

Refer to DWG 190907 - 49
for Section Detail

T1

T1

Level 91m

15000

58800

25000

16000

3000

12000

12050

17000

12000

12050

17000

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 7. Layout plans show typical Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Proposed Road
- Spoil Storage
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Internal Electrical Cabling Trench
- Cut
- Fill



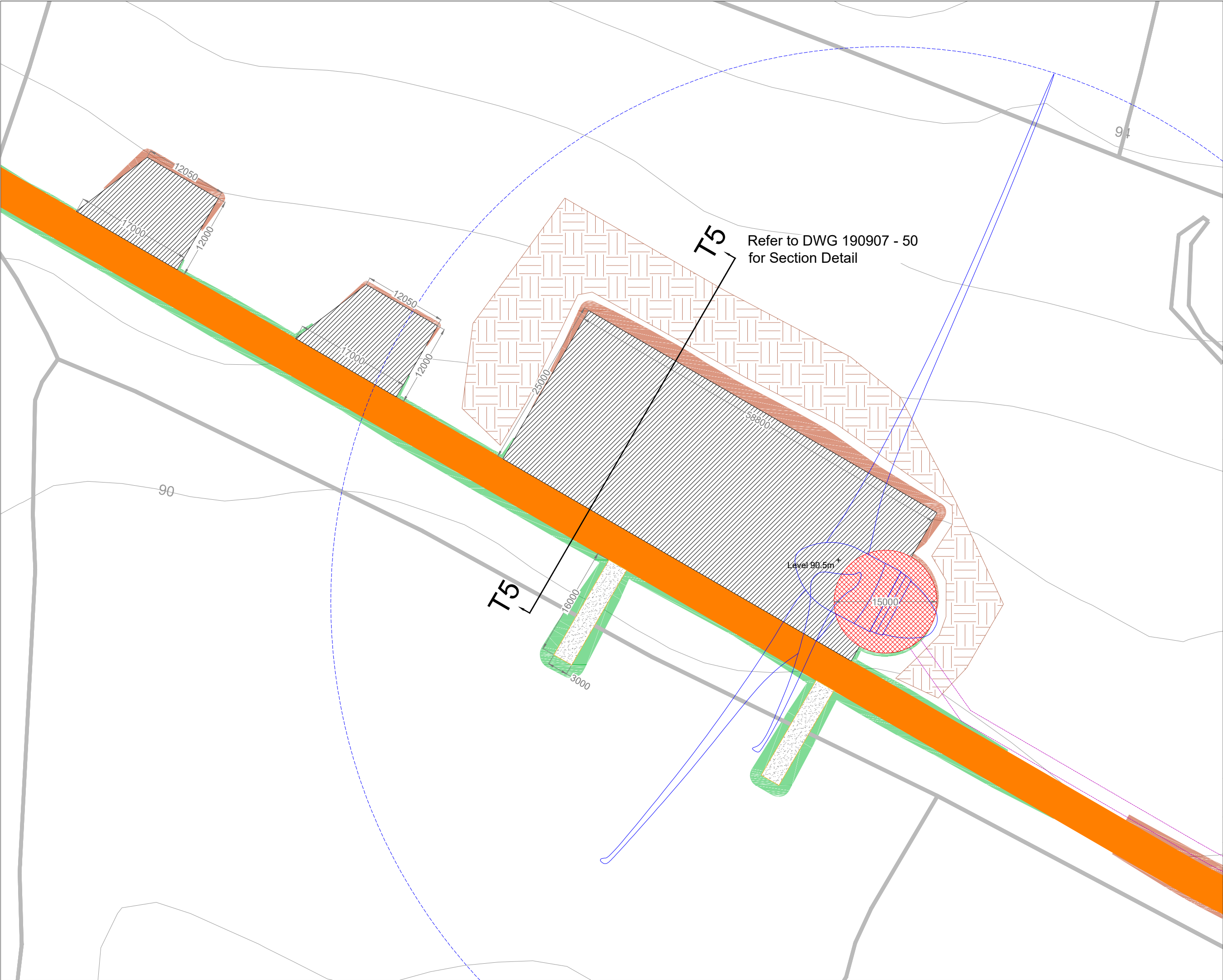
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DRAWING TITLE: Turbine 1 Layout	
PROJECT TITLE: Seven Hills Wind Farm, Co. Roscommon	
DRAWING BY: Joseph O'Brien	CHECKED BY: Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 29
SCALE: 1:500 @ A3	DATE: 03.06.2022

OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103



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 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Proposed Road
- Spoil Storage
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Internal Electrical Cabling Trench
- Cut
- Fill



DRAWING TITLE:

Turbine 5 Layout

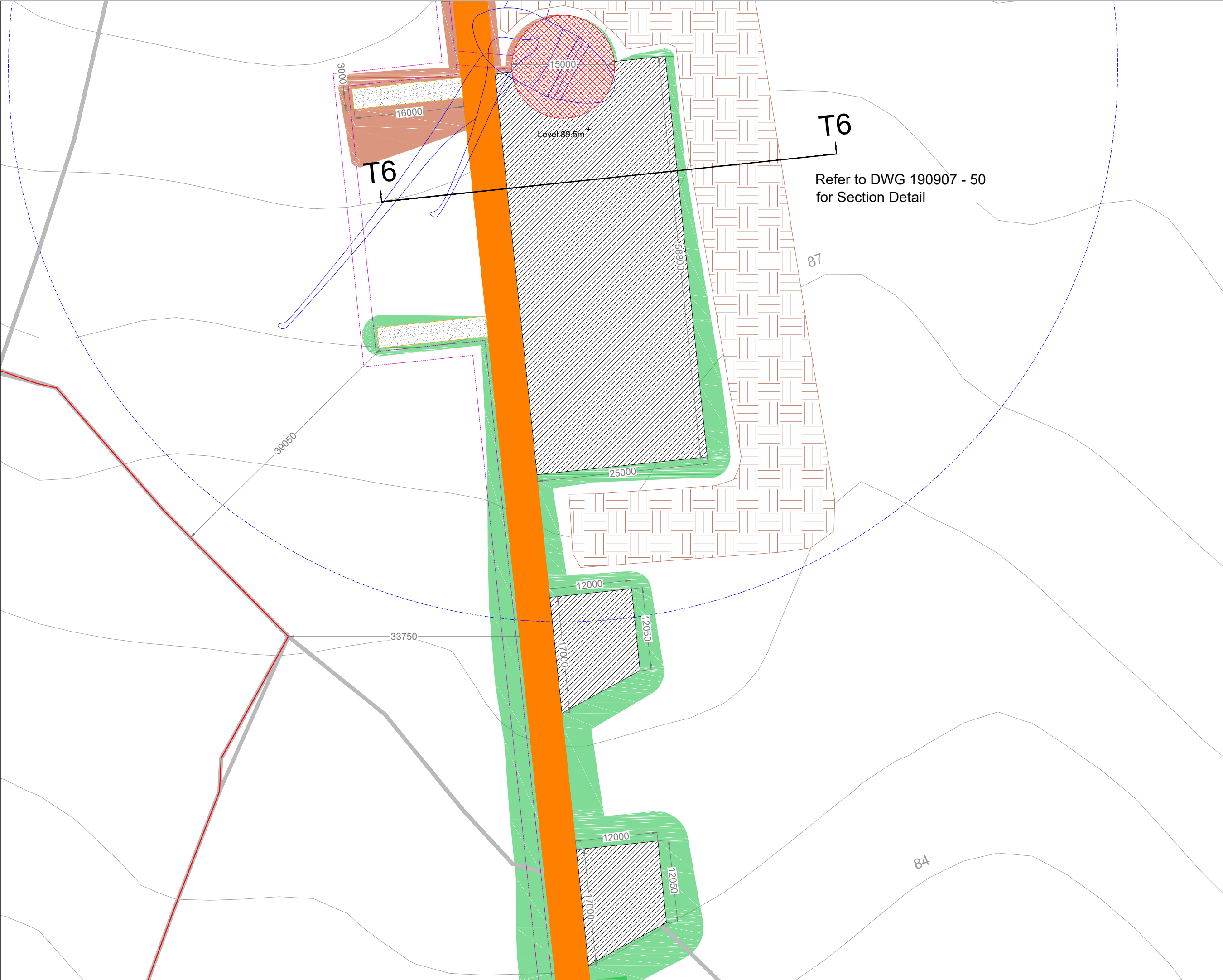
PROJECT TITLE:

**Seven Hills Wind Farm,
Co. Roscommon**

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Meabhann Crowe
PROJECT No.:	DRAWING No.:
190907	190907 - 33
SCALE:	DATE:
1:500 @ A3	03.06.2022

OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103

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 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Proposed Road
- Spoil Storage
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Internal Electrical Cabling Trench
- Cut
- Fill



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Turbine 6 Layout

PROJECT TITLE: **Seven Hills Wind Farm, Co. Roscommon**

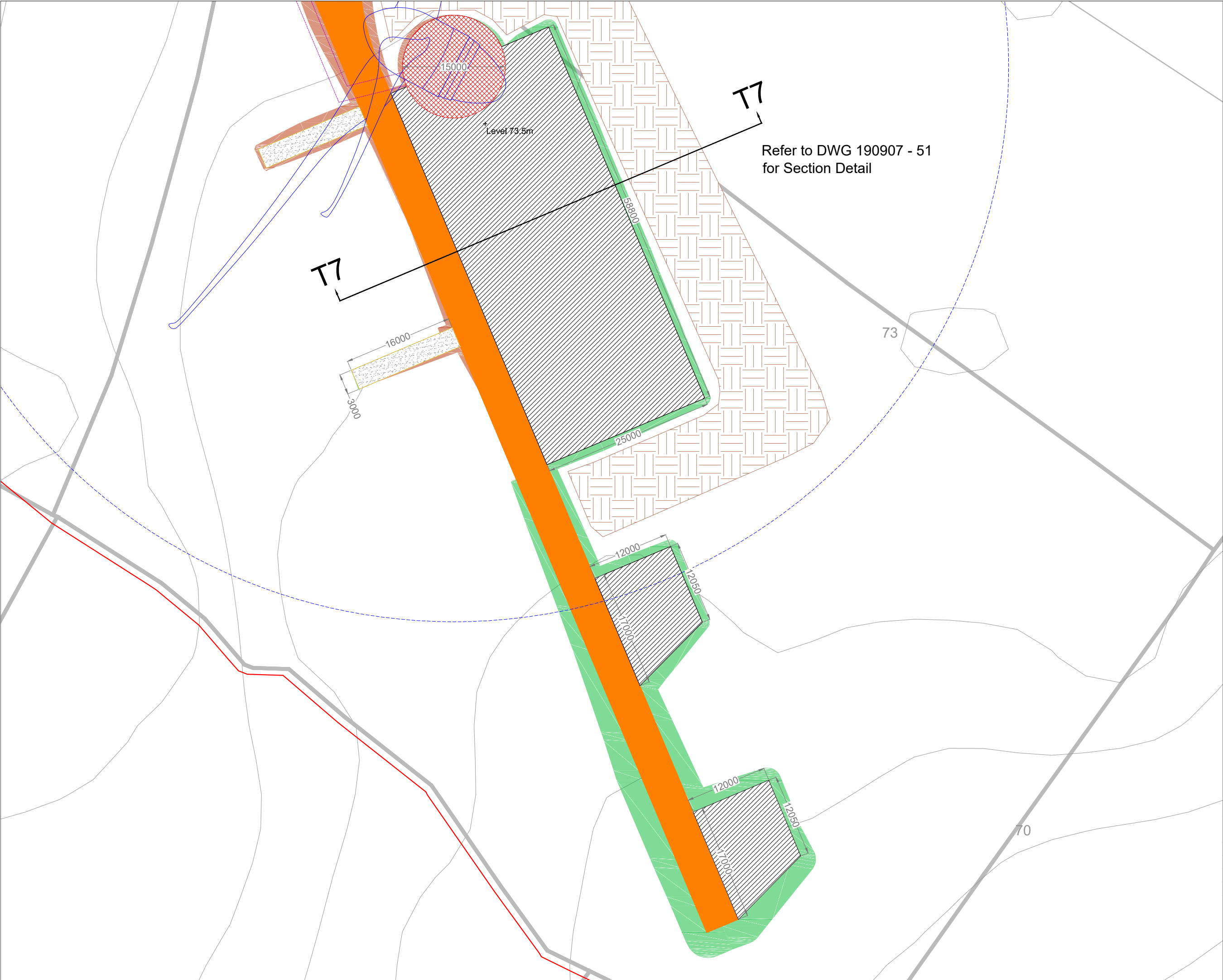
DRAWING BY: **Joseph O'Brien** CHECKED BY: **Meabhann Crowe**

PROJECT No.: **190907** DRAWING No.: **190907 - 34**

SCALE: **1:500 @ A3** DATE: **03.06.2022**

OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103

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for Section Detail

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 7. Layout plans show typical Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Proposed Road
- Spoil Storage
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Internal Electrical Cabling Trench
- Cut
- Fill



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DRAWING TITLE:

Turbine 7 Layout

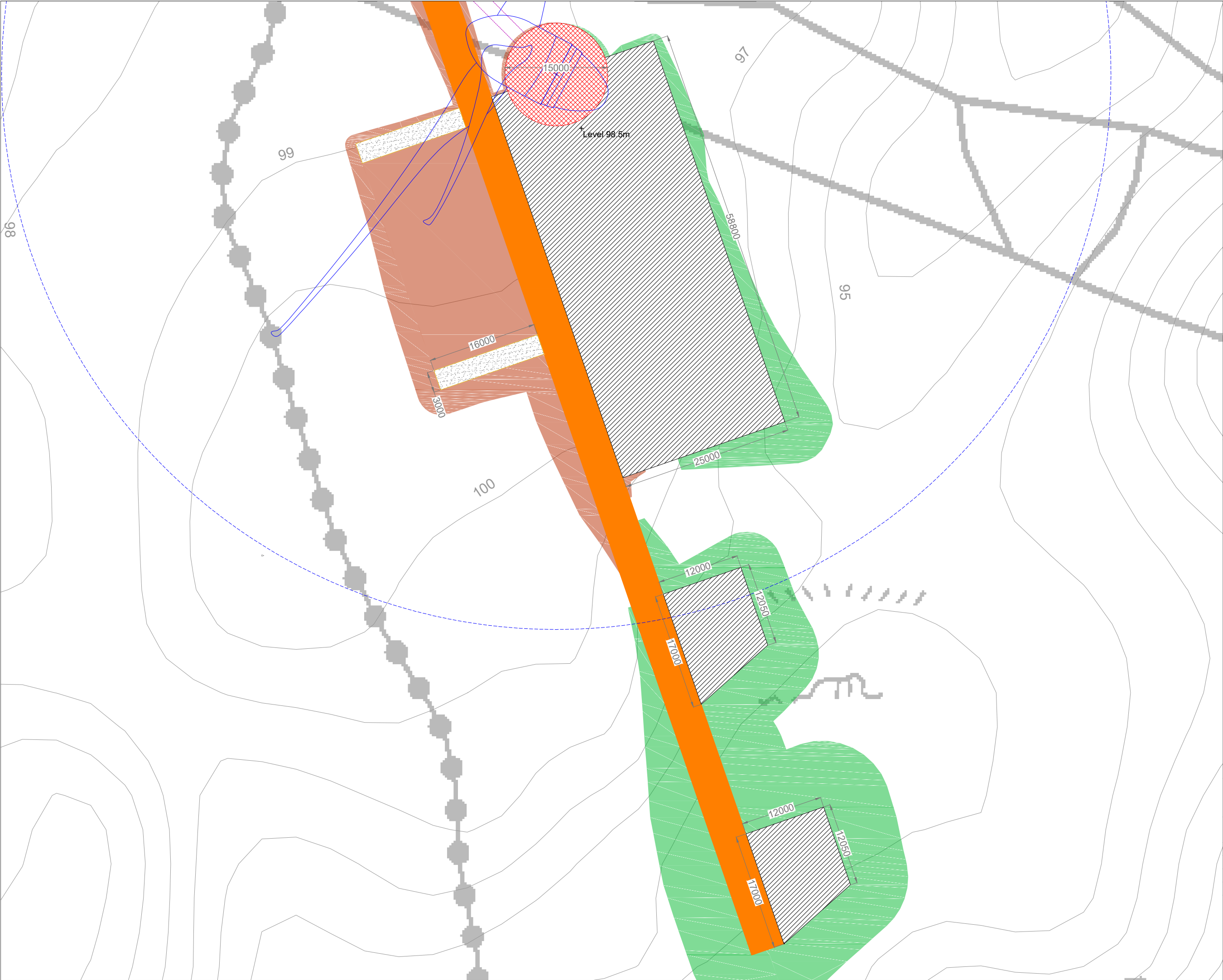
PROJECT TITLE:

**Seven Hills Wind Farm,
Co. Roscommon**

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 35
SCALE: 1:500 @ A3	DATE: 03.06.2022

OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103

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7. Layout plans show typical Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Proposed Road
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Internal Electrical Cabling Trench
- Cut
- Fill



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DRAWING TITLE:

Turbine 9 Layout

PROJECT TITLE:

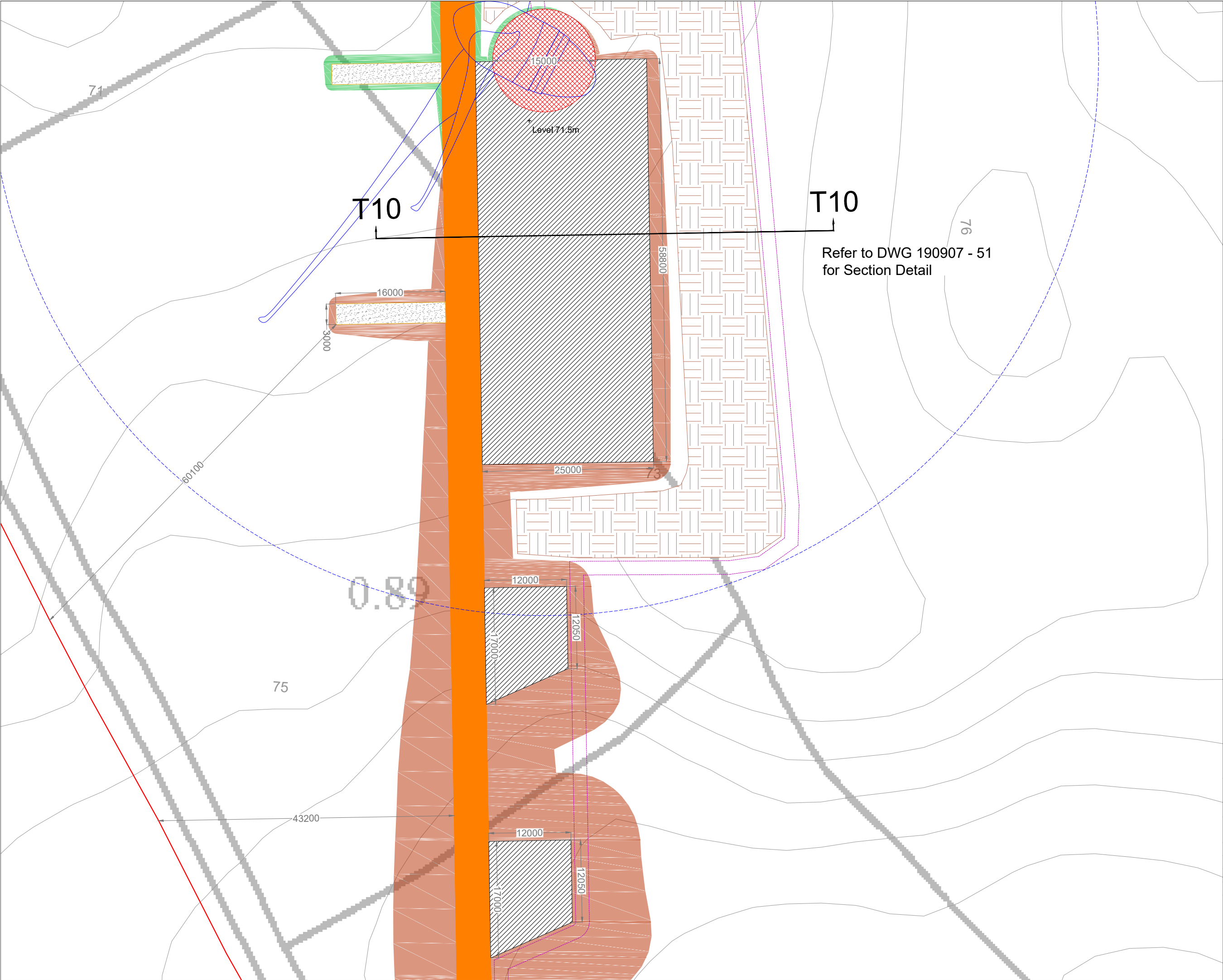
**Seven Hills Wind Farm,
Co. Roscommon**

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 37
SCALE: 1:500 @ A3	DATE: 03.06.2022

OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103



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 8. Final levels may vary depending on local ground conditions.

- Drawing Legend**
- Planning Application Boundary
 - Proposed Road
 - Spoil Storage
 - Soft Levelled Area
 - Crane Pad Hardstanding Area
 - Turbine Foundation
 - Turbine Sweep Area
 - Internal Electrical Cabling Trench
 - Cut
 - Fill

Turbine 10 Layout

PROJECT TITLE: **Seven Hills Wind Farm, Co. Roscommon**

DRAWING BY: Joseph O'Brien	CHECKED BY: Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 38
SCALE: 1:500 @ A3	DATE: 03.06.2022

OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103

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7. Layout plans show typical Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Proposed Road
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Internal Electrical Cabling Trench
- Cut
- Fill

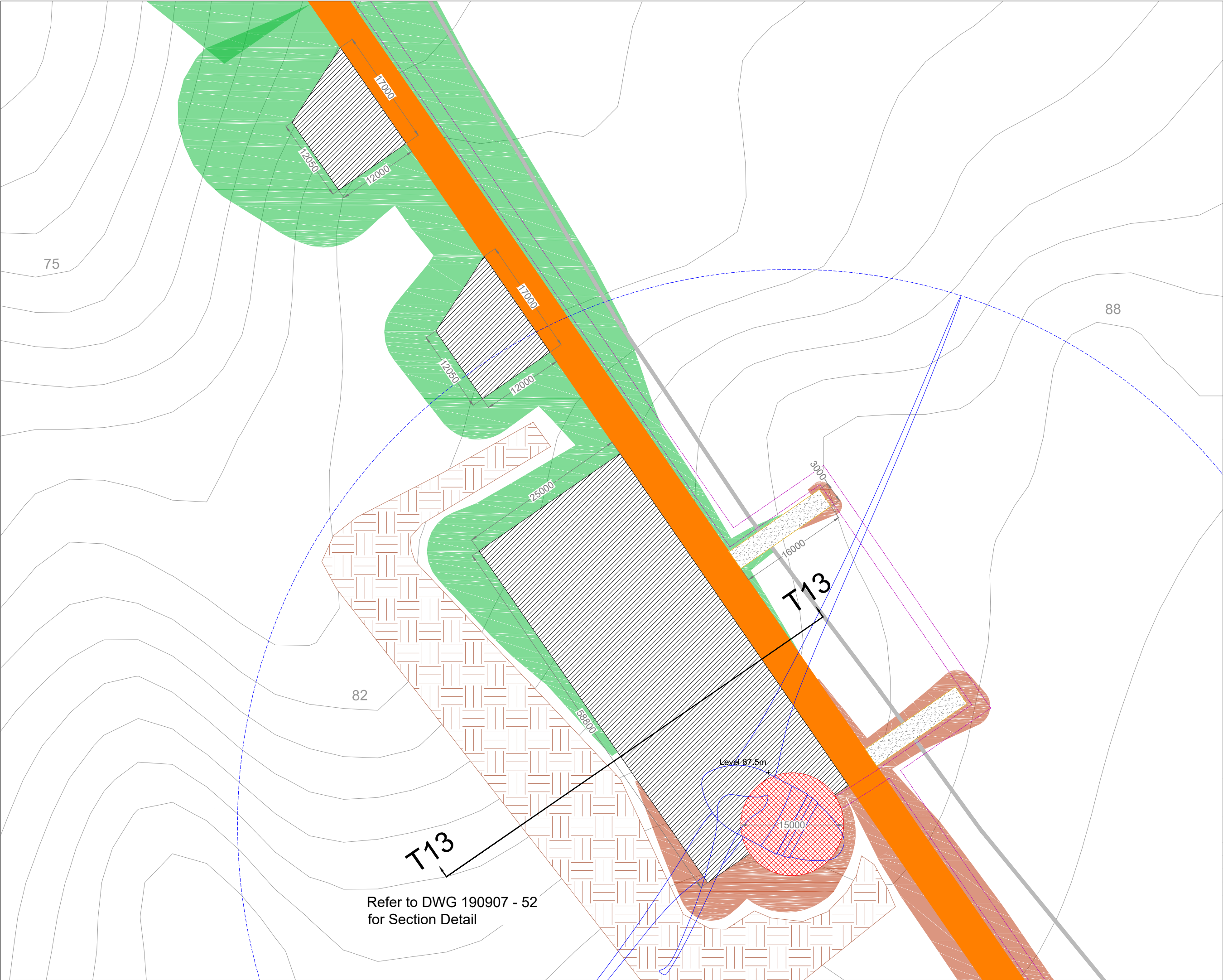
N

DRAWING TITLE:

Turbine 12 Layout

PROJECT TITLE:	
Seven Hills Wind Farm, Co. Roscommon	
DRAWING BY:	CHECKED BY:
Joseph O'Brien	Meabhann Crowe
PROJECT No.:	DRAWING No.:
190907	190907 - 40
SCALE:	DATE:
1:500 @ A3	03.06.2022
OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103	

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8. Final levels may vary depending on local ground conditions.

Drawing Legend

	Proposed Road
	Spoil Storage
	Soft Levelled Area
	Crane Pad Hardstanding Area
	Turbine Foundation
	Turbine Sweep Area
	Internal Electrical Cabling Trench
	Cut
	Fill



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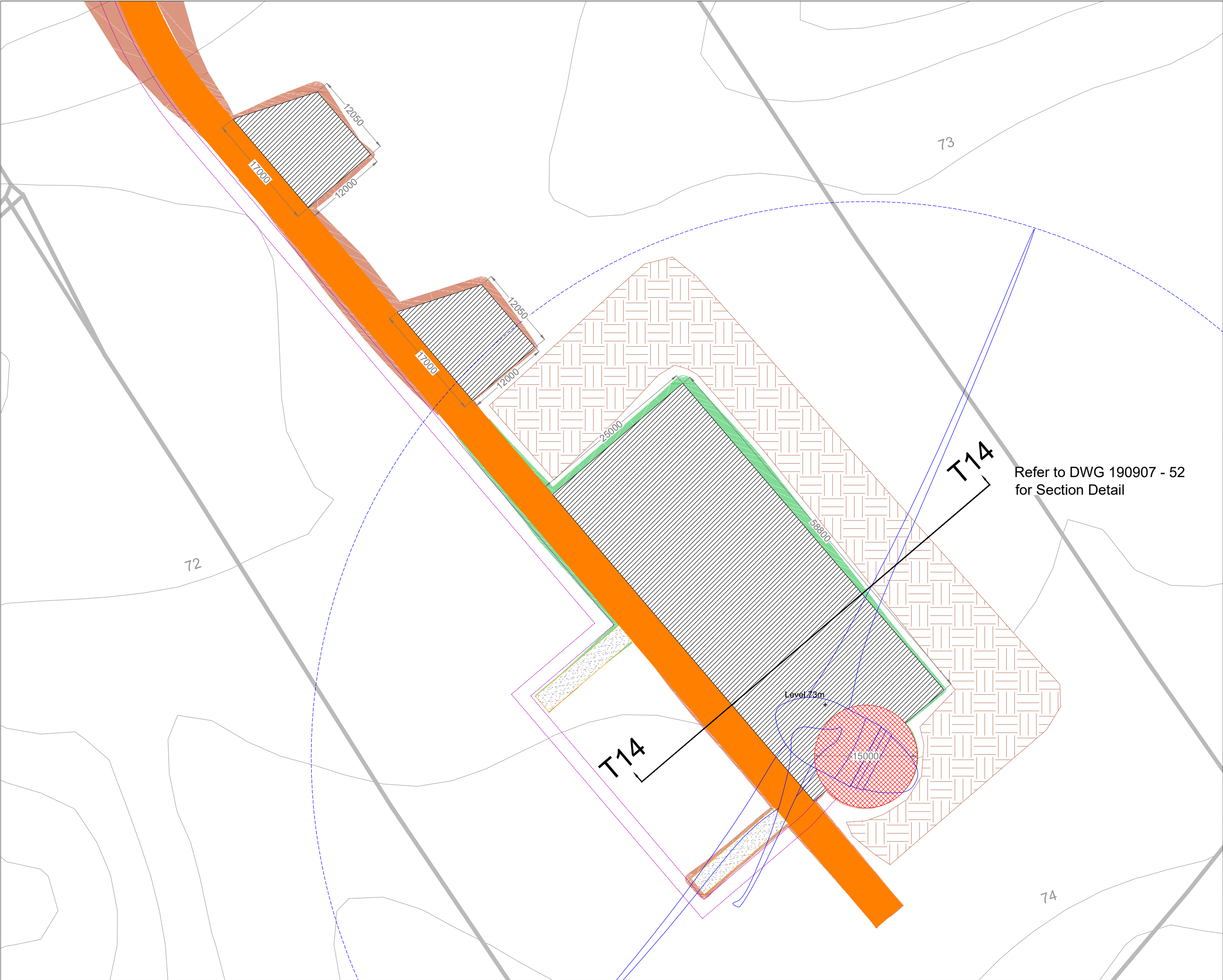
DRAWING TITLE:
Turbine 13 Layout

PROJECT TITLE:
**Seven Hills Wind Farm,
Co. Roscommon**

DRAWING BY: Joseph O'Brien	CHECKED BY: Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 41
SCALE: 1:500 @ A3	DATE: 03.06.2022

OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103

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8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Proposed Road
- Spoil Storage
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Internal Electrical Cabling Trench
- Cut
- Fill

Refer to DWG 190907 - 52
for Section Detail



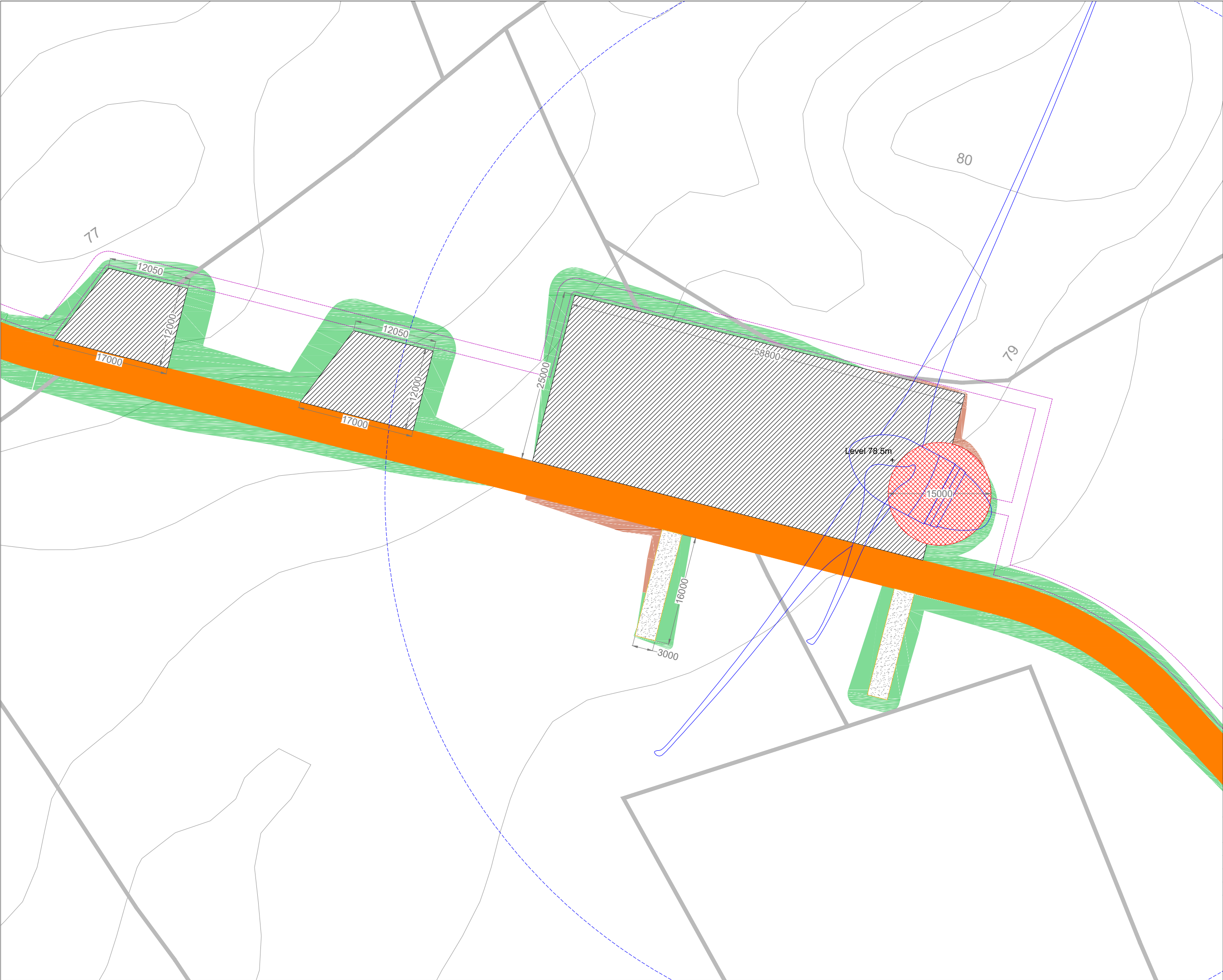
DRAWING TITLE:
Turbine 14 Layout

PROJECT TITLE:
**Seven Hills Wind Farm,
Co. Roscommon**

DRAWING BY: Joseph O'Brien	CHECKED BY: Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 42
SCALE: 1:500 @ A3	DATE: 03.06.2022

OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103

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Drawing Legend

- Proposed Road
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Internal Electrical Cabling Trench
- Cut
- Fill



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DRAWING TITLE:

Turbine 15 Layout

PROJECT TITLE:

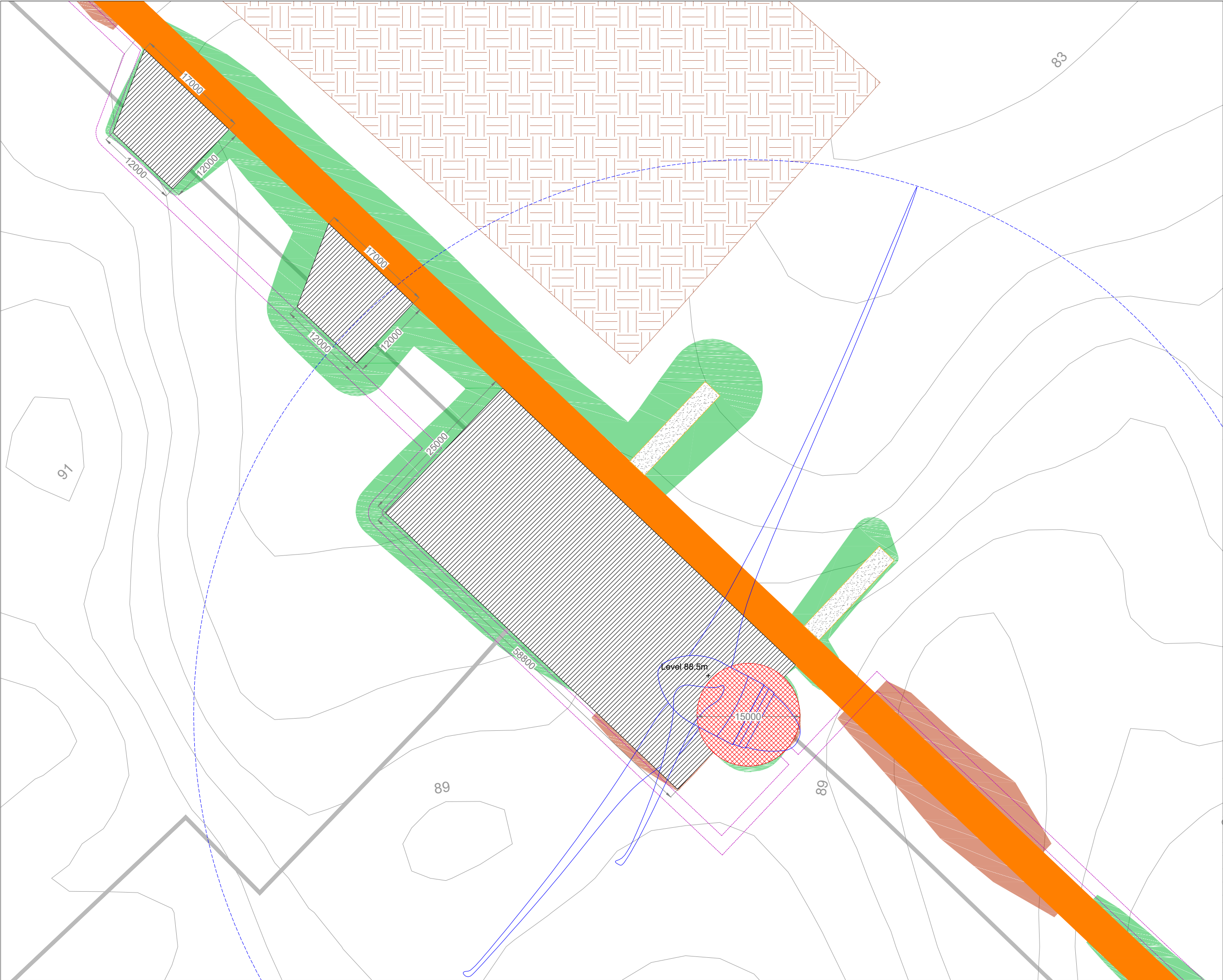
**Seven Hills Wind Farm,
Co. Roscommon**

DRAWING BY: Joseph O'Brien	CHECKED BY: Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 43
SCALE: 1:500 @ A3	DATE: 03.06.2022

OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103



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Drawing Legend

- Proposed Road
- Spoil Storage
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Internal Electrical Cabling Trench
- Cut
- Fill



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DRAWING TITLE:
Turbine 16 Layout

PROJECT TITLE:
**Seven Hills Wind Farm,
Co. Roscommon**

DRAWING BY:
Joseph O'Brien

CHECKED BY:
Meabhann Crowe

PROJECT No.:
190907

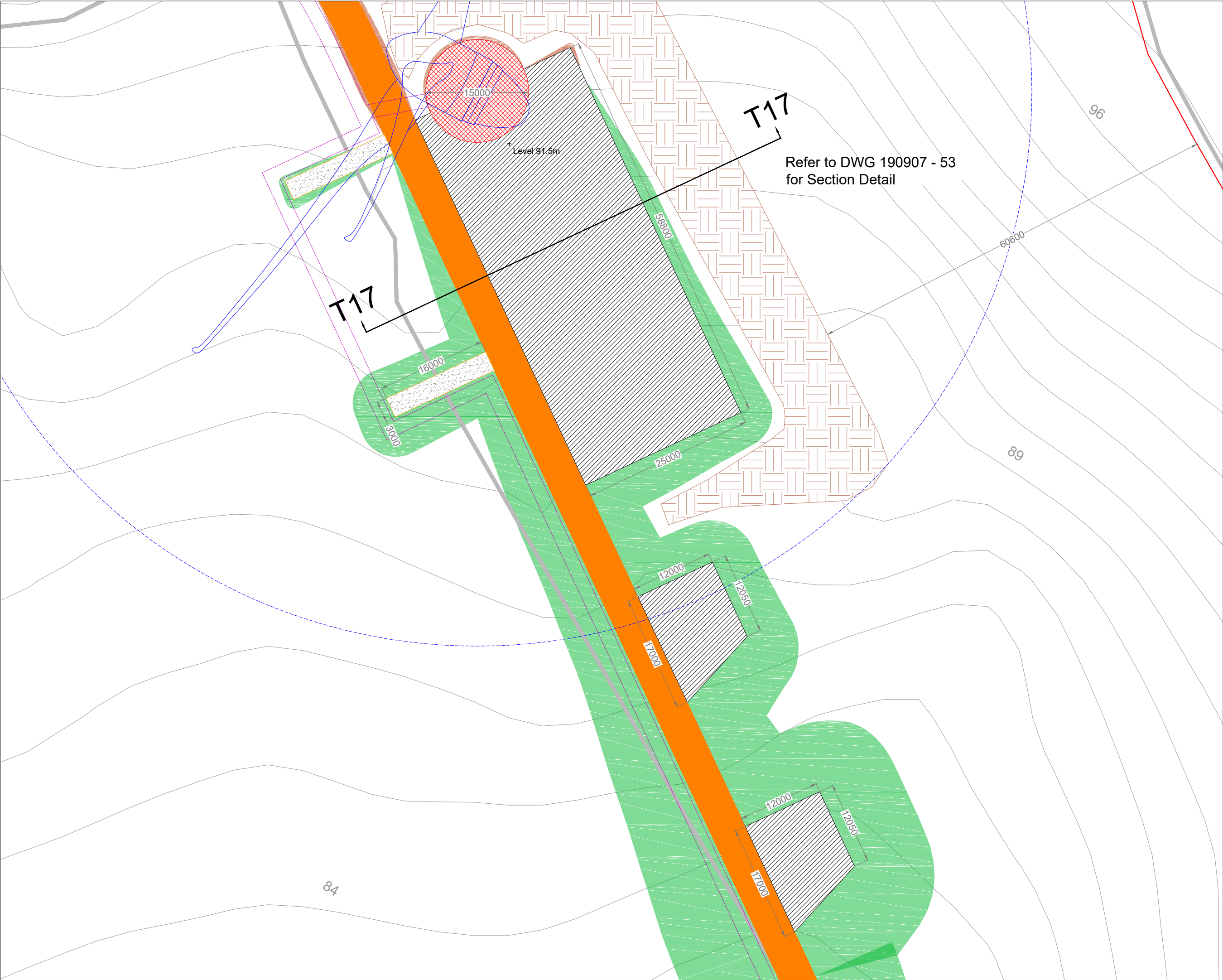
DRAWING No.:
190907 - 44

SCALE:
1:500 @ A3

DATE:
03.06.2022

OS SHEET No.:
2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965,
3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103

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Drawing Legend

- Planning Application Boundary
- Proposed Road
- Spoil Storage
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Internal Electrical Cabling Trench
- Cut
- Fill



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DRAWING TITLE:
Turbine 17 Layout

PROJECT TITLE:
**Seven Hills Wind Farm,
Co. Roscommon**

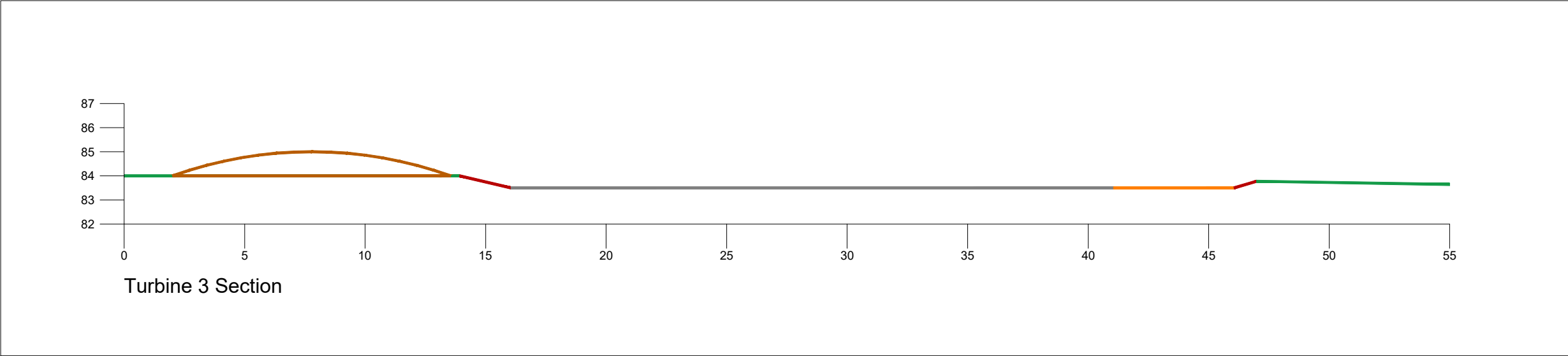
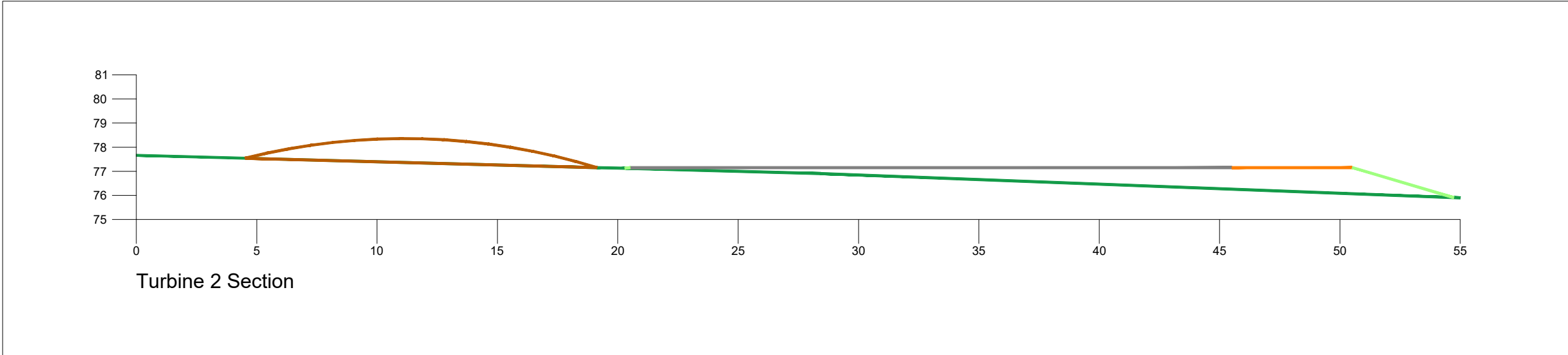
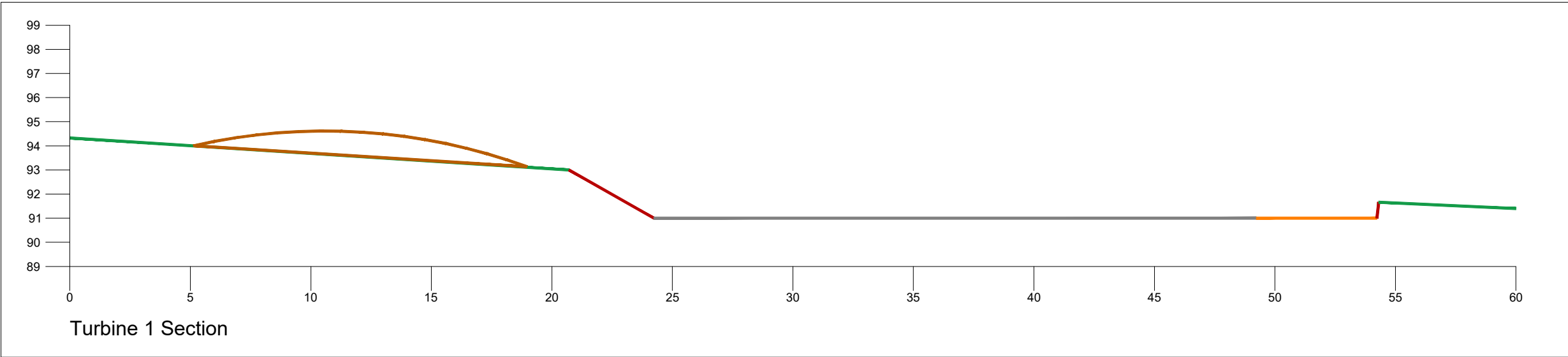
DRAWING BY: Joseph O'Brien	CHECKED BY: Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 45
SCALE: 1:500 @ A3	DATE: 03.06.2022

OS SHEET No.: 2882, 2893, 2894, 2895, 2896, 2961, 2962, 2963, 2964, 2965, 3031, 3032, 3033, 3034, 3035, 3096, 3100, 3101, 3102, 3103

