

**Proposed Clonberne Wind Farm Development,
Co. Galway
Planning Permission Application Drawings**



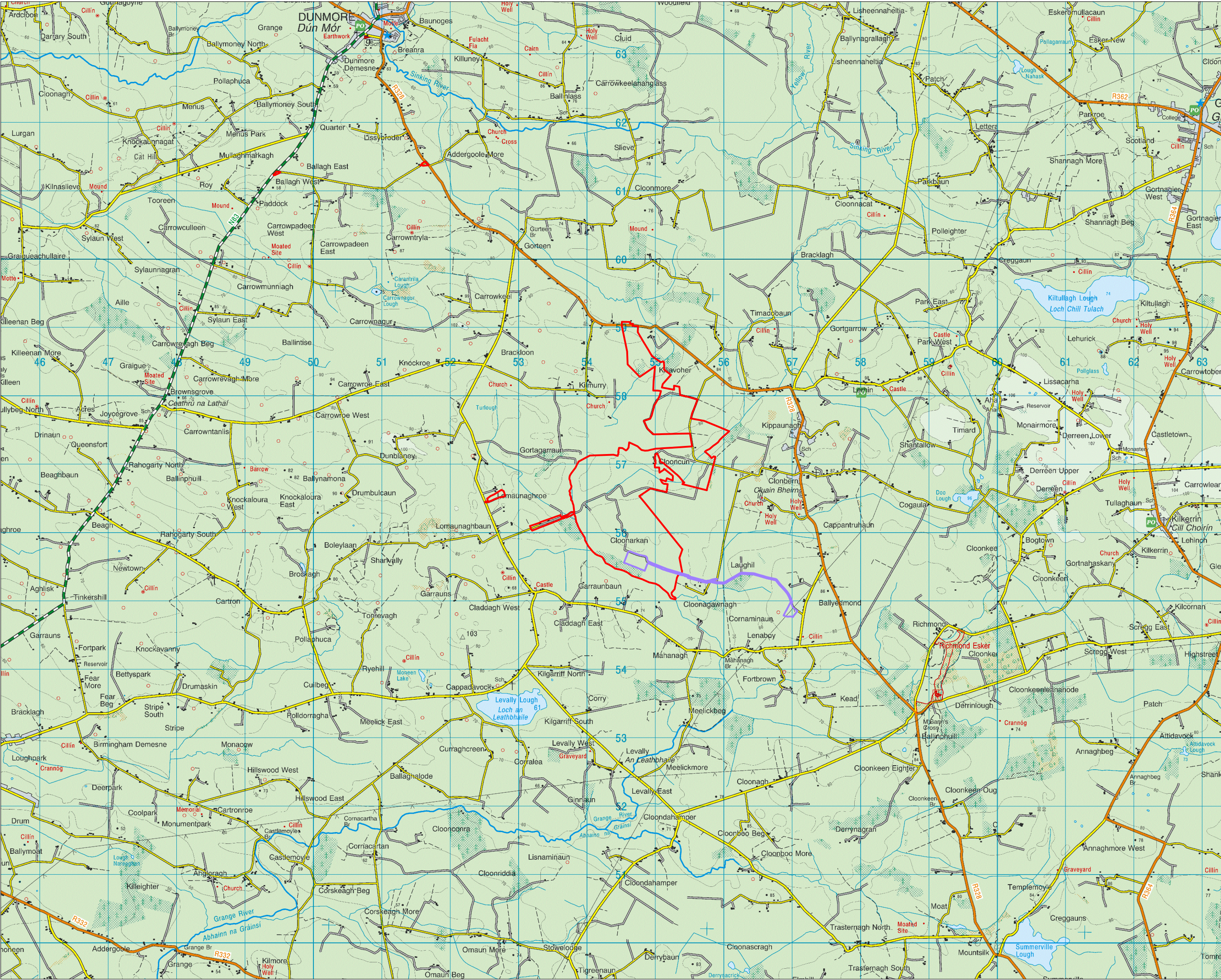


Schedule of Drawings

Drawing No.	Drawing Title	Scale	Page Size
180740 - 01	Location Context Map	1: 50,000	A3
180740 - 02	Site Location Map (Including Site Notice Key Plan)	1: 25,000	A3
180740 - 02A	Site Notice Location Map A	1:2,500	A3
180740 - 02B	Site Notice Location Map B	1:2,500	A3
180740 - 02C	Site Notice Location Map C	1:2,500	A3
180740 - 02D	Site Notice Location Map D	1:2,500	A3
180740 - 02E	Site Notice Location Map E	1:2,500	A3
180740 - 02F	Site Notice Location Map F	1:2,500	A3
180740 - 02G	Site Notice Location Map G	1:2,500	A3
180740 - 02H	Site Notice Location Map H	1:2,500	A3
180740 - 03	Site Layout Key Plan (1:5,000)	1: 40,000	A3
180740 - 04	Site Layout Sheet 1 of 3	1: 5,000	A1
180740 - 05	Site Layout Sheet 2 of 3	1: 5,000	A1
180740 - 06	Site Layout Sheet 3 of 3	1: 5,000	A1
180740 - 07	Site Layout Key Plan (1:2,500)	1: 40,000	A3
180740 - 08	Site Layout Sheet 1 of 8	1: 2,500	A1
180740 - 09	Site Layout Sheet 2 of 8	1: 2,500	A1
180740 - 10	Site Layout Sheet 3 of 8	1: 2,500	A1
180740 - 11	Site Layout Sheet 4 of 8	1: 2,500	A1
180740 - 12	Site Layout Sheet 5 of 8	1: 2,500	A1
180740 - 13	Site Layout Sheet 6 of 8	1: 2,500	A1
180740 - 14	Site Layout Sheet 7 of 8	1: 2,500	A1
180740 - 15	Site Layout Sheet 8 of 8	1: 2,500	A1
180740 - 16	Turbine 1 Layout	1:500	A3
180740 - 17	Turbine 2 Layout	1:500	A3
180740 - 18	Turbine 3 Layout	1:500	A3
180740 - 19	Turbine 4 Layout	1:500	A3
180740 - 20	Turbine 5 Layout	1:500	A3
180740 - 21	Turbine 6 Layout	1:500	A3
180740 - 22	Turbine 7 Layout	1:500	A3
180740 - 23	Turbine 8 Layout	1:500	A3
180740 - 24	Turbine 9 Layout	1:500	A3
180740 - 25	Turbine 10 Layout t	1:500	A3
