



IRISH DRILLING LIMITED

LOUGHREA, CO. GALWAY, IRELAND

**CONTRACT DRILLING
SITE INVESTIGATION**

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BALLYSEEDY AMENITY TRAIL PHASE 3 BALLYSEEDY, TRALEE CO. KERRY

SITE INVESTIGATION REPORT

MRG Consulting Engineers,
7 Day Place,
Tralee,
Co. Kerry.

March 2024
Job nr. 26KY101

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1.0 Introduction.

Irish Drilling Ltd. was instructed by MRG Consulting Engineers on behalf of the client Kerry County Council, to carry out a site investigation on the site of the proposed Ballyseedy Wood Amenity Trail Phase 3, at Ballyseedy, Tralee, Co. Kerry.

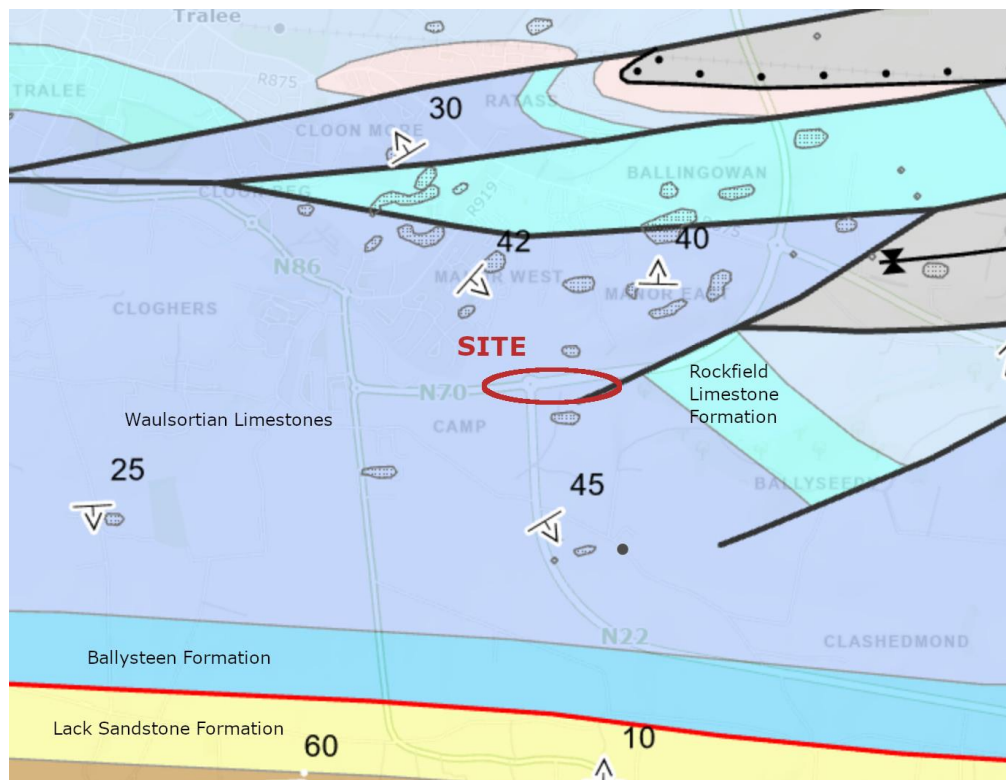
The fieldwork was carried out on 11th March 2026.

2.0 The Site & Geology.

The site is located about 2 km from the centre of Tralee, in greenfields, parallel to the N22 and sometimes adjacent to the River Lee, running from Ballyseedy Wood on the east and runs under the N22 at the River Lee crossing and continues west past the roundabout at the junction of the N22 and N70.

The investigated area was reasonably level and was mostly recently cleared but with some scrub and small trees in places.

Geological Survey maps of the area indicate that the site is underlain by Alluvium associated with the River Lee and Tills (derived from limestones) overlying the Waulsortian Limestone Formation.



3.0 Fieldwork.

The fieldwork consisted of the following:

Twelve trial pits were excavated and the pits were logged by a geotechnical engineer from this company. Trial Pits E1 to E5 were excavated on the eastern side of the River Lee and pits W1 to W7 were excavated on the western side of the river. The trial pit records are included in Appendix 1.

CBR testing (by dynamic probing) was carried out at five locations and the results are included in Appendix 2.

Photographs of the trial pits are included in Appendix 3.

The ground level at each of the test locations are taken from the drawing provided by the consulting engineer.

The fieldwork was carried out in accordance with BS5930 (2015): Code of Practice for Site Investigations and Eurocode 7 – Geotechnical Design Part 2, ground investigation and testing (BS EN1997-2:2007).

4.0 Ground Conditions

The trial pits and probes generally encountered a layer of topsoil or Made Ground consisting of gravelly sandy silt, overlying a firm orange brown and grey, slightly sandy clay or silt, that tends to become stiffer with increasing depth.

The pits beside the proposed river crossing encountered the following ground conditions.

Location	Soft to firm clay	Stiff to very stiff gravelly sandy silt
E1	G.L. – 1.90m	1.90m – 2.70m
W1	G.L. – 2.20m	2.20m – 2.40m

4.1 Groundwater

The following water levels were recorded in the trial pits:

Location	Depth	Remarks
E-1	2.60m	Moderate water inflow
E-2	1.30m	Slow water inflow
W-1	2.20m	Slow water inflow
W-6	2.30m	Slow water inflow

5.0 Foundations.

5.1 Bridge Foundations

Trial Pits E1 and W1 were excavated either side of the River Lee crossing and adjacent to the river.

Consideration could be given to using pad foundations, placed on the stiff to very stiff Till that was encountered at between 1.9m and 2.2m depth.

The following allowable bearing pressures are proposed:

Location	Depth	Remarks
E1	1.90m (3.98m O.D.)	Allowable Bearing Pressure: 150 kN/m ²
W1	2.20m (3.90m O.D.)	Allowable Bearing Pressure: 150 kN/m ²

Consideration could also be given to piled foundations and the length of pile would depend on design loads, the pile type and diameter, and the nature of the underlying soils and rock. The advice of specialist piling contractors should be sought as to the feasibility of their type of pile.