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Website: www.mkoireland.ie

Drawing Legend

- Existing Ground
- Cut
- Fill
- Hardstanding
- Spoil Storage
- Proposed Road



Note:
All Dimensions in Metres

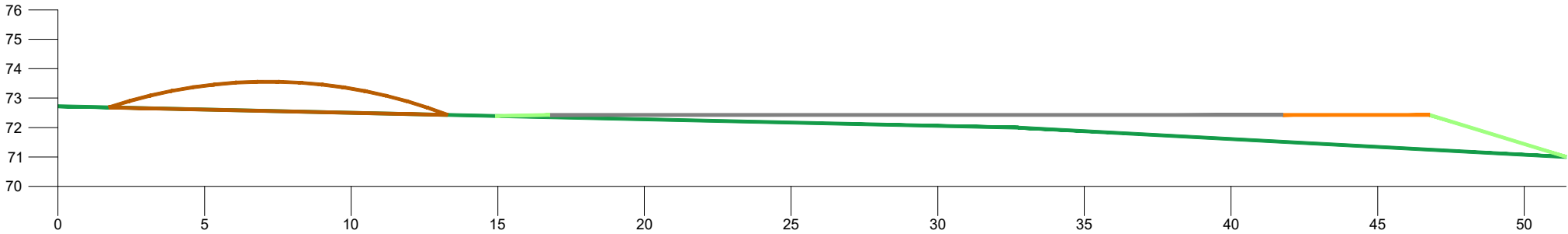
DRAWING TITLE: Turbine 1, 2 & 3 Spoil Storage Sections	
PROJECT TITLE: Seven Hills Wind Farm, Co. Roscommon	
DRAWING BY: Joseph O'Brien	CHECKED BY: Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 49
SCALE: 1:200 @ A3	DATE: 03.06.2022



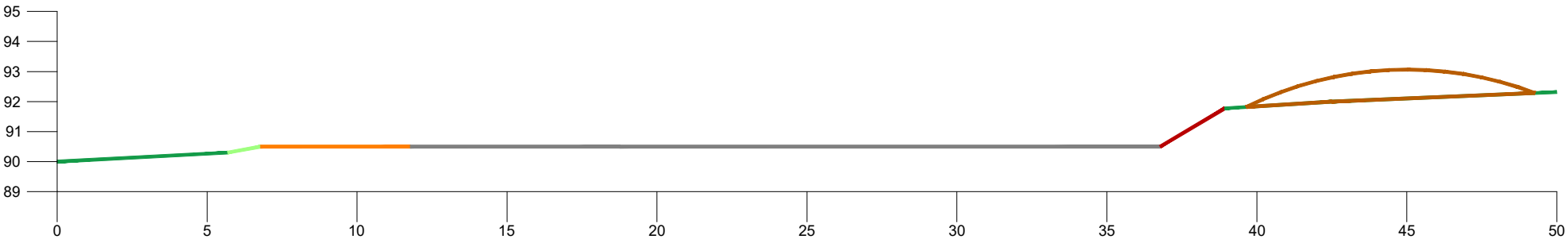
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email: info@www.mkofireland.ie
Website: www.mkofireland.ie

Drawing Legend

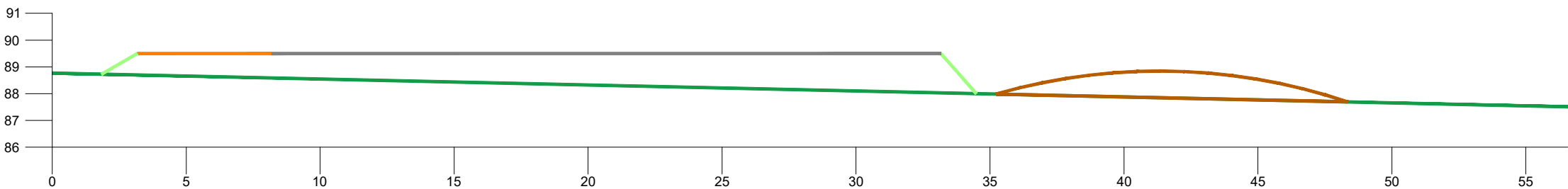
- Existing Ground
- Cut
- Fill
- Hardstanding
- Spoil Storage
- Proposed Road



Turbine 4 Section



Turbine 5 Section



Turbine 6 Section

Note:
All Dimensions in Metres

DRAWING TITLE: Turbine 4, 5, & 6 Spoil Storage Sections	
PROJECT TITLE: Seven Hills Wind Farm, Co. Roscommon	
DRAWING BY: Joseph O'Brien	CHECKED BY: Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 50
SCALE: 1:200 @ A3	DATE: 03.06.2022



MKO
Planning and Environmental Consultants

Tuam Road, Galway
Ireland, H91 VW94
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie

Drawing Legend

Existing Ground

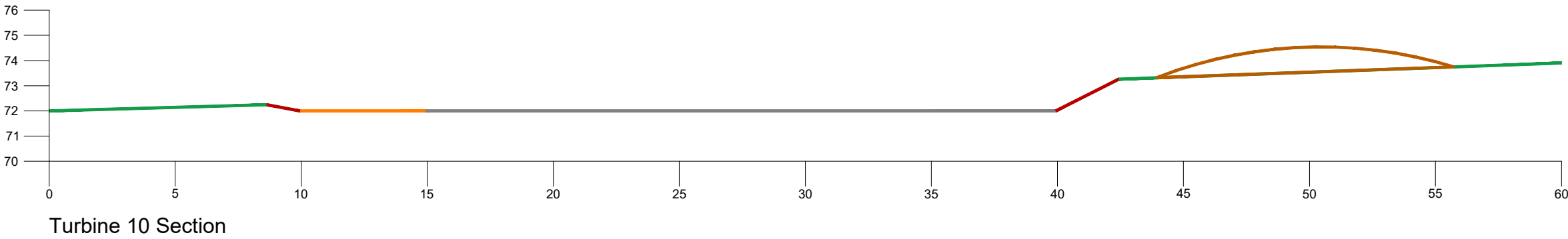
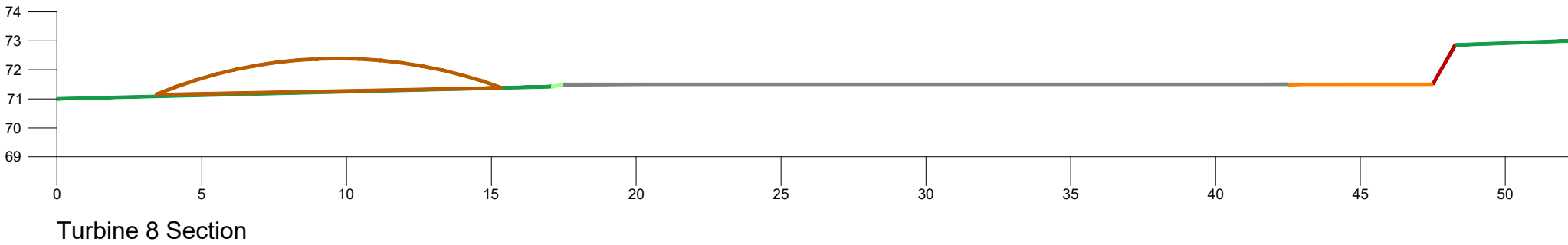
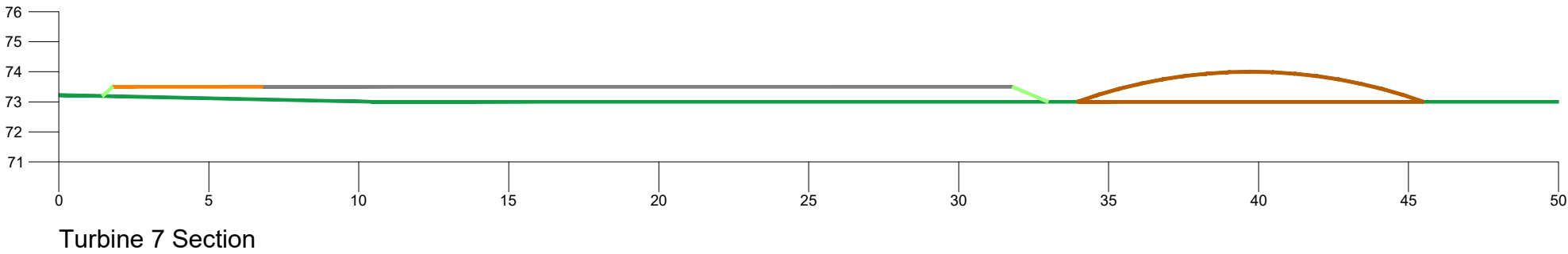
Cut

Fill

Hardstanding

Spoil Storage

Proposed Road



Note:
All Dimensions in Metres

DRAWING TITLE:
Turbine 7, 8, & 10 Spoil Storage Sections

DRAWING BY:
Joseph O'Brien

CHECKED BY:
Meabhann Crowe

PROJECT No.:
190907

DRAWING No.:
190907 - 51

SCALE:
1:200 @ A3

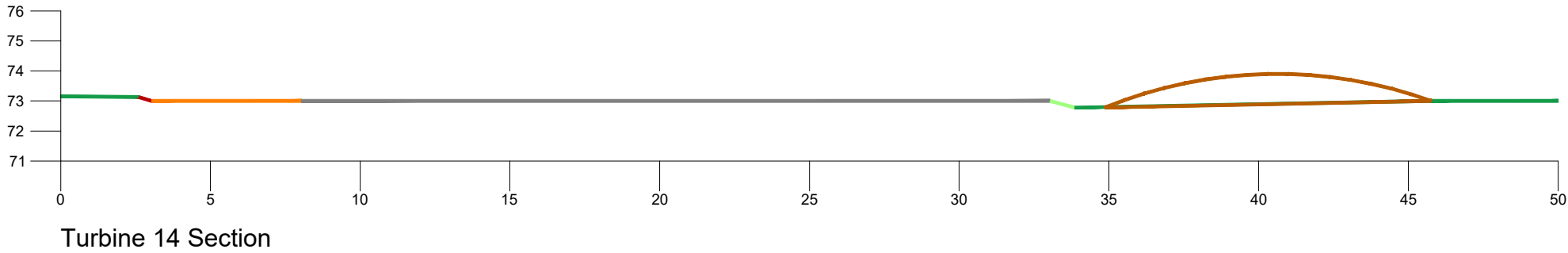
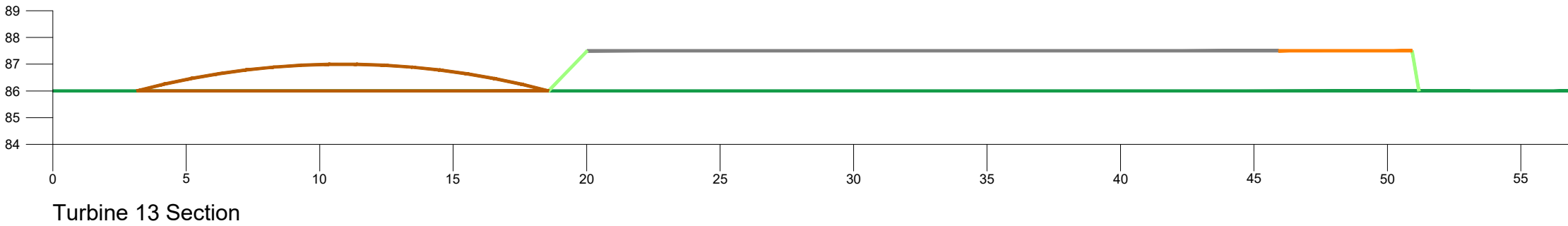
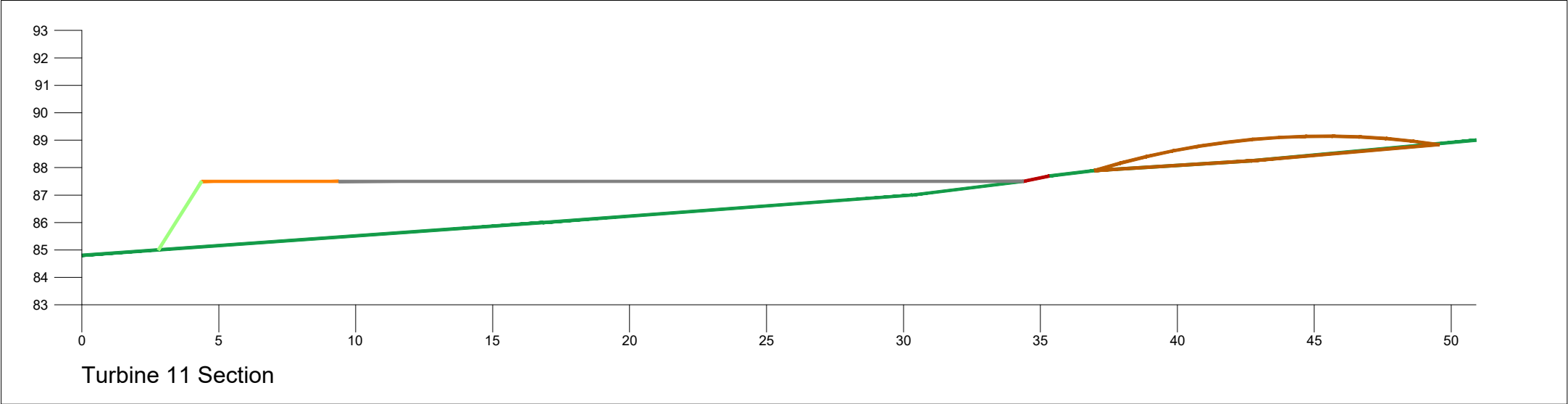
DATE:
03.06.2022



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email: info@www.mkofireland.ie
Website: www.mkofireland.ie

Drawing Legend

- Existing Ground
- Cut
- Fill
- Hardstanding
- Spoil Storage
- Proposed Road



Note:
All Dimensions in Metres

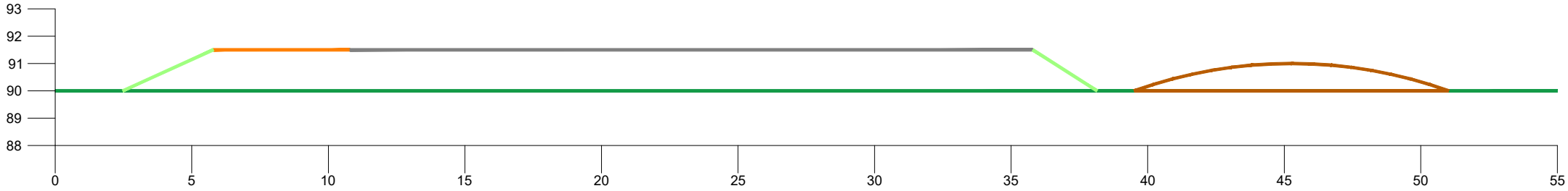
DRAWING TITLE: Turbine 11, 13, & 14 Spoil Storage Sections	
PROJECT TITLE: Seven Hills Wind Farm, Co. Roscommon	
DRAWING BY: Joseph O'Brien	CHECKED BY: Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 52
SCALE: 1:200 @ A3	DATE: 03.06.2022



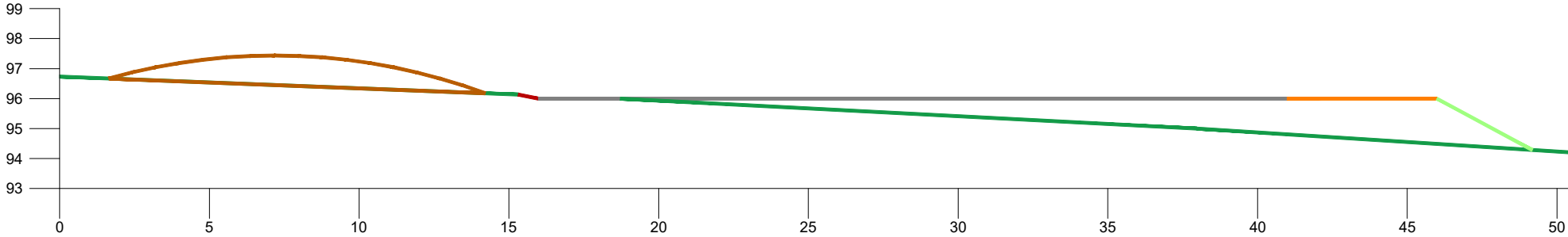
MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW94
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie

Drawing Legend

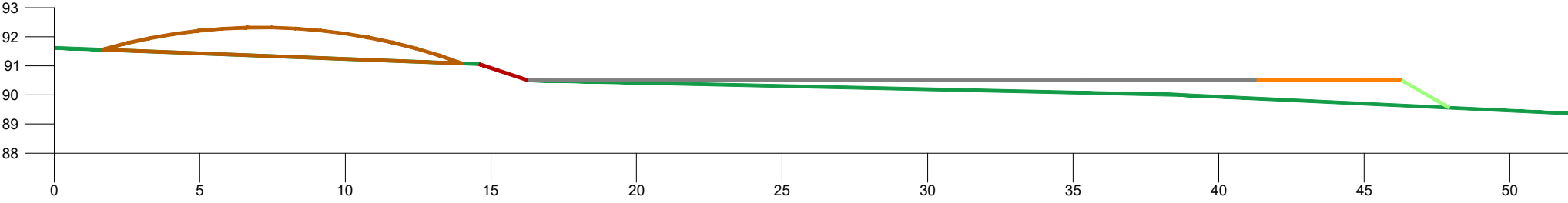
- Existing Ground
- Cut
- Fill
- Hardstanding
- Spoil Storage
- Proposed Road



Turbine 17 Section



Turbine 19 Section

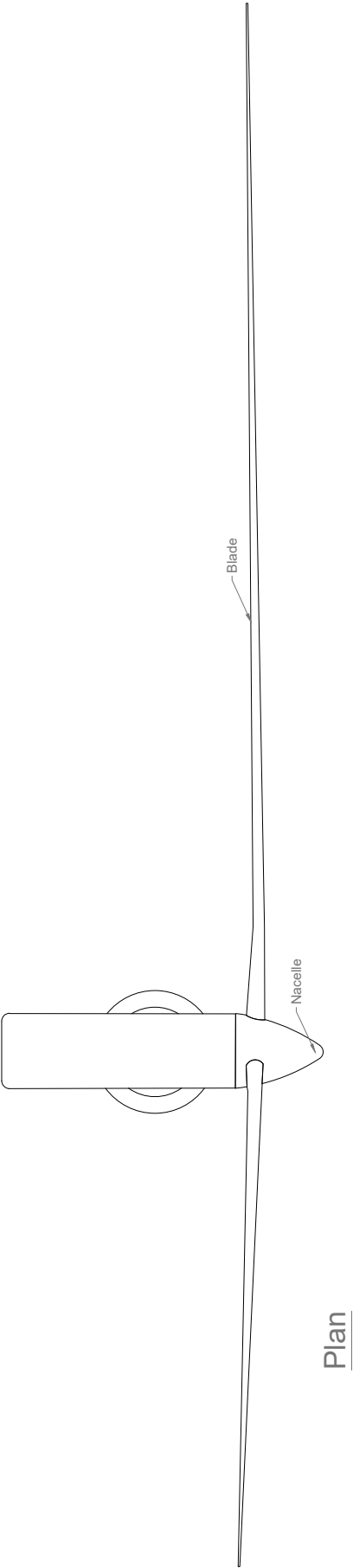
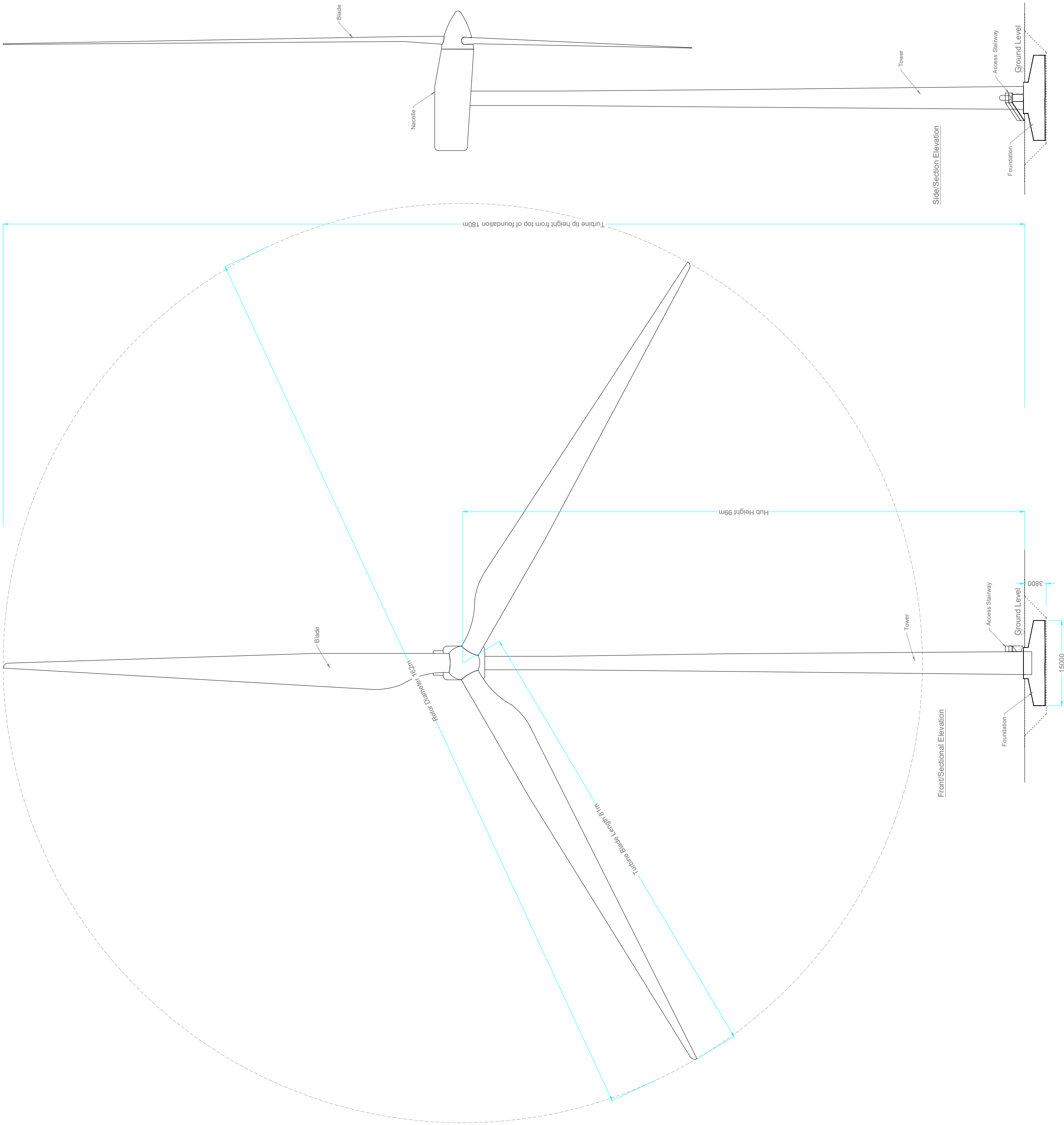


Turbine 20 Section

Note:
All Dimensions in Metres

DRAWING TITLE: Turbine 17, 19, & 20 Spoil Storage Sections	
PROJECT TITLE: Seven Hills Wind Farm, Co. Roscommon	
DRAWING BY: Joseph O'Brien	CHECKED BY: Meabhann Crowe
PROJECT No.: 190907	DRAWING No.: 190907 - 53
SCALE: 1:200 @ A3	DATE: 03.06.2022

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Plan

Drawing Notes

- Proposed wind turbines to have a maximum ground to blade tip height of 180.
- Exact make and model of the turbine to be dictated by a competitive tender process.
- Installed wind turbine not to exceed maximum size envelope set out above in any blade length and hub-height configuration.
- Turbine foundation diameter may vary.
- Ground level represents the top of turbine foundation.

DRAWING TITLE:

Wind Turbine Elevations & Plan

PROJECT TITLE: Seven Hills Wind Farm, Co. Roscommon

DRAWING BY:

Joseph O'Brien

CHECKED BY:

Meabhann Crowe

PROJECT NO:

190907

DRAWING NO:

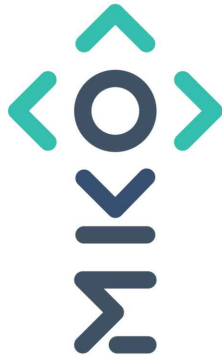
190907 - 54

SCALE:

1:500 @A1

DATE:




03.06.2022

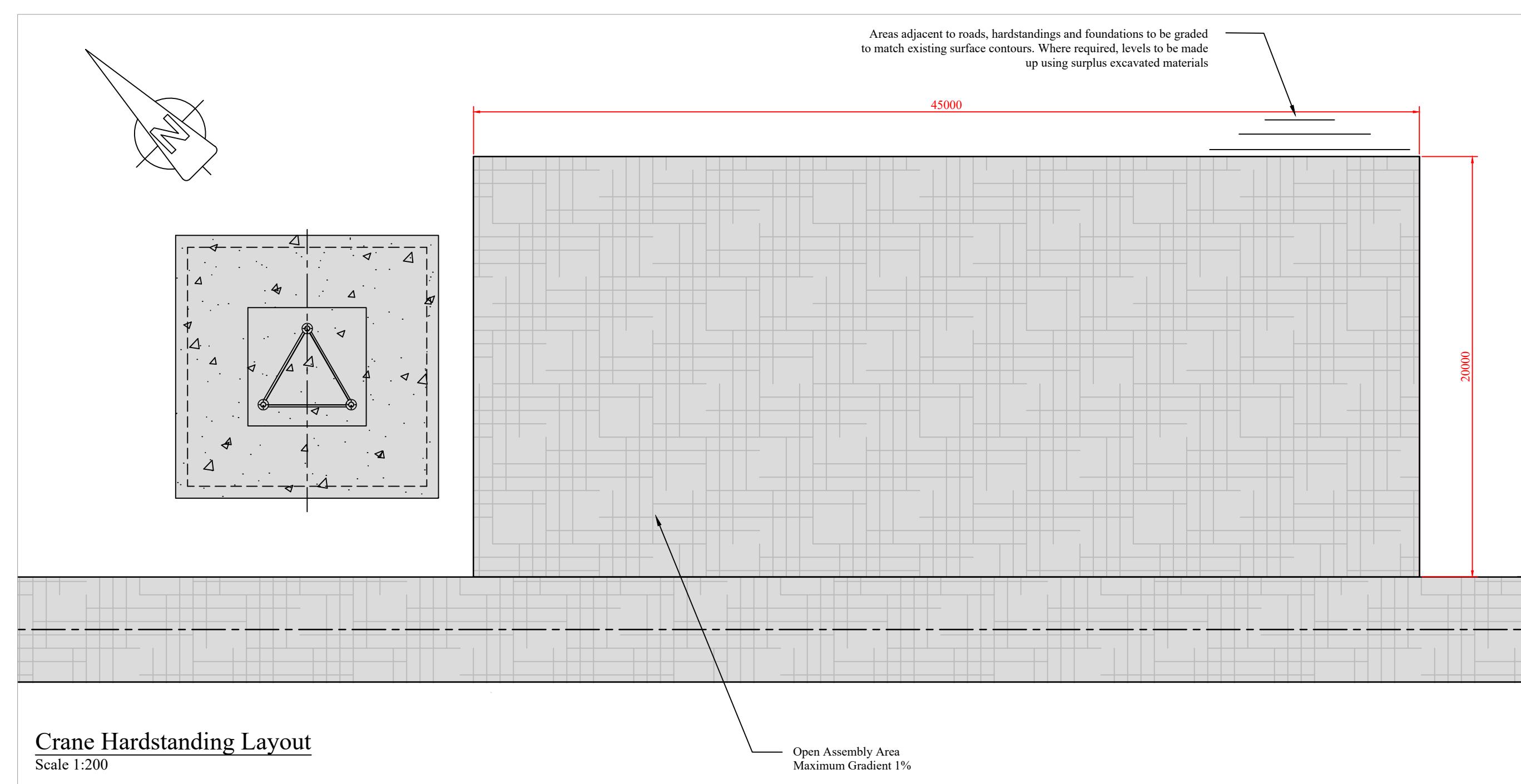
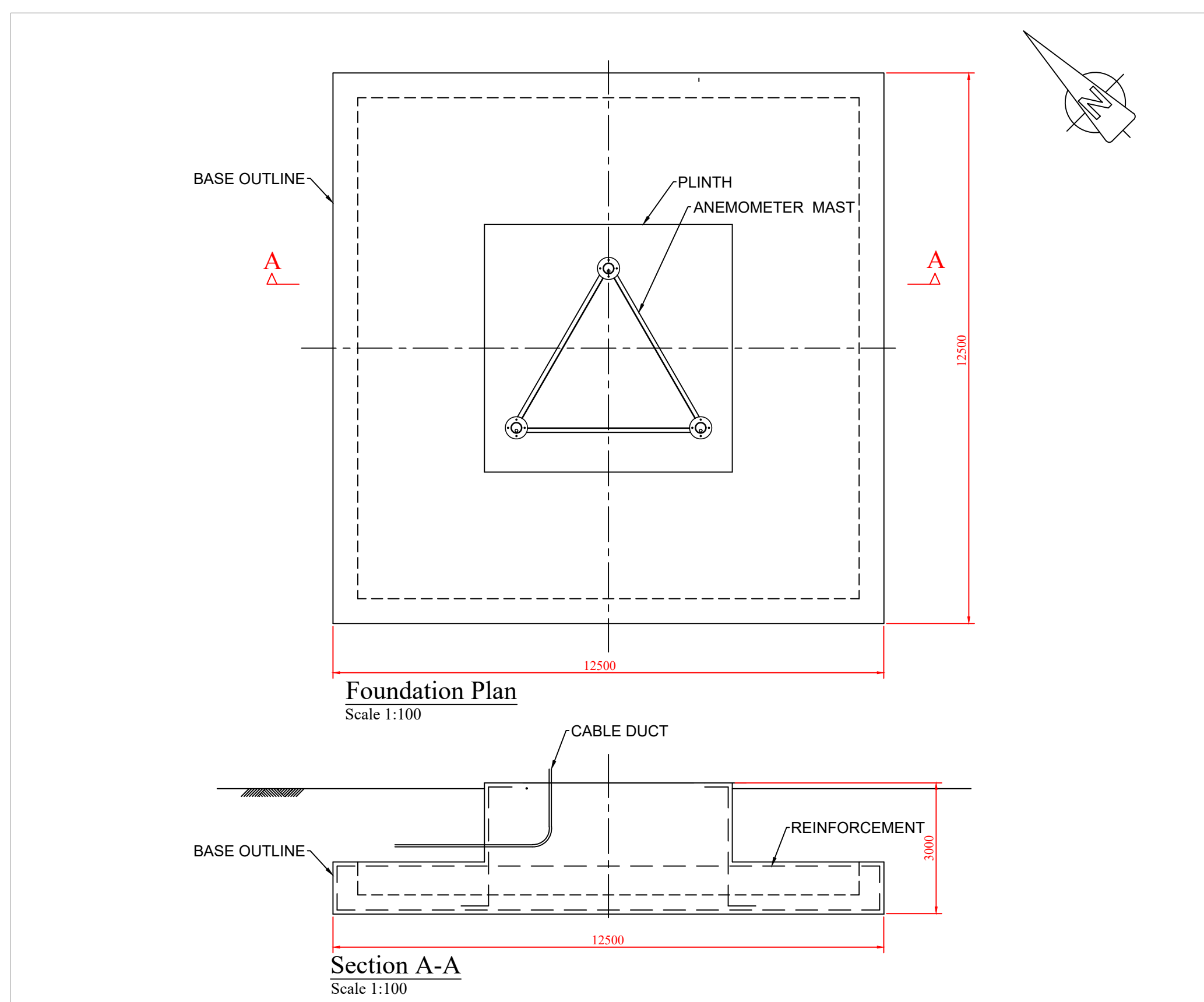
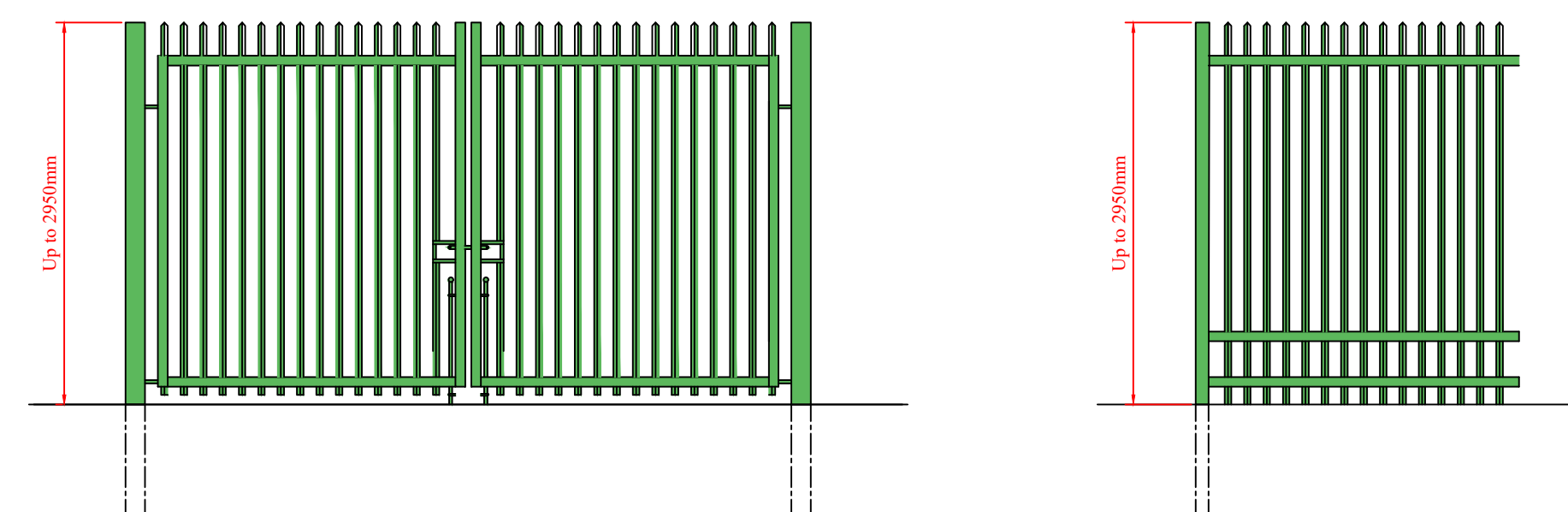
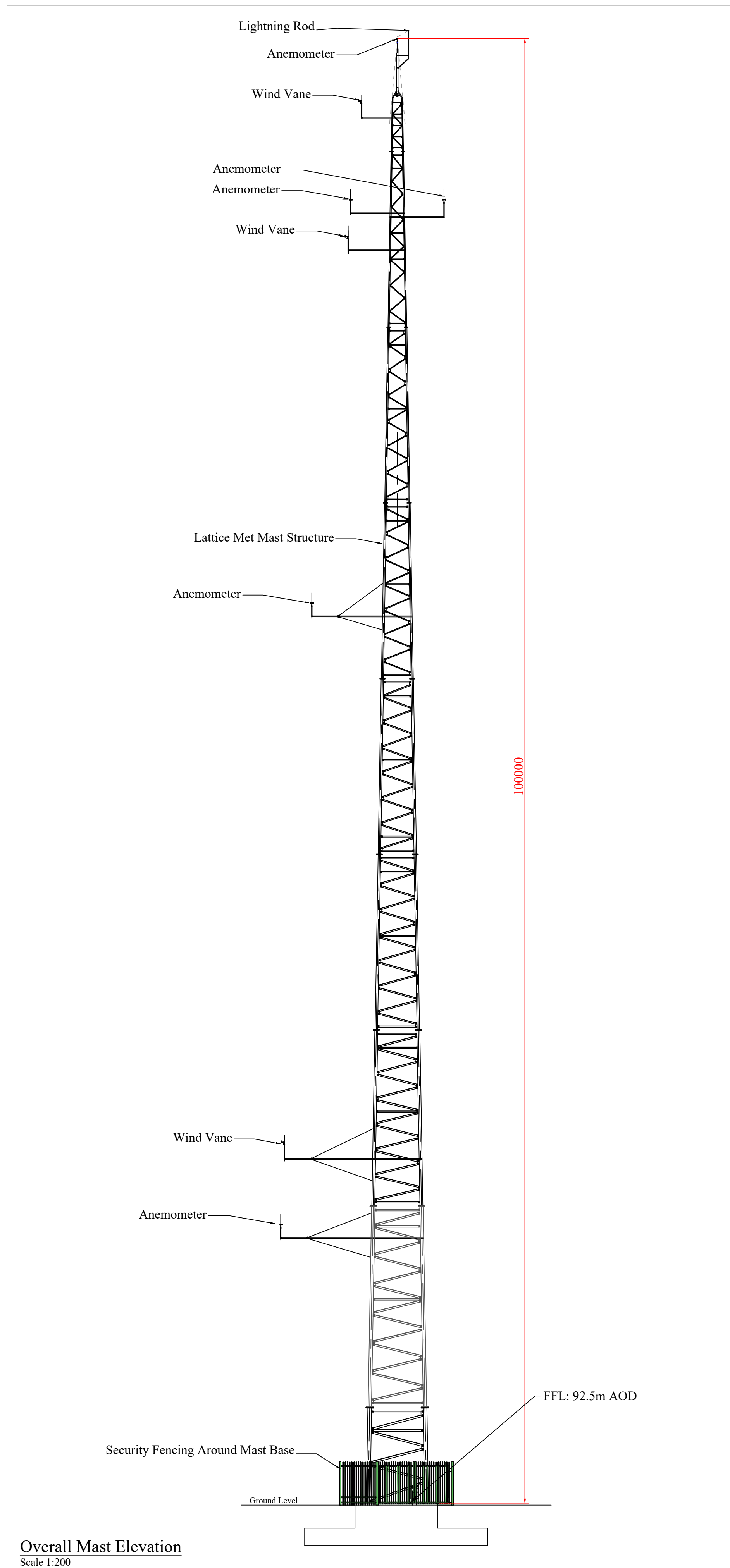


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Website: www.mkoireland.ie



REV	30/03/22	FOR INFORMATION		MP	BS
DATE		DESCRIPTION		BY	APP
PROJECT:					
SEVEN HILLS WIND FARM					
TITLE:					
GROUND BEARING FOUNDATIONS					
CLIENT:					
					
					
Malachy Walsh and Partners Engineering and Environmental Consultants Cork Tralee London Limerick					
					
The Elm Suite, Loughmore Centre, Raheen Business Park, Limerick, V94 R578					
Tel : +353 (0) 81 480164 Fax : +353 (0) 81 441125 E-mail : limerick@mwp.ie Web : www.mwp.ie					
DRAWN: MW		CHECKED: BS		APPROVED: BS	
DATE: 30/03/22		SCALE @ 1: 1:10, 25 & 100			
PROJECT NUMBER: 21337		DRAWING STATUS: S0			
DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-0104					
REV: P01					



Note:

- 1) All dimensions in millimeters unless otherwise stated and must be checked on site and not scaled from this drawing
- 2) The mast layout illustrated on this drawing is indicative only and may be subject to changes.
- 3) Foundation type may vary depending on met mast manufacturer and ground conditions
- 4) The instrument layout may vary depending on met mast manufacturer and Eirgrid requirements
- 5) Anticlimb security fencing to be fitted around the base of the mast
- 6) Ladder & fall arrest system to be fitted to the mast to allow for easy maintenance access

Date:	Rev:	Description:	Drawn By

Prepared by:



Client:

Energia Renewables ROI Ltd

Job Title:

Seven Hills Wind Farm, Co. Roscommon




Drawing Title:

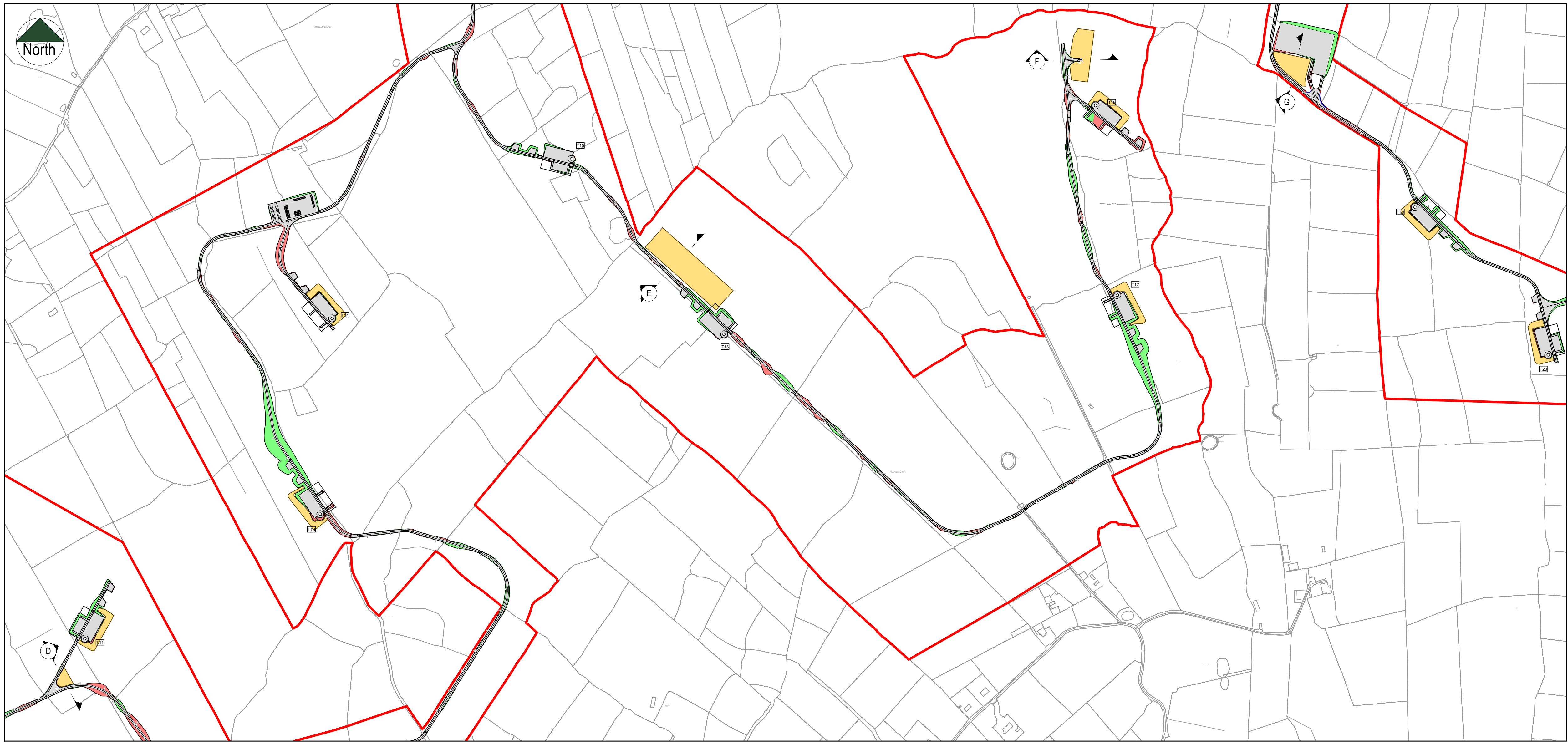
Anemometer Mast Elevations

<u>Drawing No.:</u> SVH_PAS_ECS_001		<u>Revision No.:</u> 0	
<u>Scale:</u> (A1) 1:200, 1:100, 1:50		<u>Date:</u> 22/04/2022	
<u>Drawn By:</u> C.M.P	<u>Checked By:</u> J.B	<u>Confirmed By:</u> S.C	

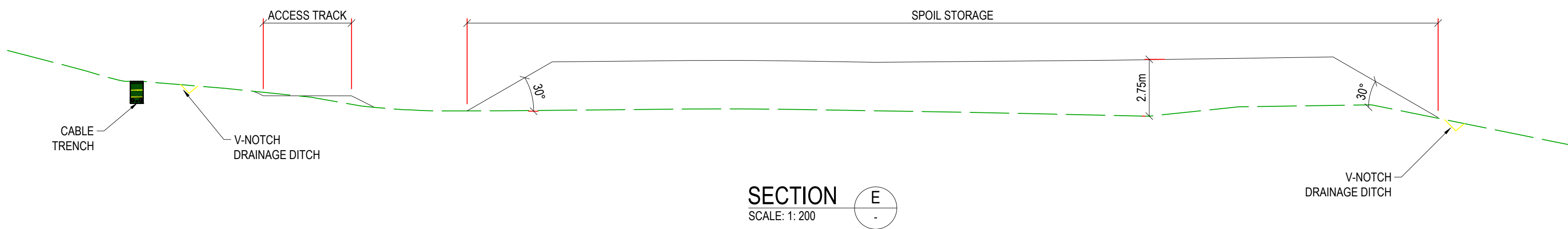
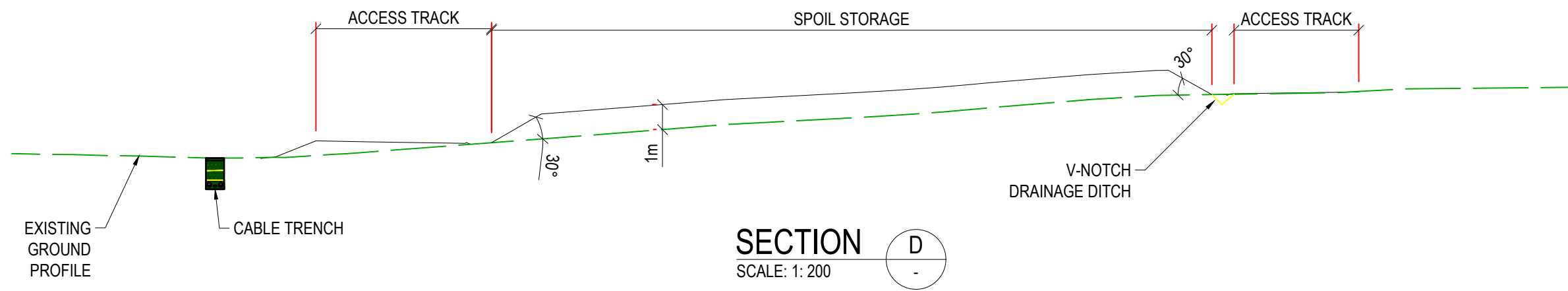


 SITE BOUNDARY
 EXISTING GROUND PROFILE
 PROPOSED SPOIL STORAGE PROFILE

PN1	15/04/22	FOR INFORMATION		MM	SP
REV	DATE	DESCRIPTION		BY	APP
PROJECT:					
SEVEN HILLS WIND FARM					
TITLE:					
SPOIL STORAGE SECTIONS - NORTH					
CLIENT:					
					
					
Malachy Walsh and Partners Engineering and Environmental Consultants Cork Tralee London Limerick					
					
The Elm Suite, Loughmore Centre, Raheen Business Park, Limerick, V94 R578					
Tel : +353 (0) 81 480164 Fax : +353 (0) 81 441125 E-mail : limerick@mwp.ie Web : www.mwp.ie					
DRAWN: MW		CHECKED: BS		APPROVED: BS	
DATE: 15/04/22		SCALE @ A1 AS NOTED			
PROJECT NUMBER: 21337		DRAWING STATUS: S0			
DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-1400					
					REV1



SOUTH PLAN
SCALE 1:5000






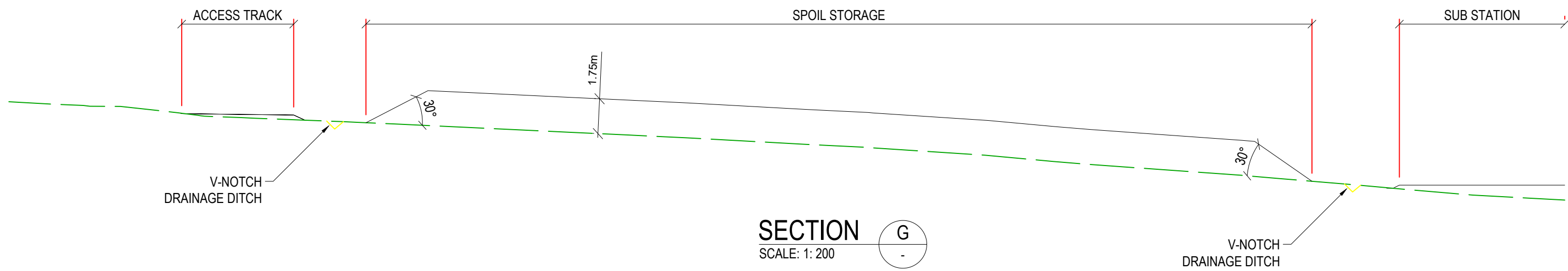
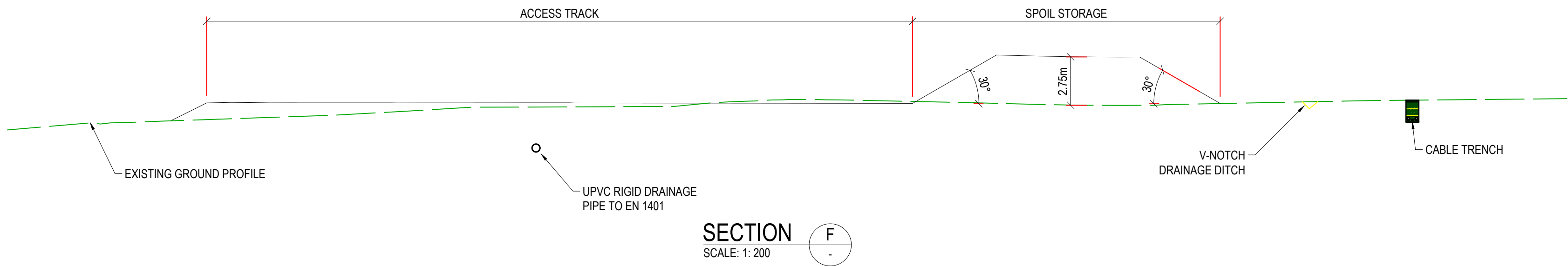
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 6. ALL DIMENSIONS ARE IN **METERS**, UNLESS NOTED OTHERWISE.

