

PROJECT: Pinewood Wind Farm		TRIALPIT: TP01
LOCATION: Co Laois		Sheet 1 of 1
CLIENT: Gaitech Energy Developments	Co-ordinates: E 650,336.9 N 682,107.0	Rig: Daewoo tracked excavator
ENGINEER: Gaitech Energy Developments		Rev: DRAFT
Ground level: 228.51m O.D.		DATE: 21.1.19

GROUNDWATER	PIT DIRECTION: 090-270		Shoring/Support: N/A Stability: Pit stable.
Water strikes: 1st: dry	PIT DIMENSION: 1.00 * 2.30m		
2nd: 3rd:	ROSE to after:		

Depth (m)	Date	Water	Samples	Depth (m)	In-situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION
0							228.36	0.15	TOPSOIL: Grass over firm dark brown slightly gravelly SILT. Gravel is fine.
									Firm orange mottled grey SILT.
1			B 1 D 2	1.20-1.50 1.20-1.50			227.61	0.90	Firm orange mottled grey gravelly SILT. Gravel is angular to subangular and flat fine to medium of shale. 1.00m to 1.50m: with lenses of wet bluish grey gravelly coarse sand. Gravel is angular to subrounded fine to medium.
						END	227.01	1.50	TP terminated at 1.50m bgl on REs instruction.
2									
3									
4									
5									

Remarks: TP dry on excavation. TP backfilled with arisings.	Scale: 1:25
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TRIAL PIT VANE & WL RISES - PINEWOOD WD TPS FILE 1 W COORDS JAN 29 2019.GPJ IRISHDRLLGDT 08/02/19

PROJECT: Pinewood Wind Farm		TRIALPIT: TP02
LOCATION: Co Laois		Sheet 1 of 1
CLIENT: Gaitech Energy Developments	Co-ordinates: E 650,317.9 N 682,215.6	Rig: Daewoo tracked excavator
ENGINEER: Gaitech Energy Developments		Rev: DRAFT
Ground level: 225.67m O.D.		DATE: 21.1.19

GROUNDWATER	PIT DIRECTION: 000-180		Shoring/Support: N/A Stability: Pit unstable. Sidewall collapse from 2.10m bgl.
Water strikes: 1st: 2.60m Rose to after:	PIT DIMENSION: 1.50 * 3.40m		
2nd: 3rd:	LOGGED BY: MM		

Depth (m)	Date	Water	Samples	Depth (m)	In-situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION
0									TOPSOIL: Grass over firm dark brown slightly sandy slightly gravelly SILT.
							225.47	0.20	Firm grey mottled orange slightly sandy gravelly SILT. Gravel is rounded to subrounded fine to medium.
1			B 1 D 2	0.90-1.30 0.90-1.30			224.27	1.40	Bluish grey silty gravelly SAND. Gravel is rounded to subangular and flat fine to coarse.
			B 3 D 4	1.40-1.60 1.40-1.60			223.57	2.10	Stiff pinkish grey slightly sandy gravelly SILT interbedded with lenses of wet clayey fine sand.
2			B 5 D 6	2.10-2.50 2.10-2.50			222.67	3.00	TP terminated at 3.00m bgl on REs instruction.
3						END			
4									
5									

Remarks: Ingress of water at 2.60m bgl. TP backfilled with arisings.	Scale: 1:25
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TRIAL PIT VANE & WL RISES PINWOOD WD TPS FILE 1 W COORDS JAN 29 2019.GPJ IRISHDRLLGDT 08/02/19

PROJECT: Pinewood Wind Farm		TRIALPIT: TP03
LOCATION: Co Laois		Sheet 1 of 1
CLIENT: Gaitech Energy Developments	Co-ordinates: E 650,316.4 N 682,298.4	Rig: Daewoo tracked excavator
ENGINEER: Gaitech Energy Developments		Rev: DRAFT
Ground level: 224.67m O.D.		DATE: 21.1.19

GROUNDWATER	PIT DIRECTION: 000-180		Shoring/Support: N/A Stability: Pit unstable. Sidewall collapse from 3.50m bgl.
Water strikes: 1st: 2.40m 2nd: 4.00m 3rd:	PIT DIMENSION: 1.50 * 3.00m		
Rose to after:	LOGGED BY: MM		

