

DATE:

03/03/2025

SCALE:	APPROVED:
1:5000 ON A3	GH

REVISION:

D01

pgl priority geotechnical

KEY:

- TP00 Denotes Trial Pit location
- SA00 Denotes Soakaway location
- BH00 Denotes Borehole location
- RC00 Denotes Rotary Core location

Note: The design layout as shown is an initial stage design, at the time of the GI, and the proposed site layout design has evolved since.

JOB NAME:

Galway Peaker

Sheet Title:

Exploratory Location Layout

JOB NUMBER:

P25025

DRAWING NUMBER:

P25025-SI-01

DRAWN BY:

G.C.

DATE:

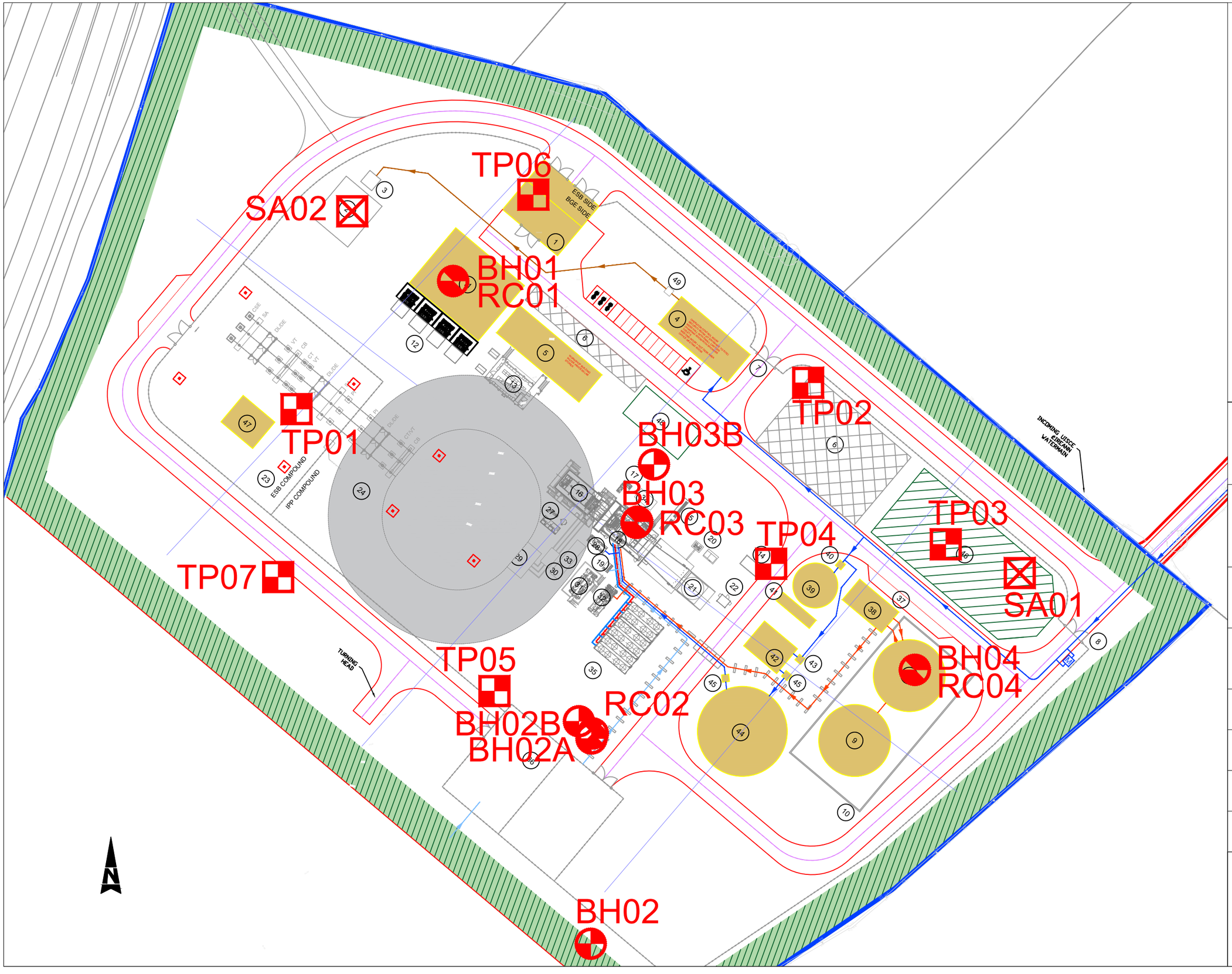
03/03/2025

SCALE:	APPROVED:
1:2000 ON A3	GH

REVISION:

D01

pgl priority geotechnical



KEY:

- TP00 Denotes Trial Pit location
- SA00 Denotes Soakaway location
- BH00 Denotes Borehole location
- RC00 Denotes Rotary Core location

Note: The design layout as shown is an initial stage design, at the time of the GI, and the proposed site layout design has evolved since.

JOB NAME:

Galway Peaker

Sheet Title:

Exploratory Location Layout

JOB NUMBER:

P25025

DRAWING NUMBER:

P25025-SI-01A

DRAWN BY:

G.C.

DATE:

03/03/2025

SCALE:	APPROVED:
1:1000 ON A3	GH

REVISION:

D01

pgl priority geotechnical

KEY:

- TP00 Denotes Trial Pit location
- SA00 Denotes Soakaway location
- BH00 Denotes Borehole location
- RC00 Denotes Rotary Core location

JOB NAME:

Galway Peaker

Sheet Title:

Exploratory Location Layout

JOB NUMBER:

P25025

DRAWING NUMBER:

P25025-SI-02

DRAWN BY:

G.C.

DATE:

03/03/2025

SCALE:

1:2000 ON A3

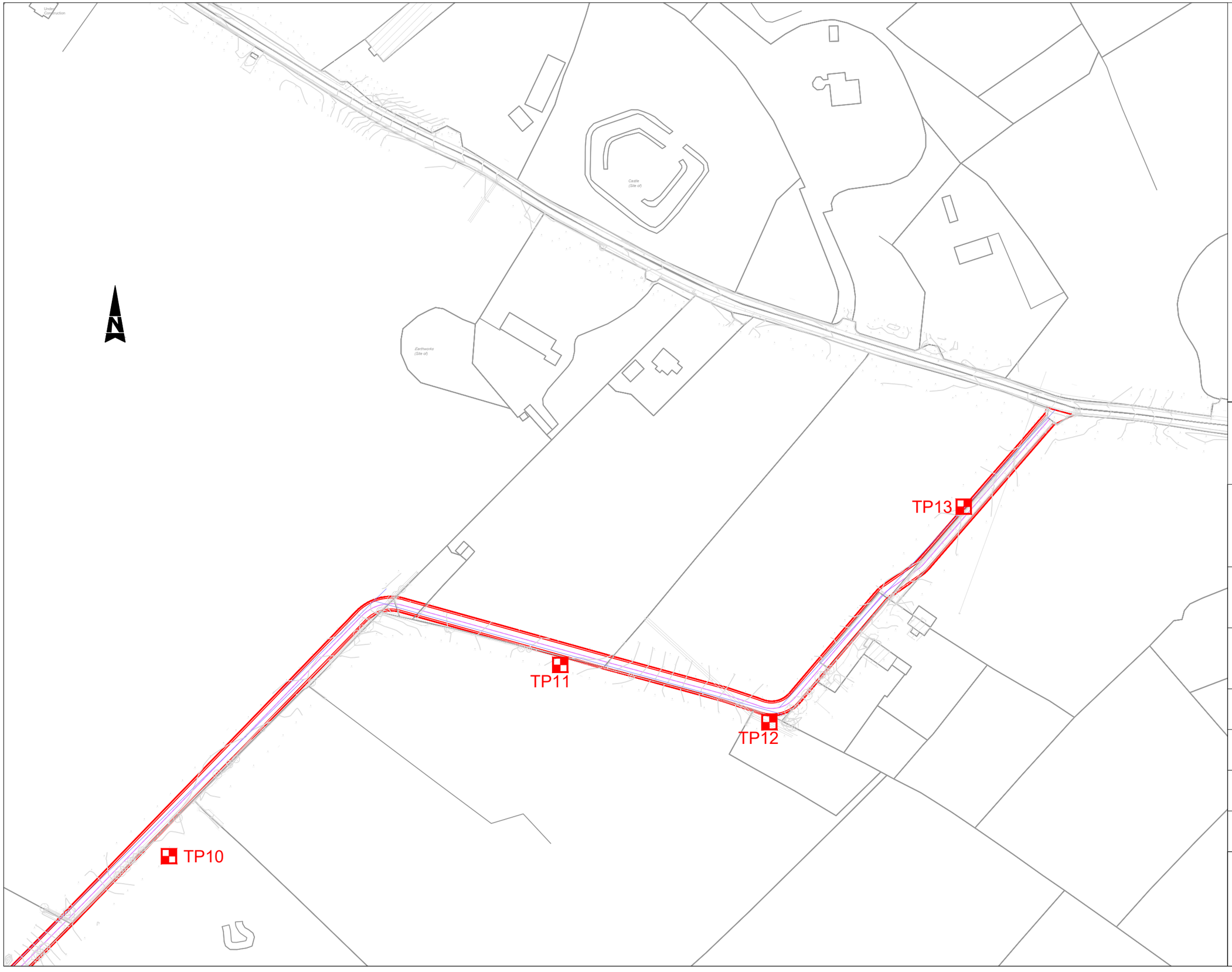
APPROVED:

GH

REVISION:

D01

pgl priority geotechnical



KEY:

- TP00 Denotes Trial Pit location
- SA00 Denotes Soakaway location
- BH00 Denotes Borehole location
- RC00 Denotes Rotary Core location

JOB NAME:

Galway Peaker

Sheet Title:

Exploratory Location Layout

JOB NUMBER:

P25025

DRAWING NUMBER:

P25025-SI-03

DRAWN BY:

G.C.

DATE:

03/03/2025

SCALE:	APPROVED:
1:2000 ON A3	GH

REVISION:

D01

pgl priority geotechnical

pgl priority geotechnical	**Priority Geotechnical Ltd.** **Tel: 021 4631600** **www.prioritygeotechnical.ie**	**Drilled By** AJ & L **Logged By** DOC	Borehole No. **BH01** Sheet 1 of 1

Project Name	Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords**	546569E - 728295N	**Hole Type** CP
Location	Athenry, Co. Galway		**Level**	55.90 m OD	**Scale** 1:50
Client	Bord Gáis Energy Limited (BGE)		**Date**	19/02/2025 - 19/02/2025	

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing: Depth (m bgl)	Type	Results	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
					0.20	55.70		TOPSOIL.
		0.40 - 0.70	B		0.40	55.50		Limestone GRAVEL.
					0.70	55.20		Dark greyish brown, slightly clayey slightly sandy GRAVEL with low cobble content. Sand is fine to coarse. Gravel is fine to coarse and and angular to sub-angular. Cobbles are angular, limestone lithology and 63-70mm in diameter.
								End of Borehole at 0.700m

1 2 3 4 5 6 7 8 9

Groundwater

Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment
				Dry

Hole Information

Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
0.70	200	200

Equipment Dando 2000

Chiselling Details

Top (m)	Base (m)	Duration (hh:mm)	Tool
0.40	0.70	01:00	Chisel.

Remarks

Cable percussion borehole terminated at 0.70m bgl, refusal.

Shift Data

GW (m bgl)	Shift	Depth (m bgl)	Remarks
	19/02/2025 08:00	0.00	Start of shift.
Dry	19/02/2025 18:00	0.70	End of borehole.

Priority Geotechnical Ltd.
Tel: 021 4631600
www.prioritygeotechnical.ie

Drilled By	Location
KM & BC	**RC01**
Logged By	
DOC	Sheet 1 of 1

Project Name	Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords**	546569E - 728295N	**Hole Type** RC
Location	Athenry, Co. Galway		**Level**	55.87 m OD	**Scale** 1:50
Client	Bord Gáis Energy Limited (BGE)		**Date**	03/03/2025 - 03/03/2025	

Backfill	Water Strike (m bgl)	Sampling and In-Situ Testing: Depth (m bgl)	Type	Results	Coring %: TCR	SCR	RQD	FI/ Run	Spacing (mm)	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
													Open hole drilling; driller describes TOPSOIL and CLAY.
		1.20 1.20 - 2.20	SPT(C)	50 (25 for 75mm/50 for 0mm)						1.20	54.67		
					100	0	0						Lithology; Medium strong, grey, LIMESTONE. Weathering; Moderately to heavily weathered from 1.90m to 2.90m and 6.00m to 6.70m bgl. Lightly weathered throughout. Fracture Sets; 3 sets observed. Set 1 is dipping 180 degrees with undulating, smooth fracture surfaces and moderate spacing. Set 2 is dipping 80-100 degrees with undulating, smooth fracture surfaces and moderate spacing. Set 3 is dipping 120 degrees with 120 degrees with planar, rough fracture surfaces and moderate spacing.
		2.20 - 2.90			100	0	0						
		2.90 - 4.20			100	31	31						
		4.20 - 5.70			100	72	63	12	0mm min 240mm max 110mm avg				
		5.70 - 7.00			100	18	13	>15					
										7.00	48.87		End of Borehole at 7.000m
					TCR	SCR	RQD						

Shift Data

Date & Time	Depth (m bgl)	Water (m bgl)	Remarks
03/03/2025 08:00	0.00		Start of shift.
03/03/2025 18:00	7.00	5.2	End of borehole.

Chiselling Details

Top (m bgl)	Base (m bgl)	Duration (hh:mm)	Tool

Plant	Soilmec PSM
Method	Compressed air mist

Hole Details		Casing Details	
Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
1.20	131	1.20	131
7.00	76		

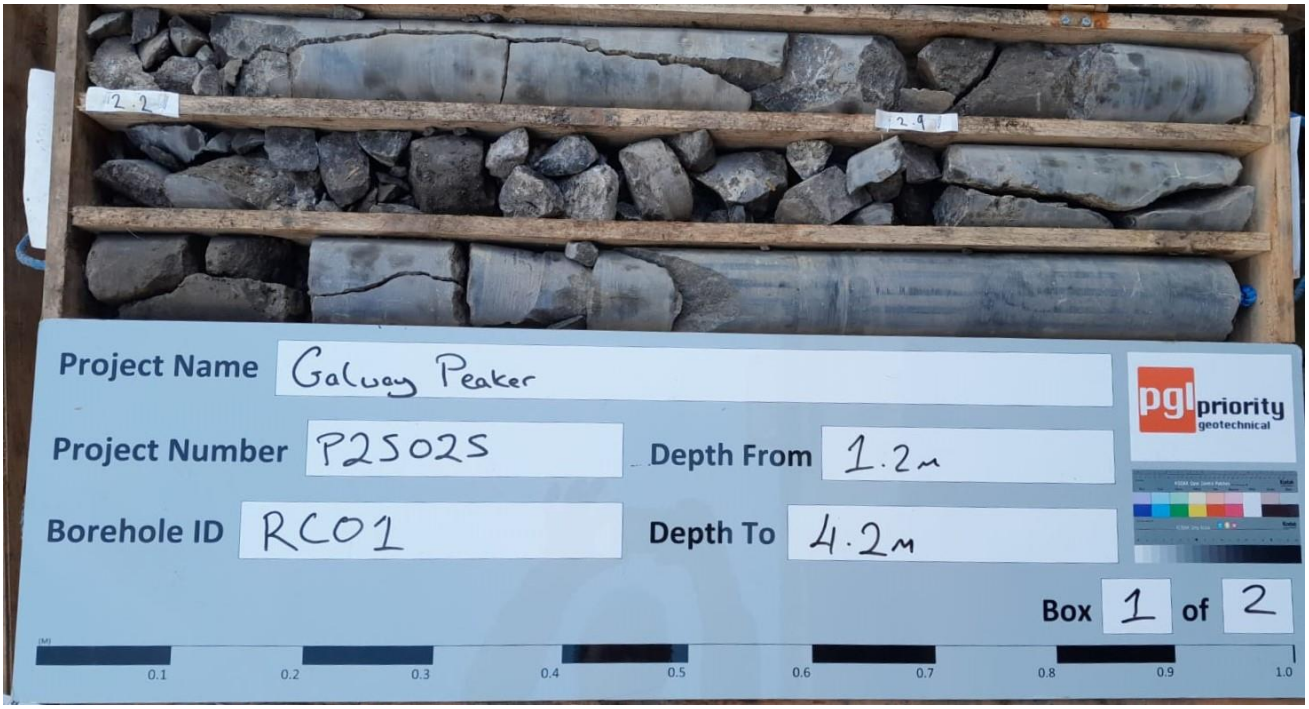
Remarks

Rotary borehole terminated at 7.00m bgl. Reached scheduled depth. 50mm standpipe installed. Response zone from 4.00m to 7.00m bgl.

Groundwater Details

Strike (m bgl)	Rose (m bgl)	After (Mins)	Remarks
			See shift data.

Photographic Record



Number:	**RC01**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

pgl priority geotechnical	**Priority Geotechnical Ltd.** **Tel: 021 4631600** **www.prioritygeotechnical.ie**	**Drilled By** AJ & L **Logged By** DOC	Borehole No. **BH02** Sheet 1 of 1

Project Name	Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords**	546608E - 728169N	**Hole Type** CP
Location	Athenry, Co. Galway		**Level**	55.20 m OD	**Scale** 1:50
Client	Bord Gáis Energy Limited (BGE)		**Date**	17/02/2025 - 17/02/2025	

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing: Depth (m bgl)	Type	Results	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
					0.20	55.00		TOPSOIL.
		0.80 - 1.00	B					Greyish brown, clayey sandy GRAVEL with low cobble content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-85mm in diameter.
		1.00	SPT (C)	50 (20 for 0mm/50 for 0mm)	1.00	54.20		End of Borehole at 1.000m

Groundwater

Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment
				Dry

Hole Information

Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
1.00	200	200

Equipment Dando 2000

Chiselling Details

Top (m)	Base (m)	Duration (hh:mm)	Tool
0.40	1.00	01:00	Chisel.

Remarks

Cable percussion borehole terminated at 1.00m bgl, refusal.

Shift Data

GW (m bgl)	Shift	Depth (m bgl)	Remarks
	17/02/2025 08:00	0.00	Start of shift.
Dry	17/02/2025 18:00	1.00	End of borehole.

pgl priority geotechnical	**Priority Geotechnical Ltd.** **Tel: 021 4631600** **www.prioritygeotechnical.ie**	**Drilled By** AJ & L **Logged By**	Borehole No. **BH02A** Sheet 1 of 1

Project Name	Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords**	546607E - 728168N	**Hole Type** CP
Location	Athenry, Co. Galway		**Level**	55.24 m OD	**Scale** 1:50
Client	Bord Gáis Energy Limited (BGE)		**Date**	18/02/2025 - 18/02/2025	

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing: Depth (m bgl)	Type	Results	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
					0.20	55.04		TOPSOIL.
					0.50	54.74		Limestone BOULDERS.
					0.80	54.44		Brownish grey, clayey sandy GRAVEL with low cobble content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-angular. Cobbles are angular to sub-angular, limestone lithology and >63mm in diameter.
								End of Borehole at 0.800m

Groundwater

Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment
				Dry

Hole Information

Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
0.80	200	200

Equipment Dando 2000

Chiselling Details

Top (m)	Base (m)	Duration (hh:mm)	Tool
0.60	0.80	01:00	Chisel.

Remarks

Cable percussion borehole terminated at 0.80m bgl, refusal.

Shift Data

GW (m bgl)	Shift	Depth (m bgl)	Remarks
	18/02/2025 08:00	0.00	Start of shift.
Dry	18/02/2025 18:00	0.80	End of borehole.

pgl priority geotechnical	**Priority Geotechnical Ltd.** **Tel: 021 4631600** **www.prioritygeotechnical.ie**	**Drilled By** AJ & L **Logged By** DOC	Borehole No. **BH02B** Sheet 1 of 1

Project Name	Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords**	546604E - 728173N	**Hole Type** CP
Location	Athenry, Co. Galway		**Level**	55.28 m OD	**Scale** 1:50
Client	Bord Gáis Energy Limited (BGE)		**Date**	18/02/2025 - 18/02/2025	

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing: Depth (m bgl)	Type	Results	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
					0.20	55.08		TOPSOIL.
		0.60 - 0.80	B					Greyish brown, slightly clayey slightly sandy GRAVEL with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded. Cobbles are sub-angular, limestone lithology and 63-90mm in diameter.
		1.00	SPT (C)	50 (20 for 0mm/50 for 0mm)	1.00	54.28		End of Borehole at 1.000m

1 2 3 4 5 6 7 8 9

Groundwater

Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment
				Dry

Hole Information

Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
1.00	200	200

Equipment Dando 2000

Chiselling Details

Top (m)	Base (m)	Duration (hh:mm)	Tool
0.60	1.00	01:00	Chisel.

Remarks

Cable percussion borehole terminated at 1.00m bgl, refusal.

Shift Data

GW (m bgl)	Shift	Depth (m bgl)	Remarks
	18/02/2025 08:00	0.00	Start of shift.
Dry	18/02/2025 18:00	1.00	End of shift.

Priority Geotechnical Ltd. Tel: 021 4631600 www.prioritygeotechnical.ie	Drilled By: KM & BC	Location: RC02
	Logged By: DOC	Sheet 1 of 1

Project Name	Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords**	546608E - 728169N	**Hole Type** RC
Location	Athenry, Co. Galway		**Level**	55.20 m OD	**Scale** 1:50
Client	Bord Gáis Energy Limited (BGE)		**Date**	28/02/2025 - 28/02/2025	

Backfill	Water Strike (m bgl)	Sampling and In-Situ Testing: Depth (m bgl)	Type	Results	Coring %: TCR	SCR	RQD	FI/ Run	Spacing (mm)	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
		0.70 0.70 - 1.40	SPT(C)	50 (25 for 75mm/50 for 75mm)						0.70	54.50		Open hole drilling; driller describes TOPSOIL and CLAY with boulder content.
					71	0	0						Lithology; Strong to very strong, grey, fossiliferous LIMESTONE. Weathering; Lightly weathered to fresh 0.70m to 4.40m bgl, 4.90m to 7.60m and 8.00m to 8.60m. Moderately weathered 4.40m to 4.90m and 7.60m to 8.00m bgl. Fracture Sets; 3 sets observed. Set 1 is dipping 75-90 degrees with undulating, rough fracture surfaces and moderate to wide spacing. Set 2 is dipping 135 degrees with planar/ stepped, smooth fracture surfaces and wide spacing. Set 3 is dipping 160-180 degrees with undulating/ smooth fracture surfaces and wide spacing.
		1.40 1.40 - 2.90	SPT(C)	50 (25 for 75mm/50 for 0mm)									
					100	57	39	10	0mm min 240mm max 150mm avg				
		2.90 - 4.40											
					100	62	38	9	0mm min 470mm max 170mm avg				
		4.40 - 5.90											
					100	57	30	10	0mm min 150mm max 150mm avg				
		5.90 - 6.90											
					100	80	80	1	200mm min 800mm max 300mm avg				
		6.90 - 7.90											
					100	68	47	11	0mm min 190mm max 90mm avg				
		7.90 - 8.60											
					100	33	0	4	0mm min 90mm max 30mm avg				
										8.60	46.60		End of Borehole at 8.600m
					TCR	SCR	RQD						

Calcite veining throughout core.

Shift Data

Date & Time	Depth (m bgl)	Water (m bgl)	Remarks
28/02/2025 08:00	0.00		Start of shift.
28/02/2025 18:00	8.60	6.5	End of borehole.

Chiselling Details

Top (m bgl)	Base (m bgl)	Duration (hh:mm)	Tool

Plant	Soilmec PSM
Method	Compressed air mist

Hole Details		Casing Details	
Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
1.40	131	1.40	131
8.60	76		

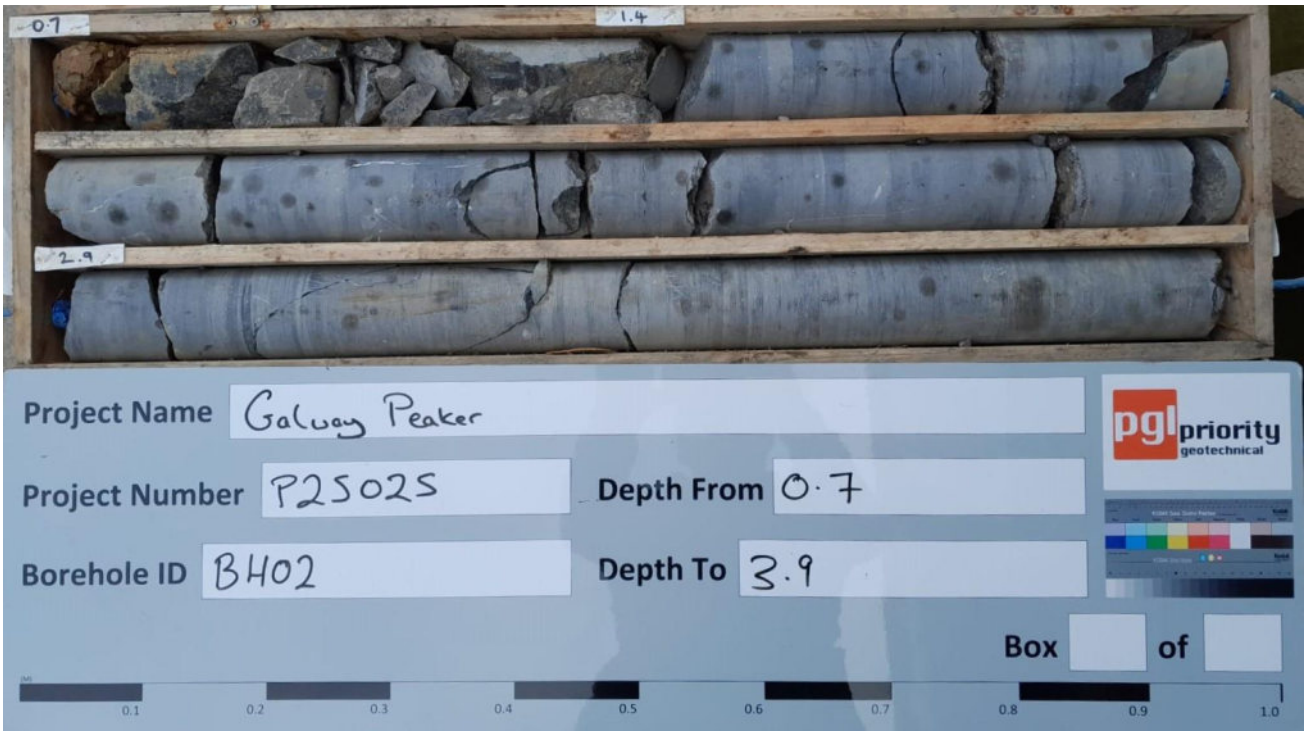
Remarks

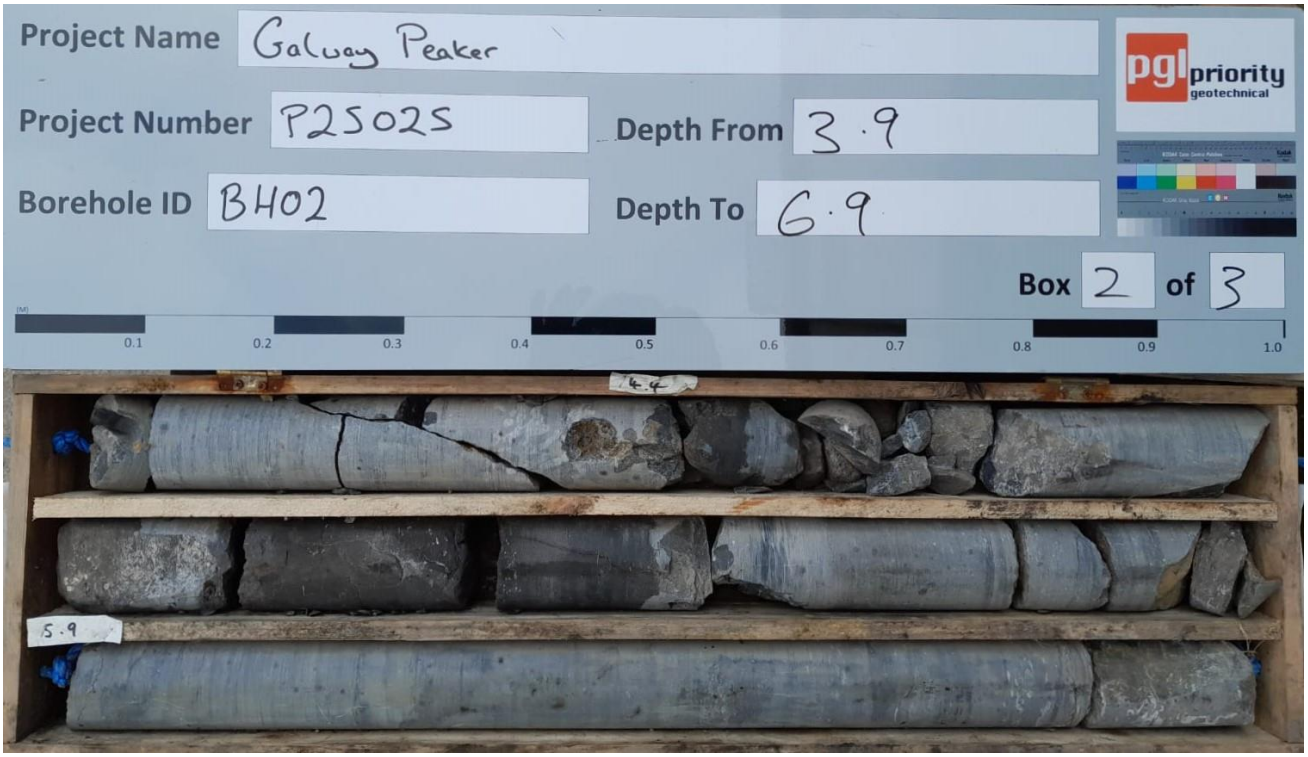
Rotary borehole terminated at 8.60m bgl. Reached scheduled depth. 50mm standpipe installed. Response zone from 6.00m to 8.60m bgl.

Groundwater Details

Strike (m bgl)	Rose (m bgl)	After (Mins)	Remarks
			See shift data.

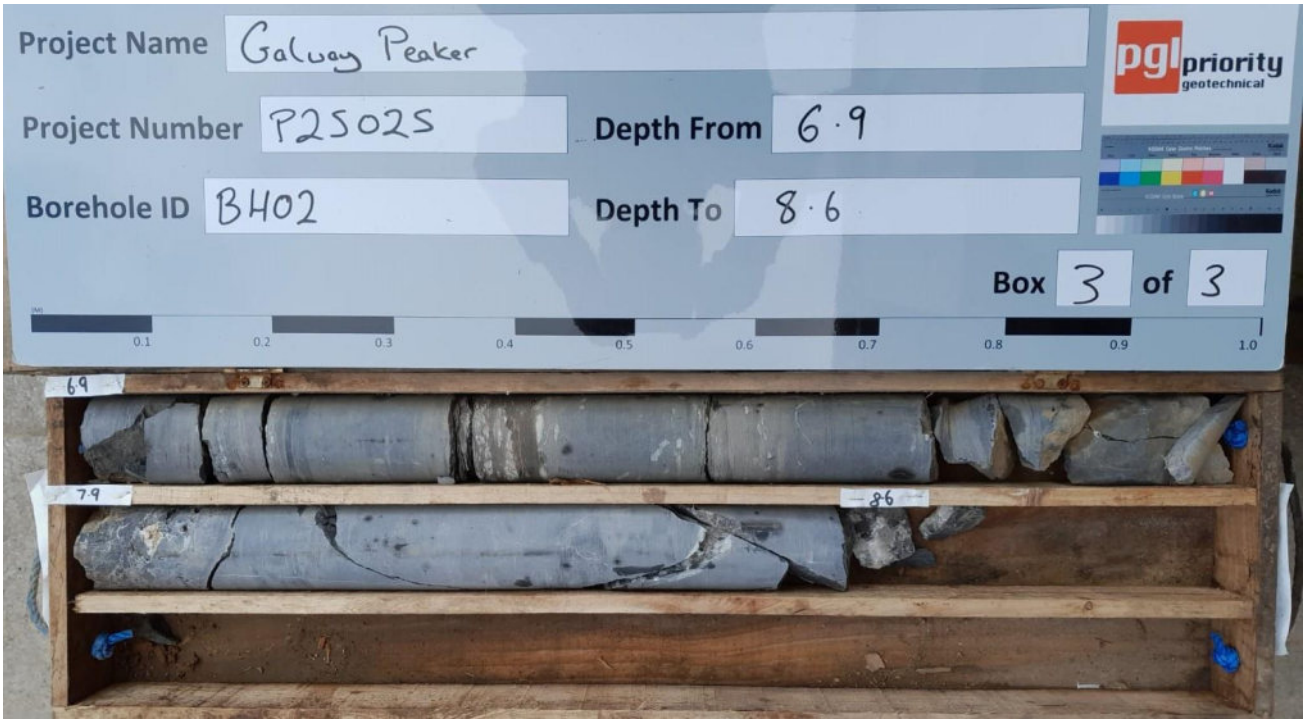
Photographic Record





Number:	**RC02**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record



Number:	**RC02**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

pgl priority geotechnical	**Priority Geotechnical Ltd.** **Tel: 021 4631600** **www.prioritygeotechnical.ie**	**Drilled By** AJ & L **Logged By**	Borehole No. **BH03** Sheet 1 of 1

Project Name	Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords**	546620E - 728228N	**Hole Type** CP
Location	Athenry, Co. Galway		**Level**	56.33 m OD	**Scale** 1:50
Client	Bord Gáis Energy Limited (BGE)		**Date**	18/02/2025 - 18/02/2025	

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing: Depth (m bgl)	Type	Results	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
					0.20	56.12		TOPSOIL.
					0.50	55.82		Limestone BOULDERS.
					0.80	55.52		Brownish grey, clayey sandy GRAVEL with low cobble content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-angular. Cobbles are angular to sub-angular, limestone lithology and >63mm in diameter.
								End of Borehole at 0.800m

1 2 3 4 5 6 7 8 9

Groundwater

Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment
				Dry

Hole Information

Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
0.80	200	200

Equipment Dando 2000

Chiselling Details

Top (m)	Base (m)	Duration (hh:mm)	Tool
0.60	0.80	01:00	Chisel.

Remarks

Cable percussion borehole terminated at 0.80m bgl, refusal.

Shift Data

GW (m bgl)	Shift	Depth (m bgl)	Remarks
	18/02/2025 08:00	0.00	Start of shift.
Dry	18/02/2025 18:00	0.80	End of borehole.

pgl priority geotechnical	**Priority Geotechnical Ltd.** **Tel: 021 4631600** **www.prioritygeotechnical.ie**	**Drilled By** AJ & L **Logged By** DOC	Borehole No. **BH03B** Sheet 1 of 1

Project Name	Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords**	546625E - 728244N	**Hole Type** CP
Location	Athenry, Co. Galway		**Level**	56.39 m OD	**Scale** 1:50
Client	Bord Gáis Energy Limited (BGE)		**Date**	19/02/2025 - 19/02/2025	

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing: Depth (m bgl)	Type	Results	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
					0.20	56.19		TOPSOIL.
								Open hole drilling; driller describes GRAVEL.
		0.60 - 0.80	B		0.60	55.79		Brownish grey, slightly clayey very sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-angular.
					0.80	55.59		End of Borehole at 0.800m

1 2 3 4 5 6 7 8 9

Groundwater

Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment
				Dry

Hole Information

Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
0.80	200	200

Equipment Dando 2000

Chiselling Details

Top (m)	Base (m)	Duration (hh:mm)	Tool
0.60	0.80	01:00	Chisel.

Remarks

Cable percussion borehole terminated at 0.80m bgl, refusal.

Shift Data

GW (m bgl)	Shift	Depth (m bgl)	Remarks
	19/02/2025 08:00	0.00	Start of shift.
Dry	19/02/2025 18:00	0.80	End of borehole.

Priority Geotechnical Ltd. Tel: 021 4631600 www.prioritygeotechnical.ie	Drilled By: KM & BC	Location: RC03
	Logged By: DOC	Sheet 1 of 1

Project Name	Ireland Gas Peaker Plant - Site Investigation	Project No. P25025	Co-ords	546620E - 728228N	Hole Type: RC
Location	Athenry, Co. Galway		Level	56.37 m OD	Scale: 1:50
Client	Bord Gáis Energy Limited (BGE)		Date	28/02/2025 - 03/03/2025	

Backfill	Water Strike (m bgl)	Sampling and In-Situ Testing: Depth (m bgl)	Type	Results	Coring %: TCR	SCR	RQD	FI/ Run	Spacing (mm)	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
													Open hole drilling; driller describes TOPSOIL and CLAY.
		1.30 1.30 - 2.80	SPT(C)	50 (25 for 75mm/50 for 0mm)						1.30	55.07		
					100	67	58	5	0mm min 120mm max 60mm avg				Lithology; Medium strong, grey, LIMESTONE. Weathering; Moderately weathered from 1.30m to 1.40m, 2.80m to 3.00m and 3.70m to 4.00m bgl. Minor clay accretion on discolouration present n fracture surfaces. Lightly weathered throughout. Fracture Sets; 3 sets observed. Set 1 is dipping 80-100 degrees with undulating/planar, rough fracture surfaces and moderate spacing. Set 2 is dipping 30 degrees with planar, rough fracture surfaces and wide spacing. Set 3 is dipping 180 degrees with undulating, rough fracture surfaces and wide spacing. *Calcite veining throughout.*
		2.80 - 4.30			100	37	24	13	0mm min 230mm max 80mm avg				
		4.30 - 5.80			100	60	53	10	0mm min 150mm max 110mm avg				
		5.80 - 6.90			100	45	26	14	0mm min 290mm max 130mm avg				
		6.90 - 7.90			100	93	56	22	0mm min 160mm max 60mm avg				
		7.90 - 8.30			100	100	100	12	0mm min 380mm max 120mm avg	8.30	48.07		End of Borehole at 8.300m
					TCR	SCR	RQD						

Shift Data

Date & Time	Depth (m bgl)	Water (m bgl)	Remarks
28/02/2025 08:00	0.00		Start of shift.
28/02/2025 18:00	6.90	6.0	End of shift.
03/03/2025 08:00	6.90	5.0	Start of shift.
03/03/2025 18:00	8.30	5.1	End of borehole.