5.2 Retaining Walls

For the design of retaining walls the following parameters may be used ⁽⁴⁾ :

Strata	Unit Wt. saturated/dry kN/m ³	Cohesion (undrained) kPa	Angle of internal friction φ degrees
Fill	22/20	0	20
Loose Sand and Gravel	20/16	0	30
Dense Sand and Gravel	21/17	0	35
Peat	11/6	5	0
Very soft organic clay/silt	14/6	10	0
Soft slightly organic clay	16/10	20	0
Firm sandy clay	17/12	40	0
Firm to stiff gravelly sandy silt	20/17	75	0
Stiff gravelly sandy silt	20/17	100	0
Very stiff gravelly sandy silt	20/17	200	0
Limestone rock	24/24	1,000-8,000	40

5.3 Pavements and Slabs

Beneath the layer of topsoil and any soft subsoil the soils are considered to be suitable to support greenway pavements.

The CBR tests (Appendix 2) recorded CBR values no lower than 3% and values increasing with increasing depth. Below 0.4m depth the CBR values were consistently recorded above 5%.

Consideration could be given to using Terram as a separation layer over the clay/silt that may be prone to softening under heavy rainfall.

The clay and silt soils are likely to rut under construction traffic, particularly during periods of prolonged rainfall or under conditions of inadequate drainage. If the soils are allowed to become wet and soften there will likely be trafficking problems after the grass and topsoil layers have been removed. The sequence of work should be planned so as to permit at all times the easy runoff of rain water from the surface.

6.0 Excavations

Excavations, in particular for bridge foundations are likely to be unstable and some form of side supports or battering of excavation sides may be necessary. The use of sumps and pumping is likely to be necessary to maintain dry excavations. The close proximity of existing roads and services should be noted as excessive pumping is likely to cause settlement or movement of the structures.

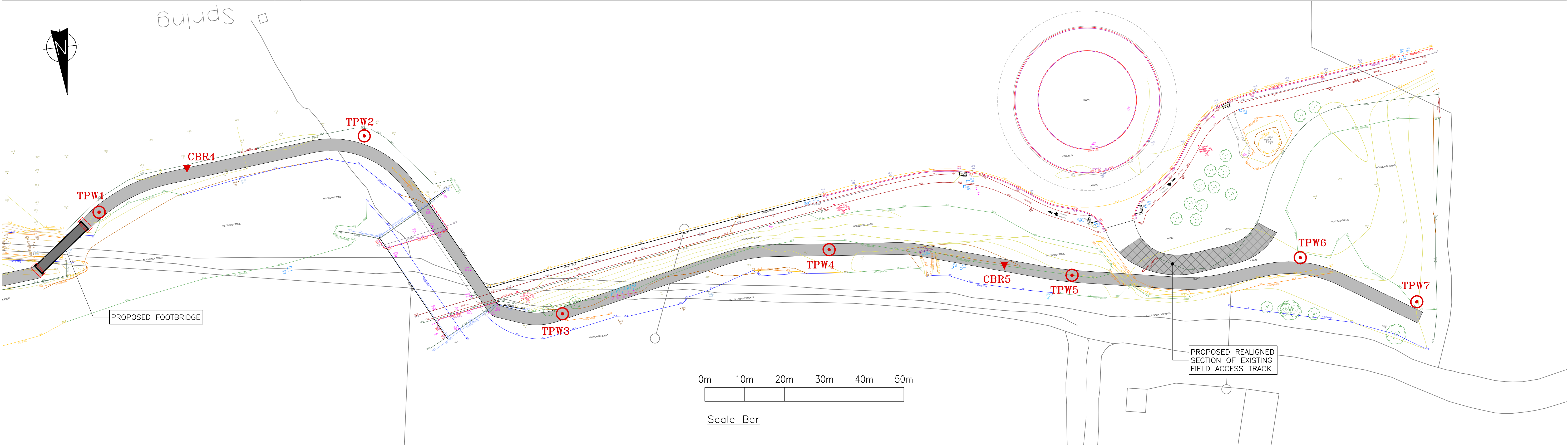
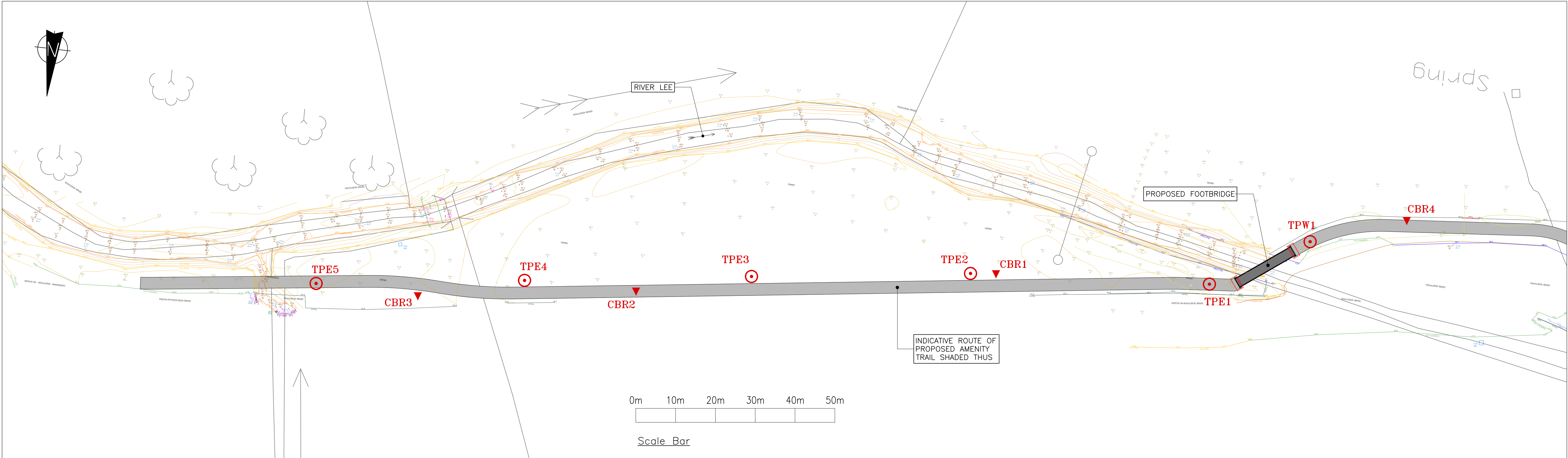
In the interest of safety, personnel should not be allowed enter unsupported excavations deeper than 1.0m.