Depth (m)	Date	Water	Samples	Depth (m)	In-situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION
0									Grass and rushes over firm brown mottled orange slightly sandy gravelly SILT. Gravel is rounded to subrounded fine to medium.
1			B 1 D 2	1.30-1.50 1.30-1.50					1.30m: mottled bluish grey.
2		↓	B 3 D 4	2.40-2.60 2.40-2.60			222.17	2.50	Wet light brown gravelly sandy SILT with cobbles.
3							221.67	3.00	Wet pinkish brown silty sandy angular to subangular fine to medium shale GRAVEL with cobbles. Sand is medium to coarse. Cobbles are flat to subrounded of shale.
4		↓	B 5 W	3.50-4.00 4.00			220.67	4.00	TP terminated at 4.00m bgl on REs instruction.
5						END			

Remarks: Moderate ingress of water at 2.40m bgl. Rapid ingress of water at 4.00m bgl. TP backfilled with arisings.	Scale: 1:25
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TRIAL PIT VANE & WL RISES - PINEWOOD WD TPS FILE 1 W COORDS JAN 29 2019.GPJ IRISHDRLLGDT 08/02/19

PROJECT: Pinewood Wind Farm		TRIALPIT: TP04
LOCATION: Co Laois		Sheet 1 of 1
CLIENT: Gaitech Energy Developments	Co-ordinates: E 650,401.6 N 682,226.2	Rig: Daewoo tracked excavator
ENGINEER: Gaitech Energy Developments		Rev: DRAFT
Ground level: 232.71m O.D.		DATE: 21.1.19

GROUNDWATER	PIT DIRECTION: 220-040		Shoring/Support: N/A Stability: Pit stable.
Water strikes: 1st: dry 2nd: 3rd:	PIT DIMENSION: 1.50 * 3.00m		
Rose to after:	LOGGED BY: MM		

Depth (m)	Date	Water	Samples	Depth (m)	In-situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION
0									TOPSOIL: Grass over firm grey SILT.
							232.41	0.30	Firm orange mottled grey slightly sandy slightly gravelly SILT.
1			B 1 D 2	0.70-1.00 0.70-1.00					
			B 3 D 4	1.40-1.70 1.40-1.70			231.31	1.40	Stiff damp dark brown slightly sandy gravelly SILT with cobbles. Gravel is angular to subangular fine to medium. Cobbles are of shale.
2									
			B 5 D 6	2.70-3.00 2.70-3.00			230.01	2.70	Wet pinkish brown slightly sandy silty very angular to subangular fine to medium GRAVEL.
3									
						END	229.21	3.50	TP terminated at 3.50m bgl - obstruction.
4									
5									

Remarks: TP dry on excavation. TP backfilled with arisings.	Scale: 1:25
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TRIAL PIT VANE & WL RISES - PINEWOOD WD TPS FILE 1 W COORDS JAN 29 2019.GPJ IRISHDRLLGDT 08/02/19

PROJECT: Pinewood Wind Farm		TRIALPIT: TP05
LOCATION: Co Laois		Sheet 1 of 1
CLIENT: Gaitech Energy Developments	Co-ordinates: E 650,298.8 N 682,417.4	Rig: Daewoo tracked excavator
ENGINEER: Gaitech Energy Developments		Rev: DRAFT
Ground level: 227.03m O.D.		DATE: 21.1.19

GROUNDWATER	PIT DIRECTION: 320-140		Shoring/Support: N/A Stability: Pit stable.
Water strikes: 1st: dry 2nd: 3rd:	PIT DIMENSION: 1.60 * 3.00m		
Rose to after:	LOGGED BY: MM		

Depth (m)	Date	Water	Samples	Depth (m)	In-situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION
0									TOPSOIL: Grass and rushes over firm dark grey SILT.
			B 1 D 2	0.30-0.50 0.30-0.50			226.73	0.30	Firm greyish brown mottled orange slightly sandy slightly gravelly SILT.
1			B 3 D 4	1.50-1.80 1.50-1.80			225.53	1.50	Stiff dark pinkish grey slightly sandy SILT with pockets of very soft silt.
2			B 5	2.20-2.50			224.83	2.20	Wet pinkish grey slightly sandy gravelly SILT. Gravel is subangular to angular fine to medium.
3							224.33	2.70	Wet pinkish grey silty angular to subangular fine to medium GRAVEL.
4						END	223.53	3.50	TP terminated at 3.50m bgl - obstruction.