Chiselling Details

Top (m bgl)	Base (m bgl)	Duration (hh:mm)	Tool

Plant	Soilmec PSM
Method	Compressed air mist

Hole Details		Casing Details	
Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
1.30	131	1.30	131
8.30	76		

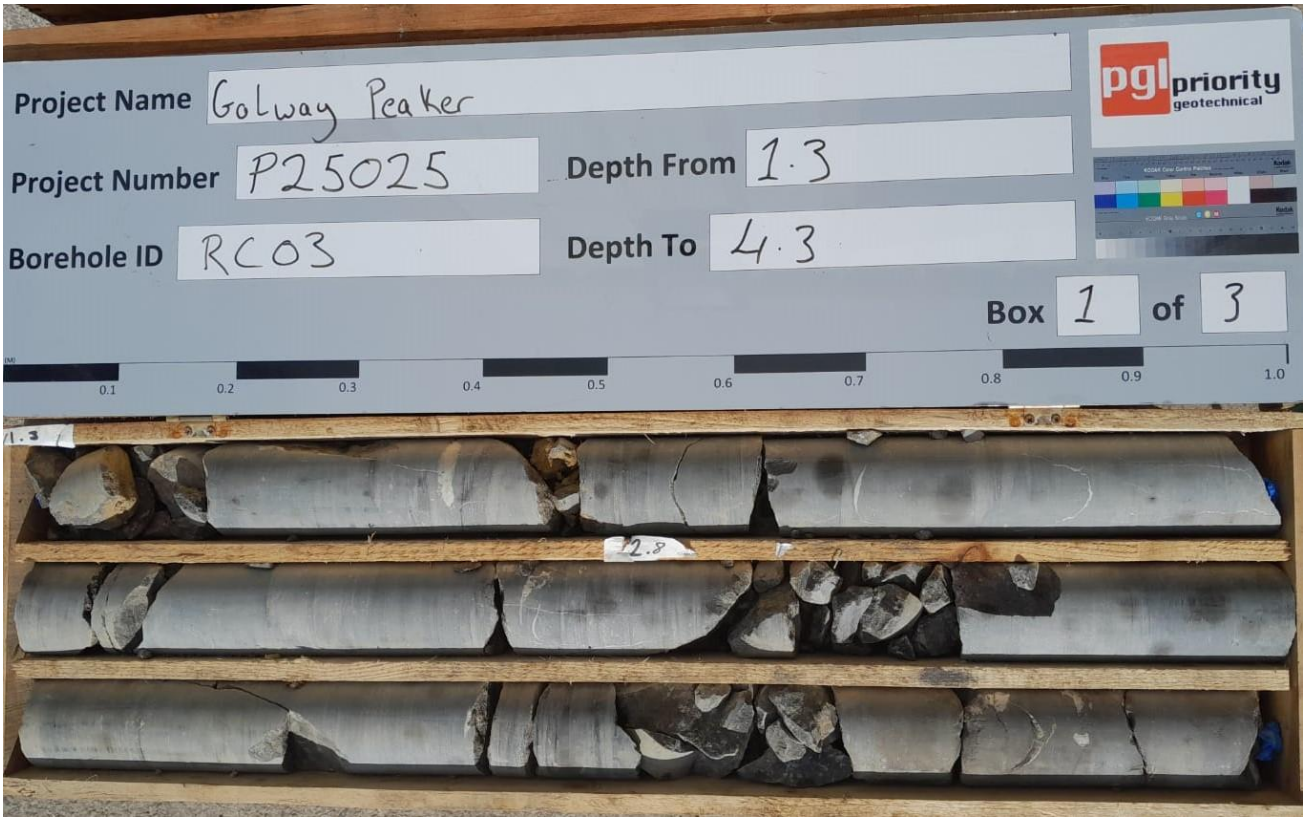
Remarks

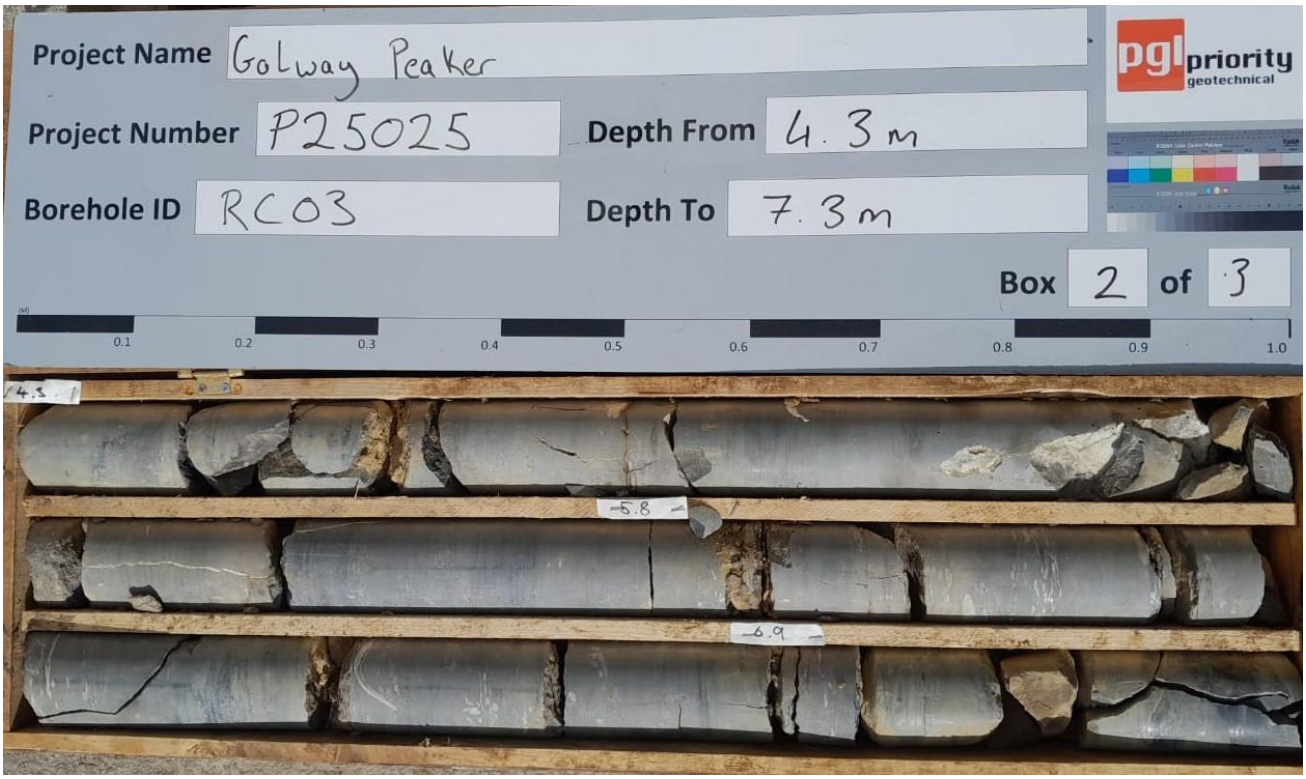
Rotary borehole terminated at 8.30m bgl. Reached required depth. 50mm standpipe installed. Response zone from 5.30m to 8.30m bgl.

Groundwater Details

Strike (m bgl)	Rose (m bgl)	After (Mins)	Remarks
			See shift data.

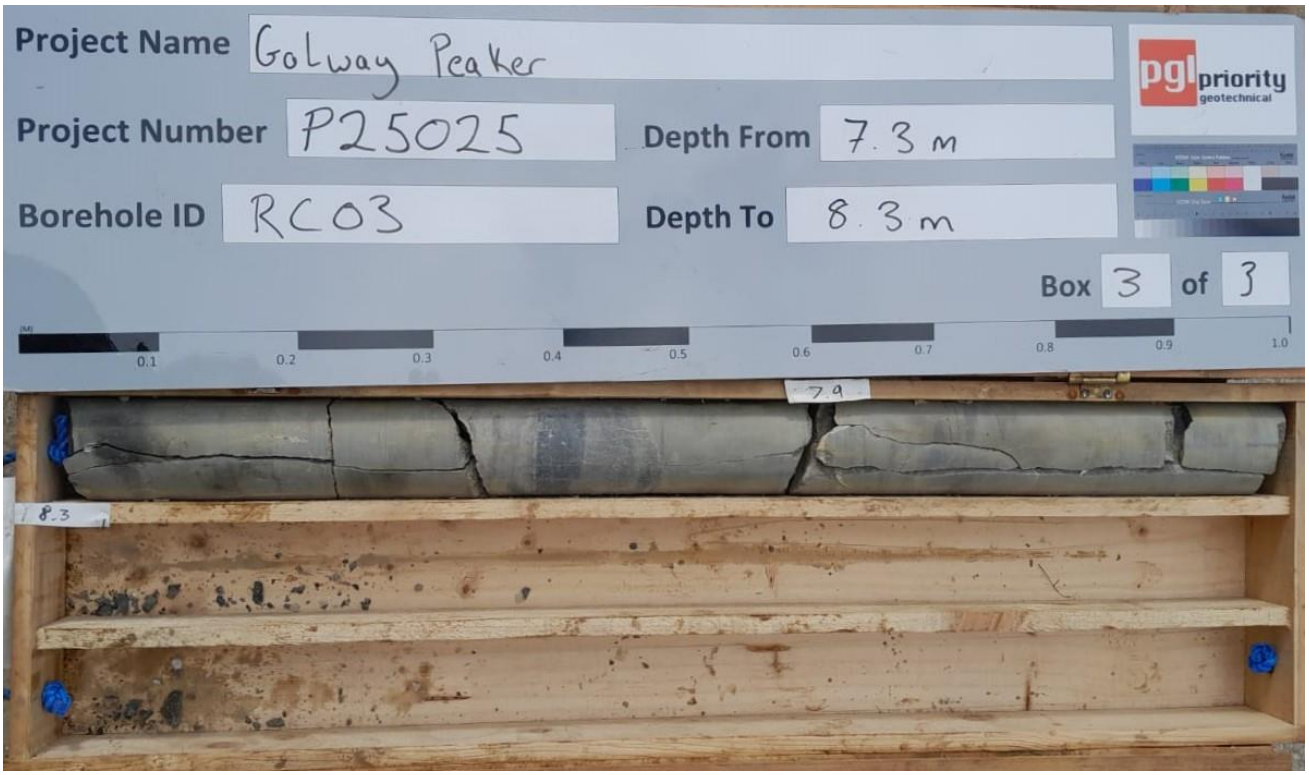
Photographic Record





Number:	**RC03**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record



Number:	**RC03**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

pgl priority geotechnical	**Priority Geotechnical Ltd.** **Tel: 021 4631600** **www.prioritygeotechnical.ie**	**Drilled By** AJ & L **Logged By** DOC	Borehole No. **BH04** Sheet 1 of 1

Project Name	Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords**	546697E - 728187N	**Hole Type** CP
Location	Athenry, Co. Galway		**Level**	54.56 m OD	**Scale** 1:50
Client	Bord Gáis Energy Limited (BGE)		**Date**	19/02/2025 - 19/02/2025	

Well Backfill	Water Strike (m bgl)	Sample and In Situ Testing: Depth (m bgl)	Type	Results	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
					0.10	54.46		TOPSOIL.
		0.40 - 0.70	B		0.40	54.16		Limestone GRAVEL.
					0.70	53.86		Greyish brown, clayey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-angular.
								End of Borehole at 0.700m

1 2 3 4 5 6 7 8 9

Groundwater

Struck (m bgl)	Rose to (m bgl)	After (mins)	Sealed (m bgl)	Comment
				Dry

Hole Information

Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)
0.70	200	200

Equipment Dando 2000

Chiselling Details

Top (m)	Base (m)	Duration (hh:mm)	Tool

Remarks

Cable percussion borehole terminated at 0.70m bgl, refusal.

Shift Data

GW (m bgl)	Shift	Depth (m bgl)	Remarks
	19/02/2025 08:00	0.00	Start of shift.
Dry	19/02/2025 18:00	0.70	End of borehole.

Priority Geotechnical Ltd. Tel: 021 4631600 www.prioritygeotechnical.ie	Drilled By: LM & BC	Location: RC04
	Logged By: DOC	Sheet 1 of 2

Project Name	Ireland Gas Peaker Plant - Site Investigation	Project No.	P25025	Co-ords	546697E - 728187N	Hole Type	RC
Location	Athenry, Co. Galway			Level	54.56 m OD	Scale	1:50
Client	Bord Gáis Energy Limited (BGE)			Date	25/02/2025 - 25/02/2025		

Backfill	Water Strike (m bgl)	Sampling and In-Situ Testing: Depth (m bgl)	Type	Results	Coring %: TCR	SCR	RQD	FI/ Run	Spacing (mm)	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
		0.90 0.90 - 2.40	SPT(C)	50 (25 for 75mm/50 for 0mm)						0.90	53.66		Open hole drilling; driller describes CLAY with boulder content.
					100	31	21						Lithology; Medium strong, grey, fossiliferous, LIMESTONE. Weathering; Highly weathered from 0.90m to 1.40m, 5.40m to 5.80m and 7.30m to 7.40m bgl. Lightly weathered throughout. Fracture Sets; 2 sets observed. Set 1 is dipping 80-100 degrees with undulating/stepped, smooth fracture surfaces and moderate spacing. Set 2 is dipping 150-180 degrees with stepped/undulating, smooth fracture surfaces and moderate spacing. *Calcite veining throughout.*
		2.40 - 3.90			100	31	27	11	0mm min 250mm max 120mm avg				
		3.90 - 5.40			100	17	13	16	0mm min 190mm max 80mm avg				
		5.40 - 6.90			100	25	17						
		6.90 - 8.40			100	65	56	19	0mm min 270mm max 50mm avg				
		8.40 - 9.90											
					TCR	SCR	RQD						

1 2 3 4 5 6 7 8 9

Shift Data

Date & Time	Depth (m bgl)	Water (m bgl)	Remarks
25/02/2025 08:00	0.00		Start of shift.
25/02/2025 18:00	9.90	5.9	End of borehole.

Chiselling Details

Top (m bgl)	Base (m bgl)	Duration (hh:mm)	Tool

Plant	Soilmec PSM
Method	Compressed air mist

Hole Details		Casing Details	
Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
0.90	131	0.90	131
9.90	76		

Remarks

Rotary borehole terminated at 9.90m bgl. Reached scheduled depth. 50mm standpipe installed. Response zone from 5.00m to 9.90m bgl.

Groundwater Details

Strike (m bgl)	Rose (m bgl)	After (Mins)	Remarks
			See shift data.

pgl priority geotechnical

Priority Geotechnical Ltd.
Tel: 021 4631600
www.prioritygeotechnical.ie

Drilled By	Location
LM & BC	**RC04**
Logged By	Sheet 2 of 2
DOC	

Project Name	Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords**	546697E - 728187N	**Hole Type** RC
Location	Athenry, Co. Galway		**Level**	54.56 m OD	**Scale** 1:50
Client	Bord Gáis Energy Limited (BGE)		**Date**	25/02/2025 - 25/02/2025	

Backfill	Water Strike (m bgl)	Sampling and In-Situ Testing: Depth (m bgl)	Type	Results	Coring %: TCR	SCR	RQD	Fl/ Run	Spacing (mm)	Depth (m bgl)	Level (mOD)	Legend	Stratum Description
					100	53	43	11	0mm min 330mm max 130mm avg	9.90	44.66		Lithology; Medium strong, grey, fossiliferous, LIMESTONE. Weathering; Highly weathered from 0.90m to 1.40m, 5.40m to 5.80m and 7.30m to 7.40m bgl. Lightly weathered throughout. Fracture Sets; 2 sets observed. Set 1 is dipping 80-100 degrees with undulating/stepped, smooth fracture surfaces and moderate spacing. Set 2 is dipping 150-180 degrees with stepped/undulating, smooth fracture surfaces and moderate spacing. End of Borehole at 9.900m
					TCR	SCR	RQD						

10 11 12 13 14 15 16 17 18

Shift Data

Date & Time	Depth (m bgl)	Water (m bgl)	Remarks
25/02/2025 08:00	0.00		Start of shift.
25/02/2025 18:00	9.90	5.9	End of borehole.

Chiselling Details

Top (m bgl)	Base (m bgl)	Duration (hh:mm)	Tool

Plant	Soilmec PSM
Method	Compressed air mist

Hole Details		Casing Details	
Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
0.90	131	0.90	131
9.90	76		

Remarks

Rotary borehole terminated at 9.90m bgl. Reached scheduled depth. 50mm standpipe installed. Response zone from 5.00m to 9.90m bgl.

Groundwater Details

Strike (m bgl)	Rose (m bgl)	After (Mins)	Remarks
			See shift data.

Photographic Record

Number:	**RC04**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**RC04**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP01
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546525E - 728260N **Level:** 56.21m OD	**Date** 26/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 3.50 x 1.20 **Depth:** 1.20m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
							(TOPSOIL). Soft, brown, sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded.
				0.30	55.91		Firm, orangey brown, slightly sandy slightly gravelly CLAY with low cobble content and low boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-angular. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-angular to sub-rounded, limestone lithology and 200-350mm in diameter.
	0.50 0.50 0.50	B D ENV		0.60	55.61		Grey, silty sandy GRAVEL with high cobble content and high boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-angular. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-angular to sub-rounded, limestone lithology and 200-500mm in diameter.
	1.00 1.00 1.00	B D ENV		1.20	55.01		End of Pit at 1.200m

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 1.20m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP01	26/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	56.209	546525.078	728259.59

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.585	85	-	-	-
1	0.633	48	48	3.0	5.0
1	0.668	35	35	4.5	7.0
1	0.673	5	5	53	55
1	0.694	21	21	8.6	12
1	0.701	7	7	35	39
1	0.732	31	31	5.2	8.0
1	0.768	36	36	4.3	6.8
1	0.803	35	35	4.5	7.0
1	0.841	38	38	4.0	6.5
1	0.870	29	29	5.7	8.6
1	0.889	19	19	10	13
1	0.915	26	26	6.5	10
1	0.922	7	7	35	39
1	0.967	45	45	3.3	5.4
1	0.983	16	16	12	16
1	0.991	8	8	29	34
1	0.997	6	6	42	45
1	1.013	16	16	12	16
1	1.019	6	6	42	45
1	1.026	7	7	35	39
1	1.029	3	3	102	95
1	1.033	4	4	70	70
1	1.041	8	8	29	34
1	1.049	8	8	29	34
1	1.053	4	4	70	70

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP01**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP01**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP01**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP02
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546668E - 728267N **Level:** 54.43m OD	**Date** 25/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 4.50 × 1.40	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)		**Depth:** 2.70m BGL	**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
							(TOPSOIL).
				0.40	54.03		
	0.50	B					Grey, very silty very sandy GRAVEL with low cobble content and medium boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-angular to sub-rounded, limestone lithology and 200-850mm in diameter.
	0.50	D					
	0.50	ENV					
	1.00	B					
	1.00	D					
	1.00	ENV					
	1.50	B					
	1.50	D					
	1.50	ENV					
	1.60	ENV					
	2.60	B					
	2.60	B		2.70	51.73		End of Pit at 2.700m
	2.60	D					
	2.60	D					
	2.60	ENV					

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 2.70m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP02	26/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	54.431	546667.549	728266.852

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.606	106	-	-	-
1	0.643	37	37	4.2	6.6
1	0.659	16	16	12.1	16.1
1	0.686	27	27	6.2	9.3
1	0.719	33	33	4.8	7.5
1	0.734	15	15	13	17
1	0.748	14	14	14	19
1	0.763	15	15	13	17
1	0.791	28	28	6.0	8.9
1	0.807	16	16	12	16
1	0.824	17	17	11	15
1	0.851	27	27	6.2	9.3
1	0.861	10	10	22	26
1	0.882	21	21	8.6	12
1	0.897	15	15	13	17
1	0.911	14	14	14	19
1	0.920	9	9	25	30
1	0.922	2	2	170	145
1	0.926	4	4	70	70
1	0.929	3	3	102	95
1	0.935	6	6	42	45
1	0.939	4	4	70	70
1	0.948	9	9	25	30
1	0.957	9	9	25	30
1	0.960	3	3	102	95
1	0.963	3	3	102	95

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP02**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP02**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP02**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP03
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546706E - 728222N **Level:** 52.31m OD	**Date** 25/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 4.00 × 2.10 **Depth:** 3.10m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.10	52.21		(TOPSOIL).
	0.50 0.50 0.50	B D ENV		0.55	51.76		Brown, sandy CLAY with low cobble content and medium boulder content. Sand is fine to coarse. Cobbles are angular to rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-angular to rounded, limestone lithology and 200-450mm in diameter.
	1.00 1.00 1.00	B D ENV					Grey, silty very sandy GRAVEL with low to medium cobble content and medium boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-angular to sub-rounded, limestone lithology and 200-600mm in diameter.
	1.50 1.50 1.50	B D ENV		1.50	50.81		Orange brown, slightly sandy slightly gravelly CLAY with low cobble content and high boulder content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-angular to sub-rounded, limestone lithology and 200-900mm in diameter.
	2.50 2.50 2.50	B D ENV					
				3.10	49.21		End of Pit at 3.100m

1 2 3 4 5

Stability: Modrate
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 3.10m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditiond unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP03	26/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	52.307	546705.762	728222.038

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.583	83	-	-	-
1	0.610	27	27	6.2	9.3
1	0.619	9	9	25	30
1	0.622	3	3	102	95
1	0.627	5	5	53	55
1	0.628	1	1	410	302
1	0.646	18	18	10	14
1	0.663	17	17	11	15
1	0.681	18	18	10	14
1	0.689	8	8	29	34
1	0.695	6	6	42	45
1	0.706	11	11	20	24
1	0.711	5	5	53	55
1	0.719	8	8	29	34
1	0.723	4	4	70	70
1	0.730	7	7	35	39
1	0.732	2	2	170	145
1	0.733	1	1	410	302
1	0.735	2	2	170	145
1	0.741	6	6	42	45
1	0.753	12	12	17	22
1	0.767	14	14	14	19
1	0.771	4	4	70	70
1	0.783	12	12	17	22
1	0.790	7	7	35	39
1	0.807	17	17	11	15

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP03**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP03**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP03**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP04
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546657E - 728217N **Level:** 55.72m OD	**Date** 25/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 4.00 × 1.20 **Depth:** 0.90m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.20	55.52		(TOPSOIL).
	0.50 0.50 0.50	B D ENV					Greyish brown, silty very sandy GRAVEL with high cobble content and medium boulder content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-angular to sub-rounded, limestone lithology and 200-500mm in diameter.
				0.90	54.82		End of Pit at 0.900m

1
2
3
4
5

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 0.90m bgl, refusal on bedrock. DCP carried out.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP04	26/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	55.725	546657.198	728216.605

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.597	97	-	-	-
1	0.639	42	42	3.6	5.8
1	0.656	17	17	11.2	15.1
1	0.682	26	26	6.5	10
1	0.697	15	15	13	17
1	0.726	29	29	5.7	8.6
1	0.759	33	33	4.8	7.5
1	0.769	10	10	22	26
1	0.788	19	19	10	13
1	0.817	29	29	5.7	8.6
1	0.839	22	22	8.1	12
1	0.848	9	9	25	30
1	0.855	7	7	35	39
1	0.863	8	8	29	34
1	0.878	15	15	13	17
1	0.892	14	14	14	19
1	0.907	15	15	13	17
1	0.935	28	28	6.0	8.9
1	0.950	15	15	13	17
1	0.952	2	2	170	145
1	0.954	2	2	170	145
1	0.955	1	1	410	302
1	0.955	0	0	-	-
1	0.957	2	2	170	145
1	0.959	2	2	170	145
1	0.961	2	2	170	145

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP04**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP04**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP04**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP05
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546580E - 728181N **Level:** 55.57m OD	**Date** 25/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 4.20 x 1.40 **Depth:** 2.10m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
							(TOPSOIL).
				0.30	55.27		
	0.50 0.50 0.50	B D ENV					Greyish brown, silty very sandy GRAVEL with high boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to rounded. Boulders are sub-angular to sub-rounded, limestone lithology and 200-600mm in diameter.
	1.00 1.00 1.00	B D ENV		1.10	54.47		
	1.50 1.50 1.50	B D ENV					Stiff, orangey brown, clayey very sandy GRAVEL with medium cobble content and medium boulder content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-rounded, limestone lithology and 200-1200mm in diameter.
				2.10	53.47		End of Pit at 2.100m

1
2
3
4
5

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 2.10m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP05	26/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	55.572	546580.153	728181.153

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.559	89	-	-	-
1	0.636	77	1	410.0	302.0
1	0.652	16	16	12	16.1
1	0.677	25	25	6.9	10
1	0.686	9	9	25	30
1	0.705	19	19	10	13
1	0.721	16	16	12	16
1	0.738	17	17	11	15
1	0.745	7	7	35	39
1	0.759	14	14	14	19
1	0.776	17	17	11	15
1	0.793	17	17	11	15
1	0.810	17	17	11	15
1	0.832	22	22	8.1	12
1	0.848	16	16	12	16
1	0.859	11	11	20	24
1	0.876	17	17	11	15
1	0.888	12	12	17	22
1	0.910	22	22	8.1	12
1	0.927	17	17	11	15
1	0.943	16	16	12	16
1	0.966	23	23	7.6	11
1	0.980	14	14	14	19
1	0.997	17	17	11	15
1	1.020	23	23	7.6	11
1	1.032	12	12	17	22

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP05**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP05**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP05**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP06
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546591E - 728319N **Level:** 55.42m OD	**Date** 26/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 4.10 × 1.40 **Depth:** 3.00m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.10	55.32		(TOPSOIL). Soft, brown, sandy gravelly CLAY. San dis fine to coarse. Garvel is fine and subangular to sub-rounded.
	0.50	B					Greyish brown, very silty very sandy GRAVEL with low cobble content and medium boulder content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-rounded, limestone lithology and 200-450mm in diameter.
	0.50	D					
	0.50	ENV					
	1.00	B					
	1.00	D					
	1.00	ENV					
				1.20	54.22		Soft, black, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded.
				1.40	54.02		Greyish brown, slightly sandy gravelly SILT with medium cobble content and low boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-rounded, limestone lithology and 200-700mm in diameter.
	1.50	B					
	1.50	D					
	1.50	ENV					
	2.80	B					
	2.80	D					
	2.80	ENV					
				3.00	52.42		End of Pit at 3.000m

1 2 3 4 5

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 3.00m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP06	26/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60°	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	55.424	546591.03	728319.219

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.607	107	-	-	-
1	0.649	42	42	3.6	5.8
1	0.690	41	41	3.7	6.0
1	0.727	37	37	4.2	6.6
1	0.743	16	16	12	16
1	0.776	33	33	4.8	7.5
1	0.795	19	19	10	13
1	0.807	12	12	17	22
1	0.821	14	14	14	19
1	0.849	28	28	6.0	8.9
1	0.871	22	22	8.1	12
1	0.897	26	26	6.5	10
1	0.913	16	16	12	16
1	0.940	27	27	6.2	9.3
1	0.956	16	16	12	16
1	0.967	11	11	20	24
1	0.988	21	21	8.6	12
1	1.004	16	16	12	16
1	1.017	13	13	16	20
1	1.043	26	26	6.5	10
1	1.069	26	26	6.5	10
1	1.087	18	18	10	14
1	1.099	12	12	17	22
1	1.120	21	21	8.6	12
1	1.152	32	32	5.0	7.7
1	1.185	33	33	4.8	7.5

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP06**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP06**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP06**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP07
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546838E - 728284N **Level:** 53.56m OD	**Date** 26/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 3.30 x 1.10 **Depth:** 1.10m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.30	53.26		(TOPSOIL). Soft, dark brown, sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium and angular to sub-angular.
	0.50 0.50 0.50	B D ENV					Greyish brown, silty very sandy GRAVEL with low cobble content and low boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-angular. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-angular to sub-rounded, limestone lithology and 200-350mm in diameter.
	1.00 1.00 1.00	B D ENV		1.10	52.46		End of Pit at 1.100m

1
2
3
4
5

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 1.10m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP07	26/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	53.564	546837.767	728284.445

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.582	82	-	-	-
1	0.626	44	44	3.4	6
1	0.649	23	23	7.6	11
1	0.675	26	26	6.5	10
1	0.698	23	23	7.6	11
1	0.716	18	18	10	14
1	0.739	23	23	7.6	11
1	0.755	16	16	12	16
1	0.781	26	26	6.5	10
1	0.793	12	12	17	22
1	0.816	23	23	7.6	11
1	0.834	18	18	10	14
1	0.858	24	24	7.2	10
1	0.879	21	21	8.6	12
1	0.893	14	14	14	19
1	0.915	22	22	8.1	12
1	0.936	21	21	8.6	12
1	0.953	17	17	11	15
1	0.970	17	17	11	15
1	0.995	25	25	6.9	10
1	1.010	15	15	13	17
1	1.016	6	6	42	45
1	1.018	2	2	170	145
1	1.022	4	4	70	70
1	1.024	2	2	170	145
1	1.026	2	2	170	145

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP07**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP07**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP07**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP08
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546838E - 728284N **Level:** 53.56m OD	**Date** 27/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 3.70 x 1.20 **Depth:** 2.70m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.30	53.26		(TOPSOIL). Dark brown, slightly sandy CLAY with organic content. Sand is fine to coarse.
	1.20 1.20 1.20	B D ENV					Firm to stiff, pale greyish brown, silty sandy GRAVEL with low boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded. Boulders are sub-rounded, limestone lithology and 200-600mm in diameter.
				2.70	50.86		End of Pit at 2.700m

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 2.70m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP08	26/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60°	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	53.564	546837.767	728284.445

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.585	85	-	-	-
1	0.652	67	67	2.0	3.5
1	0.690	38	38	4.0	6.5
1	0.726	36	36	4.3	6.8
1	0.753	27	27	6.2	9.3
1	0.787	34	34	4.7	7.3
1	0.814	27	27	6.2	9.3
1	0.837	23	23	7.6	11
1	0.861	24	24	7.2	10
1	0.891	30	30	5.5	8
1	0.910	19	19	10	13
1	0.944	34	34	4.7	7.3
1	0.963	19	19	10	13
1	0.983	20	20	9.1	13
1	0.997	14	14	14	19
1	1.011	14	14	14	19
1	1.042	31	31	5.2	8
1	1.067	25	25	6.9	10
1	1.090	23	23	7.6	11
1	1.110	20	20	9.1	13
1	1.127	17	17	11	15
1	1.142	15	15	13	17
1	1.158	16	16	12	16
1	1.173	15	15	13	17
1	1.194	21	21	9	12
1	1.211	17	17	11	15

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP08**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP08**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP08**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP09
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546953E - 728404N **Level:** 53.22m OD	**Date** 27/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 5.20 × 1.20 **Depth:** 2.30m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.30	52.92		(TOPSOIL). Soft, brown, sandy gravelly CLAY with organic content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded.
	0.50 0.50	B D		0.60	52.62		Reddish brow, firm, gravelly very sandy CLAY. Sand is fine to coarse. Gravel is fine to medium and sub-angular to sub-rounded.
	2.00 2.00	B D		2.00	51.22		Grey, silty very sandy GRAVEL with medium boulder content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to rounded. Boulders are sub-rounded. limestone lithology and 200-700mm in diameter.
	2.30 2.30	B D		2.30	50.92		Grey, slightly sandy slightly gravelly SILT with low cobble content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. End of Pit at 2.300m

1
2
3
4
5

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 2.30m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP09	27/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	53.22	546953.43	728403.548

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.595	95	-	-	-
1	0.642	47	47	3.1	5.2
1	0.665	23	23	7.6	11.0
1	0.690	25	25	6.9	10
1	0.722	32	32	5.0	8
1	0.737	15	15	13	17
1	0.753	16	16	12	16
1	0.786	33	33	4.8	7.5
1	0.790	4	4	70	70
1	0.803	13	13	16	20
1	0.810	7	7	35	39
1	0.836	26	26	6.5	10
1	0.858	22	22	8.1	12
1	0.872	14	14	14	19
1	0.890	18	18	10	14
1	0.921	31	31	5.2	8.0
1	0.927	6	6	42	45
1	0.938	11	11	20	24
1	0.958	20	20	9.1	13
1	0.979	21	21	8.6	12
1	0.990	11	11	20	24
1	1.005	15	15	13	17
1	1.030	25	25	6.9	10
1	1.048	18	18	10	14
1	1.062	14	14	14	19
1	1.087	25	25	6.9	10

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP09**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP09**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP09**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP10
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 547144E - 728581N **Level:** 50.46m OD	**Date** 27/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 4.20 × 1.20 **Depth:** 2.40m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.20	50.26		(TOPSOIL). Very soft, brown, slightly gravelly CLAY with organic content. Gravel is fine to coarse and angular to sub-rounded.
	0.50	B		0.50	49.96		Firm, reddish brown, sandy very gravelly CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to medium and sub-angular to rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-110mm in diameter.
							Greyish brown, silty very sandy GRAVEL with medium boulder content. Sand is fine to coarse. Gavel is fine to coarse and sub-angular to rounded. Boulders are sub-angular to sub-rounded, limestone lithology and 200-800mm in diameter.
	1.50	B		1.50	48.96		Brown, slightly sandy gravelly SILT with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter.
				2.40	48.06		End of Pit at 2.400m

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 2.40m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP10	27/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	50.458	547143.64	728580.838

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.575	75	-	-	-
1	0.627	52	52	2.7	4.6
1	0.658	31	31	5.2	8.0
1	0.683	25	25	6.9	10
1	0.707	24	24	7.2	10
1	0.726	19	19	10	13
1	0.749	23	23	7.6	11
1	0.771	22	22	8.1	12
1	0.790	19	19	10	13
1	0.812	22	22	8.1	12
1	0.829	17	17	11	15
1	0.851	22	22	8.1	12
1	0.880	29	29	5.7	8.6
1	0.907	27	27	6.2	9.3
1	0.919	12	12	17	22
1	0.938	19	19	10	13
1	0.959	21	21	8.6	12
1	0.972	13	13	16	20
1	0.991	19	19	10	13
1	1.019	28	28	6.0	8.9
1	1.027	8	8	29	34
1	1.043	16	16	12	16
1	1.051	8	8	29	34
1	1.057	6	6	42	45
1	1.071	14	14	14	19
1	1.078	7	7	35	39

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP10**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP10**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP10**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP11
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 547361E - 728687N **Level:** 52.72m OD	**Date** 28/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 4.30 x 1.30 **Depth:** 1.30m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
	0.50	B		0.20	52.52		(TOPSOIL). Soft, dark brown, sandy gravelly CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded.
							Stiff, light brown, silty sandy GRAVEL with low cobble content with high boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to rounded. Cobbles are sub-angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-angular to rounded, limestone lithology and 200-700mm in diameter.
				1.30	51.42		End of Pit at 1.300m

1
2
3
4
5

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 1.30m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP11	27/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60°	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	52.718	547361.402	728687.192

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.603	103	-	-	-
1	0.643	40	40	3.8	6.1
1	0.667	24	24	7.2	10.5
1	0.690	23	23	7.6	11
1	0.717	27	27	6.2	9
1	0.734	17	17	11	15
1	0.746	12	12	17	22
1	0.750	4	4	70	70
1	0.755	5	5	53	55
1	0.763	8	8	29	34
1	0.768	5	5	53	55
1	0.771	3	3	102	95
1	0.775	4	4	70	70
1	0.775	0	0	-	-
1	0.777	2	2	170	145
1	0.780	3	3	102	95
1	0.793	13	13	16	20
1	0.799	6	6	42	45
1	0.806	7	7	35	39
1	0.836	30	30	5.5	8.3
1	0.851	15	15	13	17
1	0.857	6	6	42	45
1	0.863	6	6	42	45
1	0.872	9	9	25	30
1	0.880	8	8	29	34
1	0.887	7	7	35	39

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP11**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP11**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP11**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP12
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 547478E - 728655N **Level:** 56.74m OD	**Date** 28/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 4.00 × 1.40 **Depth:** 2.10m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
	0.50 0.50	B B		0.30	56.44		(TOPSOIL). Very soft, dark brown, gravelly CLAY with low cobble content and organic content. Gravel is fine to coarse and sub-angular to rounded. Cobbles are sub-rounded, limestone lithology and are 63-180mm in diameter.
							Grey, silty very sandy GRAVEL with medium boulder content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to rounded. Boulders are sub-angular to rounded, limestone lithology and 200-500mm in diameter.
				2.10	54.64		End of Pit at 2.100m

1
2
3
4
5

Stability: Moderate
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 2.100m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP12	27/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	56.737	547477.807	728655.261

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.583	83	-	-	-
1	0.607	24	24	7.2	10
1	0.624	17	17	11	15
1	0.649	25	25	6.9	10
1	0.660	11	11	20	24
1	0.671	11	11	20	24
1	0.693	22	22	8.1	12
1	0.695	2	2	170	145
1	0.699	4	4	70	70
1	0.704	5	5	53	55
1	0.721	17	17	11	15
1	0.739	18	18	10	14
1	0.757	18	18	10	14
1	0.770	13	13	16	20
1	0.779	9	9	25	30
1	0.791	12	12	17	22
1	0.807	16	16	12	16
1	0.825	18	18	10	14
1	0.848	23	23	8	11
1	0.867	19	19	10	13
1	0.891	24	24	7.2	10
1	0.910	19	19	10	13
1	0.932	22	22	8.1	12
1	0.958	26	26	6.5	10
1	0.967	9	9	25	30
1	0.982	15	15	13	17

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP12**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP12**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP12**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP13
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 547586E - 728517N **Level:** 53.27m OD	**Date** 28/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 2.80 × 1.40	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)		**Depth:** 1.20m BGL	**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.30	52.97		(TOPSOIL). Soft, dark brown, sandy gravelly CLAY with organic content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded.
	0.50	B					Firm to stiff, brown, very silty very sandy GRAVEL with low cobble content and medium boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to rounded. Cobbles are angular to sub-rounded, limestone lithology and 63-200mm in diameter. Boulders are sub-angular to rounded, limestone lithology 200-600mm in diameter.
	1.20	B		1.20	52.07		End of Pit at 1.200m

Stability: Good
Plant: 13T track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 1.20m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP13	27/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	53.274	547586.01	728517.069

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.611	111	-	-	-
1	0.658	47	47	3.1	5.2
1	0.699	41	41	3.7	6.0
1	0.763	64	64	2.1	3.7
1	0.820	57	57	2.4	4.2
1	0.844	24	24	7.2	10
1	0.868	24	24	7.2	10
1	0.883	15	15	13	17
1	0.895	12	12	17	22
1	0.914	19	19	10	13
1	0.926	12	12	17	22
1	0.931	5	5	53	55
1	0.936	5	5	53	55
1	0.943	7	7	35	39
1	0.949	6	6	42	45
1	0.950	1	1	410	302
1	0.954	4	4	70	70
1	0.960	6	6	42	45
1	0.963	3	3	102	95
1	0.964	1	1	410	302
1	0.968	4	4	70	70
1	0.968	0	0	-	-
1	0.972	4	4	70	70
1	0.976	4	4	70	70
1	0.980	4	4	70	70

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP13**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP13**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP13**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP14
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546544E - 728517N **Level:** 53.35m OD	**Date** 26/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 4.30 × 1.40	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)		**Depth:** 2.50m BGL	**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.30	53.05		(TOPSOIL). Soft, dark brown, slightly gravelly CLAY with organic content. Gravel is fine to coarse and sub-angular to sub-rounded.
	0.50	B					Firm to stiff, greyish brown, slightly sandy gravelly SILT with moderate boulder content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded. Boulders are sub-rounded to rounded, limestone lithology and 200-550mm in diameter.
	1.50	B					
	2.50	B		2.50	50.85		End of Pit at 2.500m

1
2
3
4
5

Stability: Good to moderate
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 2.50m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP14	26/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	53.354	546544.099	728517.069

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.610	110	-	-	-
1	0.633	23	23	7.6	11
1	0.649	16	16	12	16
1	0.659	10	10	22	26
1	0.663	4	4	70	70
1	0.677	14	14	14	19
1	0.695	18	18	10	14
1	0.725	30	30	5.5	8.3
1	0.732	7	7	35	39
1	0.750	18	18	10	14
1	0.789	39	39	3.9	6.3
1	0.797	8	8	29	34
1	0.814	17	17	11	15
1	0.848	34	34	4.7	7.3
1	0.865	17	17	11	15
1	0.882	17	17	11	15
1	0.899	17	17	11	15
1	0.912	13	13	16	20
1	0.926	14	14	14	19
1	0.943	17	17	11	15
1	0.959	16	16	12	16
1	0.971	12	12	17	22
1	0.985	14	14	14	19
1	1.002	17	17	11	15
1	1.026	24	24	7	10
1	1.031	5	5	53	55

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP14**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP14**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP14**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP15
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546627E - 728783N **Level:** 47.78m OD	**Date** 26/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 3.10 x 1.20 **Depth:** 1.20m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
	0.50 0.50	B D		0.20	47.58		(TOPSOIL). Firm, dark brown, slightly gravelly sandy CLAY with organic content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to rounded.
							Firm, brown, slightly sandy gravelly CLAY with medium boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded. Boulders are sub-angular to sub-rounded, limestone lithology and 200-450mm in diameter.
	1.20 1.20	B D		1.20	46.58		End of Pit at 1.200m

1
2
3
4
5

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 1.20m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP15	27/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	47.785	546627.206	728782.931

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.615	115	-	-	-
1	0.646	31	31	5.2	8.0
1	0.673	27	27	6.2	9.3
1	0.695	22	22	8.1	12
1	0.717	22	22	8.1	12
1	0.740	23	23	7.6	11
1	0.763	23	23	7.6	11
1	0.789	26	26	6.5	10
1	0.807	18	18	10	14
1	0.815	8	8	29	34
1	0.826	11	11	20	24
1	0.827	1	1	410	302
1	0.828	1	1	410	302
1	0.831	3	3	102	95
1	0.832	1	1	410	302
1	0.833	1	1	410	302
1	0.833	0	0	-	-
1	0.835	2	2	170	145
1	0.835	0	0	-	-

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP15**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP15**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP15**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP16
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546670E - 728938N **Level:** 45.74m OD	**Date** 26/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 4.00 x 1.40 **Depth:** 1.90m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.40	45.34		(TOPSOIL). Firm, dark brown, sandy gravelly CLAY with organic content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded.
	0.50 0.50	B D					Firm, greyish brown, slightly sandy gravelly CLAY with low boulder content. Sand is fie to coarse. Gravel is fine to coarse and sub-angular to rounded. Boulders are sub-angular to sub-rounded, limestone lithology and 200-300mm in diameter.
	1.00 1.00	B D		1.10	44.64		Grey, silty very sandy GRAVEL with high boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to rounded. Boulders are sub-angular to sub-rounded, limestone lithology and 200-400mm in diameter,
				1.90	43.84		End of Pit at 1.900m

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 1.90m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP16	27/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	45.741	546669.599	728937.809

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.593	93	-	-	-
1	0.630	37	37	4.2	6.6
1	0.648	18	18	10	14
1	0.663	15	15	13	17
1	0.696	33	33	4.8	7.5
1	0.713	17	17	11	15
1	0.730	17	17	11	15
1	0.738	8	8	29	34
1	0.756	18	18	10	14
1	0.781	25	25	6.9	10
1	0.794	13	13	16	20
1	0.814	20	20	9.1	13
1	0.828	14	14	14	19
1	0.849	21	21	8.6	12
1	0.863	14	14	14	19
1	0.885	22	22	8.1	12
1	0.899	14	14	14	19
1	0.910	11	11	20	24
1	0.931	21	21	8.6	12
1	0.959	28	28	6.0	8.9
1	0.973	14	14	14	19
1	0.988	15	15	13	17

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP16**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP16**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP16**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
TP17
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546793E - 729177N **Level:** 46.06m OD	**Date** 27/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 3.90 x 1.30 **Depth:** 2.80m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged** DOC

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.20	45.86		(TOPSOIL). Firm, dark brown, slightly gravelly CLAY. Gravel is fine to medium and angular to sub-rounded.
	0.50 0.50	B D					Greyish brown, slightly sandy gravelly SILT with low cobble content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to rounded. Cobbles are sub-angular to rounded, limestone lithology and 63-190mm in diameter.
				0.80	45.26		Stiff, pale greyish brown, slightly sandy gravelly SILT with low boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to rounded. Boulders are sub-rounded, limestone lithology and 200-450mm in diameter.
	1.00 1.00	B D					
	1.50 1.50	B D					
	2.50 2.50	B D					
				2.80	43.26		End of Pit at 2.800m

1
2
3
4
5

Stability: Good
Plant: 13t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Trial pit terminated at 2.80m bgl, refusal on bedrock. DCP carried out. Hand vane attempted, ground conditions unsuitable.

