

BESSBOROUGH, CORK

APPENDIX 7

Land, Soils & Geology



VOLUME III | APPENDICES

• Appendix 7-1 - Ground Investigation Report prepared by Priority Geotechnical Ltd, Issue date February 2022

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Our Ref: JMS/Rp/P21239 + attachments (*.pdf)

16th March, 2022

JB Barry & Partners Limited

3 Eastgate Road,

Eastgate Business Park,

Little Island,

Co. Cork,

T45 KH74.

Re: Bessborough SHD Sites, Site Investigation, Factual report.

Introduction

In November 2021, Priority Geotechnical (PGL) were requested by JB Barry & Partners Limited acting on behalf of their client Estuary View Enterprises to undertake a site investigation as part of the Bessborough SHD Sites project.



Objectives

The objective of the site investigation contract is to determine the ground and groundwater conditions in order to inform the engineering design solutions for the proposed development.

Scope

The original scope of the site investigation, which was specified by JB Barry & Partners, comprised of:

- 06Nr. Cable percussion boreholes;
- Trial pits;
- Surveying of 'as-built' levels and co-ordinates;
- All associated sampling; •
- All associated laboratory works; •
- Associated reporting;

The final site works as completed is outlined, herein. This geotechnical data report presents the fieldworks records with regard to the site investigation for the Bessborough SHD Sites Project. The report should be read in conjunction with the exploratory records, the photographic records and the laboratory test data accompanying this report.

Site Works

This investigation was carried out in accordance with Eurocode 7- Geotechnical Design Part 2, ground investigation and testing (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 direct intrusive fieldworks were undertaken from the 10th and 17th January, 2022 to under the supervision of PGL, Engineering Geologist(s). Details of the plant and equipment used are detailed on the relevant exploratory records, accompanying this report.

Cable Percussion Boreholes

Six (06) cable percussion boreholes were drilled to depths 4.4m below existing ground level (bgl) to 9.1m bgl using PGL's Dando 2000 Rig and 200mm diameter casing. The logs are accompanying this factual report.

Location	Depth (m bgl)	Date (dd/mm/yyyy)
BH01	4.4	13/01/2022
BH02	9.1	10/01/2022
BH03	8.4	12/01/2022
BH04	7.3	14/01/2022
BH05	7.4	17/01/2022
BH06	7.0	13/01/2022

	Chiselling										
Location	Depth Top (m bgl)	Depth Base (m bgl)	Duration (hh:mm)	Tool							
DU01	1.20	1.30	01:00	Chisel.							
ושחס	4.30	4.40	01:00	Chisel.							
DH02	2.75	2.90	01:00	Chisel.							
BH02	8.90	9.10	01:00	Chisel.							
B U00	4.90	5.00	01:00	Chisel.							
БПОЗ	8.30	8.40	01:00	Chisel.							
DU04	3.80	4.00	01:00	Chisel.							
БП 04	7.20	7.30	01:00	Chisel.							
DUOF	6.70	6.90	01:00	Chisel.							
CUDD	7.30	7.40	01:00	Chisel.							
DHOG	5.75	5.95	01:00	Chisel.							
BH06	6.90	7.00	01:00	Chisel.							

Trial Pits

Seven (07) trial pits were excavated to depths 0.3m bgl to 4.6m bgl using a 14t tracked excavator. The exploratory logs and photographic records accompany this factual report.

Location	Depth (m bgl)	Date (dd/mm/yyyy)
TP01	3.9	11/01/2022
TP02	3.2	10/01/2022
TP03	4.5	11/01/2022
TP04	4.5	13/01/2022
TP05	4.5	14/01/2022
TP06	0.3	12/01/2022
TP06A	4.6	12/01/2022

Sampling

A total of sixty two (62) bulk disturbed samples (B) and twenty two (22) small disturbed samples (D) were recovered from the exploratory holes in accordance with Geotechnical Investigation and Sampling – Sampling Methods and Groundwater Measurements (EN ISO 22475-1:2006).

In-Situ Testing

Standard Penetration Tests (SPT)

A total of thirty nine (39) standard penetration tests, were carried out in the cable percussion boreholes using the 60° solid cone (CPT) in place of the standard split barrel sampler. The data was presented on the relevant logs accompanying this factual report.

Falling Head Tests

Two (02) in situ falling head permeability tests were carried out in boreholes; in accordance with BS5930: 1999, Section 4: Cl. 25.4, within the superficial deposits over duration of one (1) hour. The processed test data was presented on the relevant borehole log presented accompanying this factual report. The shape or intake factor, f was derived from the condition at the base of the borehole at the test depth and test geometry as per Hvorslev (1951).

$$k = \frac{A}{fd} \frac{\log_2}{\log_2}$$

Generally for all tests the specific depth range of the test was the deposits below the depth of casing. A mean k measured ($k_{H} = k_{V}$), permeability in the soil was assumed equal in both horizontal and vertical direction, $(k_H/k_V = 1)$. The test geometry provided a shape factor, f for the test undertaken in the standpipe well.

Dynamic Probing

PGL's Competitor dynamic probing rig was used to undertake dynamic probing (DP(H); 50kg drop weight, 500mm drop height) in general accordance with Geotechnical Investigation and Testing, Part 2, Dynamic probing, BS EN ISO 22476-2:2005. The blows per 100mm (N_{100 H}) were recorded to refusal being 25blows without progress over 100mm. Six (06) number dynamic probes progressed to refusal at depths 2.7m bgl to 8.8m bgl. The exploratory logs accompany this factual report.

$$\frac{(H_0/H_1)}{t}$$

Location	Refusal depth, m bgl
DP01	3.7
DP02	8.8
DP03	2.7
DP04	5.0
DP05	3.0
DP06	3.5

Survey and Drawings

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 Plans (P21239-SI-A, P21239-SI-01) accompanying this report.

Location	Easting	Northing	Ground Level (mOD)	Final Depth (m bgl)	Date Start (dd/mm/yyyy)
BH01	171820.78	70468.88	16.64	4.40	13/01/2022
BH02	171741.94	70395.18	13.07	9.10	10/01/2022
BH03	171738.42	70311.70	11.49	8.40	12/01/2022
BH04	172026.44	70364.45	12.50	7.30	14/01/2022
BH05	172034.00	70300.87	12.21	7.40	17/01/2022
BH06	171946.00	70338.05	13.57	7.00	13/01/2022
DP01	171821.58	70465.48	16.54	3.70	13/01/2022
DP02	171742.31	70392.88	12.93	8.80	13/01/2022
DP03	171735.89	70311.95	11.53	2.70	13/01/2022
DP04	172027.93	70363.86	12.40	5.00	13/01/2022
DP05	172033.97	70304.80	12.21	3.00	14/01/2022
DP06	171944.50	70343.17	13.61	3.50	13/01/2022
TP01	171822.48	70466.73	16.60	3.90	11/01/2022
TP02	171742.96	70394.13	13.04	3.20	10/01/2022
TP03	171736.67	70314.17	11.80	4.50	11/01/2022
TP04	172026.89	70362.36	12.35	4.50	13/01/2022
TP05	172033.99	70303.02	12.21	4.50	14/01/2022
TP06	171940.73	70337.93	13.69	0.30	12/01/2022
TP06A	171944.88	70339.22	13.61	4.60	12/01/2022

Laboratory Testing

Laboratory testing was ongoing at the time of reporting.