Declan Joyce B.E., M.Eng.Sc., C.Eng., M.I.E.I
Chartered Geotechnical Engineer

REFERENCES:

- (1) B.S.5930:(2015) + A1:2020, Code of Practice for Site Investigation.
- (2) B.S.1377-2:(2022), Methods of Test for Soils for Civil Engineering Purposes.
- (3) EN 14630:(2006), Products and systems for the protection and repair of concrete structures – Test methods – Determination of carbonation depth in hardened concrete by the phenolphthalein method.
- (4) Hoek E. & Bray J.W. (1991) Rock Slope Engineering, Revised 3rd ed. IMM
- (5) Stroud M.A. & Butler F.G. (1975) The Standard Penetration Test and the Engineering Properties of Glacial Materials, Proceedings of the Symposium held at the University of Birmingham 21-23 April 1975.





Notes:

1. All dimensions are in millimetres – figured dimensions to be taken in preference to scaled dimensions.
2. All levels are in metres and relate to Ordnance Datum (Malin Head).

Legend:

1. Trial pits located to east of proposed footbridge denoted thus ⊙ TPE0
2. Trial pits located to west of proposed footbridge denoted thus ⊙ TPW0
3. CBR test locations denoted thus ▼ CBR0

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DRAFT
18/03/2026



Comhairle Contae Chiarraí
Kerry County Council



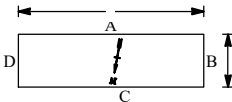
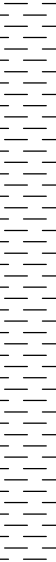
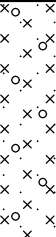
No.4 Day Place, Tralee, County Kerry.
T : (066)712330 Fax : (066)7123364 E-Mail : info@mrge.ie
also: Eyelium Business Centre, Second Floor, Breffni House,
Watercourse Road, Blackpool, Co. Cork

MRG Consulting Engineers Limited **Civil Structural Architectural Environmental**

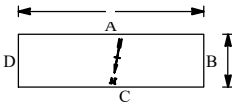
Project		
BALLYSEEDY WOOD AMENITY TRAIL PHASE 3		
Drawing		
TOPOGRAPHICAL SURVEY LAYOUT SHOWING SITE INVESTIGATION LOCATIONS		
Drawn	S. LIWANI	Project No.
Date	xx.xx.2026	126001
Scale	1:500 @ A1	Drawing No.
		126001-SI-01

APPENDIX 1

TRIAL PIT RECORDS

PROJECT: Greenway at Ballyseedy, Tralee										TRIALPIT: E1	
LOCATION: Tralee, Co. Kerry										Sheet 1 of 1	
CLIENT: Kerry Co. Council							Co-ordinates: E N		Rig: Kobelco SK75R		
ENGINEER: MRG Consulting Engineers									Rev:		
Ground level: 5.88m O.D.									DATE: 11.3.26		
GROUNDWATER Water strikes: Rose to after: 1st: 2.60m 2nd: 3rd:							PIT DIRECTION: 260° PIT DIMENSION: 2.00m * 1.00 LOGGED BY: DJ		 Shoring/Support: Stability: Sides stable		
Depth (m)	Date	Water	Samples	Depth (m)	SPT (N) In Situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION	Instrument/ Backfill	
0	11.03.26								Soft to firm greyish brown mottled orange, CLAY.		
1											
2							3.98	1.90	Very stiff grey gravelly sandy SILT. (cemented Glacial Till)		
	11.03.26						3.18	2.70	Terminated		
3						END					
4											
5											
Remarks: Moderate water inflow below 2.60m										Scale: 1:25	
Irish Drilling Ltd Loughrea, Co. Galway										Ph. 091 841274 Fax	

TRIALPIT BALLYSEEDY AGS4 2026.GPJ ID GINT AGS4_0_4.GDT 26/3/26

PROJECT: Greenway at Ballyseedy, Tralee										TRIALPIT: E2	
LOCATION: Tralee, Co. Kerry										Sheet 1 of 1	
CLIENT: Kerry Co. Council							Co-ordinates: E N		Rig: Kobelco SK75R		
ENGINEER: MRG Consulting Engineers									Rev:		
Ground level: 5.65m O.D.									DATE: 11.3.26		
GROUNDWATER Water strikes: Rose to after: 1st: 1.30m 2nd: 3rd:							PIT DIRECTION: 260° PIT DIMENSION: 2.00m * 1.00 LOGGED BY: DJ		 Shoring/Support: Stability: Sides stable		
Depth (m)	Date	Water	Samples	Depth (m)	SPT (N) In Situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION	Instrument/ Backfill	
0	11.03.26						5.45	0.20	TOPSOIL		
									Firm brown CLAY, with rootlets.		
							4.85	0.80	Firm orange brown mottled light grey CLAY.		
1							4.35	1.30			
	11.03.26						4.25	1.40	Stiff grey gravelly sandy SILT. (Glacial Till)		
						END			Terminated		
2											
3											
4											
5											
Remarks: Slow water inflow below 1.30m										Scale: 1:25	

**Irish Drilling Ltd** Loughrea, Co. Galway

Ph. 091 841274
Fax

TRIALPIT BALLYSEEDY AGS4 2026.GPJ ID GINT AGS 4_0_4.GDT 26/3/26

PROJECT: Greenway at Ballyseedy, Tralee

LOCATION: Tralee, Co. Kerry

CLIENT: Kerry Co. Council

ENGINEER: MRG Consulting Engineers

Co-ordinates:
E N

Rig: Kobelco SK75R

Rev:

Ground level: 5.70m O.D.