Remarks: TP dry on excavation. TP backfilled with arisings.	Scale: 1:25
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TRIAL PIT VANE & WL RISES - PINEWOOD WD TPS FILE 1 W COORDS JAN 29 2019.GPJ IRISHDRLL_GDT 08/02/19

PROJECT: Pinewood Wind Farm		TRIALPIT: TP06
LOCATION: Co Laois		Sheet 1 of 1
CLIENT: Gaitech Energy Developments	Co-ordinates: E 650,376.9 N 682,425.0	Rig: Daewoo tracked excavator
ENGINEER: Gaitech Energy Developments		Rev: DRAFT
Ground level: 237.96m O.D.		DATE: 21.1.19

GROUNDWATER	PIT DIRECTION: 000-180		Shoring/Support: N/A Stability: Pit stable.
Water strikes: 1st: dry 2nd: 3rd:	PIT DIMENSION: 1.50 * 2.80m		
Rose to after:	LOGGED BY: MM		

Depth (m)	Date	Water	Samples	Depth (m)	In-situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION
0							237.76	0.20	TOPSOIL: Grass and rushes over firm dark grey SILT.
									Firm brownish orange silty CLAY.
			B 1	0.70-1.30			237.26	0.70	Greyish brown silty sandy subangular to angular shale GRAVEL.
1							236.66	1.30	Possible weathered SHALE rock. Recovered as angular to subangular cobble and boulder sized clasts of shale with orangish brown sandy silt.
2							235.56	2.40	TP terminated at 2.40m bgl - obstruction.
						END			
3									
4									
5									

Remarks: TP dry on excavation. TP backfilled with arisings.	Scale: 1:25
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TRIAL PIT VANE & WL RISES - PINEWOOD WD TPS FILE 1 W COORDS JAN 29 2019.GPJ IRISHDRLLGDT 08/02/19

PROJECT: Pinewood Wind Farm		TRIALPIT: TP07
LOCATION: Co Laois		Sheet 1 of 1
CLIENT: Gaitech Energy Developments	Co-ordinates: E 650,389.9 N 682,352.5	Rig: Daewoo tracked excavator
ENGINEER: Gaitech Energy Developments		Rev: DRAFT
Ground level: 233.95m O.D.		DATE: 21.1.19

GROUNDWATER	PIT DIRECTION: 090-270		Shoring/Support: N/A Stability: Pit stable.
Water strikes: 1st: dry 2nd: 3rd:	PIT DIMENSION: 1.30 * 2.50m		
Rose to after:	LOGGED BY: MM		

Depth (m)	Date	Water	Samples	Depth (m)	In-situ Vane Tests	LEGEND	Elevation m O.D.	Depth (m)	DESCRIPTION
0							233.65	0.30	TOPSOIL: Firm light brown SILT.
									Stiff brown mottled greyish orange slightly sandy slightly gravelly SILT with cobbles. Gravel is angular to subangular and flat of shale. Cobbles are angular to subangular.
1									1.20m damp light brownish orange.
2			B 1 D 2	1.70-1.90 1.70-1.90			231.65	2.30	Possible weathered SHALE rock. Recovered as wet angular to subangular fine to medium gravel sized clasts of shale with brownish orange and bluish grey silty sand.
3						END	230.95	3.00	TP terminated at 3.00m bgl - obstruction.
4									
5									

Remarks: TP wet from 2.30m bgl. TP backfilled with arisings.	Scale: 1:25
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TRIAL PIT VANE & WL RISES - PINEWOOD WD TPS FILE 1 W COORDS JAN 29 2019.GPJ IRISHDRLL.GDT 08/02/19

Irish Drilling Ltd: Trial Pit Photos:



Figure 1 H:\2019LS102_Pinewood\Pictures\TP-1 (1).JPG



Figure 4 H:\2019LS102_Pinewood\Pictures\TP-2 (2).JPG



Figure 2 H:\2019LS102_Pinewood\Pictures\TP-1 (2).JPG



Figure 5 H:\2019LS102_Pinewood\Pictures\TP-3 (1).JPG



Figure 3 H:\2019LS102_Pinewood\Pictures\TP-2 (1).JPG



Figure 6 H:\2019LS102_Pinewood\Pictures\TP-3 (2).JPG

Irish Drilling Ltd: Trial Pit Photos:



Figure 7 H:\2019LS102_Pinewood\Pictures\TP-4 (1).JPG



Figure 10 H:\2019LS102_Pinewood\Pictures\TP-5 (2).JPG



Figure 8 H:\2019LS102_Pinewood\Pictures\TP-4 (2).JPG



Figure 11 H:\2019LS102_Pinewood\Pictures\TP-6 (1).JPG



Figure 9 H:\2019LS102_Pinewood\Pictures\TP-5 (1).JPG



Figure 12 H:\2019LS102_Pinewood\Pictures\TP-6 (2).JPG

Irish Drilling Ltd: Trial Pit Photos:



Figure 13 H:\2019LS102_Pinewood\Pictures\TP-7 (1).JPG



Figure 14 H:\2019LS102_Pinewood\Pictures\TP-7 (2).JPG



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DYNAMIC PROBE LOG

Project Pinewood Wind Farm			Location Co Laois		PROBE No DPTP01
Job No 2019LS102	Date 21-01-19 21-01-19	Ground Level (m OD) 228.51	Co-Ordinates () E 650,336.9 N 682,107.0		
Engineer Galetech Energy Developments				Sheet Rev. DRAFT1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1								
1	2								
1	3								
1	4								
1	8								
1	8								
1	6								
1	7								
1	6								
1	4								
1	2								
1	3								
2	2								
2	10								
2	9								
2	11								
2	24								
2	18								
2	26								Refusal. 26 blows for 0mm.
3									
4									
5									
6									
7									

AGS3 DYNAMIC PROBE PINEWOOD WD DPS FILE 1.W COORDS JAN 29 2019.GPJ AGS 3.1.GDT 08/02/19

Hammer Wt (kg)	50	GENERAL REMARKS DP terminated at 2.40m bgl.
Hammer Drop (mm)	500	
Cone Dia (mm)	40	
Cone Type		
Damper		

All dimensions in metres Scale 1:50	Client: Galetech Energy Developments	Method/ Plant Used DPH Rig	Bit Design	Driller MM	Logged By MM
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DYNAMIC PROBE LOG

Project Pinewood Wind Farm			Location Co Laois		PROBE No DPTP02
Job No 2019LS102	Date 21-01-19 21-01-19	Ground Level (m OD) 225.67	Co-Ordinates () E 650,317.9 N 682,215.6		
Engineer Galetech Energy Developments				Sheet Rev. DRAFT 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1								
1	2								
2	3								
3	4								
4	5								
5	6								
6	7								
7	8								
8	9								
9	10								
10	11								
11	12								
12	13								
13	14								
14	15								
15	16								
16	17								
17	18								
18	19								
19	20								
20	21								
21	22								
22	23								
23	24								
24	25								Refusal. 25 blows for 0mm.

AGS3 DYNAMIC PROBE PINEWOOD WD DPS FILE 1.W COORDS JAN 29 2019.GPJ AGS 3.1.GDT 08/02/19

Hammer Wt (kg)	50	GENERAL REMARKS DP terminated at 6.60m bgl.
Hammer Drop (mm)	500	
Cone Dia (mm)	40	
Cone Type		
Damper		

All dimensions in metres Scale 1:50	Client: Galetech Energy Developments	Method/ Plant Used DPH Rig	Bit Design	Driller MM	Logged By MM
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DYNAMIC PROBE LOG

Project Pinewood Wind Farm			Location Co Laois		PROBE No DPTP03
Job No 2019LS102	Date 21-01-19 21-01-19	Ground Level (m OD) 224.67	Co-Ordinates () E 650,316.4 N 682,298.4		
Engineer Galetech Energy Developments				Sheet Rev. DRAFT 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1								
	3								
	4								
	4								
1	2								
	2								
	1								
	2								
	1								
	2								
2	3								
	3								
	9								
	10								
	4								
	4								
	4								
3	5								
	8								
	8								
	4								
	14								
	15								
	11								
	21								
4	16								
	9								
	12								
	19								
	14								
	22								
	19								
	8								
5	12								
	25								Refusal. 25 blows for 0mm.
6									
7									

AGS3 DYNAMIC PROBE PINEWOOD WD DPS FILE 1.W COORDS JAN 29 2019.GPJ AGS 3.1.GDT 08/02/19

Hammer Wt (kg)	50	GENERAL REMARKS DP terminated at 4.90m bgl.
Hammer Drop (mm)	500	
Cone Dia (mm)	40	
Cone Type		
Damper		

All dimensions in metres Scale 1:50	Client: Galetech Energy Developments	Method/ Plant Used DPH Rig	Bit Design	Driller MM	Logged By MM
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DYNAMIC PROBE LOG

