

APPENDIX A

Ground Investigation Dynamic Cone Penetration Results

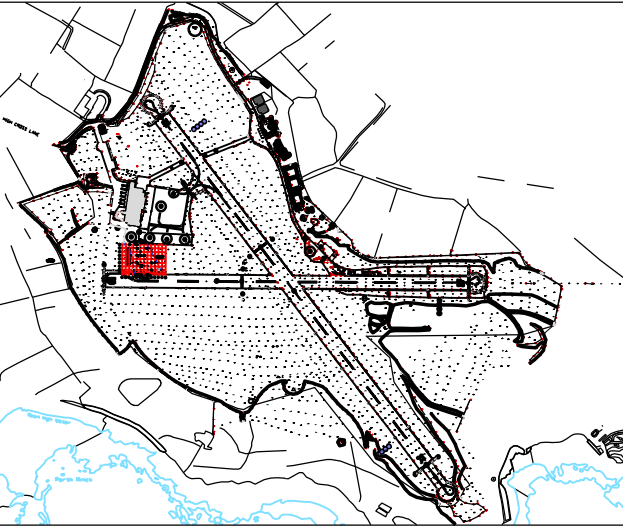


This drawing is © pdp Green Consulting Ltd.
Notes.

1. This drawing is to be read in conjunction with drawings, details and specifications issued for construction purposes as appropriate.
2. The Contractor is responsible for all dimensions and for the correct setting out of the work on site. Only figured dimensions are to be used. Any discrepancies are to be reported before proceeding.
3. All materials and workmanship to comply with current British Standards and Codes of Practice.
4. This drawing is not to be used for construction unless marked in the drawing status box "FOR CONSTRUCTION".
5. The user of the designs and details represented by this document are recommended to ensure that they are fully conversant with the Construction (Design and Management) Regulations 2015 in respect of any construction activities for which this document may be used.

If the user of this document has any doubts as to their statutory obligations in this regard, they should contact pdp Green, on 01872 265400 and ask for the Health and Safety Advisor.

Location Plan



Key

- * - DID NOT HIT REFUSAL
- ! - CABLES DETECTED
- - UNDERGROUND SERVICES
- ◇ - DYNAMIC CONE PENETRATIONS
- - DEPTH TO REFUSALS
- TP - TRIAL PIT LOCATIONS

-	10.12.2019	First Issue	NJL	WS
Rev:	Date:	Amendments:	By:	Q.A:

FOR APPROVAL

Project Leader:	Designer:	Assistant:
DH	WS	NJL

Drawing: **Site Investigation
Proposed
Taxiway Plan**

Client: **Council of the
Isles of Scilly**

Job Title: **Isle of Scilly Airport
New Taxiway**

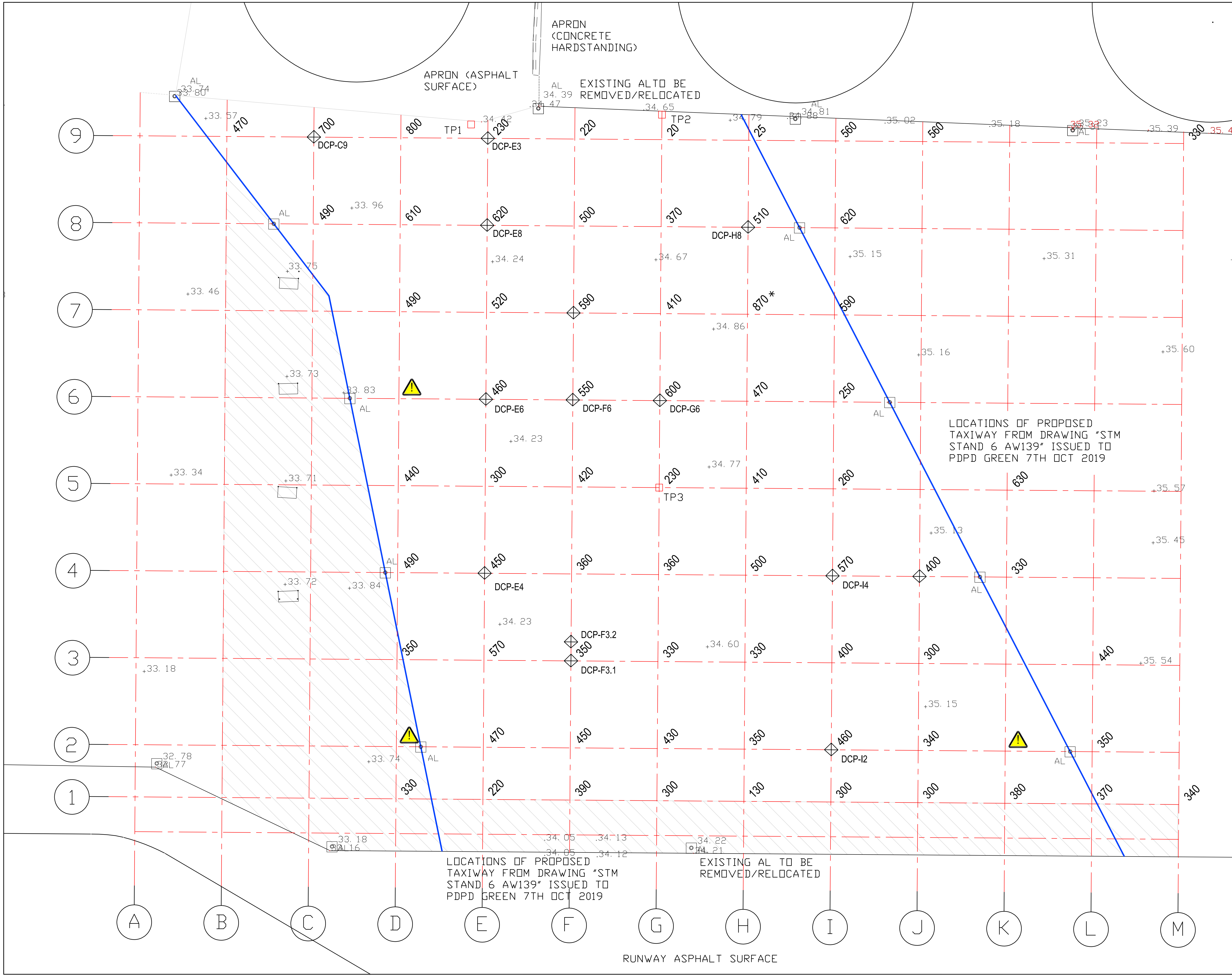
Date: November 2019 Scale: 1:100 @ A1

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Architecture, Structural and Civil Engineering

Job No: J19-090 Dwg No: 3100 Rev: -



PDP Green Consulting Ltd



Dynamic Cone Penetrometer

Drw Ref. DCP-C9

Site: St Mary's Airport

Job No. J19-090

Client: Council of the Isles of Scilly

Grid Ref. C9

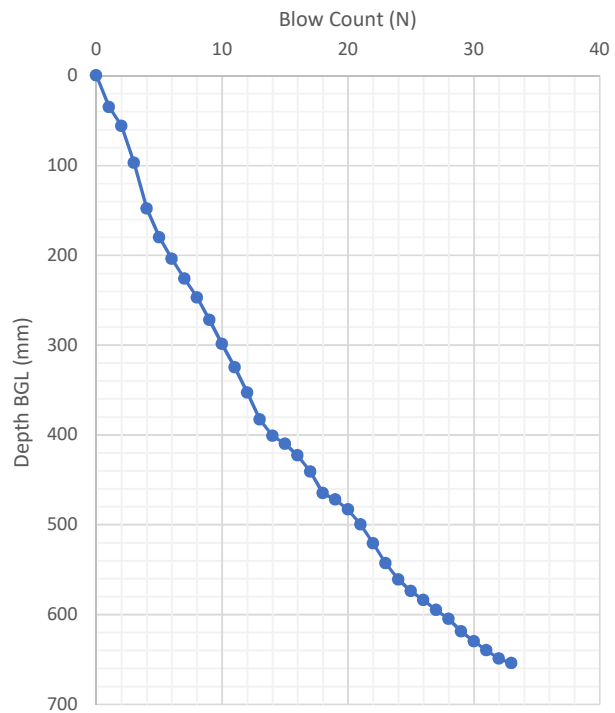
Location: St Mary's, Isles of Scilly

Date: 11/11/2019

Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	100	0	0	0
1	135	35	35	7.05
2	156	56	21	12.09
3	197	97	41	5.96
4	248	148	51	4.73
5	280	180	32	7.75
6	304	204	24	10.50
7	326	226	22	11.51
8	347	247	21	12.09
9	372	272	25	10.05
10	399	299	27	9.27
11	425	325	26	9.65
12	453	353	28	8.92
13	483	383	30	8.29
14	501	401	18	14.23
15	510	410	9	29.61
16	523	423	13	20.07
17	541	441	18	14.23
18	565	465	24	10.50
19	572	472	7	38.61
20	583	483	11	23.95
21	600	500	17	15.12
22	621	521	21	12.09
23	643	543	22	11.51
24	661	561	18	14.23
25	674	574	13	20.07
26	684	584	10	26.49
27	695	595	11	23.95
28	705	605	10	26.49
29	719	619	14	18.56
30	730	630	11	23.95
31	740	640	10	26.49
32	749	649	9	29.61
33	754	654	5	55.10
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DCP-C9 Results