Published Geology

A search of the Geological Survey data base and 1:100,000 mapping (Sheet 25) identified two (02) major lithological units defining the area. The majority of the site is underlain by Waulsortian Limestones (WA) described as massive unbedded Lime-Mudstones. The Little Island Formation (LI) is mapped to the north and defined by massive and crinoidal fine Limestone.

Teagasc subsoil mapping indicates that the area is underlain by Made Ground deposits. The National Groundwater Vulnerability mapping indicates the area mostly has a rating of high vulnerability.

Ground and Groundwater Conditions

The full details of the ground conditions encountered are provided for on the exploratory records accompanying this 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 ground investigation.

Groundwater levels may be subject to diurnal, seasonal and climatic variations and can also be affected by drainage conditions, tidal variations etc. Low volume groundwater flow may be cut-off by borehole casing as it progresses in stiff glacial deposits. The duration trial pit excavations remain open may not be sufficient to allow for low volume flow to present. The groundwater regime should be assessed from standpipe well installations.

Groundwater was encountered at depths 3.10m bgl to 3.90m bgl during the period of fieldworks within the extent of the borehole and pit excavations, summarised below. The exploratory locations were backfilled with grout, gravel and arisings.

SUMMARY OF GROUNDWATER

Location	Depth Strike (m bgl)	Remarks	Standpipe (Y/N)
BH01	-	None encountered.	Ν
BH02	-	None encountered.	Y
BH03	-	None encountered.	N
BH04	-	None encountered.	N
BH05	-	None encountered.	N
BH06	-	None encountered.	Y
TP01	-	None encountered.	N
TP02	-	None encountered.	N
TP03	-	None encountered.	N
TP04	3.9	Trickle rate of flow	N
TP05	3.9	Slow rate of flow	N
TP06	-	None encountered.	Ν
TP06A	3.1	Trickle rate of flow	Ν

Two (02) number 50mm dia. HDPE standpipe wells were constructed to allow for groundwater monitoring. The construction details are summarised below.

SUMMARY OF STANDPIPE CONSTRUCTION

Location	Depth Top (m bgl)	Depth Base (bgl)	Diameter (mm)	Pipe Type	Pipe Details
DHOD	0.00	2.00	50	PLAIN	Plain.
DHUZ	2.00	8.50	50	SLOTTED	Slotted.
DHOG	0.00	3.50	50	PLAIN	Plain.
	3.50	7.00	50	SLOTTED	Slotted.

Exploratory locations were backfilled with their arisings or gravel and bentonite for locations with monitoring wells. Backfill details are displayed graphically on the accompanying logs and summarised below.

SUMMARY OF STANDPIPE DIPS

Location	08/02/2022					
Location	Depth (m bgl)					
BH02	Dry					
BH06	4.4					

SUMMARY OF BACKFILL

GRAVEL Backfill to installation/borehole

uPVC slotted pipe

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**,

SMErence

James McSweeney BSc Engineering Geologist

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.

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.

This report has been prepared for 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.

P21239_Rp_F02

ARISINGS Backfill

BENTONITE Backfill to installation





					pgl	priori geotechnica	ty		Prior - F www.p	ity Geotech Tel: 021 463 Fax: 021 46 prioritygeot	nnical Ltd 31600 38690 technical.	ie		Drilled By PC Logged By CS	Borel B Shee
EY TO S	SYMBOLS O	N EXPLORA	TORY HOLE F	RECORDS	Project	Name:	Bessbo	ro SHD	Pr P2	oject No. 21239		Co-ords:	171821E - 70	469N	Hol
ear dimensi	ons are in metres or mi	llimetres			Locatio	on:	Mahon,	Cork				Level:	16.64 m	OD	S
IPTIONS					Client:		Estuary	View E	nt. Ltd			Date:	13/01/2022	-	14/01/202
	Easily crumbled	n			Well S	Water	Sample	e and Ir	n Situ Testing	Depth	Level	Legend	Str	atum Descriptio	'n
S					Backfill (n	m bgl) [Depth (m bgl)	Туре	Results	(m bgl)	(mOD)		Brown red slightly	sandy slightly gray	
	Undisturbed 102r	nm diameter sample, () denotes number of blow	rs to drive sampler			0.000						is fine to coarse. G	ravel is fine to coal	se, sub-ang
Р	F- not recovered,	P-partially recovered										-0	limestone boulders	inor decompos. 1 in i.	
	Piston sample - di	sturbed										-0`			
	Bulk sample - dist	urbed					1.00 - 2.00	в		1.00	15.64				
	Jar Sample - distu	rbed					1.00	SPT	65 (5,10/65 for				Firm, brown red, sli with low cobble cor	ightly sandy slightly ntent. Sand is fine f	/ gravelly (o coarse. (
	Water Sample							(C)	150mm)				is fine to coarse, su	ub-angular to sub-r	ounded. Co
	California Bearing	Ratio mould sample											1.20m - 1.30m: Dr	iller noted: Bould	lers. Incre
	Chemical Sample	for Contamination Anal	ysis									0.000	SPT blow counts I	ocally.	
	Standard Penetra	tion Test S lump sample	e from split sampler				2.00 - 3.00	B							
JVERT	Total Core Recove	ry (% of Core Bun)					2.00	(C)	N=15 (3,3/4,4,3,4)						
	Solid Core Recove	ry (% of core Rull)	g at least one full diamet	er as % of core run)											
	Rock Quality Desi	nation (length of solid	core greater than 100mn	as % of core run)											
re is in	ufficient space for the	TCR, SCR and RQD, the	results may be found in t	he remarks column			0.00 4.00				10.04				
	Fracture Spacing	n mm (Minimum/Avera	age/Maximum) NI - non ir	tact, NR - no recovery			3.00 - 4.00 3.00	SPT	N=15 (3,3/4,4,3,4)	3.00	13.64	$O^{\pm} O^{\pm} O^{\pm}$	Firm, brown red, sl	ightly sandy slightly	/ gravelly C
	Assumed Zone of	Core Loss						(C)					Gravel is fine to co	arse, sub-angular t	to coarse. o sub-round
	Non intact											0-0-0	Cobbles are sub-rc	ounded, limestone	with dia
													boulders.	describes: Hard gra	avelly clay
	Groundwater stri	æ					4.00	SPT	90 (9,10/90 for			0			
	Groundwater leve	after standing period						(C)	225mm)						
	Date of shift (day,	month)/Depth to wate	r at end of previous shift	shown above the date						4.40	12.24	1997 - 1997 - 1993 -	End	of Borehole at 4.400)m
	and depth to wat	er at beginning of shift	given below the date												
TING		ion Toot onlit howal a													
	Standard Penetra	tion Test - split barrel s	ampier												
	Self Weight Penet	ration	e												
	In Situ Vane Test,	Hand Vane Test (R) der	nonstrates remoulded str	ength											
), (P)	Permeability Test														
	Hand Penetrome	er Test													
PROP	ERTIES														
	Standard Penetra	tion Test - blows requir	ed to drive 300mm after	eating drive											
	Denotes x blows f	or y mm within the Sta	ndard Penetration Test												
	Denotes x blows i	or y mm within the sea	ting drive												
	Colifornia Dopring														
	California Bearing	Katio													
	SIZES			٦											
	Index Letter	Nomina	I Diameter (mm)	_											
		Borehole	Core	_											
	N	75	54												
	H	99	/6												
	S	146	113		Cround						o Informa	tion:		Chiselling Det	ails:
	-				Struck (m	n Rose t	o (m After	Seale	d (m	Dep	oth (m bgl)	Hole Dia (m	m) Casing Dia (mr	Top (m) Base (r 1.20 1.30 4.30 4.40	n) Duration (hh 01:00 01:00
					bgl)	bgl) (mins)	bg	None encount	ered.	4.40	200	200	4.40	01.00
										Equ	upment:	Dando 20	JU GW (m.bal)	Shift Do	pth (m hal)
				Key Sheet	Remarks	s:						Shift	Data: 1:	3/01/2022 08:00	0.00 S