LEGEND:

—	SITE BOUNDARY
---	EXISTING GROUND PROFILE
---	PROPOSED SPOIL STORAGE PROFILE

P01	15/04/22	FOR INFORMATION	MW	BS		
REV	DATE	DESCRIPTION	BY	APP		
PROJECT: SEVEN HILLS WIND FARM						
TITLE: SPOIL STORAGE SECTIONS - SOUTH SHEET 1 of 2						
CLIENT: 						
 Malachy Walsh and Partners Engineering and Environmental Consultants Cork Tralee London Limerick						
 The Elm Suite, Loughmore Centre, Raheen Business Park, Limerick, V94 R578 Tel: +353 (0) 61 480164 Fax: +353 (0) 61 441125 E-mail: limerick@mwp.ie Web: www.mwp.ie						
DRAWN: MW	CHECKED: BS	APPROVED: BS				
DATE: 15/04/22	SCALE @ A1: AS NOTED					
PROJECT NUMBER: 21337	DRAWING STATUS: S0					
DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-1401		REV: P01				





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 - ALL CO-ORDINATES ARE TO IRISH TRANSVERSE MERCATOR (ITM) AND IN **METERS**.
 - ANY DISCREPANCIES BETWEEN THESE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 - DRAWINGS ARE NOT TO BE SCALED.
 - ALL DIMENSIONS ARE IN **METERS**, UNLESS NOTED OTHERWISE.

LEGEND:

- SITE BOUNDARY
- EXISTING GROUND PROFILE
- PROPOSED SPOIL STORAGE PROFILE

P01	15/04/22	FOR INFORMATION	MW	BS
REV	DATE	DESCRIPTION	BY	APP
PROJECT: SEVEN HILLS WIND FARM				
TITLE: SPOIL STORAGE SECTIONS - SOUTH SHEET 2 of 2				
CLIENT: 				
 Malachy Walsh and Partners Engineering and Environmental Consultants Cork Tralee London Limerick  The Elm Suite, Loughmore Centre, Limerick, V94 R578 Tel: +353 (0) 61 480164 Fax: +353 (0) 61 441125 E-mail: limerick@mwp.ie Web: www.mwp.ie				
DRAWN:	MW	CHECKED:	BS	APPROVED: BS
DATE:	15/04/22	SCALE @ A1:	AS NOTED	
PROJECT NUMBER:	21337	DRAWING STATUS:	S0	
DRAWING NUMBER:	21337-MWP-ZZ-00-DR-C-1402	REV:	P01	

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 2. ALL LEVELS ARE IN METRES RELATED TO ORDNANCE DATUM MALIN HEAD.
 3. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 4. DRAWINGS ARE NOT TO BE SCALED.
 5. ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE.

REFERENCE DRAWINGS:	
DRAWING No.	DRAWING TITLE
NORTH DRAINAGE	
21337-MWP-WF-00-DR-C-2101	DRAINAGE LAYOUT SHEET 1
21337-MWP-WF-00-DR-C-2102	DRAINAGE LAYOUT SHEET 2
21337MWP-WF-00-DR-C-2103	DRAINAGE LAYOUT SHEET 3
21337-MWP-WF-00-DR-C-2104	DRAINAGE LAYOUT SHEET 4
21337-MWP-WF-00-DR-C-2105	DRAINAGE LAYOUT SHEET 5
21337-MWP-WF-00-DR-C-2106	DRAINAGE LAYOUT SHEET 6
21337-MWP-WF-00-DR-C-2107	DRAINAGE LAYOUT SHEET 7
21337-MWP-WF-00-DR-C-2108	DRAINAGE LAYOUT SHEET 8
21337-MWP-WF-00-DR-C-2109	DRAINAGE LAYOUT SHEET 9
21337MWP-WF-00-DR-C-2110	DRAINAGE LAYOUT SHEET 10
SOUTH DRAINAGE	
21337-MWP-WF-00-DR-C-2111	DRAINAGE LAYOUT SHEET 11
21337MWP-WF-00-DR-C-2112	DRAINAGE LAYOUT SHEET 12
21337-MWP-WF-00-DR-C-2113	DRAINAGE LAYOUT SHEET 13
21337-MWP-WF-00-DR-C-2114	DRAINAGE LAYOUT SHEET 14
21337-MWP-WF-00-DR-C-2115	DRAINAGE LAYOUT SHEET 15
21337-MWP-WF-00-DR-C-2116	DRAINAGE LAYOUT SHEET 16
21337-MWP-WF-00-DR-C-2117	DRAINAGE LAYOUT SHEET 17
21337-MWP-WF-00-DR-C-2118	DRAINAGE LAYOUT SHEET 18
21337MWP-WF-00-DR-C-2119	DRAINAGE LAYOUT SHEET 19
21337MWP-WF-00-DR-C-2120	DRAINAGE LAYOUT SHEET 20
21337MWP-WF-00-DR-C-2121	DRAINAGE LAYOUT SHEET 21
21337MWP-WF-00-DR-C-2122	DRAINAGE LAYOUT SHEET 22
21337MWP-WF-00-DR-C-2123	DRAINAGE LAYOUT SHEET 23
21337MWP-WF-00-DR-C-2124	DRAINAGE LAYOUT SHEET 24
21337MWP-WF-00-DR-C-2125	NORTH DRAINAGE KEYPLAN
21337MWP-WF-00-DR-C-2126	SOUTH DRAINAGE LAYOUT

REV	DATE	ISSUED FOR INFORMATION	GC	BS
REV	DATE	ISSUED FOR COORDINATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: SITE INTERNAL DUCTING CABLE TRENCH AND CROSSING DETAILS

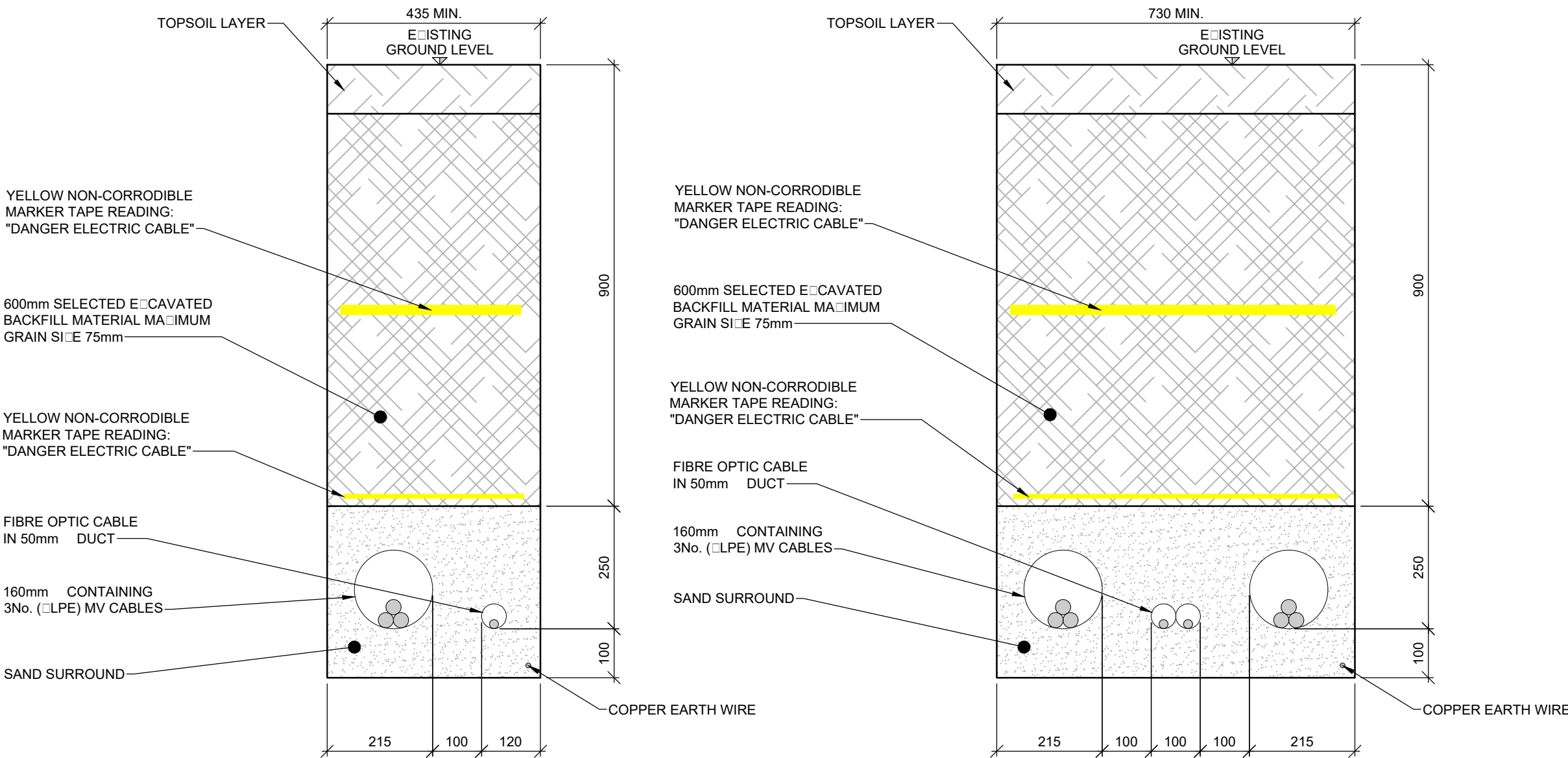
CLIENT: **enÉrgia**
Switched on

Malachy Walsh and Partners
Engineering and Environmental Consultants
Cork | Tralee | London | Limerick

The Elm Suite,
Loughmore Centre,
Raheen Business Park,
Limerick,
V94 R578

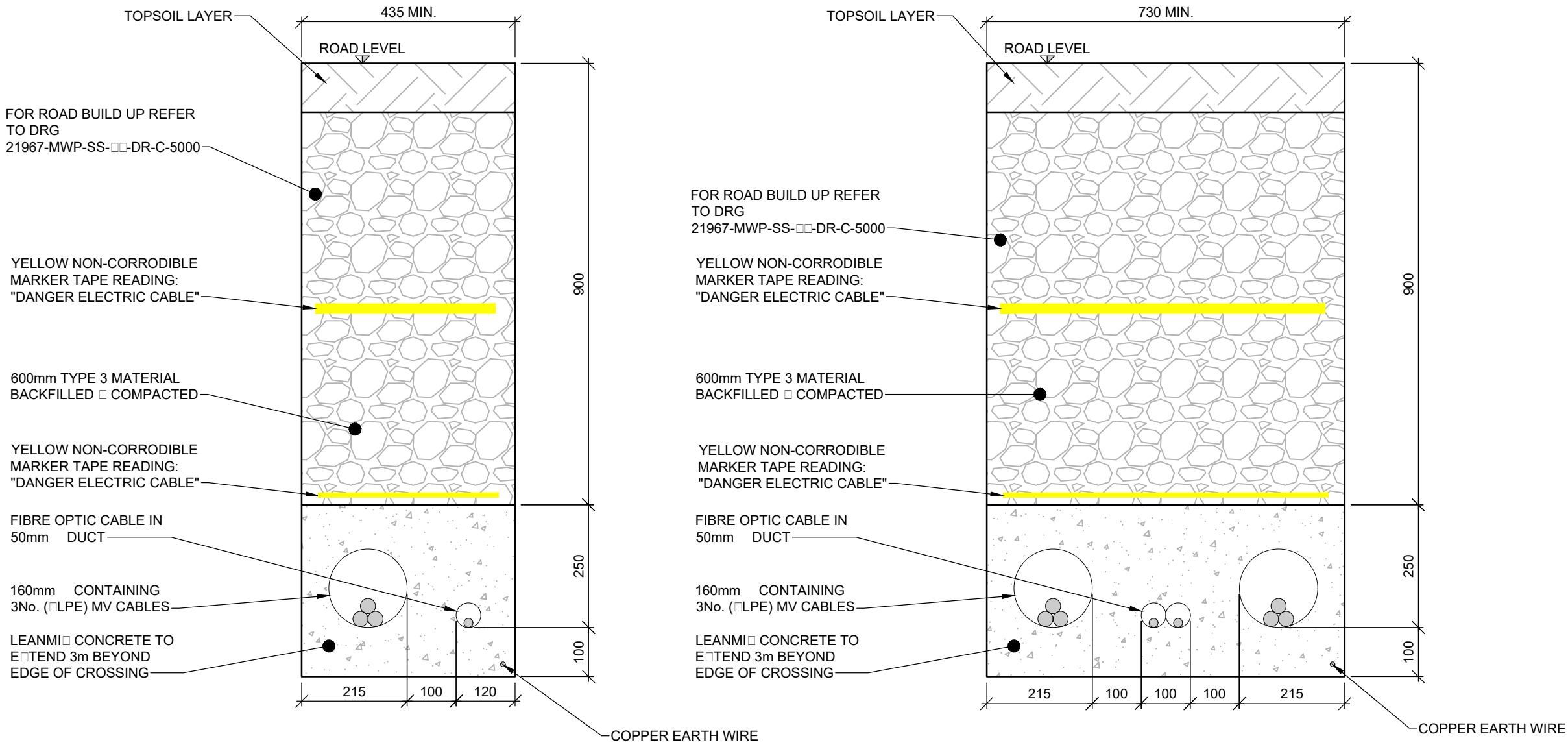
Tel: +353 (0) 61 480194
Fax: +353 (0) 61 441125
E-mail: limerick@mwp.ie
Web: www.mwp.ie

DRAWN: GC	CHECKED: PB	APPROVED: BS
DATE: MAY 22	SCALE @ A1: 1:10	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	
DRAWING NUMBER: 21337-MWP-WF-00-DR-C-5001	REV: P02	



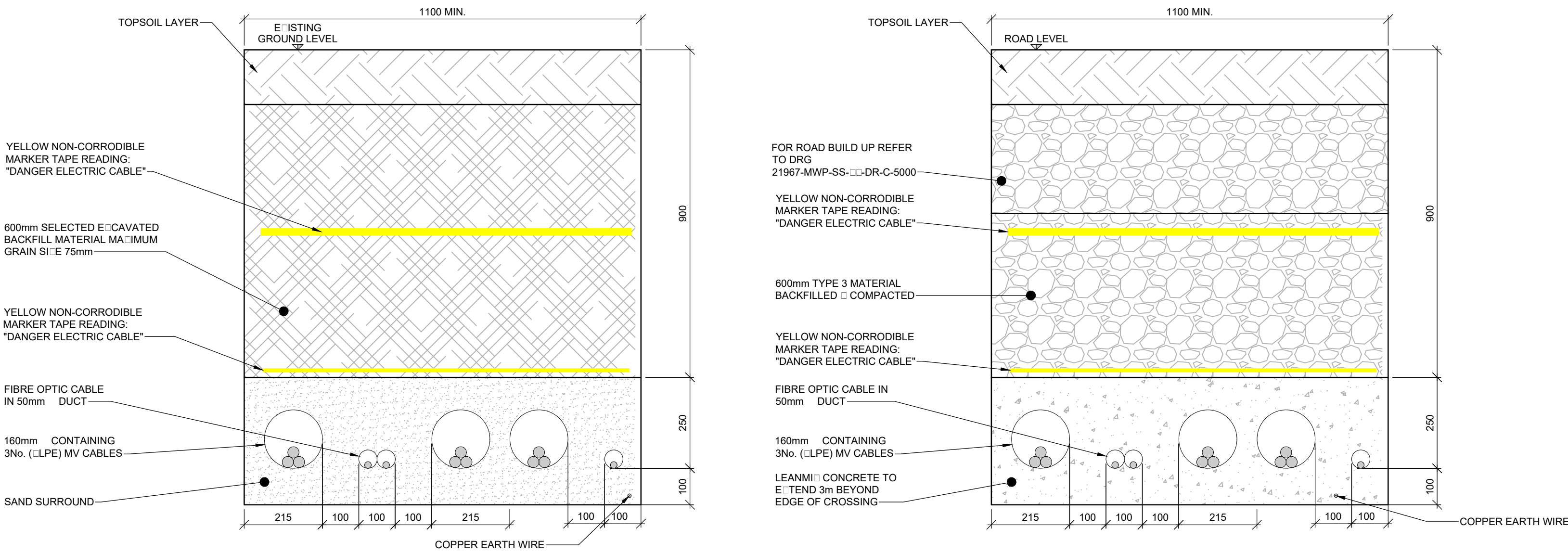
CABLE TRENCH IN OPEN GROUND
SINGLE CIRCUIT (INTERNAL WIND FARM)
SCALE: 1:10

CABLE TRENCH IN OPEN GROUND
TWIN CIRCUIT (INTERNAL WIND FARM)
SCALE: 1:10



CABLE TRENCH IN SITE ROADWAY
SINGLE CIRCUIT (INTERNAL WIND FARM)
SCALE: 1:10

CABLE TRENCH IN SITE ROADWAY
TWIN CIRCUIT (INTERNAL WIND FARM)
SCALE: 1:10

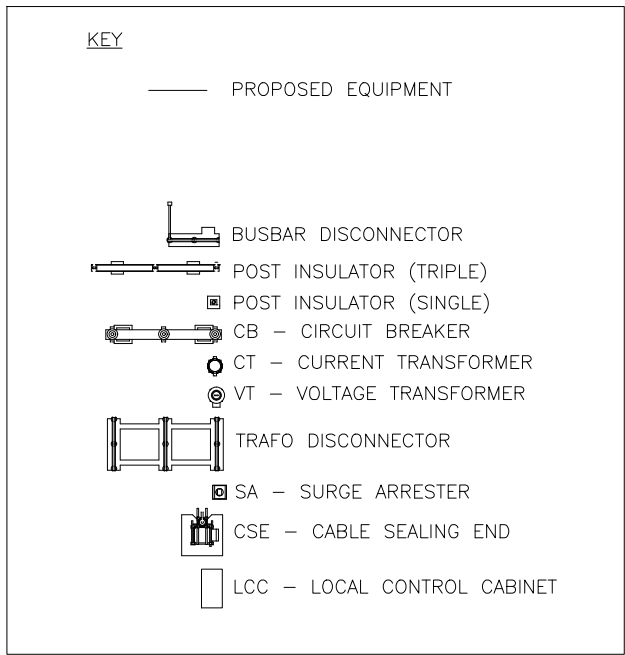
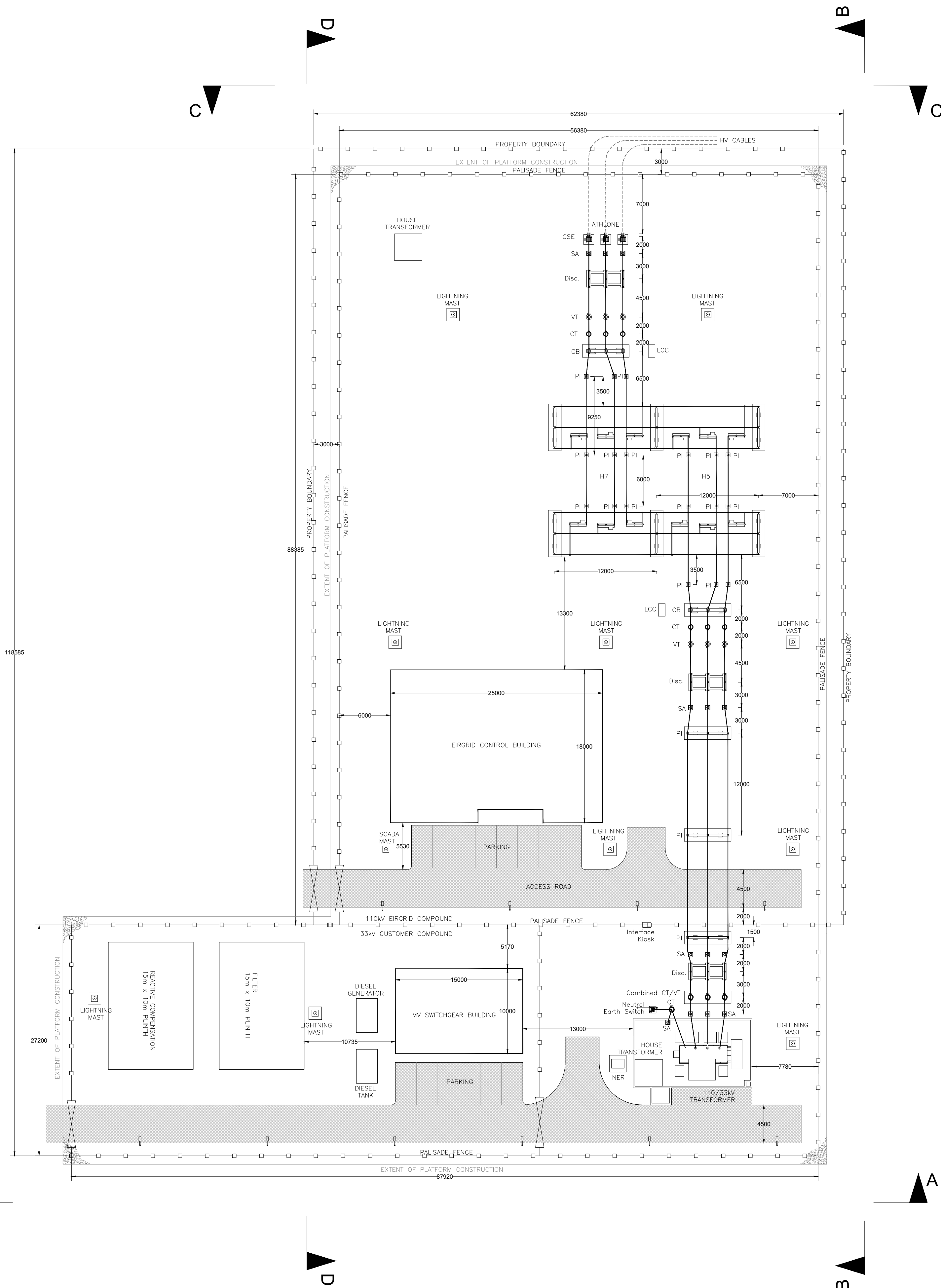


CABLE TRENCH IN OPEN GROUND TWIN CIRCUIT
WITH MET MAST DUCT (INTERNAL WIND FARM)
SCALE: 1:10

CABLE TRENCH IN SITE ROADWAY TWIN CIRCUIT
WITH MET MAST DUCT (INTERNAL WIND FARM)
SCALE: 1:10

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R9	24.01.22	REVISED TO SUIT EIRGRID SPEC
R8	09.12.21	FOR PLANNING
R7	08.12.21	REVISED FOLLOWING REVIEW
R6	06.12.21	REVISED FOLLOWING REVIEW
R5	19.07.21	REVISED FOLLOWING REVIEW
R4	23.06.21	REVISED FOLLOWING REVIEW
R3	16.04.21	REVISED FOLLOWING REVIEW
R2	30.03.21	REVISED FOLLOWING REVIEW
R1	17.03.21	REVISED FOLLOWING REVIEW
P0	24.09.20	First Issue
I/R	DATE	DESCRIPTION

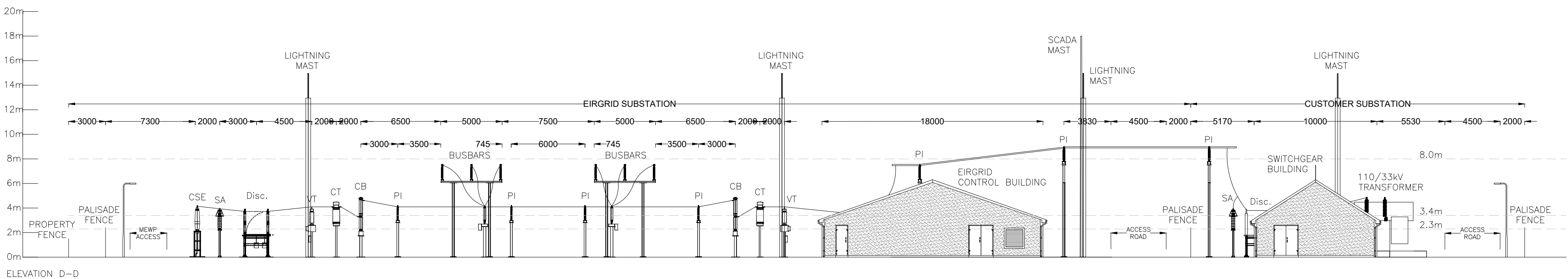
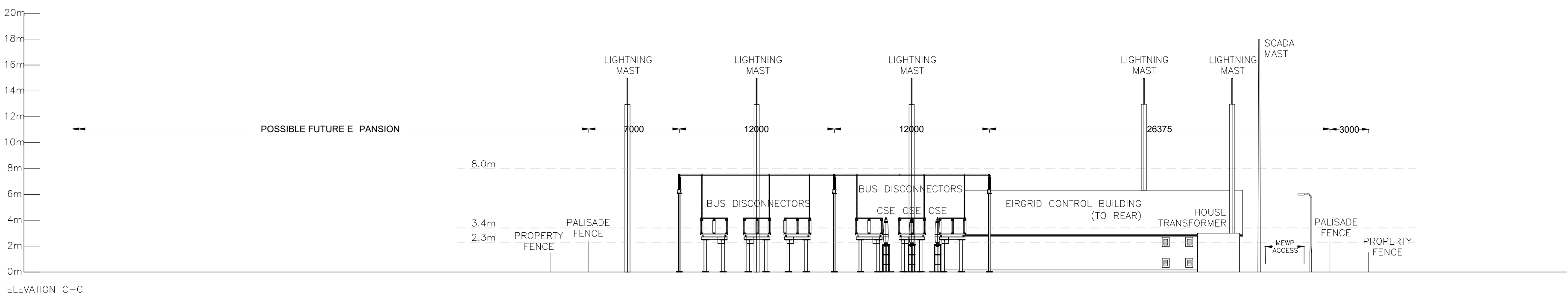
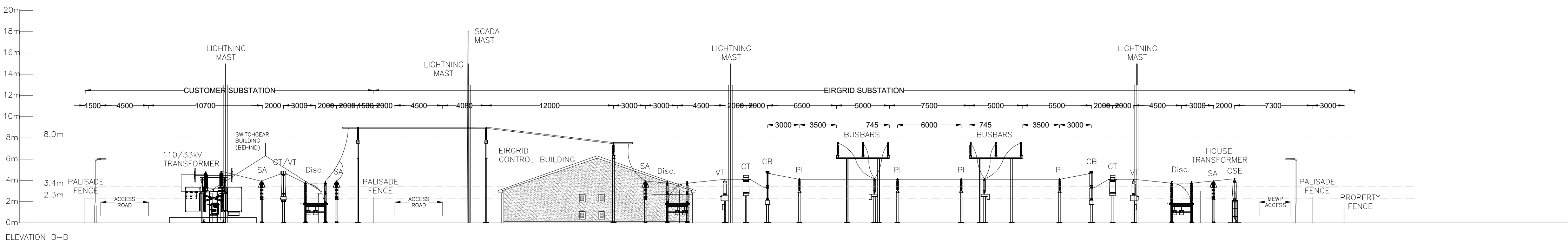
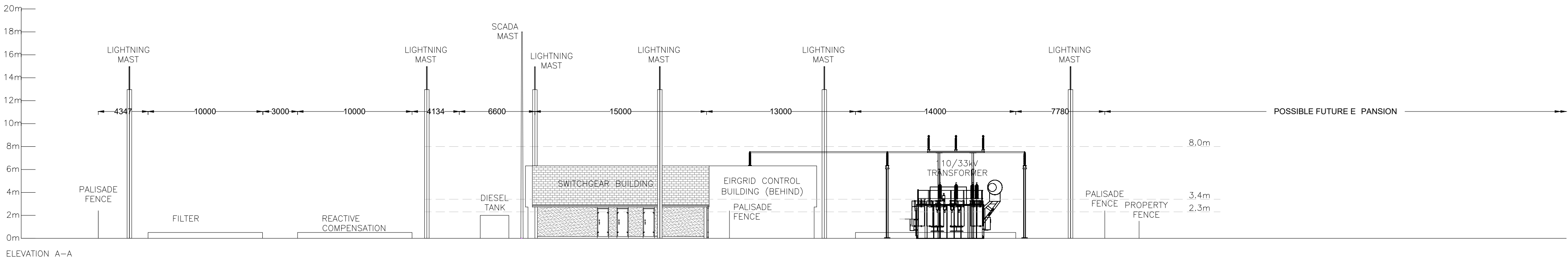


REFER TO DRAWING 60634578-ACM-DR-CE-002
FOR SITE ELEVATIONS.

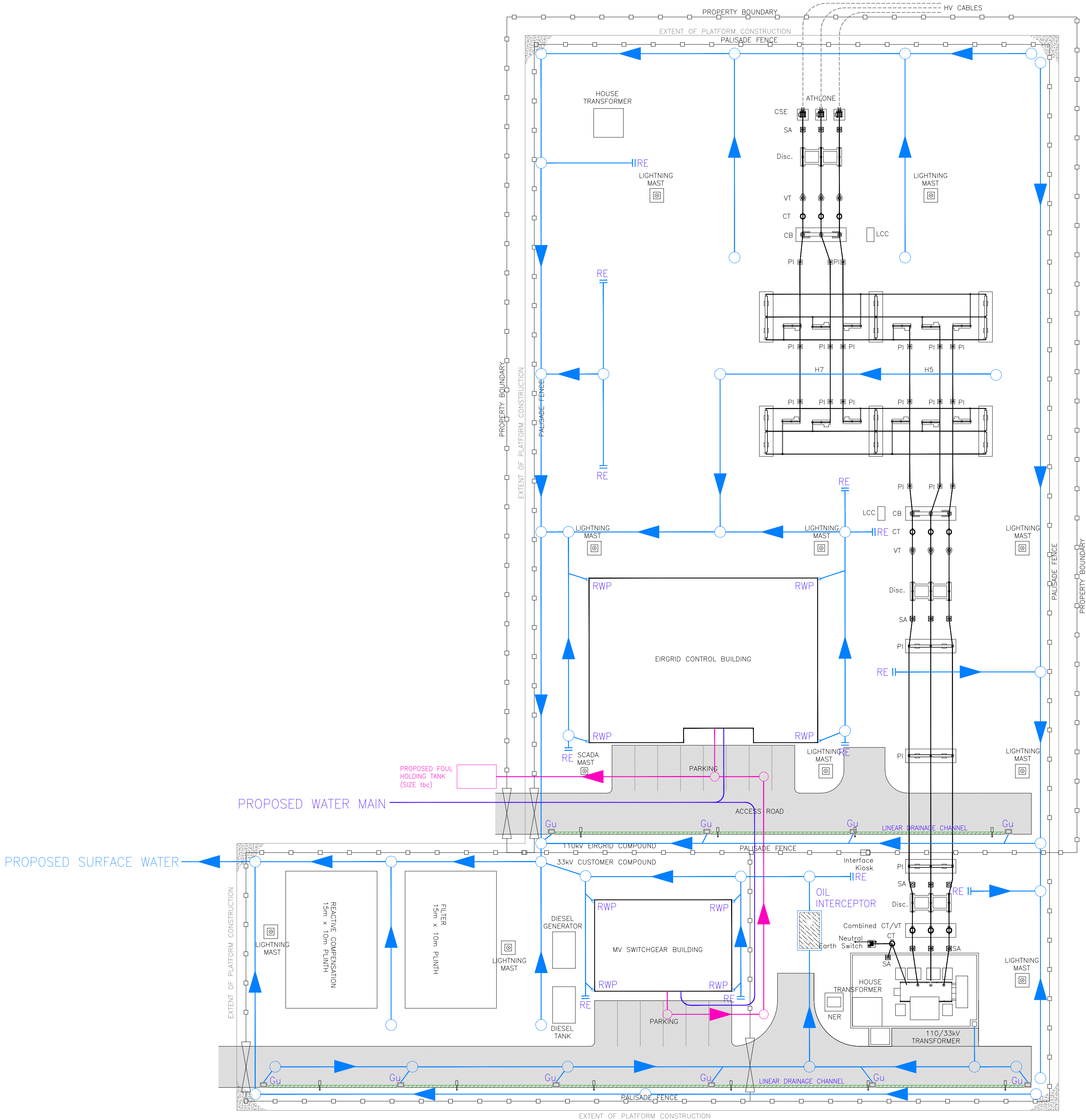
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R8	24.01.22	REVISED TO SUIT EIRGRID SPEC
R7	08.12.21	REVISED FOLLOWING REVIEW
R6	06.12.21	REVISED FOLLOWING REVIEW
R5	19.07.21	REVISED FOLLOWING REVIEW
R4	23.06.21	REVISED FOLLOWING REVIEW
R3	16.04.21	REVISED FOLLOWING REVIEW
R2	30.03.21	REVISED FOLLOWING REVIEW
R1	17.03.21	REVISED FOLLOWING REVIEW
P0	24.09.20	First Issue
I/R	DATE	DESCRIPTION



NOTE:
FUTURE EQUIPMENT NOT
SHOWN ON ELEVATIONS



- KEY
- PROPOSED SW DRAINAGE
 - MANHOLE
 - RODDING EYE
 - ROAD GULLY
 - LINEAR DRAINAGE CHANNEL
 - RAIN WATER PIPE
 - PROPOSED FW DRAINAGE
 - PROPOSED WATER MAIN
 - FUEL INTERCEPTOR

AECOM

PROJECT

Seven Hills Windfarm

CLIENT

Seven Hills Wind Ltd.

CONSULTANT

AECOM
Adel hi Pla a
Georges Street U er
Dun Laoghaire
County Du lin
Ireland
T 353 (0)1 2383100
.aecom.com

LEGEND

NOTES

1. DRAWINGS ARE INDICATIVE ONLY AND SHOULD NOT BE USED AS DETAILED FOR DESIGN

ISSUE/REVISION

R8	24.01.22	REVISED TO SUIT EIRGRID SPEC
R7	08.12.21	REVISED FOLLOWING REVIEW
R6	06.12.21	REVISED FOLLOWING REVIEW
R5	19.07.21	REVISED FOLLOWING REVIEW
R4	23.06.21	REVISED FOLLOWING REVIEW
R3	16.04.21	FOUL HOLDING TANK RELOCATED
R2	30.03.21	REVISED FOLLOWING REVIEW
R1	17.03.21	REVISED FOLLOWING REVIEW
P0	28.09.20	First Issue
I/R	DATE	DESCRIPTION

STATUS

FOR DISCUSSION

PROJECT NUMBER SCALE

60634578

NTS

SHEET TITLE

Seven Hills Windfarm
110kV Su station
Indicative Drainage Layout

SHEET NUMBER

60634578-ACM-DR-CE-005

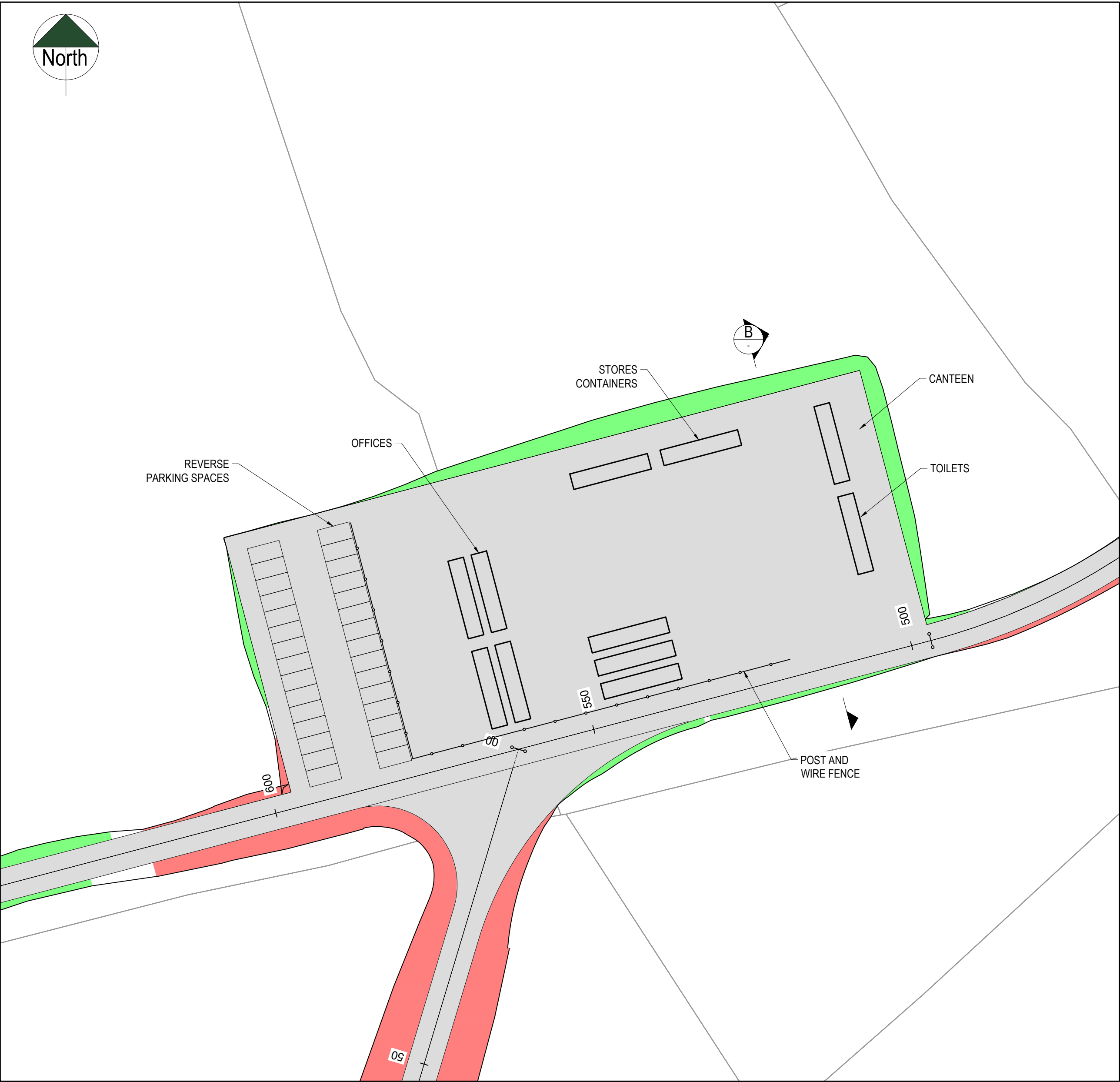
REV

R8

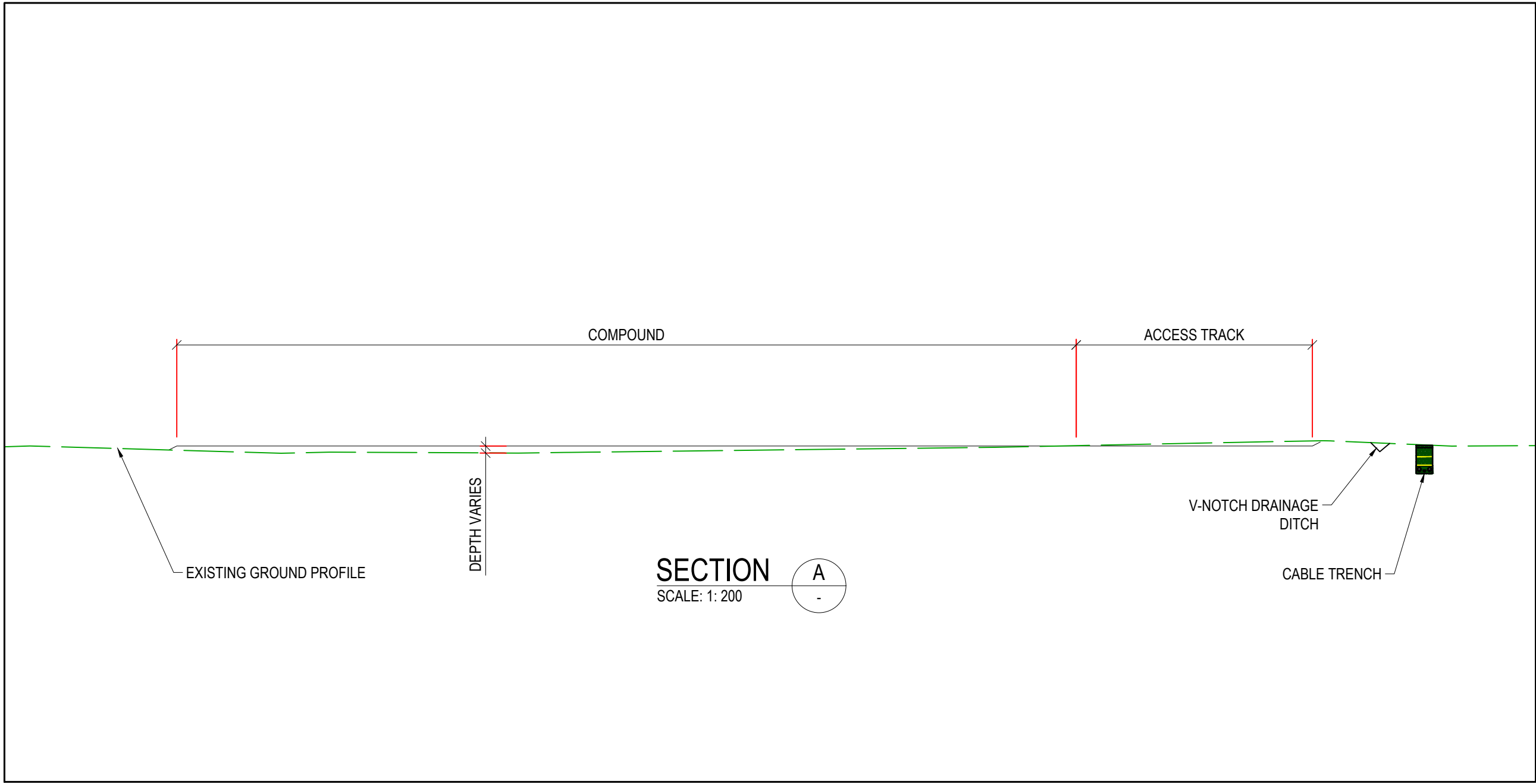
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NORTH COMPOUND
SCALE 1:500





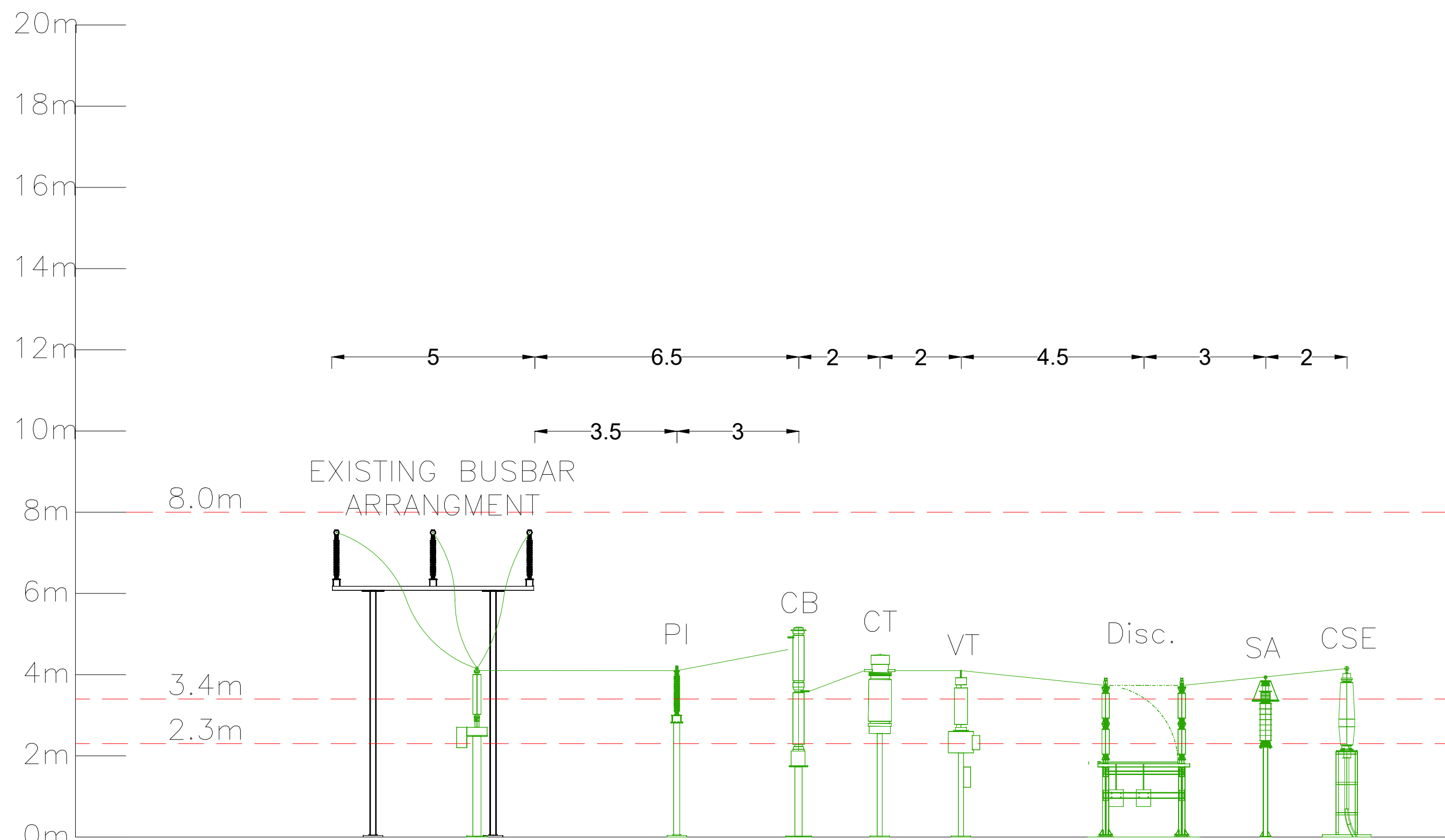
SOUTH COMPOUND
SCALE 1:500



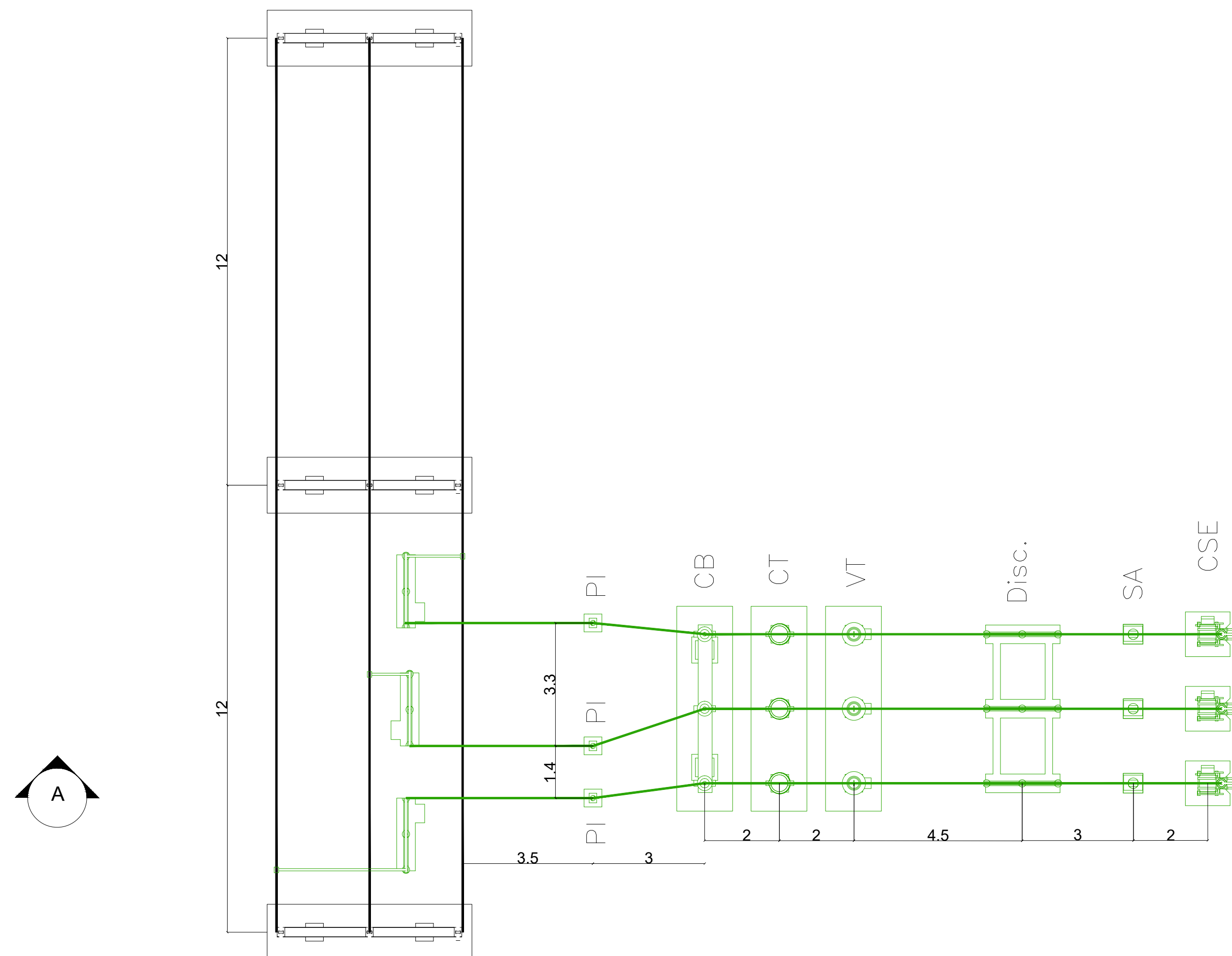
DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS IN ALL CASES.
VERIFY DIMENSIONS ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNERS IMMEDIATELY.
THIS DRAWING TO BE READ IN CONJUNCTION WITH THE DESIGNERS SPECIFICATION.
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- NOTES:**
1. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS, BILLS OF QUANTITIES, ARCHITECTURAL, SERVICES AND ENGINEERING DRAWINGS.
 2. ALL LEVELS ARE IN **METRES** RELATED TO ORDNANCE DATUM MALIN HEAD OSGM15.
 3. ALL CO-ORDINATES ARE TO IRISH TRANSVERSE MERCATOR (ITM) AND IN **METERS**.
 4. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 5. DRAWINGS ARE NOT TO BE SCALED.
 6. ALL DIMENSIONS ARE IN **METERS**, UNLESS NOTED OTHERWISE.