CBR Values calculated using the TRL Equation:

$$\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.400	9.43
0.400 - 0.654	22.74

Tested:	Checked:	Approved:
WS/DH		

PDP Green Consulting Ltd

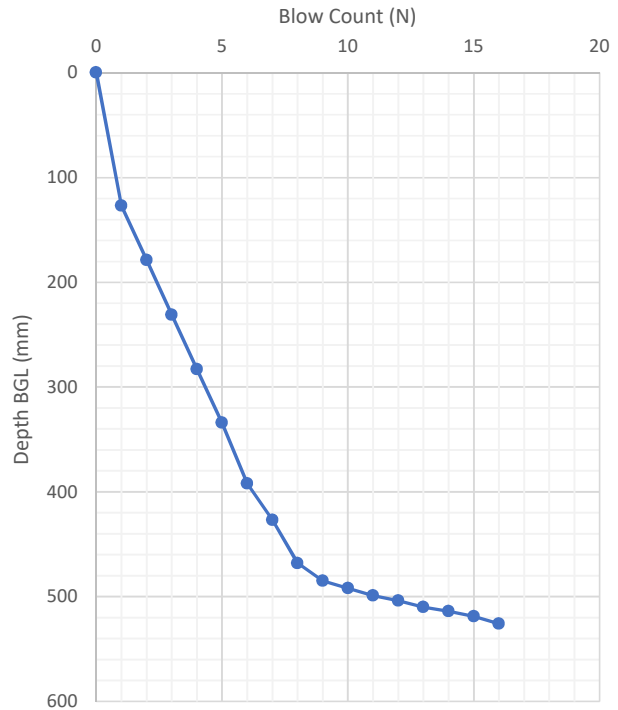


Dynamic Cone Penetrometer

Drw Ref. DCP-E3	Site: St Mary's Airport	Job No. J19-090	Client: Council of the Isles of Scilly
Grid Ref. E3	Location: St Mary's, Isles of Scilly	Date: 11/11/2019	Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	93	0	0	0
1	220	127	127	1.80
2	272	179	52	4.64
3	324	231	52	4.64
4	376	283	52	4.64
5	427	334	51	4.73
6	485	392	58	4.13
7	520	427	35	7.05
8	561	468	41	5.96
9	578	485	17	15.12
10	585	492	7	38.61
11	592	499	7	38.61
12	597	504	5	55.10
13	603	510	6	45.45
14	607	514	4	69.76
15	612	519	5	55.10
16	619	526	7	38.61
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DCP-E3 Results



CBR Values calculated using the TRL Equation:

$$\log_{10}(\text{CBR}) = 2.48 - 1.057 \times \log_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.485	5.86
0.485 - 0.526	44.55

Tested:	Checked:	Approved:
WS/DH		

PDP Green Consulting Ltd

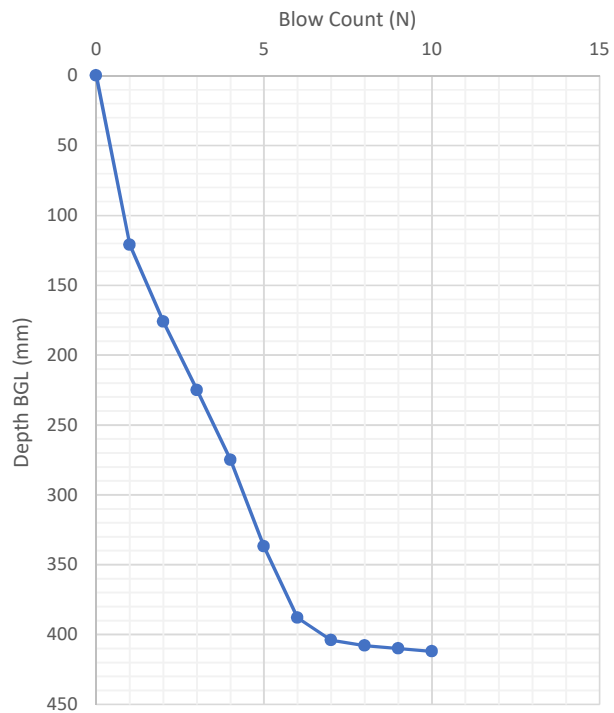


Dynamic Cone Penetrometer

Drw Ref. DCP-E6	Site: St Mary's Airport	Job No. J19-090	Client: Council of the Isles of Scilly
Grid Ref. E6	Location: St Mary's, Isles of Scilly	Date: 11/11/2019	Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	86	0	0	0
1	207	121	121	1.90
2	262	176	55	4.37
3	311	225	49	4.94
4	361	275	50	4.83
5	423	337	62	3.85
6	474	388	51	4.73
7	490	404	16	16.12
8	494	408	4	69.76
9	496	410	2	145.15
10	498	412	2	145.15
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DCP-E6 Results