No	Job	Location	Date	Engineer
P25025	Galway Peaker	TP17	27/02/2025	DOC

Drop	Weight	Cone	Correlation
575mm	8kg	60^{o}	TRL DCP

Starting Depth mm	Ground Level	Easting	Northing
500	46.063	546792.965	729177.22

Blows	Depth (m bgl)	Penetration (mm)	Penetration Per blow (mm)	CBR, % (Kleyn)	CBR, % (TII DN-PAV-03021)
0	0.587	87	-	-	-
1	0.632	45	45	3.3	5.4
1	0.656	24	24	7.2	10.5
1	0.684	28	28	6.0	8.9
1	0.716	32	32	5.0	7.7
1	0.728	12	12	17	22
1	0.732	4	4	70	70
1	0.739	7	7	35	39
1	0.745	6	6	42	45
1	0.758	13	13	16	20
1	0.777	19	19	10	13
1	0.795	18	18	10	14
1	0.812	17	17	11	15
1	0.832	20	20	9.1	13
1	0.849	17	17	11	15
1	0.858	9	9	25	30
1	0.878	20	20	9.1	13
1	0.884	6	6	42	45
1	0.897	13	13	16	20
1	0.912	15	15	13	17
1	0.936	24	24	7.2	10
1	0.943	7	7	35	39
1	0.967	24	24	7.2	10
1	0.969	2	2	170	145
1	0.975	6	6	42	45
1	0.983	8	8	29	34

Adjustments	0.71	moderate
	0.5	dry
	0.35	very dry
	0.5	not assessed

Photographic Record

Number:	**TP17**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP17**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**TP17**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
SA01
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546726E - 728214N **Level:** 52.17m OD	**Date** 27/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 2.30 × 1.20 **Depth:** 1.60m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged**

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.30	51.87		(TOPSOIL)
							Brown, slightly sandy gravelly CLAY with high cobble content and medium low boulder content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded.
				1.60	50.57		End of Pit at 1.600m

1
2
3
4
5

Stability: Moderate.
Plant: 13t tracked excavator
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Pit terminated at 1.60m bgl. Infiltration test carried out in pit.

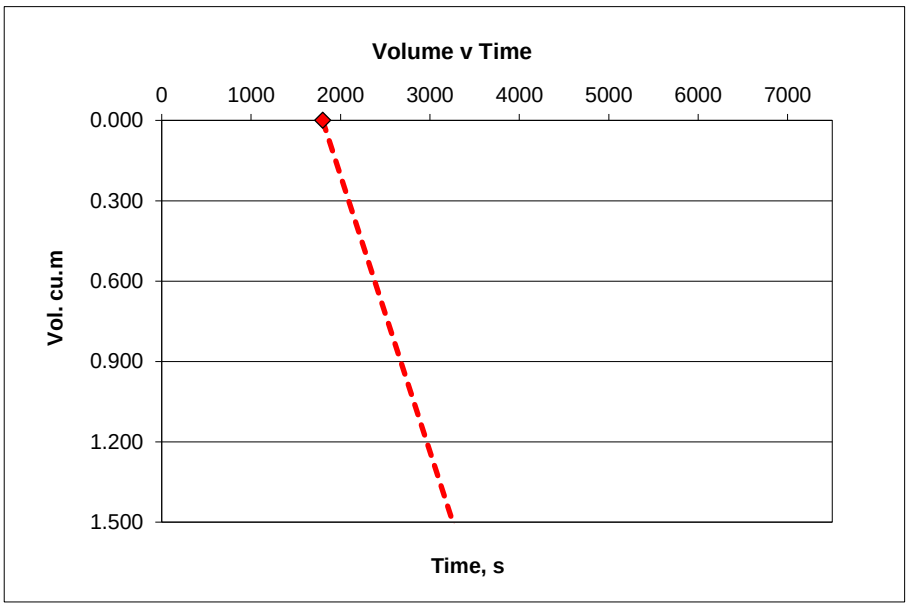
P25025 **Galway Peaker** **27/02/2025**

Test 1 **SA01** E546726.444 N728214.041 52.169mOD

l, m	**2.300**	b, m	**1.200**	d, m	**1.600**
l_base, m	**2.300**			d_eff, m	**0.560**
l_eff, m	**2.300**				

	Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
	30	1.040	1800	0.56	0.00	0.000
empty	55	1.600	3300	0.00	0.56	1.546

Area	2.760 m^2	$V_{p75\text{-}25\ theory}$	volume	0.7728	m^3
50% Area_eff, a_{p50}	4.720 m^2	$V_{p\ 75\ -\ 25\ actual}$	volume	0.7728	m^3
50% Area_act, a_{p50}	4.720 m^2	$t_{p\ 75\text{-}\ 25\ actual}$	time	750	s
		Infiltration Coefficient	*f*	2.18E-04	ms^-1



NOTES:
Water drains as the pit is being filled.
Water does not rise above 1.04m bgl.

Photographic Record

Number:	**SA01**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Photographic Record

Number:	**SA01**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

Priority Geotechnical Ltd.
Tel: 021 4631600
Fax: 021 4638690
www.prioritygeotechnical.ie

Trial Pit No
SA02
Sheet 1 of 1

Project Name: Ireland Gas Peaker Plant - Site Investigation	**Project No.** P25025	**Co-ords:** 546541E - 728315N **Level:** 55.80m OD	**Date** 27/02/2025
Location: Athenry, Co. Galway		**Dimensions (m):** 2.10 x 1.20 **Depth:** 1.00m BGL	**Scale** 1:25
Client: Bord Gáis Energy Limited (BGE)			**Logged**

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.30	55.50		(TOPSOIL)
				1.00	54.80		Brown, slightly sandy gravelly CLAY with high cobble content and medium low boulder content. Sand is fine to coarse. Gravel is fine to coarse, sub-angular to rounded.
							End of Pit at 1.000m

1 2 3 4 5

Stability: Moderate.
Plant: 13t tracked excavator.
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Pit terminated at 1.00m bgl. Infiltration test carried out in pit.

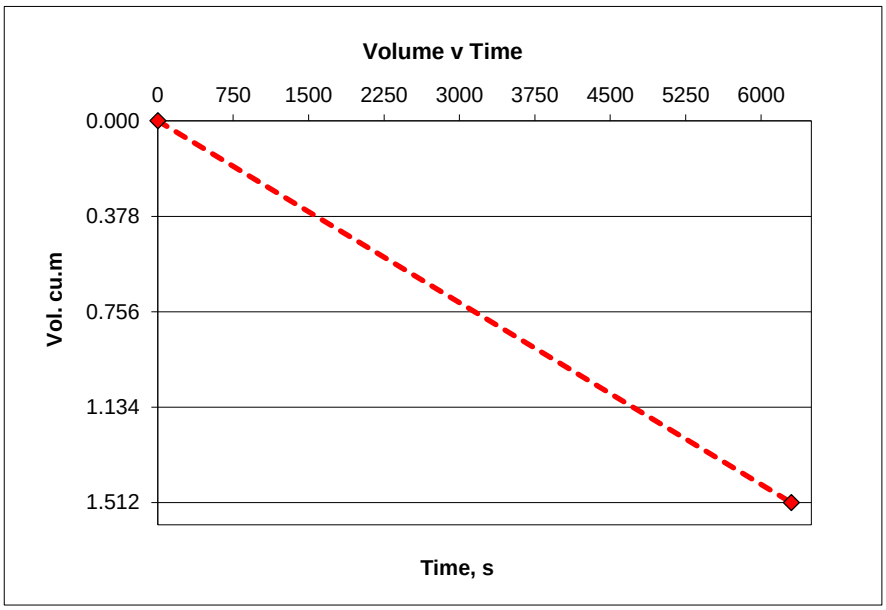
P25025 **Galway Peaker** **27/02/2025**

Test 1 **SA02 (PT01)** E546540.557 N728314.574 55.797mOD

l, m	**2.100**	b, m	**1.200**	d, m	**1.000**
l_base, m	**2.100**			d_eff, m	**0.600**
l_eff, m	**2.100**				

	Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
	0	0.400	0	0.60	0.00	0.000
empty	105	1.000	6300	0.00	0.60	1.512

Area	2.520	m^2	$V_{p75\text{-}25\ theory}$	volume	0.7560	m^3
50% Area_eff, a_{p50}	4.500	m^2	$V_{p\ 75\ -\ 25\ actual}$	volume	0.7560	m^3
50% Area_act, a_{p50}	4.500	m^2	$t_{p\ 75\text{-}\ 25\ actual}$	time	3150	s
			Infiltration Coefficient	*f*	5.33E-05	ms^-1



NOTES:
This was the proposed location for percolation test. Percolation test not carried out due to Soakaway test done instead.

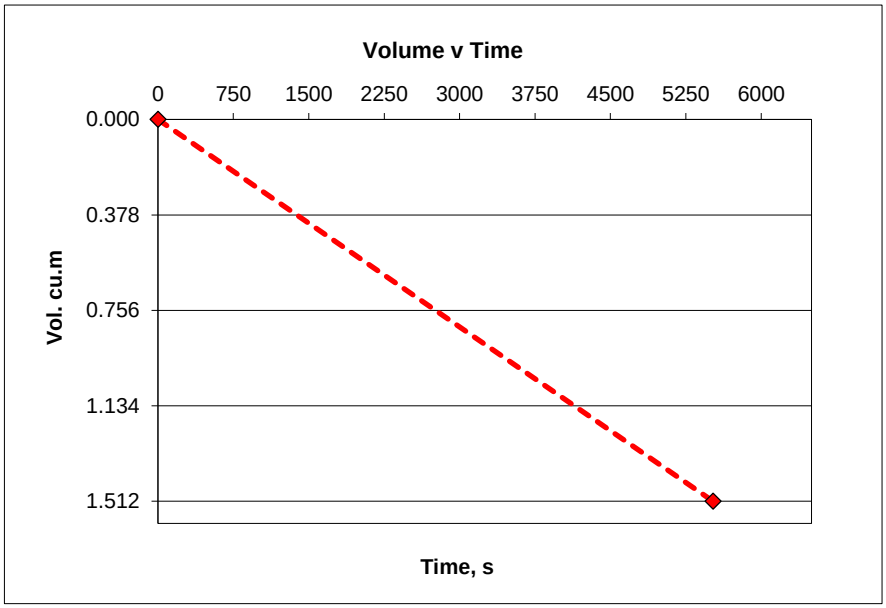
P25025 **Galway Peaker** **27/02/2025**

Test 2 **SA02 (PT01)** E546540.557 N728314.574 55.797mOD

l, m	**2.100**	b, m	**1.200**	d, m	**1.000**
l_base, m	**2.100**			d_eff, m	**0.600**
l_eff, m	**2.100**				

	Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
	0	0.400	0	0.60	0.00	0.000
empty	92	1.000	5520	0.00	0.60	1.512

Area	2.520	m^2	$V_{p75\text{-}25\ theory}$	volume	0.7560	m^3
50% Area_eff, a_{p50}	4.500	m^2	$V_{p\ 75\ -\ 25\ actual}$	volume	0.7560	m^3
50% Area_act, a_{p50}	4.500	m^2	$t_{p\ 75\text{-}\ 25\ actual}$	time	2760	s
			Infiltration Coefficient	*f*	6.09E-05	ms^-1



NOTES:
This was the proposed location for percolation test. Percolation test not carried out due to Soakaway test done instead.

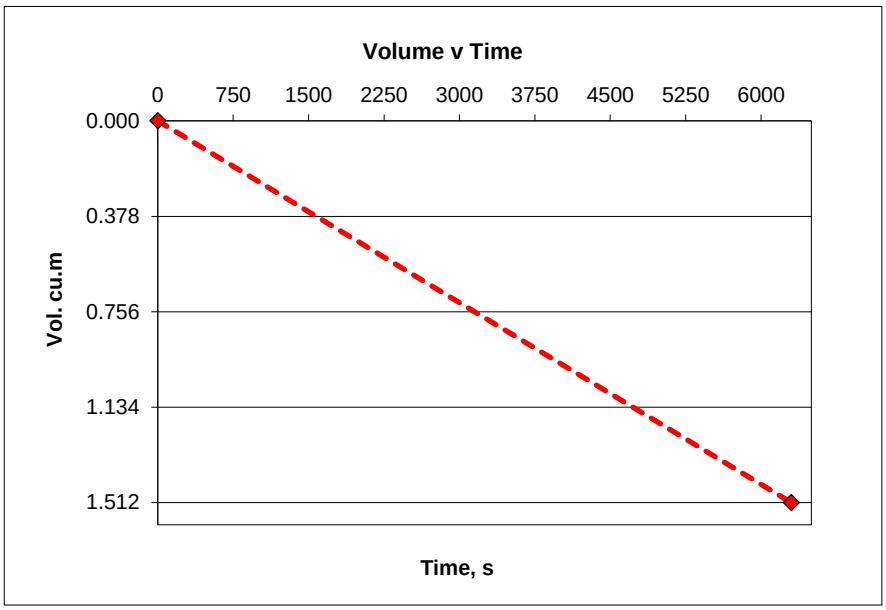
P25025 **Galway Peaker** **27/02/2025**

Test 3 **SA02 (PT01)** E546540.557 N728314.574 55.797mOD

l, m	**2.100**	b, m	**1.200**	d, m	**1.000**
l_base, m	**2.100**			d_eff, m	**0.600**
l_eff, m	**2.100**				

	Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
	0	0.400	0	0.60	0.00	0.000
empty	105	1.000	6300	0.00	0.60	1.512

Area	2.520	m^2	$V_{p75\text{-}25\ theory}$	volume	0.7560	m^3
50% Area_eff, a_{p50}	4.500	m^2	$V_{p\ 75\ -\ 25\ actual}$	volume	0.7560	m^3
50% Area_act, a_{p50}	4.500	m^2	$t_{p\ 75\text{-}\ 25\ actual}$	time	3150	s
			Infiltration Coefficient	*f*	5.33E-05	ms^-1



NOTES:
This was the proposed location for percolation test. Percolation test not carried out due to Soakaway test done instead.

Photographic Record

Number:	**SA02**	**Project**	Galway Peaker Plant Site	
		Project No	P25025	
		Engineer	Atkins	

KEY TO SYMBOLS ON LAB RESULTS

U	Undisturbed Sample
P	Piston Sample
TWS	Thin Wall Sample
B	Bulk Sample - Disturbed
D	Jar Sample - Disturbed
W	Water Sample
pH	Acidity/Alkalinity Index
SO_3	% - Total Sulphate Content (acid soluble)
SO_3	g/ltr - Water Soluble Sulphate (Water or 2:1 Aqueous Soil Extract)
+	Calcareous Reaction
Cl	Chloride Content
PI	Plasticity Index
<425	% of material in sample passing 425 micron sieve
LL	Liquid Limit
PL	Plastic Limit
MC	Water Content
NP	Non Plastic
Yb	Bulk Density
Yd	Dry Density
Ps	Particle Density
U/D	Undrained/Drained Triaxial
U/C	Unconsolidated/Consolidated Triaxial
T/M	Single Stage/Multistage Triaxial
100/38	Sample Diameter (mm)
REM	Remoulded Triaxial Test Specimen
TST	Triaxial Suction Test
V	Vane Test
DSB	Drained Shear Box
RSB	Residual Shear Box
RS	Ring Shear σ_3 Cell Pressure
σ_1-σ_3	Deviator Stress
c	Cohesion
c_	Effective Cohesion Intercept ϕ
ϕ_	Effective Angle of Shearing Resistance εf
p_o	Effective Overburden Pressure m_v Coefficient of Volume
c_v	Coefficient of Consolidation
Std	Standard Compaction - 2.5kg Rammer
Hvy	Heavy Compaction - 4.5kg Rammer
Vib	Vibratory Compaction
CBR	California Bearing Ratio
MCV	Moisture Condition Value

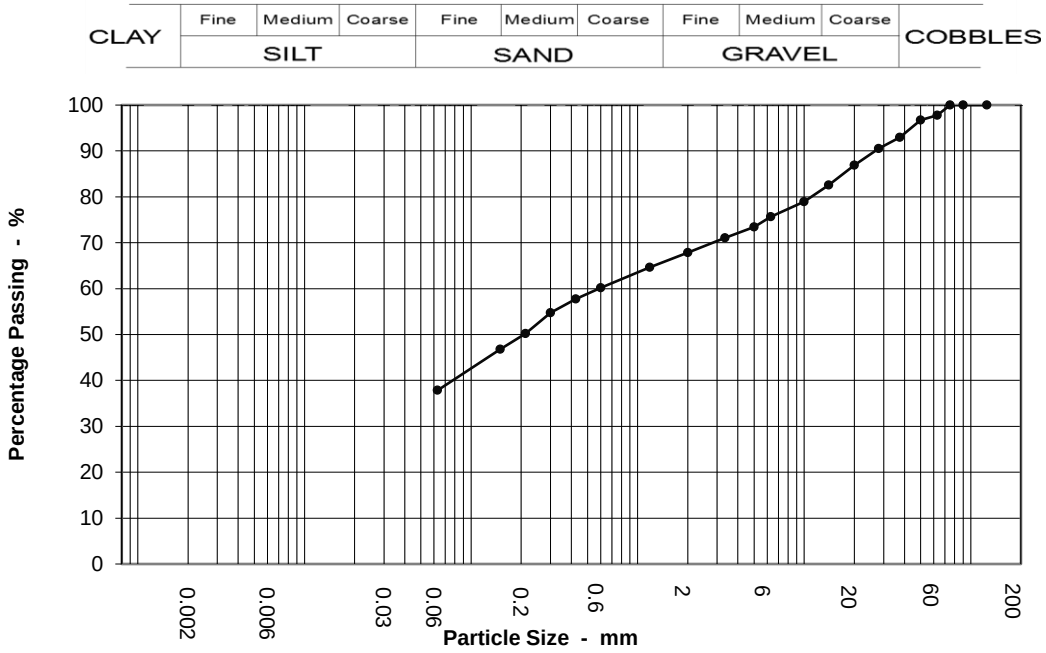
pgl priority geotechnical	**Natural Moisture Content/Atterberg Limits Summary** **BS 1377 : Part 2 : 1990 : Clause 3**	**Job Ref**
Location	**Ireland Gas Peaker Plant - Site Investigation**	**P25025**

Hole ID	Sample Ref	Depth (m)	Sample Type	Sample Description	MC	LL	PL	PI	% Pass 425
TP01	1	0.5	B	Slightly sandy slightly gravelly CLAY with low cobble content		41	26	15	70.3
TP03	7	1.5	B	Sandy very clayey GRAVEL with low cobble content	18	34	22	12	54.4
TP03	10	2.5	B	Slightly sandy slightly gravelly CLAY		46	25	21	87
TP05	7	1.5	B	Clayey sandy GRAVEL with medium cobble content		31	21	10	37.9
TP06	4	1	B	Very silty very sandy GRAVEL with high cobble content		37	25	12	56.2
TP08	1	1.2	B	Silty sandy GRAVEL		20	14	6	62.8
TP11	1	0.5	B	Silty sandy GRAVEL with high cobble content		50	33	17	50.3
TP13	2	1.2	B	Very silty very sandy GRAVEL		19	14	5	55.1
TP14	2	1.5	B	Slightly sandy gravelly SILT		18	13	5	57.9
TP16	1	0.5	B	Slightly sandy gravelly CLAY		25	18	7	61.2
TP17	1	0.5	B	Slightly gravelly sandy SILT		41	28	13	73.7

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP01
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	1
		Depth	0.50 m
Soil Description	Slightly sandy slightly gravelly CLAY with low cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	98		
50	97		
37.5	93		
28	91		
20	87		
14	83		
10	79		
6.3	76		
5	73		
3.35	71		
2	68		
1.18	65		
0.6	60		
0.425	58		
0.3	55		
0.212	50		
0.15	47		
0.063	38		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

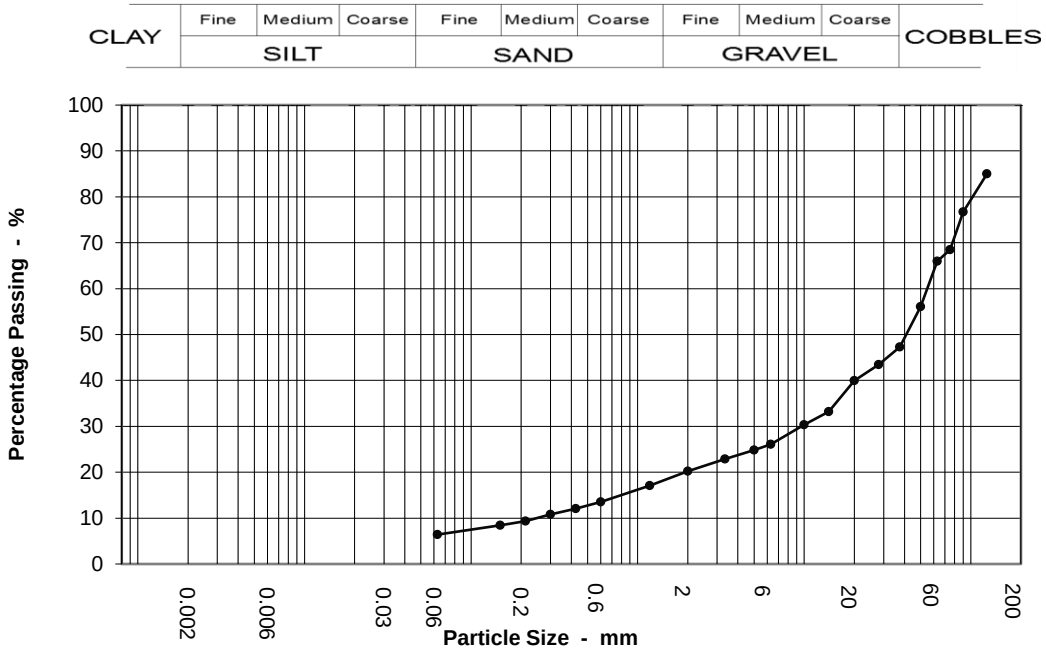
Sample Proportions	
Cobbles	2.0
Gravel	30.0
Sand	30.0
Silt & Clay	38.0

Grading Analysis	
D100	75.00
D60	0.59
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP01
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	4
		Depth	1.00 m
Soil Description	Silty sandy GRAVEL with low cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	85		
90	77		
75	69		
63	66		
50	56		
37.5	47		
28	43		
20	40		
14	33		
10	30		
6.3	26		
5	25		
3.35	23		
2	20		
1.18	17		
0.6	14		
0.425	12		
0.3	11		
0.212	9		
0.15	8		
0.063	6		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

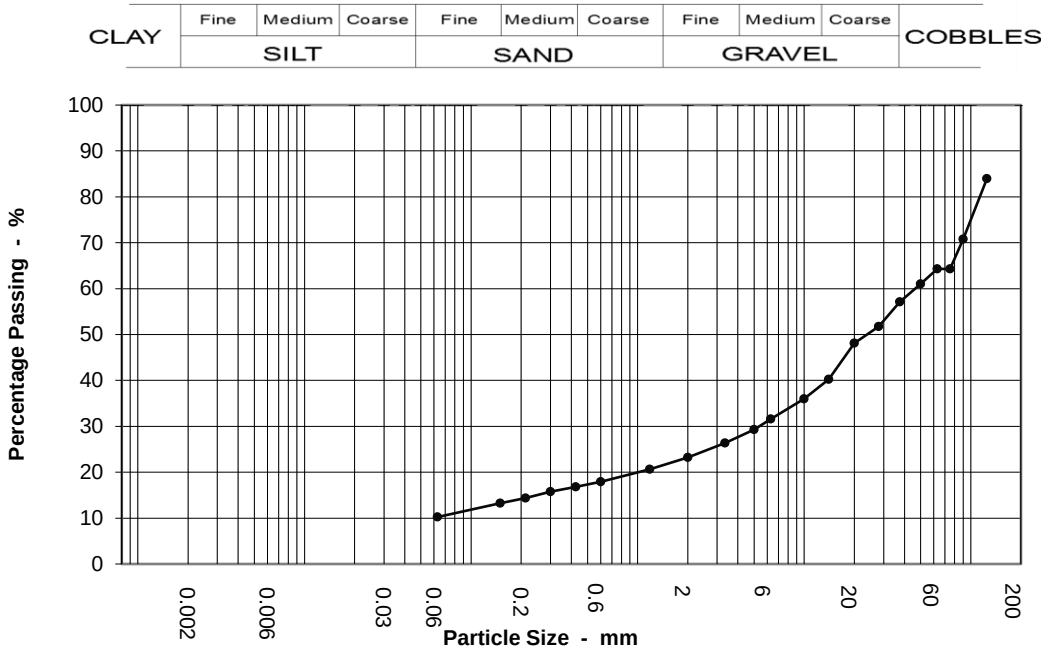
Sample Proportions	
Cobbles	34.0
Gravel	46.0
Sand	14.0
Silt & Clay	6.0

Grading Analysis	
D100	
D60	54.80
D10	0.25
Uniformity Coefficient	220.00

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP02
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	1
		Depth	0.50 m
Soil Description	Silty sandy GRAVEL with low cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	84		
90	71		
75	64		
63	64		
50	61		
37.5	57		
28	52		
20	48		
14	40		
10	36		
6.3	32		
5	29		
3.35	26		
2	23		
1.18	21		
0.6	18		
0.425	17		
0.3	16		
0.212	14		
0.15	13		
0.063	10		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

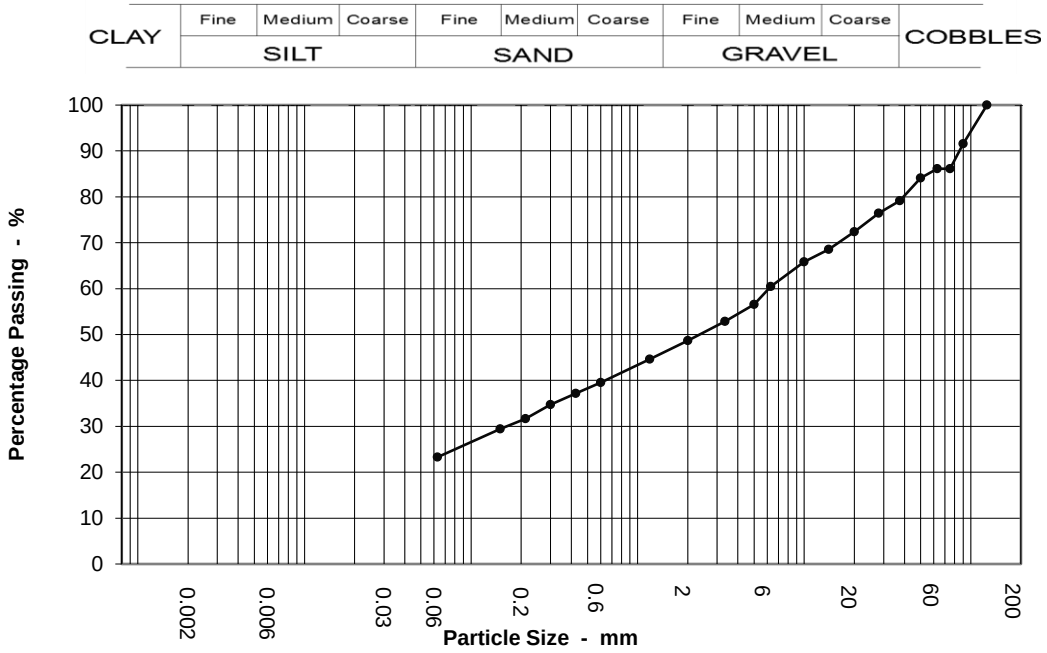
Sample Proportions	
Cobbles	36.0
Gravel	41.0
Sand	13.0
Silt & Clay	10.0

Grading Analysis	
D100	
D60	46.40
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP02
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	4
		Depth	1.00 m
Soil Description	Slightly sandy gravelly SILT with medium cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	92		
75	86		
63	86		
50	84		
37.5	79		
28	76		
20	72		
14	69		
10	66		
6.3	60		
5	57		
3.35	53		
2	49		
1.18	45		
0.6	40		
0.425	37		
0.3	35		
0.212	32		
0.15	29		
0.063	23		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

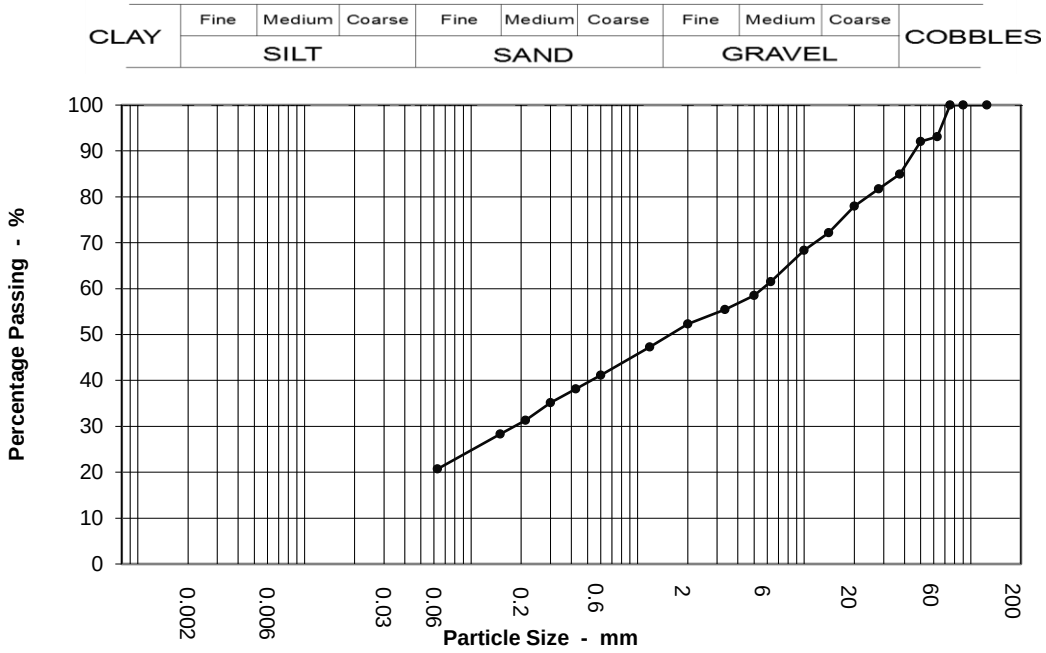
Sample Proportions	
Cobbles	14.0
Gravel	37.0
Sand	25.0
Silt & Clay	23.0

Grading Analysis	
D100	125.00
D60	6.14
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP02
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	7
		Depth	1.50 m
Soil Description	Very silty very sandy GRAVEL with low cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	93		
50	92		
37.5	85		
28	82		
20	78		
14	72		
10	68		
6.3	61		
5	59		
3.35	55		
2	52		
1.18	47		
0.6	41		
0.425	38		
0.3	35		
0.212	31		
0.15	28		
0.063	21		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

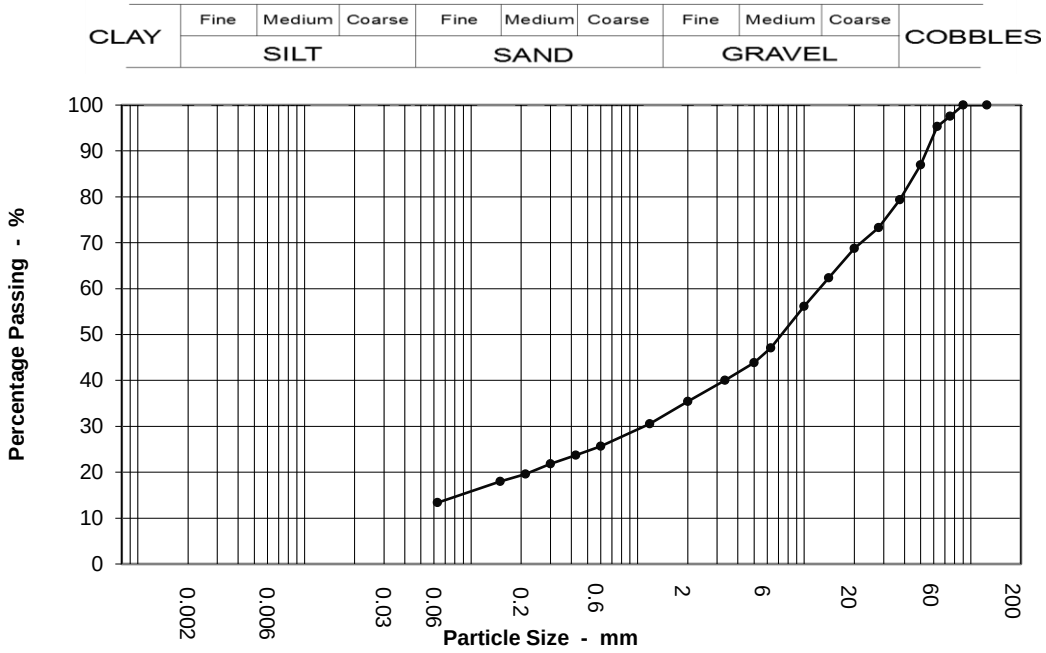
Sample Proportions	
Cobbles	7.0
Gravel	41.0
Sand	32.0
Silt & Clay	21.0