P01 28/03/22 FOR INFORMATION		MW	BS
REV	DATE	DESCRIPTION	BY APP
PROJECT: SEVEN HILLS			
TITLE: TEMPORARY CONSTRUCTION COMPOUND GENERAL ARRANGEMENT			
CLIENT:			
 Malachy Walsh and Partners Engineering and Environmental Consultants Cork Tralee London Limerick			
 The Elm Suite, Loughmore Centre, Raheen Business Park, Limerick, V94 RP26 Tel: +353 (0) 61 480164 Fax: +353 (0) 61 441126 E-mail: limerick@mwp.ie Web: www.mwp.ie			
DRAWN: MW	CHECKED: BS	APPROVED: BS	
DATE: 28/03/22	SCALE @ A1: NTS		
PROJECT NUMBER: 21337	DRAWING STATUS: S0		
DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C0103			REV: P01



ELEVATION A-A



PI	Post Insulator
CB	Circuit Breaker
CT	Current Transformer
VT	Voltage Transformer
DISC.	Disconnecter
SA	Surge Arrester
CSE	Cable Sealing End

1. DRAWINGS ARE INDICATIVE ONLY AND SHOULD NOT BE USED FOR DETAILED DESIGN;
2. THE EQUIPMENT LAYOUTS ARE INDICATIVE AND DIMENSIONS MAY CHANGE ONCE THE EXACT SPECIFICATIONS ARE DETERMINED;
3. DRAWING REPRESENTS AN INDICATIVE 110 kV LINE BAY, HAS BEEN PRODUCED WITHOUT ANY DETAILED INFORMATION ON ATHLONE 110 kV STATION, AS SUCH A DETAILED SPACE PROVING EXERCISE HAS NOT BEEN CARRIED OUT.

ISSUE/REVISION		
I/R	DATE	DESCRIPTION

STATUS

FOR DISCUSSION

PROJECT NUMBER

SCALE

1:100@ A1

SHEET TITLE

TYPICAL CABLE CONNECTION BAY

SHEET NUMBER

REV

60634578-ACM-DR-CE-006

PROJECT

ATHLONE 110 kV SUBSTATION

CLIENT

ENERGIA

CONSULTANT

AECOM
Adelhi Plaza
Georges Street Upper
Dun Laoghaire
County Dublin
Ireland
T 353 (0)1 2383100
www.aecom.com

LEGEND

— E ISTING E UIPMENT
— PROPOSED E UIPMENT

NOTES

1. DRAWINGS ARE INDICATIVE ONLY AND SHOULD NOT BE USED FOR DETAILED DESIGN;
2. THE EQUIPMENT LAYOUTS ARE INDICATIVE AND DIMENSIONS MAY CHANGE ONCE THE EXACT SPECIFICATIONS ARE DETERMINED;
3. DRAWING REPRESENTS AN INDICATIVE 110 KV LINE BAY, HAS BEEN PRODUCED WITHOUT ANY DETAILED INFORMATION ON ATHLONE 110 KV STATION, AS SUCH A DETAILED SPACE PROVING EXERCISE HAS NOT BEEN CARRIED OUT.

ISSUE/REVISION

STATUS

FOR DISCUSSION

PROJECT NUMBER

SCALE

1:100@ A1

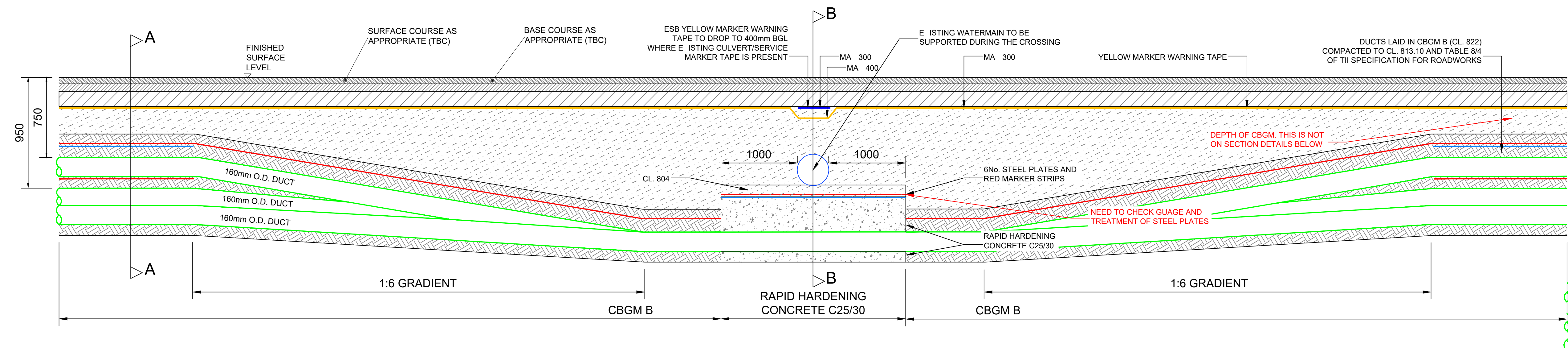
SHEET TITLE

TYPICAL CABLE CONNECTION BAY

SHEET NUMBER

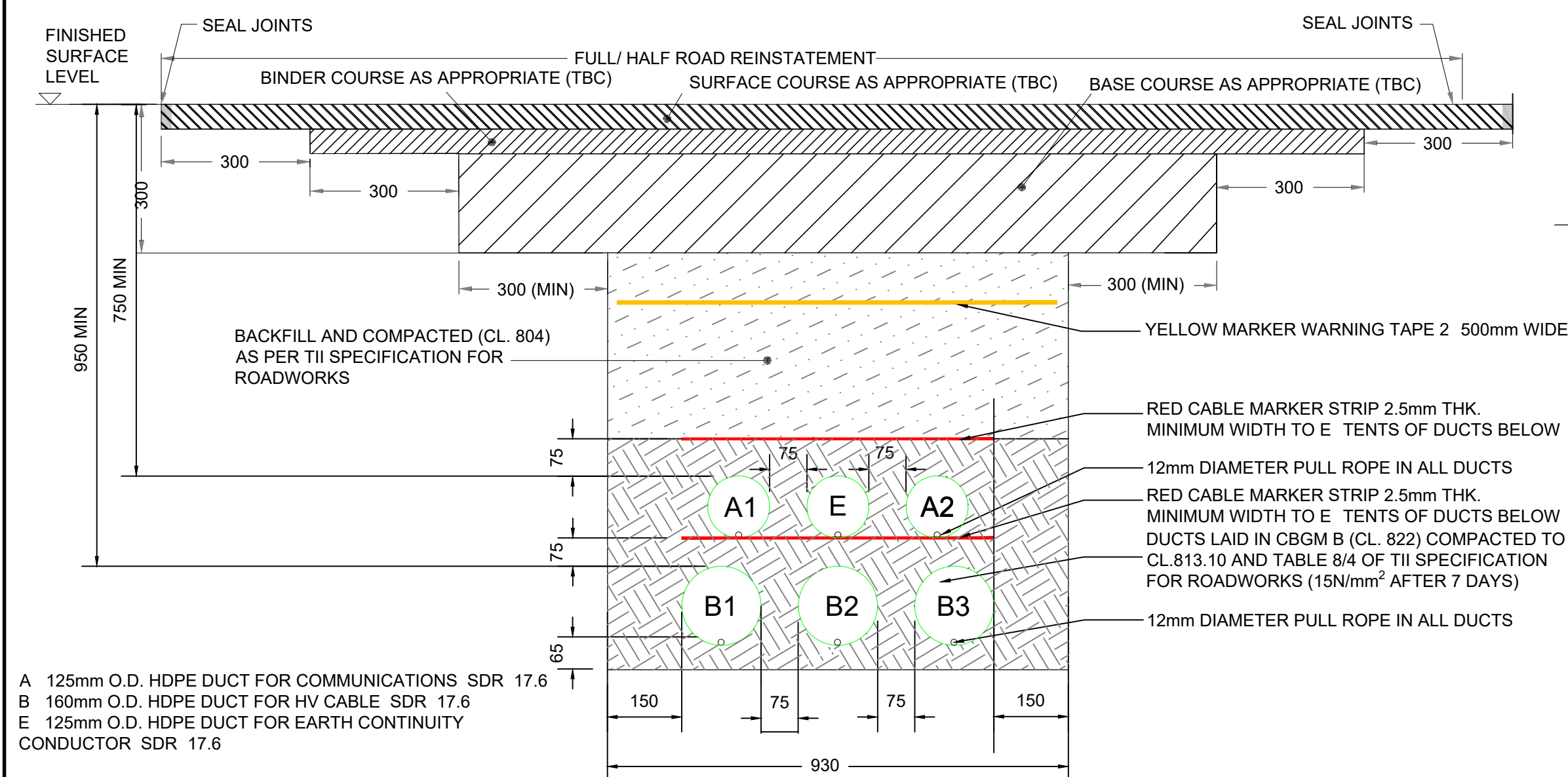
REV

60634578-ACM-DR-CE-006

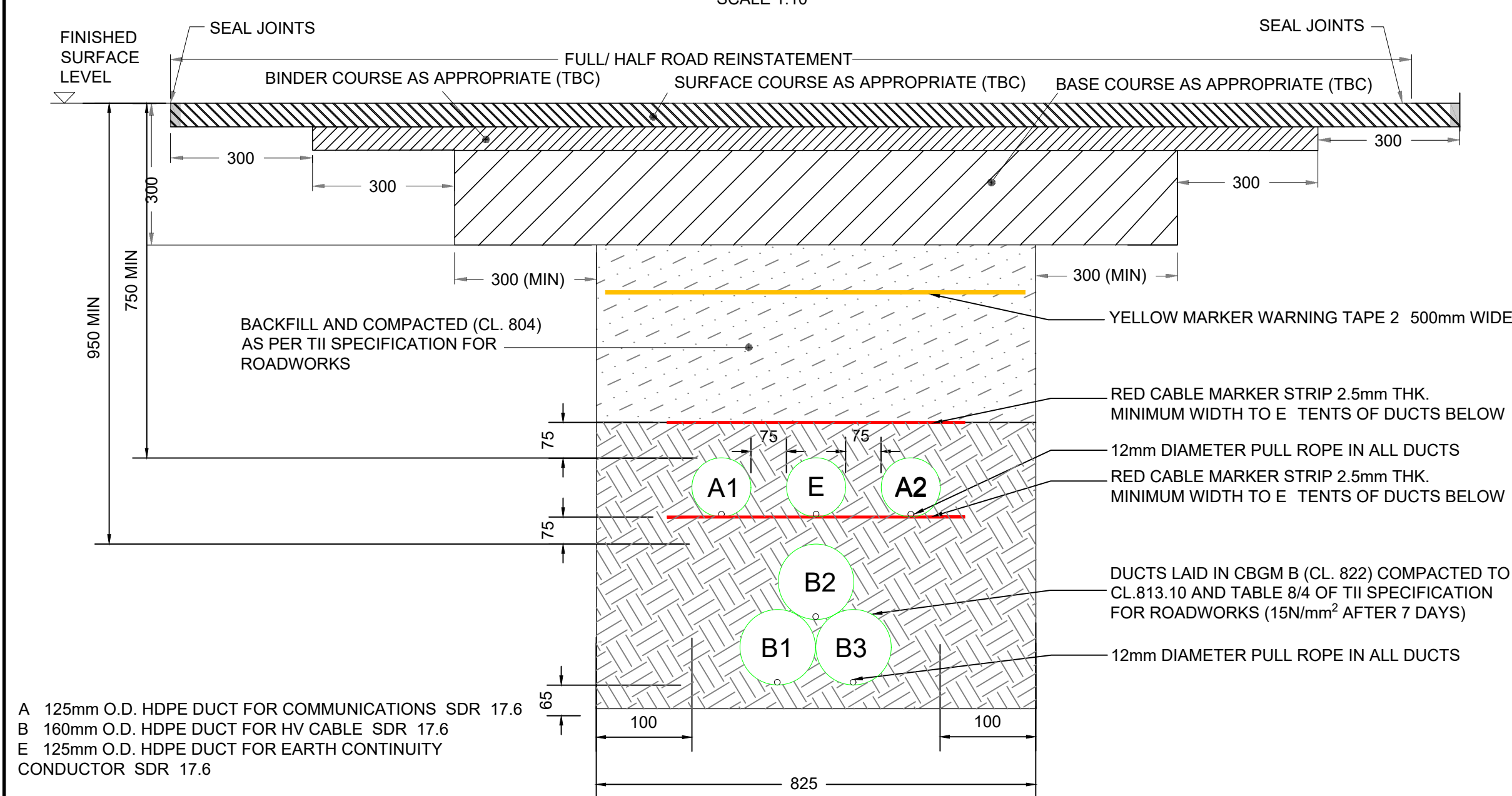


**TRANSITION OF 110KV CIRCUIT TO FULL FLAT
FORMATION UNDER 3RD PARTY SERVICE
TYPICAL X-SECTION BASED ON CH R1B 225**

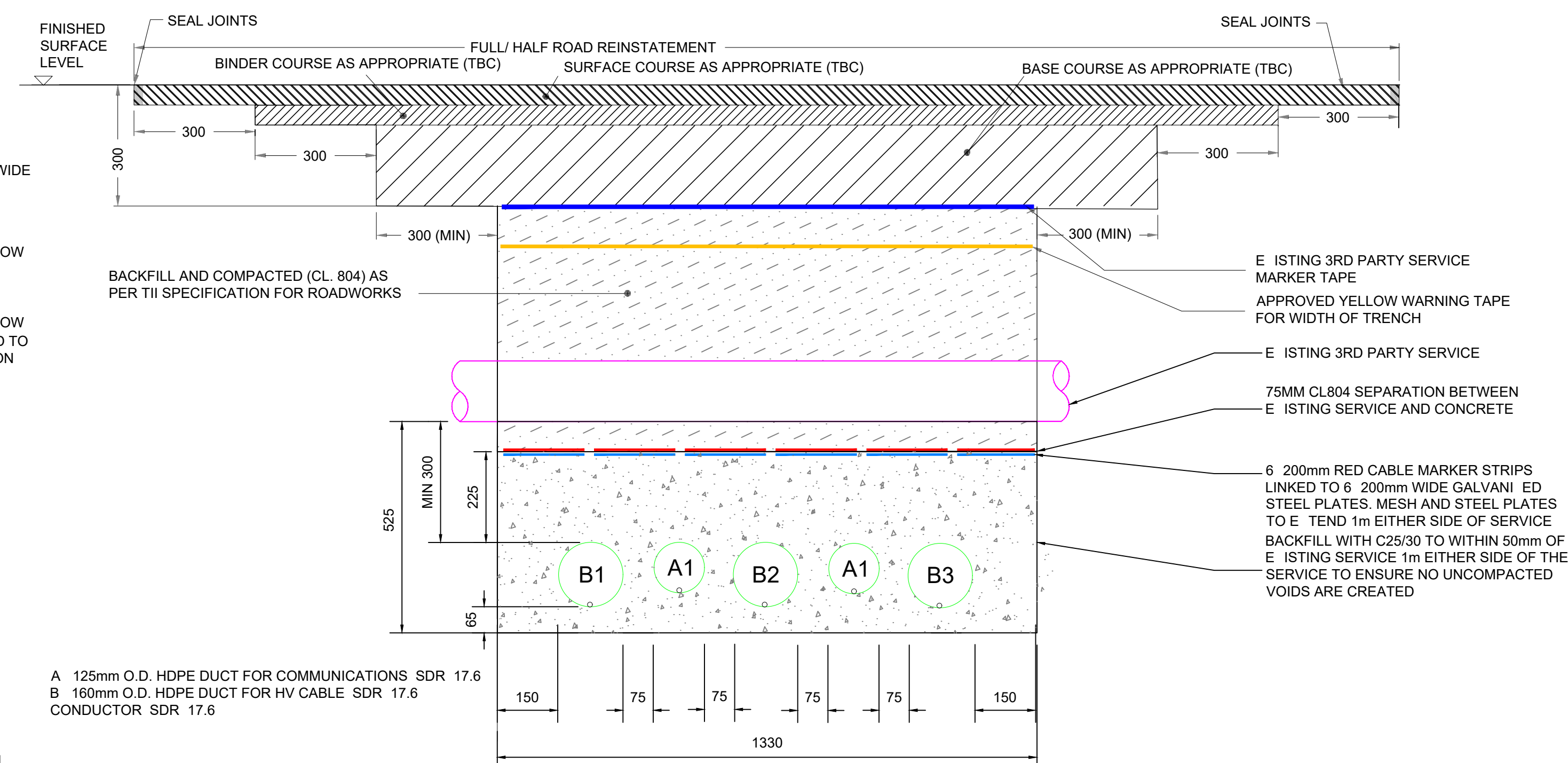
NOT TO SCALE



SECTION A-A DETAIL 1
TYPICAL CROSS SECTION INDICATING TRENCH FOR
110KV CIRCUIT UNDER ROADS



SECTION A-A DETAIL 2
TYPICAL CROSS SECTION INDICATING TRENCH FOR
110KV CIRCUIT UNDER ROADS (TREFOIL)



SECTION B-B DETAIL 3
TYPICAL CROSS SECTION INDICATING TRENCH FOR 110KV CIRCUIT
IN FULL FLAT FORMATION UNDER 3RD PARTY SERVICE

Cable Depth to top of duct	Width of trench (mm)
950	930
1.5	1130
2	1200
2.5	1480

NOT FOR
CONSTRUCTION

- NOTES:
- ALL PRODUCTS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
 - 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS etc.) IN THE CASE OF HIGH RISK 3RD PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT 3RD PARTY SERVICE OWNERS FOR GUIDANCE.
 - STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 25mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
 - THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
 - DRAWING IS INDICATIVE ONLY. TO BE USED TO AID IN THE DESIGN OF RELEVANT INFRASTRUCTURE.
 - TEMPLES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm DUCT INSTALLATION IN WET CONCRETE.
 - HAND DIG WITHIN 500mm OF E. LISTING SERVICE.
 - EARTH CONTINUITY CONDUCTOR IS A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.
 - IF E. LISTING SERVICE MARKER TAPE IS NOT PRESENT THE YELLOW MARKER TAPE SHOULD BE INSTALLED AT A MINIMUM OF 300mm BELOW FINISHED SURFACE LEVEL.

- A 125mm O.D. HDPE DUCT FOR COMMUNICATIONS SDR 17.6
B 160mm O.D. HDPE DUCT FOR HV CABLE SDR 17.6
E 125mm O.D. HDPE DUCT FOR EARTH CONTINUITY
CONDUCTOR SDR 17.6

- | | |
|---|--|
|  | RED MARKER STRIP |
|  | YELLOW MARKER WARNING TAPE |
|  | E-ISTING SERVICE MARKER STRIP |
|  | 6mm GALVANISED STEEL PLATE |
|  | RAPID HARDENING WET CONCRETE C25/30 |
|  | CBGM B (CL 822) COMPACTED TO CL 813.10 |
|  | BACKFILL COMPACTED (CL 804) |

AECOM

PROJECT

THE SEVEN HILLS
WINDFARM
(MIDLANDS HV CABLE
ROUTE)

CLIENT

energía
Switched on

CONSULTANT

AECOM Limited
9th Floor
The Clarence West Building
2 Clarence Street West
Belfast
BT2 7GP
United Kingdom
44-(0)28-90607200
aecom.com

NOTE

- | | |
|---|---|
| any other relevant documentation | THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION |
| any that use dimensions | DO NOT SCALE FROM THIS DRAWING USE ONLY PRINTED DIMENSIONS |
| any all dimensions in millimetres | ALL DIMENSIONS IN MILLIMETRES ALL CHANGES LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE |
| any this drawing is to be read in conjunction with the project health and safety file | THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT HEALTH AND SAFETY FILE FOR ANY IDENTIFIED POTENTIAL HAZARDS |
| any reinstatement methods and details to be agreed with local authority in advance of works | REINSTATEMENT METHODS AND DETAILS TO BE AGREED WITH LOCAL AUTHORITY IN ADVANCE OF WORKS |
| any notes to be read in conjunction with department of transport tourism sport guidelines for managing openings in public roads (purple book) | NOTES TO BE READ IN CONJUNCTION WITH DEPARTMENT OF TRANSPORT TOURISM SPORT GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS (PURPLE BOOK) |

ISSUE/REVISION

P2	22/12/2021	Removal of Duct E Section B-B
P1	09/12/2021	160mm Diameter Ducts U dated
P0	23/09/2020	FIRST ISSUE
I/R	DATE	DESCRIPTION

STATUS

FOR INFORMATION

PROJECT NUMBER

SCALE

SHEET TITLE

THE SEVEN HILLS WINDFARM (MIDLANDS HV CABLE ROUTE) TYPICAL STANDARD TRENCH DETAILS

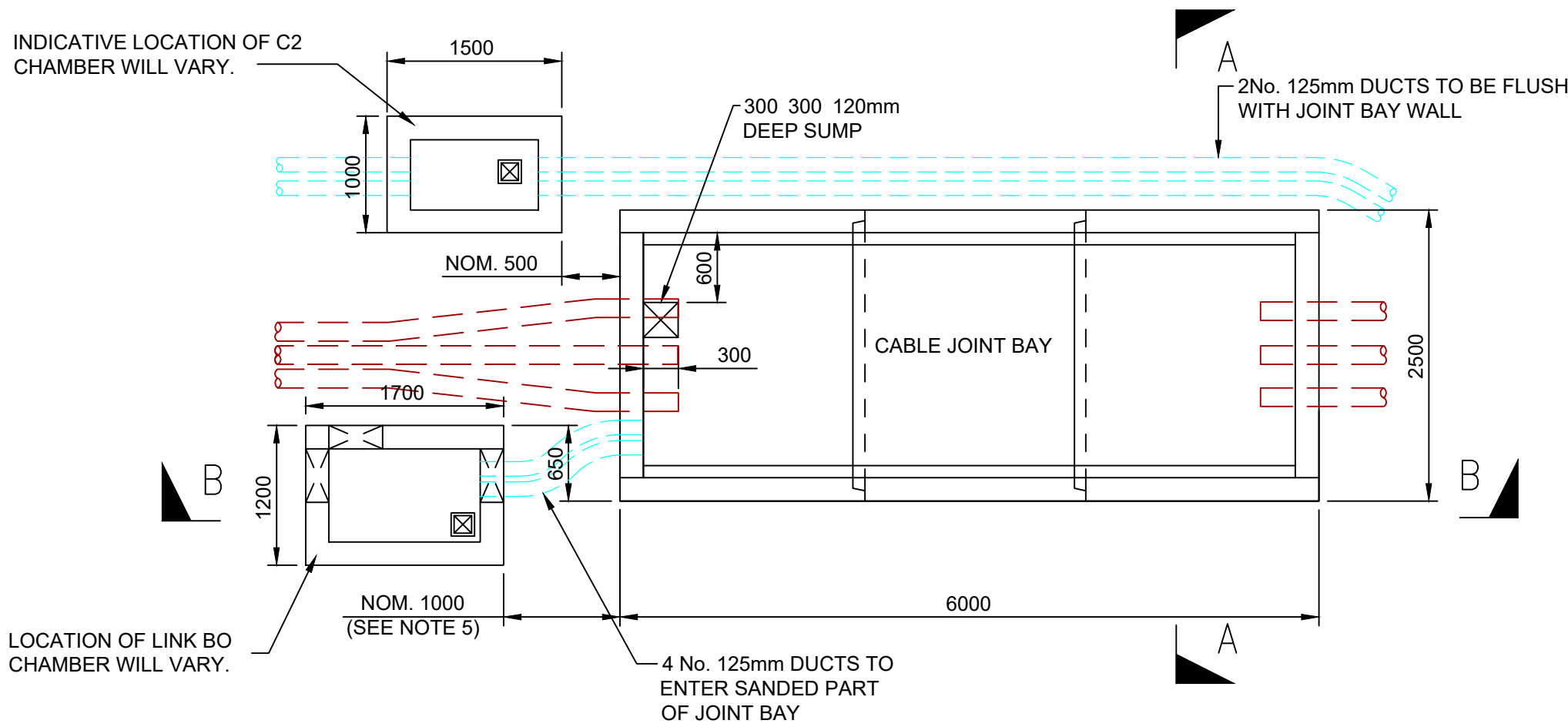
SHEET NUMBER

REV

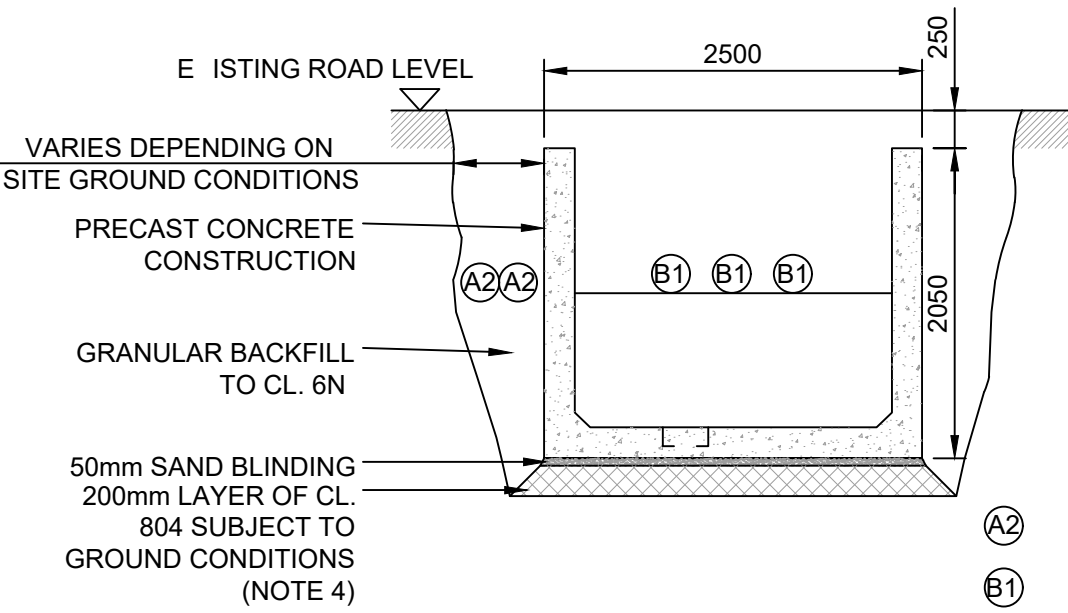
60634578-ACM-DR-CE-036

P2

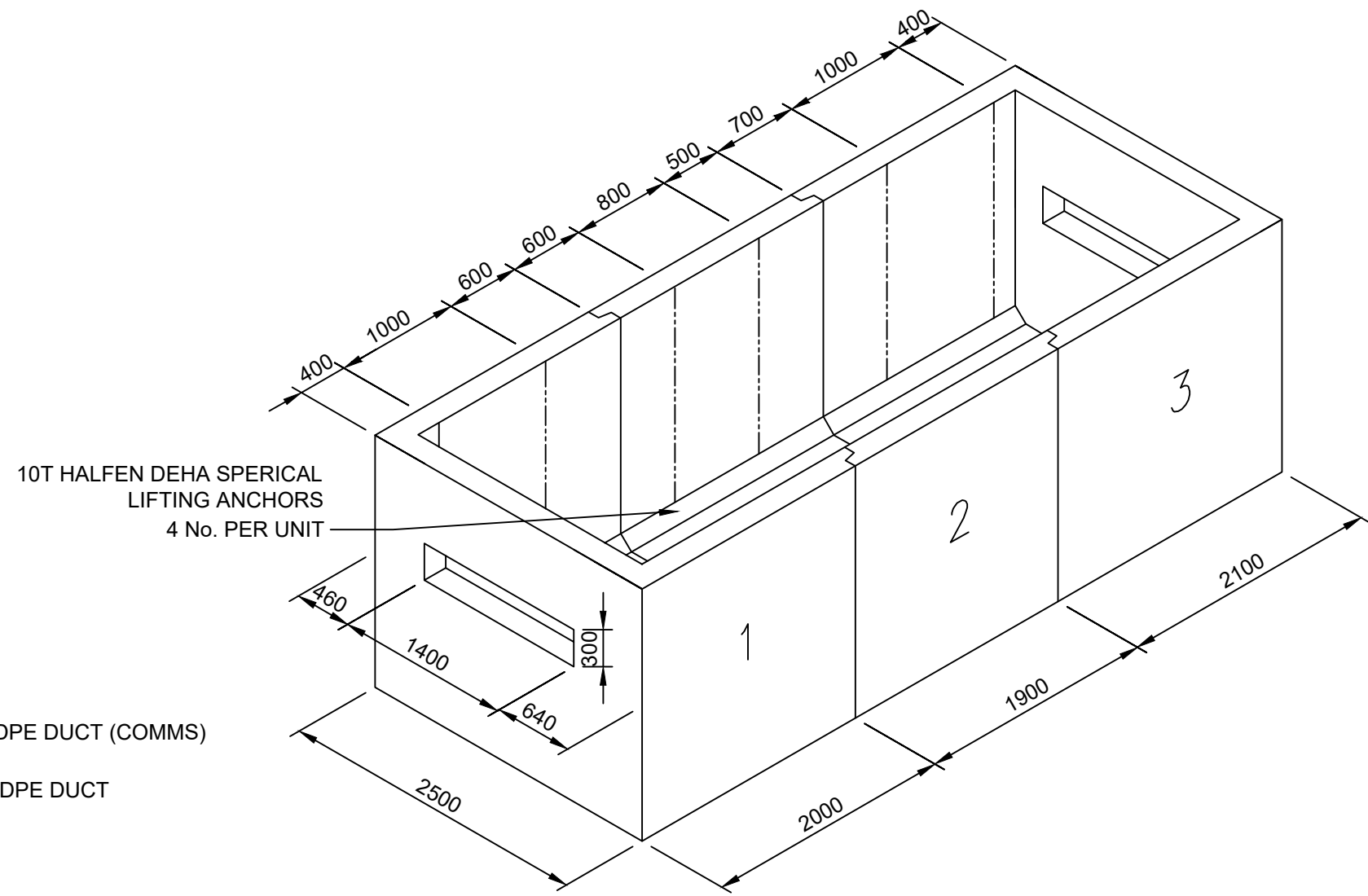
Last saved y: EUAN PATTERSON(2020-09-17) Last Plotted: 2021-12-09 Designer : AF Checked : RL A roved : PA



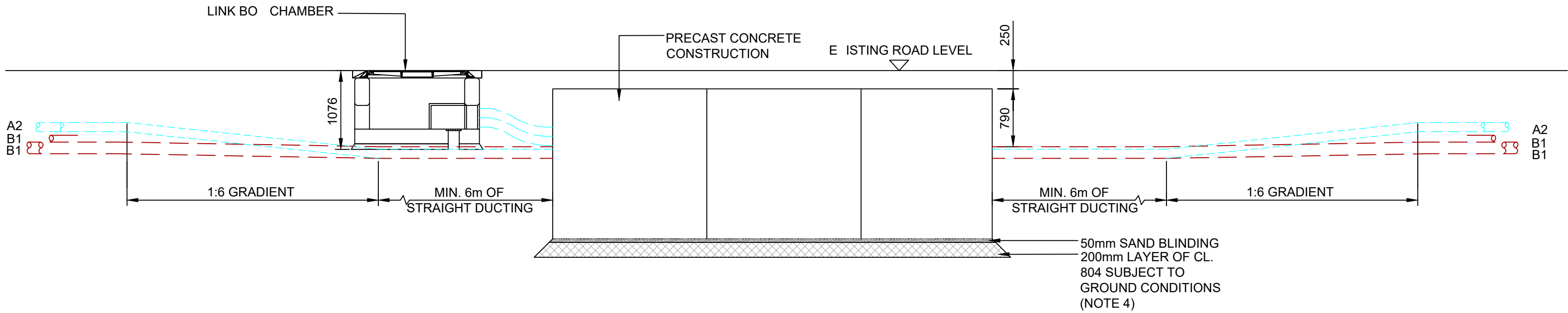
PLAN VIEW
SCALE 1:50



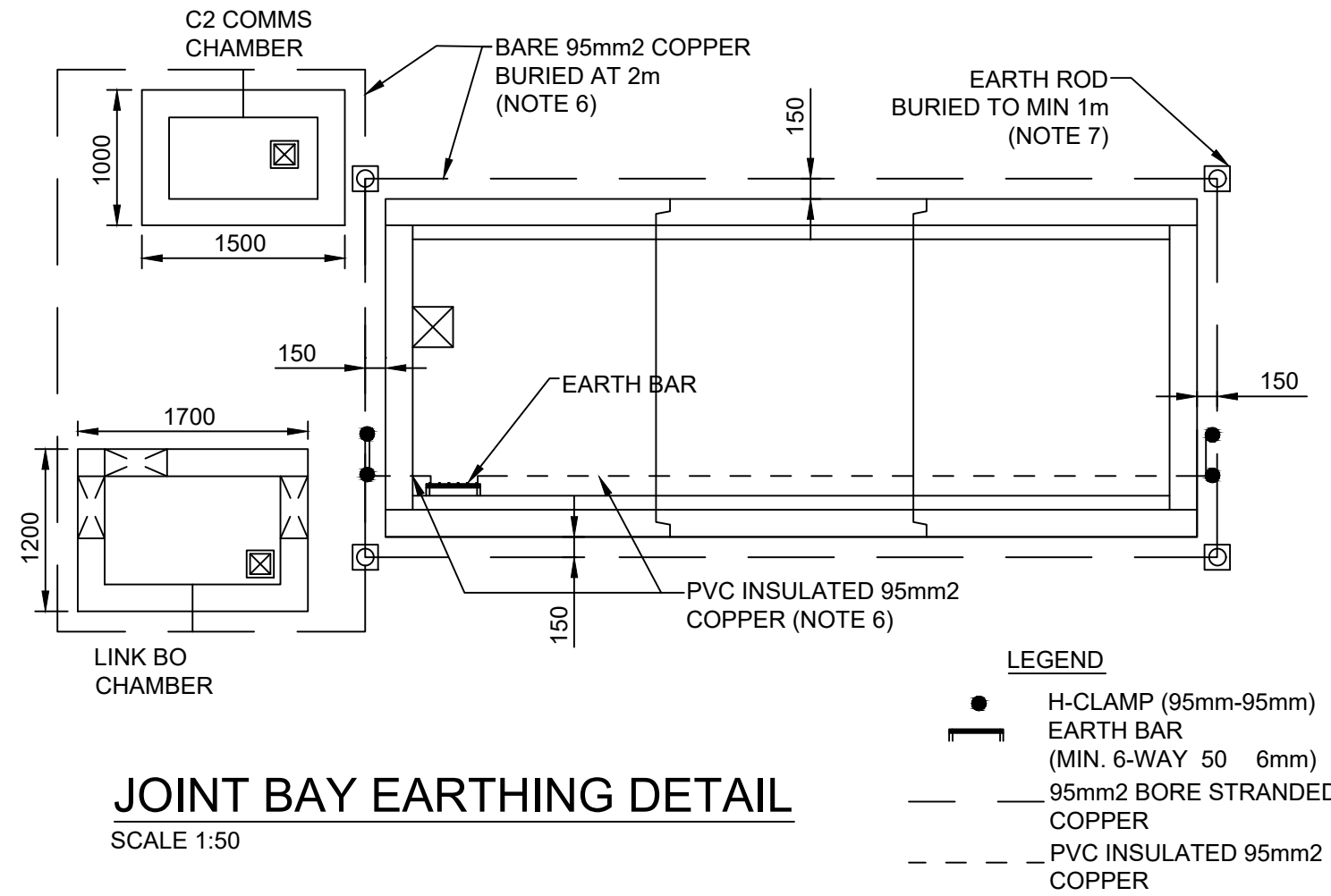
SECTION A-A
SCALE 1:50



ISOMETRIC VIEW
SCALE 1:50



SECTION B-B
SCALE 1:50

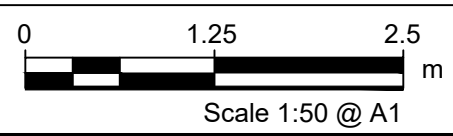


JOINT BAY EARTHING DETAIL
SCALE 1:50

- NOTES:**
- THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED AND IS SUBJECT TO AMENDMENT
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT INFORMATION
 - ALL DIMENSIONS ARE IN MILLIMETRES. ALL CHAINAGES LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE.
 - STANDARD FOUNDATIONS ARE BASED ON THE FORMATION AT THE BASE OF THE E CAVATION SHOWN BEING SUITABLE FOR A MINIMUM BEARING PRESSURE OF 100kN/m². SUITABILITY OF STANDARD JOINT BAY FOUNDATIONS CAN ONLY BE CONFIRMED FOLLOWING GROUND INVESTIGATION. HAND VANE TESTS PLATE LOAD TESTS AND LWD (CBR) TESTS SHALL BE RE UIRED AS PER GI SPECIFICATION. WHERE SPECIFIED MINIMUM BEARING PRESSURE IS NOT ACHIEVABLE THE CONTRACTOR SHALL REFER TO THE ENGINEER FOR GUIDANCE.
 - THE LENGTH OF BONDING LEAD LENGTH SHALL IN NO CASE E CEED 10m. NO JOINTS IN BONDING CABLE ARE PERMITTED.
 - BARE STRANDED 95mm² COPPER CONDUCTOR SHALL HAVE 100mm SOIL SURROUND. PVC INSULATED CONDUCTOR RE UIRED WITHIN JOINT BAY AND WHERE CONTACT WITH POWER AND AU CABLES IS POSSIBLE. BURIAL DEPTH TO BE 1 METRE INFORMATION TO BE REVIEWED BY ELECTRIC TEAM.
 - COPPERBOND ROD NOMINAL 20mm DIA 1200mm LONG (FURSE RB210 OR SIMILAR). CONNECTION TO STRANDED CONDUCTOR SHALL BE VIA SUITABLE ROD TO CABLE CLAMP. EARTH ROD SHALL BE DRIVEN TO NATIVE SOIL INFORMATION TO BE REVIEWED BY ELECTRIC TEAM. IF THIS IS NOT ACHIEVABLE THE CONTRACTOR SHALL REFER TO THE ENGINEER FOR GUIDANCE. IF ROCK IS PRESENT AND IT IS NOT FEASIBLE TO DRIVE THE EARTH RODS THEN 6 METER RADIAL CONDUCTORS CAN BE INSTALLED CONNECTING TO THE MAIN EARTH GRID AT THE LOCATION OF THE EARTH RODS IN LIEU OF THE EARTH RODS THEMSELVES.
 - EARTH BAR SHALL BE FI ED TO THE JOINT BAY SIDEWALL IN A SUITABLE LOCATION TO FACILITATE ROUTING OF BONDING LEADS AND JOINTING. MIN. 2 NO. TAILS RE UIRED TO CONNECT TO THE 95mm² EARTH RING INFORMATION TO BE REVIEWED BY ELECTRIC TEAM.

LEGEND

- 160mm HDPE DUCT WITH 12mm DIAMETER PULL ROPE
- 125mm HDPE COMMUNICATION DUCT WITH 12mm DIAMETER PULL ROPE



NOT FOR
CONSTRUCTION

AECOM

PROJECT

THE SEVEN HILLS
WINDFARM
(MIDLANDS HV CABLE
ROUTE)

CLIENT

energía
Switched on

CONSULTANT

AECOM Limited
9th Floor
The Clarence West Building
2 Clarence Street West
Belfast
BT2 7GP
United Kingdom
44-(0)28-90607200
aecom.com

NOTES

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
- DO NOT SCALE FROM THIS DRAWING USE ONLY PRINTED DIMENSIONS.
- ALL DIMENSIONS IN MILLIMETRES ALL CHAINAGES LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT HEALTH AND SAFETY FILE FOR ANY IDENTIFIED POTENTIAL RISKS.
- REINSTATEMENT METHODS AND DETAILS TO BE AGREED WITH LOCAL AUTHORITY IN ADVANCE OF WORKS.
- NOTES TO BE READ IN CONJUNCTION WITH DEPARTMENT OF TRANSPORT TOURISM SPORT GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS. (PURPLE BOOK)

ISSUE/REVISION

ISSUE/REVISION	DATE	DESCRIPTION
P1	09/12/2021	160mm Diameter Ducts U dated
P0	23/09/2020	FIRST ISSUE
I/R	DATE	DESCRIPTION

STATUS

PROJECT NUMBER SCALE

PR-471040 AS SHOWN

SHEET TITLE

THE SEVEN HILLS WINDFARM
(MIDLANDS HV CABLE ROUTE)
TYPICAL JOINT BO DETAILS

SHEET NUMBER REV

60634578-ACM-DR-CE-037 P0

PROJECT

CLIENT

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
2. DO NOT SCALE FROM THIS DRAWING, USE ONLY PRINTED DIMENSIONS.
3. ALL DIMENSIONS IN MILLIMETRES, ALL CHAINAGES, LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE.
4. ALL LEVELS AND COVER DEPTHS ARE SUBJECT TO DETAILS PRE- WORKS TOPOGRAPHIC SURVEY AND CONSTRUCTION DRAWINGS IN ADVANCE OF ANY WORKS. NOTE ALL ESTIMATED TRENCH LEVELS ARE TO CROWN OF HDV DUCT ABOVE COVER DEPTHS & TSM.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECTS PLANNING DRAWINGS.
6. ALL PUBLIC ROAD WORKS AND OPENING AND REINSTATEMENTS OF PAVEMENTS TO BE UNDERTAKEN IN ACCORDANCE WITH PRE- APPROVED COUNCIL LICENCE AND A TEMPORARY TRAFFIC MANAGEMENT PLAN IN ACCORDANCE WITH THE ROAD TRAFFIC ACT 1988 & TSM.
7. PROPOSED SITE ACCESS TO DRILLING AND EXIT SITE COMPOUNDS TO BE AGREED WITH ALL RELEVANT PUBLIC AND PRIVATE PARTIES IN ADVANCE OF ANY WORKS.
8. PRIOR TO CONSTRUCTION, CONSULTATION WILL BE HELD WITH ROSCOMMON COUNTY COUNCIL WITH RESPECT TO APPROVING THE PRELIMINARY DESIGN FOR HDD UNDER THEIR RESPECTIVE ASSETS.
9. DRILLING TO BE LOCATED MIN 25M AWAY FROM ANY STRUCTURES / WATERCOURSES.
10. CONTRACTOR TO VERIFY GROUND CONDITIONS THROUGH ADDITIONAL GEOTECHNICAL INVESTIGATIONS AND BOREHOLES IN ADJOINING LANDS.
11. ALL WORKS TO CONFORM TO PLANNING CONDITION AND APPROVALS.
12. THESE WORKS TO BE UNDERTAKEN IN CONJUNCTION WITH THE PROJECTS APPROVED PRE CONSTRUCTION HEALTH AND SAFETY FILE AND ASSOCIATED RAMS AND RISK ASSESSMENTS.
13. CONTRACTOR TO UNDERTAKE APPROVED SITE INVESTIGATE FOR ASSOCIATED UTILITIES AND STRUCTURAL REPORT FOR RELEVANT BUILDINGS AND STRUCTURES.
14. ALL LANDSCAPE AND ENVIRONMENTAL WORKS TO CONFORM TO THE EIA.