CBR Values calculated using the TRL Equation:

$$\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.388	4.10
0.388 - 0.412	76.18

Tested:	Checked:	Approved:
WS/DH		

PDP Green Consulting Ltd

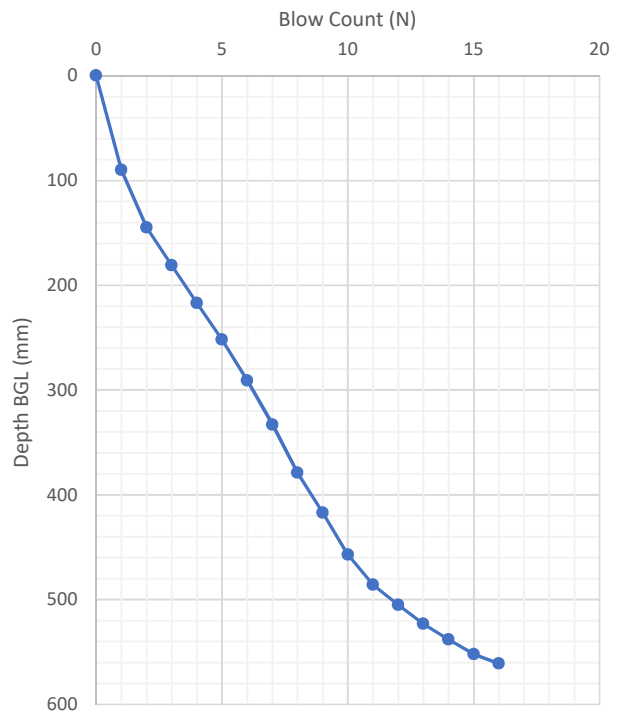


Dynamic Cone Penetrometer

Drw Ref. DCP-E8	Site: St Mary's Airport	Job No. J19-090	Client: Council of the Isles of Scilly
Grid Ref. E8	Location: St Mary's, Isles of Scilly	Date: 11/11/2019	Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	93	0	0	0
1	183	90	90	2.60
2	238	145	55	4.37
3	274	181	36	6.84
4	310	217	36	6.84
5	345	252	35	7.05
6	384	291	39	6.28
7	426	333	42	5.81
8	472	379	46	5.28
9	510	417	38	6.46
10	550	457	40	6.12
11	579	486	29	8.59
12	598	505	19	13.44
13	616	523	18	14.23
14	631	538	15	17.25
15	645	552	14	18.56
16	654	561	9	29.61
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DCP-E8 Results



CBR Values calculated using the TRL Equation:

$$\log_{10}(\text{CBR}) = 2.48 - 1.057 \times \log_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.486	6.02
0.486 - 0.561	16.95