DATE: 11.3.26

GROUNDWATER

Water strikes: Rose to after:

1st: dry

2nd:

3rd:

PIT DIRECTION: 260°

PIT DIMENSION: 2.00m * 1.00

LOGGED BY: DJ

Shoring/Support:

Stability: Sides stable

Depth (m)	Date	Water	Samples	Depth (m)	SPT (N) In Situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION	Instrument/ Backfill
0	11.03.26								Firm brown mottled orange CLAY.	
							5.00	0.70	Firm greyish orange brown mottled orange CLAY.	
1							4.50	1.20	Stiff grey gravelly sandy SILT. (Glacial Till)	
	11.03.26						4.30	1.40	Terminated	
						END				
2										
3										
4										
5										

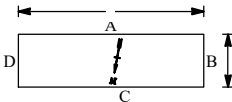
Remarks: Pit dry during excavation

Scale: 1:25

Irish Drilling Ltd Loughrea, Co. Galway

Ph. 091 841274

Fax

PROJECT: Greenway at Ballyseedy, Tralee										TRIALPIT: W1	
LOCATION: Tralee, Co. Kerry										Sheet 1 of 1	
CLIENT: Kerry Co. Council							Co-ordinates: E N		Rig: Kobelco SK75R		
ENGINEER: MRG Consulting Engineers									Rev:		
Ground level: 6.10m O.D.									DATE: 11.3.26		
GROUNDWATER Water strikes: Rose to after: 1st: 2.20m 2nd: 3rd:							PIT DIRECTION: 260° PIT DIMENSION: 2.00m * 1.00 LOGGED BY: DJ		 Shoring/Support: Stability: Sides stable		
Depth (m)	Date	Water	Samples	Depth (m)	SPT (N) In Situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION	Instrument/ Backfill	
0	11.03.26						5.70	0.40	Brown slightly gravelly slightly sandy SILT with roots.		
									Firm orange brown mottled grey CLAY.		
							4.10	2.00	Firm dark grey slightly sandy CLAY.		
							3.90	2.20	Stiff dark grey gravelly sandy SILT. (Glacial Till)		
	11.03.26						3.70	2.40	Terminated		
						END					
3											
4											
5											
Remarks: Slow water inflow below 2.20m										Scale: 1:25	
Irish Drilling Ltd Loughrea, Co. Galway										Ph. 091 841274 Fax	

TRIALPIT BALLYSEEDY AGS4 2026.GPJ ID GINT AGS4_0_4.GDT 26/3/26

PROJECT: Greenway at Ballyseedy, Tralee

LOCATION: Tralee, Co. Kerry

CLIENT: Kerry Co. Council

ENGINEER: MRG Consulting Engineers

Co-ordinates:
E N

Rig: Kobelco SK75R

Rev:

Ground level: 5.45m O.D.

DATE: 11.3.26

GROUNDWATER
Water strikes: Rose to after:
1st: dry
2nd:
3rd:

PIT DIRECTION: 260°
PIT DIMENSION: 2.00m * 1.00
LOGGED BY: DJ

Shoring/Support:
Stability: Sides stable

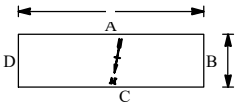
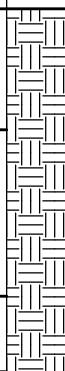
Depth (m)	Date	Water	Samples	Depth (m)	SPT (N) In Situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION	Instrument/ Backfill
0	11.03.26						4.65	0.80	MADE GROUND (Firm orange brown slightly gravelly slightly sandy SILT)	
1							3.85	1.60	Firm to stiff brown slightly sandy CLAY.	
	11.03.26						3.75	1.70	Stiff dark grey CLAY.	
2						END			Terminated	
3										
4										
5										

Remarks: Pit dry during excavation

Scale:
1:25

Irish Drilling Ltd Loughrea, Co. Galway

Ph. 091 841274
Fax

PROJECT: Greenway at Ballyseedy, Tralee										TRIALPIT: W5	
LOCATION: Tralee, Co. Kerry										Sheet 1 of 1	
CLIENT: Kerry Co. Council							Co-ordinates: E N		Rig: Kobelco SK75R		
ENGINEER: MRG Consulting Engineers									Rev:		
Ground level: 5.45m O.D.									DATE: 11.3.26		
GROUNDWATER Water strikes: Rose to after: 1st: dry 2nd: 3rd:							PIT DIRECTION: 260° PIT DIMENSION: 2.00m * 1.00 LOGGED BY: DJ		 Shoring/Support: Stability: Sides stable		
Depth (m)	Date	Water	Samples	Depth (m)	SPT (N) In Situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION	Instrument/ Backfill	
0	11.03.26						5.05	0.40	Soft to firm brown mottled orange SILT.		
							4.50	0.95	Firm to stiff brownish grey CLAY.		
1									Very stiff brownish grey slightly gravelly slightly sandy CLAY.		
	11.03.26						4.25	1.20	Terminated		
						END					
2											
3											
4											
5											
Remarks: Pit dry during excavation										Scale: 1:25	
 Irish Drilling Ltd Loughrea, Co. Galway										Ph. 091 841274 Fax	

PROJECT: Greenway at Ballyseedy, Tralee

LOCATION: Tralee, Co. Kerry

CLIENT: Kerry Co. Council

ENGINEER: MRG Consulting Engineers

Co-ordinates:
E N

Rig: Kobelco SK75R

Rev:

Ground level: 6.45m O.D.