Pgl pric	Priority Geotechnical Tel: 021 4631600 Fax: 021 4638690 www.prioritygeotechnical								Drilled By PC Logged By CS	Borehole N BH02 Sheet 1 of	No. 1 f 1	
Project Nan	ne: Bessbor	o SHD	Pro P2	oject No. 1239		Co-o	ords:	ds: 171742E - 70395N Hole			e	
Location:	Mahon,	Cork	•			Leve	el:	13.07 m OD Scale				
Client:	Estuary	View E	nt. Ltd			Date	:	10/01/2022 - 11/01/2022				
Well Backfill	Sample	and Ir	Situ Testing	Depth	Level	Lege	end	Stratum Description				
	Depth (m bgl) 0.00 - 1.00 1.00 - 2.00 1.00 2.00 - 3.00 2.00 3.00 - 4.00 3.00 4.00 - 5.00 4.00 5.00 - 6.00	Type B B SPT (C) B SPT (C) B SPT (C) B SPT (C) B SPT (C)	Results N=6 (1,1/1,1,2,2) N=7 (1,1/1,2,2,2) N=12 (3,3/2,3,3,4) N=21 (4,4/5,5,6,5) N=24 (5,6/5,6,7,6)	(m bgl) 1.00 3.00 5.00	(mOD) 12.07 10.07 8.07			Brown red, slightly s is fine to coarse. Grato to sub-rounded. Dril Soft, brown red, slig Sand is fine to coars angular to sub-round clay. 2.00m - 3.00m: Dril Firm to stiff, brown r sift CLAY with low coarse. Gravel is fin rounded. Cobbles a dia 63-170mm dia. Stiff, brown red, slig with medium cobble Gravel is fine to coars	andy slightly grave avel is fine to coars ler describes: Grav htly sandy slightly se. Gravel is fine to ded. Driller describ ler noted: Boulde ed, slightly sandy s cobble content. Sa e to coarse, sub-a re sub-rounded, Li htly sandy slightly content. Sand is fi res sub-angular to	gravelly CLAY. Sand se, sub-angular vel clay. gravelly CLAY. o coarse, sub- es: Gravelly ers.		
	6.00 - 7.00 6.00 7.00 - 8.00 7.00 8.00	B SPT (C) B SPT (C) SPT (C)	N=29 (6,6/7,7,8,7) N=33 (7,7/8,8,9,8) N=32 (7,8/9,5,9,9)	9.10	3.97			Cobbles are sub-rou Driller describes: bo	Inded, limestone w ulders.	nith dia 63-170.		
Groundwate	 er:			Но	le Informa	tion:			Chiselling Deta	ils:	Teel	
Struck (m Ro bgl)	bse to (m After bgl) (mins)	Seale bg	d (m I) None encounte	Depered.	pth (m bgl) 9.10	Hole I	Dia (m 200	m) Casing Dia (mm)	2.75 2.90 8.90 9.10	, Duration (nn:mm) 01:00 01:00	Chisel. Chisel.	
Remarke:				Eq	uipment:	Dan	nao 20 Shif	GW (m bgl)	Shift Dep	th (m bgl) Remai	rks	
Cable percuss	ion borehole termin	nated at	9.10m bgl.				5111	10/ 10/ 11/ Dry 11/	01/2022 08:00 01/2022 18:00 01/2022 08:00 01/2022 18:00	0.00 Start of s 0.00 End of s 0.00 Start of s 0.00 Start of s 9.10 End of bor	shift. shift. shift. rehole.	