Grading Analysis	
D100	75.00
D60	5.61
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP03
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	4
		Depth	1.00 m
Soil Description	Silty very sandy GRAVEL with low cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	98		
63	95		
50	87		
37.5	79		
28	73		
20	69		
14	62		
10	56		
6.3	47		
5	44		
3.35	40		
2	35		
1.18	31		
0.6	26		
0.425	24		
0.3	22		
0.212	20		
0.15	18		
0.063	13		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

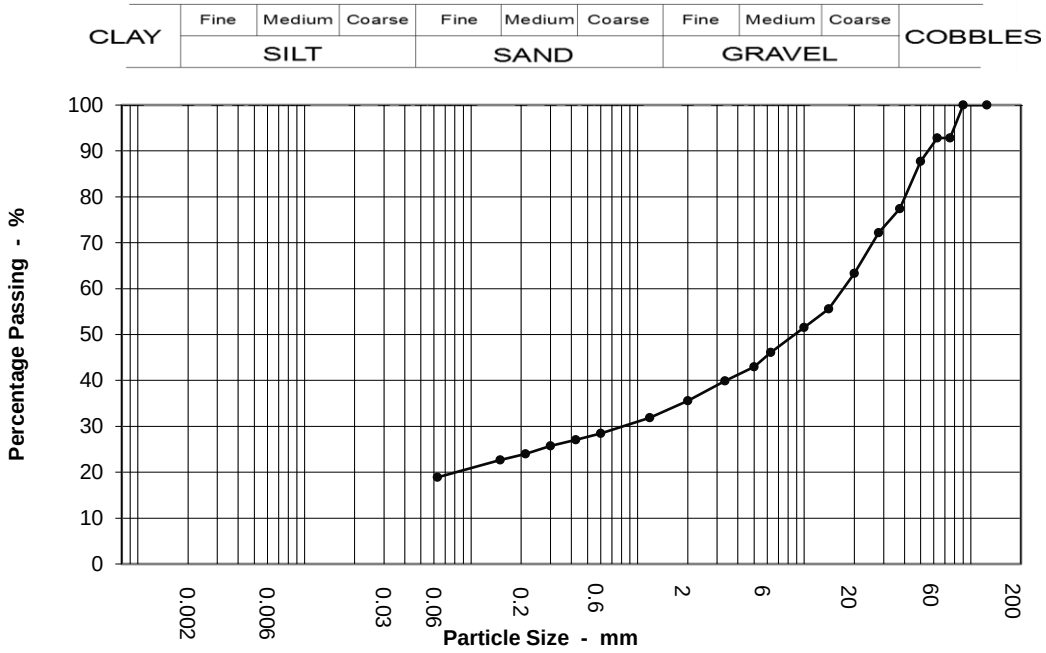
Sample Proportions	
Cobbles	5.0
Gravel	60.0
Sand	22.0
Silt & Clay	13.0

Grading Analysis	
D100	90.00
D60	12.30
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP03
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	7
		Depth	1.50 m
Soil Description	Sandy very clayey GRAVEL with low cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	93		
63	93		
50	88		
37.5	77		
28	72		
20	63		
14	56		
10	52		
6.3	46		
5	43		
3.35	40		
2	36		
1.18	32		
0.6	28		
0.425	27		
0.3	26		
0.212	24		
0.15	23		
0.063	19		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

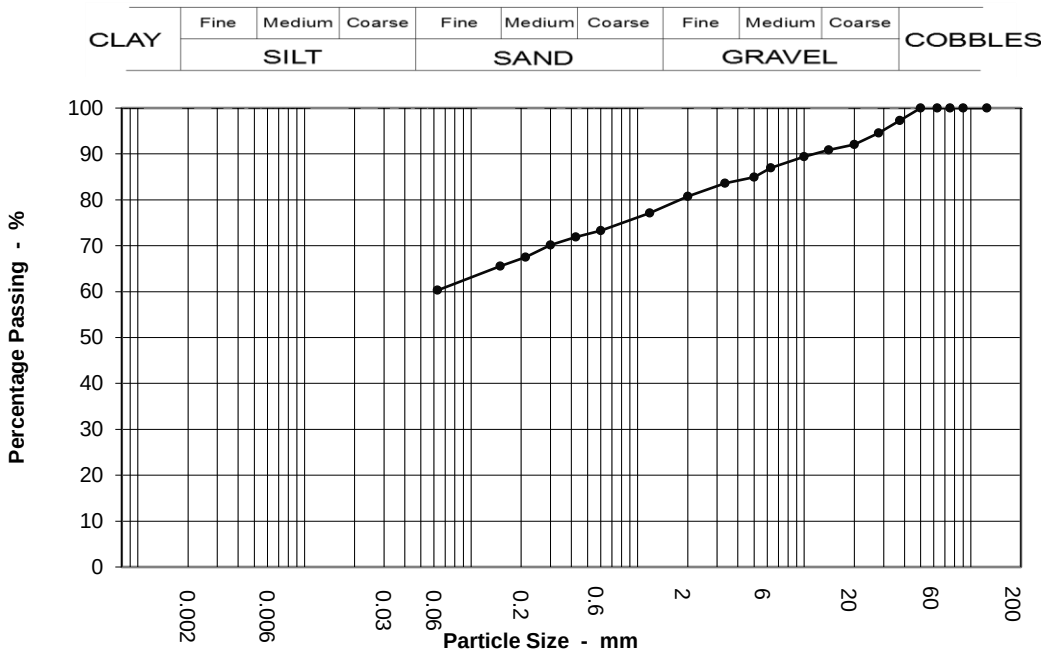
Sample Proportions	
Cobbles	7.0
Gravel	57.0
Sand	17.0
Silt & Clay	19.0

Grading Analysis	
D100	90.00
D60	17.20
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP03
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	10
		Depth	2.50 m
Soil Description	Slightly sandy slightly gravelly CLAY	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	97		
28	95		
20	92		
14	91		
10	89		
6.3	87		
5	85		
3.35	84		
2	81		
1.18	77		
0.6	73		
0.425	72		
0.3	70		
0.212	68		
0.15	66		
0.063	60		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

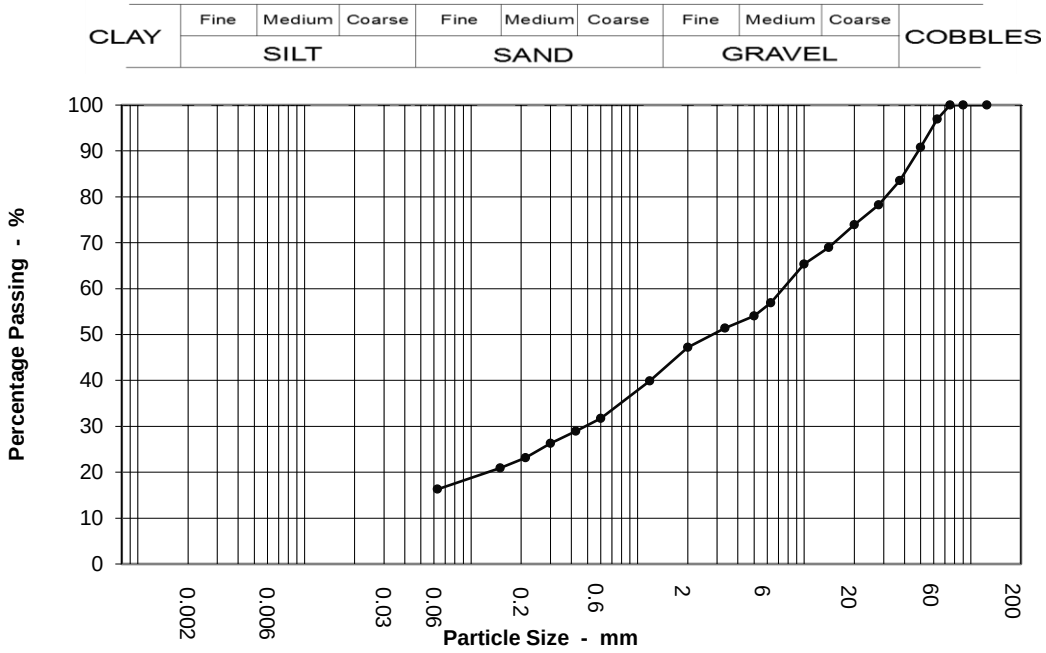
Sample Proportions	
Cobbles	0.0
Gravel	19.0
Sand	20.0
Silt & Clay	60.0

Grading Analysis	
D100	50.00
D60	
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP04
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	1
		Depth	0.50 m
Soil Description	Silty very sandy GRAVEL with low cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	97		
50	91		
37.5	84		
28	78		
20	74		
14	69		
10	65		
6.3	57		
5	54		
3.35	51		
2	47		
1.18	40		
0.6	32		
0.425	29		
0.3	26		
0.212	23		
0.15	21		
0.063	16		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

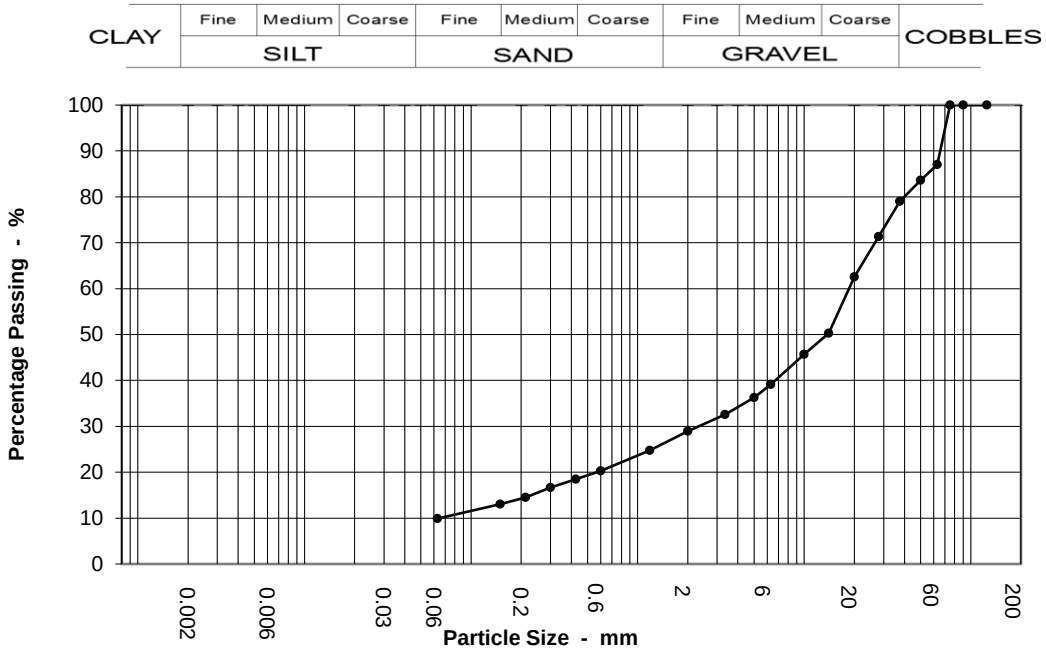
Sample Proportions	
Cobbles	3.0
Gravel	50.0
Sand	31.0
Silt & Clay	16.0

Grading Analysis	
D100	75.00
D60	7.46
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP05
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	4
		Depth	1.00 m
Soil Description	Slty very sandy GRAVEL with medium cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	87		
50	84		
37.5	79		
28	71		
20	63		
14	50		
10	46		
6.3	39		
5	36		
3.35	33		
2	29		
1.18	25		
0.6	20		
0.425	18		
0.3	17		
0.212	15		
0.15	13		
0.063	10		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

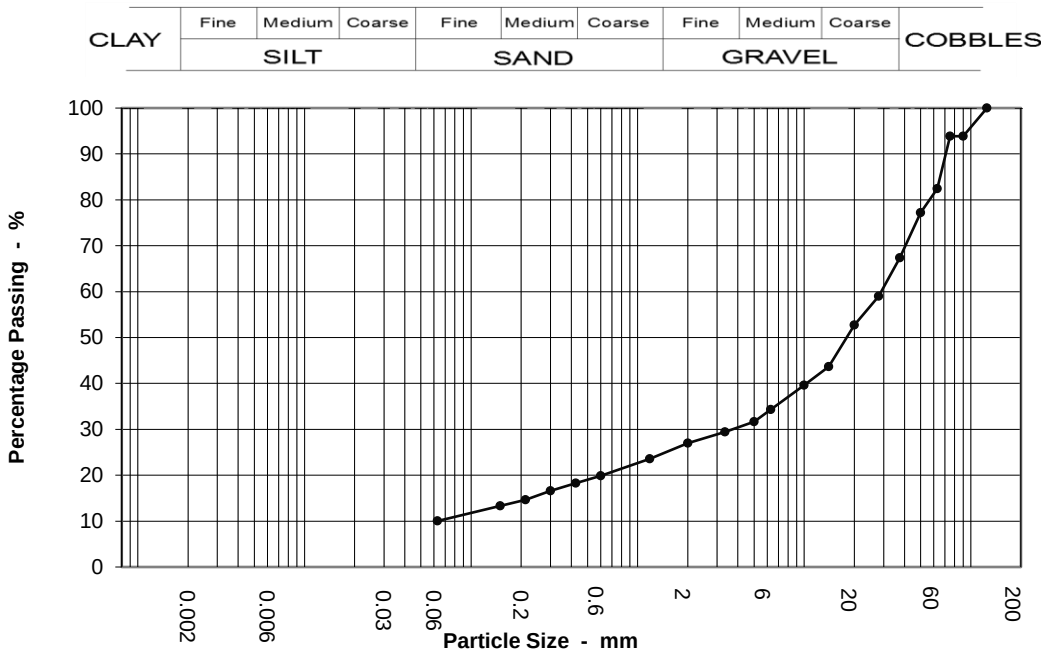
Sample Proportions	
Cobbles	13.0
Gravel	58.0
Sand	19.0
Silt & Clay	10.0

Grading Analysis	
D100	75.00
D60	18.60
D10	0.06
Uniformity Coefficient	290.00

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP05
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	7
		Depth	1.50 m
Soil Description	Clayey sandy GRAVEL with medium cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	94		
75	94		
63	82		
50	77		
37.5	67		
28	59		
20	53		
14	44		
10	40		
6.3	34		
5	32		
3.35	29		
2	27		
1.18	24		
0.6	20		
0.425	18		
0.3	17		
0.212	15		
0.15	13		
0.063	10		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

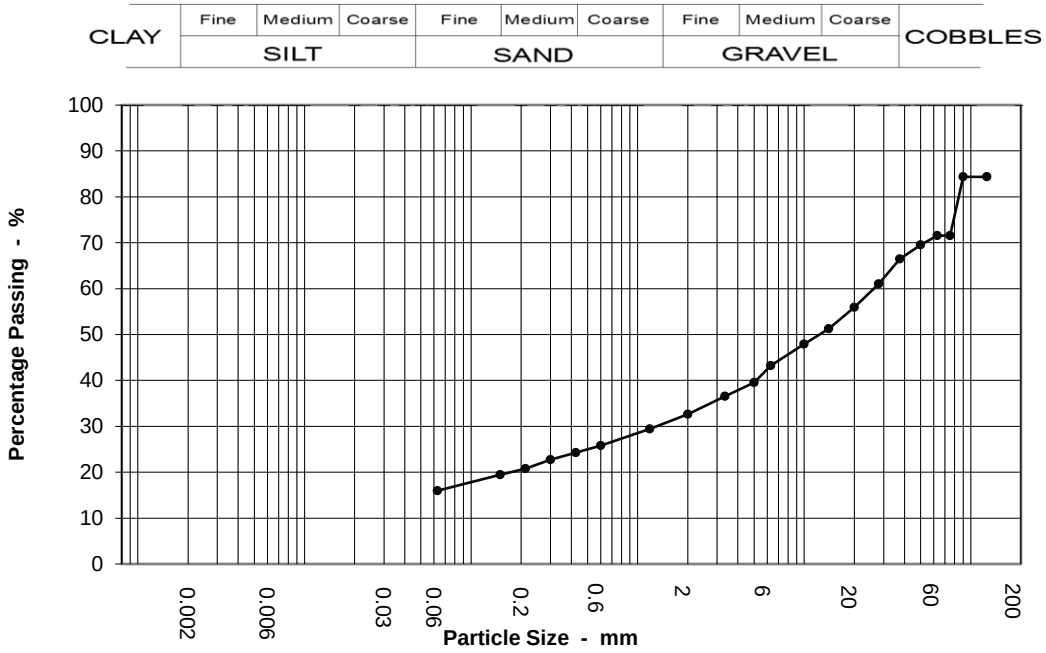
Sample Proportions	
Cobbles	18.0
Gravel	55.0
Sand	17.0
Silt & Clay	10.0

Grading Analysis	
D100	125.00
D60	29.00
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP06
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	4
		Depth	1.00 m
Soil Description	Very silty very sandy GRAVEL with high cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	84		
90	84		
75	72		
63	72		
50	70		
37.5	66		
28	61		
20	56		
14	51		
10	48		
6.3	43		
5	40		
3.35	37		
2	33		
1.18	29		
0.6	26		
0.425	24		
0.3	23		
0.212	21		
0.15	19		
0.063	16		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

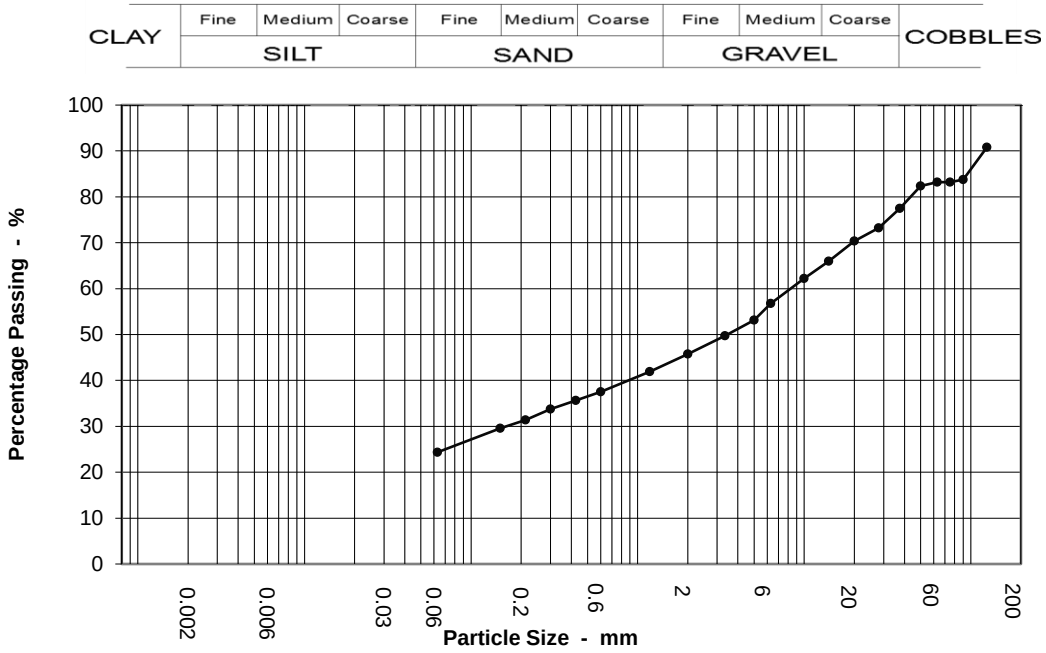
Sample Proportions	
Cobbles	28.0
Gravel	39.0
Sand	17.0
Silt & Clay	16.0

Grading Analysis	
D100	
D60	26.20
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP06
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	7
		Depth	1.50 m
Soil Description	Slightly sandy gravelly SILT with medium cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	91		
90	84		
75	83		
63	83		
50	82		
37.5	78		
28	73		
20	70		
14	66		
10	62		
6.3	57		
5	53		
3.35	50		
2	46		
1.18	42		
0.6	38		
0.425	36		
0.3	34		
0.212	31		
0.15	30		
0.063	24		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

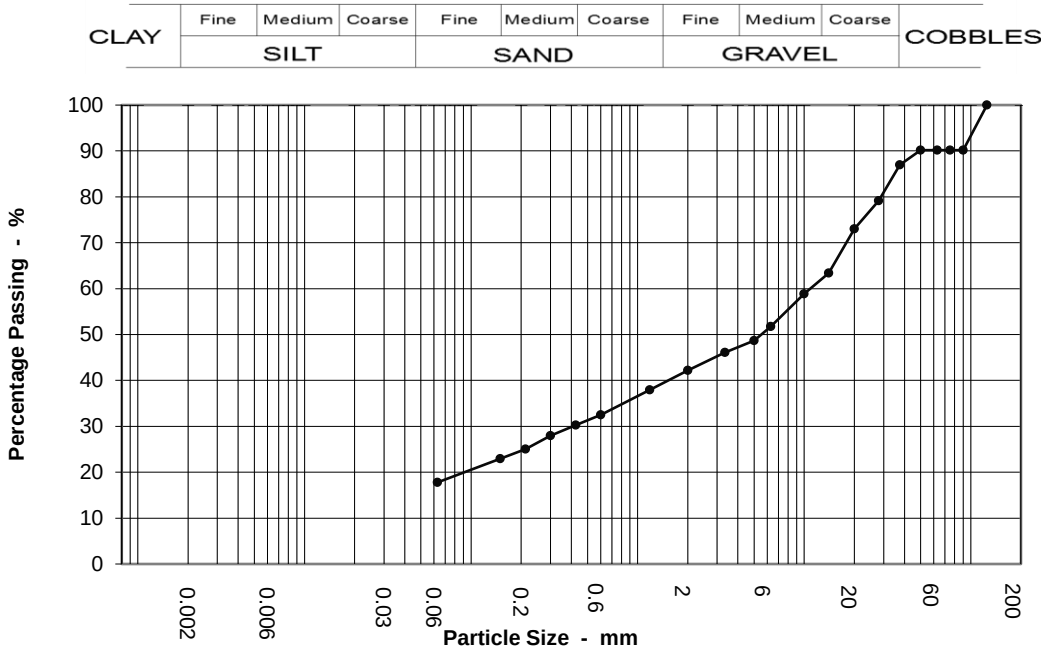
Sample Proportions	
Cobbles	17.0
Gravel	37.0
Sand	21.0
Silt & Clay	24.0

Grading Analysis	
D100	
D60	8.30
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP07
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	1
		Depth	0.50 m
Soil Description	Silty very sandy GRAVEL with low cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	90		
75	90		
63	90		
50	90		
37.5	87		
28	79		
20	73		
14	63		
10	59		
6.3	52		
5	49		
3.35	46		
2	42		
1.18	38		
0.6	32		
0.425	30		
0.3	28		
0.212	25		
0.15	23		
0.063	18		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

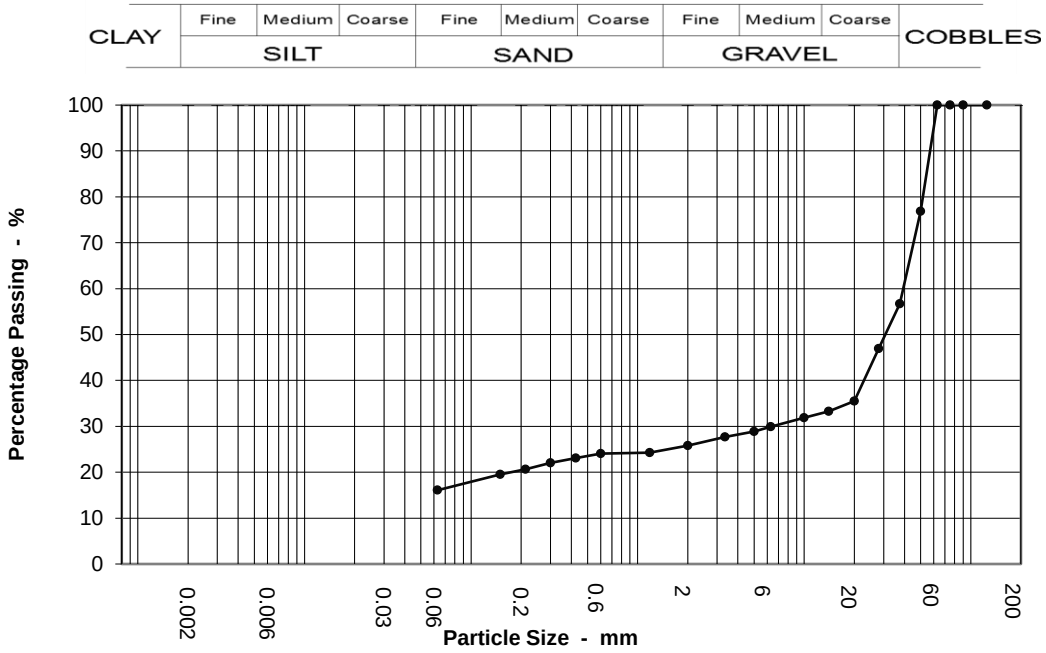
Sample Proportions	
Cobbles	10.0
Gravel	48.0
Sand	24.0
Silt & Clay	18.0

Grading Analysis	
D100	125.00
D60	10.90
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP08
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	1
		Depth	1.20 m
Soil Description	Silty sandy GRAVEL	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	77		
37.5	57		
28	47		
20	36		
14	33		
10	32		
6.3	30		
5	29		
3.35	28		
2	26		
1.18	24		
0.6	24		
0.425	23		
0.3	22		
0.212	21		
0.15	20		
0.063	16		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

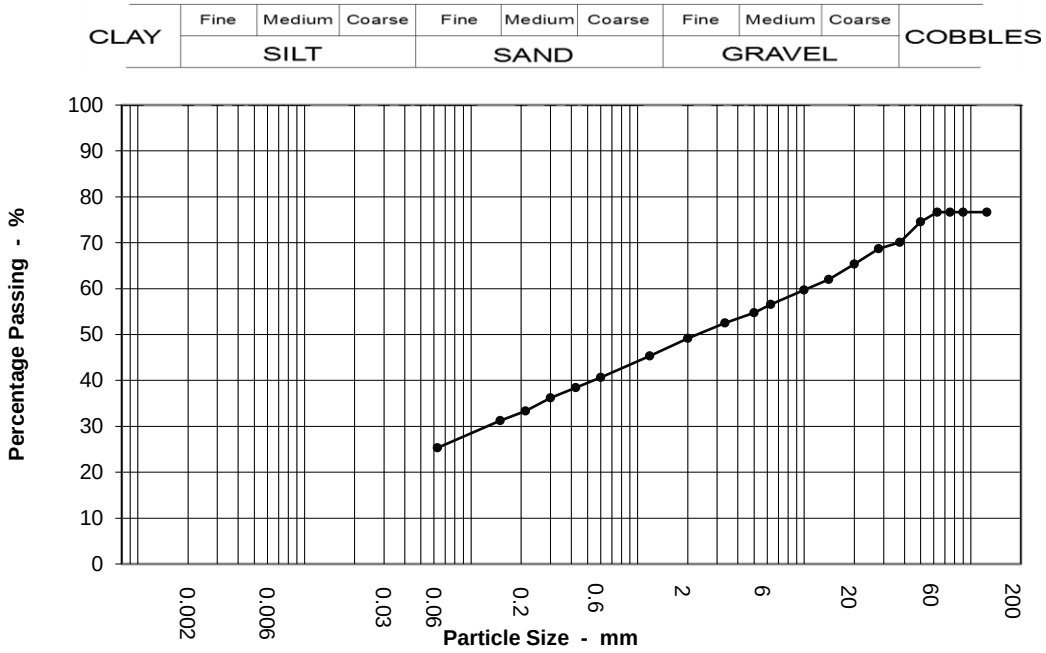
Sample Proportions	
Cobbles	0.0
Gravel	74.0
Sand	10.0
Silt & Clay	16.0

Grading Analysis	
D100	63.00
D60	39.30
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP09
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	3
		Depth	2.00 m
Soil Description	Slightly sandy slightly gravelly SILT with high cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	77		
90	77		
75	77		
63	77		
50	75		
37.5	70		
28	69		
20	65		
14	62		
10	60		
6.3	57		
5	55		
3.35	53		
2	49		
1.18	45		
0.6	41		
0.425	38		
0.3	36		
0.212	33		
0.15	31		
0.063	25		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

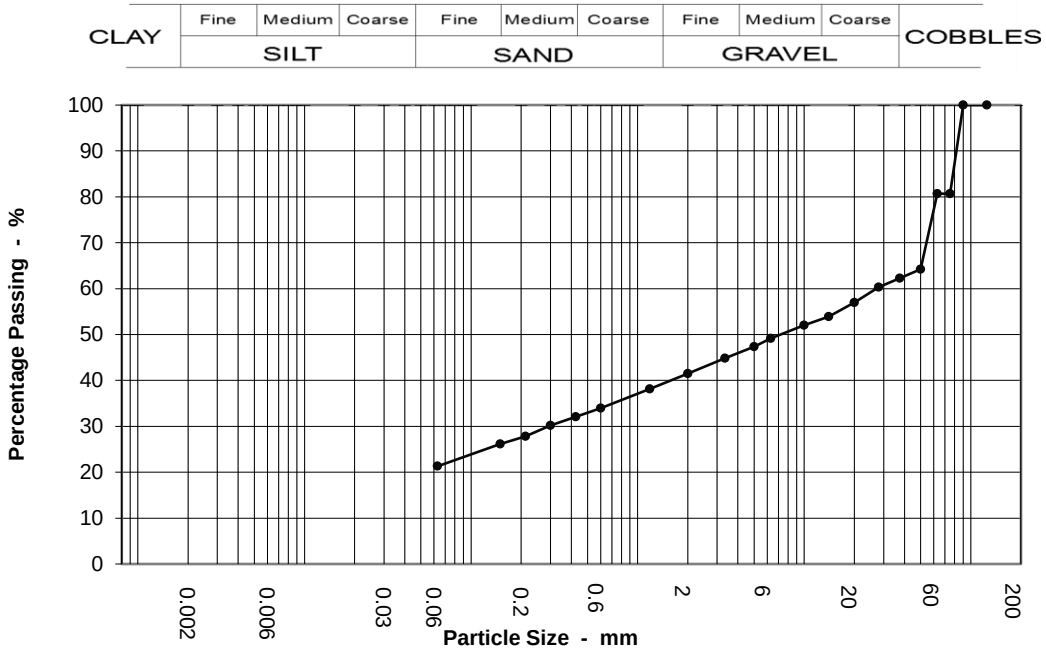
Sample Proportions	
Cobbles	23.0
Gravel	28.0
Sand	24.0
Silt & Clay	25.0

Grading Analysis	
D100	
D60	10.40
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP10
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	2
		Depth	1.50 m
Soil Description	Slightly sandy gravelly SILT with medium cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	81		
63	81		
50	64		
37.5	62		
28	60		
20	57		
14	54		
10	52		
6.3	49		
5	47		
3.35	45		
2	42		
1.18	38		
0.6	34		
0.425	32		
0.3	30		
0.212	28		
0.15	26		
0.063	21		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

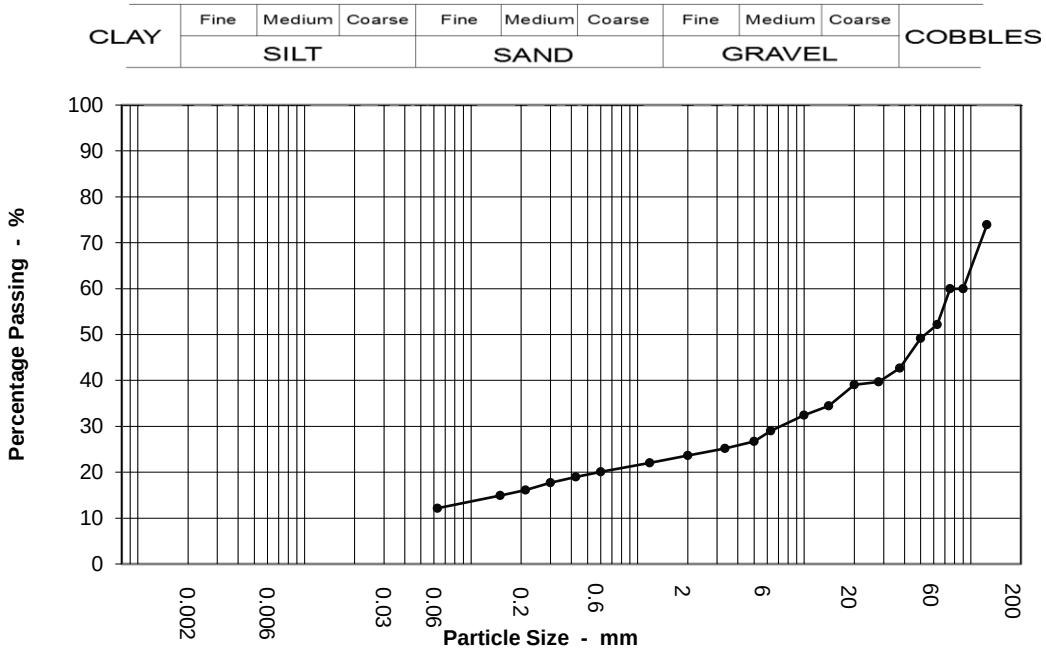
Sample Proportions	
Cobbles	19.0
Gravel	39.0
Sand	20.0
Silt & Clay	21.0

Grading Analysis	
D100	90.00
D60	27.20
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP11
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	1
		Depth	0.50 m
Soil Description	Silty sandy GRAVEL with high cobble content	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	74		
90	60		
75	60		
63	52		
50	49		
37.5	43		
28	40		
20	39		
14	34		
10	32		
6.3	29		
5	27		
3.35	25		
2	24		
1.18	22		
0.6	20		
0.425	19		
0.3	18		
0.212	16		
0.15	15		
0.063	12		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

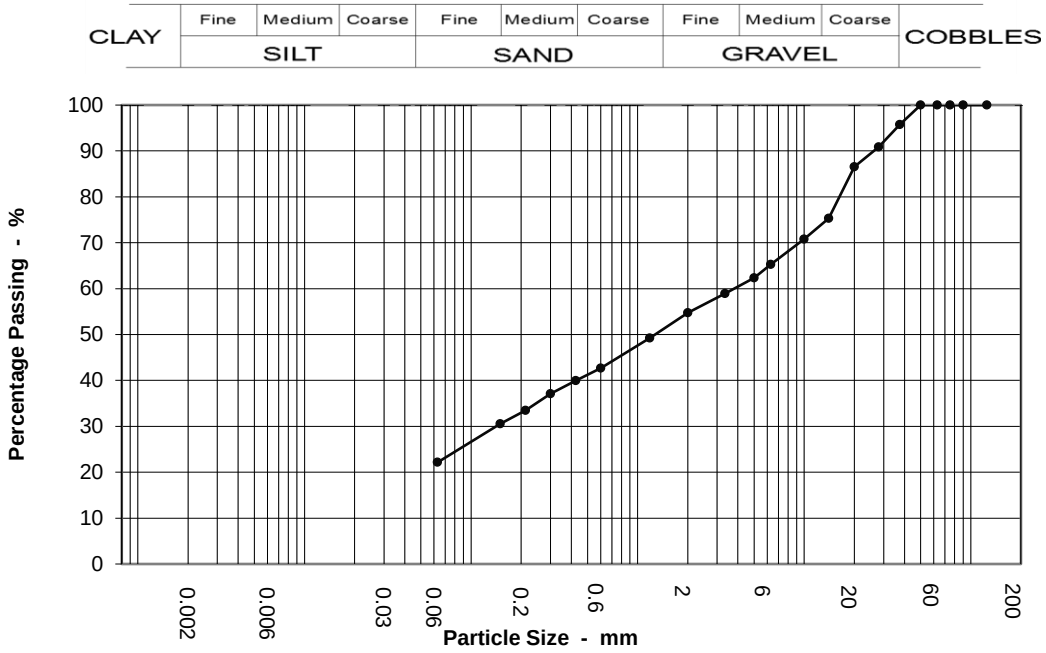
Sample Proportions	
Cobbles	48.0
Gravel	29.0
Sand	11.0
Silt & Clay	12.0

Grading Analysis	
D100	
D60	90.10
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP13
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	2
		Depth	1.20 m
Soil Description	Very silty very sandy GRAVEL	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	96		
28	91		
20	87		
14	75		
10	71		
6.3	65		
5	62		
3.35	59		
2	55		
1.18	49		
0.6	43		
0.425	40		
0.3	37		
0.212	33		
0.15	31		
0.063	22		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

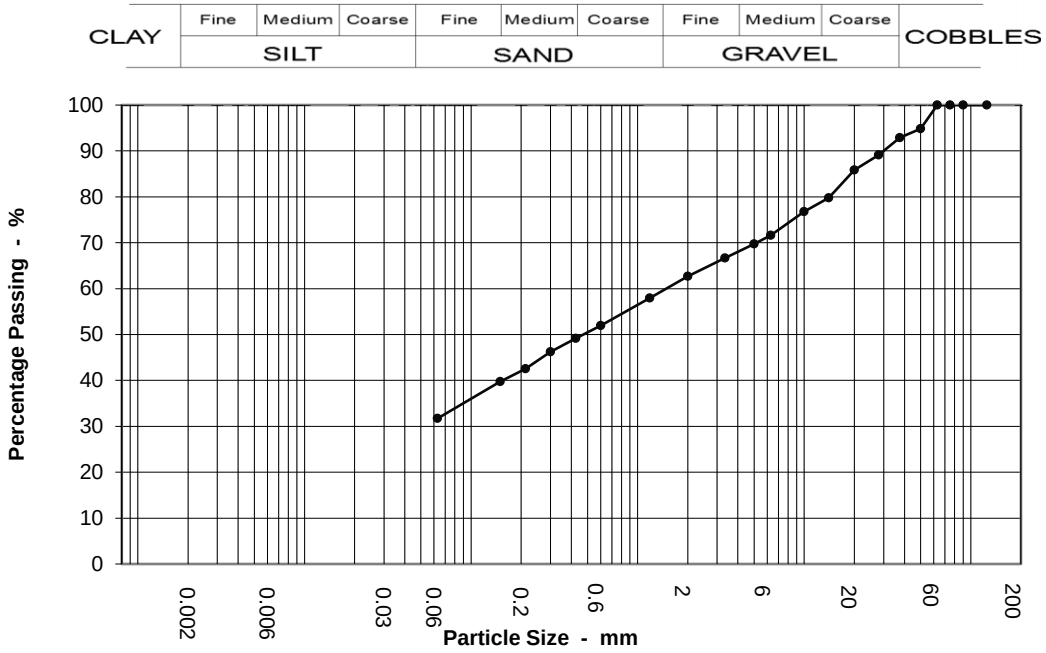
Sample Proportions	
Cobbles	0.0
Gravel	45.0
Sand	33.0
Silt & Clay	22.0

Grading Analysis	
D100	50.00
D60	3.80
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP14
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	2
		Depth	1.50 m
Soil Description	Slightly sandy gravelly SILT	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	95		
37.5	93		
28	89		
20	86		
14	80		
10	77		
6.3	72		
5	70		
3.35	67		
2	63		
1.18	58		
0.6	52		
0.425	49		
0.3	46		
0.212	43		
0.15	40		
0.063	32		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