DATE: 11.3.26

GROUNDWATER

Water strikes: Rose to after:

1st: 2.30m

2nd:

3rd:

PIT DIRECTION: 260°

PIT DIMENSION: 2.00m * 1.00

LOGGED BY: DJ

Shoring/Support:
Stability: Sides stable

Depth (m)	Date	Water	Samples	Depth (m)	SPT (N) In Situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION	Instrument/ Backfill
0	11.03.26						5.95	0.50	TOPSOIL with roots	
1									Firm to stiff brown mottled orange slightly sandy SILT.	
2							4.15	2.30		
	11.03.26						4.05	2.40	Stiff grey sandy CLAY.	
						END			Terminated	
3										
4										
5										

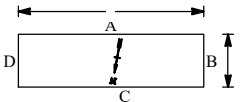
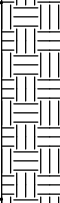
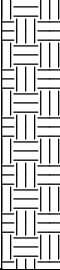
Remarks: Slow water inflow below 2.30m

Scale: 1:25

Irish Drilling Ltd Loughrea, Co. Galway

Ph. 091 841274
Fax

TRIALPIT BALLYSEEDY AGS4 2026.GPJ ID GINT AGS4 0_4.GDT 26/3/26

PROJECT: Greenway at Ballyseedy, Tralee										TRIALPIT: W7	
LOCATION: Tralee, Co. Kerry										Sheet 1 of 1	
CLIENT: Kerry Co. Council							Co-ordinates: E N			Rig: Kobelco SK75R	
ENGINEER: MRG Consulting Engineers										Rev:	
Ground level: 5.50m O.D.										DATE: 11.3.26	
GROUNDWATER Water strikes: Rose to after: 1st: dry 2nd: 3rd:							PIT DIRECTION: 260° PIT DIMENSION: 2.00m * 1.00 LOGGED BY: DJ			 Shoring/Support: Stability: Sides stable	
Depth (m)	Date	Water	Samples	Depth (m)	SPT (N) In Situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION	Instrument/ Backfill	
0	11.03.26						5.15	0.35	MADE GROUND (Brown slightly sandy slightly gravelly SILT with roots)		
									MADE GROUND (Orange brown mottled orange slightly gravelly SILT with occasional subrounded to subangular cobbles and boulders)		
1							4.50	1.00	Firm to stiff brown mottled orange slightly sandy CLAY.		
2	11.03.26					END	3.60	1.90	Terminated		
3											
4											
5											
Remarks: Pit dry during excavation										Scale: 1:25	
 Irish Drilling Ltd Loughrea, Co. Galway										Ph. 091 841274 Fax	

APPENDIX 2

CBR (IN-SITU) TEST RECORDS

Irish Drilling Ltd., Site Investigation.

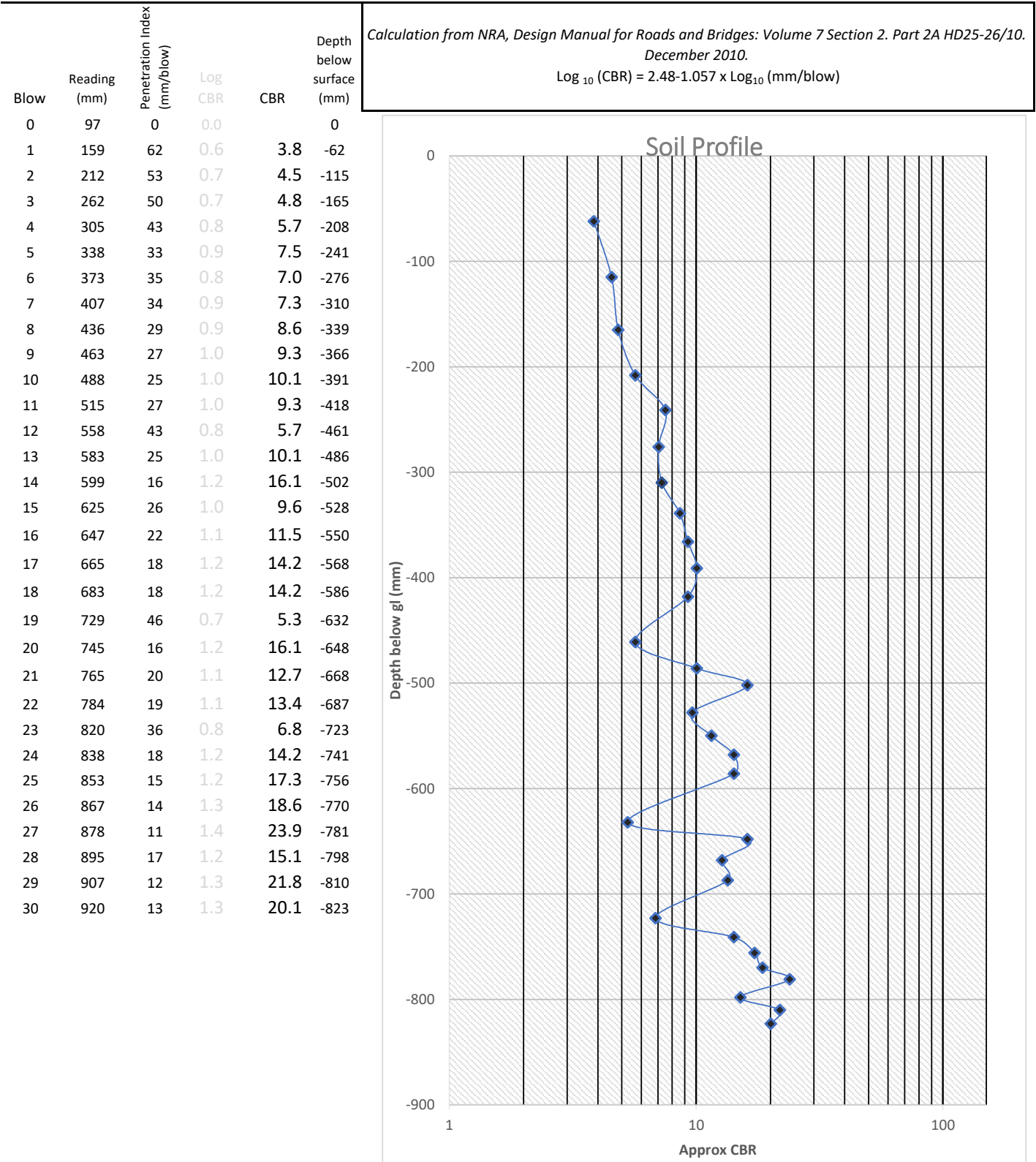
Site: Ballyseedy Wood Amenity Trail Phase 3
 Test Location: CBR-1
 Start depth of test (m): 0
 Tested By / on: DJ 11/03/2026

26KY101

Calc: DJ



Dynamic Cone Penetrometer Test; ASTM D6951



Irish Drilling Ltd., Site Investigation.