pg	prio	rity		Prior F www.p	ity Geoto Tel: 021 Fax: 021 prioritygo	echnical Ltd 4631600 4638690 eotechnical.	ie		Drilled By PC Logged By CS	Borehole N BH03 Sheet 1 o	No. 3 ıf 1	
Projec	t Name	e: Bessbo	ro SHD	Pi P2	oject No 21239).	Co-ords:	171738E - 703	312N	Hole Typ CP	be	
Locat	on:	Mahon,	Cork	ł			Level:	11.49 m	11.49 m OD Scale			
Client		Estuary	View E	nt. Ltd			Date:	12/01/2022	-	- 12/01/2022		
Well Backfill	Water Strike	Sample	e and Ir	n Situ Testing	Dept (m bo	h Level	Legend	Stra	atum Descriptio	n		
		0.00 - 1.00 1.00 - 2.00 1.00 2.00 - 3.00 2.00 3.00 - 4.00 3.00 4.00 - 5.00 4.00 5.00 - 6.00 5.00 6.00 - 7.00 6.00	B B SPT (C) B SPT (C) B SPT (C) B SPT (C) B SPT (C) B SPT (C)	N=7 (1,1/1,2,2,2) N=7 (1,1/2,2,1,2) N=10 (2,3/3,2,3,2) N=20 (3,4/4,5,5,6) N=26 (6,7/6,6,7,7) N=28 (7,6/6,8,7,7)	4.00 5.00 6.00	7.49 6.49 5.49		Soft becoming firm, gravelly CLAY.	brown red, slightly ghtly sandy slightly se. Gravel is fine to ghtly sandy slightly itent. Cobbles are s stone with dia 63-80 ghtly sandy slightly itent. Cobbles are s	gravelly CLAY. coarse. gravelly CLAY sub-angular to 0mm.	1 2 3 - 4 - 5 - 6	
		7.00 - 8.00 7.00 8.00 - 8.40 8.00	(C) B SPT (C) B SPT (C)	N=34 (7,8/8,9,8,9) 40 (9,10/40 for 150mm)	8.40	3.09		6.00m - 8.40m: Dri	itent. Cobbles are s <u>stone wi</u> th dia 63-8i <u>iller not</u> ed Boulde of Borehole at 8.400	sub-angular to Omm. <i>er content.</i>	8	
											9	
Grour	dwater	:			ŀ	lole Informa	tion:		Chiselling Deta Top (m) Base (m	Duration (hh:mm)	Tool	
Struck (bgl)	m Ros	e to (m After ogl) (mins)	Seale bg	d (m I) None encount	t ered	Depth (m bgl) 8.40	Hole Dia (n 200	nm) Casing Dia (mm 200	4.90 5.00 8.30 8.40	01:00 01:00	Chisel. Chisel.	
≀emar Cable p	ks: ercussio	n borehole termi	nated at	8.40m bgl.	E	Equipment:	Dando 2	000. ft Data: ^{GW (m bgl)} 12 Dry 12	Shift Dep /01/2022 08:00 /01/2022 18:00	^{hth (m bgl)} Rema 0.00 Start of 8.40 End of bo	irks shift. brehol€	

P21239 Falling head permeability test

Location BH ID Test Casing dia Casing dep Borehole d GW Influer Date	meter oth lepth nce	Bessborough SH BH03 1 200 2.00 2.20 2.20 12/01/2022	ID mm m m m bgl		H _{w/} H _o	2.20	
Min	Sec	depth, m bgl	vol, cu.m	H _t	log H ₀ /H _t	1	
0	0	0.000	0.00000	2.200	0.000	1	
0.083	5	0.000	0.00000	2.200	0.000		
0.17	10	0.000	0.00000	2.200	0.000		
0.25	15	0.000	0.00000	2.200	0.000		
0.5	30	0.000	0.00000	2.200	0.000		
0.75	45	0.000	0.00000	2.200	0.000		
1	60	1.000	0.03140	1.200	-0.263]	
1.5	90	1.400	0.04396	0.800	-0.439	k _{mean}	1.12E-03 ms ⁻¹
2	120	1.600	0.05024	0.600	-0.564	k _H = k _V	
3	180	1.900	0.05966	0.300	-0.865		
4	240	2.199	0.06905	0.001	-3.342		
		Rate of infiltr	ation				



pg	prio	rity ^{nical}		Priori F www.p	ity Geo Fel: 021 Fax: 021 Priorityg	tech 463 1 463 geote	nical Ltd. 1600 8690 echnical.i	e				Drilled By PC Logged By	Borehole BH0 Sheet 1	No. 4 of 1
Proje	ct Name	e: Bessbo	o SHD	Pr	oject N	lo.		Co-oi	rds:	172026E - 70364		64N	Hole Ty	pe
Locat	ion:	Mahon,	Cork	<u> </u>	1200			Level	:	12.50 m O		OD Sca		•
Client	:	Estuary	View E	nt. Ltd				Date:		14/01/20)22	-	14/01/2022	
Well Backfill	Water Strike	Sample	and li	n Situ Testing	Dep	oth	Level	Lege	end		Stra	tum Descriptio	n	
		1.00 - 2.00 1.00 2.00 - 3.00 2.00 3.00 - 4.00 3.00 4.00 - 5.00 4.00 5.00 - 6.00 5.00 6.00 - 7.00 6.00 7.00	B SPT (C) B SPT (C) B SPT (C) B SPT (C) B SPT (C) B SPT (C) B SPT (C) SPT (C) SPT (C) SPT (C) SPT (C)	N=9 (1,1/2,2,3,2) N=9 (2,2/2,3,2,2) N=14 (2,3/3,4,3,4) N=22 (4,4/5,6,5,6) N=29 (6,5/7,7,8,7) N=37 (7,8/8,9,9,11) 75 (10,15/75 for 150mm)	1.0 2.0 3.0 5.0 6.0 7.3	0 0 0 0 0 0	11.50 10.50 9.50 7.50 6.50 5.20		석맖식맖석맖석맖석맖석먎 Ŏ먎짇먎짇먎짇먎짇먎짇먎짇먎짇먎짇먎짇먎짇먎짇먎짇먎짇맖쟹탒탒탒탒탒탒탒탒 4.맖싞맖석맖석맖석맖 <u>석먊궝먎짇먎짇먎궝먎궝먎궝먎궝먎궝먎궝먎궝먎궝먎궝먎궝먎궝먎궝</u> 맖쟹탒탒탒탒	Dark brown, plant materia Firm, dark br Sand is fine 1 Firm, brown, low cobble c fine to coars: are sub-angu 63-120mm. Firm to stiff, CLAY with lo Gravel is fine Cobbles are with dia 63-1 Stiff, brown, with low cobl coarse. Grav rounded. Coi Limestone w rounded, Lim Stiff, brown, with low cobl is fine to coa are sub-angu 63-90mm.	slightly i. own, sli to coars slightly ontent. e, sub-as ular to s brown, sli to coars brown, sli to coars brown, sli to coars slightly ble and slightly ble and slightly ble soft rse, sub- slightly ble conf rse, sub- slightly ble soft slightly ble soft slightly slightly ble soft slightly sligh	ightly sandy slightly grav ightly sandy slightly se. Gravel is fine to sandy slightly grav Sand is fine to coa ingular to sub-rour ub-rounded, Limes slightly sandy slight le content. Sand is rse, sub-angular to gular to sub-round Driller describes: It sandy slightly grav boulder content. S e to coarse, sub-a re sub-angular to s isi3-70mm. Boulders with dia 200. sandy slightly grav isi3-romm. Boulders with dia 200. sandy slightly grav isi3-rounded, Limes bo-angular to sub-rounded, Limes f Borehole at 7.300	velly SILT with y gravelly SILT. o coarse. velly CLAY with trse. Gravel is ded. Cobbles stone with dia tty gravelly silty fine to coarse. o sub-rounded. ed, Limestone boulders. relly silty CLAY and is fine to ngular to sub- ub-rounded, s are sub- relly silty CLAY o coarse. Gravel punded. Cobbles stone with dia m	
Grour Struck bgl)	ndwater (m Ros	: e to (m After ggl) (mins)	Seale	id (m I) None encount	t ered.	Hole	h (m bgi) 7.30	tion: Hole D 2	Dia (mm 200 do 200	1) Casing [20	Dia (mm) 10	Chiselling Deta Top (m) Base (m 3.80 4.00 7.20 7.30	ills:) Duration (hh:mm) 01:00 01:00	9 - Tool Chisel.
Remar Cable p	ks: ercussio	n borehole termi	nated at	7.30m bgl.					Shift	Data: GW (m Dry	bgi) 14/0 / 14/0	Shift Dep 01/2022 08:00 01/2022 18:00	^{th (m bgl)} Rem 0.00 Start o 7.30 End of b	arks f shift. orehole.