ISSUE/REVISION

1	28/04/2022	REVISION 1
P0	26/04/2022	FIRST ISSUE
I/R	DATE	DESCRIPTION

STATUS

FIRST ISSUE

PROJECT NUMBER	SCALE
PR-471040	AS SHOWN @ A0

SHEET TITLE

SEVEN HILLS WINDFARM
(PROPOSED 110kV CABLE ROUTE)
WC2 - HDD OF CROSS RIVER

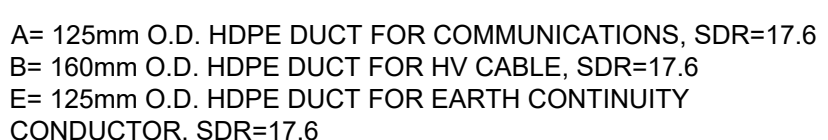
SHEET NUMBER	REV
60634578-ACM-DR-CE-042	PC



ENTRY PIT LOCATION - FACING EAST

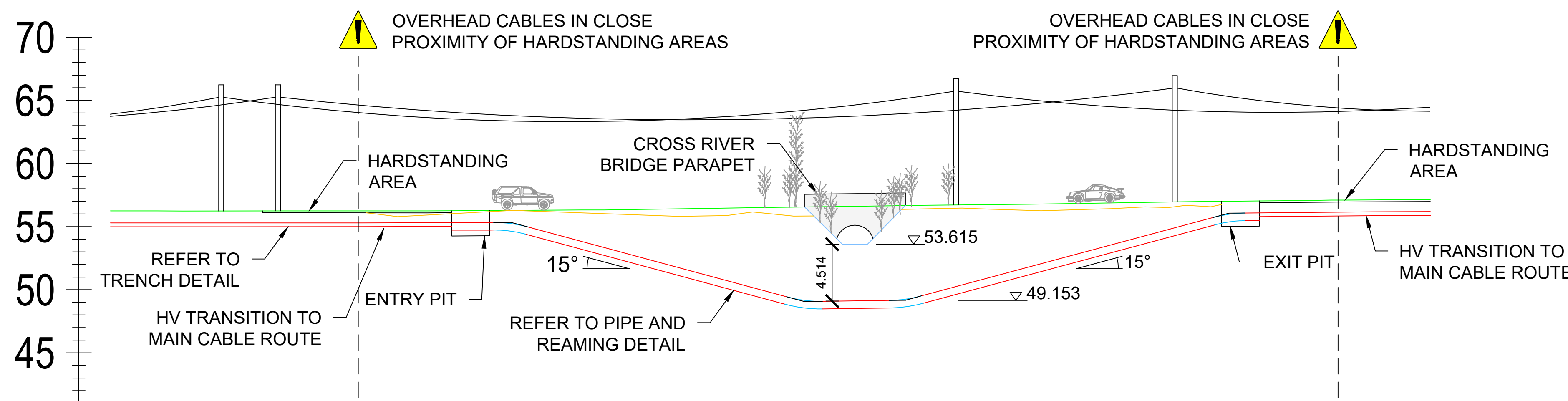


EXIT PIT LOCATION - FACING WEST



CROSS SECTION INDICATING TRENCH FOR
110KV CIRCUIT UNDER ROADS (TREFOIL)

NTS



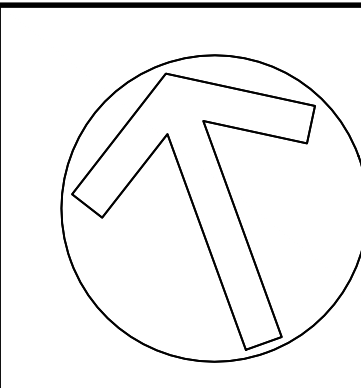
CHAINAGE	00.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	104.618
EXISTING ROAD / FIELD LEVELS	56.242	56.241	56.244	56.278 56.178	56.337 55.801	56.489 56.078	56.629	56.749 56.234	56.888 56.275	57.027	57.118	57.141
EXISTING WATERCOURSE LEVELS						56.561	53.615	56.676				
PROPOSED HDD / HV CABLE CROWN LEVELS	55.292	55.291	55.294	55.328	53.111	50.412	49.129	51.049	53.736	56.077	56.168	56.191
VERTICAL ALIGNMENT												
HORIZONTAL ALIGNMENT	L=104.618											

WC2 - HDD OF CROSS RIVER
LONGSECTION

1:250

WC 3 - CULVERT

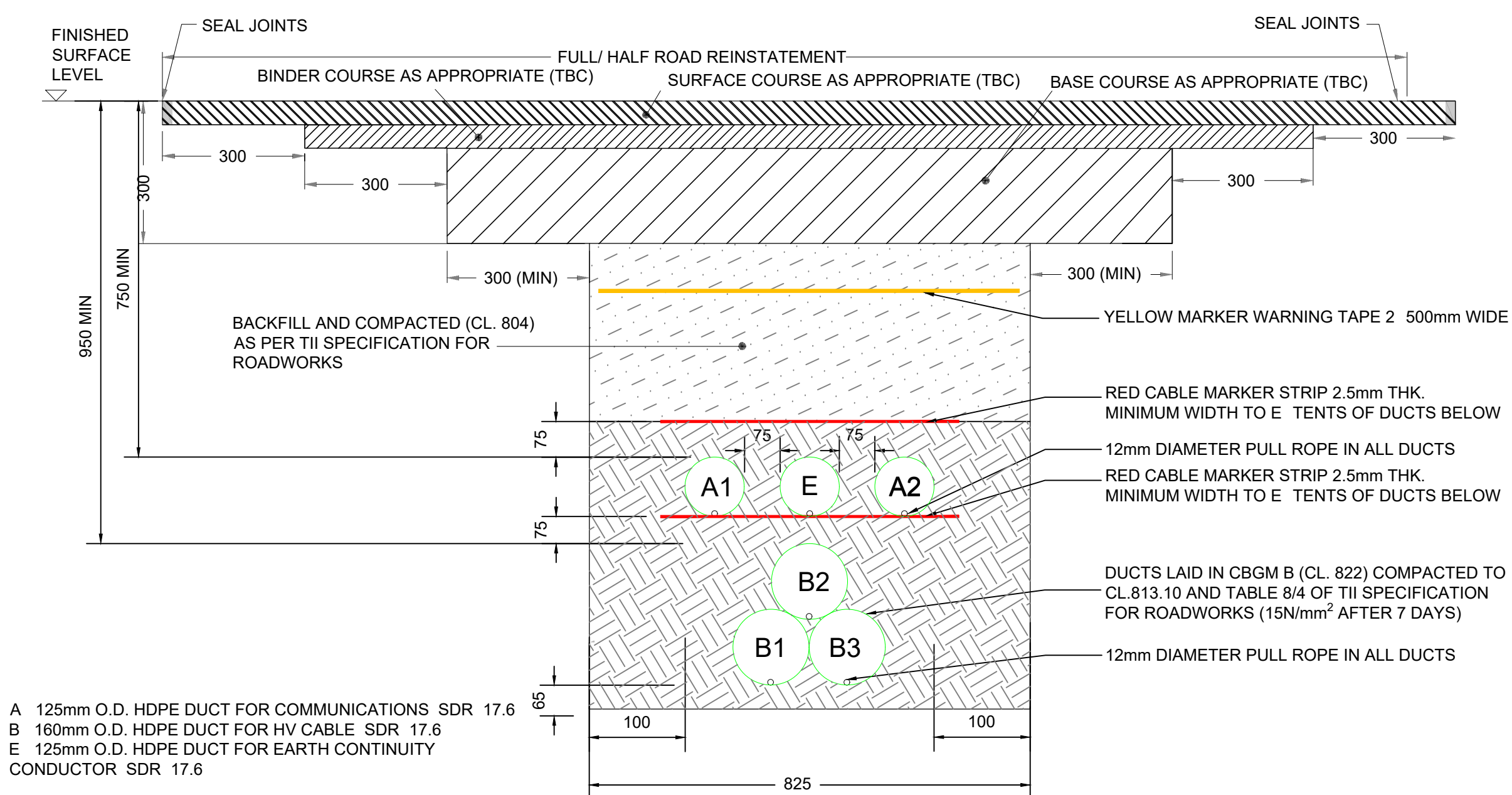
R362



JB 11
IN ROAD OPTION

JB 11
OFF ROAD OPTION

WC3 - CULVERT CROSSING PLAN 1:250



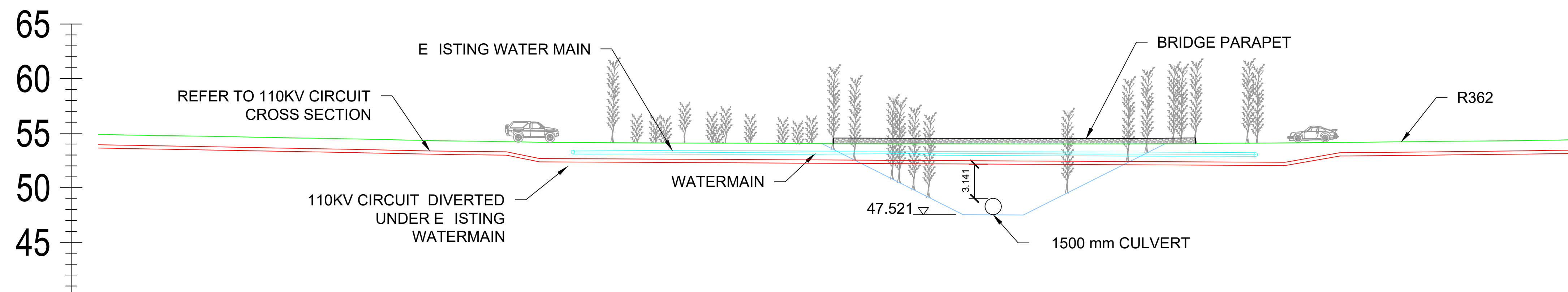
CROSS SECTION INDICATING TRENCH FOR 110KV CIRCUIT UNDER ROADS (TREFOIL) NTS



WC3 - SITE PHOTO
FACING EAST



WC3 - SITE PHOTO
FACING WEST



CHAINAGE	00.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	135.097
EXISTING ROAD LEVELS	54.892	54.711	54.532	54.333	54.180	54.118	54.080	54.047	54.018	54.007	54.056	54.124	54.214	54.327	54.399
EXISTING WATERCOURSE LEVELS								54.061	52.132	47.518	50.184	54.039			
PROPOSED TREFOIL CROWN LEVELS	53.942	53.761	53.578	53.385	53.261	53.168	53.133	53.098	53.065	53.058	53.106	53.180	53.264	53.377	53.449
VERTICAL ALIGNMENT	G=-1.80% -1.55.5	G=-1.80% -1.55.6	G=-1.99% -1.50.4	G=-1.53% -1.65.2	G=-0.61% -1.63.7	G=-0.35% -1.282.2	G=-50.30% -1.2.0	G=-0.37% -1.288.1	G=-50.30% -1.2.0	G=-0.89% -1.145.1	G=-0.90% -1.111.1	G=-1.13% -1.88.6	G=-1.40% -1.71.3		
HORIZONTAL ALIGNMENT	L=19.228		L=27.839		L=28.738		L=27.587		L=31.706						

WC3 - CULVERT CROSSING LONGSECTION 1:250

- KEY:
- PROPOSED 110KV CONNECTION TO SUBSTATION
 - EXISTING WATERMAIN
 - EXISTING WATERCOURSE
 - EXISTING MV (10V/20V) OVERHEAD ROUTE
 - PROPOSED JOINT BO LOCATION
 - PROPOSED COMMUNICATIONS CHAMBER LOCATION
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
 - DO NOT SCALE FROM THIS DRAWING. USE ONLY PRINTED DIMENSIONS.
 - ALL DIMENSIONS IN MILLIMETRES. ALL CHAINAGES, LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE.
 - ALL LEVELS AND COVER DEPTHS ARE SUBJECT TO DETAILED PRE-WORKS TOPOGRAPHIC SURVEY AND CONSTRUCTION DRAWINGS IN ADVANCE. NOTE ALL ESTIMATED TRENCH LEVELS ARE TO CROWN OF HV DUCT AND/OR HD PIPE.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT'S PLANNING DRAWINGS.
 - ALL PUBLIC ROAD WORKS AND OPENING AND REINSTATEMENTS OF PAVEMENTS TO BE UNDERTAKEN IN ACCORDANCE WITH PRE-APPROVED COUNCIL LICENCE AND A TEMPORARY TRAFFIC MANAGEMENT PLAN IN ACCORDANCE WITH CHAPTER 8 TSM.
 - PROPOSED SITE ACCESS TO CROSSINGS AND EIT SITE COMPOUNDS TO BE AGREED WITH ALL RELEVANT PUBLIC AND PRIVATE PARTIES IN ADVANCE OF ANY WORKS.
 - PRIOR TO CONSTRUCTION CONSULTATION WILL BE HELD WITH LOCAL COUNTY COUNCIL WITH RESPECT TO APPROVING THE FINAL DESIGN FOR CROSSINGS OVER THEIR RESPECTIVE ASSETS.
 - CONTRACTOR TO VERIFY GROUND CONDITIONS THROUGH ADDITIONAL GEOTECHNICAL INVESTIGATIONS AND BOREHOLES IN ADJOINING LANDS.
 - ALL WORKS TO CONFORM TO PLANNING CONDITION AND APPROVALS.
 - THESE WORKS TO BE UNDERTAKEN IN CONJUNCTION WITH THE PROJECTS APPROVED PRE CONSTRUCTION HEALTH AND SAFETY FILE AND ASSOCIATED RAMS AND RISK ASSESSMENTS.
 - CONTRACTOR TO UNDERTAKE APPROVED SITE INVESTIGATION FOR ALL ASSOCIATED UTILITIES AND STRUCTURAL REPORT FOR RELEVANT BUILDINGS AND STRUCTURES.
 - ALL LANDSCAPE AND ENVIRONMENTAL WORKS TO CONFORM TO THE EIA.

ISSUE/REVISION		
P0	26/04/2022	FIRST ISSUE
I/R	DATE	DESCRIPTION

STATUS	
FIRST ISSUE	
PROJECT NUMBER	SCALE
PR-471040	AS SHOWN @ A0
SHEET TITLE	
SEVEN HILLS WINDFARM (PROPOSED 110KV CABLE ROUTE) WC3 - CULVERT CROSSING	
SHEET NUMBER	REV
60634578-ACM-DR-CE-043	P0

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AECOM
PROJECT

SEVEN HILLS WINDFARM
(PROPOSED 110KV CABLE ROUTE)

CLIENT

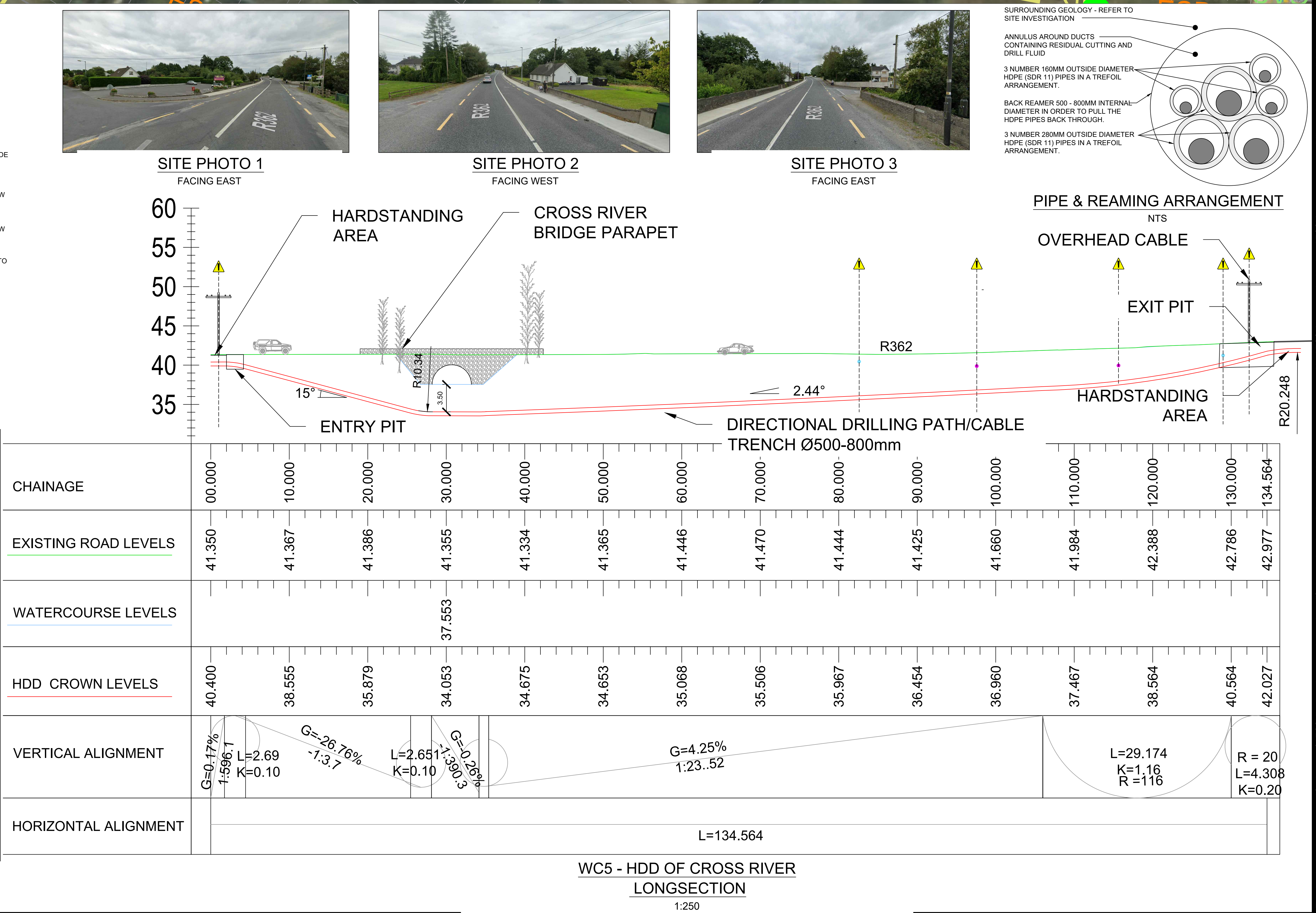
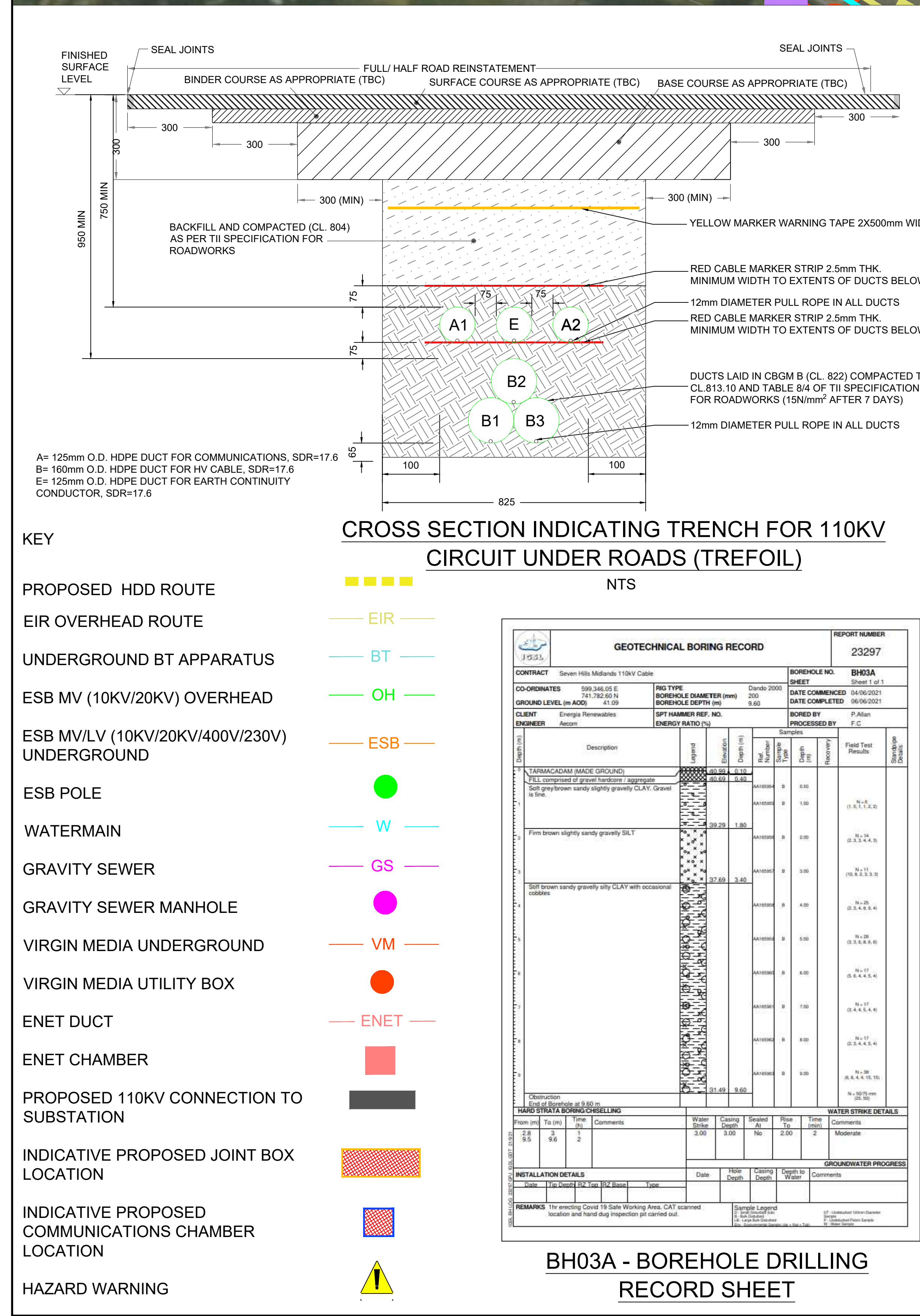
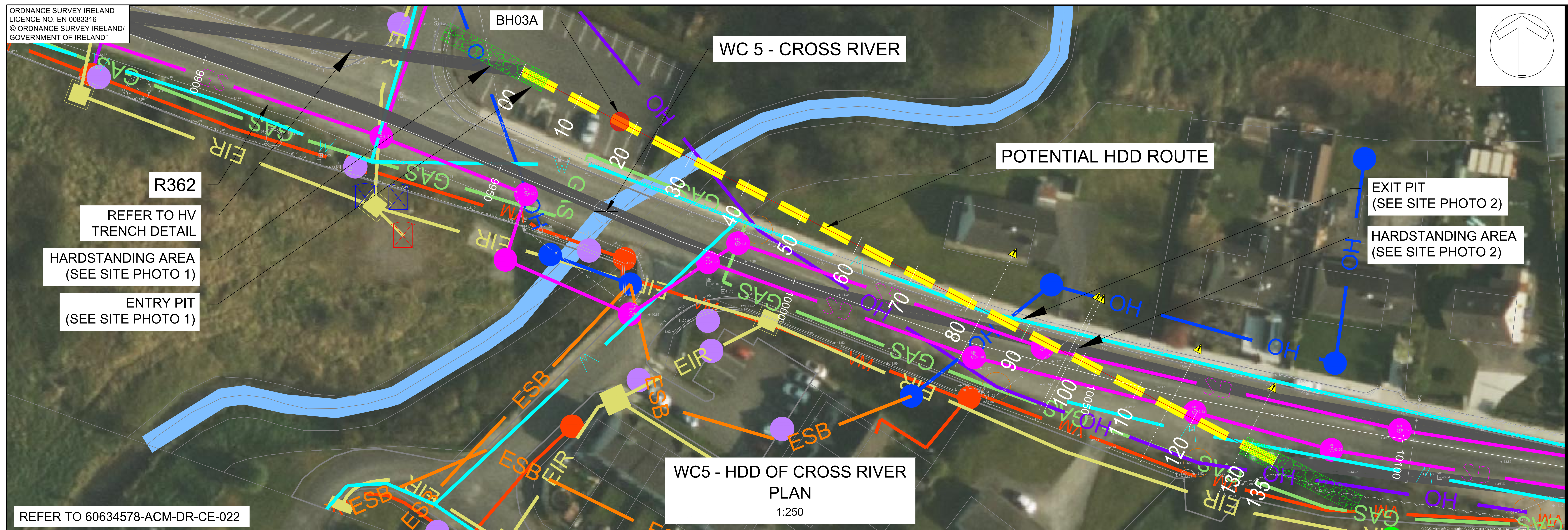
energia
Switched on


CONSULTANT

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- ALL PUBLIC ROAD WORKS AND OPENING AND REINSTATEMENTS OF PAVEMENTS TO BE UNDERTAKEN IN ACCORDANCE WITH PRE-APPROVED COUNCIL LICENCE AND A TEMPORARY TRAFFIC MANAGEMENT PLAN IN ACCORDANCE WITH CHAPTER 8 TSM.
- PROPOSED SITE ACCESS TO CROSSINGS AND EIT SITE COMPOUNDS TO BE AGREED WITH ALL RELEVANT PUBLIC AND PRIVATE PARTIES IN ADVANCE OF ANY WORKS.
- PRIOR TO CONSTRUCTION CONSULTATION WILL BE HELD WITH LOCAL COUNTY COUNCIL WITH RESPECT TO APPROVING THE FINAL DESIGN FOR CROSSINGS OVER THEIR RESPECTIVE ASSETS.
- CONTRACTOR TO VERIFY GROUND CONDITIONS THROUGH ADDITIONAL GEOTECHNICAL INVESTIGATIONS AND BOREHOLES IN ADJOINING LANDS.
- ALL WORKS TO CONFORM TO PLANNING CONDITION AND APPROVALS.
- THESE WORKS TO BE UNDERTAKEN IN CONJUNCTION WITH THE PROJECTS APPROVED PRE CONSTRUCTION HEALTH AND SAFETY FILE AND ASSOCIATED RAMS AND RISK ASSESSMENTS.
- CONTRACTOR TO UNDERTAKE APPROVED SITE INVESTIGATION FOR ALL ASSOCIATED UTILITIES AND STRUCTURAL REPORT FOR RELEVANT BUILDINGS AND STRUCTURES.
- ALL LANDSCAPE AND ENVIRONMENTAL WORKS TO CONFORM TO THE EIA.






PROJECT

SEVEN HILLS WINDFARM

(PROPOSED 110KV CABLE ROUTE)

CLIENT



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- PRIOR TO CONSTRUCTION , CONSULTATION WILL BE HELD WITH ROSCOMMON COUNTY COUNCIL WITH RESPECT TO APPROVING THE FINAL DESIGN FOR HDD UNDER THEIR RESPECTIVE ASSETS.
- DRILLING TO BE LOCATED MIN 25M AWAY FROM ANY STRUCTURES / WATERCOURSES.
- CONTRACTOR TO VERIFY GROUND CONDITIONS THROUGH ADDITIONAL GEOTECHNICAL INVESTIGATIONS AND BOREHOLES IN ADJOINING LANDS.
- ALL WORKS TO CONFORM TO PLANNING CONDITION AND APPROVALS.
- THESE WORKS TO BE UNDERTAKEN IN CONJUNCTION WITH THE PROJECTS APPROVED PRE CONSTRUCTION HEALTH AND SAFETY FILE AND ASSOCIATED RAINS AND RISK ASSESSMENTS.
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- ALL LANDSCAPE AND ENVIRONMENTAL WORKS TO CONFORM TO THE EIA.
- ALL PUBLIC ROAD WORKS AND OPENING AND REINSTATEMENTS OF PAVEMENTS TO BE UNDERTAKEN IN ACCORDANCE WITH PRE- APPROVED COUNCIL LICENCE AND A TEMPORARY TRAFFIC MANAGEMENT PLAN IN ACCORDANCE WITH CHAPTER 8, TSM

ISSUE/REVISION

P0	27/04/2022	FIRST ISSUE
I/R	DATE	DESCRIPTION

STATUS

FIRST ISSUE

PROJECT NUMBER	SCALE
PR-471040	AS SHOWN @ A0

SHEET TITLE

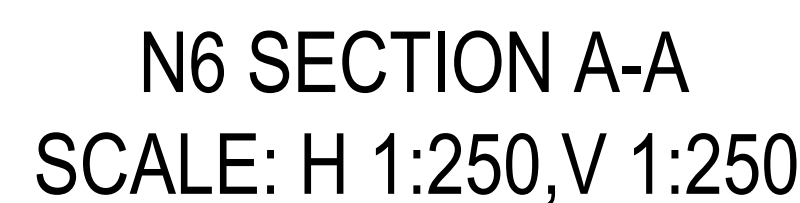
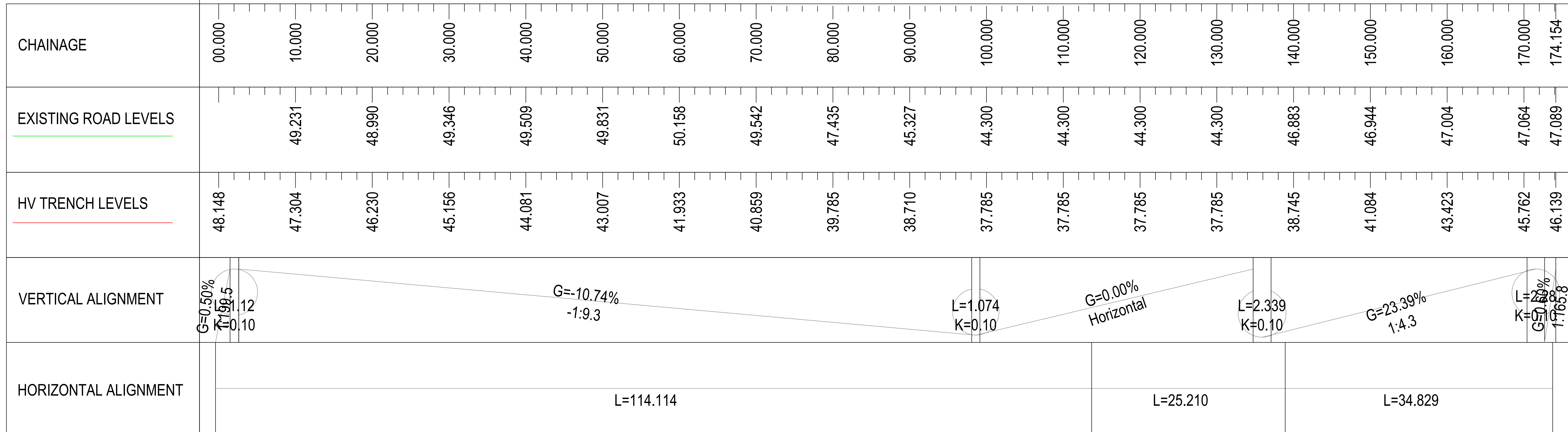
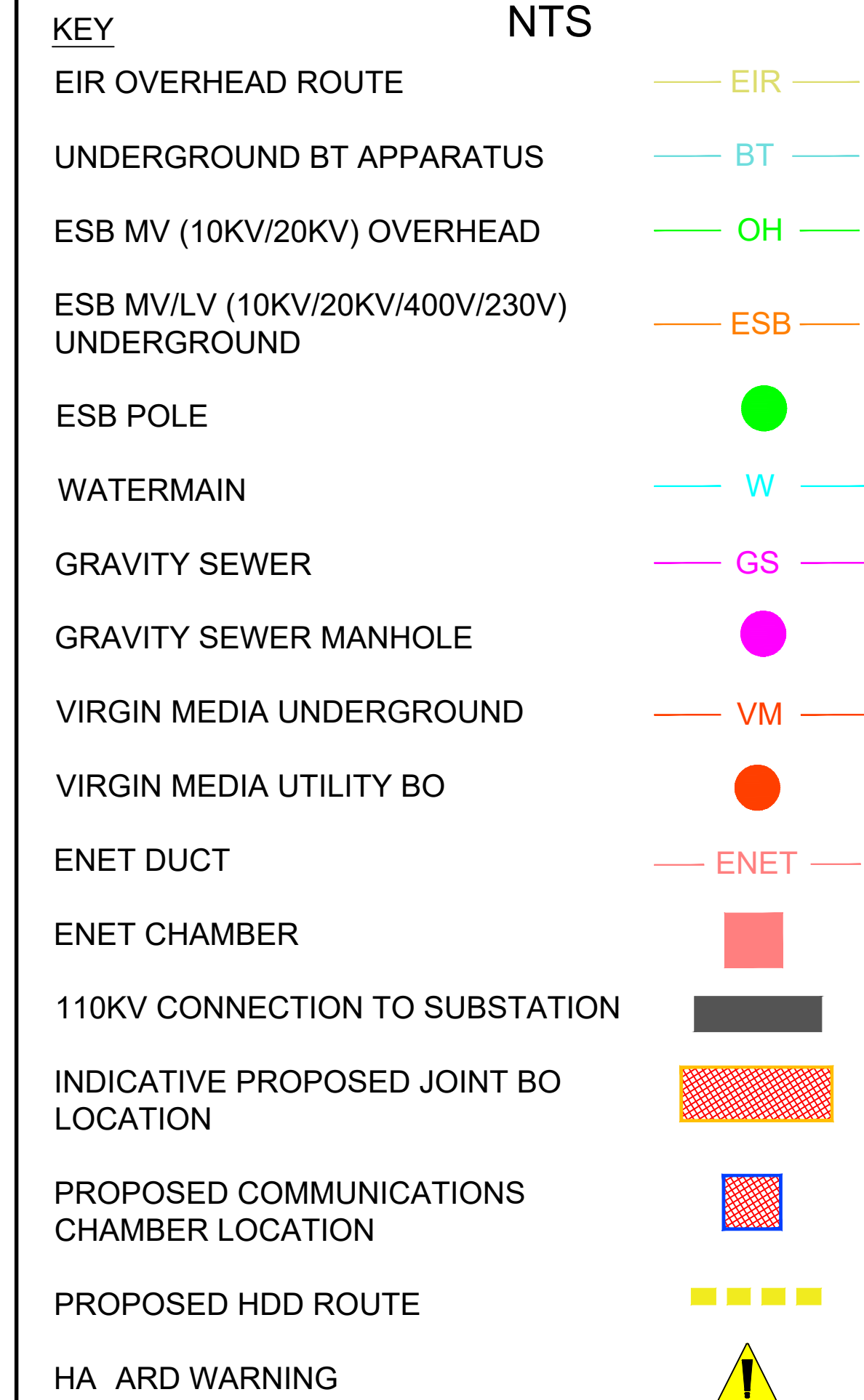
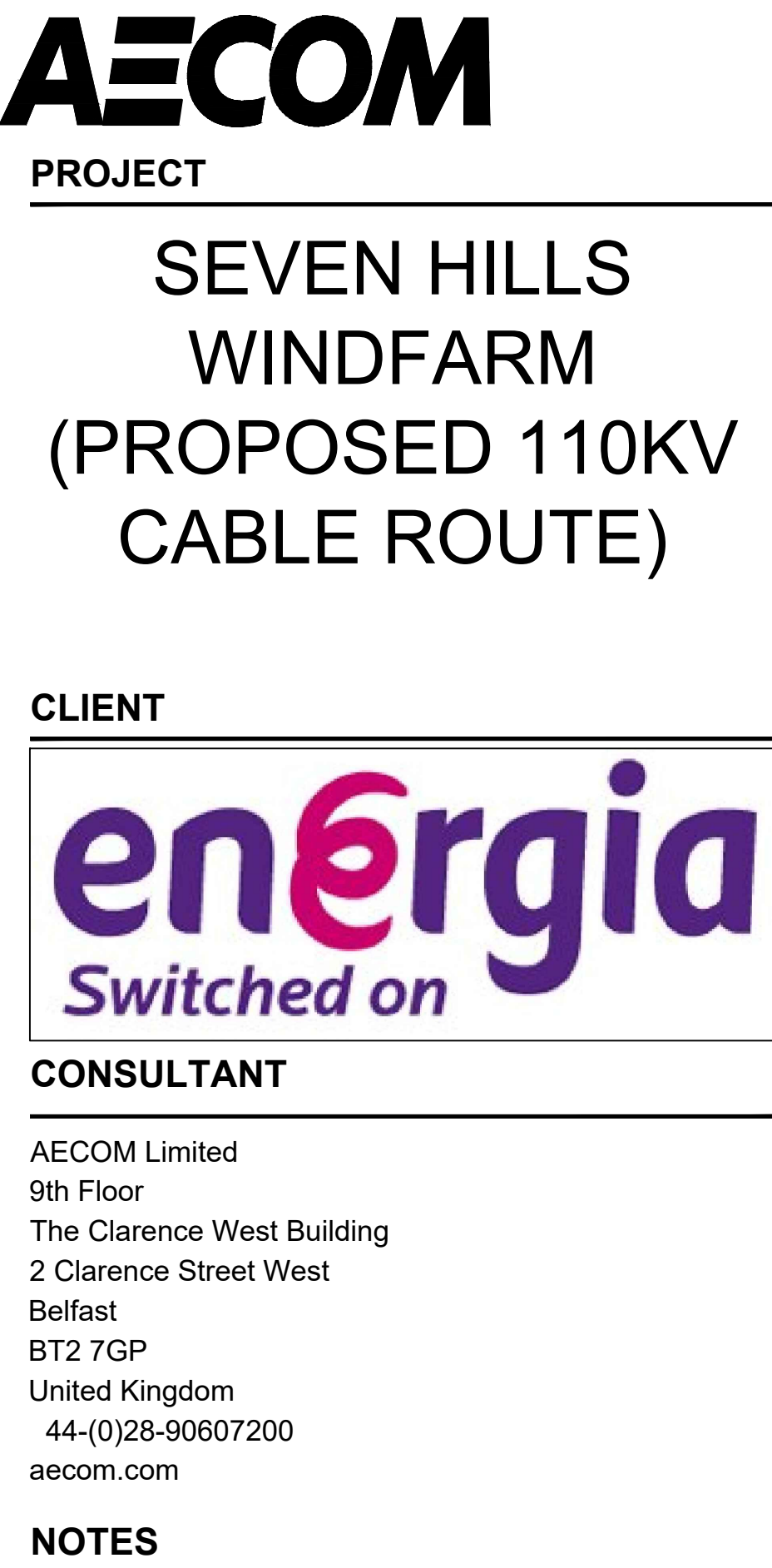
SEVEN HILLS WINDFARM

(PROPOSED 110KV CABLE ROUTE)

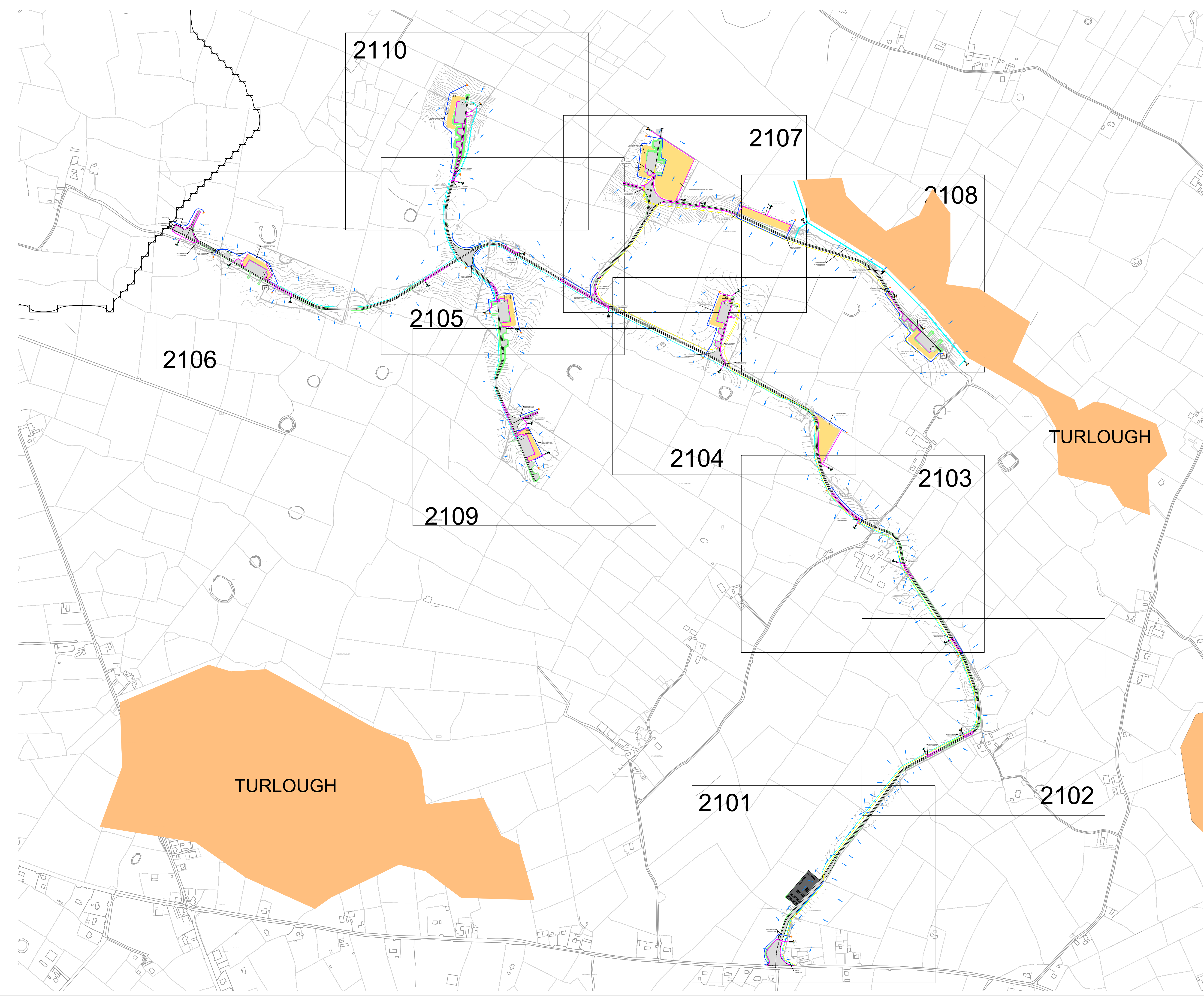
WC5 - HDD OF CROSS RIVER

SHEET NUMBER	REV
60634578-ACM-DR-CE-044	P0

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STATUS	
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FIRST ISSUE	
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PROJECT NUMBER	SCALE
PR-471040	AS SHOWN @ A0
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SHEET TITLE	
SEVEN HILLS WINDFARM (PROPOSED 110KV CABLE ROUTE) N6 - HDD	
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SHEET NUMBER	REV
60634578-ACM-DR-CE-045	PO



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 5. ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE.