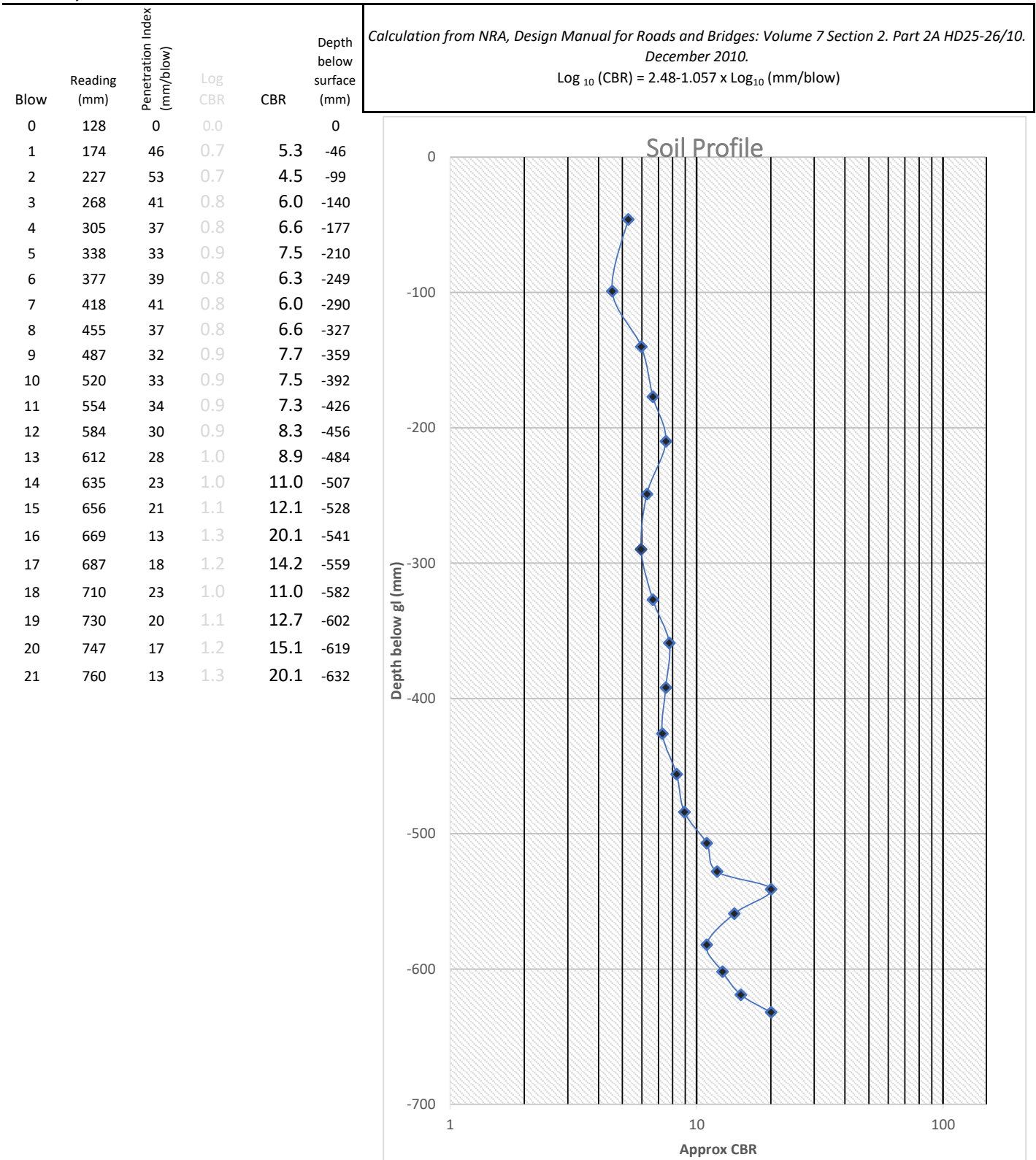
Site: Ballyseedy Wood Amenity Trail Phase 3
 Test Location: CBR-2
 Start depth of test (m): 0
 Tested By / on: DJ 11/03/2026

26KY101

Calc: DJ



Dynamic Cone Penetrometer Test; ASTM D6951



Irish Drilling Ltd., Site Investigation.