pg	Priority Geotechni Tel: 021 46310 Fax: 021 4638 www.prioritygeotec					echnical Ltd 4631600 4638690			Drilled By PC Logged By	Borehole N BH05	10. 5
				www.p	riorityg	eotechnical.	ie		CS	Sheet 1 of Hole Typ	1 e
Proje	ct Name	e: Bessbo	ro SHD	P2	1239		Co-ords:	172034E - 703	301N	CP	
Locat	ion:	Mahon,	Cork				Level:	12.21 m	OD	1:50	
Client	:	Estuary	View E	Ent. Ltd			Date:	17/01/2022	-	17/01/2022	
Well Backfill	Water Strike	Sample	e and I	n Situ Testing	Dept	h Level	Legend	Stra	atum Descriptio	n	
		0.00 - 1.00 1.00 - 2.00 1.00 2.00 - 3.00 3.00 4.00 - 5.00 4.00 5.00 - 6.00	B SPT (C) B SPT (C) B SPT (C)	N=8 (1,1/2,2,2,2) N=13 (2,3/3,4,3,3) N=16 (3,4/3,4,4,5)	5.00	7.21		Firm becoming stiff gravelly CLAY. San coarse, sub-angula	, brown red, slightly d is fine to coarse. r to sub-rounded.	/ sandy slightly Gravel is fine to	
		5.00 6.00 - 7.00 6.00 7.00	B SPT (C) SPT (C) SPT (C)	N=30 (5,6/7,7,8,8) N=38 (7,8/9,9,10,10) 90 (9,10/90 for 225mm)	6.00	6.21		with low cobble cor is fine to coarse, su are sub-angular to : Limestone lithology with low cobble cor is fine to coarse. G to sub-rounded. Ca rounded, 63-120mr Boulders are sub-a lithology.	shift sand is fine to be angular to sub-ro- sub-rounded, 63-12 , ghtly sandy slightly itent and low bould ravel is fine to coar obbles are sub-ang n dia., Limestone li ngular, 200-250mn	gravelly CLAY er content. Sand se, sub-angular jular to sub- thology. n dia., Limestone	6
					7.40	4.81		End	of Borehole at 7.400	m	8 -
Grour	Idwator	<u> </u>			 	lole Informa	tion [.]		Chiselling Deta	ails:	
Struck		e to (m After	Seale	ed (m Comment	[Depth (m bgl)	Hole Dia (n	nm) Casing Dia (mm	Top (m) Base (m 6.70 6.90 7.30 7.40	n) Duration (hh:mm) 01:00 01:00	Tool Chisel. Chisel.
ngi)		,gi) (mins)	ja	None encounte	ered.	Equipment:	Dando 2	000	-1		
Remaı Cable p	rks: ercussio	ı n borehole termi	nated at	i 7.40m bgl, obstruction.	1		Shi	ft Data: ^{GW (m bgl)} 17 Dry 17	Shift Deg /01/2022 08:00 /01/2022 18:00	oth (m bgl) Remai 0.00 Start of 9 7.40 End of bor	r ks shift. rehole.

P21239	Falling I	nead permeability test
Location		Bessborough SHD
BH ID		BH05
Test		1
Casing dia	ameter	200 mm
Casing de	epth	1.50 m
Borehole	depth	2.00 m
GW Influe	ence	2.00 m bg
Date		17/01/2022

Min		Sec	depth, m bgl	vol, cu.m	Ht	log H ₀ /H _t		
0		0	0.000	0.00000	2.000	0.000		
0.08	33	5	0.000	0.00000	2.000	0.000		
0.17	7	10	0.000	0.00000	2.000	0.000		
0.2	5	15	0.000	0.00000	2.000	0.000		
0.5	5	30	0.000	0.00000	2.000	0.000		
0.7	5	45	0.000	0.00000	2.000	0.000		
1		60	0.000	0.00000	2.000	0.000		
1.5	5	90	0.000	0.00000	2.000	0.000	k _{mean} -	ms⁻¹
2		120	0.000	0.00000	2.000	0.000	$\mathbf{k}_{H} = \mathbf{k}_{V}$	
3		180	0.000	0.00000	2.000	0.000		
4		240	0.000	0.00000	2.000	0.000		
5		300	0.000	0.00000	2.000	0.000		
10		600	0.000	0.00000	2.000	0.000		
15		900	0.000	0.00000	2.000	0.000		
20		1200	0.000	0.00000	2.000	0.000		
25		1500	0.000	0.00000	2.000	0.000		
30		1800	0.000	0.00000	2.000	0.000		
45		2700	0.000	0.00000	2.000	0.000		
60		3600	0.000	0.00000	2.000	0.000	ļ	
Log H ₀ /H _t	0.0 -0.1 -0.2 -0.3 -0.4 -0.5 -0.6 -0.7 -0.8		500 1000 1500	2000 2500	3000 350	0 4000		
	-0.9 -1.0							



Notes:

2.00

No Change in groundwater level observed after 60 mins. Infiltration rate mot determined.