Tested:	Checked:	Approved:
WS/DH		

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Dynamic Cone Penetrometer

Drw Ref. DCP-F3.1

Site: St Mary's Airport

Job No. J19-090

Client: Council of the Isles of Scilly

Grid Ref. F3.1

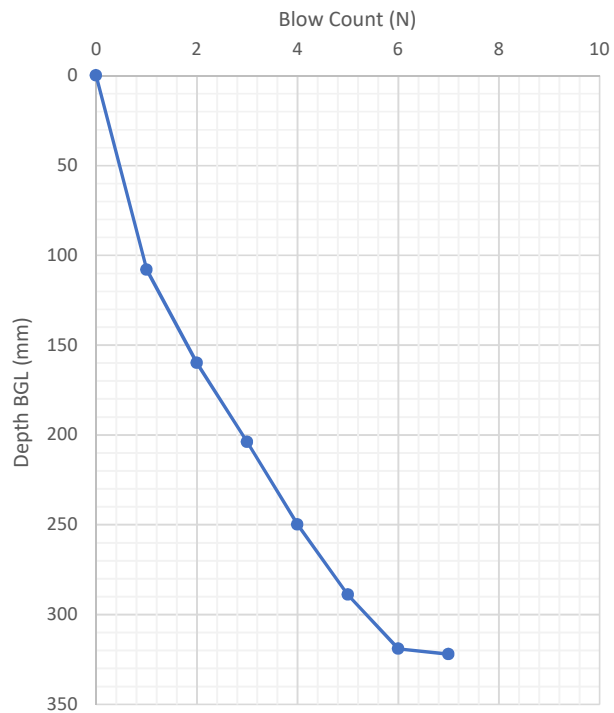
Location: St Mary's, Isles of Scilly

Date: 11/11/2019

Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	83	0	0	0
1	191	108	108	2.14
2	243	160	52	4.64
3	287	204	44	5.53
4	333	250	46	5.28
5	372	289	39	6.28
6	402	319	30	8.29
7	405	322	3	94.55
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DCP-F3.1 Results



CBR Values calculated using the TRL Equation:

$$\log_{10}(\text{CBR}) = 2.48 - 1.057 \times \log_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.319	5.36
0.319 - 0.322	51.42

Tested:	Checked:	Approved:
WS/DH		

PDP Green Consulting Ltd



Dynamic Cone Penetrometer

Drw Ref. DCP-F3.2

Site: St Mary's Airport

Job No. J19-090

Client: Council of the Isles of Scilly

Grid Ref. F3.2

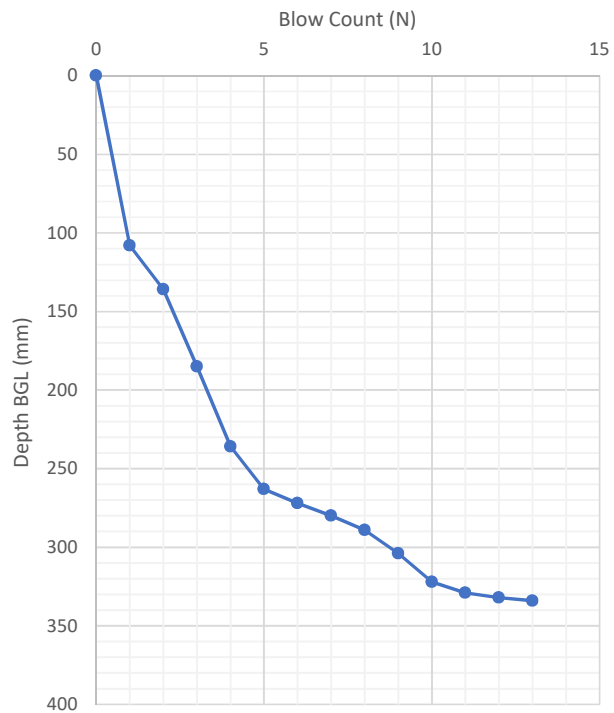
Location: St Mary's, Isles of Scilly

Date: 11/11/2019

Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	90	0	0	0
1	198	108	108	2.14
2	226	136	28	8.92
3	275	185	49	4.94
4	326	236	51	4.73
5	353	263	27	9.27
6	362	272	9	29.61
7	370	280	8	33.53
8	379	289	9	29.61
9	394	304	15	17.25
10	412	322	18	14.23
11	419	329	7	38.61
12	422	332	3	94.55
13	424	334	2	145.15
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DCP-F3.2 Results



CBR Values calculated using the TRL Equation:

$$\log_{10}(\text{CBR}) = 2.48 - 1.057 \times \log_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.263	6.00
0.263 - 0.334	45.76