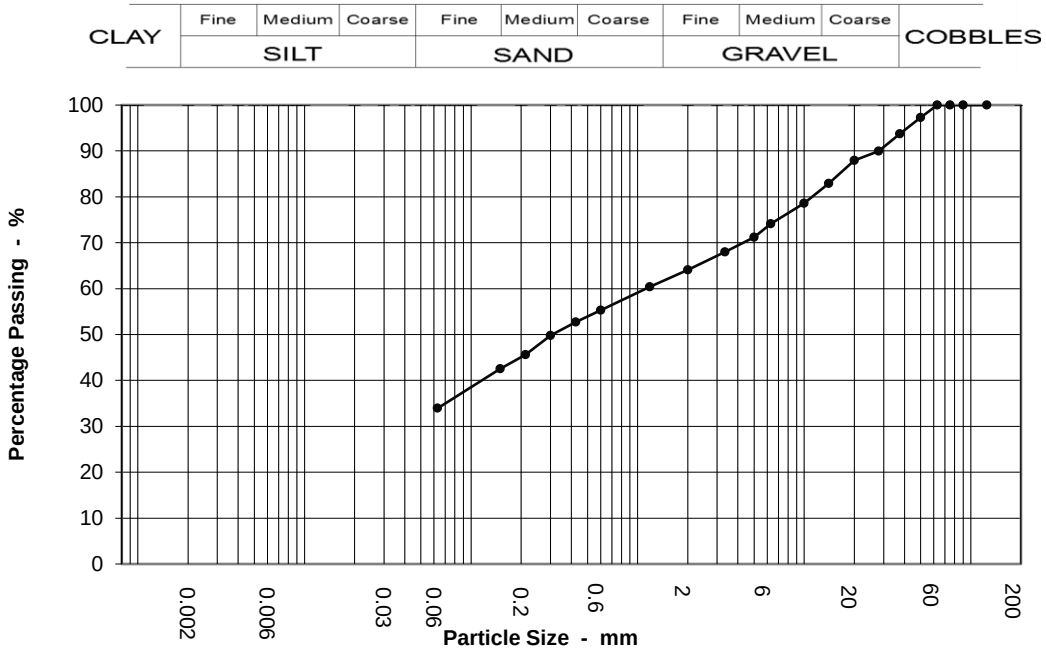
Sample Proportions	
Cobbles	0.0
Gravel	37.0
Sand	31.0
Silt & Clay	32.0

Grading Analysis	
D100	63.00
D60	1.49
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP16
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	1
		Depth	0.50 m
Soil Description	Slightly sandy gravelly CLAY	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	97		
37.5	94		
28	90		
20	88		
14	83		
10	79		
6.3	74		
5	71		
3.35	68		
2	64		
1.18	60		
0.6	55		
0.425	53		
0.3	50		
0.212	46		
0.15	43		
0.063	34		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

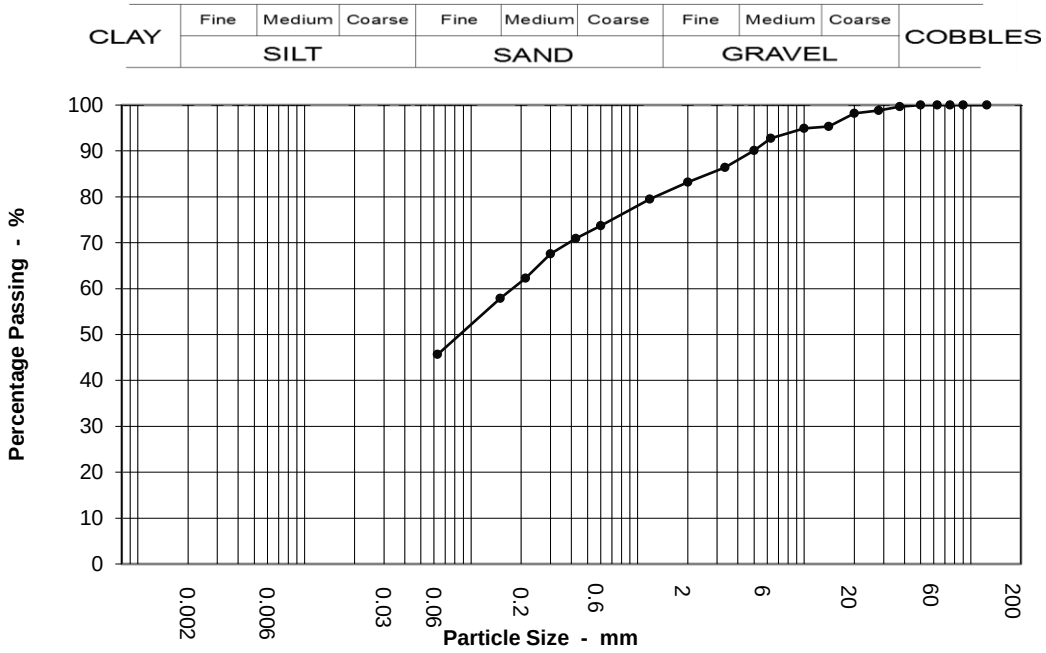
Sample Proportions	
Cobbles	0.0
Gravel	36.0
Sand	30.0
Silt & Clay	34.0

Grading Analysis	
D100	63.00
D60	1.12
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP17
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	1
		Depth	0.50 m
Soil Description	Slightly gravelly sandy SILT	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	99		
20	98		
14	95		
10	95		
6.3	93		
5	90		
3.35	86		
2	83		
1.18	80		
0.6	74		
0.425	71		
0.3	68		
0.212	62		
0.15	58		
0.063	46		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

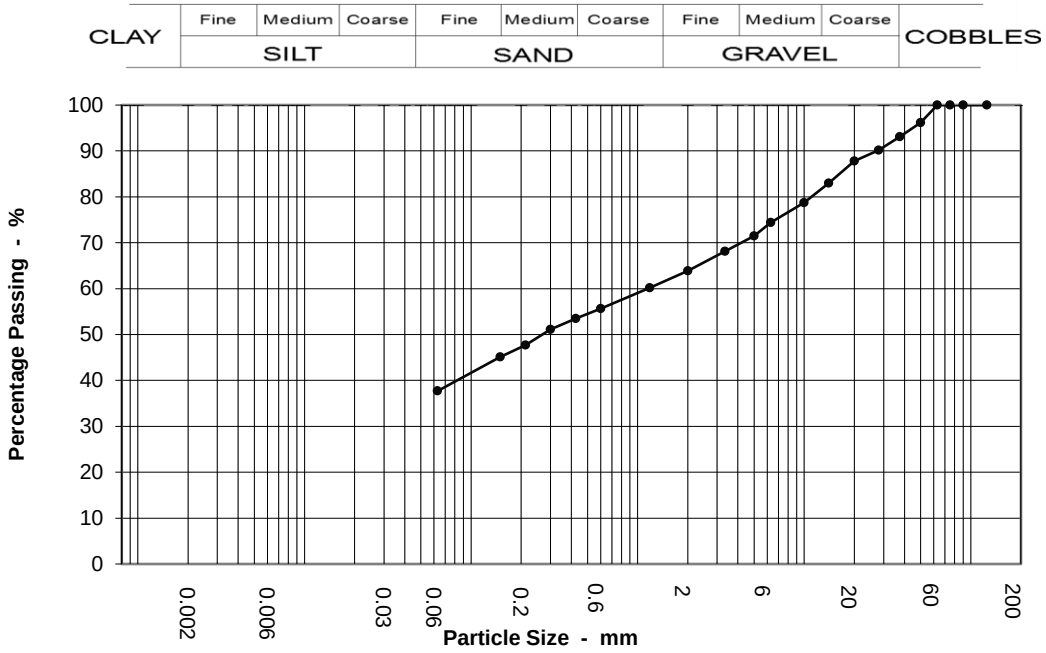
Sample Proportions	
Cobbles	0.0
Gravel	17.0
Sand	38.0
Silt & Clay	46.0

Grading Analysis	
D100	50.00
D60	0.18
D10	
Uniformity Coefficient	

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

		Job Ref	**P25025**
		Borehole / Pit No	TP17
Location	**Ireland Gas Peaker Plant - Site Investigation**	Sample No	5
		Depth	1.50 m
Soil Description	Slightly sandy gravelly SILT	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	96		
37.5	93		
28	90		
20	88		
14	83		
10	79		
6.3	74		
5	71		
3.35	68		
2	64		
1.18	60		
0.6	56		
0.425	53		
0.3	51		
0.212	48		
0.15	45		
0.063	38		

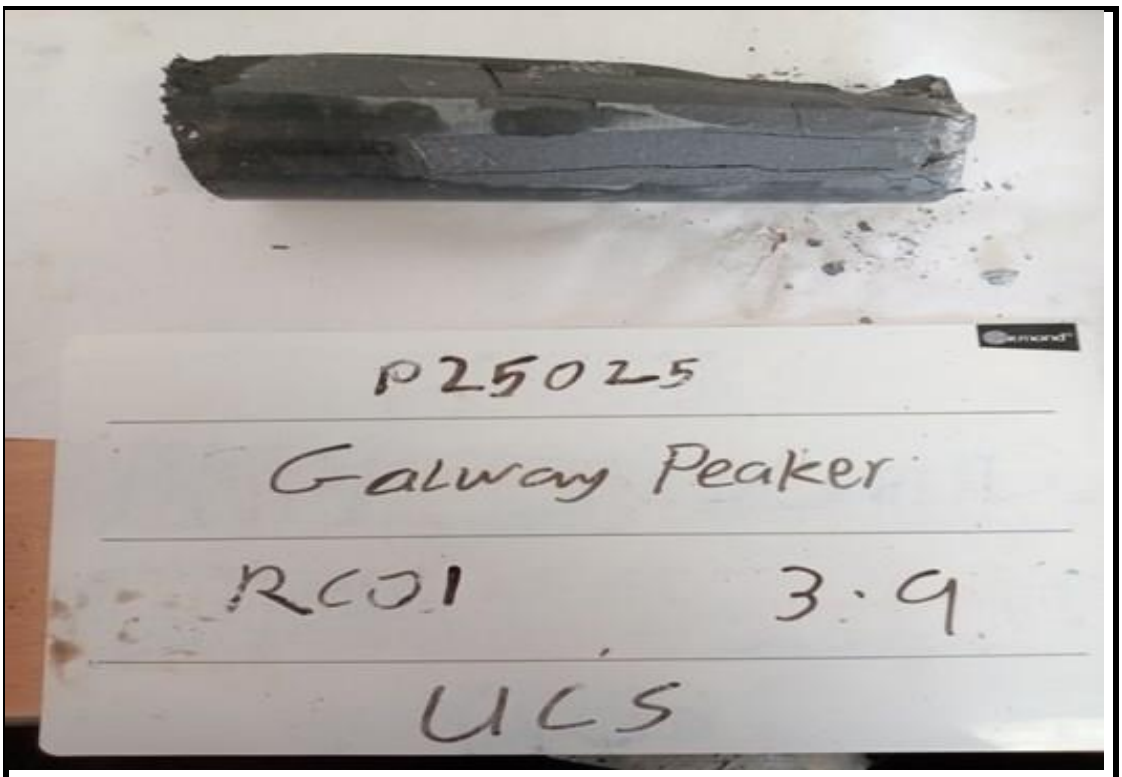
Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	36.0
Sand	26.0
Silt & Clay	38.0

Grading Analysis	
D100	63.00
D60	1.14
D10	
Uniformity Coefficient	

Unconfined Compressive Strength, UCS

Job Name	**Ireland Gas Peaker Plant - Site Investigation**	
Job Number	**P25025**	
Borehole:	**RC01**	
Depth:	**3.9**	**m**
Rock Type	**Limestone**	
Diameter	**79**	**mm**
Length	**198.75**	**mm**
Bulk Density	**2.74**	**Mg/m3**
Orientation of axis of loading	**Parallel**	
Stress rate	**3.00**	**kN/s**
Test Duration	**122.00**	**Seconds**
Load at Failure, P	**340**	**kN**
Stress at Failure	**69.45**	**MPa**

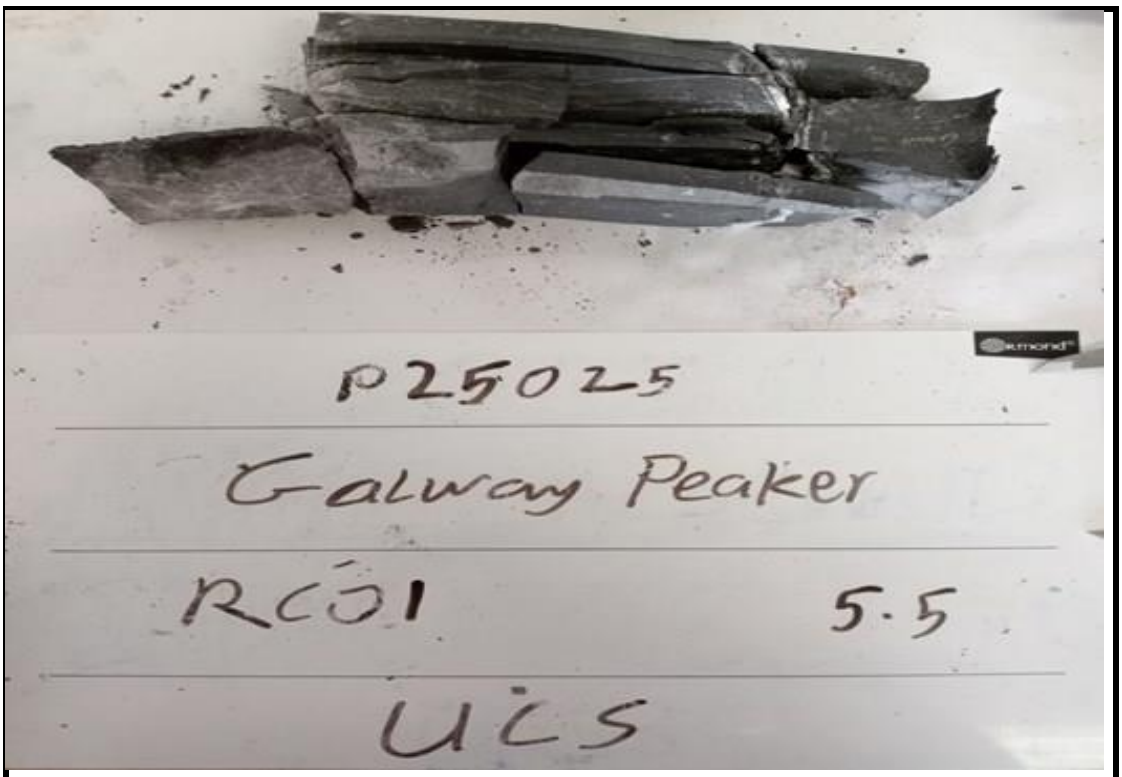


Mode of Failure

Test performed in accordance with ISRM Suggested Methods : 2007,

Unconfined Compressive Strength, UCS

Job Name	**Ireland Gas Peaker Plant - Site Investigation**	
Job Number	**P25025**	
Borehole:	**RC01**	
Depth:	**5.5**	**m**
Rock Type	**Limestone**	
Diameter	**78.25**	**mm**
Length	**195**	**mm**
Bulk Density	**2.67**	**Mg/m3**
Orientation of axis of loading	**Parallel**	
Stress rate	**3.00**	**kN/s**
Test Duration	**138.00**	**Seconds**
Load at Failure, P	**409.3**	**kN**
Stress at Failure	**85.65**	**MPa**

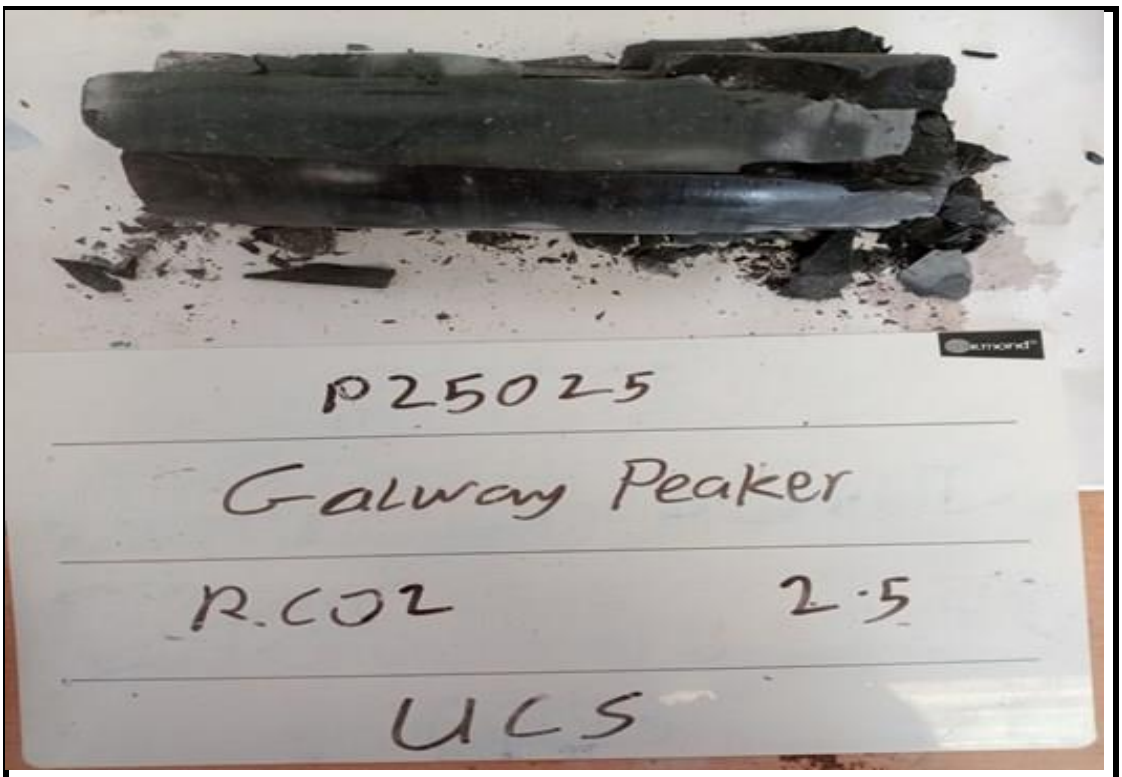


Mode of Failure

Test performed in accordance with ISRM Suggested Methods : 2007,

Unconfined Compressive Strength, UCS

Job Name	**Ireland Gas Peaker Plant - Site Investigation**	
Job Number	**P25025**	
Borehole:	**RC02**	
Depth:	**2.5**	**m**
Rock Type	**Limestone**	
Diameter	**78.5**	**mm**
Length	**188.75**	**mm**
Bulk Density	**2.73**	**Mg/m3**
Orientation of axis of loading	**Parallel**	
Stress rate	**3.00**	**kN/s**
Test Duration	**125.00**	**Seconds**
Load at Failure, P	**345.8**	**kN**
Stress at Failure	**70.55**	**MPa**

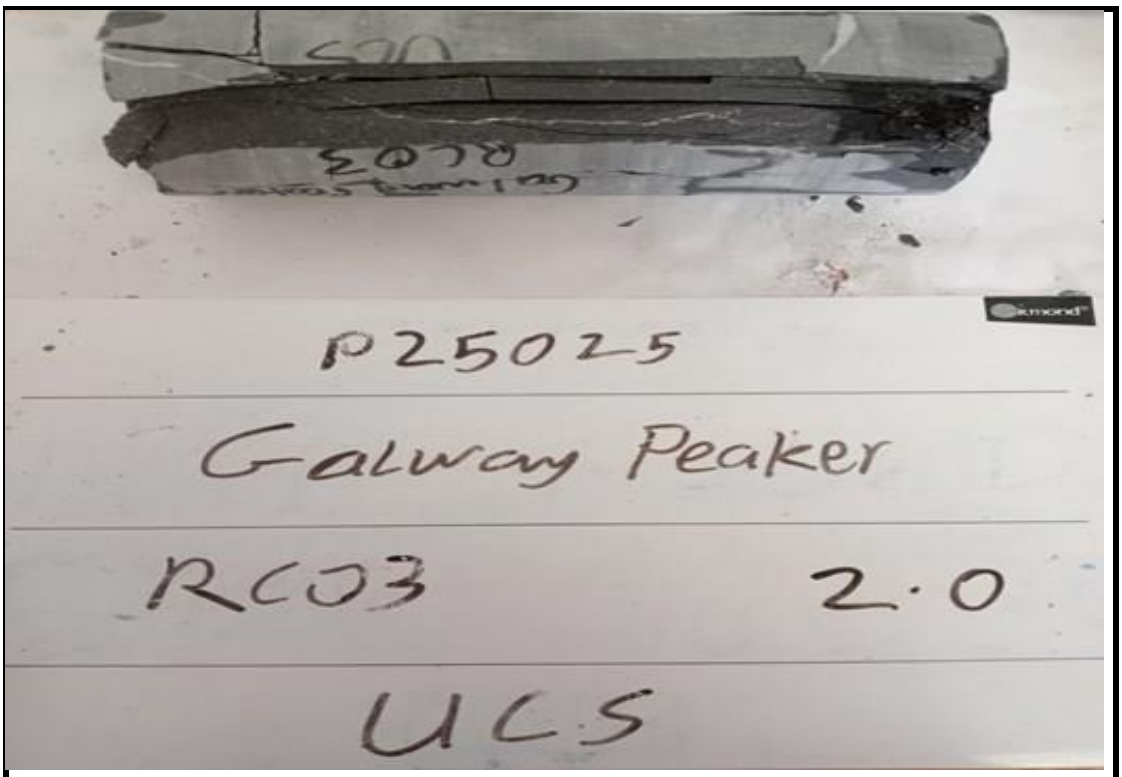


Mode of Failure

Test performed in accordance with ISRM Suggested Methods : 2007,

Unconfined Compressive Strength, UCS

Job Name	**Ireland Gas Peaker Plant - Site Investigation**	
Job Number	**P25025**	
Borehole:	**RC03**	
Depth:	**2**	**m**
Rock Type	**Limestone**	
Diameter	**78.75**	**mm**
Length	**195.25**	**mm**
Bulk Density	**2.70**	**Mg/m3**
Orientation of axis of loading	**Parallel**	
Stress rate	**3.00**	**kN/s**
Test Duration	**102.00**	**Seconds**
Load at Failure, P	**287.8**	**kN**
Stress at Failure	**58.75**	**MPa**

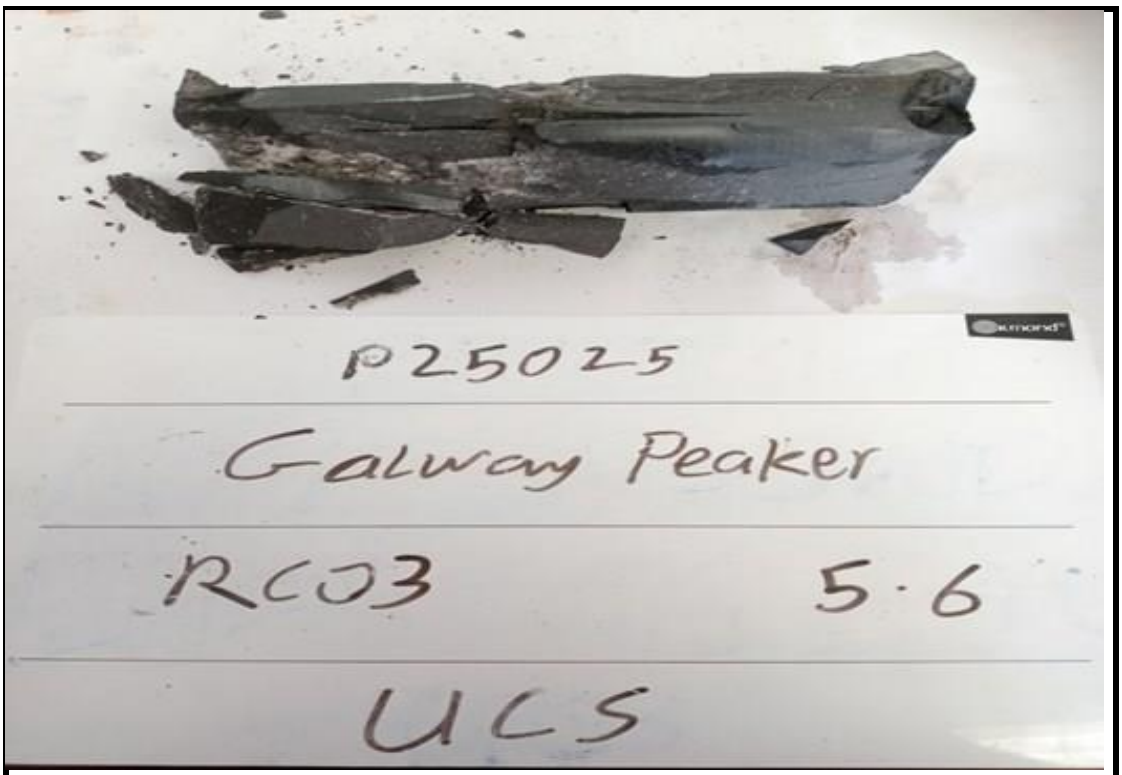


Mode of Failure

Test performed in accordance with ISRM Suggested Methods : 2007,

Unconfined Compressive Strength, UCS

Job Name	**Ireland Gas Peaker Plant - Site Investigation**	
Job Number	**P25025**	
Borehole:	**RC03**	
Depth:	**5.6**	**m**
Rock Type	**Limestone**	
Diameter	**78.25**	**mm**
Length	**191.75**	**mm**
Bulk Density	**2.79**	**Mg/m3**
Orientation of axis of loading	**Parallel**	
Stress rate	**3.00**	**kN/s**
Test Duration	**126.00**	**Seconds**
Load at Failure, P	**370.08**	**kN**
Stress at Failure	**77.65**	**MPa**

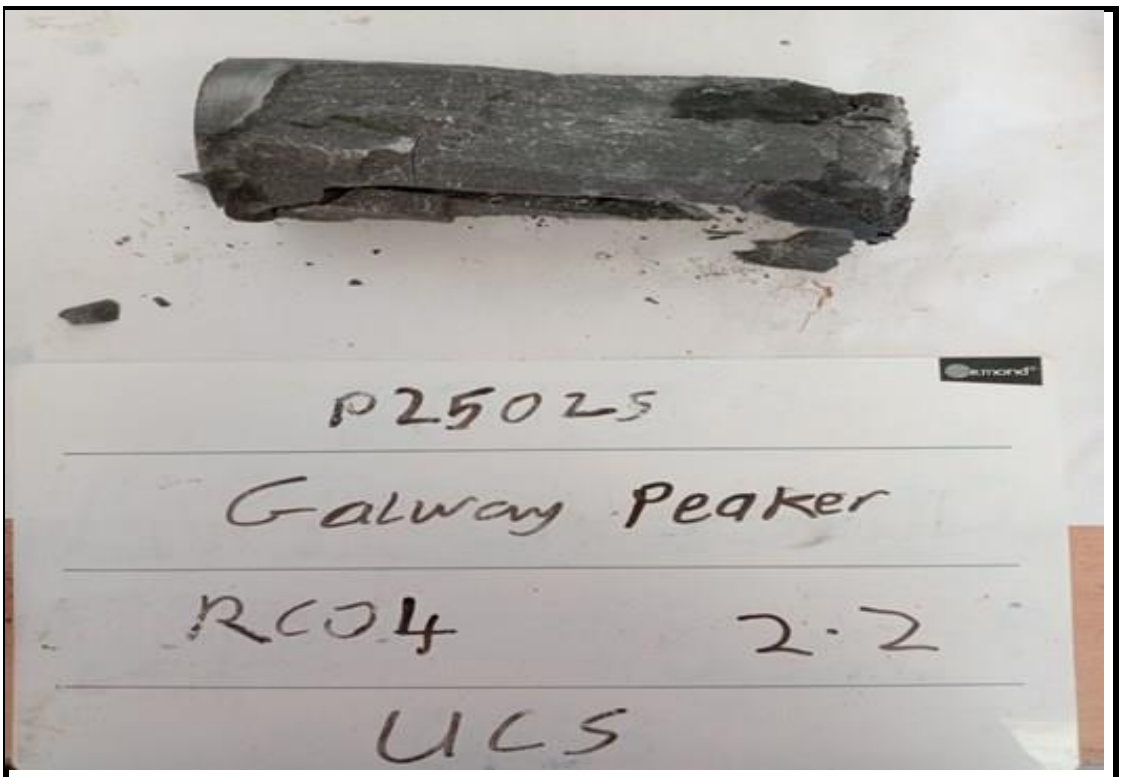


Mode of Failure

Test performed in accordance with ISRM Suggested Methods : 2007,

Unconfined Compressive Strength, UCS

Job Name	**Ireland Gas Peaker Plant - Site Investigation**	
Job Number	**P25025**	
Borehole:	**RC04**	
Depth:	**2.2**	**m**
Rock Type	**Limestone**	
Diameter	**77.75**	**mm**
Length	**172**	**mm**
Bulk Density	**2.72**	**Mg/m3**
Orientation of axis of loading	**Parallel**	
Stress rate	**3.00**	**kN/s**
Test Duration	**161.00**	**Seconds**
Load at Failure, P	**453.4**	**kN**
Stress at Failure	**94.95**	**MPa**

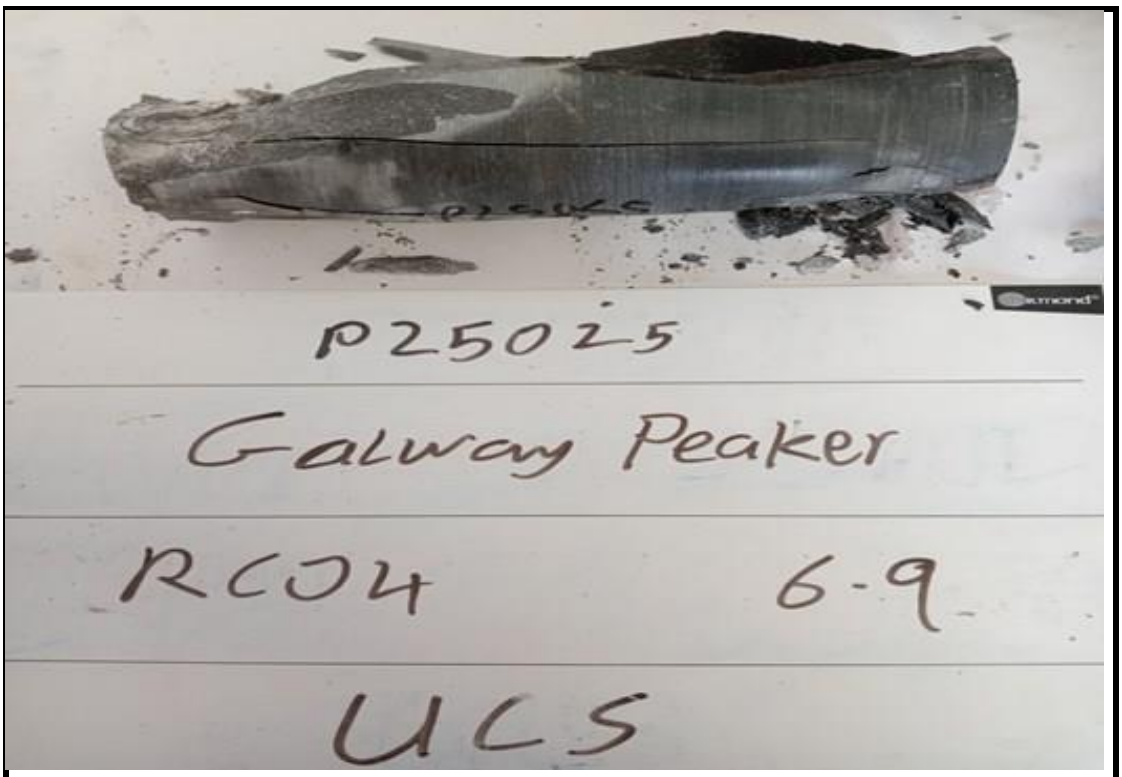


Mode of Failure

Test performed in accordance with ISRM Suggested Methods : 2007,

Unconfined Compressive Strength, UCS

Job Name	**Ireland Gas Peaker Plant - Site Investigation**	
Job Number	**P25025**	
Borehole:	**RC04**	
Depth:	**6.9**	**m**
Rock Type	**Limestone**	
Diameter	**78**	**mm**
Length	**198.5**	**mm**
Bulk Density	**2.75**	**Mg/m3**
Orientation of axis of loading	**Parallel**	
Stress rate	**3.00**	**kN/s**
Test Duration	**177.00**	**Seconds**
Load at Failure, P	**508.7**	**kN**
Stress at Failure	**106.56**	**MPa**



Mode of Failure

Test performed in accordance with ISRM Suggested Methods : 2007,

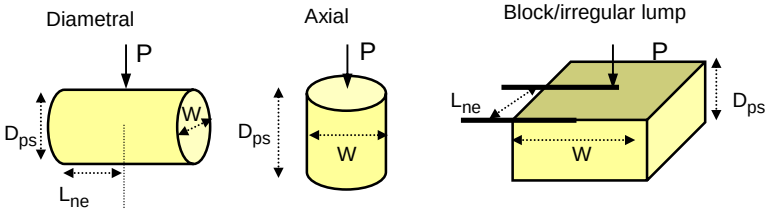
Point Load Strength Index Tests
Summary of Results

Project No.: P25025

Project Name: Ireland Gas Peaker Plant - Site Investigation

Borehole No.	Sample			Specimen		Rock Type and Test condition	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index		Remarks (including water content if measured)
	Depth	Ref.	Type	Ref.	Depth		Type (D, A, I, B)	Direction (L, P or U)		Lne	W	Dps	Dps'			Is	Is(50)	
	m				m					mm	mm	mm	mm	kN	mm	MPa	MPa	
RC01	3.50		C		3.50	Limestone	I	U	YES	30.0	78.0	69.0	66.0	14.5	81.0	2.2	2.8	Planar Rough
RC01	5.80		C		5.80	Limestone	D	U	YES	43.0	78.0	78.0	69.0	13.7	73.4	2.5	3.0	Planar Rough
RC02	2.70		C		2.70	Limestone	D	U	YES	58.0	78.0	78.0	74.0	25.7	76.0	4.4	5.4	Undulating Smooth
RC02	6.80		C		6.80	Limestone	I	U	YES	51.0	78.0	64.0	60.0	16.6	77.2	2.8	3.4	Planar Rough
RC02	7.00		C		7.00	Limestone	A	U	YES	34.0	78.0	50.0	42.0	14.3	64.6	3.4	3.8	Undulating Rough
RC03	3.50		C		3.50	Limestone	A	U	YES	32.0	78.0	55.0	47.0	22.4	68.3	4.8	5.5	Planar Rough
RC03	7.00		C		7.00	Limestone	D	U	YES	47.0	78.0	78.0	76.0	18.1	77.0	3.0	3.7	Planar Smooth
RC04	2.80		C		2.80	Limestone	I	U	YES	41.0	78.0	55.0	53.0	15.5	72.6	3.0	3.5	Planar Rough
RC04	6.40		C		6.40	Limestone	D	U	YES	30.0	78.0	69.0	66.0	15.5	71.7	3.0	3.5	Planar Rough

Test Type
D - Diametral, A - Axial, I - Irregular Lump, B - Block
Direction
L - parallel to planes of weakness
P - perpendicular to planes of weakness
U - unknown or random
Dimensions
Dps - Distance between platens (platen separation)
Dps' - at failure (see ISRM note 6)
Lne - Length from platens to nearest free end
W - Width of shortest dimension perpendicular to load, P



Test performed in accordance with ISRM Suggested Methods : 2007, unless noted otherwise
Detailed legend for test and dimensions, based on ISRM, is shown above.
Size factor, F = (De/50)0.45 for all tests.