- LEGEND:
- SITE BOUNDARY
 - OWNERSHIP BOUNDARY
 - WORKS CORRIDOR
 - ROAD/ STONE CAPPED SURFACES
 - EXTENT OF ROAD SIDE BERM
 - CUT EMBANKMENT
 - FILL EMBANKMENT
 - HARD STAND
 - STONE BERM
 - TURLOUGH
 - PEAT STORAGE
 - DIRTY WATER DRAIN
 - CLEAN WATER DRAIN
 - EXISTING CUT-OFF DRAIN
 - RUN OFF DRAIN WITH BUFFERED OUTFALL
 - SETTLEMENT POND WITH BUFFERED OUTFALL
 - DIRECTION OF FLOW OF SURFACE WATER
 - LAND & STRUCTURE BOUNDARY
 - INTERNAL CABLE ROUTE (Circuit 1)
 - INTERNAL CABLE ROUTE (Circuit 2)
 - INTERNAL CABLE ROUTE (Circuit 3)
 - INTERNAL CABLE ROUTE (Circuit 4)
 - INTERNAL CABLE ROUTE (Circuit 5)
 - INTERNAL CABLE ROUTE (4 x circuits to Substation)

P02	01/06/22	ISSUED FOR INFORMATION	PK	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: DRAINAGE & CABLE ROUTE LAYOUT - NORTH
DRAWING LAYOUT PLAN

CLIENT: **enērgia**
Switched on

Malachy Walsh and Partners
Engineering and Environmental Consultants
Cork | Tralee | London | Limerick

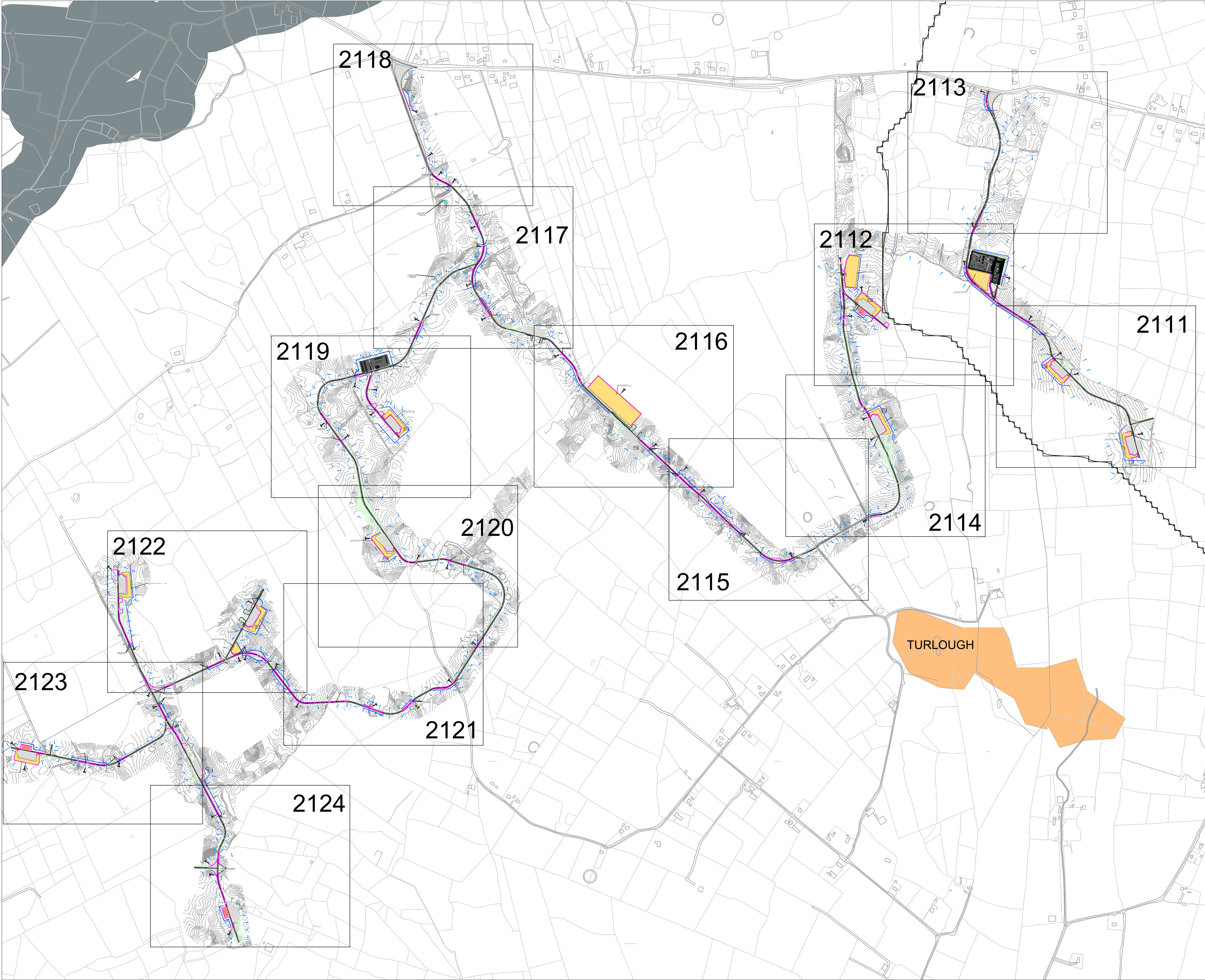
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Web: www.mwp.ie

DRAWN: MW	CHECKED: PB	APPROVED: BS
DATE: 01/06/22	SCALE @ 1: 5000	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2125	REV: P02
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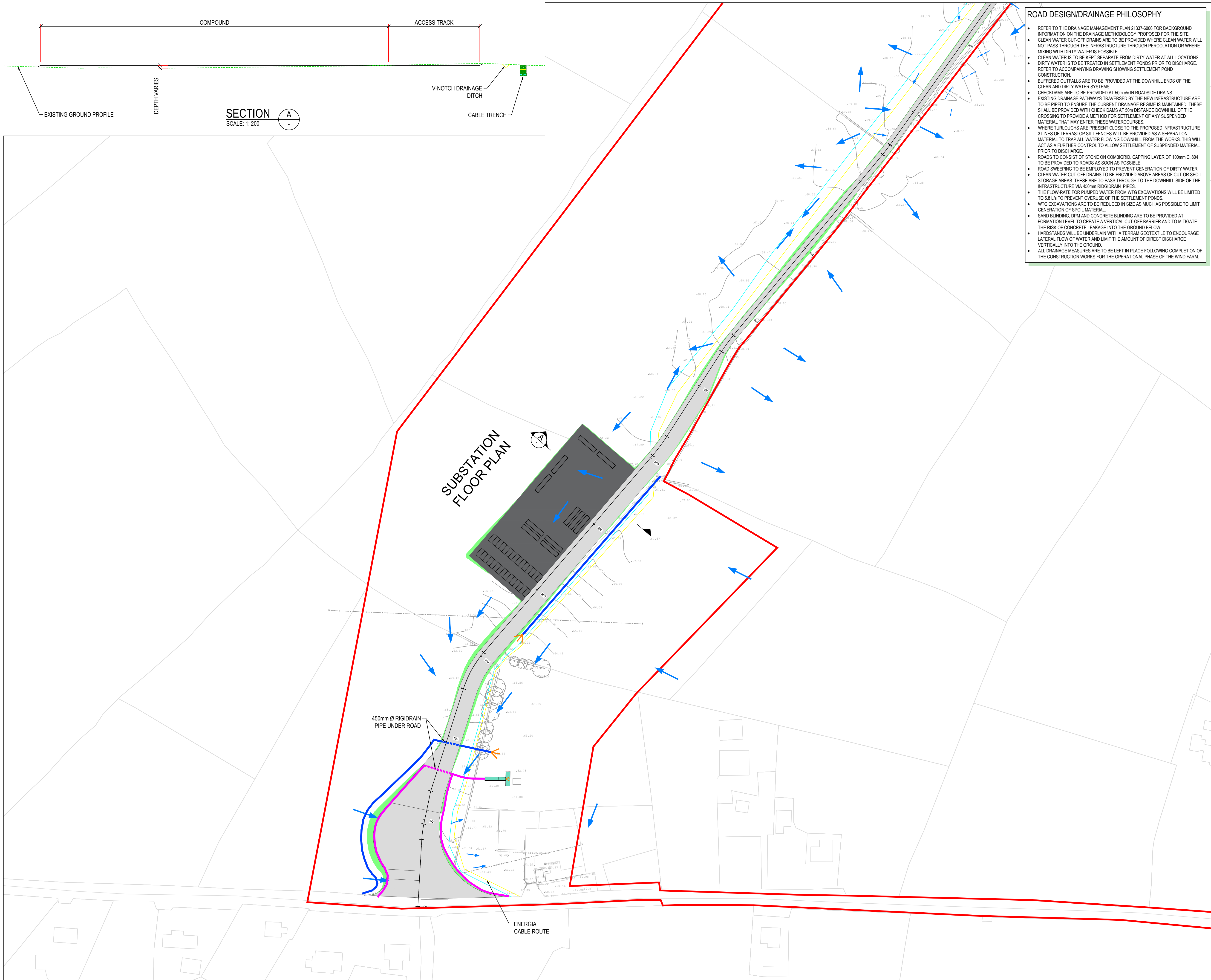
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LEGEND:

- SITE BOUNDARY
- OWNERSHIP BOUNDARY
- WORKS CORRIDOR
- ROAD/ STONE CAPPED SURFACES
- EXTENT OF ROAD SIDE BERM
- CUT EMBANKMENT
- FILL EMBANKMENT
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- STONE BERM
- TURLOUGH
- PEAT STORAGE
- DIRTY WATER DRAIN
- CLEAN WATER DRAIN
- EXISTING CUT-OFF DRAIN
- RUN OFF DRAIN WITH BUFFERED OFFFALL
- SETTLEMENT POND WITH BUFFERED OFFFALL
- DIRECTION OF FLOW OF SURFACE WATER
- LAND & STRUCTURE BOUNDARY
- INTERNAL CABLE ROUTE (Circuit 1)
- INTERNAL CABLE ROUTE (Circuit 2)
- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

P03	01/06/22	SUB STATION UPDATED	MW	BS
P02	06/02/22	SUB STATION UPDATED	MW	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP
PROJECT: SEVEN HILLS WF				
TITLE: DRAINAGE & CABLE ROUTE LAYOUT - SOUTH DRAWING LOCATION PLAN				
CLIENT: 				
 Malachy Walsh and Partners Engineering and Environmental Consultants Cork Tralee London Limerick				
 The Elm Suite, Loughmore Centre, Raheen Business Park, Limerick, V94 R578 Tel: +353 (0) 61 480164 Fax: +353 (0) 61 441125 E-mail: limerick@mwp.ie Web: www.mwp.ie				
DRAWN: PK		CHECKED: PB	APPROVED: BS	
DATE: 01/06/22		SCALE @ A1: 1:1000		
PROJECT NUMBER: 21337			DRAWING STATUS: S2	
DRAWING NUMBER: 21337-MWP-00-00-DR-C-2126				REV: P03

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ROAD DESIGN/DRAINAGE PHILOSOPHY

- REFER TO THE DRAINAGE MANAGEMENT PLAN 21337-6006 FOR BACKGROUND INFORMATION ON THE DRAINAGE METHODOLOGY PROPOSED FOR THE SITE.
- CLEAN WATER CUT-OFF DRAINS ARE TO BE PROVIDED WHERE CLEAN WATER WILL NOT PASS THROUGH THE INFRASTRUCTURE THROUGH PERCOLATION OR WHERE MIXING WITH DIRTY WATER IS POSSIBLE.
- CLEAN WATER IS TO BE KEPT SEPARATE FROM DIRTY WATER AT ALL LOCATIONS. DIRTY WATER IS TO BE TREATED IN SETTLEMENT PONDS PRIOR TO DISCHARGE. REFER TO ACCOMPANYING DRAWING SHOWING SETTLEMENT POND CONSTRUCTION.
- BUFFERED OUTFALLS ARE TO BE PROVIDED AT THE DOWNHILL ENDS OF THE CLEAN AND DIRTY WATER SYSTEMS.
- CHECKDAMS ARE TO BE PROVIDED AT 50m *etc* IN ROADSIDE DRAINS.
- EXISTING DRAINAGE PATHWAYS TRAVERSED BY THE NEW INFRASTRUCTURE ARE TO BE PIPED TO ENSURE THE CURRENT DRAINAGE REGIME IS MAINTAINED. THESE SHALL BE PROVIDED WITH CHECK DAMS AT 50m DISTANCE DOWNHILL OF THE CROSSING TO PROVIDE A METHOD FOR SETTLEMENT OF ANY SUSPENDED MATERIAL THAT MAY ENTER THESE WATERCOURSES.
- WHERE TURLLOUGHS ARE PRESENT CLOSE TO THE PROPOSED INFRASTRUCTURE 3 LINES OF TERRASTOP SILT FENCES WILL BE PROVIDED AS A SEPARATION MATERIAL TO TRAP ALL WATER FLOWING DOWNHILL FROM THE WORKS. THIS WILL ACT AS A FURTHER CONTROL TO ALLOW SETTLEMENT OF SUSPENDED MATERIAL PRIOR TO DISCHARGE.
- ROADS TO CONSIST OF STONE ON COMBIGRID. CAPPING LAYER OF 100mm CI 804 TO BE PROVIDED TO ROADS AS SOON AS POSSIBLE.
- ROAD SWEEPING TO BE EMPLOYED TO PREVENT GENERATION OF DIRTY WATER.
- CLEAN WATER CUT-OFF DRAINS TO BE PROVIDED ABOVE AREAS OF CUT OR SPOIL STORAGE AREAS. THESE ARE TO PASS THROUGH TO THE DOWNHILL SIDE OF THE INFRASTRUCTURE VIA 450mm RIDGDRAIN PIPES.
- THE FLOW RATE FOR PUMPED WATER FROM WTG EXCAVATIONS WILL BE LIMITED TO 5.8 L/s TO PREVENT OVERUSE OF THE SETTLEMENT PONDS.
- WTG EXCAVATIONS ARE TO BE REDUCED IN SIZE AS MUCH AS POSSIBLE TO LIMIT GENERATION OF SPOIL MATERIAL.
- SAND BLINDING, DPM AND CONCRETE BLINDING ARE TO BE PROVIDED AT FORMATION LEVEL TO CREATE A VERTICAL CUT-OFF BARRIER AND TO MITIGATE THE RISK OF CONCRETE LEAKAGE INTO THE GROUND BELOW.
- HARDSTANDS WILL BE UNDERLAIN WITH A TERRAM GEOTEXTILE TO ENCOURAGE LATERAL FLOW OF WATER AND LIMIT THE AMOUNT OF DIRECT DISCHARGE VERTICALLY INTO THE GROUND.
- ALL DRAINAGE MEASURES ARE TO BE LEFT IN PLACE FOLLOWING COMPLETION OF THE CONSTRUCTION WORKS FOR THE OPERATIONAL PHASE OF THE WIND FARM.

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LEGEND:

- SITE BOUNDARY
- OWNERSHIP BOUNDARY
- WORKS CORRIDOR
- ROAD/ STONE CAPPED SURFACES
- EXTENT OF ROAD SIDE BERM
- CUT EMBANKMENT
- FILL EMBANKMENT
- SUBSTATION FLOOR PLAN
- STONE BERM
- PEAT STORAGE
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- RUN OFF DRAIN WITH BUFFERED OUTFALL
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- LAND & STRUCTURE BOUNDARY
- INTERNAL CABLE ROUTE (Circuit 1)
- INTERNAL CABLE ROUTE (Circuit 2)
- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

REFERENCE DRAWINGS:

DRAWING No.	DRAWING TITLE
21337-MWP-WF-00-DR-C-2101	DRAINAGE LAYOUT SHEET 1
21337-MWP-WF-00-DR-C-2102	DRAINAGE LAYOUT SHEET 2
21337-MWP-WF-00-DR-C-2103	DRAINAGE LAYOUT SHEET 3
21337-MWP-WF-00-DR-C-2104	DRAINAGE LAYOUT SHEET 4
21337-MWP-WF-00-DR-C-2105	DRAINAGE LAYOUT SHEET 5
21337-MWP-WF-00-DR-C-2106	DRAINAGE LAYOUT SHEET 6
21337-MWP-WF-00-DR-C-2107	DRAINAGE LAYOUT SHEET 7
21337-MWP-WF-00-DR-C-2108	DRAINAGE LAYOUT SHEET 8
21337-MWP-WF-00-DR-C-2109	DRAINAGE LAYOUT SHEET 9
21337-MWP-WF-00-DR-C-2110	DRAINAGE LAYOUT SHEET 10
21337-MWP-WF-00-DR-C-2125	NORTH DRAINAGE KEYPLAN

PK	01/08/22	ISSUED FOR INFORMATION	PK	BS
REV	20/01/22	ISSUED FOR INFORMATION	REV	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT SHEET 1

CLIENT: **energia**
Switched on

Malachy Walsh and Partners
Engineering and Environmental Consultants
Cork | Tralee | London | Limerick

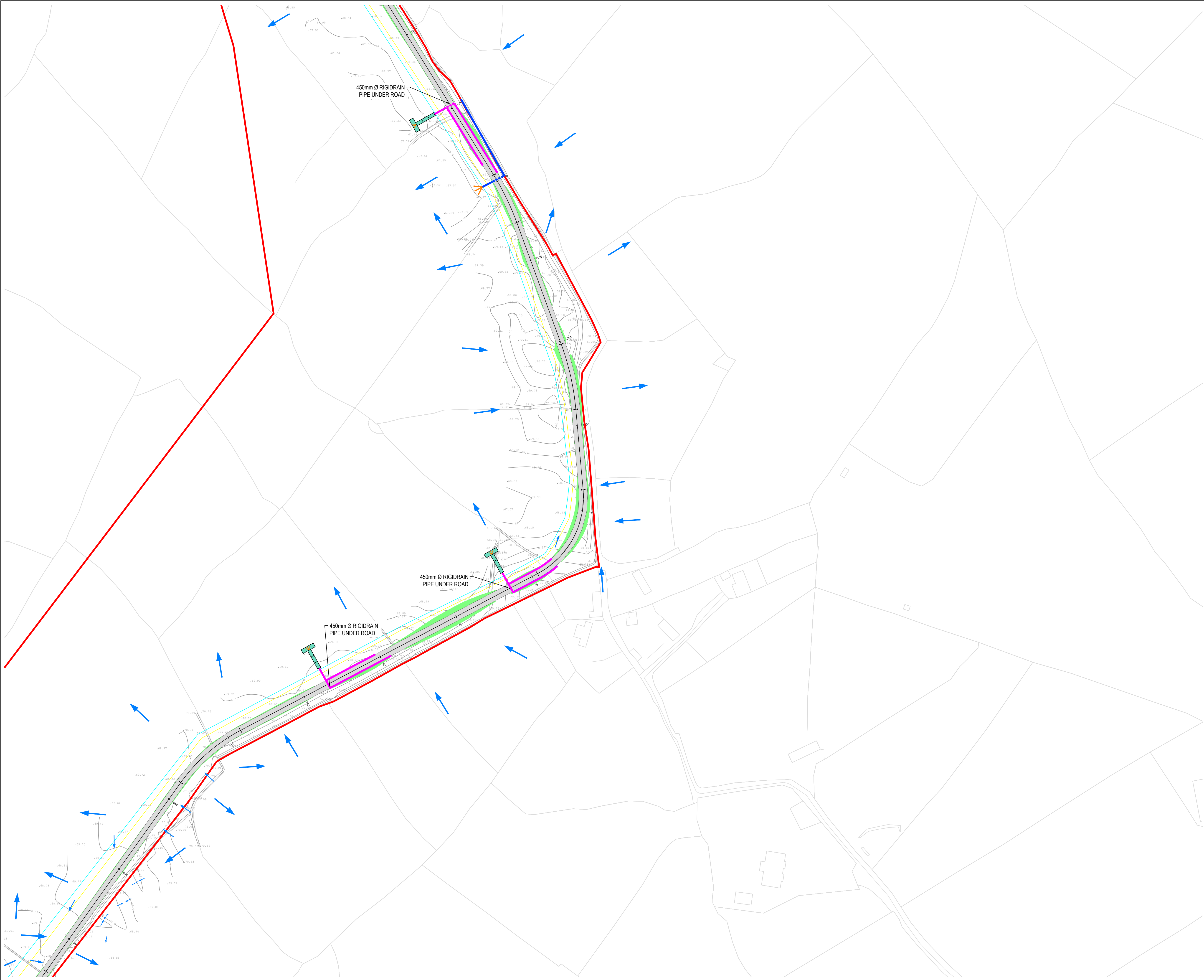
The Elm Suite,
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E-mail: limerick@mwpl.ie
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DRAWN: MW CHECKED: PB APPROVED: BS

DATE: 01/06/22 SCALE @ A1: 1:1000

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-WF-00-DR-C-2101 REV: P02



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	INTERNAL CABLE ROUTE (4 x circuits to Substation)

PK	01/06/22	ISSUED FOR INFORMATION	PK	BS
REV	01/06/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

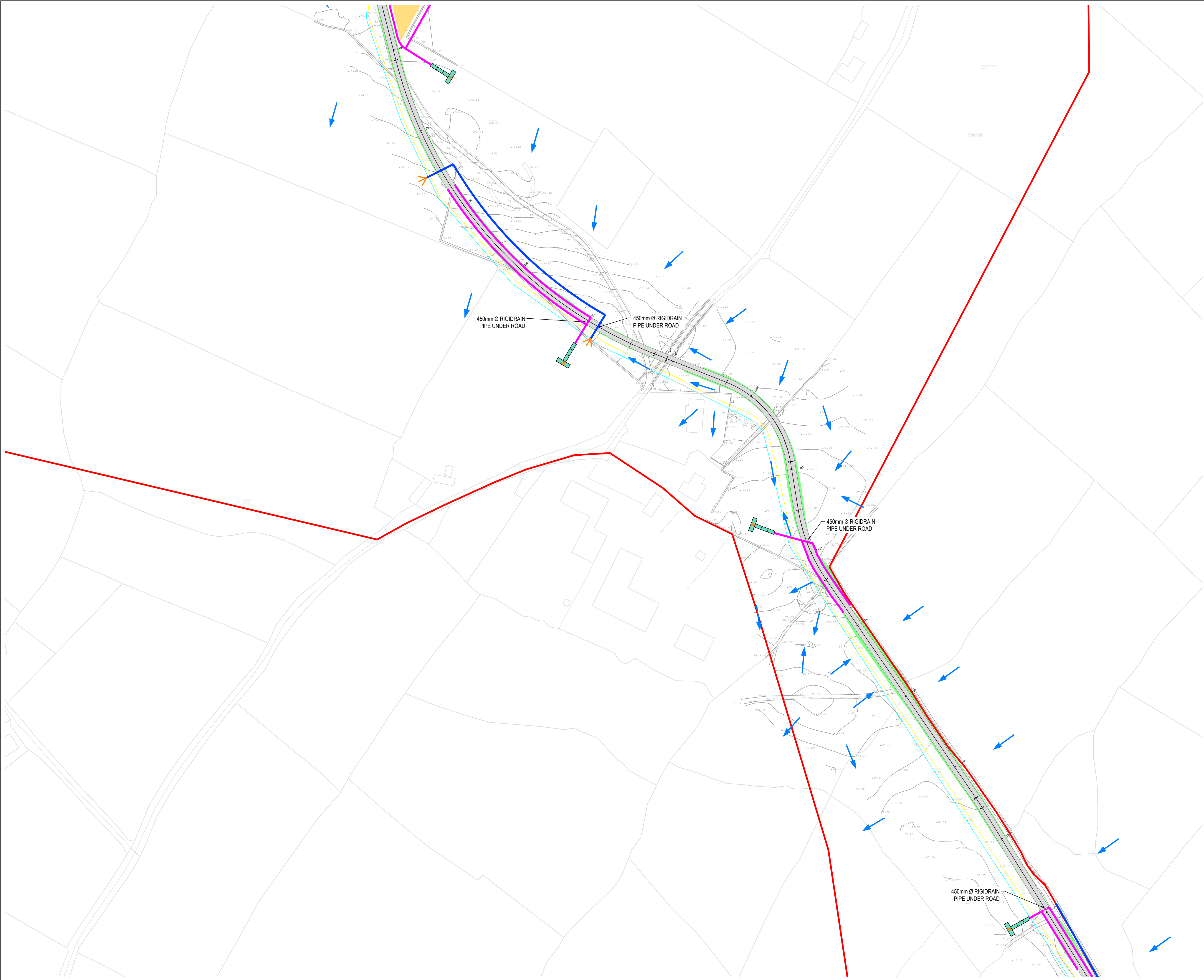
TITLE: PROPOSED DRAINAGE LAYOUT SHEET 2

CLIENT: **Malachy Walsh and Partners**
Engineering and Environmental Consultants
Cork | Tralee | London | Limerick

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V94 R578

Tel: +353 (0) 61 480164
Fax: +353 (0) 61 441125
E-mail: limerick@mwpl.ie
Web: www.mwpl.ie

DRAWN: PK	CHECKED: PB	APPROVED: BS
DATE: 01/06/22	SCALE @ A1: 1:1000	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	
DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-2102	REV: P02	



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LEGEND:

- SITE BOUNDARY
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- WORKS CORRIDOR
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- EXTENT OF ROAD SIDE BERM
- CUT EMBANKMENT
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- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

REV	DATE	DESCRIPTION	BY	APP
P02	01/06/22	ISSUED FOR INFORMATION	PK	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS

PROJECT:	SEVEN HILLS WIND FARM
----------	-----------------------

TITLE:	PROPOSED DRAINAGE LAYOUT SHEET 3
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CLIENT:	
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Limerick,
V94 R578

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Fax: +353 (0) 61 441125
E-mail: limerick@mwp.ie
Web: www.mwp.ie

DRAWN: PK	CHECKED: PB	APPROVED: BS
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DATE: 01/06/22	SCALE @ A1: 1:1000
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PROJECT NUMBER: 21337	DRAWING STATUS: S2
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DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-2103	REV: P02
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LEGEND:

- SITE BOUNDARY
- OWNERSHIP BOUNDARY
- WORKS CORRIDOR
- ROAD/ STONE CAPPED SURFACES
- EXTENT OF ROAD SIDE BERM
- CUT EMBANKMENT
- FILL EMBANKMENT
- SUBSTATION FLOOR PLAN
- STONE BERM
- PEAT STORAGE
- DIRTY WATER DRAIN
- CLEAN WATER DRAIN
- EXISTING CUT-OFF DRAIN
- RUN OFF DRAIN WITH BUFFERED OFFFALL
- SETTLEMENT POND WITH BUFFERED OFFFALL
- DIRECTION OF FLOW OF SURFACE WATER
- LAND & STRUCTURE BOUNDARY
- INTERNAL CABLE ROUTE (Circuit 1)
- INTERNAL CABLE ROUTE (Circuit 2)
- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

PK	01/06/22	ISSUED FOR INFORMATION	MW	BS
PK	12/04/22	ISSUED FOR INFORMATION	MW	BS
PK	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT SHEET 4

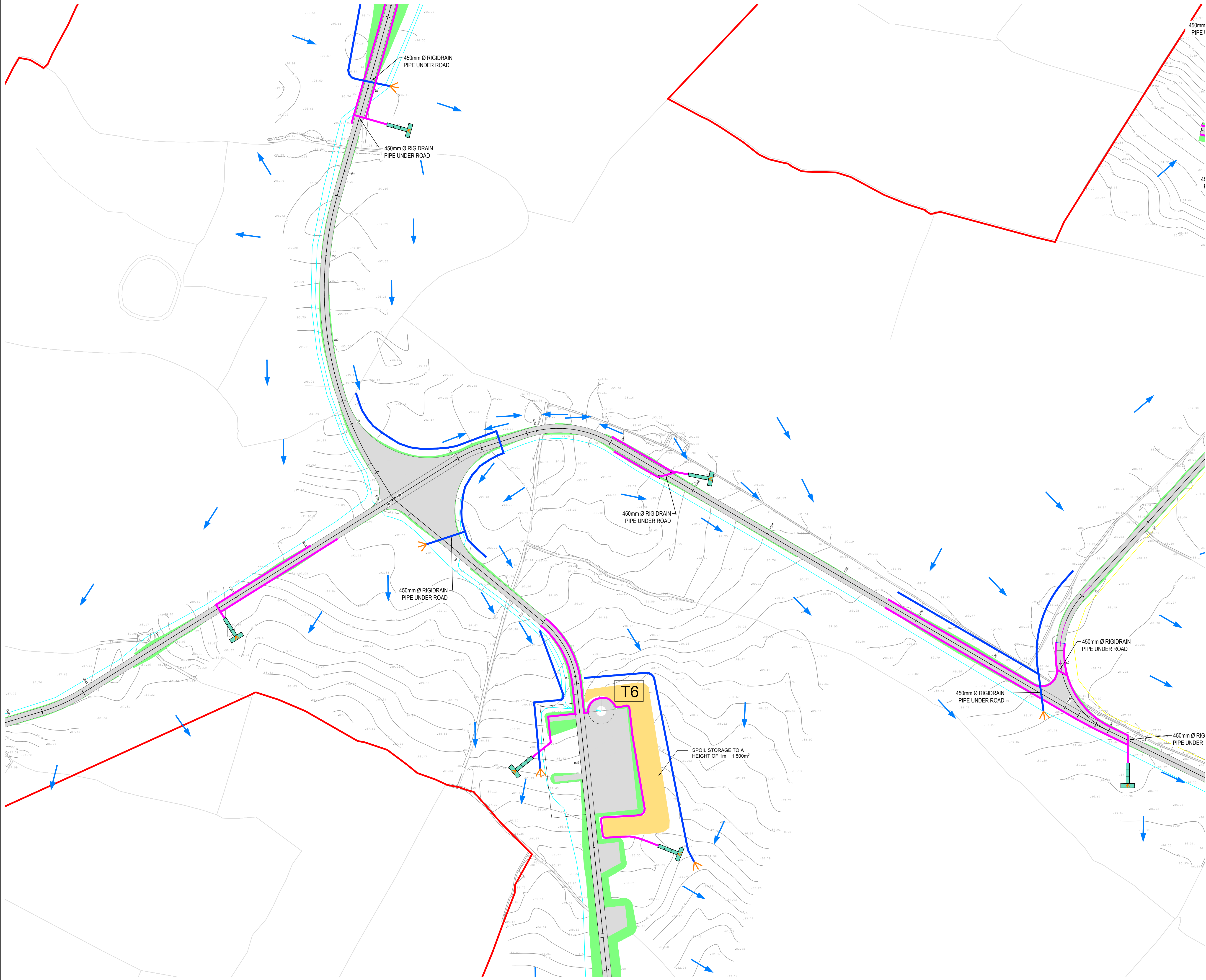
CLIENT: **enērgia** Switched on

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Engineering and Environmental Consultants
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Raheen Business Park,
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Fax: +353 (0) 61 441125
E-mail: limerick@mwp.ie
Web: www.mwp.ie

DRAWN: PK	CHECKED: PB	APPROVED: BS
DATE: 01/06/22	SCALE @ A1: 1:1000	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	
DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-2104		REV: P03



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- LEGEND:
- SITE BOUNDARY
 - OWNERSHIP BOUNDARY
 - WORKS CORRIDOR
 - ROAD/ STONE CAPPED SURFACES
 - EXTENT OF ROAD SIDE BERM
 - CUT EMBANKMENT
 - FILL EMBANKMENT
 - SUBSTATION FLOOR PLAN
 - STONE BERM
 - PEAT STORAGE
 - DIRTY WATER DRAIN
 - CLEAN WATER DRAIN
 - EXISTING CUT-OFF DRAIN
 - RUN OFF DRAIN WITH BUFFERED OUTFALL
 - SETTLEMENT POND WITH BUFFERED OUTFALL
 - DIRECTION OF FLOW OF SURFACE WATER
 - LAND & STRUCTURE BOUNDARY
 - INTERNAL CABLE ROUTE (Circuit 1)
 - INTERNAL CABLE ROUTE (Circuit 2)
 - INTERNAL CABLE ROUTE (Circuit 3)
 - INTERNAL CABLE ROUTE (Circuit 4)
 - INTERNAL CABLE ROUTE (Circuit 5)
 - INTERNAL CABLE ROUTE (4 x circuits to Substation)

REV	DATE	DESCRIPTION	BY	APP
P02	01/06/22	ISSUED FOR INFORMATION	PK	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT SHEET 5

CLIENT: **enērgia**
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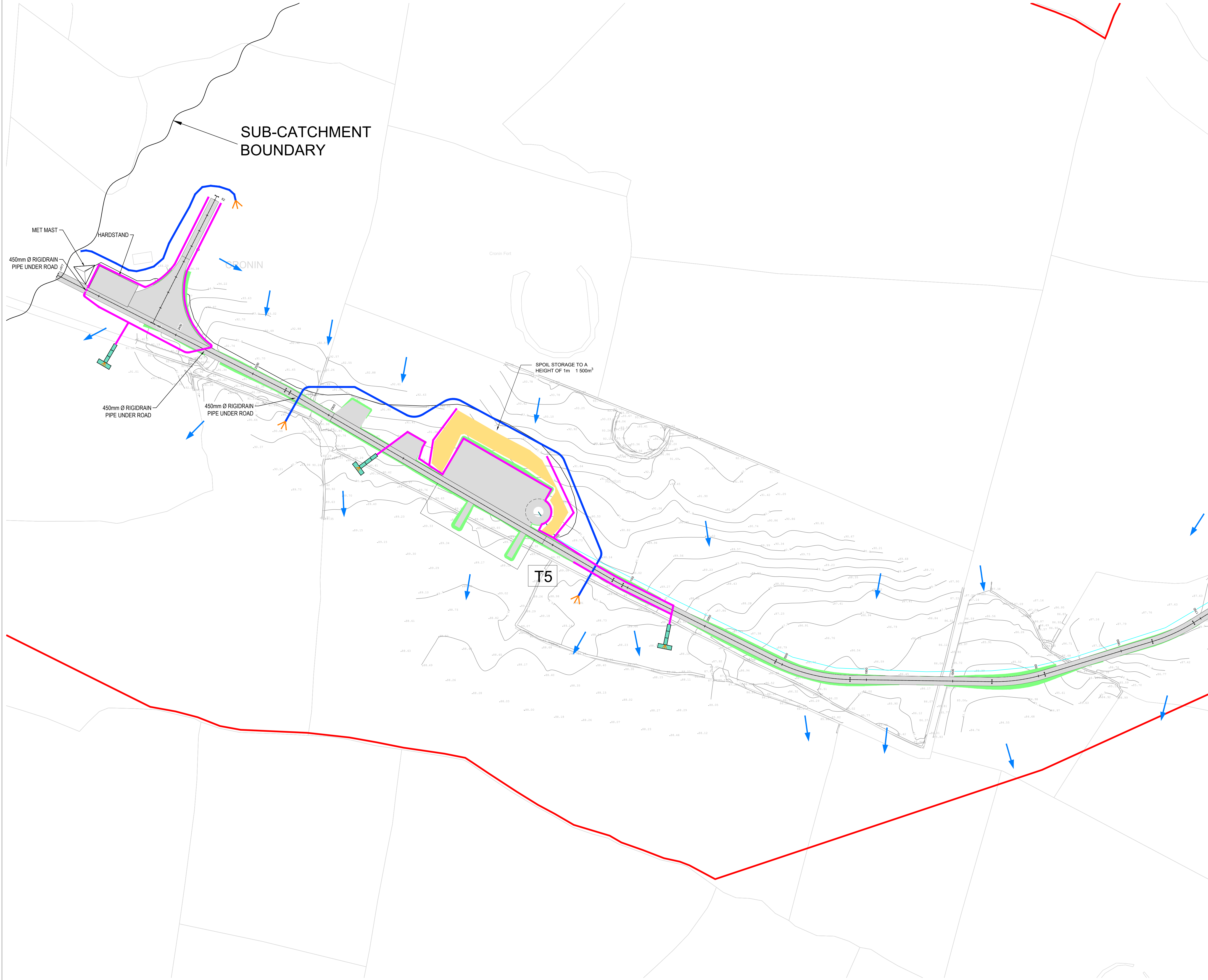
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DATE: 01/06/22	SCALE @ A1: 1:1000	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	

DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-2105 REV: P02

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LEGEND:

- SITE BOUNDARY
- OWNERSHIP BOUNDARY
- WORKS CORRIDOR
- ROAD/ STONE CAPPED SURFACES
- EXTENT OF ROAD SIDE BERM
- CUT EMBANKMENT
- FILL EMBANKMENT
- SUBSTATION FLOOR PLAN
- STONE BERM
- PEAT STORAGE
- DIRTY WATER DRAIN
- CLEAN WATER DRAIN
- EXISTING CUT-OFF DRAIN
- RUN OFF DRAIN WITH BUFFERED OFFFALL
- SETTLEMENT POND WITH BUFFERED OFFFALL
- DIRECTION OF FLOW OF SURFACE WATER
- LAND & STRUCTURE BOUNDARY
- INTERNAL CABLE ROUTE (Circuit 1)
- INTERNAL CABLE ROUTE (Circuit 2)
- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

REV	DATE	DESCRIPTION	BY	APP	PK	BS
R02	01/08/22	ISSUED FOR INFORMATION			PK	BS
R01	20/01/22	ISSUED FOR INFORMATION			PK	BS

PROJECT:

SEVEN HILLS WIND FARM

TITLE:

PROPOSED DRAINAGE LAYOUT
SHEET 6

CLIENT:

enērgia
Switched on

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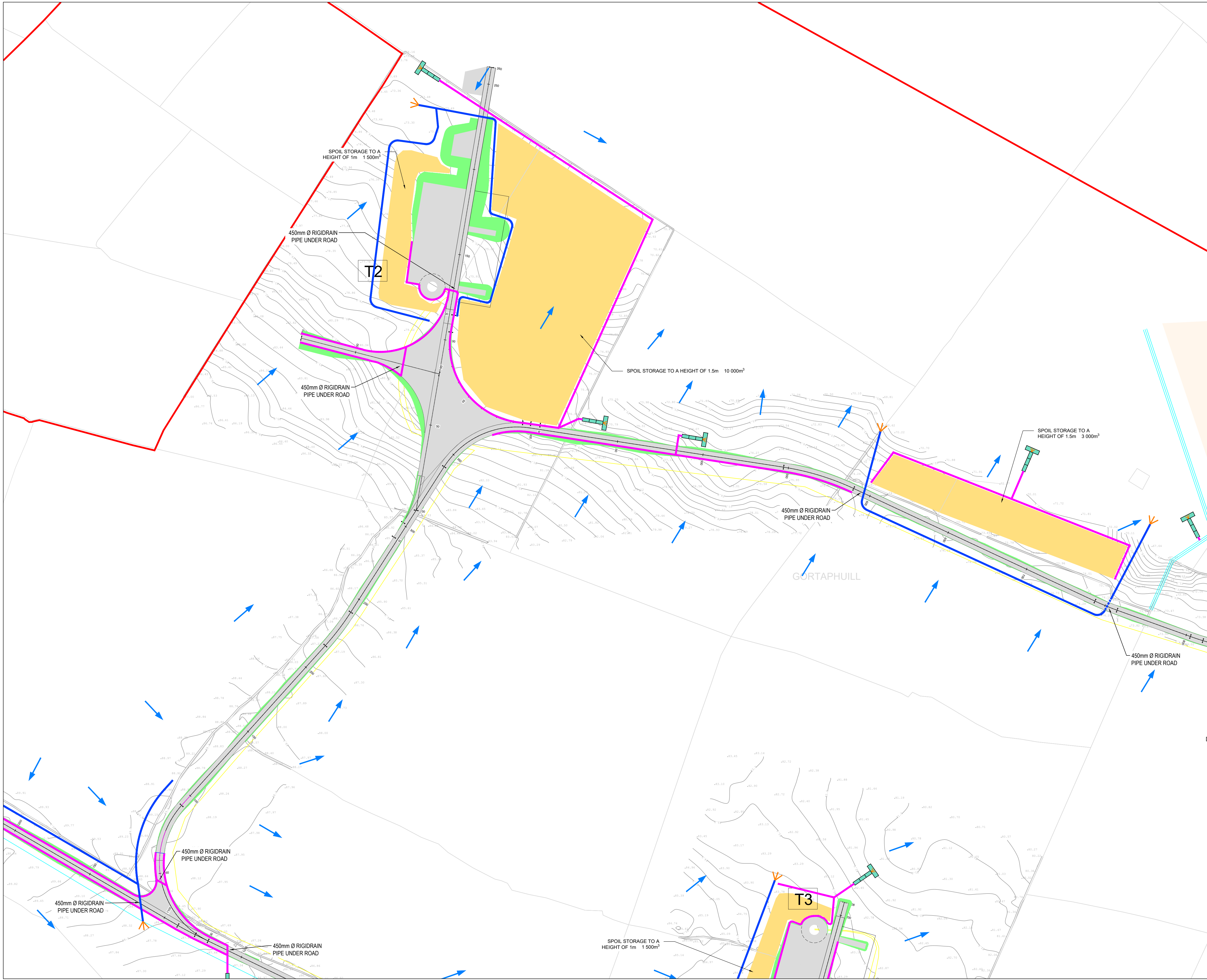
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Fax: +353 (0) 61 441125
E-mail: limerick@mwpl.ie
Web: www.mwpl.ie

DRAWN: PK
CHECKED: PB
APPROVED: BS

DATE: 01/06/22
SCALE @ A1: 1:1000

PROJECT NUMBER: 21337
DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-2106
REV: P02



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 4. DRAWINGS ARE NOT TO BE SCALED.
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- LEGEND:
- SITE BOUNDARY
 - OWNERSHIP BOUNDARY
 - WORKS CORRIDOR
 - ROAD/ STONE CAPPED SURFACES
 - EXTENT OF ROAD SIDE BERM
 - CUT EMBANKMENT
 - FILL EMBANKMENT
 - SUBSTATION FLOOR PLAN
 - STONE BERM
 - PEAT STORAGE
 - DIRTY WATER DRAIN
 - CLEAN WATER DRAIN
 - EXISTING CUT-OFF DRAIN
 - RUN OFF DRAIN WITH BUFFERED OUTFALL
 - SETTLEMENT POND WITH BUFFERED OUTFALL
 - DIRECTION OF FLOW OF SURFACE WATER
 - LAND & STRUCTURE BOUNDARY
 - INTERNAL CABLE ROUTE (Circuit 1)
 - INTERNAL CABLE ROUTE (Circuit 2)
 - INTERNAL CABLE ROUTE (Circuit 3)
 - INTERNAL CABLE ROUTE (Circuit 4)
 - INTERNAL CABLE ROUTE (Circuit 5)
 - INTERNAL CABLE ROUTE (4 x circuits to Substation)

PK	01/06/22	ISSUED FOR INFORMATION	MW	BS
PK	12/04/22	ISSUED FOR INFORMATION	MW	BS
PK	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 7

CLIENT: **enērgia**
Switched on

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Engineering and Environmental Consultants
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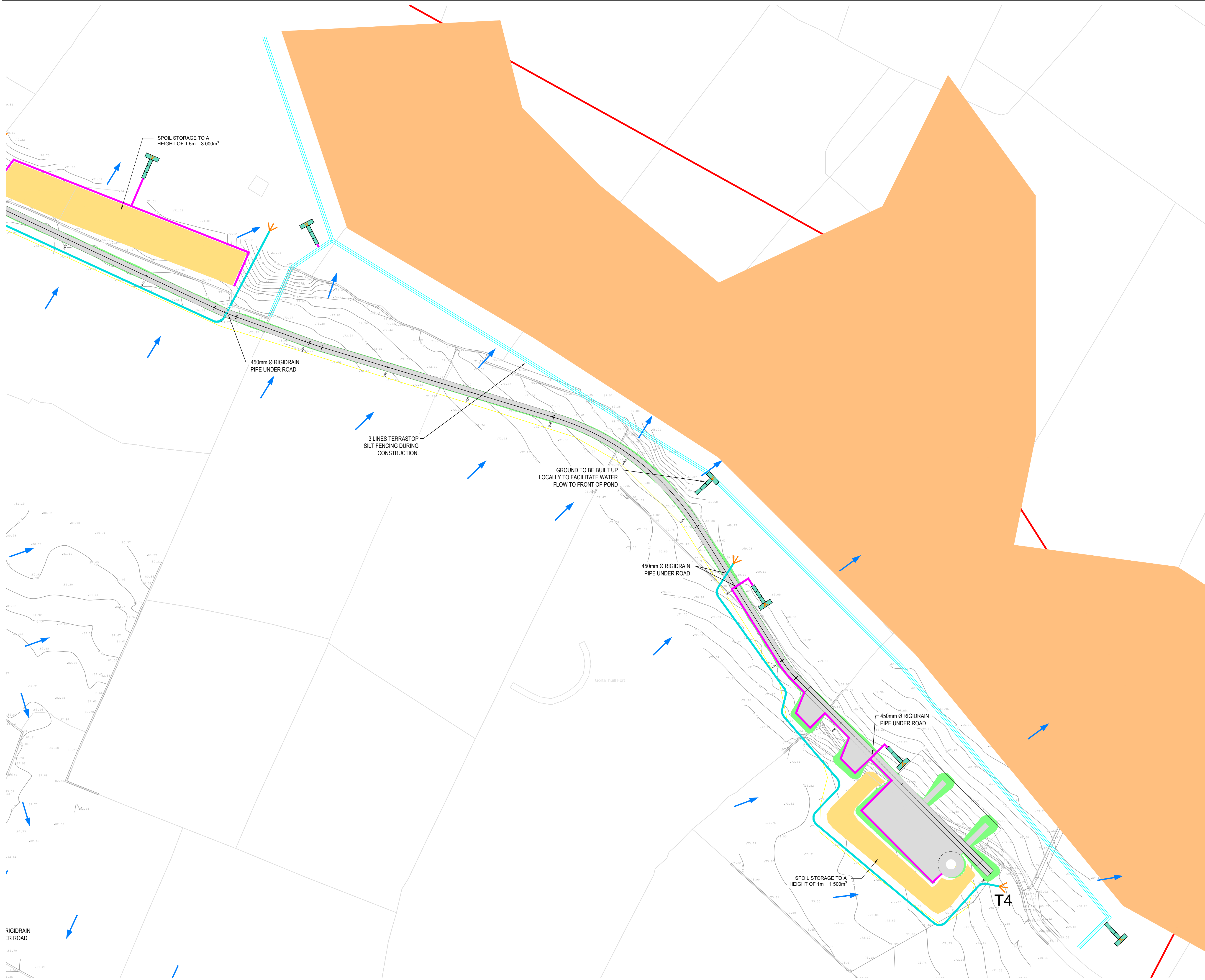
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E-mail: limerick@mwp.ie
Web: www.mwp.ie

DRAWN: PK CHECKED: PB APPROVED: BS

DATE: 01/06/22 SCALE @ A1: 1:1000

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-2107 REV: P03



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LEGEND:

- SITE BOUNDARY
- OWNERSHIP BOUNDARY
- WORKS CORRIDOR
- ROAD/ STONE CAPPED SURFACES
- EXTENT OF ROAD SIDE BERM
- CUT EMBANKMENT
- FILL EMBANKMENT
- SUBSTATION FLOOR PLAN
- STONE BERM
- TURLOUGH
- PEAT STORAGE
- DIRTY WATER DRAIN
- CLEAN WATER DRAIN
- EXISTING CUT-OFF DRAIN
- RUN OFF DRAIN WITH BUFFERED OUTFALL
- SETTLEMENT POND WITH BUFFERED OUTFALL
- DIRECTION OF FLOW OF SURFACE WATER
- LAND & STRUCTURE BOUNDARY
- INTERNAL CABLE ROUTE (Circuit 1)
- INTERNAL CABLE ROUTE (Circuit 2)
- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

PK	BS
REV	DATE
DESCRIPTION	BY
APP	

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT SHEET 8

CLIENT: enērgia Switched on

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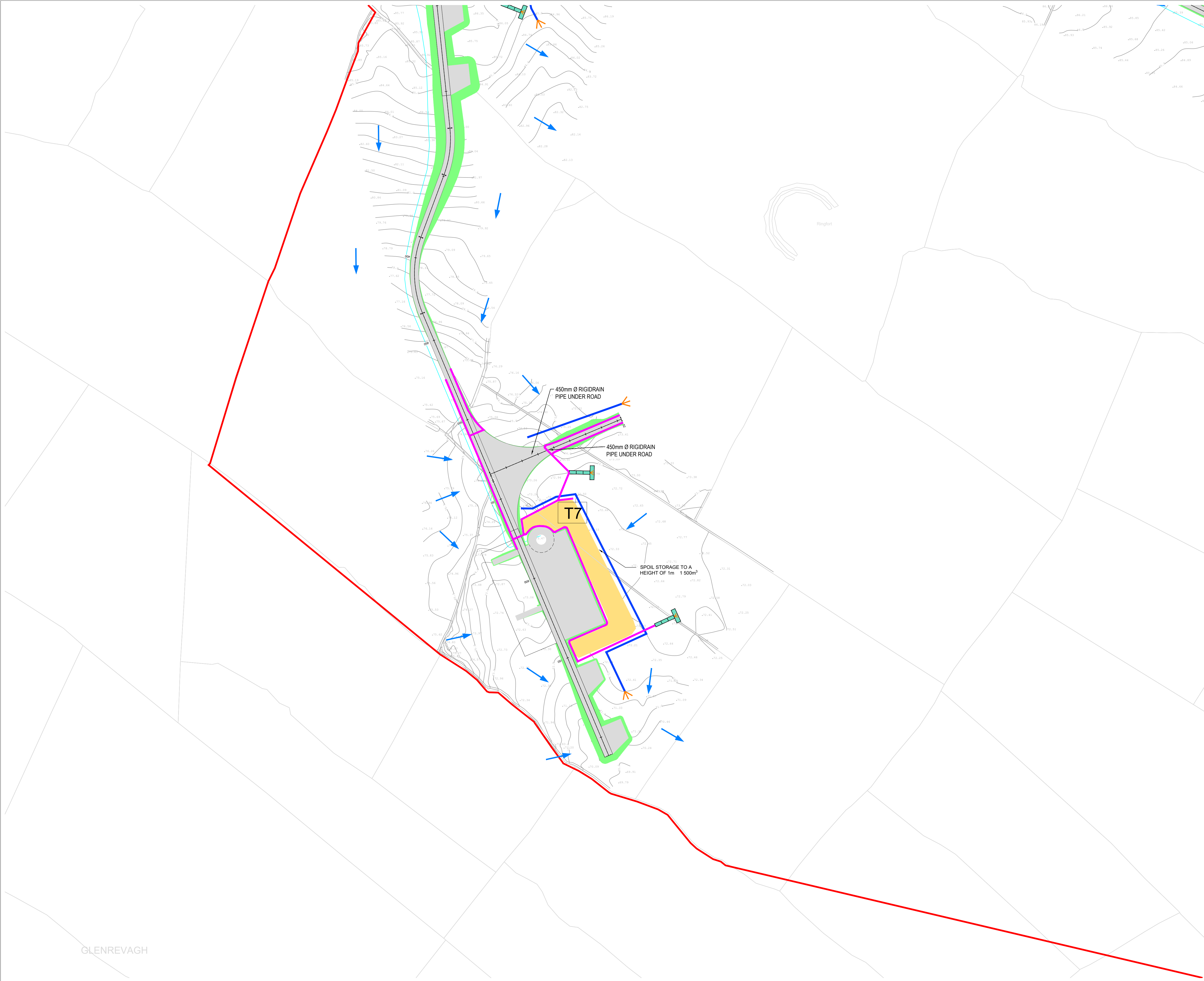
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DATE: 01/06/22 SCALE @ A1: 1:1000

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-2108 REV: P02



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LEGEND:

- SITE BOUNDARY
- OWNERSHIP BOUNDARY
- WORKS CORRIDOR
- ROAD/ STONE CAPPED SURFACES
- EXTENT OF ROAD SIDE BERM
- CUT EMBANKMENT
- FILL EMBANKMENT
- SUBSTATION FLOOR PLAN
- STONE BERM
- PEAT STORAGE
- DIRTY WATER DRAIN
- CLEAN WATER DRAIN
- EXISTING CUT-OFF DRAIN
- RUN OFF DRAIN WITH BUFFERED OUTFALL
- SETTLEMENT POND WITH BUFFERED OUTFALL
- DIRECTION OF FLOW OF SURFACE WATER
- LAND & STRUCTURE BOUNDARY
- INTERNAL CABLE ROUTE (Circuit 1)
- INTERNAL CABLE ROUTE (Circuit 2)
- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

REV	DATE	DESCRIPTION	BY	APP
P02	01/06/22	ISSUED FOR INFORMATION	PK	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT SHEET 9

CLIENT: **enērgia**
Switched on

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E-mail: limerick@mwp.ie
Web: www.mwp.ie

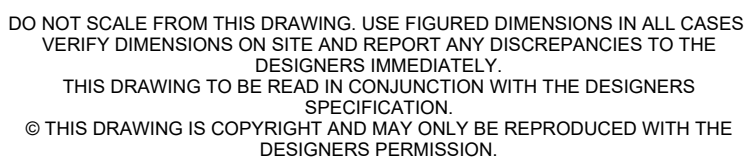
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DATE: 01/06/22 SCALE @ A1: 1:1000
























PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-2109 REV: P02

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5. ALL DIMENSIONS ARE IN **METERS**, UNLESS NOTED OTHERWISE.