Tested:	Checked:	Approved:
WS/DH		

PDP Green Consulting Ltd



Dynamic Cone Penetrometer

Drw Ref. DCP-F6

Site: St Mary's Airport

Job No. J19-090

Client: Council of the Isles of Scilly

Grid Ref. F6

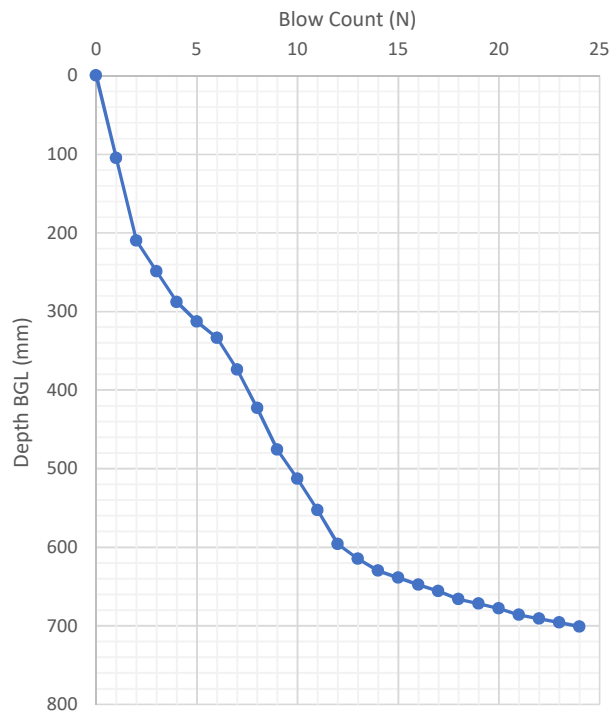
Location: St Mary's, Isles of Scilly

Date: 11/11/2019

Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	79	0	0	0
1	184	105	105	2.21
2	223	210	105	2.21
3	262	249	39	6.28
4	287	288	39	6.28
5	308	313	25	10.05
6	348	334	21	12.09
7	397	374	40	6.12
8	450	423	49	4.94
9	487	476	53	4.54
10	527	513	37	6.64
11	570	553	40	6.12
12	589	596	43	5.67
13	604	615	19	13.44
14	613	630	15	17.25
15	622	639	9	29.61
16	630	648	9	29.61
17	640	656	8	33.53
18	646	666	10	26.49
19	652	672	6	45.45
20	660	678	6	45.45
21	665	686	8	33.53
22	670	691	5	55.10
23	675	696	5	55.10
24	680	701	5	55.10
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DCP-F6 Results



CBR Values calculated using the TRL Equation:

$$\log_{10}(\text{CBR}) = 2.48 - 1.057 \times \log_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.288	4.25
0.288 - 0.596	6.94
0.596 - 0.701	34.26

Tested:	Checked:	Approved:
WS/DH		

PDP Green Consulting Ltd



Dynamic Cone Penetrometer

Drw Ref. DCP-G6

Site: St Mary's Airport

Job No. J19-090

Client: Council of the Isles of Scilly

Grid Ref. G6

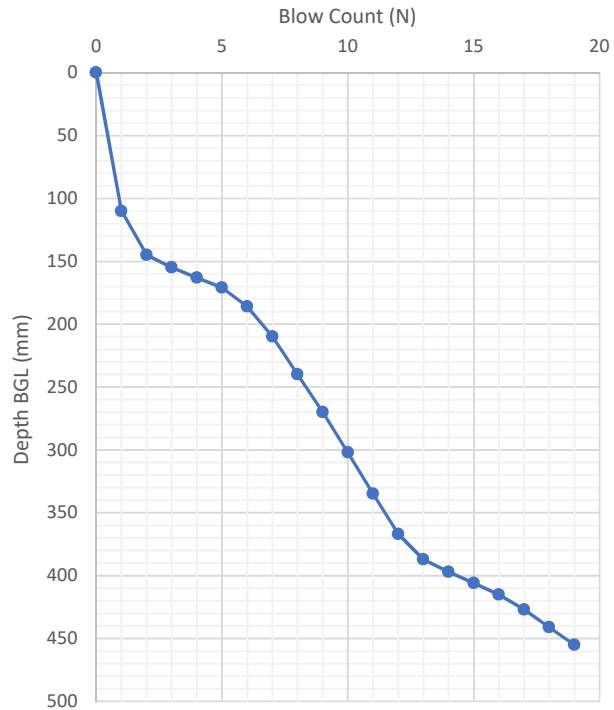
Location: St Mary's, Isles of Scilly

Date: 11/11/2019

Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	75	0	0	0
1	185	110	110	2.10
2	220	145	35	7.05
3	230	155	10	26.49
4	238	163	8	33.53
5	246	171	8	33.53
6	261	186	15	17.25
7	285	210	24	10.50
8	315	240	30	8.29
9	345	270	30	8.29
10	377	302	32	7.75
11	410	335	33	7.50
12	442	367	32	7.75
13	462	387	20	12.73
14	472	397	10	26.49
15	481	406	9	29.61
16	490	415	9	29.61
17	502	427	12	21.84
18	516	441	14	18.56
19	530	455	14	18.56
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DCP-G6 Results



CBR Values calculated using the TRL Equation:

$$\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.186	19.99
0.186 - 0.387	10.01
0.387 - 0.455	22.48