Project Pinewood Wind Farm			Location Co Laois		PROBE No DPTP04
Job No 2019LS102	Date 21-01-19 21-01-19	Ground Level (m OD) 232.71	Co-Ordinates () E 650,401.6 N 682,226.2		
Engineer Galetech Energy Developments				Sheet Rev. DRAFT 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2								
1	2								
1	1								
1	3								
1	7								
1	10								
1	5								
1	7								
1	9								
1	11								
1	15								
1	13								
1	14								
1	11								
1	10								
1	7								
1	8								
1	7								
2	25								Refusal. 25 blows for 0mm.
2	18								
3									
4									
5									
6									
7									

Hammer Wt (kg)	50	GENERAL REMARKS DP terminated at 2.00m bgl.
Hammer Drop (mm)	500	
Cone Dia (mm)	40	
Cone Type		
Damper		

AGS3 DYNAMIC PROBE PINewood WD DPS FILE 1.W COORDS JAN 29 2019.GPJ AGS 3.1.GDT 08/02/19

All dimensions in metres Scale 1:50	Client: Galetech Energy Developments	Method/ Plant Used DPH Rig	Bit Design	Driller MM	Logged By MM
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DYNAMIC PROBE LOG

Project Pinewood Wind Farm			Location Co Laois		PROBE No DPTP05
Job No 2019LS102	Date 21-01-19 21-01-19	Ground Level (m OD) 227.03	Co-Ordinates () E 650,298.8 N 682,417.4		
Engineer Galetech Energy Developments				Sheet Rev. DRAFT1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1								
1	2								
2	7								
3	9								
4	25	Refusal. 25 blows for 0mm.							

AGS3 DYNAMIC PROBE PINEWOOD WD DPS FILE 1.W COORDS JAN 29 2019.GPJ AGS 3.1.GDT 08/02/19

Hammer Wt (kg)	50	GENERAL REMARKS DP terminated at 3.50m bgl.
Hammer Drop (mm)	500	
Cone Dia (mm)	40	
Cone Type		
Damper		

All dimensions in metres Scale 1:50	Client: Galetech Energy Developments	Method/ Plant Used DPH Rig	Bit Design	Driller MM	Logged By MM
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DYNAMIC PROBE LOG

Project Pinewood Wind Farm			Location Co Laois		PROBE No DPTP06
Job No 2019LS102	Date 21-01-19 21-01-19	Ground Level (m OD) 237.96	Co-Ordinates () E 650,376.9 N 682,425.0		
Engineer Galetech Energy Developments				Sheet Rev. DRAFT 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2								
1	1								
2	1								
3	1								
4	2								
5	9								
6	15								
7	10								
8	11								
9	15								
10	18								
11	19								
12	18								
13	21								
14	16								
15	18								
16	11								
17	12								
18	14								
19	21								
20	25								Refusal. 25 blows for 0mm.

AGS3 DYNAMIC PROBE PINEWOOD WD DPS FILE 1.W COORDS JAN 29 2019.GPJ AGS 3.1.GDT 08/02/19

Hammer Wt (kg)	50	GENERAL REMARKS DP terminated at 2.50m bgl.
Hammer Drop (mm)	500	
Cone Dia (mm)	40	
Cone Type		
Damper		

All dimensions in metres Scale 1:50	Client: Galetech Energy Developments	Method/ Plant Used DPH Rig	Bit Design	Driller MM	Logged By MM
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DYNAMIC PROBE LOG

Project Pinewood Wind Farm			Location Co Laois		PROBE No DPTP07
Job No 2019LS102	Date 21-01-19 21-01-19	Ground Level (m OD) 233.95	Co-Ordinates () E 650,389.9 N 682,352.5		
Engineer Galetech Energy Developments				Sheet Rev. DRAFT 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1								
	2								
	4								
	8								
	19								
	15								
	10								
1	16								
	17								
	13								
	13								
	10								
	9								
	10								
	7								
	7								
	11								
2	14								
	17								
	9								
	8								
	9								
	18								
	12								
	14								
	15								
	18								
3	19								
	25								Refusal. 25 blows for 0mm.
4									
5									
6									
7									

AGS3 DYNAMIC PROBE PINEWOOD WD DPS FILE 1.W COORDS JAN 29 2019.GPJ AGS 3.1.GDT 08/02/19

Hammer Wt (kg)	50	GENERAL REMARKS DP terminated at 2.90m bgl.
Hammer Drop (mm)	500	
Cone Dia (mm)	40	
Cone Type		
Damper		

All dimensions in metres Scale 1:50	Client: Galetech Energy Developments	Method/ Plant Used DPH Rig	Bit Design	Driller MM	Logged By MM
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