pg	Priority Geotechnic Tel: 021 46316 Fax: 021 46386 www.prioritygeotech				iical Ltd. 600 3690 chnical.i	e		Drilled By PC Logged By CS	Borehole N BH06 Sheet 1 of	lo. 1		
Proje	ct Name	e: Bessbo	ro SHD	Pr P2	oject N 21239	0.		Co-ords:	171946E - 703	38N	Hole Type CP	9
Locat	ion:	Mahon,	Cork	_				Level:	13.57 m	OD	Scale 1:50	
Client	:	Estuary	View E	nt. Ltd				Date:	13/01/2022	-	13/01/2022	
Well Backfill	Water Strike	Sampl	e and l	n Situ Testing	Dept (m b	th al)	Level (mOD)	Legend	Stra	atum Descriptio	n	
		Depth (in bg) 0.00 - 1.00 1.00 - 2.00 1.00 2.00 - 3.00 2.00 - 3.00 3.00 - 4.00 3.00 - 4.00 3.00 - 5.00 4.00 - 5.00 4.00 - 5.00 6.00 - 7.00 6.00	B B SPT (C) B SPT (C) B SPT (C) B SPT (C) B SPT (C) B SPT (C) B SPT (C)	N=6 (1,1/2,2,1,1) N=8 (1,1/2,2,2,2) N=9 (2,2/3,2,2,2) N=13 (3,2/3,3,4,3) N=28 (4,6/6,7,7,8) N=33 (7,7/8,8,9,8)	1.00 6.00 7.00	0	12.57		Brown, CLAY. Soft becoming stiff, gravelly silty CLAY. fine to coarse, sub- fine to coarse, sub- stiff, brown red, slig CLAY with low cobb Gravel is fine to coa Cobbles are sub-an 63-130mm.	brown red, slightly Sand is fine to coa angular to sub-rour <i>ller described: 'w</i> <u>ihtly sandy slightly</u> be content. Sand is arse, sub-angular to gular, limestone wi	sandy slightly rse. Gravel is nded. et' soils.	
Groui Struck bgl)	ndwater (m Rose	: a to (m After gl) (mins) Seale	ed (m Comment None encounte	t ered.	Hole Depth 7	Informa (m bgl) .00	tion: Hole Dia (n 200	nm) Casing Dia (mm 200	Chiselling Deta Top (m) Base (m 5.75 5.95 6.90 7.00	ails:) Duration (hh:mm) 01:00 01:00	9
Rema Cable p	rks:	n borehole term	inated at	7.0m bgl.		Equip	oment:	Dando 2	000. ft Data:	Shift Dep /01/2022 08:00 /01/2022 18:00	^{th (m bgl)} Remar 0.00 Start of s 7.00 End of bor	ks shift. ehole.

oject ame:	Bessboro Sł	HD		Proje P212	ct No. 39
cation	: Mahon, Co	rk			
ient:	Estuary Vie	ew Ent. Lto	ł		
Strike & Backfill	Samp Depth (m)	les & In Situ Type	r Testing Results	Depth (m)	Level (m OD)
				0.20	16.40
71X(1)X(1)X(1)X(1)X(1)X(1)X(1)X	0.70 - 1.50 0.70 - 1.50	BD		0.65	15.95
	1.50 - 2.50 1.50 - 2.50	BD			
	2.50 - 3.50 2.50 - 3.50	B D			
				3.90	12.70

G	eotechr	nical Ltd.	Trial Pit No		
: (021 4631 021 463	600 8690	TP01		
or	itygeote	chnical.ie	Sheet 1 of 1		
		Co-ords:171822E - 70467N	Date		
_		Level: 16.60m OD	11/01/2022		
		Dimensions (m): 3.60	Scale		
		Donth:	1:25		
		3.90m BGL	OD		
)	Legend	Stratum Description			
		(TOPSOIL) Soft to firm, brown, slightly sandy s	lightly _		
		coarse. Gravel is fine to coarse, sub-rounded to			
		(MADE GROUND) Soft to firm, brown, slightly s	sandy		
		slightly gravelly CLAY with pottery fragments, b	locks, –		
		fine to coarse, sub-rounded to rounded.	-		
		Soft to firm becoming stiff from 2.80m. brown. s	lightly		
	<u> </u>	sandy slightly gravelly CLAY with medium cobb			
	<u> </u>	Gravel is fine to coarse, sub-rounded to rounde	d.		
	<u> </u>	Cobbles are sub-rounded to rounded. Boulders	sub- 1 -		
	2000		-		
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		4 			
	<u>~</u> V^~?X &&~~		-		
			-		
	<u>60.8%</u>	End of Pit at 3.900m			
			4		
			-		
			-		
			-		
			-		
			5 -		
6	Groundwa	ater: None encountered	-		
ľ		None encountered.			
1					



Number:	TP01	Project Project No Engineer	Bessborough SHD P21239 J.B. Barry & Partners	

Project Name:	Bessboro SI	HD		Proje P212	ct No. 39
Location	: Mahon, Co	rk			
Client:	Estuary Vie	ew Ent. Lto	1		
Water Strike & Backfill	Samp Depth (m)	Depth (m)	Level (m OD)		
				0.30	12.74
	0.50 - 1.00 0.50 - 1.00	B D			
	1.20 - 2.30 1.20 - 2.30	B D		1.20	11.84
	2.30 - 3.20 2.30 - 3.20	B D		2.30	10.74
				3.20	9.84
Stability:	Poor	line line			

Geotec	hnical Ltd.	Trial Pit No	
: 021 46 : 021 46	31600 38690	TP02	
oritygeo	technical.ie	Sheet 1 of 1	
	Co-ords :171743E - 70394N	Date	
	Level: 13.04m OD	10/01/2022	
	Dimensions (m): 3.20	Scale	
	Depth:	1:25	
	3.20m BGL	OD	
) Legen	d Stratum Description		
	(TOPSOIL) Soft to firm, brown, slightly sandy	slightly _	
	coarse. Gravel is fine to coarse, sub-rounded	to	
	(MADE GROUND) Soft to firm, light brown, sli	ghtly _	
	 sandy slightly gravelly SILT with medium cobb content, medium boulder content and pottery 	le _	
	fragments. Sand is fine to coarse. Gravel is fir coarse, sub-angular to rounded. Cobbles are a	e to – angular to –	
	sub-rounded. Boulders are angular to sub-rou	nded.	
	×		
	×	1	
	Soft, light purple brown, slightly gravelly silty S	AND.	
××× ×××	angular to rounded.	, SUD	
× × × × ×			
× × × × ×		-	
×××			
××××			
× × × × ×		2 —	
××××			
×, × Ď⊷Ŭ	Soft to firm purple brown slightly sandy grave		
0.0	with medium cobble content and medium boul	der	
0-0	sub-rounded to rounded. Cobles are sub-rou	nded to	
<u>0</u> ~0		u	
<u>0</u> 0		-	
<u>0</u> 0		3 -	
	53 40		
	End of Pit at 3.200m		
		-	
		4 -	
		5	
Ground	water: None encountered	Ĭ	





Project Name:	Bessboro Sł	HD		Proje P212	ct No. 39
Location	: Mahon, Co	rk			
Client:	Estuary Vie	ew Ent. Lto	1		
ater ike & ckfill	Samp	Depth	Level		
Ba	Depth (m)	Туре	Results	(m)	(m OD)
	0.50 - 1.50 0.50 - 1.50	B D		0.35	11.45
				1.10	10.70
	1.50 - 2.50 1.50 - 2.50	B D			
	2.50 - 3.50 2.50 - 3.50	B D			
	3.50 - 4.50 3.50 - 4.50	B D			
				4.50	7.30
Stability:	Moderate			1	1
Plant: Backfill:	141 track mach Arisings.	line			