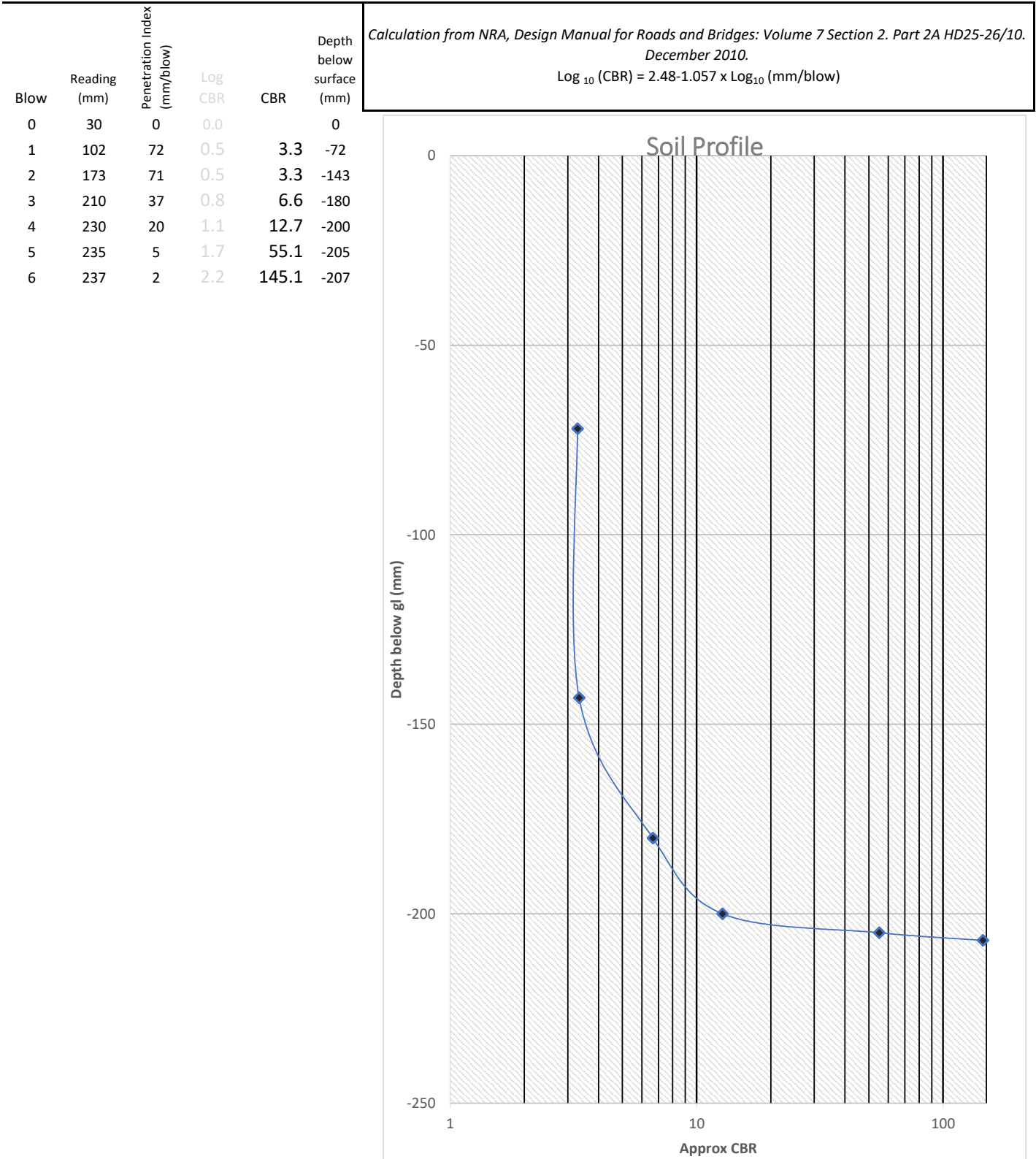
Site: Ballyseedy Wood Amenity Trail Phase 3
 Test Location: CBR-3
 Start depth of test (m): 0
 Tested By / on: DJ 11/03/2026

26KY101

Calc: DJ



Dynamic Cone Penetrometer Test; ASTM D6951



Irish Drilling Ltd., Site Investigation.

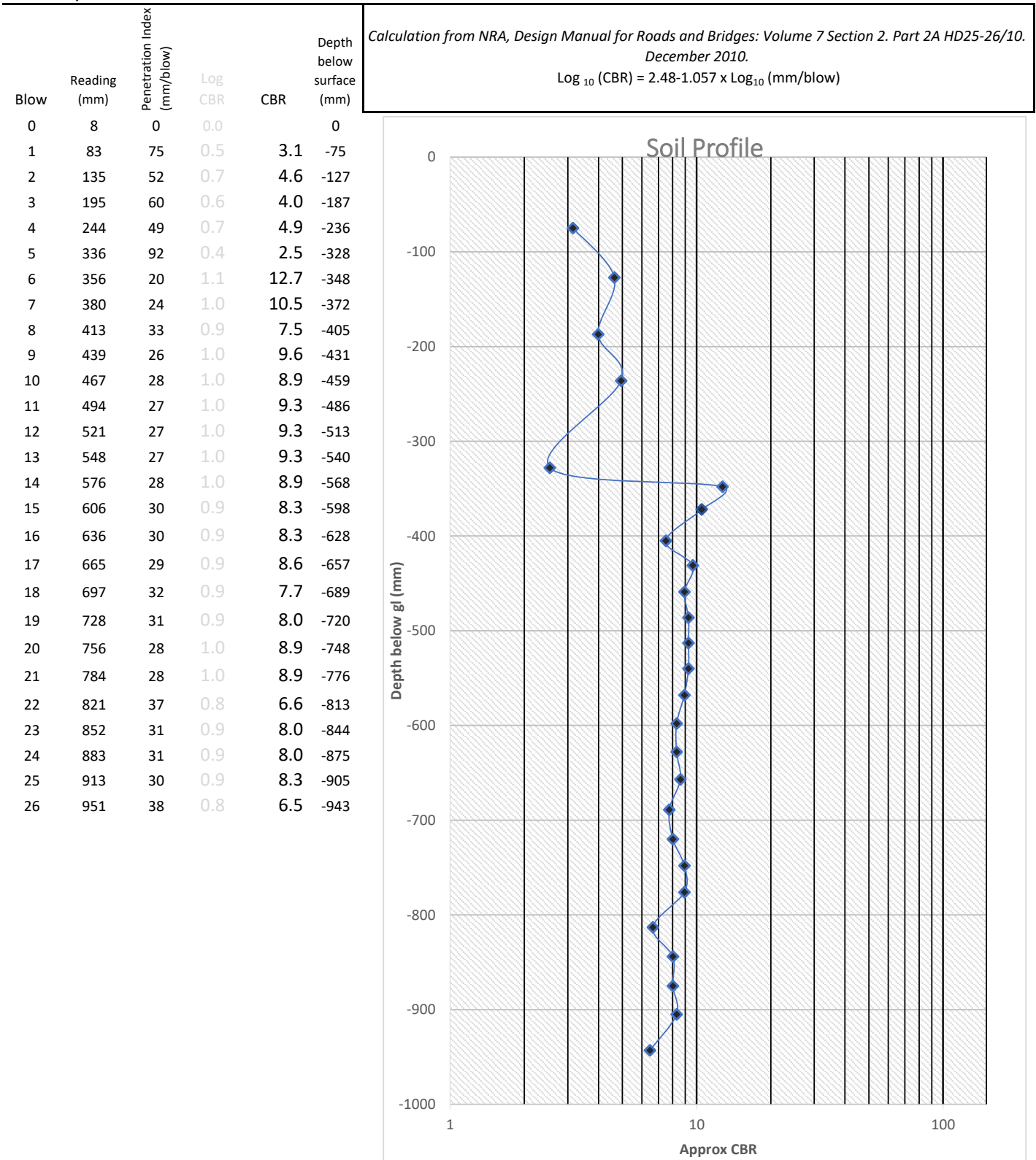
Site: Ballyseedy Wood Amenity Trail Phase 3
 Test Location: CBR-4
 Start depth of test (m): 0
 Tested By / on: DJ 11/03/2026