180740 - 26	Turbine 11 Layout	1:500	A3
180740 - 27	Wind Turbine Elevation and Plan	1:500	A1
180740 - 28	Gravity Foundation Detail	As shown	A3
180740 - 29	Bored Pile Foundation Detail	As shown	A3
180740 - 30	Driven Pile Foundation Detail	As shown	A3
180740 - 31	Temporary Construction Compound 1	1:500	A3
180740 - 32	Temporary Construction Compound 2	1:500	A3
180740 - 33	Peatland Restoration Area	1: 2,500	A3
180740 - 34	Permanent Signage Detail	1:20	A3
180740 - 35	Field Gate Detail	1:20	A3
180740 - 36	Site Office & Staff Facilities Detail	1:50	A3
180740 - 37	Wheel Wash Detail	1:50	A3
180740 - 38	Clear Span Watercourse Crossing	1:50	A3
180740 - 39	Proposed Junction Arrangement A	1:1,000	A3
180740 - 40	Proposed Junction Arrangement B	1:1,000	A3
180740 - 41	Proposed Junction Arrangement C	1:1,000	A3
180740 - 42	Proposed Junction Arrangement D	1:500	A3
180740 - 43	Proposed Junction Arrangement F	1:500	A3
180740 - 44	Proposed Junction Arrangement G	1:500	A3
180740 - 45	Proposed Temporary Access Road A	1:500	A3
180740 - 46	Proposed Temporary Access Road B	1:500	A3
180740 - 47	Passing Bay Detail	As Shown	A3
180740 - 48	Temporary Works Boundary Treatment	1:125	A3
180740 - 49	Cable Interface End Mast Detail	1:100	A3
Gavin & Doherty Geosolutions			
20021-GDG-ZZ-XX-DR-C-0010	Borrow Pit Plan & Sections	1:500	A1
20021-GDG-ZZ-XX-DR-C-0100	Access Road Standard Details	NTS	A1
20021-GDG-ZZ-XX-DR-C-0101	Cable Trench Standard Details	NTS	A1
20021-GDG-ZZ-XX-DR-C-2000	Peat And Spoil Storage Area Typical Details	As Shown	A1
Hydro Environmental Services Ltd.			
P1508-0_D101	Proposed Drainage Layout	1:2,000	A1
P1508-0_D102	Proposed Drainage Layout	1:2,000	A1
P1508-0_D103	Proposed Drainage Layout	1:2,000	A1
P1508-0_D104	Proposed Drainage Layout	1:2,000	A1