G	Geotechr	nical Ltd.	Trial Pit No	
: (021 4631 021 463	600 8690	TP0	3
or	itygeote	chnical.ie	Sheet 1	of 1
		Co-ords:171737E - 70314N	Date	
		Level: 11.80m OD	11/01/20)22
		Dimensions (m): 3.80	Scale	•
		Depth: 1	Loaae	d
		4.50m BGL	ŐĎ	
	Legend	Stratum Description		
<u></u>		(TOPSOIL) Soft dark brown clightly sandy slig	bthy	
		gravelly SILT with grass and rootlets. Sand is fil	ne to	-
		rounded.		-
		(MADE GROUND) Soft to firm, purple brown, s	lightly	-
		sandy gravelly CLAY with medium cobble conte rare pottery and glass fragments. Sand is fine to	ent and o	
		coarse. Gravel is fine to coarse, sub-rounded to rounded. Cobbles are sub-rounded to rounded.)	-
				-
				-
				1 -
		(ASSUMED NATURAL) Soft to firm, purple brow	wn,	-
		content. Sand is fine to coarse. Gravel is fine to	coarse,	
		sub-rounded to rounded. Cobbles are sub-roun rounded.	ded to	-
				_
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				5 —
1	Groundwa	ater: None encountered.		





pgl _{pl}	pgl _{priority}						
Project Name:	Bessboro Sł	Proje P212	ct No. 39				
Location	: Mahon, Co	rk					
Client:	Estuary Vie	ew Ent. Lto	1				
ater ke & kfill	Samp	les & In Situ	I Testing	Depth	Level		
Stri &	Depth (m)	Туре	Results	(m)	(m OD)		
	0.50 - 1.50	В		0.30	12.05		
	0.50 - 1.50	D		0.70	11.65		
	1.50 - 2.50 1.50 - 2.50	B D		1.50	10.85		
	2.50 - 3.50 2.50 - 3.50	B D					
	3.50 - 4.50 3.50 - 4.50	B D					
*				4.50	7.85		
Stability: Plant: Backfill:	Moderate 14T track mach Arisings.	ine		dopth			

G	eotechr	nical Ltd.	Trial Pit No	
: (021 4631 021 463	1600 8690	TP04	
or	itygeote	chnical.ie	Sheet 1 of 1	
		Co-ords:172027E - 70362N	Date	
		Level: 12.35m OD	13/01/2022	
		Dimensions (m):	Scale	
		Denth:	1:25	
		4.50m BGL	OD	
	Leaend	Stratum Description		
)	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
		(TOPSOIL) Soft to firm, brown, slightly sandy sl gravelly SILT with grass and rootlets. Sand is fil	ne to	
		coarse. Gravel is fine to medium, sub-angular t rounded.	o sub-	
		(MADE GROUND): Soft, brown slightly silty slig gravely SAND with plastic waste. Sand is fine t	ihtly	
		coarse. Gravel is fine to coarse, sub-rounded to		
		Tounded.		
	XXX	(ASSUMED NATURAL): Soft, brown, slightly sil	lty .	
	××× ×××	fine to coarse, sub-rounded to rounded.		
	. × . × × . × . ×		1 -	
	* * * * * * * *			
	× × × × × × ×	3		
	× ^ × × × ×			
		Soft to firm, slightly sandy slightly gravelly CLA	Y with	
		fine to coarse, sub-rounded to rounded. Cobble	es are	
		sub-rounded to rounded.		
			2 -	
			-	
			-	
			-	
			3 -	
			-	
			-	
			-	
		्र स्ट्रि	-	
			-	
			4 -	
		End of Pit at 4.500m		
			-	
			5	
7	Proundar		5 -	
ľ	BIOUNDW	aver - 3.90m: I rickle rate of flow		
L				





pgl _p	riority otechnical	v	Priority C Tel: Fax: /ww.prior		
Project Name:	Bessboro SI	HD		Proje P212	ct No. 39
Location	: Mahon, Co	rk			
Client:	Estuary Vie	ew Ent. Lto	ł		
Water trike & sackfill	Samp Depth (m)	les & In Situ	I Testing Results	Depth (m)	Level (m OD)
б		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
				0.30	11.91
	0.70 - 1.50 0.70 - 1.50	B D		0.70	11.51
	1.50 - 2.50 1.50 - 2.50	B D			
	2.50 - 3.50	D			
•	3.50 - 4.50 3.50 - 4.50	B D			
				4.50	7.71
Stability:	Good				 ^
Piant: Backfill:	Arisings.	mie			

G	eotechr	Trial Pit No		
: (021 4631 021 463	600 8690	TP05	
or	itygeote	chnical.ie	Sheet 1	of 1
		Co-ords:172034E - 70303N	Date	
		Level: 12.21m OD	14/01/20)22
		Dimensions (m):	Scale 1:25)
		Depth: -	Logge	d
		4.50m BGL	ŐĎ	
	Legend	Stratum Description		
		(TOPSOIL) Soft to firm, brown, slightly sandy s	lightly	_
		gravelly SILT with grass and rootlets. Sand is fit	ne to o sub-	-
		rounded.		-
		sandy gravelly CLAY. Sand is fine to coarse. Gr	avel is	-
		fine to coarse, sub-rounded to rounded.		-
		F . (1976)		-
	<u> </u>	gravelly CLAY with medium cobble content and	y Iow	-
		boulder content. Sand is fine to coarse. Gravel coarse, sub-rounded to rounded. Cobbles are s	is fine to sub-	-
		rounded to rounded. Boulders are sub-rounded rounded. (Assumed Natural).	to	1
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	<u> </u>	End of Dit at 4 500m		
				-
				-
				5 —
C	Groundwa	ater: 3.90m: Slow rate of flow		





 Stability:
 Good

 Plant:
 14T track machine

 Backfill:
 Arisings.

 Remarks:
 Trial pit terminated at 0.30m bgl, due to encountering a concrete sla

Number:	TP05	Project Project No Engineer	Bessborough SHD P21239 J.B. Barry & Partners		

G	eotechr	Trial Pit No							
:	021 4631 021 463	600 8690	TP06						
or	itygeote	chnical.ie	Sheet 1 of 1						
		Co-ords:171941E - 70338N	Date						
		Level: 13.69m OD	12/01/2022						
		Dimensions (m):	Scale						
		Depth: -	Logged						
		0.30m BGL	0D						
	Legend	Stratum Description							
		(TOPSOIL) Soft to firm, slightly sandy slightly g	ravelly _						
		(MADE GROUND) Firm to stiff, light blue grey,	slightly _						
		fine to coarse, sub-angular.							
		Concrete Slab - drain/sewer access cover. End of Pit at 0.300m	/						
			-						
			-						
			1 -						
			-						
			-						
			-						
			-						
			-						
			2 —						
			-						
			3						
			4 —						
			-						
			-						
	Grounder		5 -						
ľ	siounawa	None encountered.							
L ab	coverina	an apparent un-used drain. Pit relocated.							
	serenny								





pgl _p	riority			v	Priority (Tel: Fax: /ww.prior
Project Name:	Bessboro Sł	HD		Proje P212	ct No. 39
ocatior	: Mahon, Co	rk			
Client:	Estuary Vie	ew Ent. Lt	d		
ater ike & ckfill	Samp	les & In Sit	u Testing	Depth	Level
S B	Depth (m)	Туре	Results	(11)	
	0.50 - 1.45 0.50 - 1.45	B D		0.10	13.51
	1.50 - 2.50 1.50 - 2.50	B D		1.45	12.16
	2.50 - 3.50 2.50 - 3.50	B D			
T	3.50 - 4.50 3.50 - 4.50	B D			
				4.60	9.01
Stability:	Good 14T track mach	ine I		1	<u> </u>
Backfill: Remarks:	Arisings. Trial pit termin	ated at 4.60	m bgl, scheduled c	lepth.	