	SITE BOUNDARY
	OWNERSHIP BOUNDARY
	WORKS CORRIDOR
	ROAD/ STONE CAPPED SURFACES
	EXTENT OF ROAD SIDE BERM
	CUT EMBANKMENT
	FILL EMBANKMENT
	SUBSTATION FLOOR PLAN
	STONE BERM
	PEAT STORAGE
	DIRTY WATER DRAIN
	CLEAN WATER DRAIN
	EXISTING CUT-OFF DRAIN
	RUN OFF DRAIN WITH BUFFERED OUTFALL
	SETTLEMENT POND WITH BUFFERED OUTFALL
	DIRECTION OF FLOW OF SURFACE WATER
	LAND & STRUCTURE BOUNDARY
	INTERNAL CABLE ROUTE (Circuit 1)
	INTERNAL CABLE ROUTE (Circuit 2)
	INTERNAL CABLE ROUTE (Circuit 3)
	INTERNAL CABLE ROUTE (Circuit 4)
	INTERNAL CABLE ROUTE (Circuit 5)
	INTERNAL CABLE ROUTE (4 x circuits to Substation)

DRAWING NO.	DRAWING TITLE
21337-MWP-WF-00-DR-C-2111	DRAINAGE LAYOUT SHEET 11
21337-MWP-WF-00-DR-C-2112	DRAINAGE LAYOUT SHEET 12
21337-MWP-WF-00-DR-C-2113	DRAINAGE LAYOUT SHEET 13
21337-MWP-WF-00-DR-C-2114	DRAINAGE LAYOUT SHEET 14
21337-MWP-WF-00-DR-C-2115	DRAINAGE LAYOUT SHEET 15
21337-MWP-WF-00-DR-C-2116	DRAINAGE LAYOUT SHEET 16
21337-MWP-WF-00-DR-C-2117	DRAINAGE LAYOUT SHEET 17
21337-MWP-WF-00-DR-C-2118	DRAINAGE LAYOUT SHEET 18
21337-MWP-WF-00-DR-C-2119	DRAINAGE LAYOUT SHEET 19
21337-MWP-WF-00-DR-C-2120	DRAINAGE LAYOUT SHEET 20
21337-MWP-WF-00-DR-C-2121	DRAINAGE LAYOUT SHEET 21
21337-MWP-WF-00-DR-C-2122	DRAINAGE LAYOUT SHEET 22
21337-MWP-WF-00-DR-C-2123	DRAINAGE LAYOUT SHEET 23
21337-MWP-WF-00-DR-C-2124	DRAINAGE LAYOUT SHEET 24
21337-MWP-WF-00-DR-C-2126	SOUTH DRAINAGE LAYOUT

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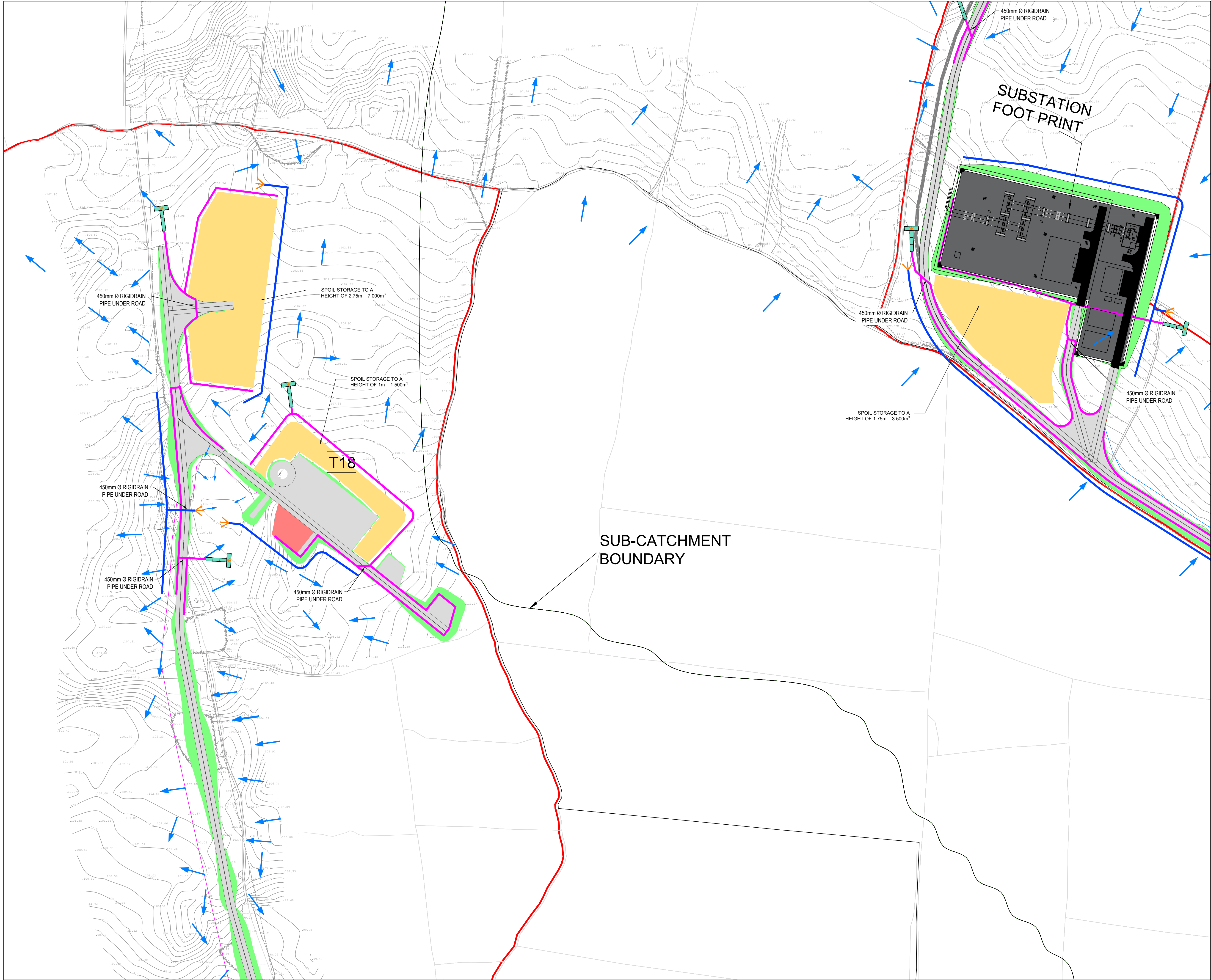
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DATE: 01 / 06 / 22	SCALE @ A1: 1:1000	
PROJECT NUMBER: 21337		DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2111	REV: P02
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- LEGEND:
- SITE BOUNDARY
 - OWNERSHIP BOUNDARY
 - WORKS CORRIDOR
 - ROAD/ STONE CAPPED SURFACES
 - EXTENT OF ROAD SIDE BERM
 - CUT EMBANKMENT
 - FILL EMBANKMENT
 - SUBSTATION FLOOR PLAN
 - STONE BERM
 - PEAT STORAGE
 - DIRTY WATER DRAIN
 - CLEAN WATER DRAIN
 - EXISTING CUT-OFF DRAIN
 - RUN OFF DRAIN WITH BUFFERED OUTFALL
 - SETTLEMENT POND WITH BUFFERED OUTFALL
 - DIRECTION OF FLOW OF SURFACE WATER
 - LAND & STRUCTURE BOUNDARY
 - INTERNAL CABLE ROUTE (Circuit 1)
 - INTERNAL CABLE ROUTE (Circuit 2)
 - INTERNAL CABLE ROUTE (Circuit 3)
 - INTERNAL CABLE ROUTE (Circuit 4)
 - INTERNAL CABLE ROUTE (Circuit 5)
 - INTERNAL CABLE ROUTE (4 x circuits to Substation)

REV	DATE	DESCRIPTION	BY	APP
P05	01/06/22	ISSUED FOR INFORMATION	MW	BS
P04	12/04/22	ISSUED FOR INFORMATION	MW	BS
P03	08/02/22	SUB STATION UPDATED	MW	BS
P02	04/02/22	SUB STATION UPDATED	MW	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 12

CLIENT: **enērgia**
Switched on

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Cork | Tralee | London | Limerick

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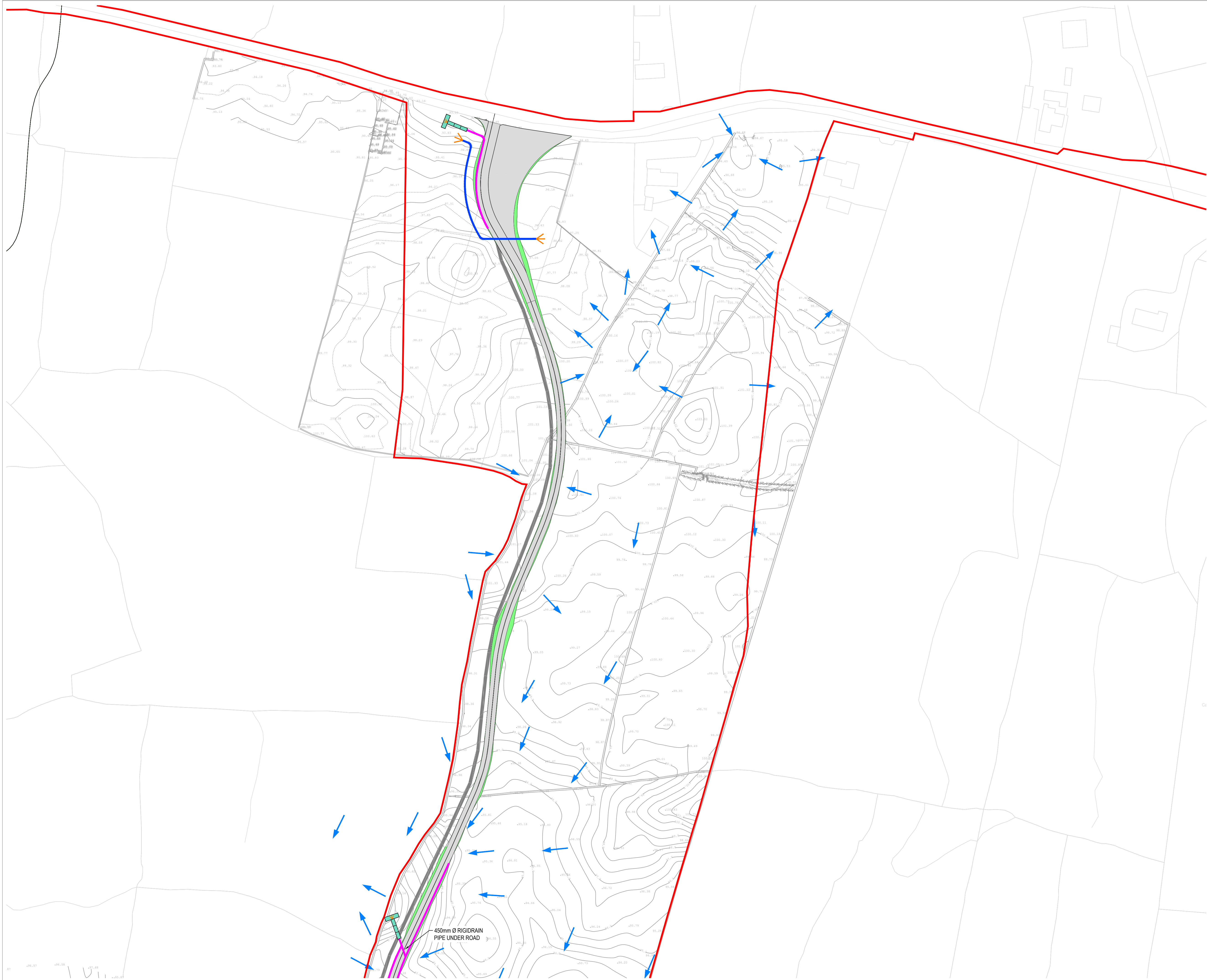
Tel: +353 (0) 61 480164
Fax: +353 (0) 61 241125
E-mail: limerick@mwp.ie
Web: www.mwp.ie

DRAWN: PK CHECKED: PB APPROVED: BS

DATE: 01/06/22 SCALE @ A1: 1:1000

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2112 REV: P05



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- LEGEND:
- SITE BOUNDARY
 - OWNERSHIP BOUNDARY
 - WORKS CORRIDOR
 - ROAD/ STONE CAPPED SURFACES
 - EXTENT OF ROAD SIDE BERM
 - CUT EMBANKMENT
 - FILL EMBANKMENT
 - SUBSTATION FLOOR PLAN
 - STONE BERM
 - TURLOUGH
 - PEAT STORAGE
 - DIRTY WATER DRAIN
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 - RUN OFF DRAIN WITH BUFFERED OUTFALL
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 - DIRECTION OF FLOW OF SURFACE WATER
 - LAND & STRUCTURE BOUNDARY
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 - INTERNAL CABLE ROUTE (Circuit 3)
 - INTERNAL CABLE ROUTE (Circuit 4)
 - INTERNAL CABLE ROUTE (Circuit 5)
 - INTERNAL CABLE ROUTE (4 x circuits to Substation)

P02	01/06/22	ISSUED FOR INFORMATION	PK	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 13

CLIENT: **enÉrgia**
Switched on

Malachy Walsh and Partners
Engineering and Environmental Consultants
Cork | Tralee | London | Limerick

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Limerick
V94 R578

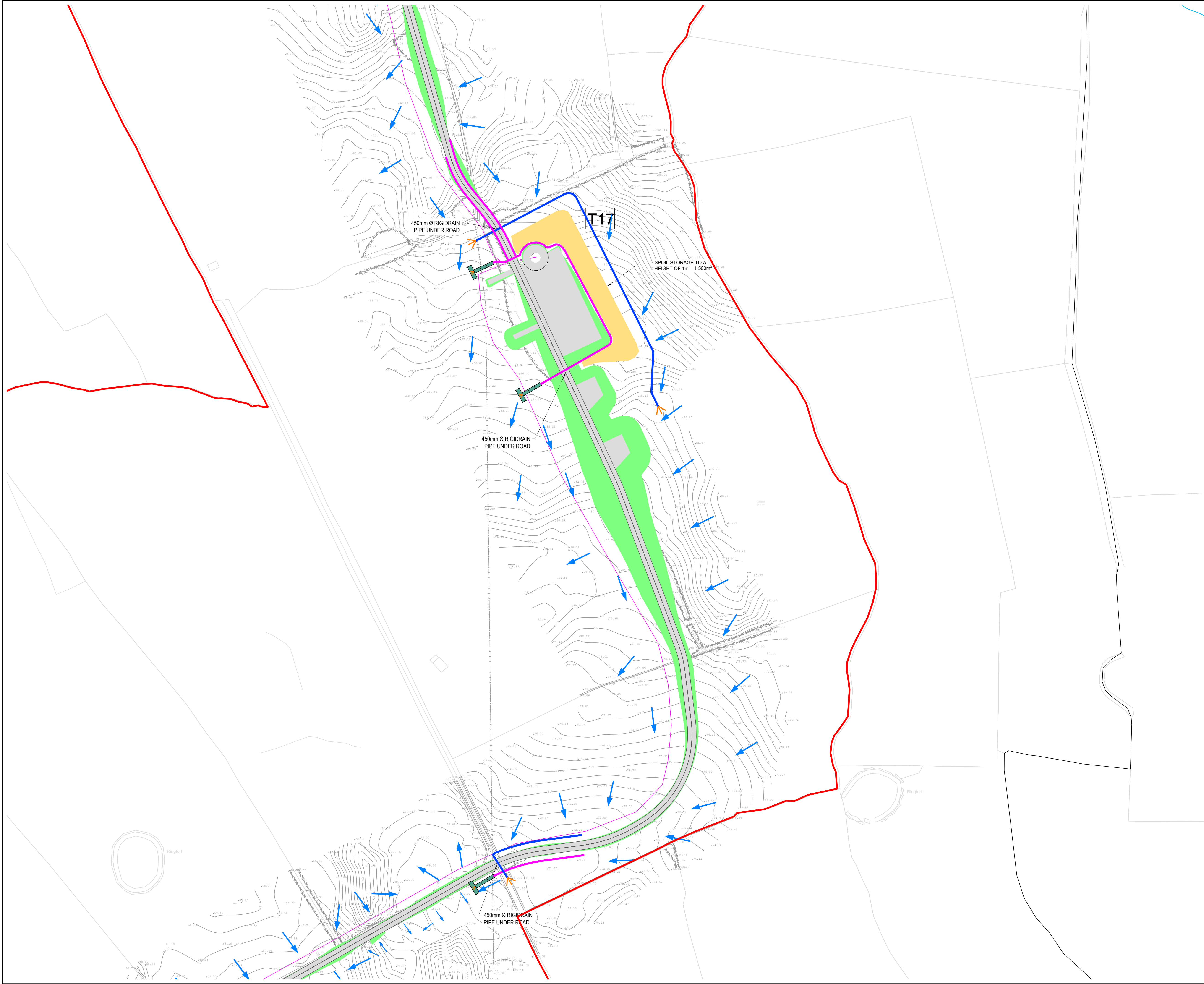
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E-mail : limerick@mwp.ie
Web : www.mwp.ie

DRAWN: PK CHECKED: PB APPROVED: BS

DATE: 01 / 06 / 22 SCALE @ A1: 1:1000

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2113 REV: P02



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P02	01/06/22	ISSUED FOR INFORMATION	PK	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 14

CLIENT: **en^{er}gia**
Switched on

Malachy Walsh and Partners
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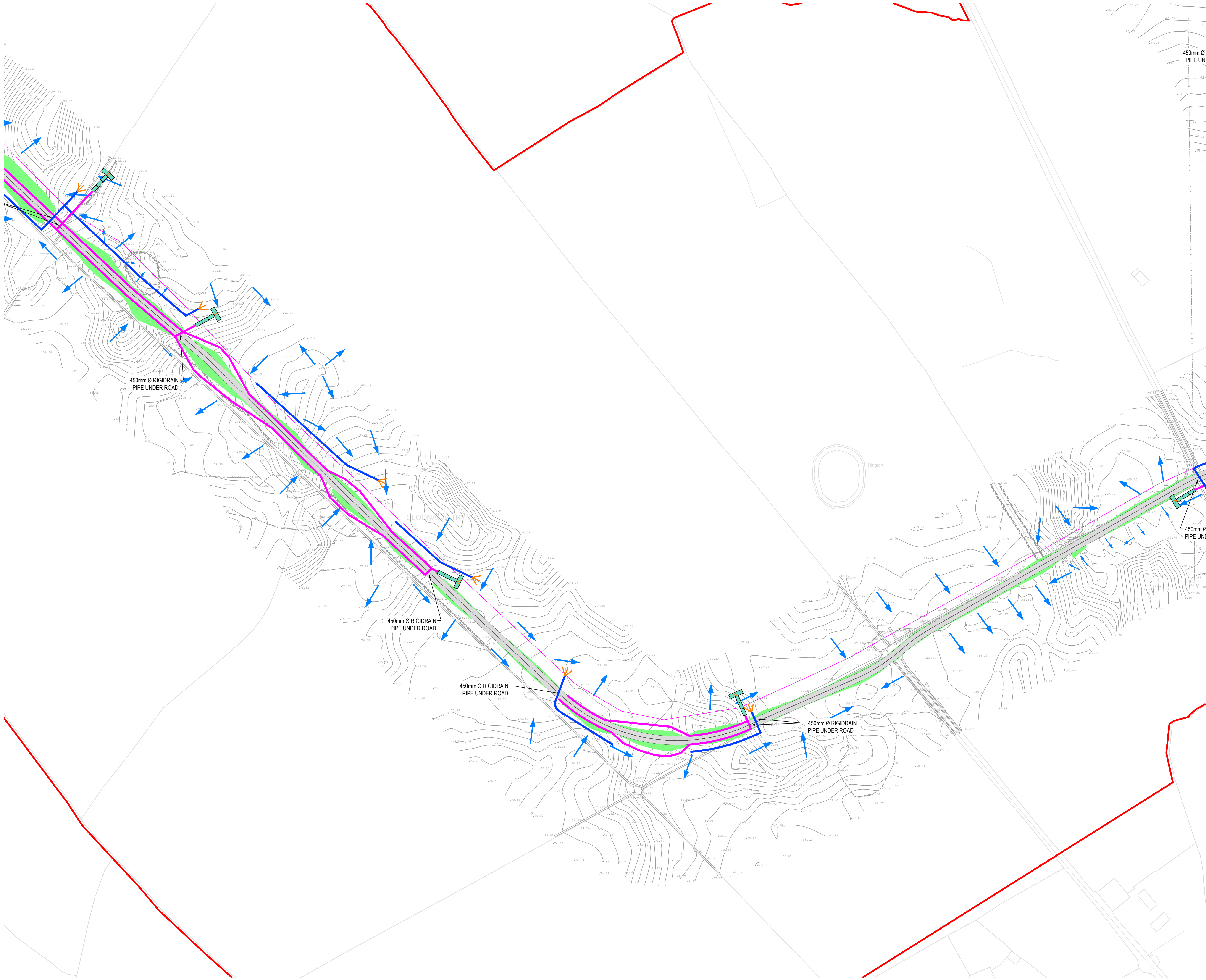
Tel. : +353 (0) 61 480164
Fax : +353 (0) 61 241125
E-mail : limerick@mwp.ie
Web : www.mwp.ie

DRAWN: PK	CHECKED: PB	APPROVED: BS
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DATE: 01 / 06 / 22	SCALE @ A1: 1:1000
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PROJECT NUMBER: 21337	DRAWING STATUS: S2
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DRAWING NUMBER: 21337-MWP-00-00-DR-C-2114	REV: P02
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- INTERNAL CABLE ROUTE (4 x circuits to Substation)

PK	BS			
REV	DATE	DESCRIPTION	PK	BS
REV	DATE	DESCRIPTION	PK	BS

PROJECT:

SEVEN HILLS WIND FARM

TITLE:

PROPOSED DRAINAGE LAYOUT SHEET 15

CLIENT:

en^{er}gia
Switched on

Malachy Walsh and Partners
Engineering and Environmental Consultants

Cork | Tralee | London | Limerick

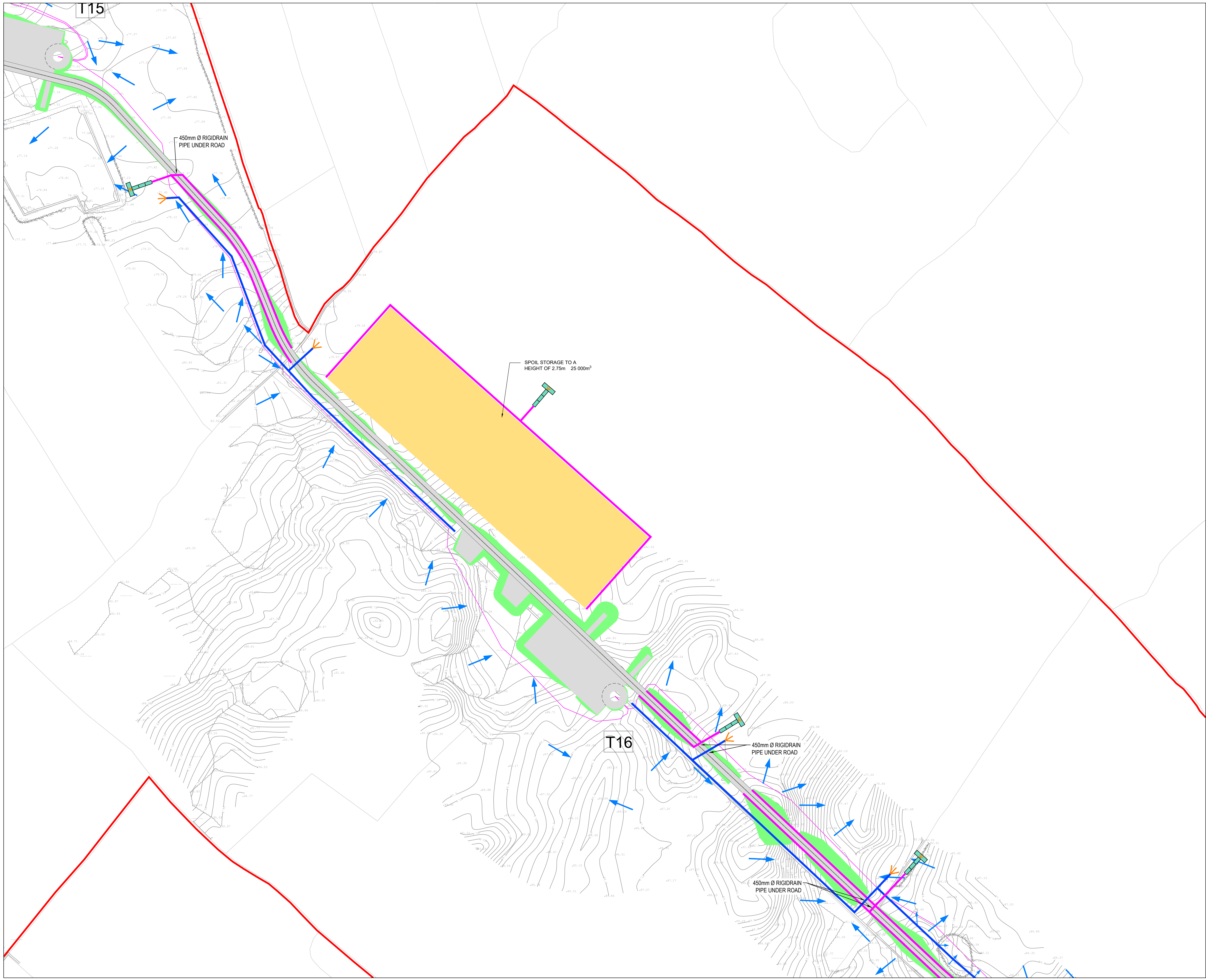
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DATE:	01 / 06 / 22	SCALE @ A1:	1:1000		
PROJECT NUMBER:	21337	DRAWING STATUS:	S2		

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2115

REV: P02



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 - INTERNAL CABLE ROUTE (Circuit 4)
 - INTERNAL CABLE ROUTE (Circuit 5)
 - INTERNAL CABLE ROUTE (4 x circuits to Substation)

PO3	01/06/22	ISSUED FOR INFORMATION	MW	BS
PO2	12/04/22	ISSUED FOR INFORMATION	MW	BS
PO1	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 16

CLIENT: **enÉrgia**
Switched on

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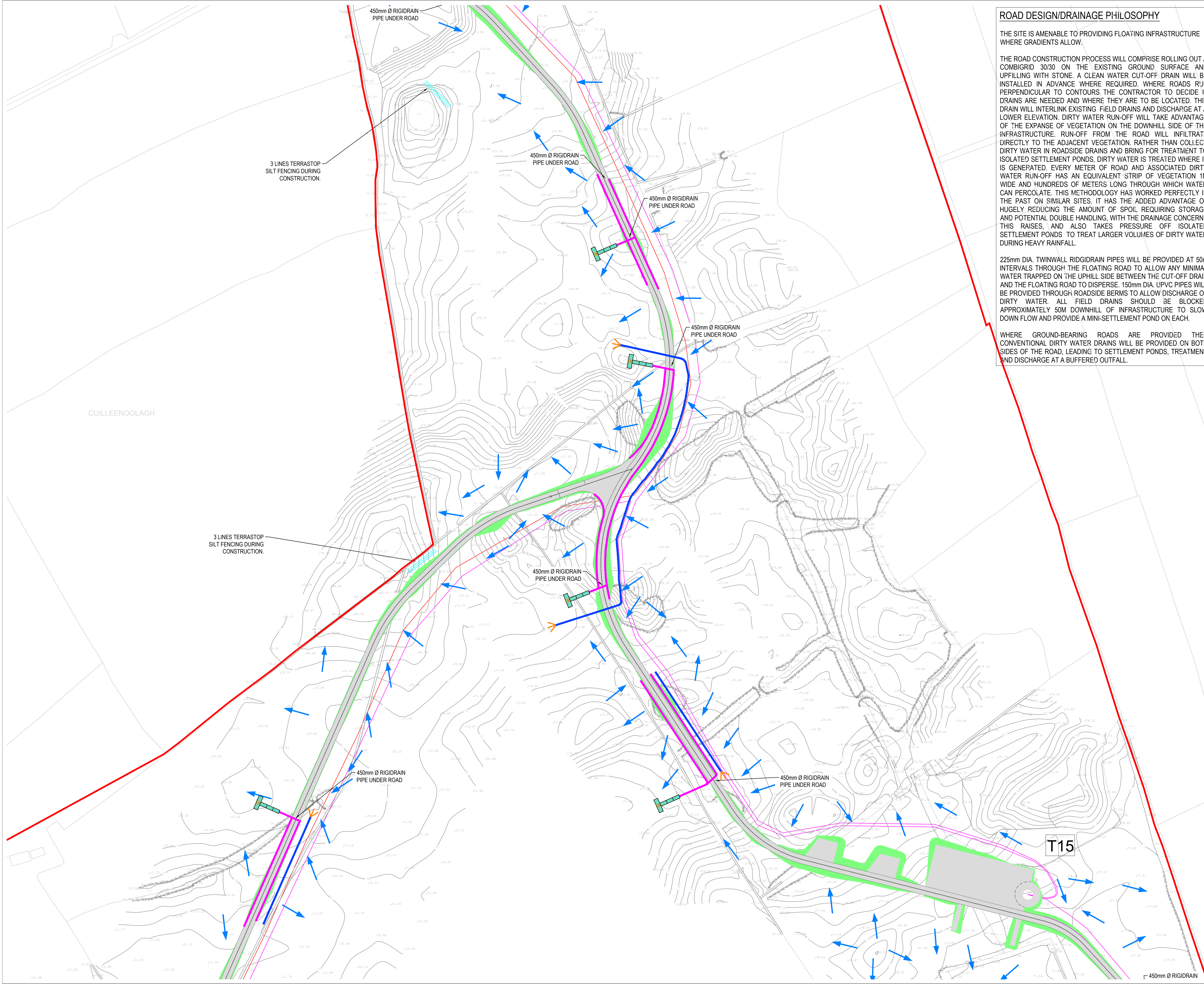
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DRAWN: PK CHECKED: PB APPROVED: BS

DATE: 01/06/22 SCALE @ A1: 1:1000

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2116 REV: P03



ROAD DESIGN/DRAINAGE PHILOSOPHY

THE SITE IS AMENABLE TO PROVIDING FLOATING INFRASTRUCTURE WHERE GRADIENTS ALLOW.

THE ROAD CONSTRUCTION PROCESS WILL COMPRISE ROLLING OUT A COMBIGRID 30/30 ON THE EXISTING GROUND SURFACE AND UPFILLING WITH STONE. A CLEAN WATER CUT-OFF DRAIN WILL BE INSTALLED IN ADVANCE WHERE REQUIRED. WHERE ROADS RUN PERPENDICULAR TO CONTOURS THE CONTRACTOR TO DECIDE IF DRAINS ARE NEEDED AND WHERE THEY ARE TO BE LOCATED. THIS DRAIN WILL INTERLINK EXISTING FIELD DRAINS AND DISCHARGE AT A LOWER ELEVATION. DIRTY WATER RUN-OFF WILL TAKE ADVANTAGE OF THE EXPANSE OF VEGETATION ON THE DOWNHILL SIDE OF THE INFRASTRUCTURE. RUN-OFF FROM THE ROAD WILL INFILTRATE DIRECTLY TO THE ADJACENT VEGETATION. RATHER THAN COLLECT DIRTY WATER IN ROADSIDE DRAINS AND BRING FOR TREATMENT TO ISOLATED SETTLEMENT PONDS, DIRTY WATER IS TREATED WHERE IT IS GENERATED. EVERY METER OF ROAD AND ASSOCIATED DIRTY WATER RUN-OFF HAS AN EQUIVALENT STRIP OF VEGETATION 1M WIDE AND HUNDREDS OF METERS LONG THROUGH WHICH WATER CAN PERCOLATE. THIS METHODOLOGY HAS WORKED PERFECTLY IN THE PAST ON SIMILAR SITES. IT HAS THE ADDED ADVANTAGE OF HUGELY REDUCING THE AMOUNT OF SPOIL, REQUIRING STORAGE AND POTENTIAL DOUBLE HANDLING, WITH THE DRAINAGE CONCERNS THIS RAISES, AND ALSO TAKES PRESSURE OFF ISOLATED SETTLEMENT PONDS TO TREAT LARGER VOLUMES OF DIRTY WATER DURING HEAVY RAINFALL.

225mm DIA. TWINWALL RIDGIDRAIN PIPES WILL BE PROVIDED AT 50m INTERVALS THROUGH THE FLOATING ROAD TO ALLOW ANY MINIMAL WATER TRAPPED ON THE UPHILL SIDE BETWEEN THE CUT-OFF DRAIN AND THE FLOATING ROAD TO DISPERSE. 150mm DIA. UPVC PIPES WILL BE PROVIDED THROUGH ROADSIDE BERMS TO ALLOW DISCHARGE OF DIRTY WATER. ALL FIELD DRAINS SHOULD BE BLOCKED APPROXIMATELY 50M DOWNHILL OF INFRASTRUCTURE TO SLOW DOWN FLOW AND PROVIDE A MINI-SETTLEMENT POND ON EACH.

WHERE GROUND-BEARING ROADS ARE PROVIDED THEN CONVENTIONAL DIRTY WATER DRAINS WILL BE PROVIDED ON BOTH SIDES OF THE ROAD, LEADING TO SETTLEMENT PONDS, TREATMENT AND DISCHARGE AT A BUFFERED OFFFALL.

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- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

PKZ	01/06/22	ISSUED FOR INFORMATION	PK	BS
REV	23/07/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WF

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 17

CLIENT: **en^{er}gia**
Switched on

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Engineering and Environmental Consultants
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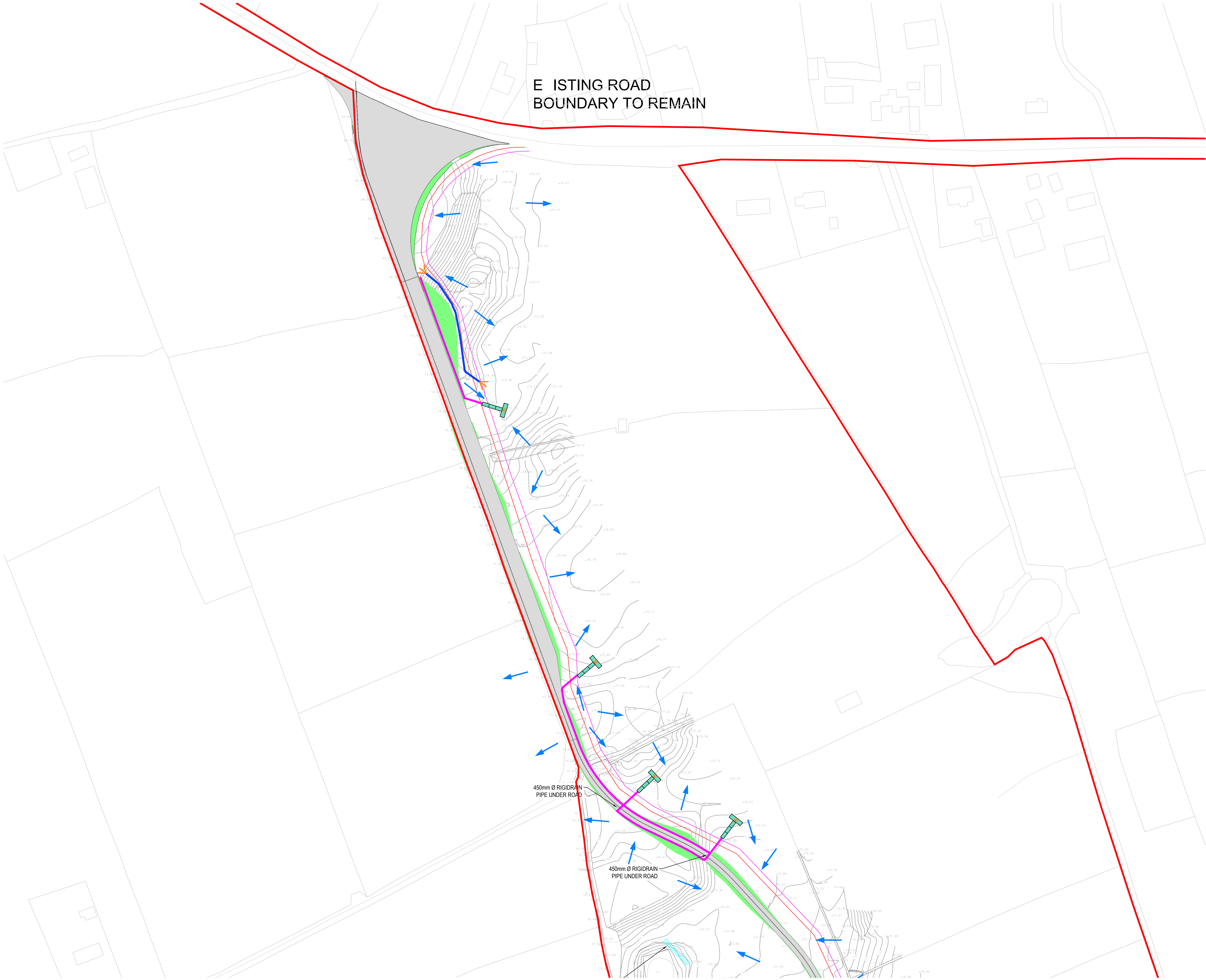
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E-mail : limerick@mwp.ie
Web : www.mwp.ie

DRAWN: PK CHECKED: PB APPROVED: BS

DATE: 01/06/22 SCALE @ A1: 1:1000

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2117 REV: P02



EXISTING ROAD
BOUNDARY TO REMAIN

450mm Ø RIGIDRAIN
PIPE UNDER ROAD

450mm Ø RIGIDRAIN
PIPE UNDER ROAD

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 - INTERNAL CABLE ROUTE (4 x circuits to Substation)

P02	01/06/22	ISSUED FOR INFORMATION	PK	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 18

CLIENT: **en^{er}gia**
Switched on

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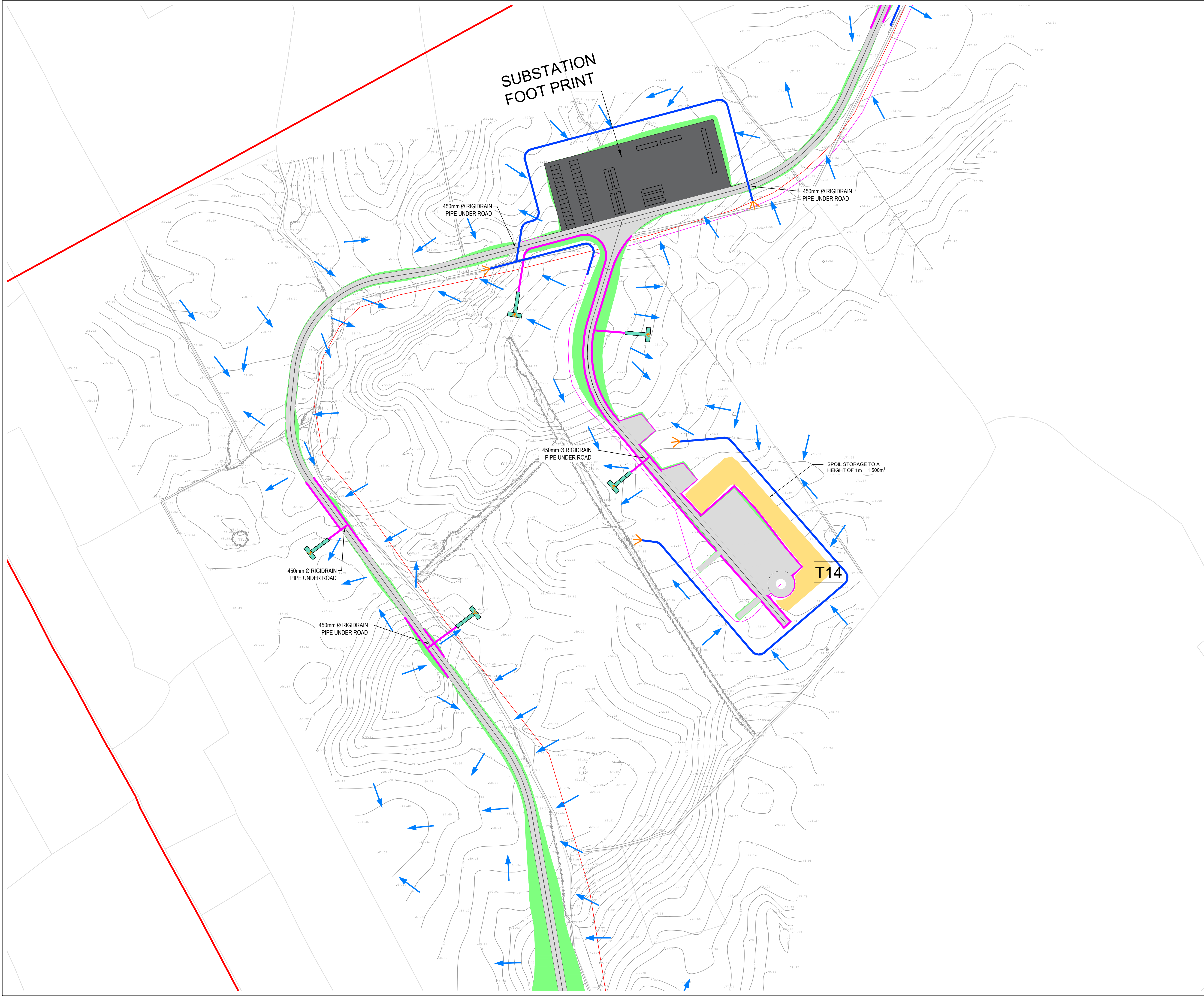
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DRAWN: PK CHECKED: PB APPROVED: BS

DATE: 01 / 06 / 22 SCALE @ A1: 1:1000

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2118 REV: P02



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P02	01/06/22	ISSUED FOR INFORMATION	PK	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 19

CLIENT: **enērgia**
Switched on

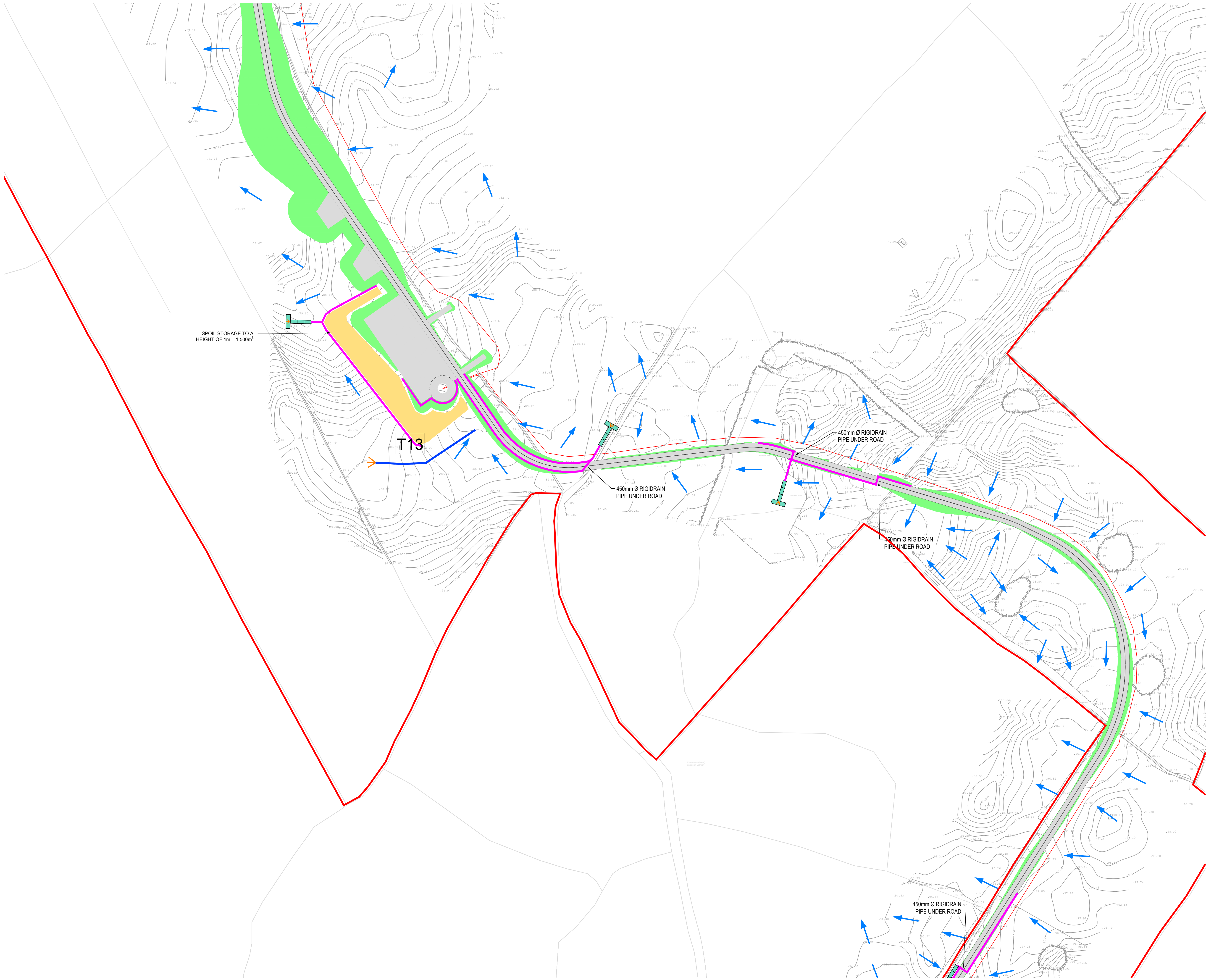
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DRAWN: PK	CHECKED: PB	APPROVED: BS
DATE: 01 / 06 / 22	SCALE @ A1: 1:1000	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2119 REV: P02



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PK	01/06/22	ISSUED FOR INFORMATION	PK	BS
REV	01/06/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 20

CLIENT: **enērgia**
Switched on

Malachy Walsh and Partners
Engineering and Environmental Consultants
Cork | Tralee | London | Limerick

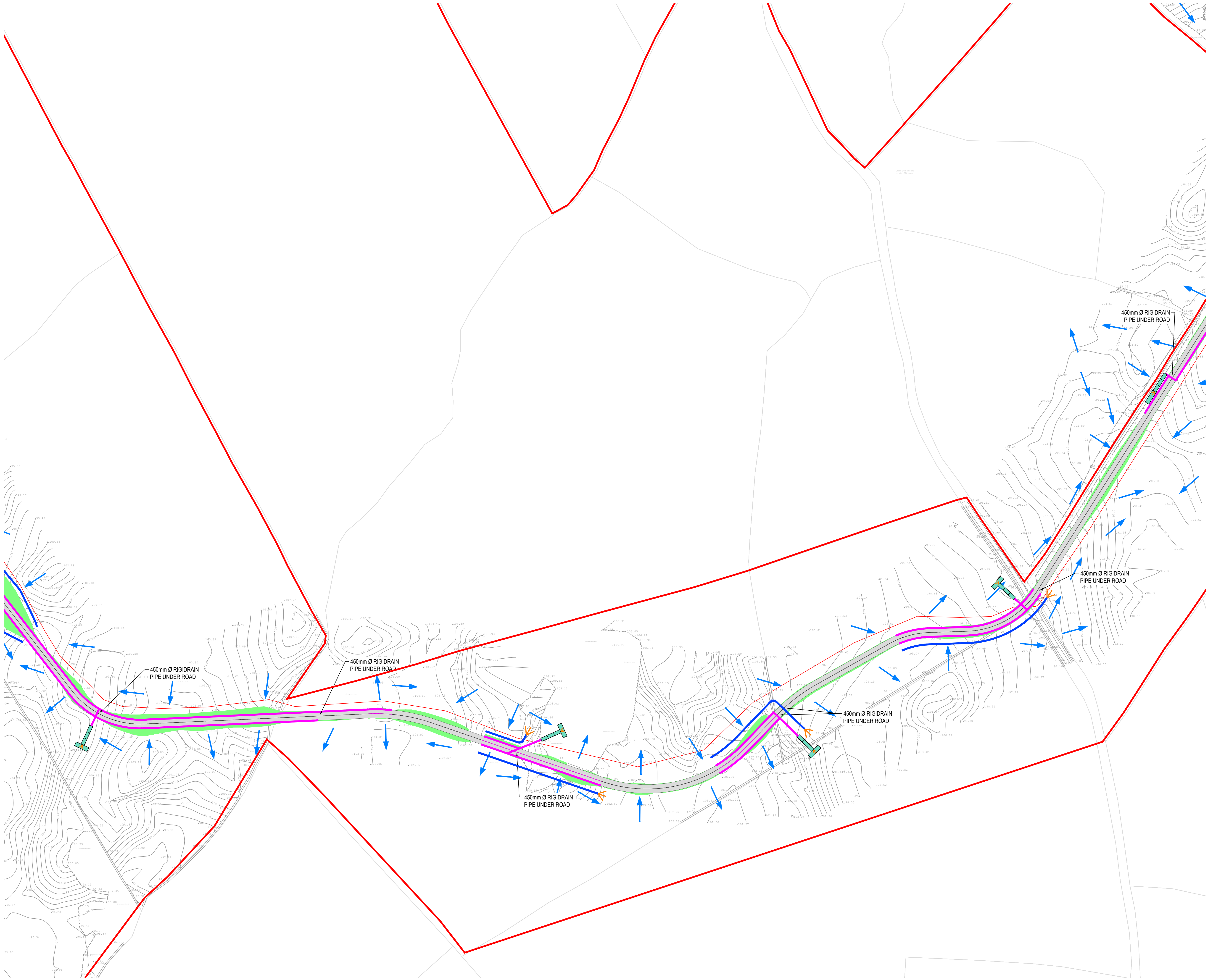
The Elm Suite,
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Tel: +353 (0) 61 480164
Fax: +353 (0) 61 241125
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Web: www.mwp.ie

DRAWN: PK CHECKED: PB APPROVED: BS

DATE: 01/06/22 SCALE @ A1: 1:1000

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2120 REV: P02



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- ALL DIMENSIONS ARE IN **METERS**, UNLESS NOTED OTHERWISE.