26KY101

Calc: DJ



Dynamic Cone Penetrometer Test; ASTM D6951



Irish Drilling Ltd., Site Investigation.

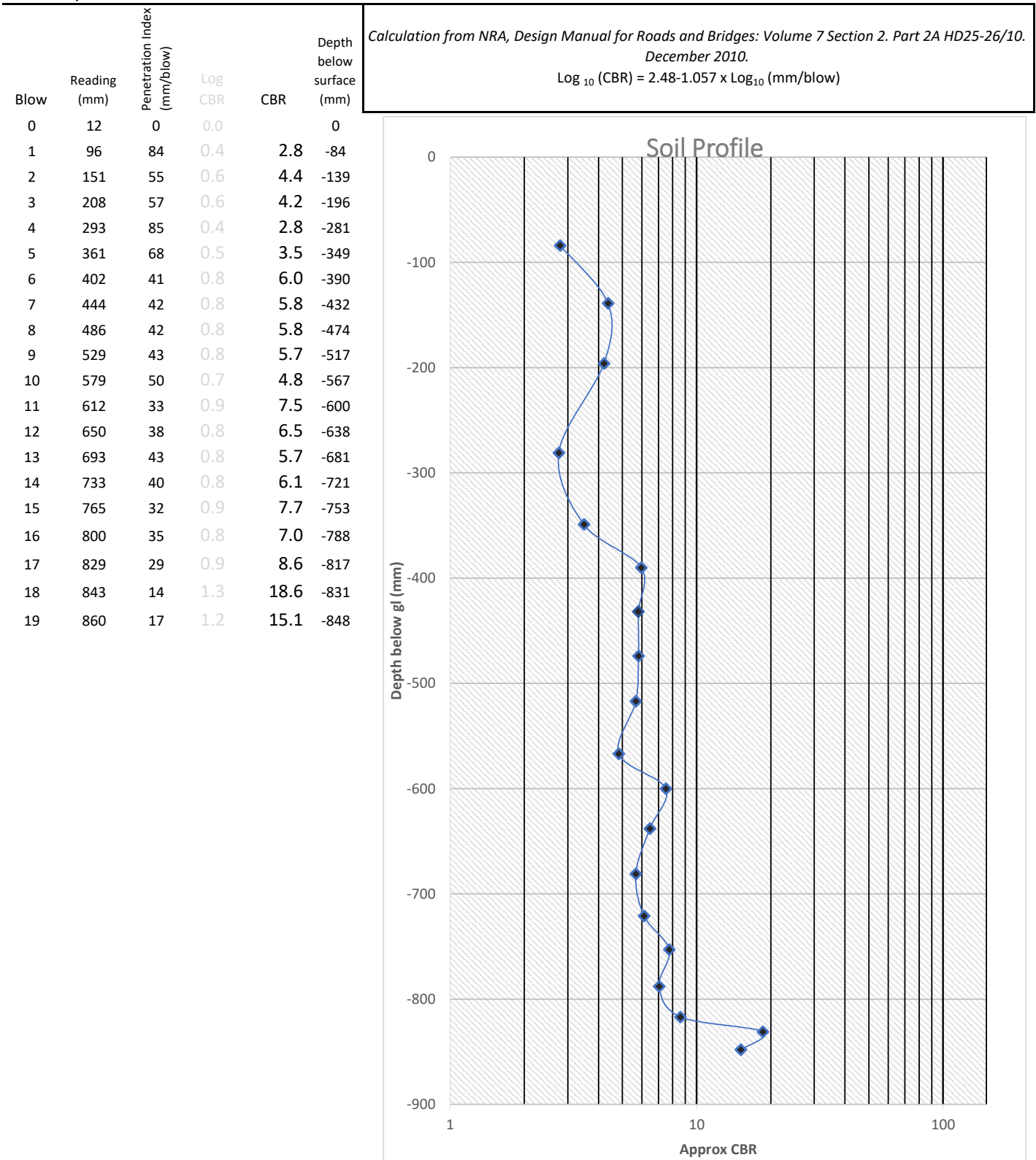
Site: Ballyseedy Wood Amenity Trail Phase 3
 Test Location: CBR-5
 Start depth of test (m): 0
 Tested By / on: DJ 11/03/2026

26KY101

Calc: DJ



Dynamic Cone Penetrometer Test; ASTM D6951



APPENDIX 3

PHOTOGRAPHS













Ballyseedy Greenway. W1



Ballyseedy Greenway. W2



Ballyseedy Greenway. W3



Ballyseedy Greenway. W4



Ballyseedy Greenway. W5



Ballyseedy Greenway. W6



Ballyseedy Greenway. W7