Date Printed: 29/04/2025

Approved By: Vasco

Table: 1

sheet: 1

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	25-08261-1
Initial Date of Issue:	18-Mar-2025
Re-Issue Details:	
Client	Priority Geotechnical Ltd
Client Address:	Unit 12 Owenacurra Business Park Midleton County Cork Ireland
Contact(s):	Colette Kelly
Project	P25025 Galway Peaker Plant
Quotation No.:	Q24-36581
Date Received:	10-Mar-2025
Order No.:	16792
Date Instructed:	10-Mar-2025
No. of Samples:	9
Turnaround (Wkdays):	5
Results Due:	14-Mar-2025
Date Approved:	18-Mar-2025
Approved By:	

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Leachate

Project: P25025 Galway Peaker Plant

Client: Priority Geotechnical Ltd				**Chemtest Job No.:**		25-08261	25-08261	25-08261	25-08261	25-08261	25-08261	25-08261	25-08261
Quotation No.: Q24-36581				**Chemtest Sample ID.:**		1944998	1944999	1945000	1945001	1945002	1945003	1945004	1945005
				Sample Location:		TP01	TP02	TP03	TP03	TP04	TP05	TP06	TP06
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.5	1.0	0.5	1.5	0.5	1.0	1.5	1.0
				Date Sampled:		26-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	26-Feb-2025	26-Feb-2025
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**								
Ammonium	U	1220	10:1	mg/l	0.050	0.085	0.082	0.085	0.083	0.059	< 0.050	0.16	0.14
Ammonium	N	1220	10:1	mg/kg	0.10	0.86	0.97	0.87	0.87	0.69	0.72	1.8	1.6

Results - Leachate

Project: P25025 Galway Peaker Plant

Client: Priority Geotechnical Ltd				**Chemtest Job No.:**		25-08261
Quotation No.: Q24-36581				**Chemtest Sample ID.:**		1945006
				Sample Location:		TP07
				Sample Type:		SOIL
				Top Depth (m):		0.5
				Date Sampled:		26-Feb-2025
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**	
Ammonium	U	1220	10:1	mg/l	0.050	0.084
Ammonium	N	1220	10:1	mg/kg	0.10	0.91

Results - Soil

Project: P25025 Galway Peaker Plant

Client: Priority Geotechnical Ltd						**Chemtest Job No.:**	25-08261	25-08261	25-08261	25-08261	25-08261	25-08261	25-08261
Quotation No.: Q24-36581						**Chemtest Sample ID.:**	1944998	1944999	1945000	1945001	1945002	1945003	1945004
						Sample Location:	TP01	TP02	TP03	TP03	TP04	TP05	TP06
						Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Top Depth (m):	0.5	1.0	0.5	1.5	0.5	1.0	1.5
						Date Sampled:	26-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	26-Feb-2025
						Asbestos Lab:	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type		N	2192		N/A		-	-	-	-	-	-	-
Asbestos Identification		U	2192		N/A		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020		16	6.6	25	10	9.4	6.7	15
Soil Colour		N	2040		N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A		Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Roots and Stones	Stones and Roots
Soil Texture		N	2040		N/A		Loam	Sand	Loam	Loam	Loam	Sand	Loam
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40		< 0.40	< 0.40	1.1	< 0.40	< 0.40	< 0.40	< 0.40
Sulphur (Elemental)		M	2180	mg/kg	1.0		< 1.0	< 1.0	< 1.0	1.8	< 1.0	1.4	< 1.0
Cyanide (Total)		M	2300	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50		12	11	6.4	20	13	4.2	2.9
Sulphate (Total)		U	2430	%	0.010		0.091	0.049	0.14	0.090	0.059	0.14	0.056
Arsenic		M	2455	mg/kg	0.5		8.8	1.5	5.9	4.9	1.7	6.9	1.5
Barium		M	2455	mg/kg	0.5		35	12	38	26	8.6	21	12
Cadmium		M	2455	mg/kg	0.10		2.3	0.54	2.0	1.3	0.86	1.9	0.59
Chromium		M	2455	mg/kg	0.5		32	6.3	23	16	7.2	16	5.7
Molybdenum		M	2455	mg/kg	0.5		3.3	< 0.5	1.8	2.7	0.6	3.4	< 0.5
Antimony		N	2455	mg/kg	2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Copper		M	2455	mg/kg	0.50		12	2.7	8.3	11	2.9	16	3.5
Mercury		M	2455	mg/kg	0.05		0.09	< 0.05	0.08	0.05	< 0.05	0.05	< 0.05
Nickel		M	2455	mg/kg	0.50		46	9.4	30	37	9.8	46	8.7
Lead		M	2455	mg/kg	0.50		20	2.5	18	8.9	4.0	12	4.1
Selenium		M	2455	mg/kg	0.25		1.9	< 0.25	1.3	0.75	0.37	1.4	< 0.25
Zinc		M	2455	mg/kg	0.50		41	8.1	42	24	8.9	27	9.8
Chromium (Trivalent)		N	2490	mg/kg	1.0		32	6.3	23	16	7.2	16	5.7
Chromium (Hexavalent)		N	2490	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00		< 3.0	< 3.0	3.7	< 3.0	< 3.0	< 3.0	< 3.0
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00		< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00		< 5.0	< 5.0	5.4	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Results - Soil

Project: P25025 Galway Peaker Plant

Client: Priority Geotechnical Ltd				**Chemtest Job No.:**		25-08261	25-08261	25-08261	25-08261	25-08261	25-08261	25-08261
Quotation No.: Q24-36581				**Chemtest Sample ID.:**		1944998	1944999	1945000	1945001	1945002	1945003	1945004
				Sample Location:		TP01	TP02	TP03	TP03	TP04	TP05	TP06
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.5	1.0	0.5	1.5	0.5	1.0	1.5
				Date Sampled:		26-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	26-Feb-2025
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**							
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	2.4	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	< 2.0	2.3	3.5	5.0	6.1	4.8	4.0
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	5.5	< 2.0	7.7	< 2.0	< 2.0	< 2.0	< 2.0
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	2.1	1.5	3.3	< 1.0	< 1.0	1.3	< 1.0
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	7.5	< 5.0	14	5.0	6.1	< 5.0	< 5.0
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	< 10	< 10	19	< 10	< 10	< 10	< 10
Mineral Oil EPH		N	2670	mg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.1
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	0.19	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Coronene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
PCB 28		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 52		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 101		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 118		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Results - Soil

Project: P25025 Galway Peaker Plant

Client: Priority Geotechnical Ltd				**Chemtest Job No.:**		25-08261	25-08261	25-08261	25-08261	25-08261	25-08261	25-08261
Quotation No.: Q24-36581				**Chemtest Sample ID.:**		1944998	1944999	1945000	1945001	1945002	1945003	1945004
				Sample Location:		TP01	TP02	TP03	TP03	TP04	TP05	TP06
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.5	1.0	0.5	1.5	0.5	1.0	1.5
				Date Sampled:		26-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	26-Feb-2025
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**							
PCB 153		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 138		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 180		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Tot PCBs Low (7 Congeners)		N	2815	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P25025 Galway Peaker Plant

Client: Priority Geotechnical Ltd				**Chemtest Job No.:**		25-08261	25-08261
Quotation No.: Q24-36581				**Chemtest Sample ID.:**		1945005	1945006
				Sample Location:		TP06	TP07
				Sample Type:		SOIL	SOIL
				Top Depth (m):		1.0	0.5
				Date Sampled:		26-Feb-2025	26-Feb-2025
				Asbestos Lab:		NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type		N	2192		N/A	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	15	14
Soil Colour		N	2040		N/A	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A	Loam	Loam
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	0.45	0.45
Sulphur (Elemental)		M	2180	mg/kg	1.0	< 1.0	< 1.0
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	5.8	5.9
Sulphate (Total)		U	2430	%	0.010	0.050	0.099
Arsenic		M	2455	mg/kg	0.5	1.2	6.3
Barium		M	2455	mg/kg	0.5	8.2	26
Cadmium		M	2455	mg/kg	0.10	0.48	1.8
Chromium		M	2455	mg/kg	0.5	5.1	26
Molybdenum		M	2455	mg/kg	0.5	< 0.5	2.3
Antimony		N	2455	mg/kg	2.0	< 2.0	< 2.0
Copper		M	2455	mg/kg	0.50	2.2	7.2
Mercury		M	2455	mg/kg	0.05	< 0.05	0.10
Nickel		M	2455	mg/kg	0.50	5.9	34
Lead		M	2455	mg/kg	0.50	3.3	15
Selenium		M	2455	mg/kg	0.25	< 0.25	1.4
Zinc		M	2455	mg/kg	0.50	7.9	33
Chromium (Trivalent)		N	2490	mg/kg	1.0	5.1	26
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	< 1.0	< 1.0
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	< 3.0	< 3.0
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	< 5.0	< 5.0
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05

Results - Soil

Project: P25025 Galway Peaker Plant

Client: Priority Geotechnical Ltd				**Chemtest Job No.:**		25-08261	25-08261
Quotation No.: Q24-36581				**Chemtest Sample ID.:**		1945005	1945006
				Sample Location:		TP06	TP07
				Sample Type:		SOIL	SOIL
				Top Depth (m):		1.0	0.5
				Date Sampled:		26-Feb-2025	26-Feb-2025
				Asbestos Lab:		NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	4.8	5.6
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	< 2.0	< 2.0
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	< 1.0	< 1.0
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	< 5.0	5.6
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	< 10	< 10
Mineral Oil EPH		N	2670	mg/kg	10	< 10	< 10
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	2.8	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	< 1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Coronene		N	2800	mg/kg	0.10	< 0.10	< 0.10
PCB 28		U	2815	mg/kg	0.010	< 0.010	< 0.010
PCB 52		U	2815	mg/kg	0.010	< 0.010	< 0.010
PCB 101		U	2815	mg/kg	0.010	< 0.010	< 0.010
PCB 118		U	2815	mg/kg	0.010	< 0.010	< 0.010

Results - Soil

Project: P25025 Galway Peaker Plant

Client: Priority Geotechnical Ltd				**Chemtest Job No.:**		25-08261	25-08261
Quotation No.: Q24-36581				**Chemtest Sample ID.:**		1945005	1945006
				Sample Location:		TP06	TP07
				Sample Type:		SOIL	SOIL
				Top Depth (m):		1.0	0.5
				Date Sampled:		26-Feb-2025	26-Feb-2025
				Asbestos Lab:		NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**		
PCB 153		U	2815	mg/kg	0.010	< 0.010	< 0.010
PCB 138		U	2815	mg/kg	0.010	< 0.010	< 0.010
PCB 180		U	2815	mg/kg	0.010	< 0.010	< 0.010
Tot PCBs Low (7 Congeners)		N	2815	mg/kg	0.05	< 0.05	< 0.05
Total Phenols		M	2920	mg/kg	0.10	0.24	< 0.10

Results - Single Stage WAC

Project: P25025 Galway Peaker Plant

						Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	25-08261							
Chemtest Sample ID:	1944998							
Sample Ref:								
Sample ID:						**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Sample Location:	TP01							
Top Depth(m):	0.5							
Bottom Depth(m):								
Sampling Date:	26-Feb-2025							
Determinand	**SOP**	**HWOL Code**	**Accred.**	**Units**				
Total Organic Carbon	2625		M	%	2.2	3	5	6
Loss On Ignition	2610		M	%	3.2	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.2	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.017	--	To evaluate	To evaluate
Eluate Analysis				**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455		U	0.0013	0.013	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	0.00017	0.0017	0.04	1	5
Chromium	1455		U	0.0031	0.031	0.5	10	70
Copper	1455		U	0.0018	0.019	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0007	0.0067	0.5	10	30
Nickel	1455		U	0.0027	0.027	0.4	10	40
Lead	1455		U	0.0013	0.013	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	0.0007	0.0069	0.1	0.5	7
Zinc	1455		U	0.010	0.10	4	50	200
Chloride	1220		U	1.5	15	800	15000	25000
Fluoride	1220		U	0.15	1.5	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	50	500	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	4.2	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.8
WAC Sample Weight	2796

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P25025 Galway Peaker Plant

						Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	25-08261							
Chemtest Sample ID:	1944999							
Sample Ref:								
Sample ID:								
Sample Location:	TP02							
Top Depth(m):	1.0							
Bottom Depth(m):								
Sampling Date:	25-Feb-2025							
Determinand	**SOP**	**HWOL Code**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625		M	%	4.7	3	5	6
Loss On Ignition	2610		M	%	0.49	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.8	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.077	--	To evaluate	To evaluate
Eluate Analysis				**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455		U	0.0006	0.0064	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.0008	0.0078	0.5	10	70
Copper	1455		U	0.0017	0.017	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0003	0.0029	0.5	10	30
Nickel	1455		U	0.0020	0.021	0.4	10	40
Lead	1455		U	0.0005	0.0053	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.005	0.054	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.22	2.2	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	34	340	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	3.4	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	3.3
WAC Sample Weight	3877

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P25025 Galway Peaker Plant

						Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	25-08261							
Chemtest Sample ID:	1945000							
Sample Ref:								
Sample ID:								
Sample Location:	TP03							
Top Depth(m):	0.5							
Bottom Depth(m):								
Sampling Date:	25-Feb-2025							
Determinand	**SOP**	**HWOL Code**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625		M	%	4.4	3	5	6
Loss On Ignition	2610		M	%	7.5	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	11	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.0	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.0030	--	To evaluate	To evaluate
Eluate Analysis				**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455		U	0.0005	0.0046	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.0006	0.0063	0.5	10	70
Copper	1455		U	0.0016	0.016	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0016	0.016	0.5	10	30
Nickel	1455		U	0.0008	0.0083	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.012	0.12	4	50	200
Chloride	1220		U	2.0	20	800	15000	25000
Fluoride	1220		U	0.27	2.7	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	81	810	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	4.1	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	6.4
WAC Sample Weight	3079

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P25025 Galway Peaker Plant

						Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	25-08261							
Chemtest Sample ID:	1945001							
Sample Ref:								
Sample ID:								
Sample Location:	TP03							
Top Depth(m):	1.5							
Bottom Depth(m):								
Sampling Date:	25-Feb-2025							
Determinand	**SOP**	**HWOL Code**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625		M	%	2.4	3	5	6
Loss On Ignition	2610		M	%	1.3	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.6	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.038	--	To evaluate	To evaluate
Eluate Analysis				**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455		U	< 0.0002	< 0.0020	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0008	0.0080	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0003	0.0030	0.5	10	30
Nickel	1455		U	< 0.0005	< 0.0050	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.004	0.044	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.27	2.7	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	47	470	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	2.9	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	6.3
WAC Sample Weight	3784

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P25025 Galway Peaker Plant

						Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	25-08261							
Chemtest Sample ID:	1945002							
Sample Ref:								
Sample ID:								
Sample Location:	TP04							
Top Depth(m):	0.5							
Bottom Depth(m):								
Sampling Date:	25-Feb-2025					**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Determinand	**SOP**	**HWOL Code**	**Accred.**	**Units**				
Total Organic Carbon	2625		M	%	4.2	3	5	6
Loss On Ignition	2610		M	%	1.3	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.5	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.0060	--	To evaluate	To evaluate
Eluate Analysis				**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455		U	0.0003	0.0025	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.0006	0.0063	0.5	10	70
Copper	1455		U	0.0011	0.011	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0002	0.0024	0.5	10	30
Nickel	1455		U	< 0.0005	< 0.0050	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.005	0.048	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.12	1.2	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	35	340	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	2.6	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	5.1
WAC Sample Weight	3286

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P25025 Galway Peaker Plant

						Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	25-08261							
Chemtest Sample ID:	1945003							
Sample Ref:								
Sample ID:								
Sample Location:	TP05							
Top Depth(m):	1.0							
Bottom Depth(m):								
Sampling Date:	25-Feb-2025							
Determinand	**SOP**	**HWOL Code**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625		M	%	3.4	3	5	6
Loss On Ignition	2610		M	%	0.76	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.8	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.031	--	To evaluate	To evaluate
Eluate Analysis				**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455		U	0.0004	0.0040	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0013	0.013	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0004	0.0037	0.5	10	30
Nickel	1455		U	0.0007	0.0073	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.006	0.055	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.16	1.6	10	150	500
Sulphate	1220		U	3.3	33	1000	20000	50000
Total Dissolved Solids	1020		N	30	300	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	< 2.5	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	8.8
WAC Sample Weight	3648

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P25025 Galway Peaker Plant

						Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	25-08261							
Chemtest Sample ID:	1945004							
Sample Ref:								
Sample ID:								
Sample Location:	TP06							
Top Depth(m):	1.5							
Bottom Depth(m):								
Sampling Date:	26-Feb-2025							
Determinand	**SOP**	**HWOL Code**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625		M	%	4.0	3	5	6
Loss On Ignition	2610		M	%	3.0	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.3	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.060	--	To evaluate	To evaluate
Eluate Analysis				**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455		U	0.0007	0.0068	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0019	0.019	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0013	0.013	0.5	10	30
Nickel	1455		U	0.0012	0.012	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.005	0.053	4	50	200
Chloride	1220		U	1.0	10	800	15000	25000
Fluoride	1220		U	0.16	1.6	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	55	550	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	4.3	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	14
WAC Sample Weight	3074

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P25025 Galway Peaker Plant

						Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	25-08261							
Chemtest Sample ID:	1945005							
Sample Ref:								
Sample ID:								
Sample Location:	TP06							
Top Depth(m):	1.0							
Bottom Depth(m):								
Sampling Date:	26-Feb-2025							
Determinand	**SOP**	**HWOL Code**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625		M	%	1.9	3	5	6
Loss On Ignition	2610		M	%	2.8	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.1	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.049	--	To evaluate	To evaluate
Eluate Analysis				**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455		U	0.0006	0.0064	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.0006	0.0057	0.5	10	70
Copper	1455		U	0.0018	0.018	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0008	0.0080	0.5	10	30
Nickel	1455		U	0.0012	0.012	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.007	0.071	4	50	200
Chloride	1220		U	1.0	10	800	15000	25000
Fluoride	1220		U	0.16	1.6	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	58	580	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	5.0	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	3.0
WAC Sample Weight	2974

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: P25025 Galway Peaker Plant

						Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	25-08261							
Chemtest Sample ID:	1945006							
Sample Ref:								
Sample ID:								
Sample Location:	TP07							
Top Depth(m):	0.5							
Bottom Depth(m):								
Sampling Date:	26-Feb-2025							
Determinand	**SOP**	**HWOL Code**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625		M	%	3.9	3	5	6
Loss On Ignition	2610		M	%	2.9	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		7.9	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.0020	--	To evaluate	To evaluate
Eluate Analysis				**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455		U	0.0006	0.0060	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.0019	0.019	0.5	10	70
Copper	1455		U	0.0017	0.017	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0004	0.0042	0.5	10	30
Nickel	1455		U	0.0015	0.015	0.4	10	40
Lead	1455		U	0.0008	0.0076	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	0.0006	0.0065	0.1	0.5	7
Zinc	1455		U	0.018	0.18	4	50	200
Chloride	1220		U	1.1	11	800	15000	25000
Fluoride	1220		U	0.12	1.2	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	46	460	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	4.0	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	6.0
WAC Sample Weight	3802

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	RE PW PL LE DW GW
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	PL SW GW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	
2010	pH Value of Soils	pH at 20°C	pH Meter	
2015	Acid Neutralisation Capacity	Acid Reserve	Titration	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2180	Sulphur (Elemental) in Soils by HPLC	Sulphur	Dichloromethane extraction / HPLC with UV detection	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8-C10 Aromatics: >C5–C7,>C7-C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS. Reported PCB 101 results may contain contributions from PCB 90 due to inseparable chromatography.	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge	
650	Characterisation of Waste (Leaching WAC)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge	

Report Information

Key	
U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.
Any comments or interpretations are outside the scope of UKAS accreditation.
The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.
Uncertainty of measurement for the determinands tested are available upon request .
None of the results in this report have been recovery corrected.
All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at ≤ 30°C prior to analysis.
All Asbestos testing is performed at the indicated laboratory .
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

NEW_ASB	Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL
DURHAM	Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - The required amount of sample for analysis was not received
H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.
All water samples will be retained for 14 days from the date of receipt.
Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

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 - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Ireland Gas Peaker Plant

Geophysical Survey Report

Report Number: P25025_Gp_Rp_Rev.03

Project ID: P25025

This geophysical survey report is provided for informational purposes only and is not intended to be used for any other purpose. The information contained in this report is based on data gathered from geophysical surveying techniques and is subject to limitations and uncertainties inherent in such methods. Therefore, no warranties or representations are made as to the accuracy, completeness, or reliability of the information presented in this report.

The results of the survey are based on the specific conditions and assumptions made during the survey process and may not be applicable to other locations or conditions. It is the responsibility of the reader to determine the suitability of the information presented in this report for their intended use.

Furthermore, this report is not intended to provide advice or recommendations regarding the suitability of any site for construction or any other purpose. The reader should consult with qualified professionals and conduct their own investigations and assessments before making any decisions based on the information presented in this report.

The author(s) of this report are not liable for any loss, damage, or expense resulting from the use of the information presented in this report.

REPORT CONTROL SHEET

Project Client	AtkinsRealis					
Terra Survey Client	Priority Geotechnical Ltd.					
Project Name	Ireland Gas Peaker Plant					
Document Type	Technical Report					
Project Number	P25025					
This Report Comprises of	**TOC**	**Text**	**No. of Volume**	**No. of Appendices**	**Drawings**	**Electronic data**
	1	16	1	1	12	*.dwg, *.pdf

Revision	Status	Author(s)	Approved by	Issue Date
Rev.01	Draft	CN	HP	24/03/2025
Rev.02	Final	CN	HP	04/04/2025
Rev.03	Final	CN	HP	14/04/2025

Rev.03 adjusted pending client comments

Table of Contents

Acronyms

- bgl – below ground level
- ERT – Electrical Resistivity Tomography
- SRP – Seismic Refraction Profiling
- ITM – Irish Transverse Mercator
- OD Malin – metres above Ordnance Datum Malin (OSGM15)
- Vp- Primary Velocity

A) Executive Summary

Terra Survey was instructed by Priority Geotechnical Ltd. on behalf of AtkinsRealis to undertake a geophysical investigation at Ireland Gas Peaker Plant, Co. Galway. The geophysical survey is in conjunction with an overall site investigation project.

The survey consisted of seismic refraction & electrical resistivity tomography in accordance with BS5930[1] and BS7022[2] and the Geological Society Engineering Group Working Party Report on Engineering Geophysics. The survey locations are shown in Figure B-1 below.

The survey was carried out on 17th -27th March 2025.

The survey consisted of 8no. ERT profiles with an electrode spacing of 5m with a total survey length of 3515m. Also, 44no. SRP profiles were completed with a 4m and 3m geophone spacing totalling 3515m.

The survey profile positions, modelled profiles and geophysical interpretations are shown in APPENDIX A: Drawing No. P25025_GP_D01 to D12. These drawings are plotted at paper size ISO A1 and are also supplied in AutoCAD format.

The geological interpretation across the survey area reveals a stratigraphic sequence consisting of Sandy Gravelly CLAY overburden, underlain by a highly weathered LIMESTONE layer, with fresh LIMESTONE bedrock located underneath. The SRP (Vp) velocities have been predominantly used in picking the rock boundaries across all profiles.

Additionally, distinct zones of sharp lateral resistivity changes have been identified across all profiles except for profile R1. These anomalies are interpreted to represent potential karstified features and have been designated as locations A1 through A18 for further investigation. The geophysical interpretation given is in concordance with all site investigations acquired.

[1] *The BS5930 standard recommends that geophysical surveys should be carried out in conjunction with other site investigation techniques, such as drilling and sampling, to provide a comprehensive understanding of the ground conditions. It also emphasizes the importance of selecting appropriate geophysical methods and equipment for the specific site conditions and objectives, and of using experienced and qualified personnel to carry out and interpret the surveys.*

[2] *BS0722 is a British Standard that provides guidance on the use of geophysical methods for detecting and mapping buried utilities and other underground features. In relation to geophysics, BS0722 recognizes that geophysical surveys can provide valuable information about the location and nature of buried objects, such as pipes, cables, and archaeological features, which can help to reduce the risk of damage during construction works.*

B) Introduction

Terra Survey was instructed by Priority Geotechnical Ltd. on behalf of AtkinsRealis to undertake a geophysical investigation at Ireland Gas Peaker Plant, Co. Galway. The geophysical survey is in conjunction with an overall site investigation project.

The survey consisted of seismic refraction & electrical resistivity tomography in accordance with BS5930 and BS7022 and the Geological Society Engineering Group Working Party Report on Engineering Geophysics. The survey locations are shown in Figure B-1 below.

The survey was carried out on 17th -27th March 2025.

Figure B-1: Location map showing surveyed ERT geophysical profiles in red and SRP geophysical profiles in Blue.

B.1) Survey Objectives

The survey objectives were to provide information on the following:

- Provide information on the type and thickness of the overburden.
- Estimate the overburden stiffness.
- Assess the depth to bedrock, the weathering and excavatability of the bedrock.
- Identify the type of bedrock.
- Identify any potential faults/fissure/karst sones within the bedrock.

B.2) Site Topography

The site was generally a grassy field but gravelly in some areas, with elevations ranging from 45.0 to 60.3m OD.

B.3) Coordinate System and Datum

All coordinates are given in Irish Transverse Mercator (EPSG: 2157). All elevations are given in metres Ordnance Datum Malin Head (EPSG: 7959), OSGM15 revision.

B.4) Intrusive Works

This report considers all relevant site investigation results. The relevant site investigation logs are overlain on the cross sections when they were within 20m distance of the ERT profiles.

B.5) Site Geology

According to the GSI 100k Geology Map (see Figure B-2) the survey area is underlain by one main formation known as the "Burren Formation" shown in green, described as "Pale grey clean skeletal limestone".

Figure B-2: GSI 100k Bedrock Geology Map of the site.

According to the GSI Quaternary Soils Map (see Figure B-3) the survey area is underlain by two main soil types. Most of the survey area is underlain by "Till derived from Limestone", shown in green, and "Kartsified bedrock outcrop or subcrop" shown in brown mostly at the southern section of the survey area.

Figure B-3: Quaternary Sediments Map of the site.

All above mapping is available for free viewing on the Geological Survey of Ireland website at *https://www.gsi.ie/en-ie/Pages/default.aspx.* Both Figure B-2 and Figure B-3 contain Irish Public Sector Data (Geological Survey) licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0) licence.

C) Methodology

The geophysical techniques used were as follows:

C.1) 2D Electrical Resistivity Tomography (ERT)

This technique involved measuring electrical resistivity at the ground surface to image subsurface structures. A total of 8 profiles were collected along pre-determined lines (R1 to R8), with an electrode spacing of 5m with a total ERT length of 3514m.

An 84-channel ABEM LS2 resistivity meter was used. Multicore resistivity cables with 20 channels and stainless-steel electrodes were employed. Contact resistivities were checked and improved if necessary. The Wenner Alpha Array protocol was used.

C.2) Seismic Refraction Profiling (SRP)

Seismic waves were measured to determine subsurface layer Vp velocities. A total of 44 SRP profiles were recorded (S1 to S44), following the same orientation as the ERT lines. A geophone spacing of 3-4m was used throughout with a total SRP length of 3514m. A 24-channel Geometrics Geode seismic system was used.

C.3) Data Processing and Interpretation:

Data processing and interpretation were carried out using specific software for each technique:

- ERT data was processed using Res2DInv software, with up to 5 iterations of inversion per profile.
- SRP data was processed using Plotrefa software. Velocity modelling, travel time plots, and layer thickness calculations were performed.

C.4) Geospatial Relocation:

Horizontal control and elevation were determined using an RTK-enabled GNSS receiver.

D) Results and Geophysical Interpretation

The survey profile positions, modelled profiles and geophysical interpretations are shown in APPENDIX A: Drawing No. P25025_GP_D01 to D12. These drawings are plotted at paper size ISO A1 and are also supplied in AutoCAD format.

D.1) Seismic Refraction:

The seismic refraction method was employed to determine the depth and velocity of subsurface layers. By analysing the travel times of seismic waves, the boundaries between different geological units were identified. This information helped in delineating the subsurface layering and identifying potential bedrock formations. Velocity-depth profiles were generated to visualise the variations in subsurface velocities and infer the lithological composition of the layers.

D.2) Electrical Resistivity Tomography (ERT):

ERT was utilised to assess the electrical resistivity distribution in the subsurface. By measuring the resistivity of different materials, the ERT technique provided information about the lithological variations, water content, and presence of geological structures such as faults or fractures. ERT profiles and imaging allowed for the interpretation of subsurface layering and the identification of potential groundwater resources or areas of interest.

D.3) Integration of Results:

The integration of seismic refraction, ERT, and MASW results allowed for a comprehensive understanding of the subsurface conditions. Correlations between seismic velocities, resistivity values, and shear-wave velocities provided valuable information on the lithological composition, layer thicknesses, and geotechnical properties of the surveyed area. The combined interpretation helped in identifying potential geological hazards, delineating aquifers or other subsurface resources, and assessing the overall stability and suitability for various engineering or environmental applications.

The SRP refracted boundaries were used to establish top of rock and overburden / rock material strength characteristics across all profiles. Direct investigation results were used as a guide for interpreting the overburden. The general geophysical interpretation is outlined in Table D-1.

Resistivity (Ohm-m)	Vp velocity	Interpretation
<400	<550m/s	Sandy Gravelly CLAY
<2000	<2000m/s	Weathered LIMESTONE
>2000	>2500m/s	LIMESTONE BEDROCK

Table D-1: Interpretation based on electrical resistivity.

D.4) Geophysical Interpretation Summary

The geological interpretation across the survey area reveals a stratigraphic sequence consisting of Sandy Gravelly CLAY overburden, underlain by a highly weathered LIMESTONE layer, with fresh LIMESTONE bedrock located underneath. Within the bedrock numerous areas were flagged as suspect for karstification. The SRP (Vp) velocities have been predominantly used in picking the rock boundaries across all profiles.

The overburden has been classified based on resistivity measurements <400ohmm, coupled with seismic velocities (Vp) less than c. 550m/s which can be observed linearly across all profiles. The highly weathered LIMESTONE layer is delineated by resistivity values >400ohmm and <2000ohmm, with Vp velocities recorded at less than 2000m/s. The fresh LIMESTONE bedrock is further characterized by resistivity values exceeding 2000ohmm and Vp velocities >2500m/s.

The overburden depth has been interpreted to be relatively shallow across all survey profiles, with an average depth of less than c.5m. Due to limitations in imaging the shallow subsurface regions resulting from the geophone and electrode spacing utilised, our interpretation has been formulated in conjunction with the findings from the site investigations acquired.

D.5) Karst

Distinct zones of sharp lateral resistivity changes have been identified across all profiles, except for profile R1. These anomalies are interpreted to represent potential karstified features and have been designated as locations A1 through A18 for further investigation.

The anomalous zones have been categorized in Table D-2 below according to our interpretation of karst presence in each profile and our corresponding confidence levels. Fundamental case studies in geophysics have established a strong correlation between subsurface anomalies and variations in electrical resistivity (Reynolds, 2011). In typical bedrock formations, resistivity values tend to be

relatively uniform. However, significant deviations from these baseline values often indicate the presence of subsurface features. Specifically, zones exhibiting anomalously high resistivity are frequently associated with voids or cavities, such as those found in karst formations. These voids, being filled with air or other resistive materials, impede the flow of electrical current, resulting in higher resistivity measurements. Conversely, zones with anomalously low resistivity may suggest the presence of infill materials, such as clay or water-saturated sediments, which are more conductive and thus allow for a freer flow of electrical current. This can also be a sign of karstified bedrock.

In our interpretation in picking the areas of suspected karst, we have observed a similar condition in the ERT data. Areas with extreme resistivity values, significantly different from the baseline bedrock resistivity, were flagged. Therefore, our interpretation is based on the combination of established geological principles and our professional judgement.

Table D-2: Interpreted Anomalies across survey profiles

Name	Easting	Northing	Depth of interest [m bgl]	Karst presence rating /confidence level	Reasoning behind Interpretation
A1	547302.3	728710.6	20	High	Very notable low resistivity extending to depth, suspect a sinkhole here, at edge of ERT so depth of penetration maxed out on ERT
A2	547389.1	728688.4	15	Low	Small area of low resistivity, possibly infill due to weathered rock.
A3	546492.4	728376.9	20	Medium	Area of low resistivity extending to depth, suspect karst
A4	546576.4	728644.6	40	High	We have 250m of anomalously low resistivity extending to a depth of 40m bgl, highly suspect karst in this area
A5	546647.3	728873.1	30	Low	Similar to A4 but smaller in size, suspect karst
A6	546714.2	728994.0	30	High	Very strong low resistivity extending to depth

A7	547260.0	728722.1	30	Medium	Similar to A1
A8	547093.1	728551.5	30	High	Very strong low resistivity extending to depth
A9	546428.0	728124.8	15	High	Very high resistivity, possible air void
A10	546481.2	728208.6	15	High	Very high resistivity, possible air void
A11	546549.1	728282.7	15	Medium	Slightly high resistivity, possible air void
A12	546577.0	728203.8	20	High	Very high resistivity, possible air void
A13	546472.2	728075.0	20	Medium	Slightly high resistivity, possible air void
A14	546549.6	728039.7	20	High	Very high resistivity, possible air void
A15	546597.4	728106.1	20	High	Very high resistivity, possible air void
A16	546672.8	728199.1	15	High	Very high resistivity, possible air void
A17	546592.7	728241.1	20	High	Very high resistivity, possible air void
A18	546613.8	728225.6	20	Medium	Slightly high resistivity, possible air void

Anomaly A1 is interpreted as high risk due to the high amplitude of the low resistivity extending to depth and resulting in likely dramatic drop in bedrock elevation/increase in bedrock weathering. Anomaly A2 is interpreted as low risk due to the limited amplitude of the drop in resistivity with depth. See Figure D-1 for an image of the ERT profile to its natural logarithmic scale.

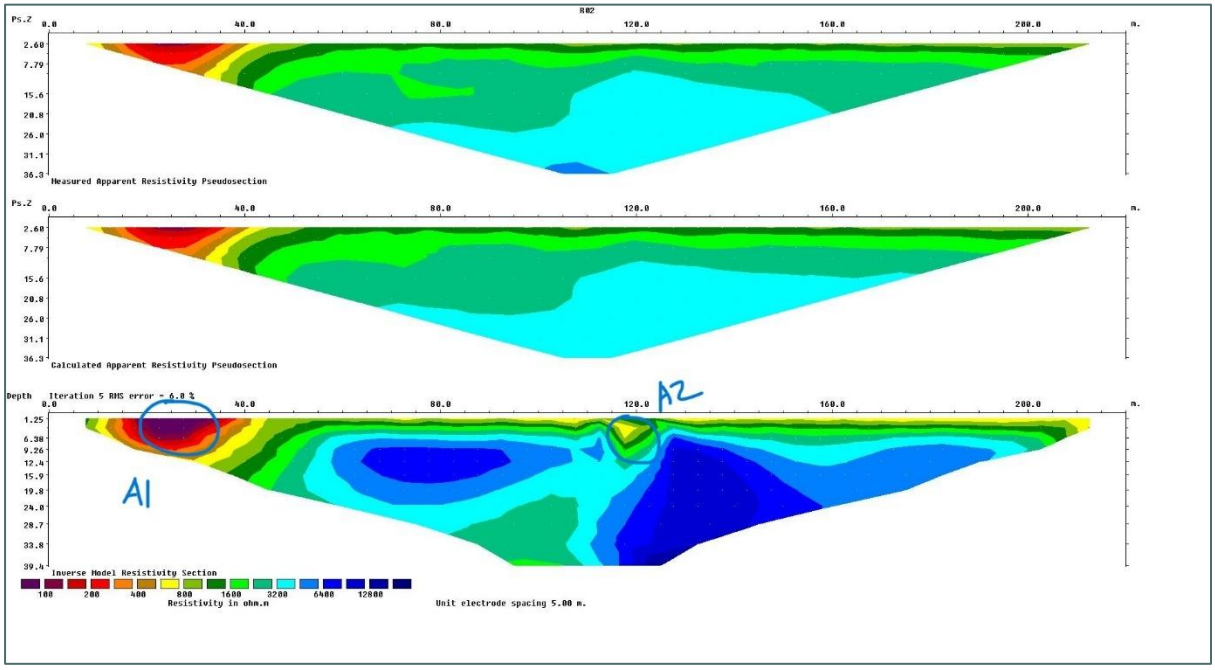


Figure D-1: ERT profile R2 showing Anomaly A1 and A2

Anomaly A3, is interpreted as an area of Medium risk, it is similar in nature to anomaly A1 where we see low resistivity extending to depth, and likely a corresponding likely dramatic drop bedrock elevation/increase in bedrock weathering. Anomaly A4 and anomaly A6 are interpreted as high risk, A4 is a large (length 200m) area where low resistivity is seen extending into the bedrock and is interpreted as being related to a karst feature. Anomaly A6 is seen as low resistivity extending deep into the bedrock (> 50m bgl) and likely relating to karst. Anomaly A5 is seen as a similar and smaller feature to anomaly A4 and is interpreted as relatively low risk. See Figure D-2 for an image of the ERT profile to its natural logarithmic scale.

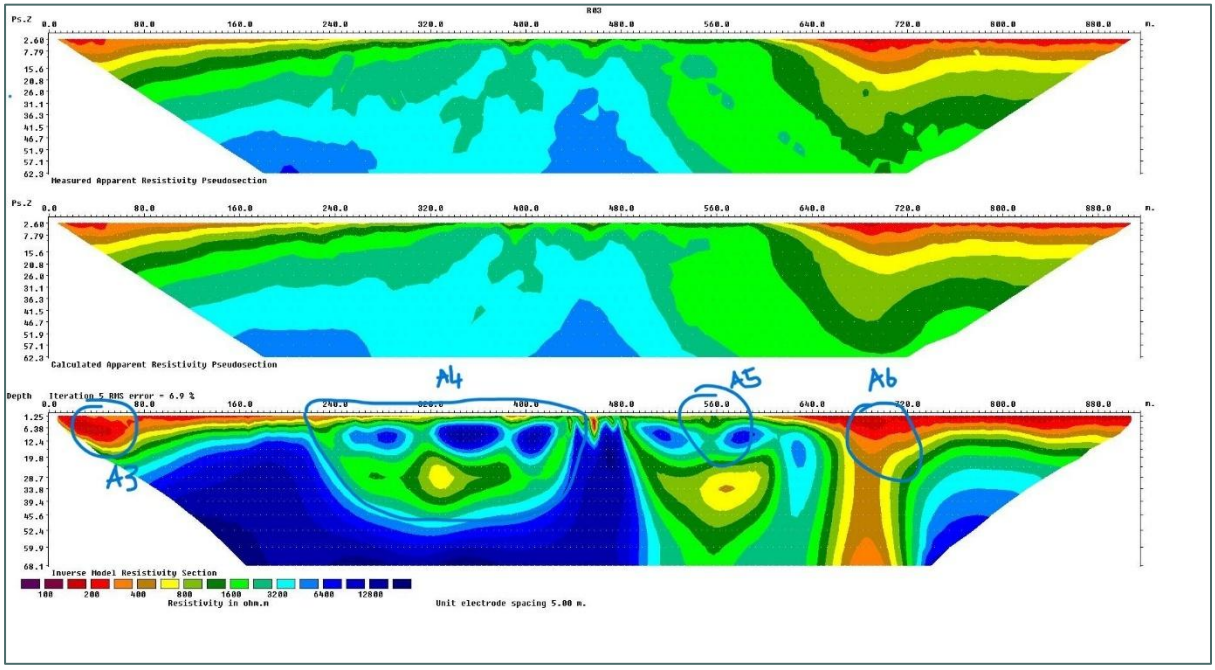


Figure D-2: ERT profile R3 showing Anomaly A3 to A6

Anomaly A7 is interpreted as medium risk and is similar in nature to Anomaly A4 and A6, a large area of low resistivity extending to depth. Anomaly A8, similar in nature to Anomaly A6 is interpreted as high risk due to the fact that the area of low resistivity extends to depths of greater than 50m bgl.

Anomalies A9 through to anomaly A18 are all pockets of high resistivity close to the surface, within c. 15m bgl. These anomalies have been categorised as either low, medium or high risk based on the amplitude of the high resistivity. Areas of very high resistivity are being flagged as possible air-filled voids, with areas of relatively lower resistivity flagged as possible but less likely. See Figure D-4 to Figure D-7 for these anomalies.