G	eotechr	Trial Pit No		
: (021 4631 021 463	1600 8690	TP06A	
or	itygeote	chnical.ie	Sheet 1 of 1	
		Co-ords :171945E - 70339N	Date	
		Level: 13.61m OD	12/01/2022	_
		Dimensions (m):	1:25	
		Depth:	Logged	
		<u>4.60m BGL</u>	OD	-
)	Legend	Stratum Description		
		(TOPSOIL) Soft to firm, slightly sandy slightly g	ravelly	-
		(MADE GROUND) Soft to firm, slightly sandy s	ightly	_
		(pottery fragments, glass, plastics). Sand is fine	e to	
		coarse. Gravel is fine to coarse, sub-rounded to rounded. Cobbles are sub-rounded to rounded.		-
				-
				-
			1 -	-
				-
			(ith	_
		low cobble content. Sand is fine to coarse. Grav	vel is	-
		fine to coarse, sub-rounded to rounded. Cobble sub-rounded to rounded.	s are	
				_
				1 1 1
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				-
		<u>्य</u> स		-
			4	-
				-
				-
		End of Pit at 4.600m		-
			5	
ľ	sroundwa	ater: 3.10m: Trickle rate of flow		
L				-





pgl prid	prity		Priority Geotechnical Ltd. Tel: 021 4631600 Fax: 021 4638690 www.prioritygeotechnical.ie			Probe No DP01 Sheet 1 of 1		
Project Name:	Bessboro SHD			No. c	o-ords:	171822E - 7046	5N	Hole Type DP
Location:	Mahon	, Cork		L	evel:	16.54m OD		Scale 1:25
Client:	Estuary	/ View Ent. Ltd		ſ	ates:	13/01/2022		Logged By LM
Depth	_			Blows/100mn	ı			Torque (Nm)
- 1		10 5 4 8 4 7			30	4)	
-3	2	4 7 11 7 11	15 16 18 17 15	25				
-4								
Remarks:			Fall He	ight (mm):	500	Cone Base Dia	a. (mm): 4	5
Dynamic pr	obe termin	ated at 3.70m bgl, r	etusal. Hamme	er Mass (Kg):	50.0	Cone Angle (D	eg): 90	
			Probe	туре:	UPH	Final Depth (n	ז מו: 3 .7	U





Geotech	nical Ltd.			Pi	robe No
021 463	1600			[DP02
ritygeote	echnical.ie			She	eet 2 of 2
	Co orde	1717405 7000	201	Ho	ole Type
	vo-oras:	1/1/42E - /039	NICK		DP
	Level:	12.93m OD			Scale
	Detect	12/01/2022		Lo	gged By
	Jaies.	13/01/2022			LM
s/100m	m				Torque
	30	4	0		(INM)
-					
25					
nm):	500	Cone Base Dia	a. (mm): 4	15 I	
s (Kq):	50.0	Cone Anale (D)eg): 90	-	
	DPH	Final Depth (n	n bgl): 8.8	0	





Geotech	nical Ltd.			Pr	obe No
021 463	1600				DP04
itygeote	echnical.ie			She	et 1 of 2
		470000 7000	411	Но	ole Type
	co-ords:	172028E - 7036	4IN		DP
	Level:	12.40m OD			Scale
					aged By
	Dates:	13/01/2022			LM
s/100m	m				Torque
	30	40)		(Nm)
nm):	500	Cone Base Dia	1. (mm): 4	5	
is (Kg):	50.0	Cone Angle (D	eg): 90		
	DPH	Final Depth (m	n bgl): 5.00	U	

	Priority Geotechnical Ltd.						P	robe No		
Pg prio	priority geotechnical				Tel: 021 463 Fax: 021 463	1600 8690				DP04
geoteen	-			w	ww.prioritygeote	chnical.ie)		Sh	eet 2 of 2
Project Name:	Bessbo	oro SHD		Projec	t No. 9	Co-ords:	172028E - 7	0364N	н	ole Type
Location:	Mahon	, Cork		2120	0	Level:	12.40m OD			Scale
Client:	Estuary	/ View Ent. L	td			Dates:	13/01/2022		Lo	ogged By
Depth					Blows/100m	 m				Torque
(m) =		10		20		30		40		(Nm)
		ł			25					
E										
-										
-										
-										
-										
-6										
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- 8 -										
-										
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-										
-9										-
-										
Remarks:				Fall H	leight (mm):	500	Cone Base	Dia. (mm):	45	
Dynamic pro	obe termin	ated at 5.00r	n bgl, refusal.	Hamr	ner Mass (Kg):	50.0	Cone Angle	e (Deg):	90	
				Probe	е Туре:	DPH	Final Dept	n (m bgl):	5.00	

pglpriority geotechnical		Priority Geotechnical Ltd. Tel: 021 4631600 Fax: 021 4638690 www.prioritygeotechnical.ie				Pro C She	obe No 0 P05 et 1 of 1	
Project Name:	Bessbo	bro SHD	Project No. P21239	Co-ords:	172034E - 70305N	Но	le Type DP	
Location:	Mahon, Cork			Level:	12.21m OD	5	Scale 1:25	
Client:	Estuary	vView Ent. Ltd		Dates:	14/01/2022	Log	gged By LM	
Depth (m)	Blows/100mm						Torque (Nm)	
- 1		5 5 5 4 4 5 6 7 5 6 7 5 6 7 5 6 7 5 6 7 5 10						
- 3			16 16 20 22 21 21	25				
- - - - - - - - - - - - - - - - - - -								
Remarks:		Fall Height (mm): 500 Cone Base Dia. (mm):): 45				
Dynamic probe terminated at 3.00m bgl, refusal.			Hammer Mass	Hammer Mass (Kg): 50.0 Cone Angle (Deg): 90		. 90		
			Probe Type:	DPH	Final Depth (m bgl):	3.00		