Tested:	Checked:	Approved:
WS/DH		

PDP Green Consulting Ltd

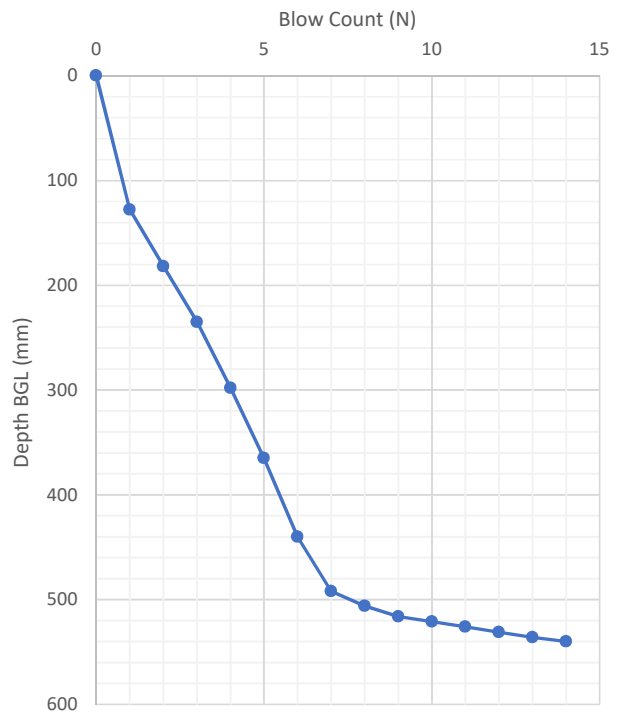


Dynamic Cone Penetrometer

Drw Ref. DCP-H8	Site: St Mary's Airport	Job No. J19-090	Client: Council of the Isles of Scilly
Grid Ref. H8	Location: St Mary's, Isles of Scilly	Date: 11/11/2019	Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	94	0	0	0
1	222	128	128	1.79
2	276	182	54	4.46
3	329	235	53	4.54
4	392	298	63	3.79
5	459	365	67	3.55
6	534	440	75	3.15
7	586	492	52	4.64
8	600	506	14	18.56
9	610	516	10	26.49
10	615	521	5	55.10
11	620	526	5	55.10
12	625	531	5	55.10
13	630	536	5	55.10
14	634	540	4	69.76
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DCP-H8 Results



CBR Values calculated using the TRL Equation:

$$\log_{10}(\text{CBR}) = 2.48 - 1.057 \times \log_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.492	3.70
0.492 - 0.540	42.48

Tested:	Checked:	Approved:
WS/DH		

PDP Green Consulting Ltd



Dynamic Cone Penetrometer

Drw Ref. DCP-I2

Site: St Mary's Airport

Job No. J19-090

Client: Council of the Isles of Scilly

Grid Ref. I2

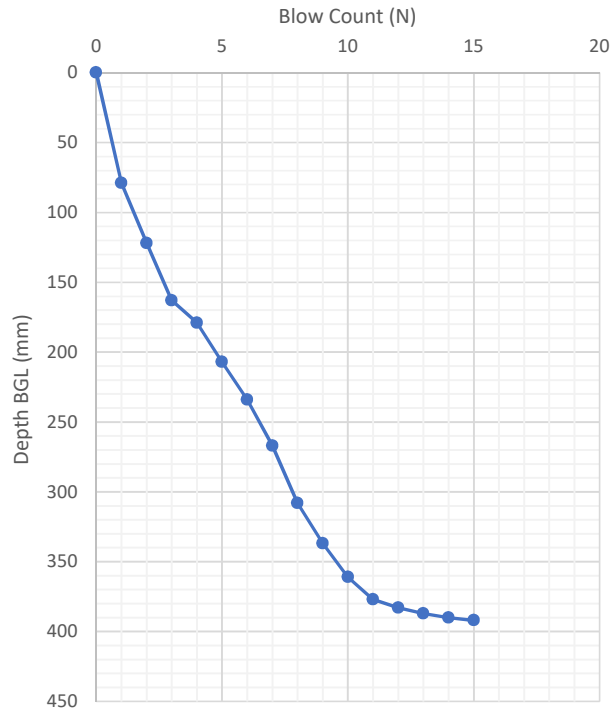
Location: St Mary's, Isles of Scilly

Date: 11/11/2019

Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	76	0	0	0
1	155	79	79	2.98
2	198	122	43	5.67
3	239	163	41	5.96
4	255	179	16	16.12
5	283	207	28	8.92
6	310	234	27	9.27
7	343	267	33	7.50
8	384	308	41	5.96
9	413	337	29	8.59
10	437	361	24	10.50
11	453	377	16	16.12
12	459	383	6	45.45
13	463	387	4	69.76
14	466	390	3	94.55
15	468	392	2	145.15
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DCP-I2 Results



CBR Values calculated using the TRL Equation:

$$\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.377	8.87
0.377 - 0.392	74.21