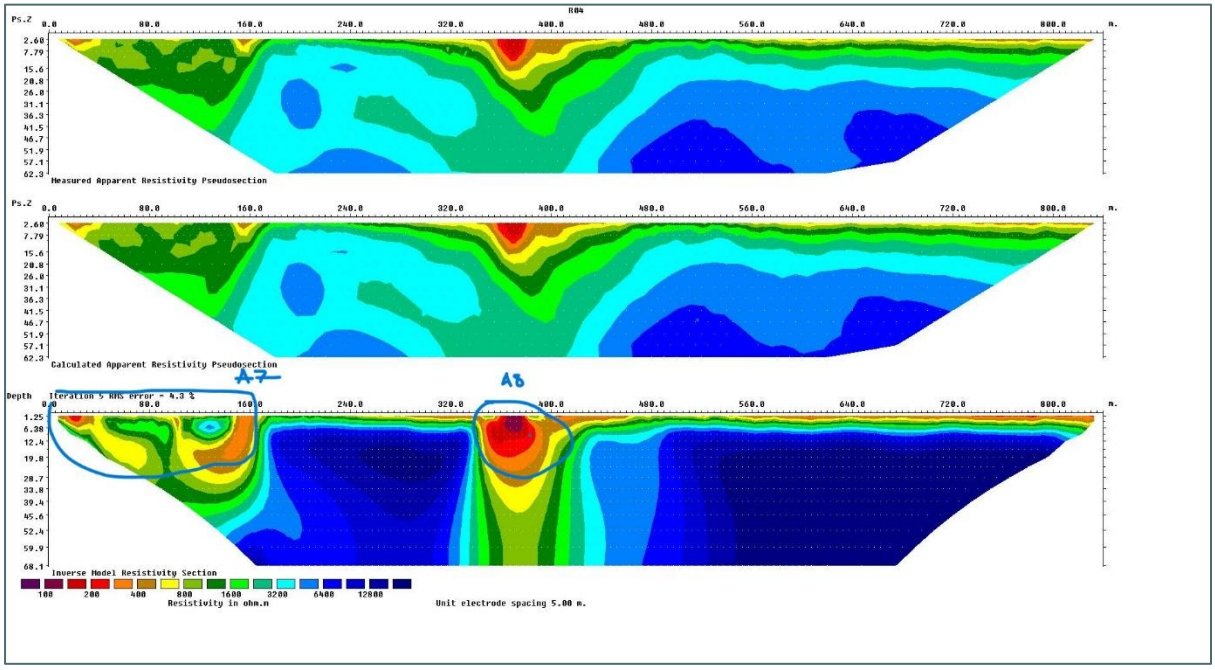


Figure D-3: ERT profile R4 showing Anomaly A7 and A8

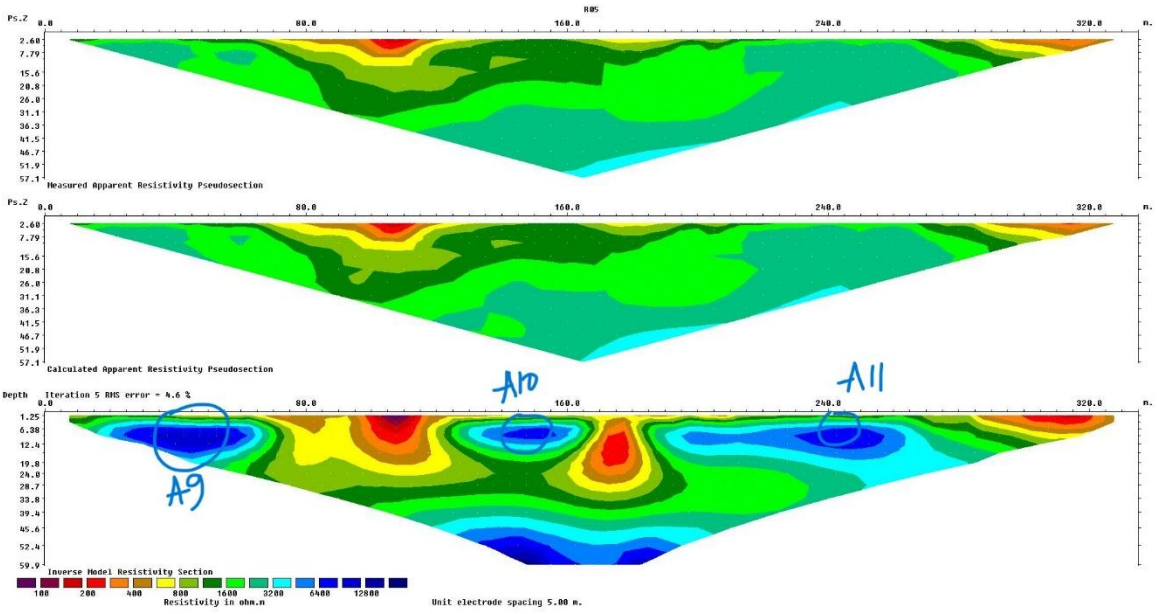


Figure D-4: ERT profile R5 showing Anomaly A9 to A11

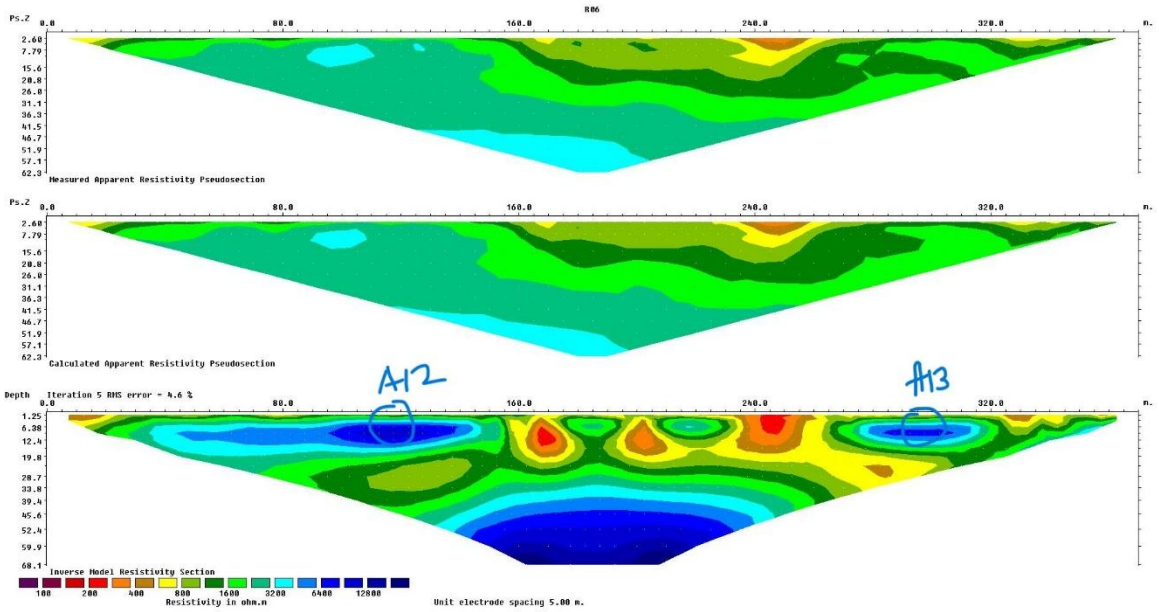


Figure D-5: ERT profile R6 showing Anomaly A12 and A13

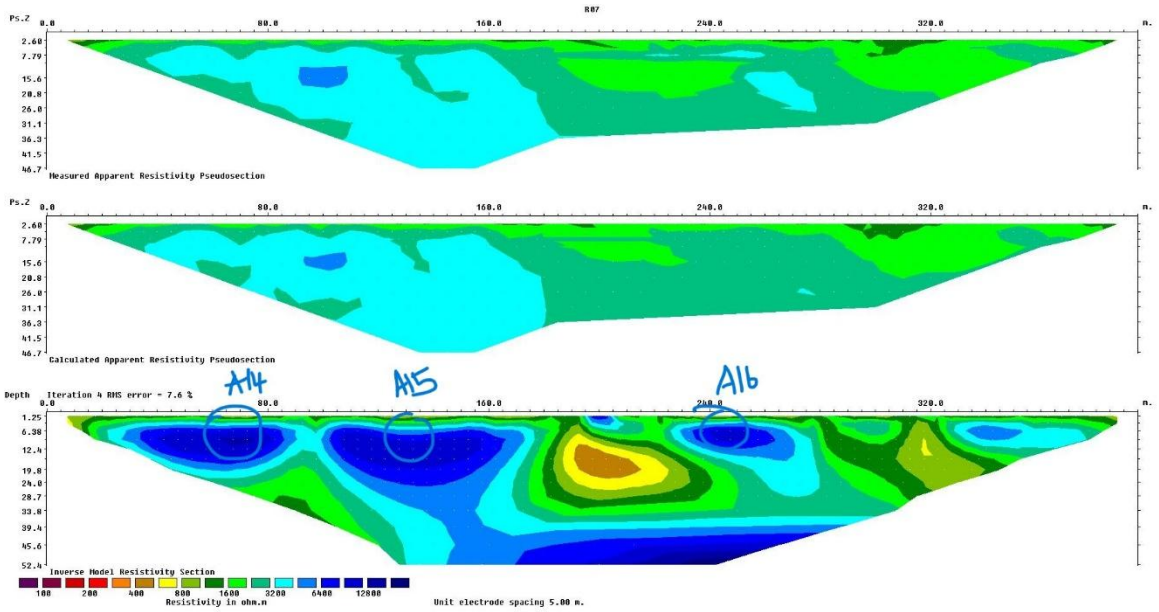


Figure D-6: ERT profile R7 showing Anomaly A14 to A16

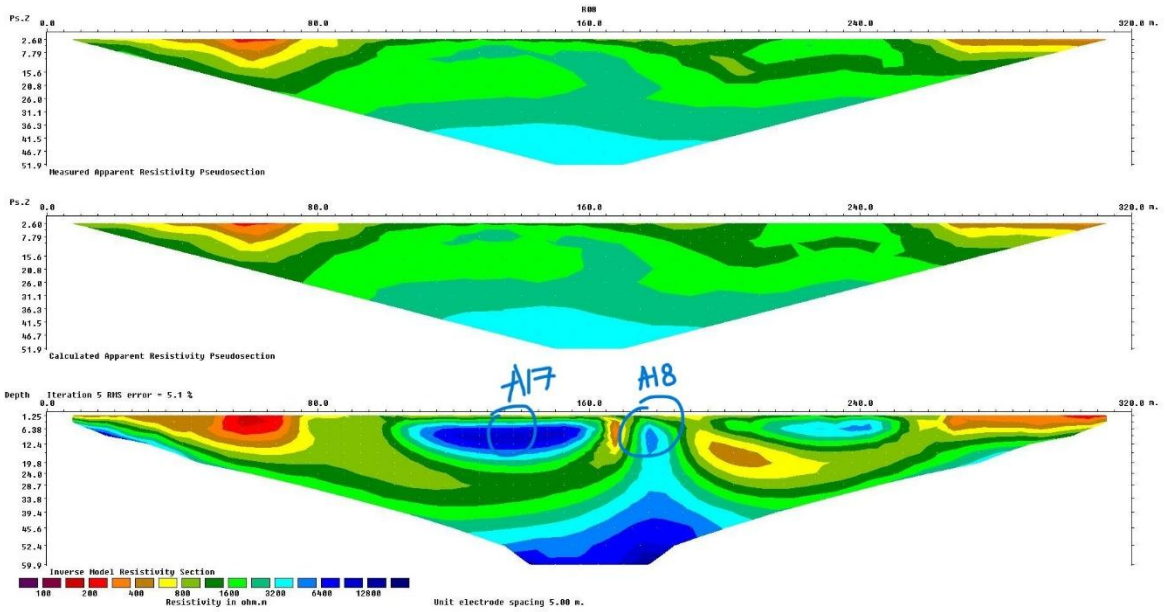


Figure D-7: ERT profile R8 showing Anomaly A17 and A18

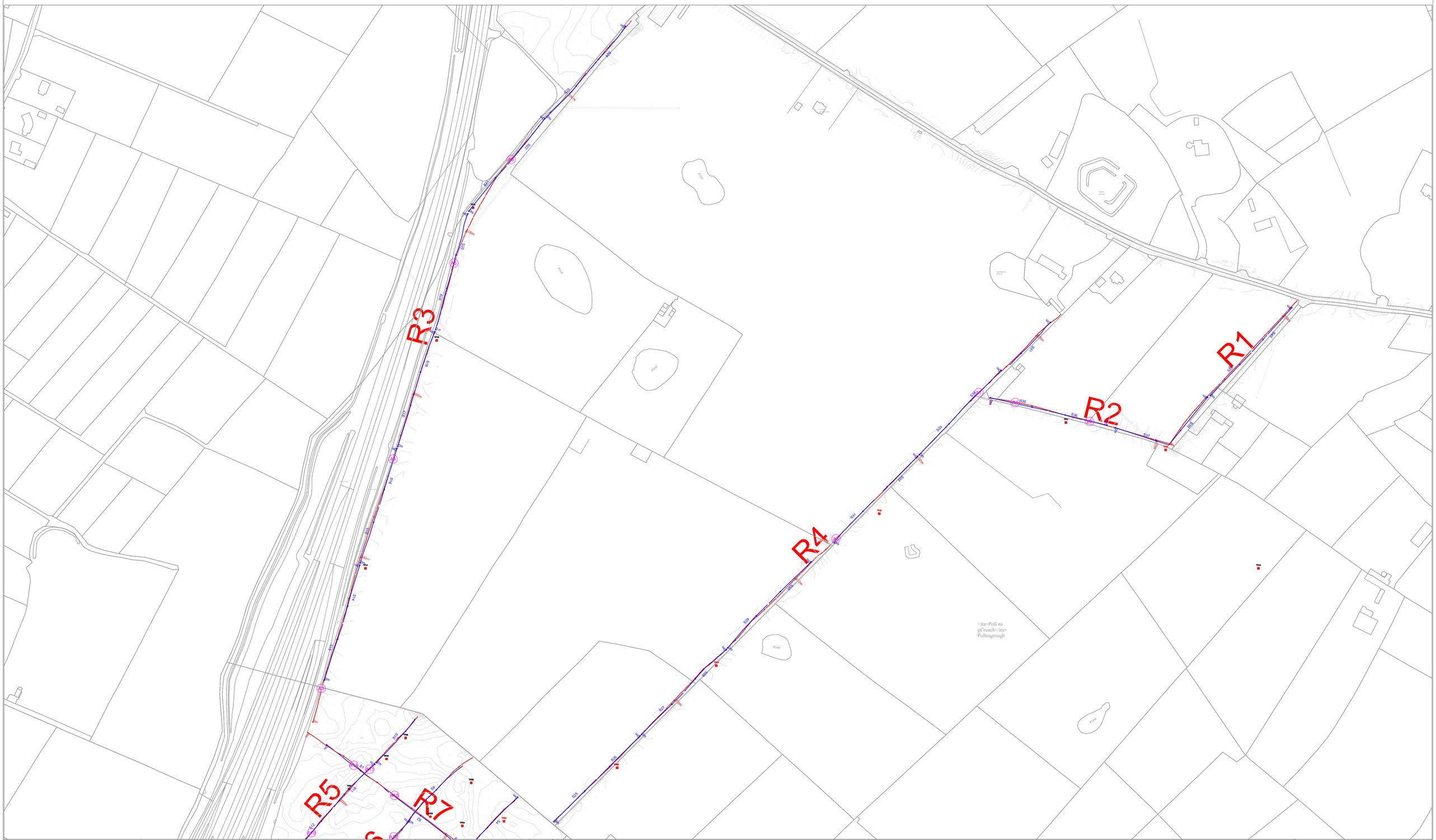
D.6) Integration of direct investigation

All direct investigation results were provided to Terra Survey by Priority Geotechnical Ltd. These boreholes were digitised and are draped over the accompanying cross sections. These include both trial pitting and borehole information.

APPENDIX A: DRAWINGS

Drawing Number	Description	Scale
P25025_GP_D01	Location Map showing Geophysical profile location R1- R4	1:2000@ A1
P25025_GP_D02	Location Map showing Geophysical profile location R5 -R8	1:800 @ A1
P25025_GP_D03	Geophysical Pseudo section and Geophysical Interpretation of Profile R1	1:400 @ A1
P25025_GP_D04	Geophysical Pseudo section and Geophysical Interpretation of Profile R2	1:400 @ A1
P25025_GP_D05	Geophysical Pseudo section and Geophysical Interpretation of Profile R3	1:750 @ A1
P25025_GP_D06	Geophysical Pseudo section and Geophysical Interpretation of Profile R3 CONT'D	1:750 @ A1
P25025_GP_D07	Geophysical Pseudo section and Geophysical Interpretation of Profile R4	1:600 @ A1
P25025_GP_D08	Geophysical Pseudo section and Geophysical Interpretation of Profile R4 CONT'D	1:600 @ A1
P25025_GP_D09	Geophysical Pseudo section and Geophysical Interpretation of Profile R5	1:450 @ A1
P25025_GP_D10	Geophysical Pseudo section and Geophysical Interpretation of Profile R6	1:500 @ A1
P25025_GP_D11	Geophysical Pseudo section and Geophysical Interpretation of Profile R7	1:400 @ A1
P25025_GP_D12	Geophysical Pseudo section and Geophysical Interpretation of Profile R8	1:450 @ A1

FIGURE 1: LOCATION MAP SHOWING GEOPHYSICAL PROFILE LOCATIONS R1-R4
SCALE 1:2000



Project name:
IRELAND GAS PEAKER PLANT

Sheet Title:
LOCATION MAP SHOWING GEOPHYSICAL PROFILE LOCATION R1-R4

Client:
ATKINS REALIS

Terra Survey client:
PRIORITY GEOTECHNICAL LTD.

Survey by:
TERRA SURVEY
UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08
T: +353 21 483 1184
E: info@hydrosurvey.com

Project number:
P25025

Drawing number:
P25025_Gp_D01

Revision:
Rev.01

Drawn by:
CN

Approved by:
HP

CRS:
ITM (EPSG 2157)

Datum:
OD Malin (EPSG 7959)

Scale:
As stated A1

Issue date:
24/03/2025

Legend:

Location Map
- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)
- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)
- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation
- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types
- Sand
- Gravel
- Clay
- Silt
- Sandy CLAY
- Sandy gravelly CLAY
- Gravelly SAND
- GRAVEL

Rock types
- LIMESTONE
- HIGHLY WEATHERED LIMESTONE
- Possible area of karst

Site:

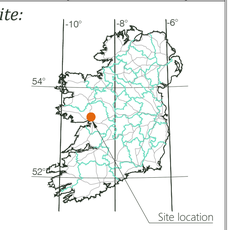
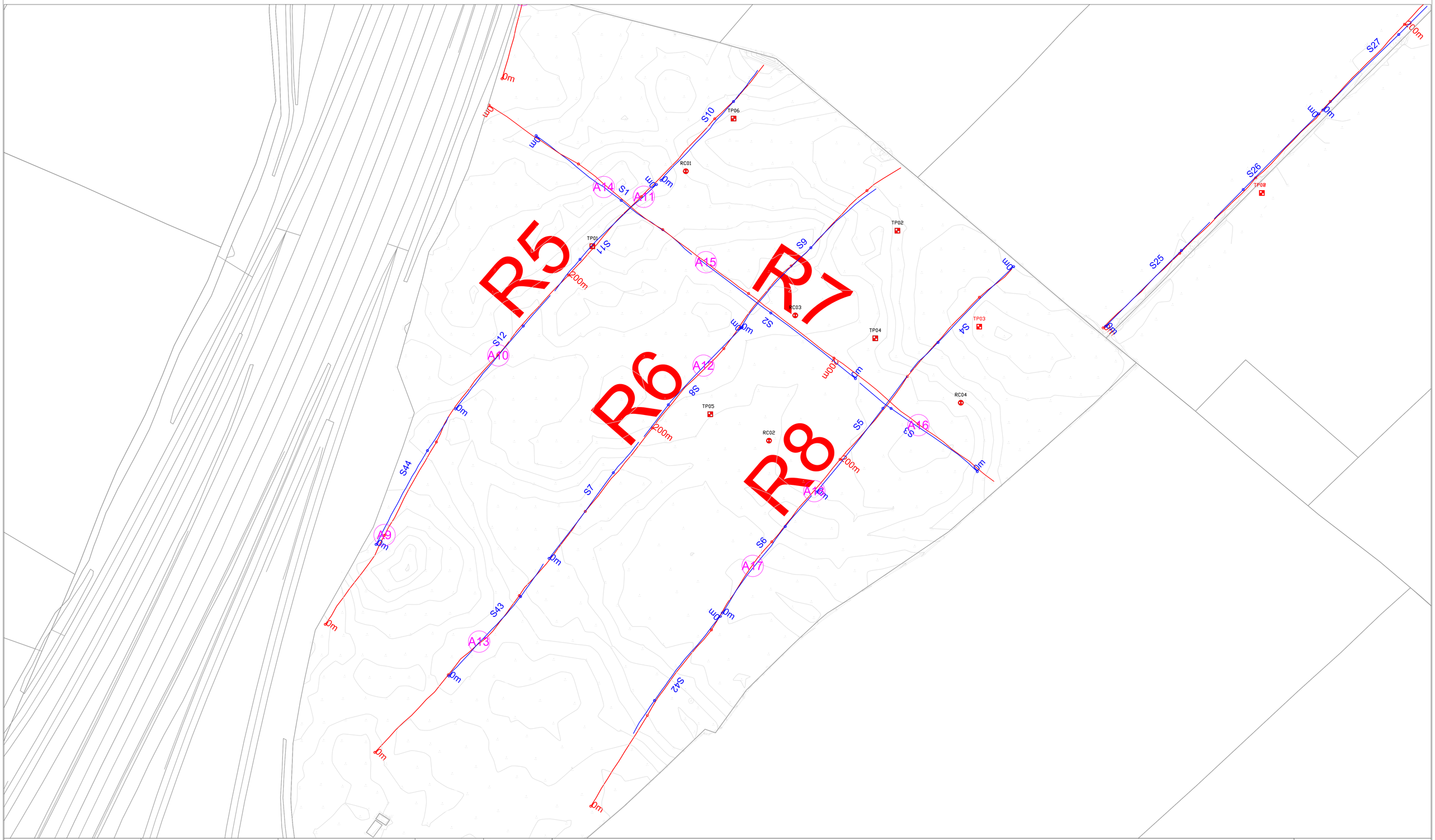


FIGURE 2: LOCATION MAP SHOWING GEOPHYSICAL PROFILE LOCATIONS R5-R8
SCALE 1:800



Project name:
IRELAND GAS PEAKER PLANT

Sheet Title:
LOCATION MAP SHOWING GEOPHYSICAL PROFILE LOCATION R5-R8

Client:
ATKINS REALIS

Terra Survey client:
PRIORITY GEOTECHNICAL LTD.

Survey by:
TERRA SURVEY
UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08
T: +353 21 483 1184
E: info@hydrosurvey.com

Project number:
P25025

Drawing number:
P25025_Gp_D02

Revision:
Rev.01

Drawn by:
CN

Approved by:
HP

CRS:
ITM (EPSG 2157)

Datum:
OD Malin (EPSG 7959)

Scale:
As stated A1

Issue date:
24/03/2025

Legend:

Location Map
- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)
- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)
- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation
- R6 I Intersection of another named profile
- BH22 I Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types
- Sand
- Gravel
- Clay
- Silt
- Sandy CLAY
- Sandy gravelly CLAY
- Gravelly SAND
- GRAVEL

Rock types
- LIMESTONE
- HIGHLY WEATHERED LIMESTONE
- Possible area of karst

Site:

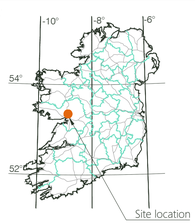
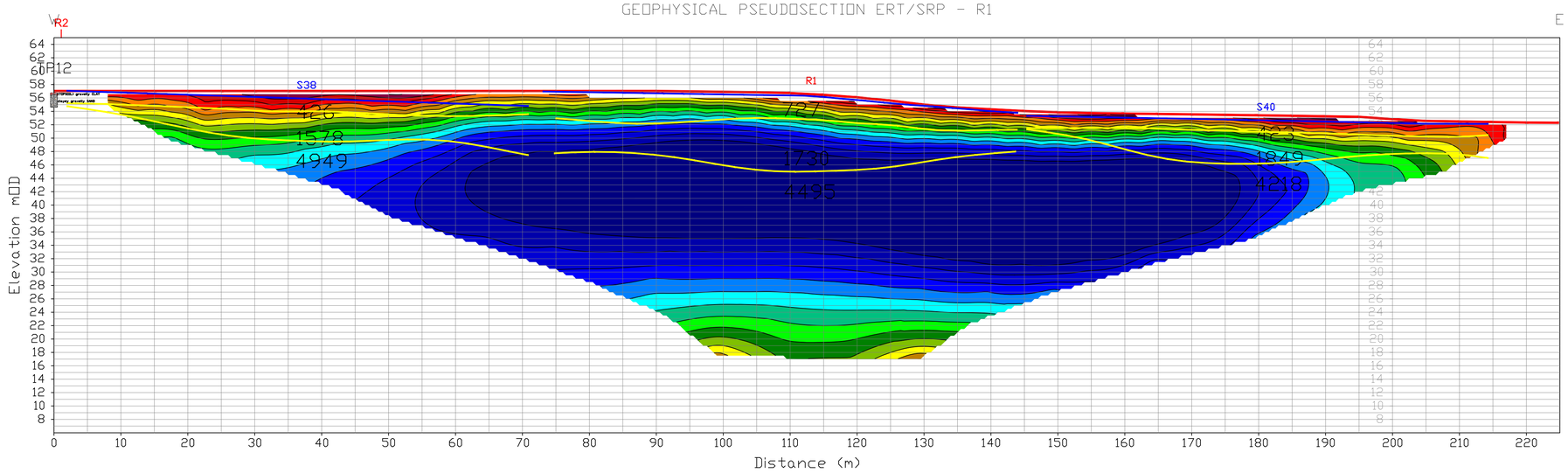
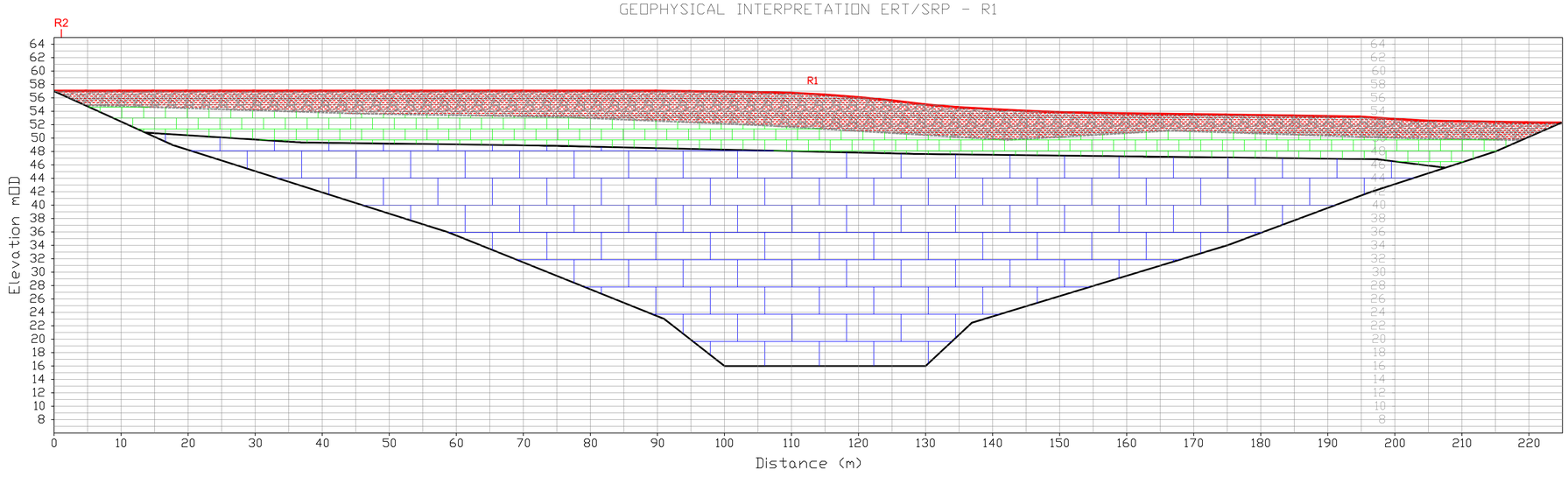


FIGURE 1: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSCIAL INTERPRETATION OF PROFILE R1
SCALE 1:400

GEOPHYSICAL PSEUDOSECTION ERT/SRP - R1



GEOPHYSICAL INTERPRETATION ERT/SRP - R1



Project name: IRELAND GAS PEAKER PLANT	*Client:* ATKINS REALIS	*Project number:* P25025	*Drawn by:* CN	*Approved by:* HP	
Sheet Title: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSICAL INTERPRETATION OF PROFILE R1	*Terra Survey client:* PRIORITY GEOTECHNICAL LTD.	*Drawing number:* P25025_Gp_D03	*CRS:* ITM (EPSG 2157)		
	Survey by: TERRA SURVEY UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08 T: +353 21 483 1184 E: info@hydrosurvey.com	*Revision:* Rev.01	*Datum:* OD Malin (EPSG 7959)		
			Scale: As stated A1	*Issue date:* 24/03/2025	

Legend:

Location Map

- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)

- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)

- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation

- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types: Sand, Gravel, Clay, Silt, Sandy CLAY, Sandy gravelly CLAY, Gravelly SAND, GRAVEL

Rock types: LIMESTONE, HIGHLY WEATHERED LIMESTONE

Possible area of karst

Site:

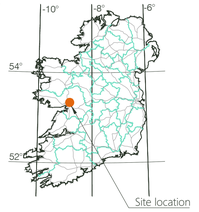
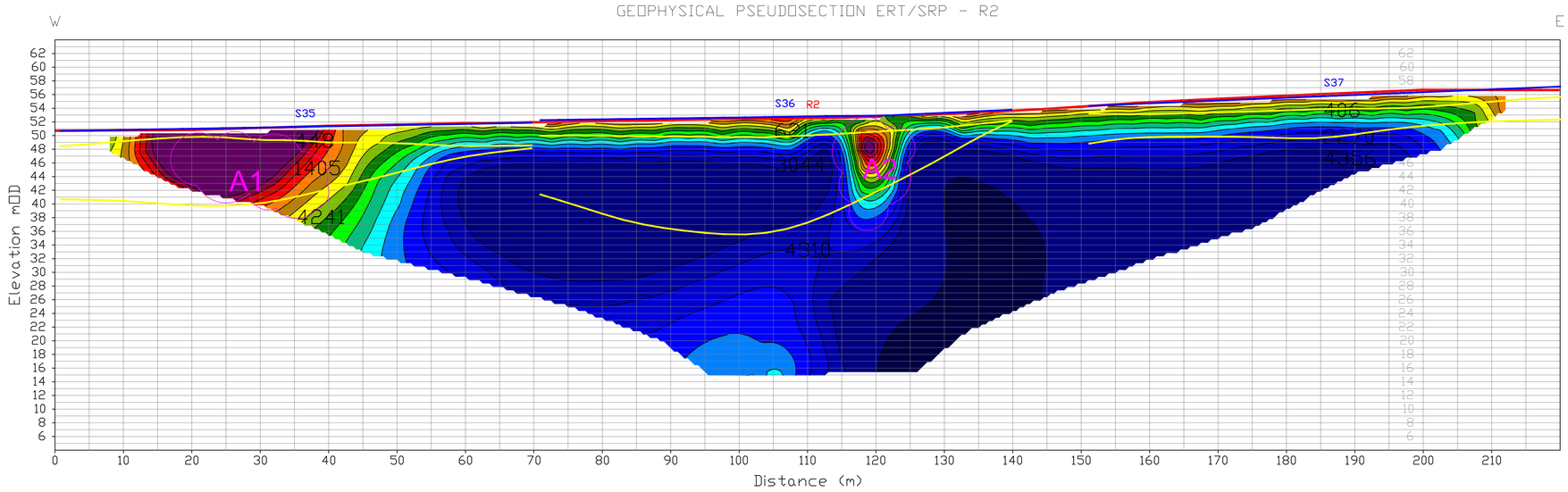
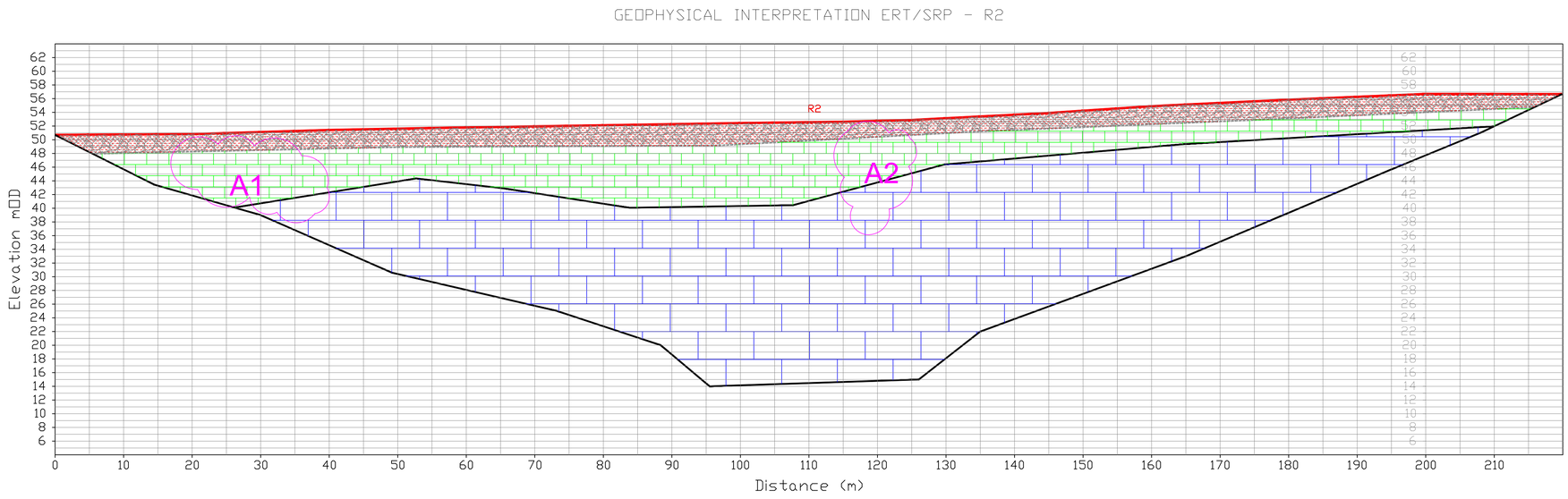


FIGURE 1: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSCIAL INTERPRETATION OF PROFILE R2
SCALE 1:400





Project name:
IRELAND GAS PEAKER PLANT

Sheet Title:
GEOPHYSICAL PSEUDOSECTION AND GEOPHYSICAL INTERPRETATION OF PROFILE R2

Client:
ATKINS REALIS

Terra Survey client:
PRIORITY GEOTECHNICAL LTD.

Survey by:
TERRA SURVEY
UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08
T: +353 21 483 1184
E: info@hydrosurvey.com

Project number:
P25025

Drawing number:
P25025_Gp_D04

Revision:
Rev.01

Drawn by:
CN

Approved by:
HP

CRS:
ITM (EPSG 2157)

Datum:
OD Malin (EPSG 7959)

Scale:
As stated A1

Issue date:
24/03/2025

Legend:

Location Map
- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)
- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)
- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation
- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types
- Sand
- Gravel
- Clay
- Silt
- Sandy CLAY
- Sandy gravelly CLAY
- Gravelly SAND
- GRAVEL

Rock types
- LIMESTONE
- HIGHLY WEATHERED LIMESTONE

Possible area of karst

Site:

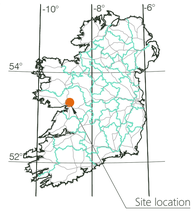
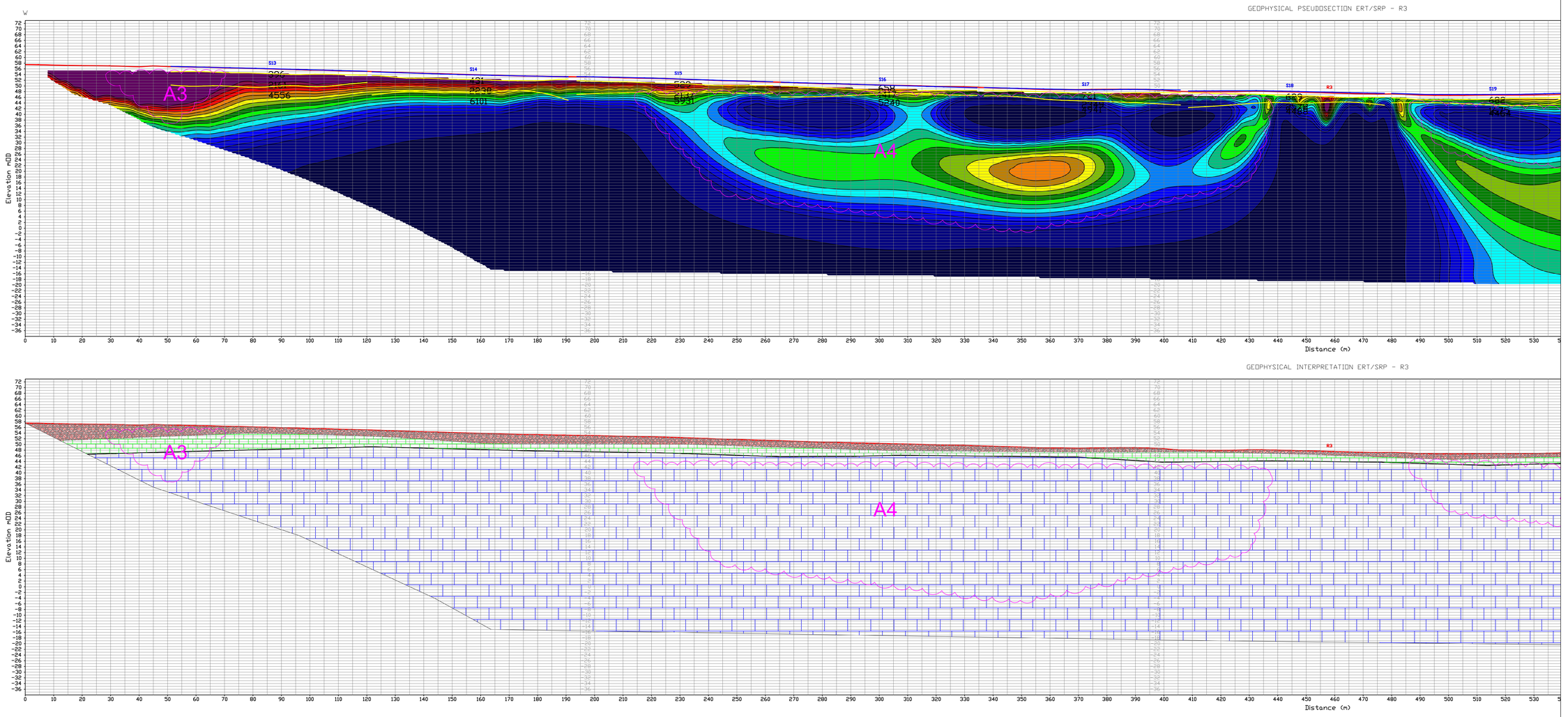


FIGURE 1: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSCIAL INTERPRETATION OF PROFILE R3
SCALE 1:750



Project name: IRELAND GAS PEAKER PLANT	*Client:* ATKINS REALIS	*Project number:* P25025	*Drawn by:* CN	*Approved by:* HP	
Sheet Title: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSICAL INTERPRETATION OF PROFILE R3	*Terra Survey client:* PRIORITY GEOTECHNICAL LTD.	*Drawing number:* P25025_Gp_D05	*CRS:* ITM (EPSG 2157)		
	Survey by: TERRA SURVEY UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08 T: +353 21 483 1184 E: info@hydrosurvey.com	*Revision:* Rev.01	*Datum:* OD Malin (EPSG 7959)		
			Scale: As stated A1	*Issue date:* 24/03/2025	

Legend:

Location Map

- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)

- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)

- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation

- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types: Sand, Gravel, Clay, Silt, Sandy CLAY, Sandy gravelly CLAY, Gravelly SAND, GRAVEL

Rock types: LIMESTONE, HIGHLY WEATHERED LIMESTONE

Possible area of karst

Site:

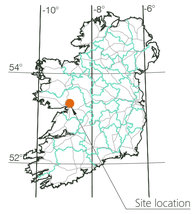
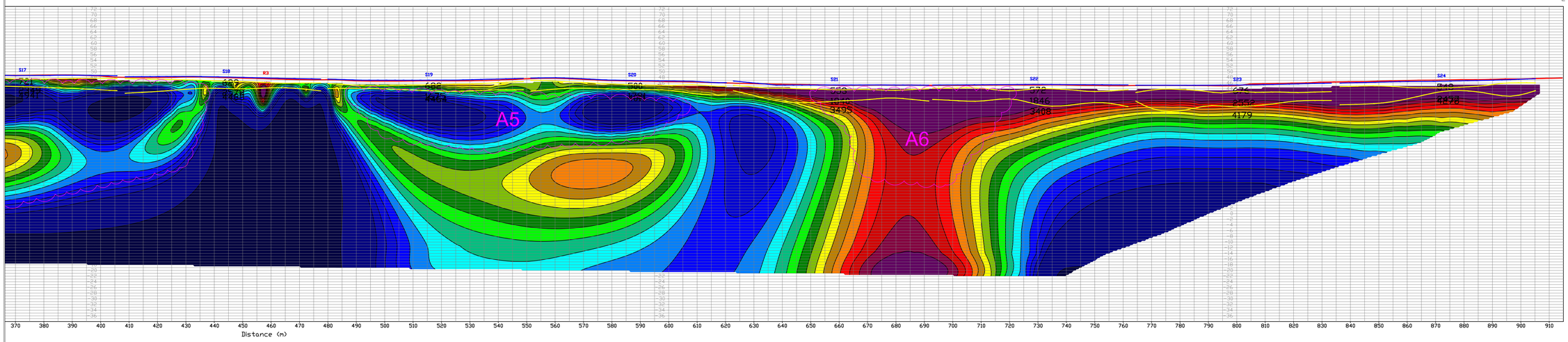
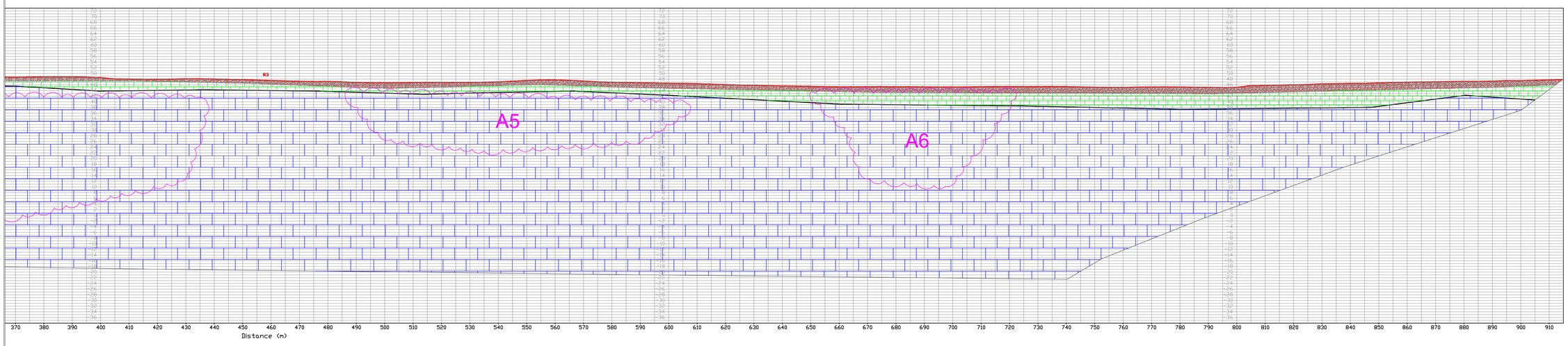


FIGURE 2: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSCIAL INTERPRETATION OF PROFILE R3 CONT'D
SCALE 1:750

GEOPHYSICAL PSEUDOSECTION ERT/SRP - R3



GEOPHYSICAL INTERPRETATION ERT/SRP - R3



Project name:
IRELAND GAS PEAKER PLANT

Sheet Title:
GEOPHYSICAL PSEUDOSECTION AND GEOPHYSICAL INTERPRETATION OF PROFILE R3 CONT'D

Client:
ATKINS REALIS

Terra Survey client:
PRIORITY GEOTECHNICAL LTD.