LEGEND:

- SITE BOUNDARY
- OWNERSHIP BOUNDARY
- WORKS CORRIDOR
- ROAD/ STONE CAPPED SURFACES
- EXTENT OF ROAD SIDE BERM
- CUT EMBANKMENT
- FILL EMBANKMENT
- SUBSTATION FLOOR PLAN
- STONE BERM
- PEAT STORAGE
- DIRTY WATER DRAIN
- CLEAN WATER DRAIN
- EXISTING CUT-OFF DRAIN
- RUN OFF DRAIN WITH BUFFERED OUTFALL
- SETTLEMENT POND WITH BUFFERED OUTFALL
- DIRECTION OF FLOW OF SURFACE WATER
- LAND & STRUCTURE BOUNDARY
- INTERNAL CABLE ROUTE (Circuit 1)
- INTERNAL CABLE ROUTE (Circuit 2)
- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

REV	DATE	ISSUED FOR INFORMATION	PK	BS
01	06/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT SHEET 21

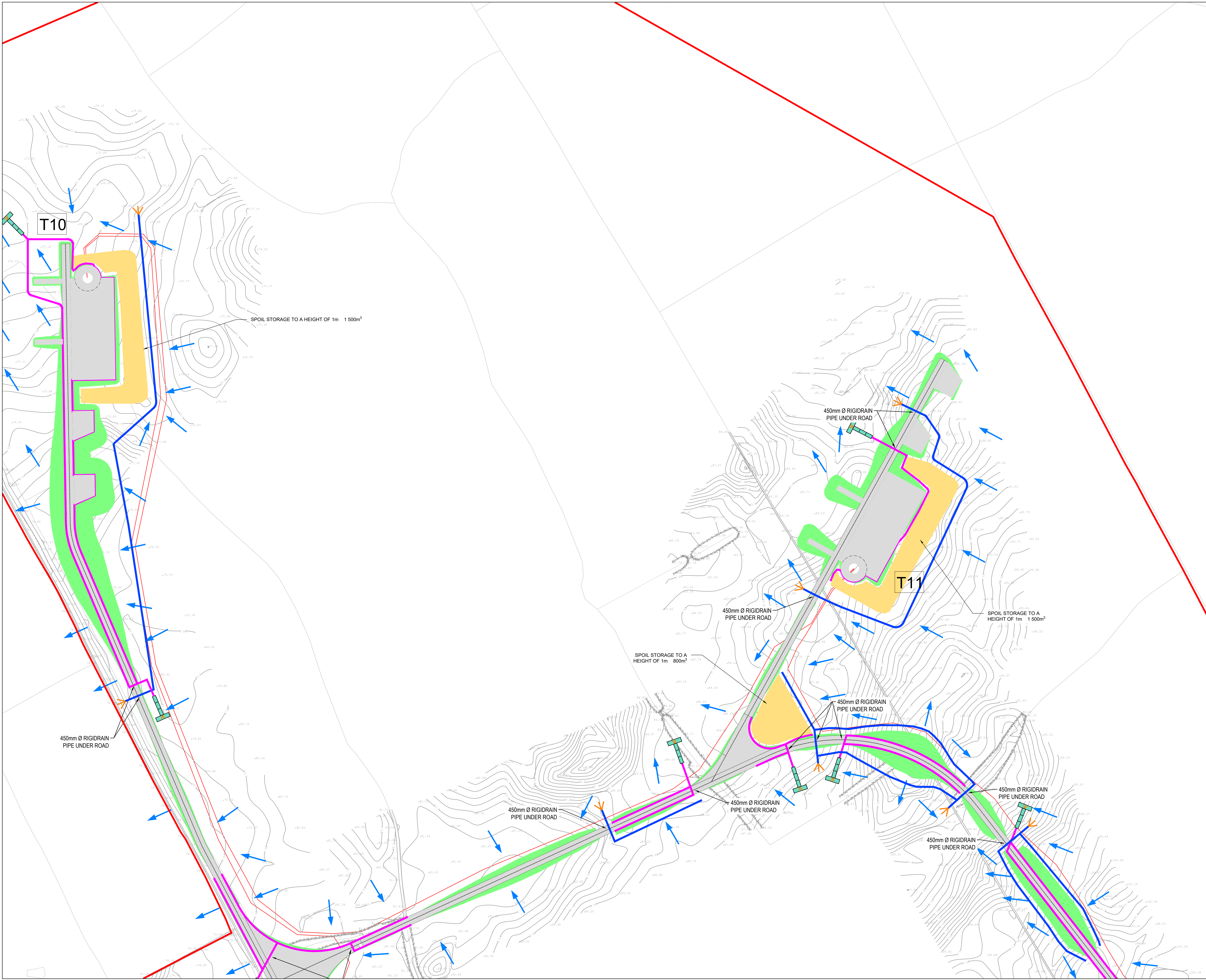
CLIENT: **enērgia** Switched on

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Fax : +353 (0) 61 241125
E-mail : limerick@mwp.ie
Web : www.mwp.ie

DRAWN: PK	CHECKED: PB	APPROVED: BS
DATE: 01 / 06 / 22	SCALE @ A1: 1:1000	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	
DRAWING NUMBER: 21337-MWP-00-00-DR-C-2121		REV: P02



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LEGEND:

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- WORKS CORRIDOR
- ROAD/ STONE CAPPED SURFACES
- EXTENT OF ROAD SIDE BERM
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- STONE BERM
- PEAT STORAGE
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- CLEAN WATER DRAIN
- EXISTING CUT-OFF DRAIN
- RUN OFF DRAIN WITH BUFFERED OUTFALL
- SETTLEMENT POND WITH BUFFERED OUTFALL
- DIRECTION OF FLOW OF SURFACE WATER
- LAND & STRUCTURE BOUNDARY
- INTERNAL CABLE ROUTE (Circuit 1)
- INTERNAL CABLE ROUTE (Circuit 2)
- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

PO3	01/06/22	ISSUED FOR INFORMATION	MW	BS
PO2	12/04/22	ISSUED FOR INFORMATION	MW	BS
PO1	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT:

SEVEN HILLS WIND FARM

TITLE:

PROPOSED DRAINAGE LAYOUT
SHEET 22

CLIENT:

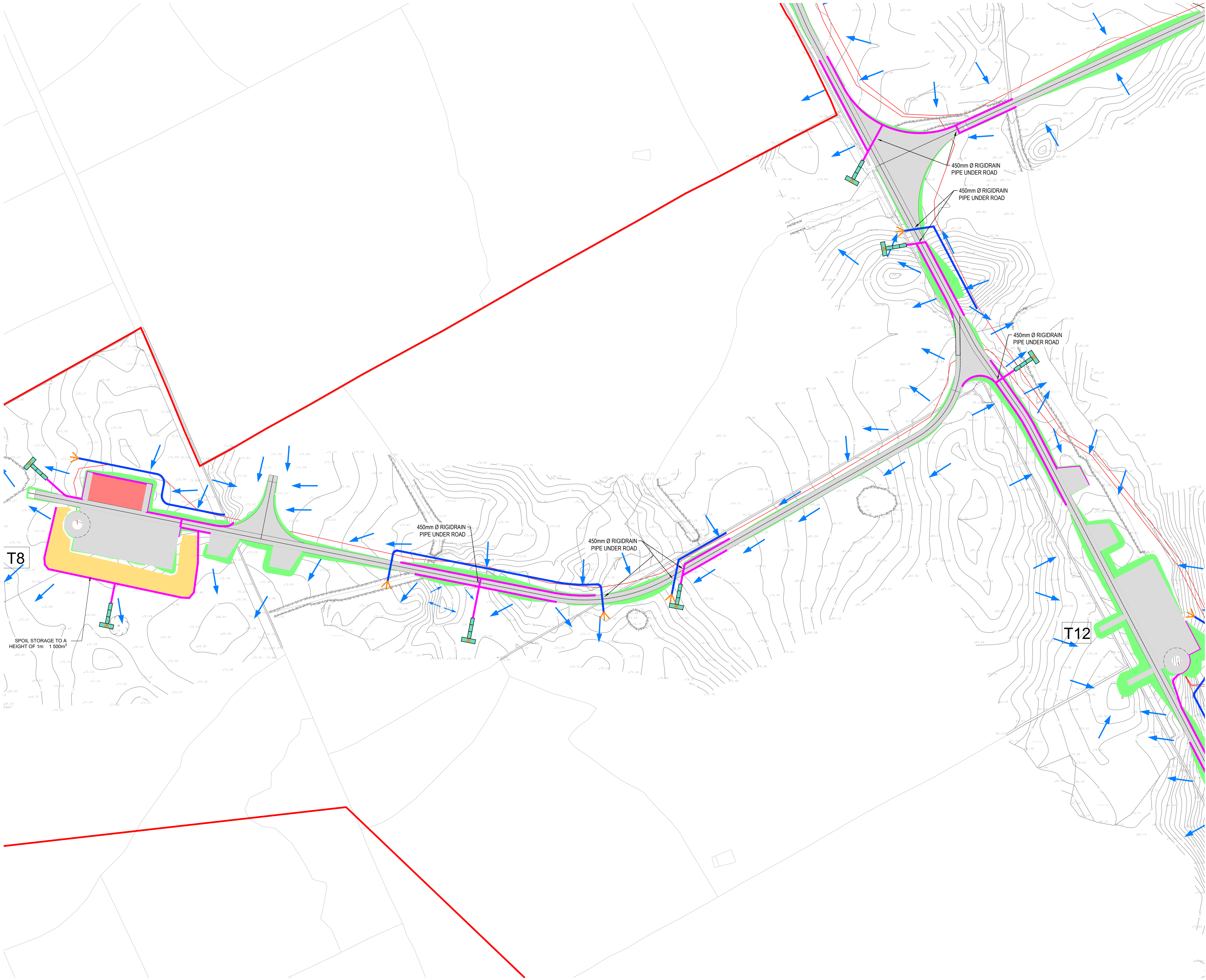
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DRAWN: PK	CHECKED: PB	APPROVED: BS
DATE: 01/06/22	SCALE @ A1: 1:1000	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	
DRAWING NUMBER: 21337-MWP-00-00-DR-C-2122		REV: P03



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- LEGEND:
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 - OWNERSHIP BOUNDARY
 - WORKS CORRIDOR
 - ROAD/ STONE CAPPED SURFACES
 - EXTENT OF ROAD SIDE BERM
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 - FILL EMBANKMENT
 - SUBSTATION FLOOR PLAN
 - STONE BERM
 - PEAT STORAGE
 - DIRTY WATER DRAIN
 - CLEAN WATER DRAIN
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 - INTERNAL CABLE ROUTE (Circuit 2)
 - INTERNAL CABLE ROUTE (Circuit 3)
 - INTERNAL CABLE ROUTE (Circuit 4)
 - INTERNAL CABLE ROUTE (Circuit 5)
 - INTERNAL CABLE ROUTE (4 x circuits to Substation)

REV	DATE	DESCRIPTION	PK	BS
001	01/06/22	ISSUED FOR INFORMATION	PK	BS
002	23/07/22	ISSUED FOR INFORMATION	PK	BS

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 23

CLIENT: **enērgia**
Switched on

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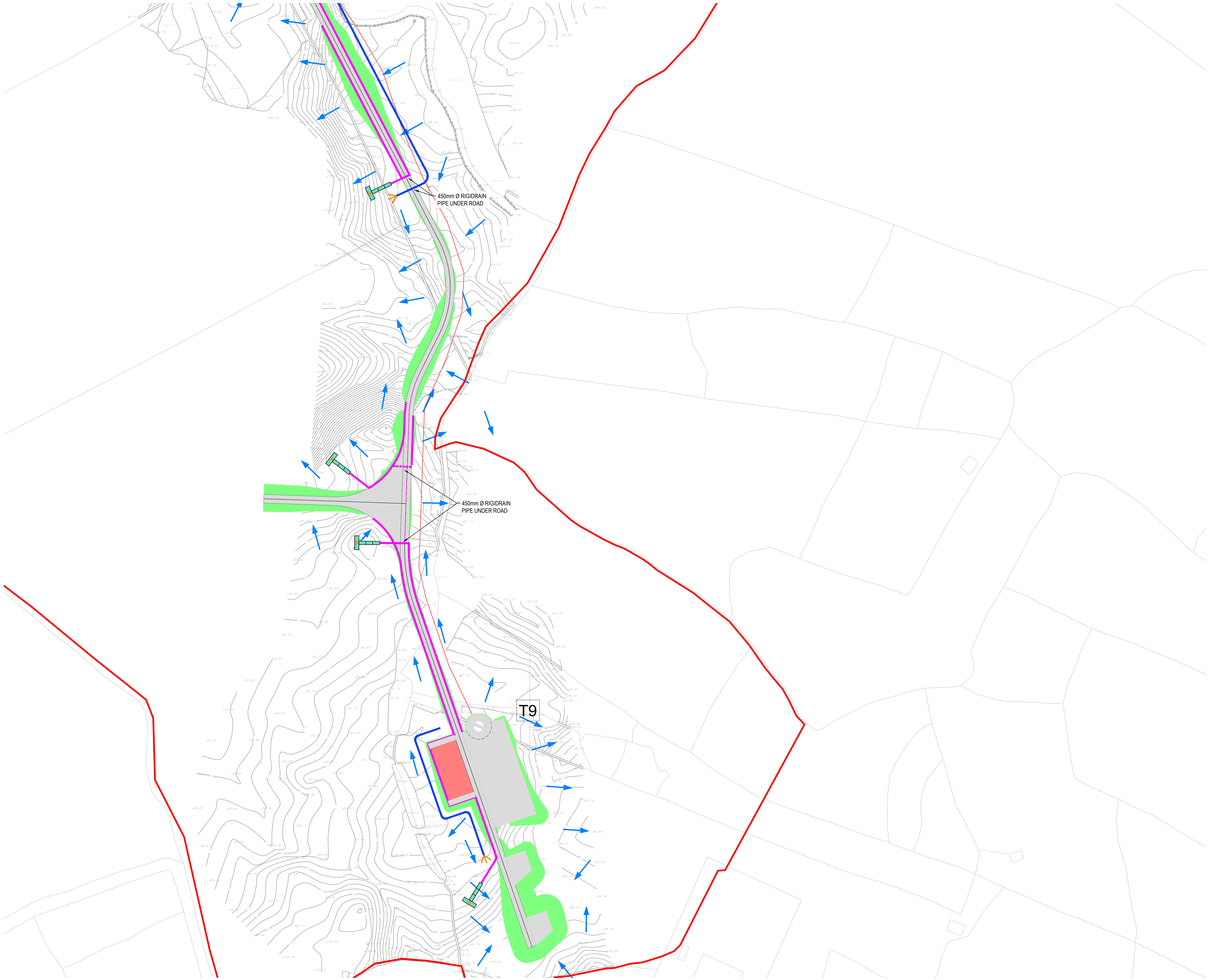
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Fax: +353 (0) 61 241125
E-mail: limerick@mwp.ie
Web: www.mwp.ie

DRAWN: PK CHECKED: PB APPROVED: BS

DATE: 01/06/22 SCALE @ A1: 1:1000

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-00-00-DR-C-2123 REV: P02



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- LEGEND:
- SITE BOUNDARY
 - OWNERSHIP BOUNDARY
 - WORKS CORRIDOR
 - ROAD/ STONE CAPPED SURFACES
 - EXTENT OF ROAD SIDE BERM
 - CUT EMBANKMENT
 - FILL EMBANKMENT
 - SUBSTATION FLOOR PLAN
 - STONE BERM
 - PEAT STORAGE
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 - INTERNAL CABLE ROUTE (Circuit 5)
 - INTERNAL CABLE ROUTE (4 x circuits to Substation)

P02	01/06/22	ISSUED FOR INFORMATION	PK	BS
P01	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WIND FARM

TITLE: PROPOSED DRAINAGE LAYOUT
SHEET 24

CLIENT: **en^{er}gia**
Switched on

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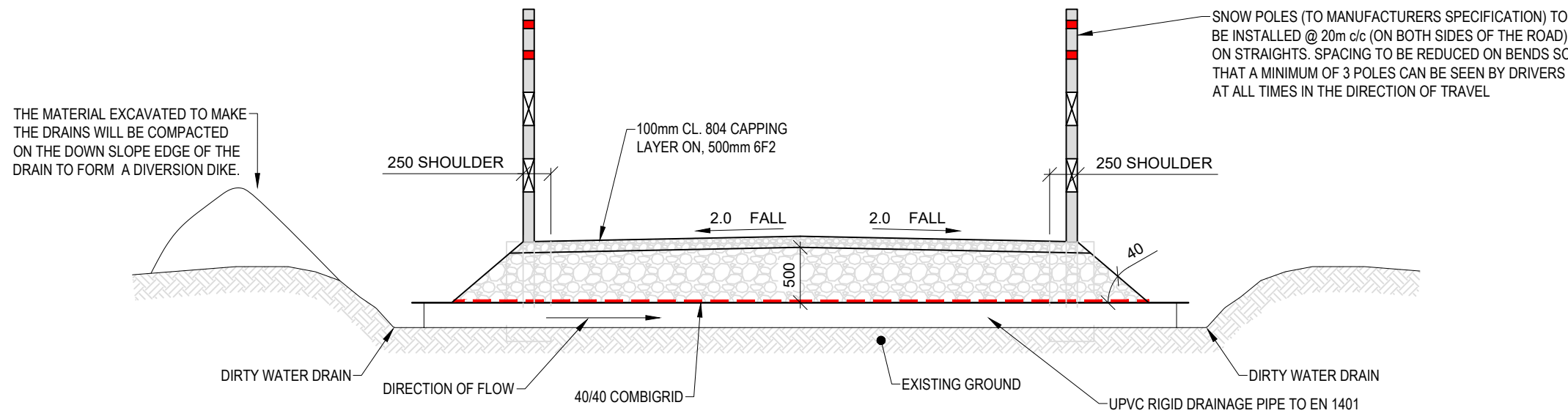
Tel. : +353 (0) 61 480164
Fax : +353 (0) 61 241125
E-mail : limerick@mwp.ie
Web : www.mwp.ie

DRAWN: PK CHECKED: PB APPROVED: BS

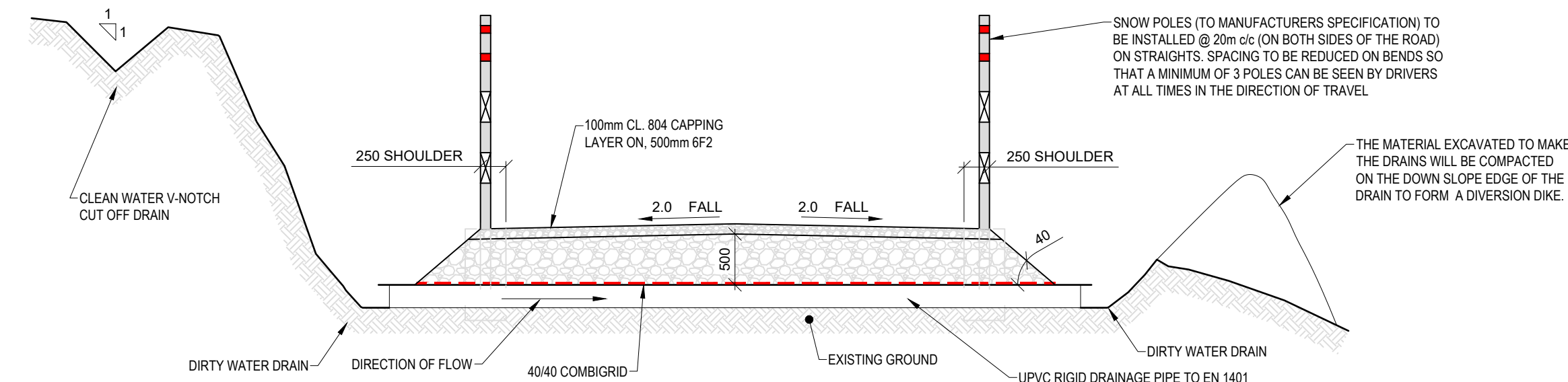
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PROJECT NUMBER: 21337 DRAWING STATUS: S2

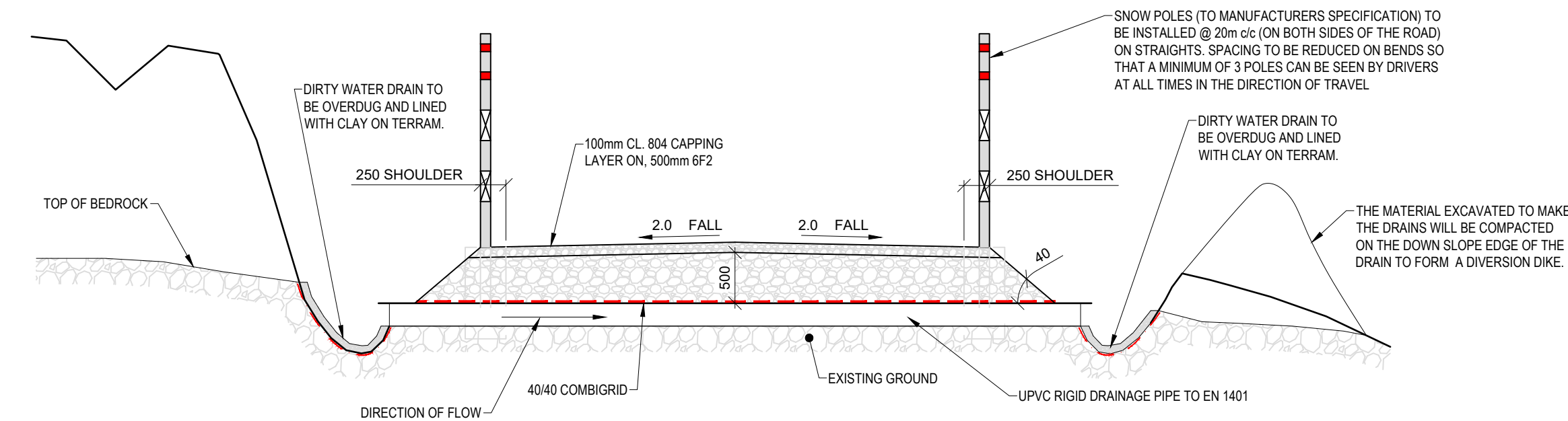
DRAWING NUMBER: 21337-MWP-00-00-DR-C-2124 REV: P02



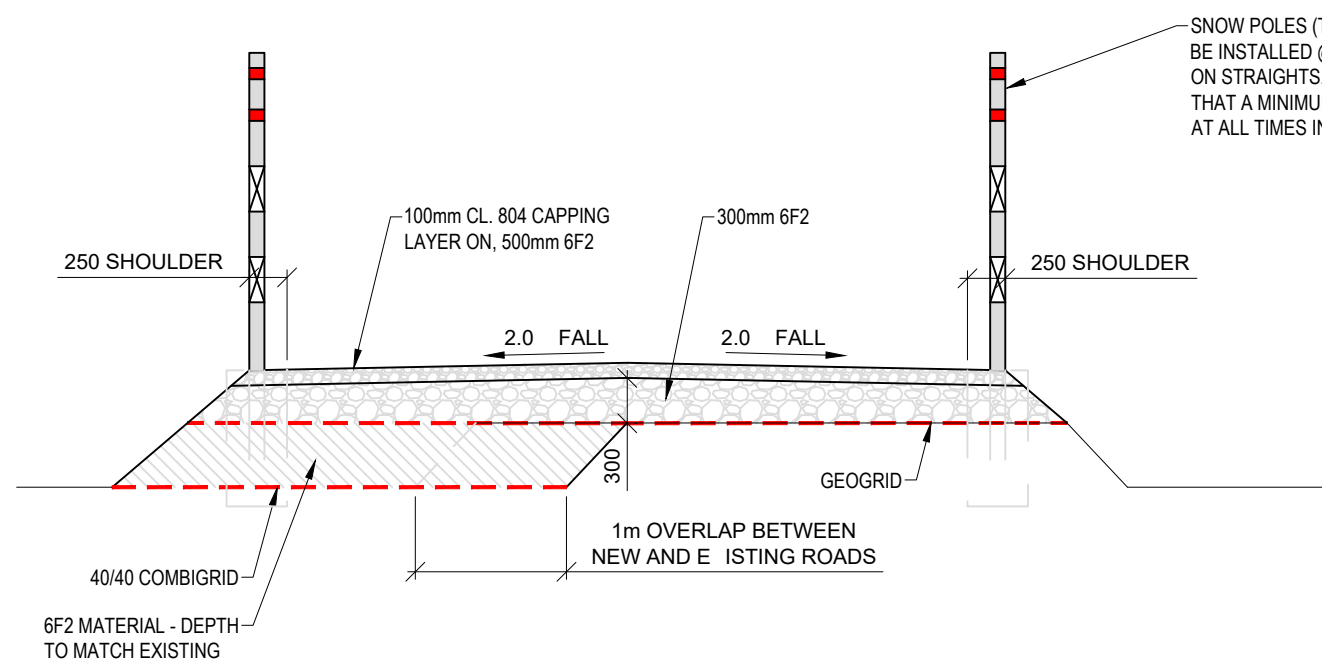
GROUND BEARING ROAD DETAIL
(FLAT GROUND)
SCALE 1:50



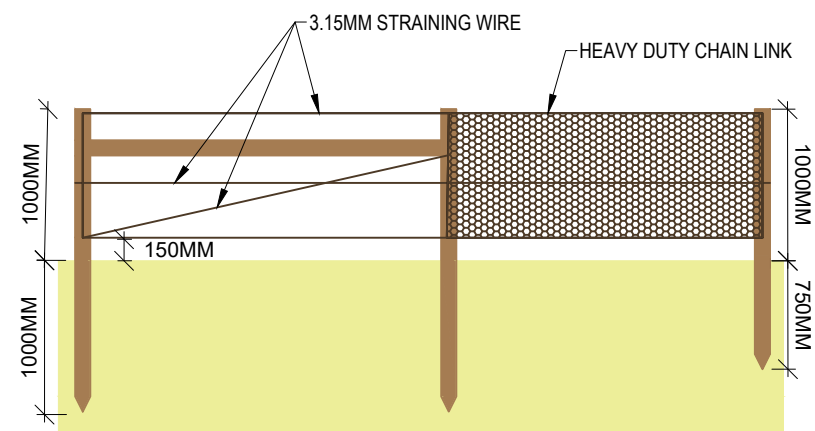
GROUND BEARING ROAD DETAIL
(SLOPING GROUND NO BEDROCK
E POSED)
SCALE 1:50



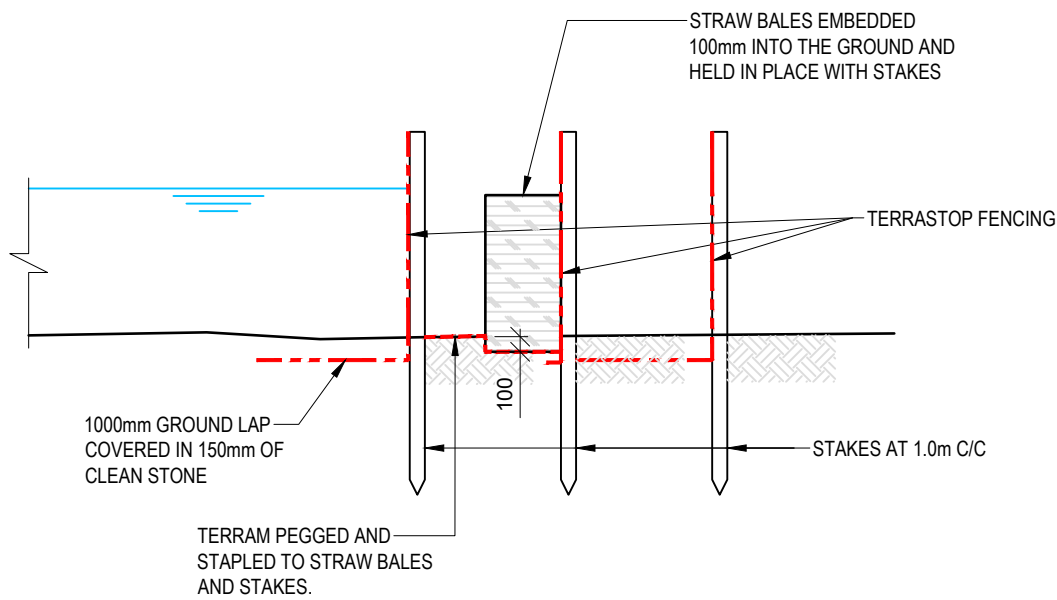
GROUND BEARING ROAD DETAIL
(SLOPING GROUND BEDROCK
E POSED)
SCALE 1:50



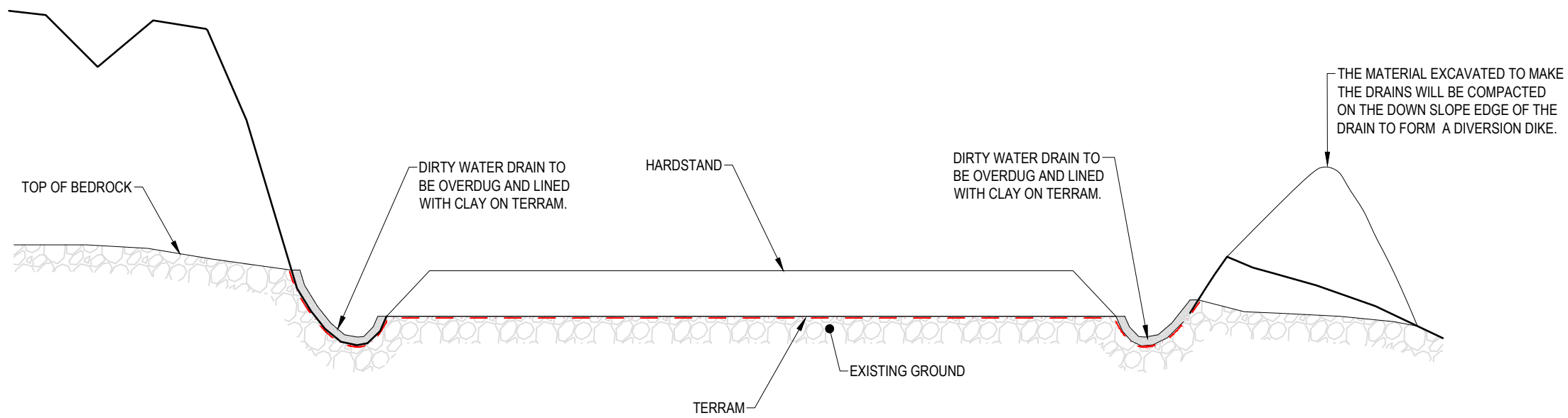
WIDENED ACCESS TRACK DETAIL
SCALE 1:50



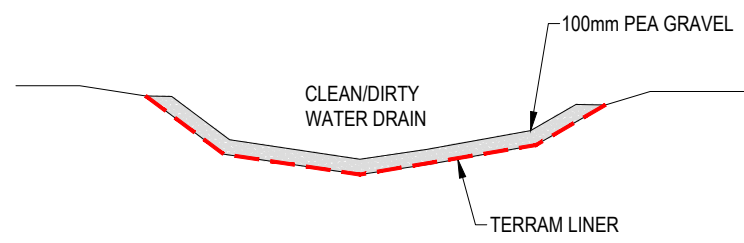
STOCK PROOF FENCING DETAILS
SCALE 1:50



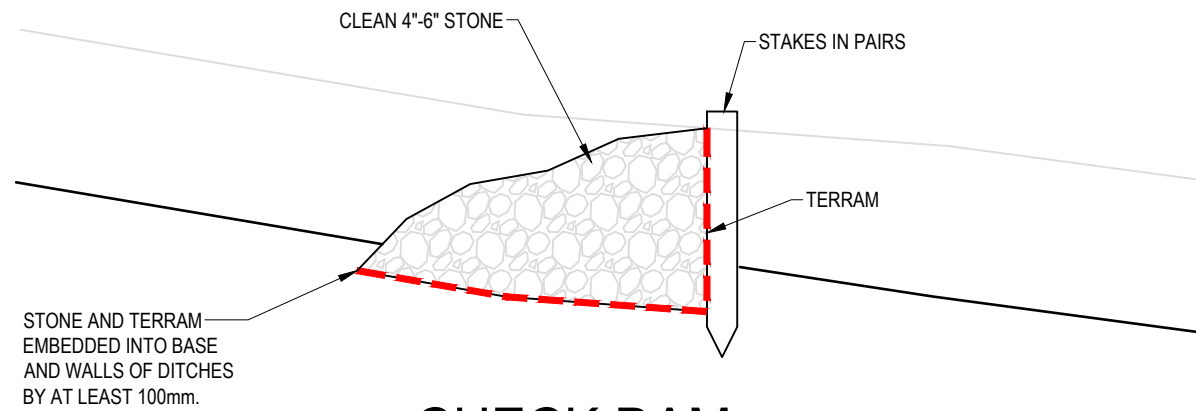
TERRASTOP FENCING DETAILS
SCALE 1:50



GROUND BEARING HARDSTAND
DETAIL (SLOPING GROUND
BEDROCK E POSED)
SCALE 1:50



EROSION CONTROL ON STEEPER
LOCATIONS (GRADIENT IS
STEEPER THAN 10)
SCALE NTS



CHECK DAM
SCALE 1:25

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REFERENCE DRAWINGS:

DRAWING No.	DRAWING TITLE
21337-MWP-00-00-DR-C-	SITE LAYOUT MASTER SHEET

PK3	01/06/22	ISSUED FOR INFORMATION	MW	BS
PK2	26/03/22	ISSUED FOR INFORMATION	MW	BS
PK1	20/01/22	ISSUED FOR INFORMATION	PK	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT: SEVEN HILLS WF

TITLE: TURBINE FOUNDATION, FENCING, ROAD AND DRAINAGE DETAILS

CLIENT: en^{erg}ia Switched on

Malachy Walsh and Partners
Engineering and Environmental Consultants
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E-mail: limerick@mwp.ie
Web: www.mwp.ie

DRAWN: PK CHECKED: PB APPROVED: BS

DATE: 01/06/22 SCALE @ A1: 1:50

PROJECT NUMBER: 21337 DRAWING STATUS: S2

DRAWING NUMBER: 21337-MWP-ZZ-00-DR-C-2127 REV: P03

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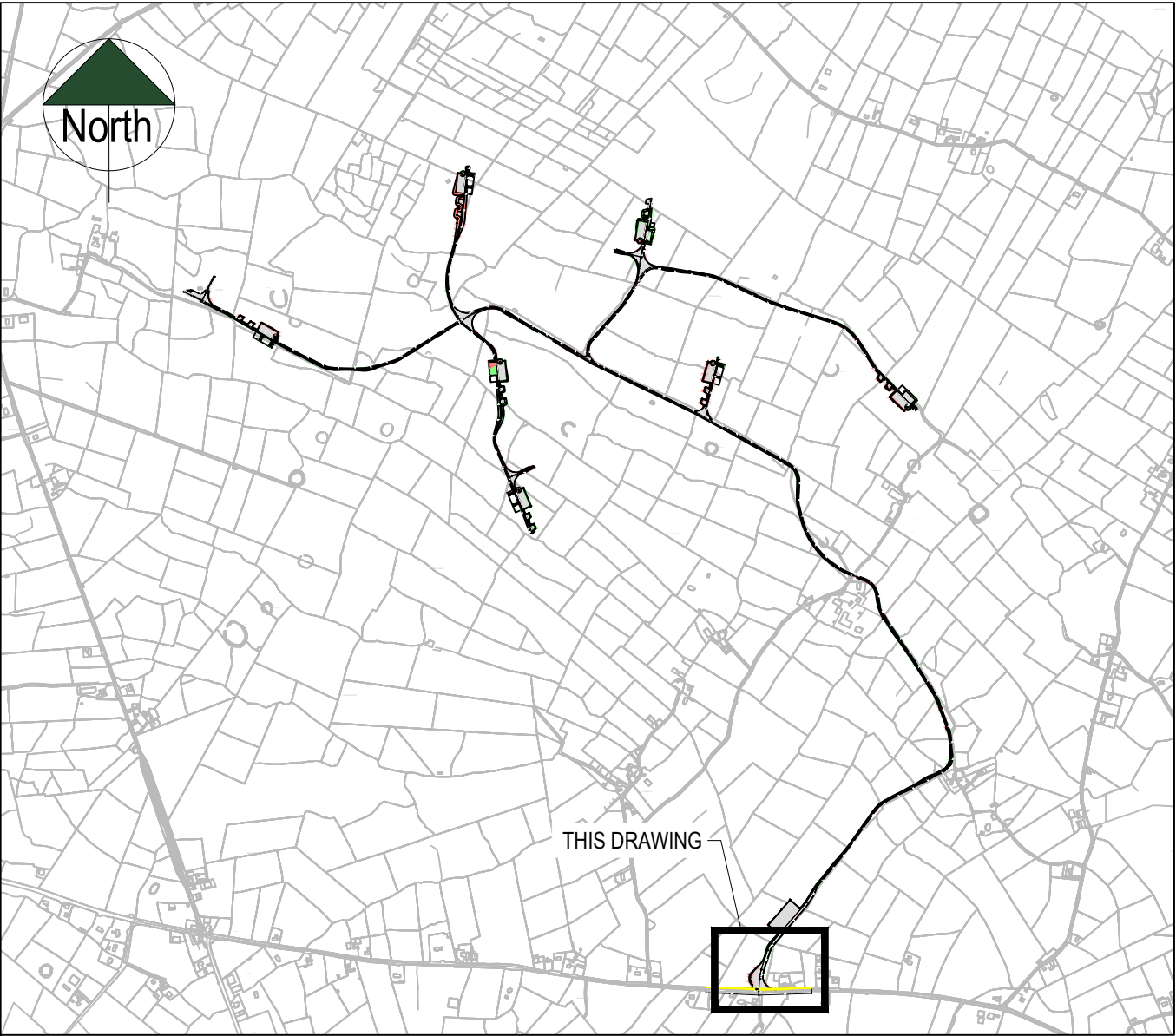
PROJECT: SEVEN HILLS WF

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Cork | Tralee | London | Limerick

DRAWN: PK	CHECKED: PB	APPROVED: BS
DATE: 01/06/22	SCALE @ A1: 1:50	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	

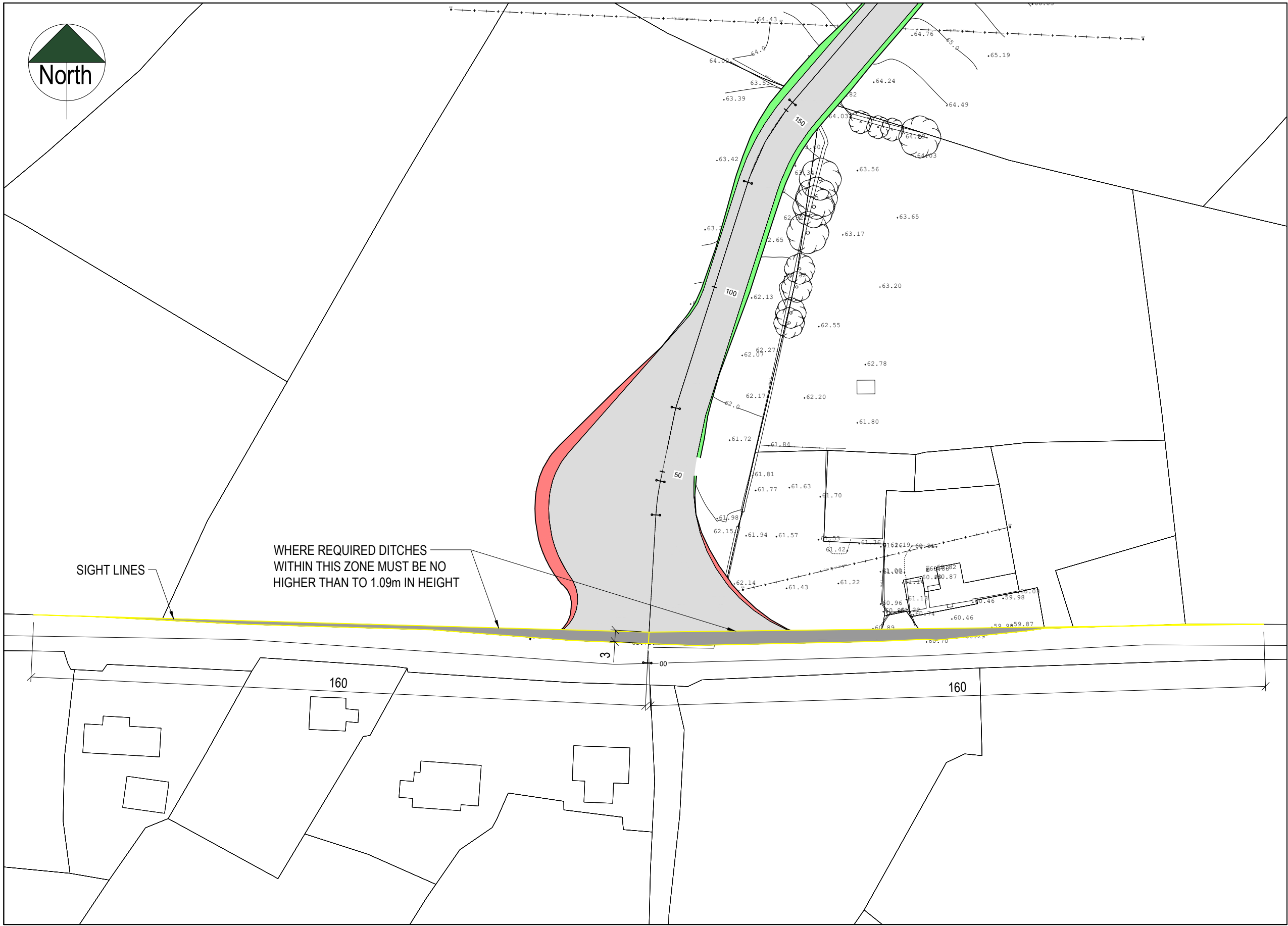
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LOCATION PLAN - NORTH

SCALE: 1: 20000



NORTH ENTRANCE

SCALE: 1: 1000

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- OWNERSHIP BOUNDARY
- WORKS CORRIDOR
- ROAD/ STONE CAPPED SURFACES
- EXTENT OF ROAD SIDE BERM
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- FILL EMBANKMENT
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- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)

REV	DATE	DESCRIPTION	BY	APP
P02	01/06/22	ISSUED FOR INFORMATION	CM	BS
P01	20/01/22	ISSUED FOR INFORMATION	CM	BS


PROJECT: SEVEN HILLS WIND FARM

TITLE: WINDFARM ENTRANCE SIGHTLINES
SHEET 1

CLIENT: **energia**
Switched on



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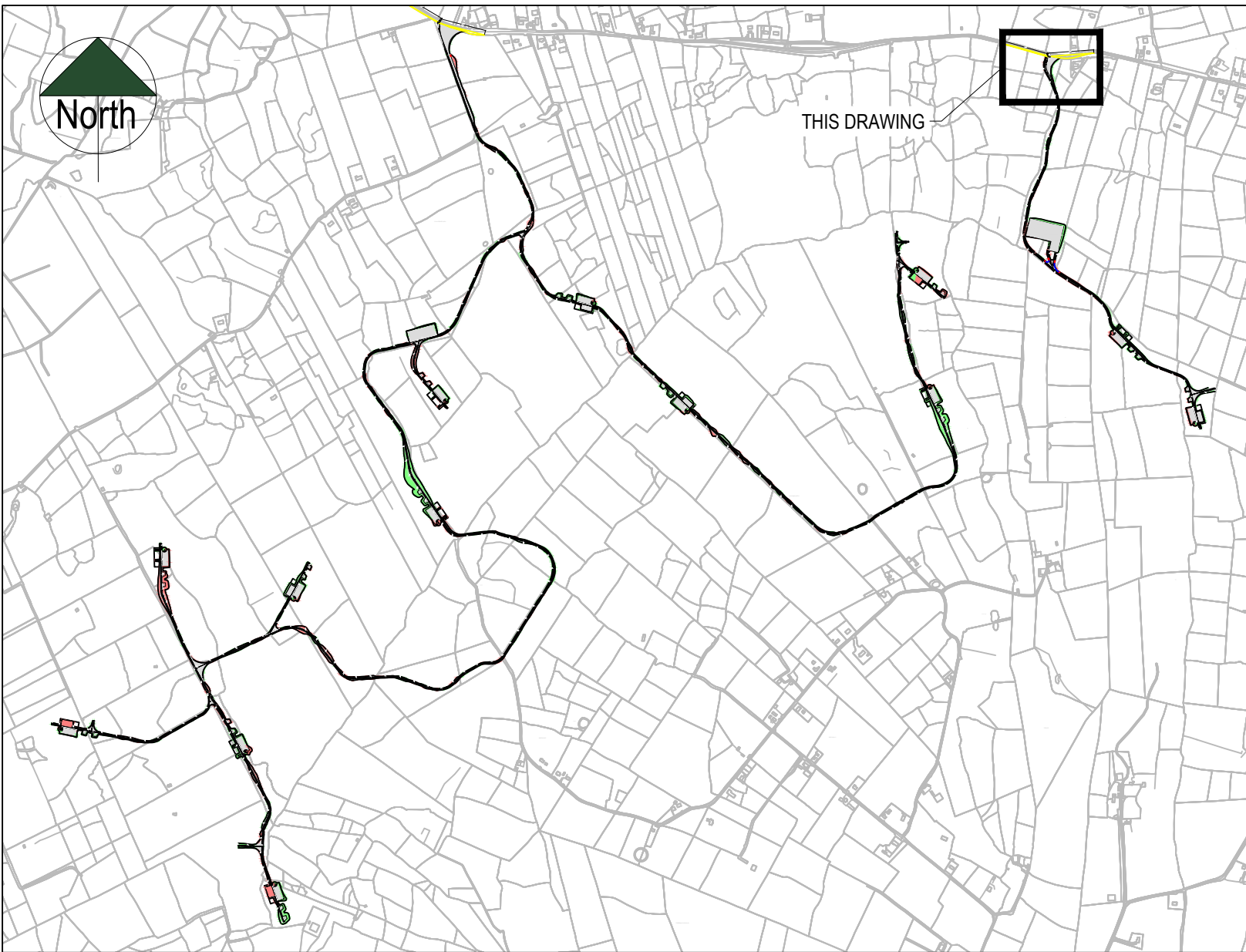


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Fax : +353 (0) 61 441125
E-mail : limerick@mwp.ie
Web : www.mwp.ie

DRAWN: CM	CHECKED: PB	APPROVED: BS
DATE: 01/06/22	SCALE @ A1: 1:1000	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	

DRAWING NUMBER: 21337-MWP-WF-00-DR-C-3000 REV: P02



LOCATION PLAN - SOUTH

SCALE: 1: 20000



SOUTH ENTRANCE - EAST

SCALE: 1: 1000

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- INTERNAL CABLE ROUTE (Circuit 3)
- INTERNAL CABLE ROUTE (Circuit 4)
- INTERNAL CABLE ROUTE (Circuit 5)
- INTERNAL CABLE ROUTE (4 x circuits to Substation)


P02	01/06/22	ISSUED FOR INFORMATION	CM	BS
P01	20/01/22	ISSUED FOR INFORMATION	CM	BS
REV	DATE	DESCRIPTION	BY	APP

PROJECT:	SEVEN HILLS WIND FARM
----------	-----------------------

TITLE:	WINDFARM ENTRANCE SIGHTLINES SHEET 2
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CLIENT:	
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	Malachy Walsh and Partners Engineering and Environmental Consultants Cork Tralee London Limerick
---	---

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DRAWN: CM	CHECKED: PB	APPROVED: BS
DATE: 01/06/22	SCALE @ A1: 1:1000	
PROJECT NUMBER: 21337	DRAWING STATUS: S2	

DRAWING NUMBER: 21337-MWP-WF-00-DR-C-3001	REV: P02
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