Tested:	Checked:	Approved:
WS/DH		

PDP Green Consulting Ltd

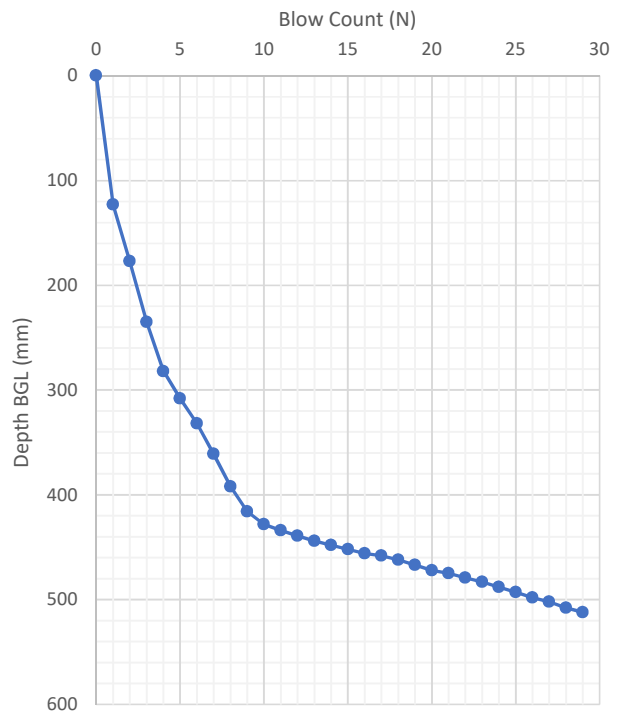


Dynamic Cone Penetrometer

Drw Ref. DCP-I4	Site: St Mary's Airport	Job No. J19-090	Client: Council of the Isles of Scilly
Grid Ref. I4	Location: St Mary's, Isles of Scilly	Date: 11/11/2019	Notes:

Blows (N)	DCP Reading	Depth (mm)	mm/blow	Equivalent CBR Value (%)
0	82	0	0	0
1	205	123	123	1.87
2	259	177	54	4.46
3	317	235	58	4.13
4	364	282	47	5.16
5	390	308	26	9.65
6	414	332	24	10.50
7	443	361	29	8.59
8	474	392	31	8.01
9	498	416	24	10.50
10	510	428	12	21.84
11	516	434	6	45.45
12	521	439	5	55.10
13	526	444	5	55.10
14	530	448	4	69.76
15	534	452	4	69.76
16	538	456	4	69.76
17	540	458	2	145.15
18	544	462	4	69.76
19	549	467	5	55.10
20	554	472	5	55.10
21	557	475	3	94.55
22	561	479	4	69.76
23	565	483	4	69.76
24	570	488	5	55.10
25	575	493	5	55.10
26	580	498	5	55.10
27	584	502	4	69.76
28	590	508	6	45.45
29	594	512	4	69.76
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DCP-I4 Results



CBR Values calculated using the TRL Equation:

$$\log_{10}(\text{CBR}) = 2.48 - 1.057 \times \log_{10}(\text{mm/Blow})$$

Depth (m)	Equivalent CBR Value (%)
0.000 - 0.416	6.98
0.416 - 0.512	62.23

Tested:	Checked:	Approved:
WS/DH		

Depth BGL (m)	Test Location	CBR Values (%)		
		Test Result	FOS	CBR for design use
0.2	C9	10.50	2	5.25
	E3	4.64	2	2.32
	E6	4.37	2	2.18
	E8	6.84	2	3.42
	F3.1	5.53	2	2.77
	F3.2	4.73	2	2.37
	F6	2.21	2	1.10
	G6	8.29	2	4.15
	H8	3.79	2	1.89
	I2	8.92	2	4.46
	I4	4.13	2	2.07
0.4	C9	14.23	2	7.11
	E3	4.13	2	2.07
	E6	16.12	2	8.06
	E8	6.46	2	3.23
	F3.1	Bedrock	2	-
	F3.2	Bedrock	2	-
	F6	4.94	2	2.47
	G6	26.49	2	13.24
	H8	3.15	2	1.57
	I2	Bedrock	2	-
	I4	8.01	2	4.00
0.6	C9	18.56	2	9.28
	E3	Bedrock	2	-
	E6	Bedrock	2	-
	E8	Terminated	2	-
	F3.1	Bedrock	2	-
	F3.2	Bedrock	2	-
	F6	5.67	2	2.83
	G6	Bedrock	2	-
	H8	Bedrock	2	-
	I2	Bedrock	2	-
	I4	Bedrock	2	-