Survey by:
TERRA SURVEY
UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08
T: +353 21 483 1184
E: info@hydrosurvey.com

Project number:
P25025

Drawing number:
P25025_Gp_D06

Revision:
Rev.01

Drawn by: CN

Approved by: HP

CRS:
ITM (EPSG 2157)

Datum:
OD Malin (EPSG 7959)

Scale: As stated A1

Issue date: 24/03/2025

Legend:

Location Map
- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)
- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)
- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation
- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types
- Sand
- Gravel
- Clay
- Silt
- Sandy CLAY
- Sandy gravelly CLAY
- Gravelly SAND
- GRAVEL

Rock types
- LIMESTONE
- HIGHLY WEATHERED LIMESTONE
- Possible area of karst

Site:

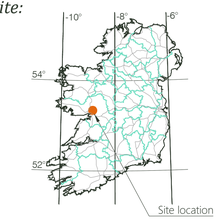
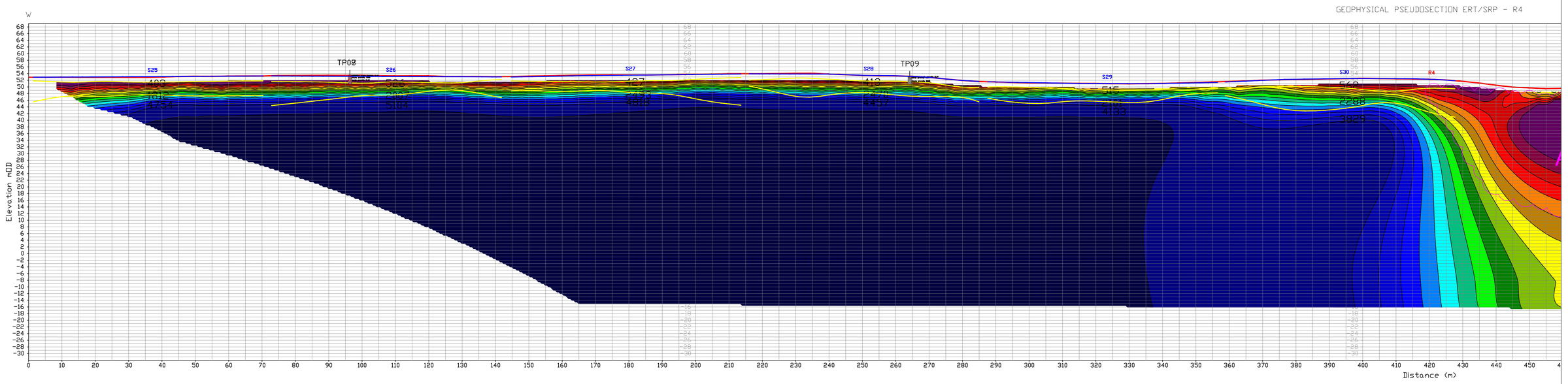


FIGURE 1: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSCIAL INTERPRETATION OF PROFILE R4
SCALE 1:600



Project name: IRELAND GAS PEAKER PLANT	*Client:* ATKINS REALIS	*Project number:* P25025	*Drawn by:* CN	*Approved by:* HP	
Sheet Title: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSICAL INTERPRETATION OF PROFILE R4	*Terra Survey client:* PRIORITY GEOTECHNICAL LTD.	*Drawing number:* P25025_Gp_D07	*CRS:* ITM (EPSG 2157)		
	Survey by: TERRA SURVEY UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08 T: +353 21 483 1184 E: info@hydrosurvey.com	*Revision:* Rev.01	*Datum:* OD Malin (EPSG 7959)		
			Scale: As stated A1	*Issue date:* 24/03/2025	

Legend:

Location Map

- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)

- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)

- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation

- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types: Sand, Gravel, Clay, Silt, Sandy CLAY, Sandy gravelly CLAY, Gravelly SAND, GRAVEL

Rock types: LIMESTONE, HIGHLY WEATHERED LIMESTONE

Possible area of karst

Site:

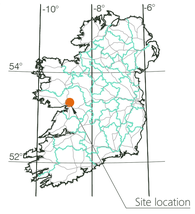
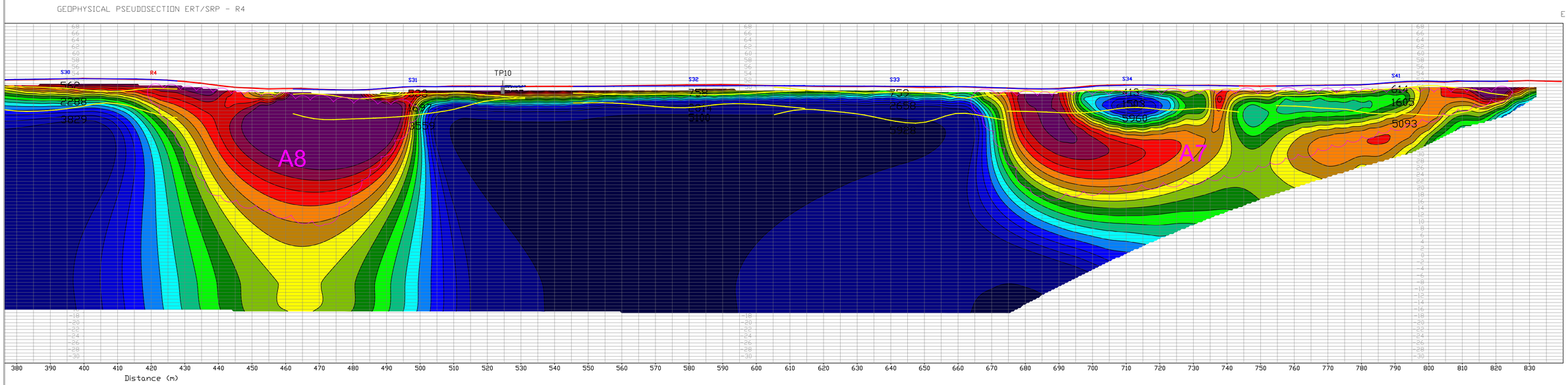
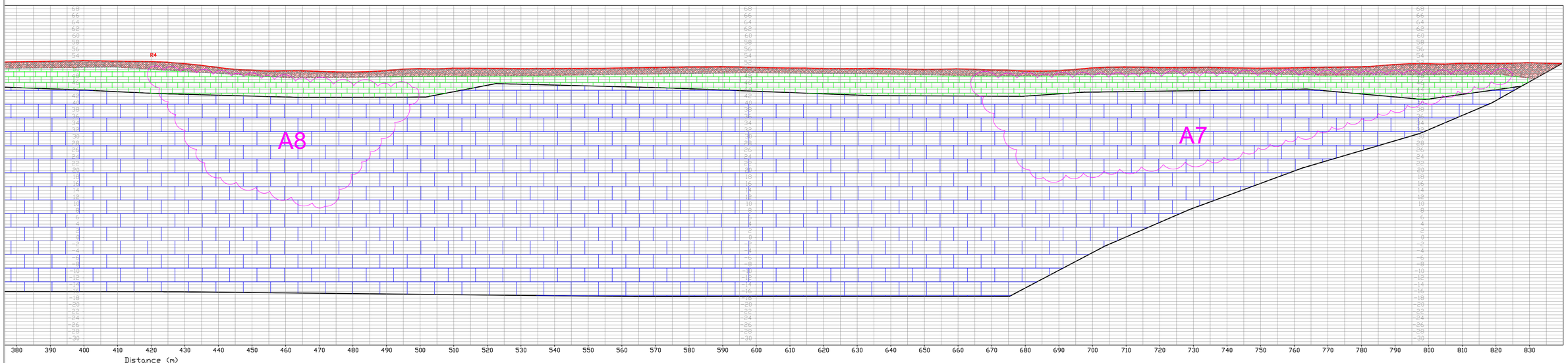


FIGURE 2: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSCIAL INTERPRETATION OF PROFILE R4 CONT'D
SCALE 1:600

GEOPHYSICAL PSEUDOSECTION ERT/SRP - R4



GEOPHYSICAL INTERPRETATION ERT/SRP - R4



Project name: IRELAND GAS PEAKER PLANT	*Client:* ATKINS REALIS	*Project number:* P25025	*Drawn by:* CN	*Approved by:* HP	
Sheet Title: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSICAL INTERPRETATION OF PROFILE R4 CONT'D	*Terra Survey client:* PRIORITY GEOTECHNICAL LTD.	*Drawing number:* P25025_Gp_D08	*CRS:* ITM (EPSG 2157)		
	Survey by: TERRA SURVEY UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08 T: +353 21 483 1184 E: info@hydrosurvey.com	*Revision:* Rev.01	*Datum:* OD Malin (EPSG 7959)		
			Scale: As stated A1	*Issue date:* 24/03/2025	

Legend:

Location Map

- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)

- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)

- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation

- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types: Sand, Gravel, Clay, Silt, Sandy CLAY, Sandy gravelly CLAY, Gravelly SAND, GRAVEL

Rock types: LIMESTONE, HIGHLY WEATHERED LIMESTONE

Possible area of karst

Site:

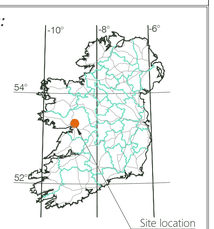
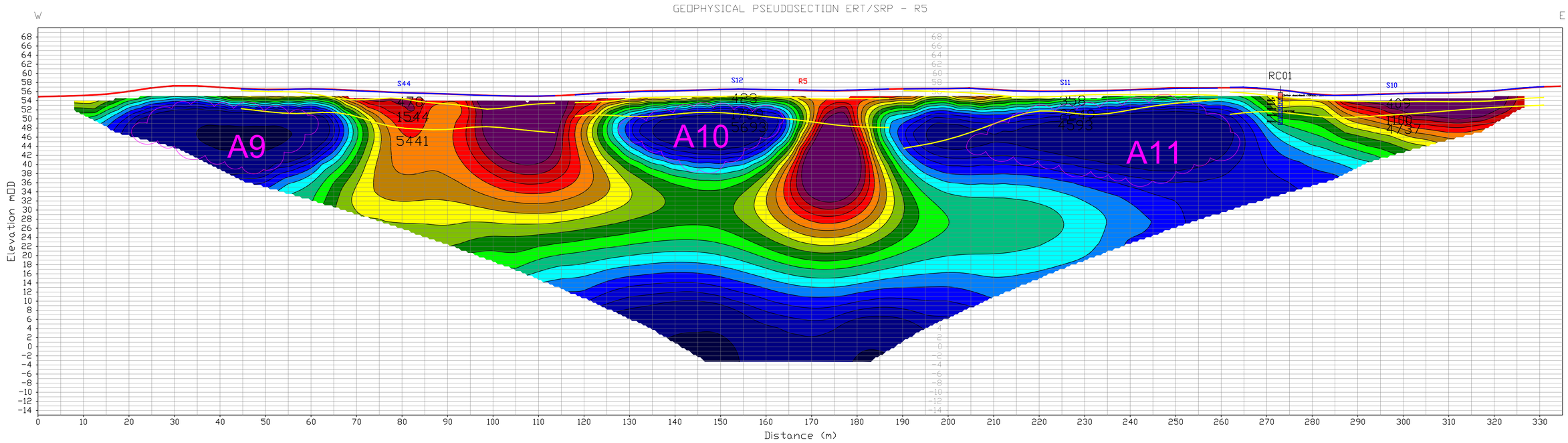
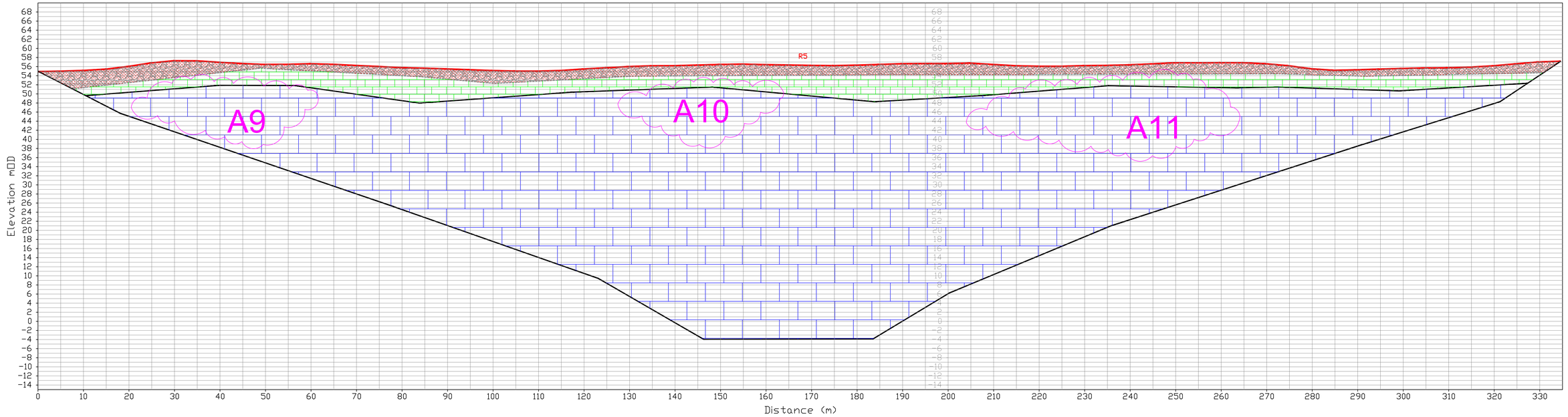


FIGURE 1: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSCIAL INTERPRETATION OF PROFILE R5
SCALE 1:450





Project name: IRELAND GAS PEAKER PLANT	*Client:* ATKINS REALIS	*Project number:* P25025	*Drawn by:* CN	*Approved by:* HP	
Sheet Title: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSICAL INTERPRETATION OF PROFILE R5	*Terra Survey client:* PRIORITY GEOTECHNICAL LTD.	*Drawing number:* P25025_Gp_D09	*CRS:* ITM (EPSG 2157)		
	Survey by: TERRA SURVEY UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08 T: +353 21 483 1184 E: info@hydrosurvey.com	*Revision:* Rev.01	*Datum:* OD Malin (EPSG 7959)		
			Scale: As stated A1	*Issue date:* 24/03/2025	

Legend:

Location Map

- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)

- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)

- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation

- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types: Sand, Gravel, Clay, Silt, Sandy CLAY, Sandy gravelly CLAY, Gravelly SAND, GRAVEL

Rock types: LIMESTONE, HIGHLY WEATHERED LIMESTONE

Possible area of karst

Site:

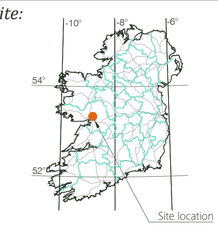
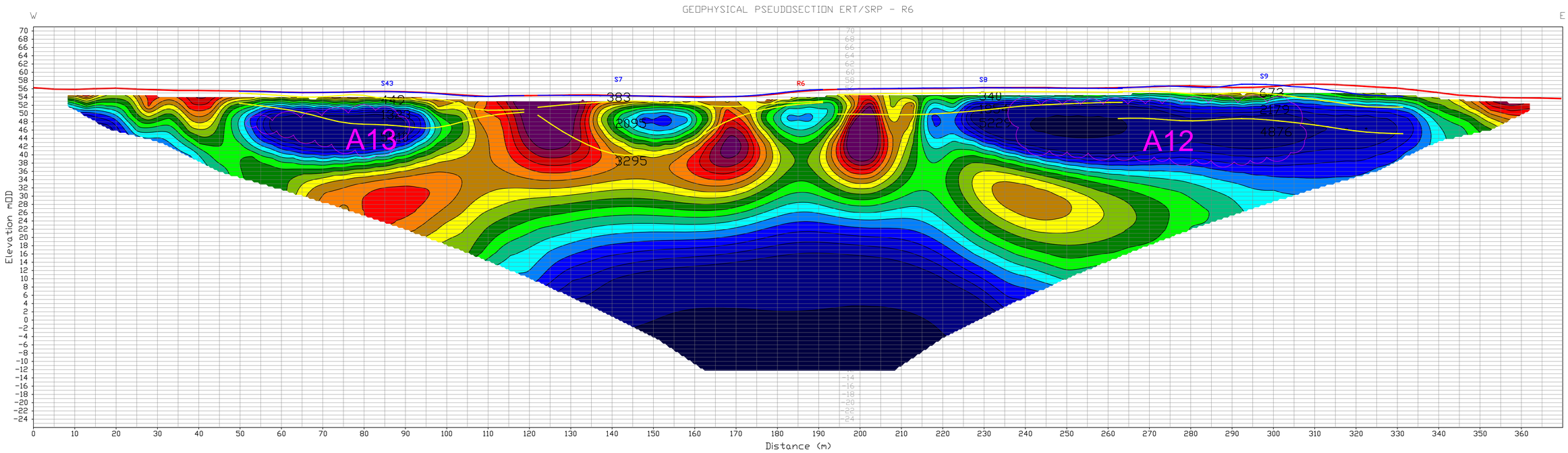
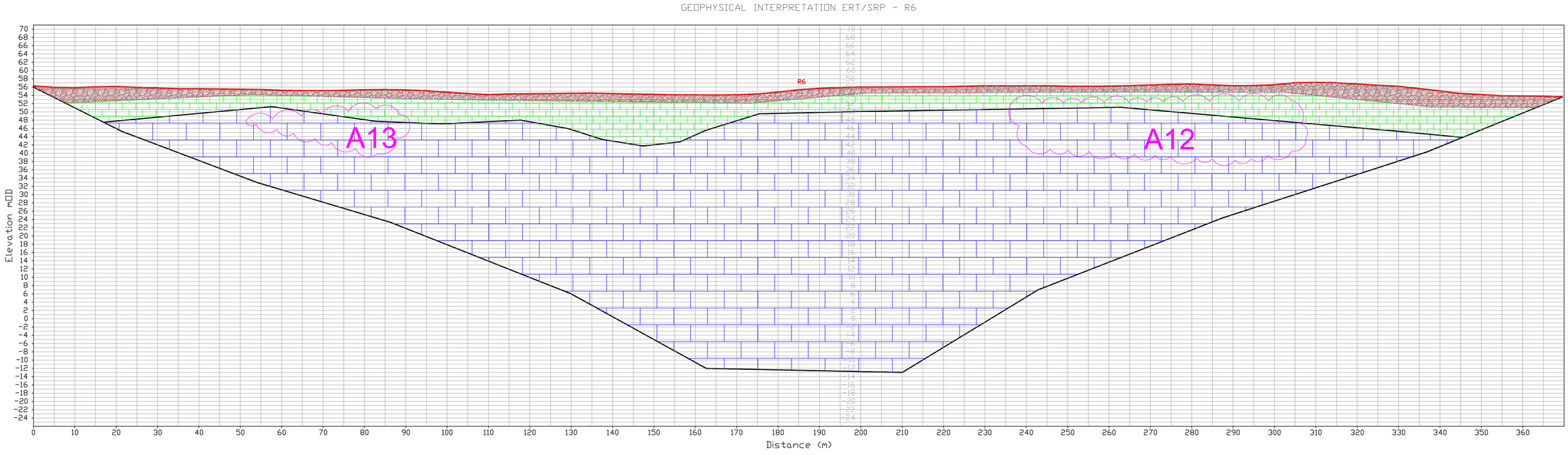


FIGURE 2: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSCIAL INTERPRETATION OF PROFILE R6
SCALE 1:500





Project name:
IRELAND GAS PEAKER PLANT

Sheet Title:
GEOPHYSICAL PSEUDOSECTION AND GEOPHYSICAL INTERPRETATION OF PROFILE R6

Client:
ATKINS REALIS

Terra Survey client:
PRIORITY GEOTECHNICAL LTD.

Survey by:
TERRA SURVEY
UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08
T: +353 21 483 1184
E: info@hydrosurvey.com

Project number:
P25025

Drawing number:
P25025_Gp_D10

Revision:
Rev.01

Drawn by: CN

Approved by: HP

CRS:
ITM (EPSG 2157)

Datum:
OD Malin (EPSG 7959)

Scale: As stated A1

Issue date: 24/03/2025

Legend:

Location Map
- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)
- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)
- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation
- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types: Sand, Gravel, Clay, Silt, Sandy CLAY, Sandy gravelly CLAY, Gravelly SAND, GRAVEL

Rock types: LIMESTONE, HIGHLY WEATHERED LIMESTONE

Possible area of karst

Site:

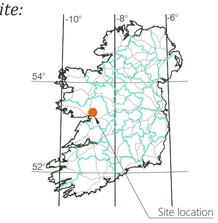
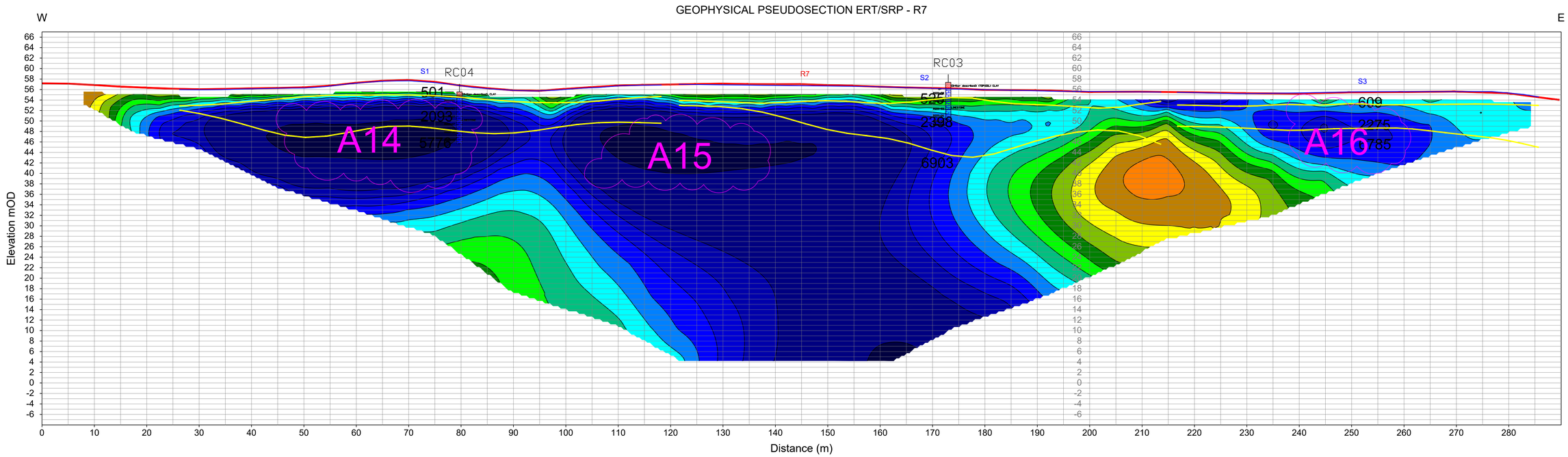
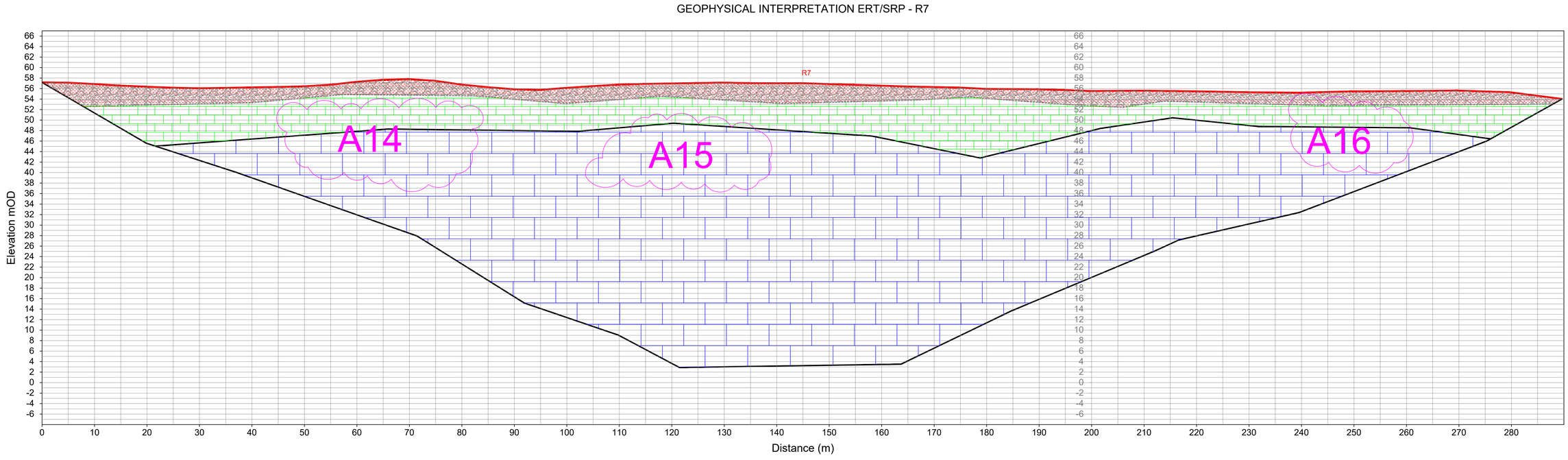


FIGURE 2: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSCIAL INTERPRETATION OF PROFILE R7
SCALE 1:400





Project name:
IRELAND GAS PEAKER PLANT

Sheet Title:
GEOPHYSICAL PSEUDOSECTION AND GEOPHYSICAL INTERPRETATION OF PROFILE R7

Client:
ATKINS REALIS

Terra Survey client:
PRIORITY GEOTECHNICAL LTD.

Survey by:
TERRA SURVEY
UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08
T: +353 21 483 1184
E: info@hydrosurvey.com

Project number:
P25025

Drawing number:
P25025_Gp_D11

Revision:
Rev.01

Drawn by:
CN

Approved by:
HP

CRS:
ITM (EPSG 2157)

Datum:
OD Malin (EPSG 7959)

Scale:
As stated A1

Issue date:
24/03/2025

Legend:

Location Map
- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)
- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)
- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation
- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types
- Sand
- Gravel
- Clay
- Silt
- Sandy CLAY
- Sandy gravelly CLAY
- Gravelly SAND
- GRAVEL

Rock types
- LIMESTONE
- HIGHLY WEATHERED LIMESTONE
- Possible area of karst

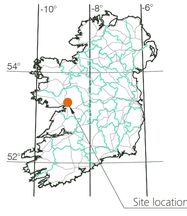
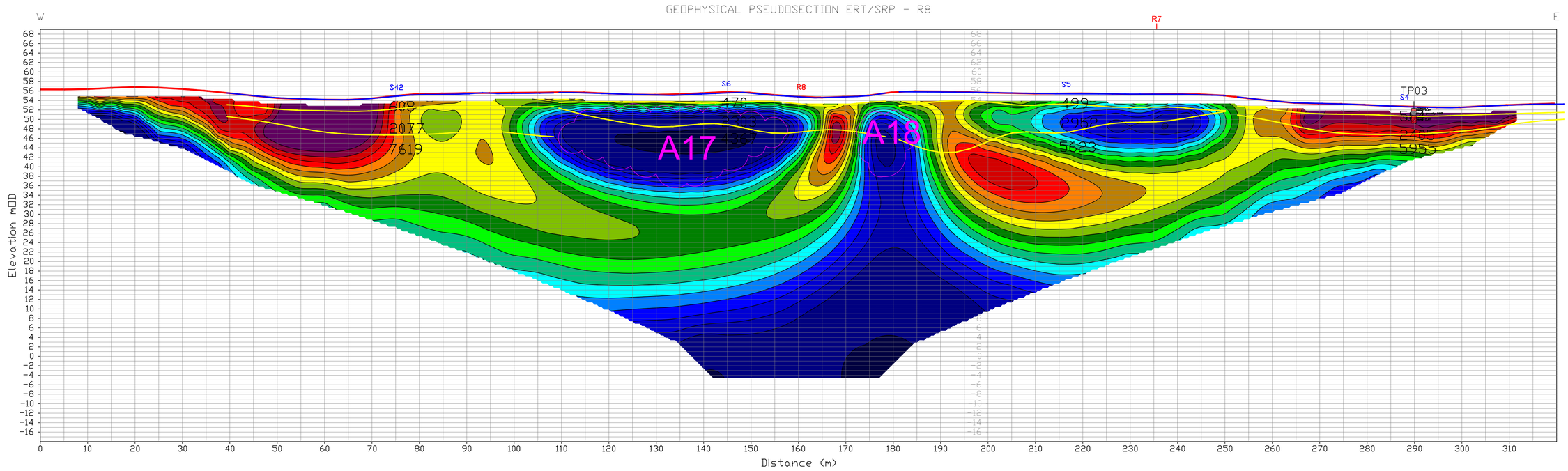
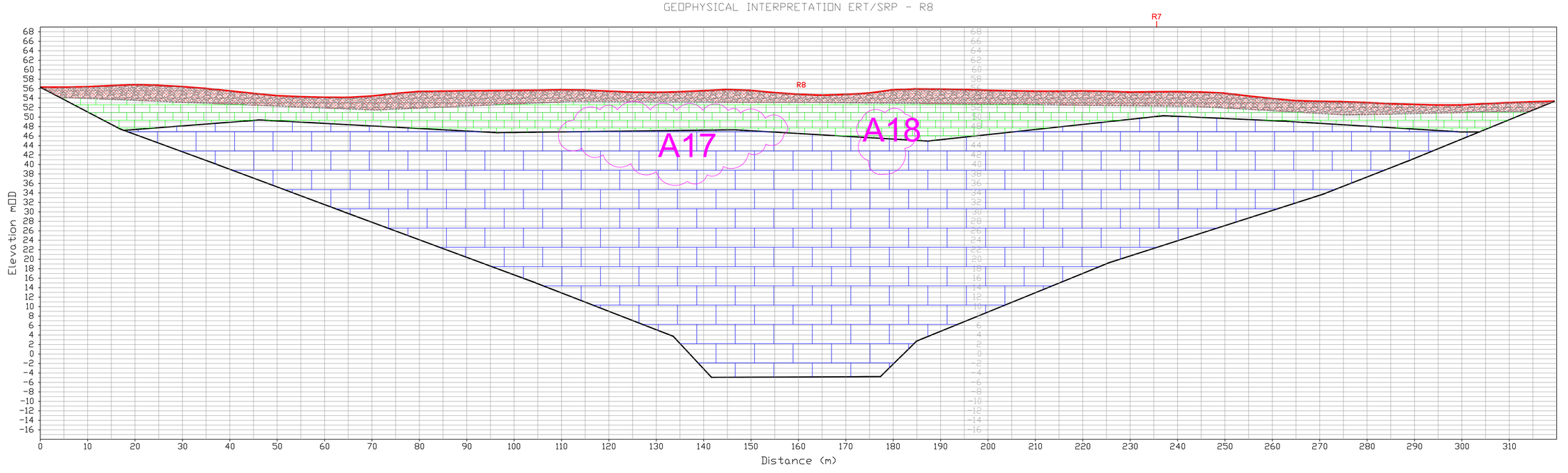
Site:


FIGURE 2: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSCIAL INTERPRETATION OF PROFILE R8
SCALE 1:450





Project name: IRELAND GAS PEAKER PLANT	*Client:* ATKINS REALIS	*Project number:* P25025	*Drawn by:* CN	*Approved by:* HP	
Sheet Title: GEOPHYSICAL PSEUDOSECTION AND GEOPHYSICAL INTERPRETATION OF PROFILE R8	*Terra Survey client:* PRIORITY GEOTECHNICAL LTD.	*Drawing number:* P25025_Gp_D12	*CRS:* ITM (EPSG 2157)		
	Survey by: TERRA SURVEY UNIT C WEST CORK BUSINESS & TECH PARK, CLONAKILTY, CO. CORK, P85 RV08 T: +353 21 483 1184 E: info@hydrosurvey.com	*Revision:* Rev.01	*Datum:* OD Malin (EPSG 7959)		
			Scale: As stated A1	*Issue date:* 24/03/2025	

Legend:

Location Map

- Seismic profile
- ERT profile
- MASW profile
- RC01 Rotary core
- BH01 Cable percussion borehole
- TP01 Trial pit
- Possible area of karst

Geophysical pseudosection

Seismic refraction boundaries with P-wave velocities (m/s)

- 300 ground surface
- 1000 layer 1 / layer 2 boundary
- 3000 layer 2 / layer 3 boundary

ERT boundaries and resistivity colour scale (Ωm)

- ground surface

0 353 420 499 594 706 840 998 1187 1412 1679 1997 2375 2824 3358 3994 4749 9410

Geophysical interpretation

- R6 Intersection of another named profile
- BH22 Approx location of named site investigation work
- Change in overburden boundary
- Rock surface boundary
- Change in rock boundary

Overburden types: Sand, Gravel, Clay, Silt, Sandy CLAY, Sandy gravelly CLAY, Gravelly SAND, GRAVEL

Rock types: LIMESTONE, HIGHLY WEATHERED LIMESTONE

Possible area of karst

Site:

REFERENCES

BANERJEE, B. and GUPTA, S. (1975). HIDDEN LAYER PROBLEM IN SEISMIC REFRACTION WORK*. *Geophysical Prospecting*, 23(4), pp.642-652.

British Standards Institution (BSI), 2019. BS 0722: Geophysical methods for site investigation. London: British Standards Institution.

British Standards Institution (BSI), 2020. BS 5930: Code of practice for ground investigations. London: British Standards Institution.

Geological Society Engineering Group, 2014. Engineering Geophysics: A report of the Engineering Group Working Party. London: Geological Society of London.

GSEG (2002) Geophysics in Engineering Investigations. Geological Society Engineering Geology Special Publication 19, London, 2002.

Loke, M. (2000). Electrical imaging surveys for environmental and engineering studies.

Milsom, (1989). Field Geophysics. John Wiley and Sons.

Reynolds, J.M. (2011). An introduction to applied and environmental geophysics

Soske, J. (1959). THE BLIND SONE PROBLEM IN ENGINEERING GEOPHYSICS. *GEOPHYSICS*, 24(2), pp.359-365.

Telford W.S., Geldart L.P, Sheriff R.E. (1990) Applied Geophysics Second Edition (Cambridge University Press) 769pp

Williamson E.D and Adams L.H. (1923). Density distribution in the Earth. J. Wash. Acad. Sci., 13, p413-28.