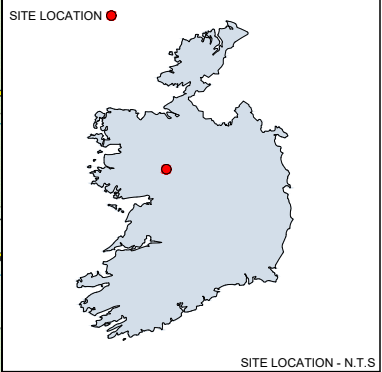


P1508-0_D105	Proposed Drainage Layout	1:2,000	A1
P1508-0_D501	Proposed Drainage Details	As Shown	A1
P1508-0_D502	Proposed Drainage Details	As Shown	A1



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.



Drawing Legend

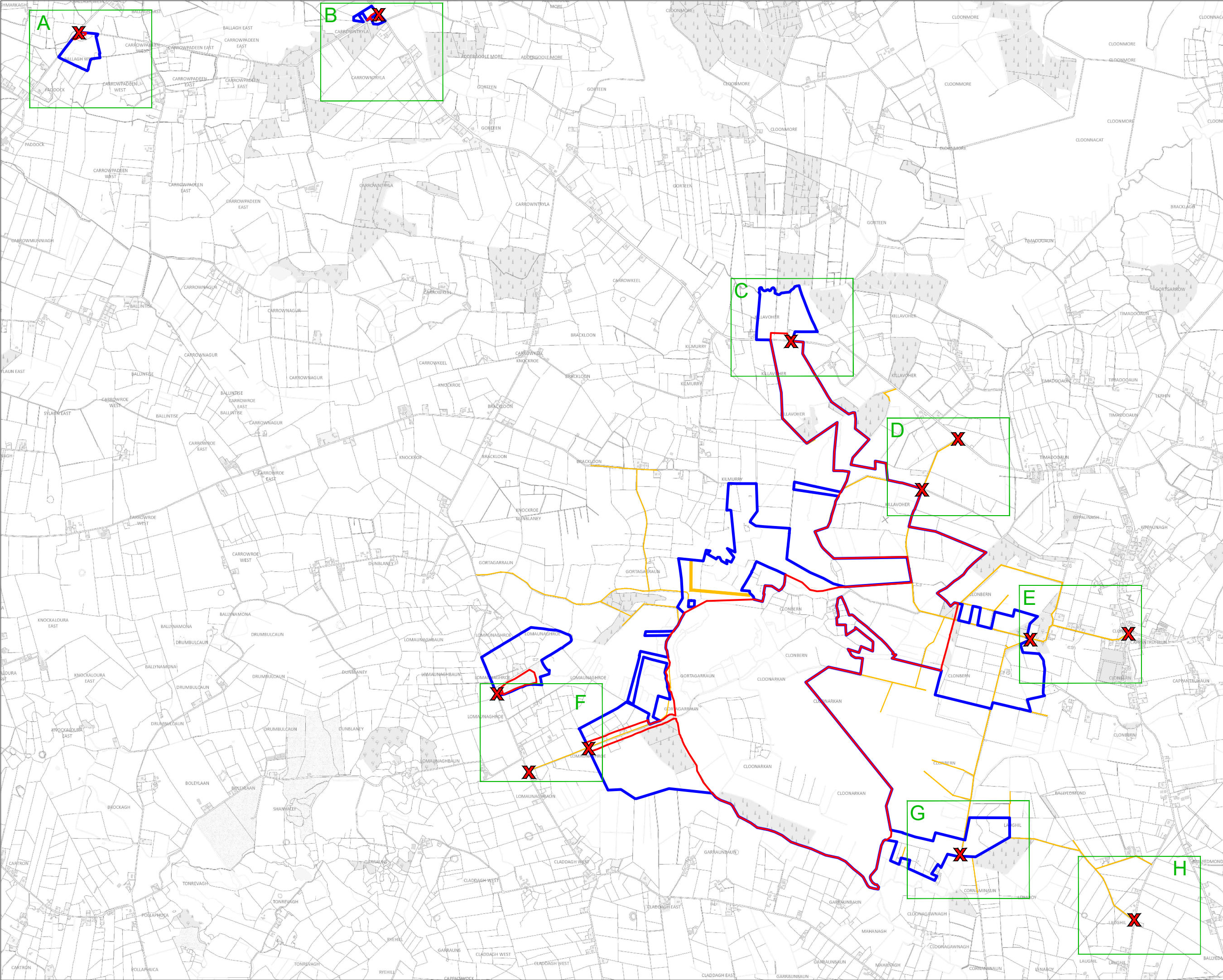
- Planning Application Boundary
- Clonberne Wind Farm 220kV Grid Connection Boundary Line Subject to a Separate Application.



Location Context Map

PROJECT TITLE:	
Clonberne Wind Farm, Co. Galway	
DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.:	DRAWING No.:
180740	180740 - 01
SCALE:	DATE:
1:50,000 @ A3	10.06.2024
OS SHEET No.:	
OS1424, OS1426, OS1624, OS1626	

MKO
Planning and
Environmental
Consultants
Tuum Road, Galway
Ireland, H91 VV84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie

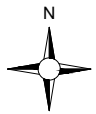


Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Landowners Boundary
- Site Notice
- Wayleaves



DRAWING TITLE

Site Location Map
(Including Site Notice
Key Plan)

PROJECT TITLE

Clonberne Wind Farm, Co. Galway

DRAWING BY:

Joseph O'Brien

CHECKED BY:

Owen Cahill

PROJECT No.:

180740

DRAWING No.:

180740 - 02

SCALE:

1:25,000 @ A3

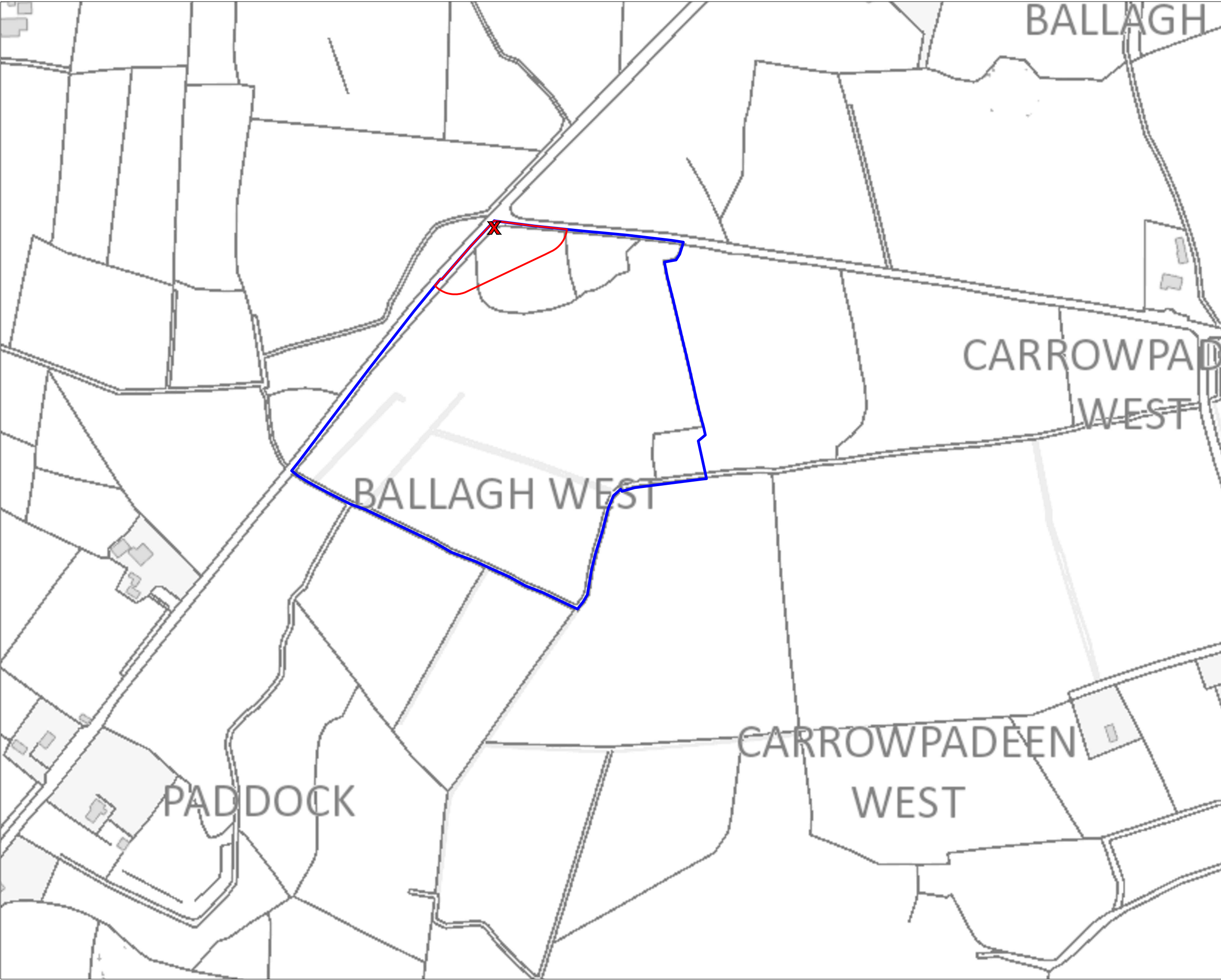
DATE:

10.06.2024

OS SHEET No.:

2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

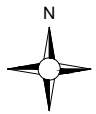
Drawing Legend

Planning Application Boundary

Landowners Boundary

X

Site Notice



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/Government of Ireland

DRAWING TITLE:

Site Notice Location Map
Sheet A

PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:

Joseph O'Brien

CHECKED BY:

Owen Cahill

PROJECT No.:

180740

DRAWING No.:

180740 - 02A

SCALE:

1:2,500 @ A3

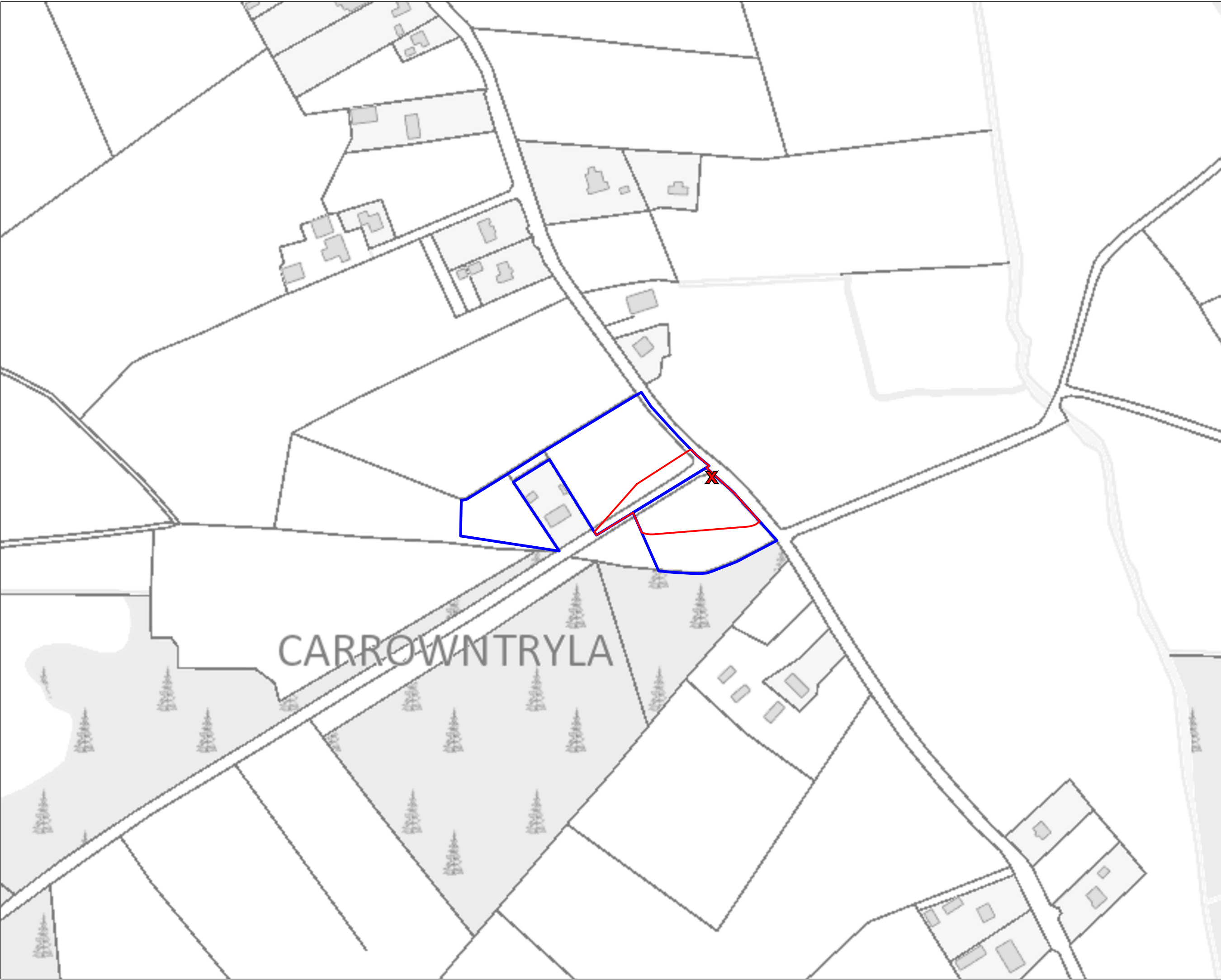
DATE:

10.06.2024

OS SHEET No.:

2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

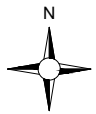
Drawing Legend

Planning Application Boundary

Landowners Boundary

X

Site Notice



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/ Government of Ireland

DRAWING TITLE:

**Site Notice Location Map
Sheet B**

PROJECT TITLE:

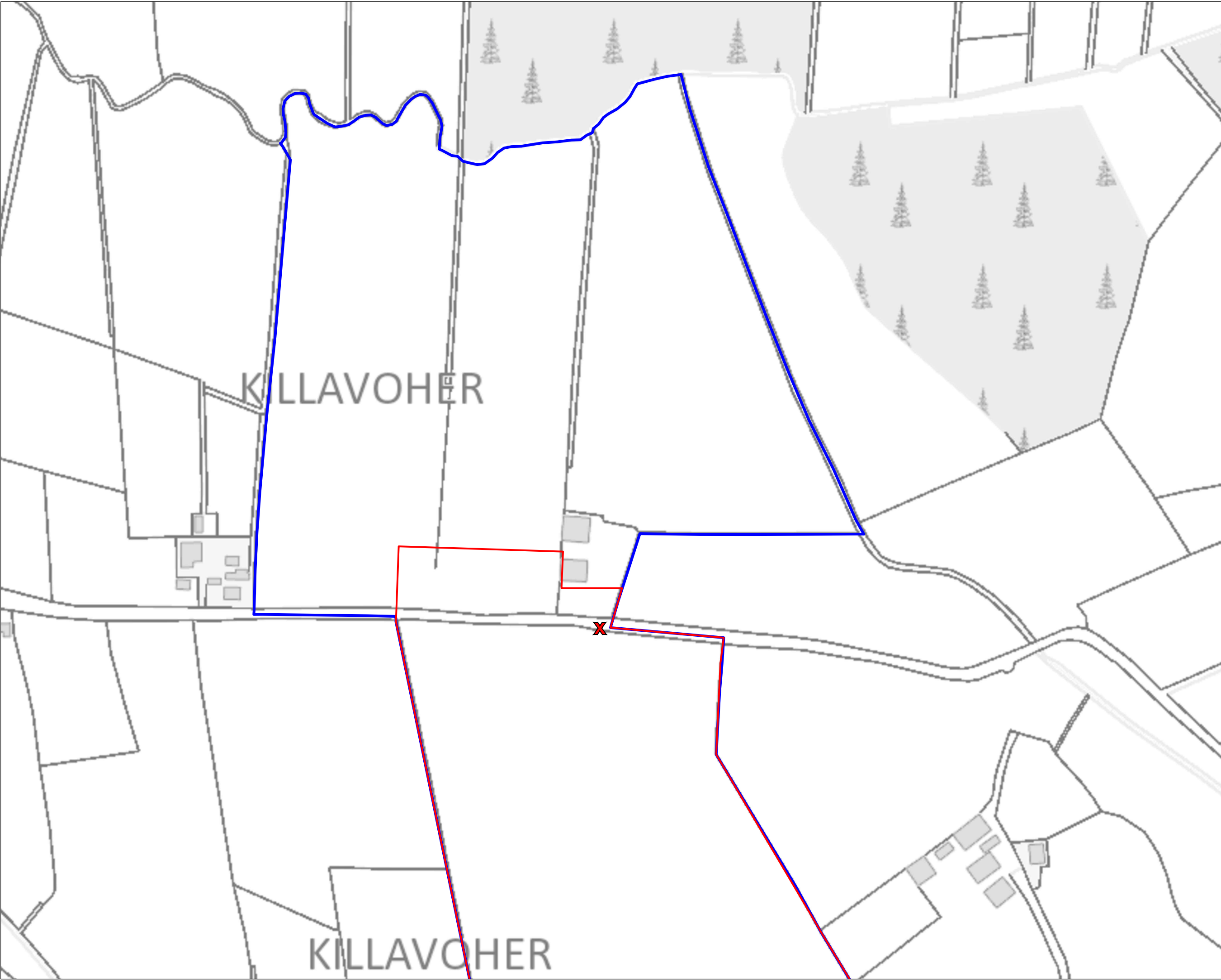
Clonberne Wind Farm, Co. Galway

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.:	DRAWING No.:
180740	180740 - 02B
SCALE:	DATE:
1:2,500 @ A3	10.06.2024

OS SHEET No.:

2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Landowners Boundary
- X Site Notice




Site Notice Location Map Sheet C

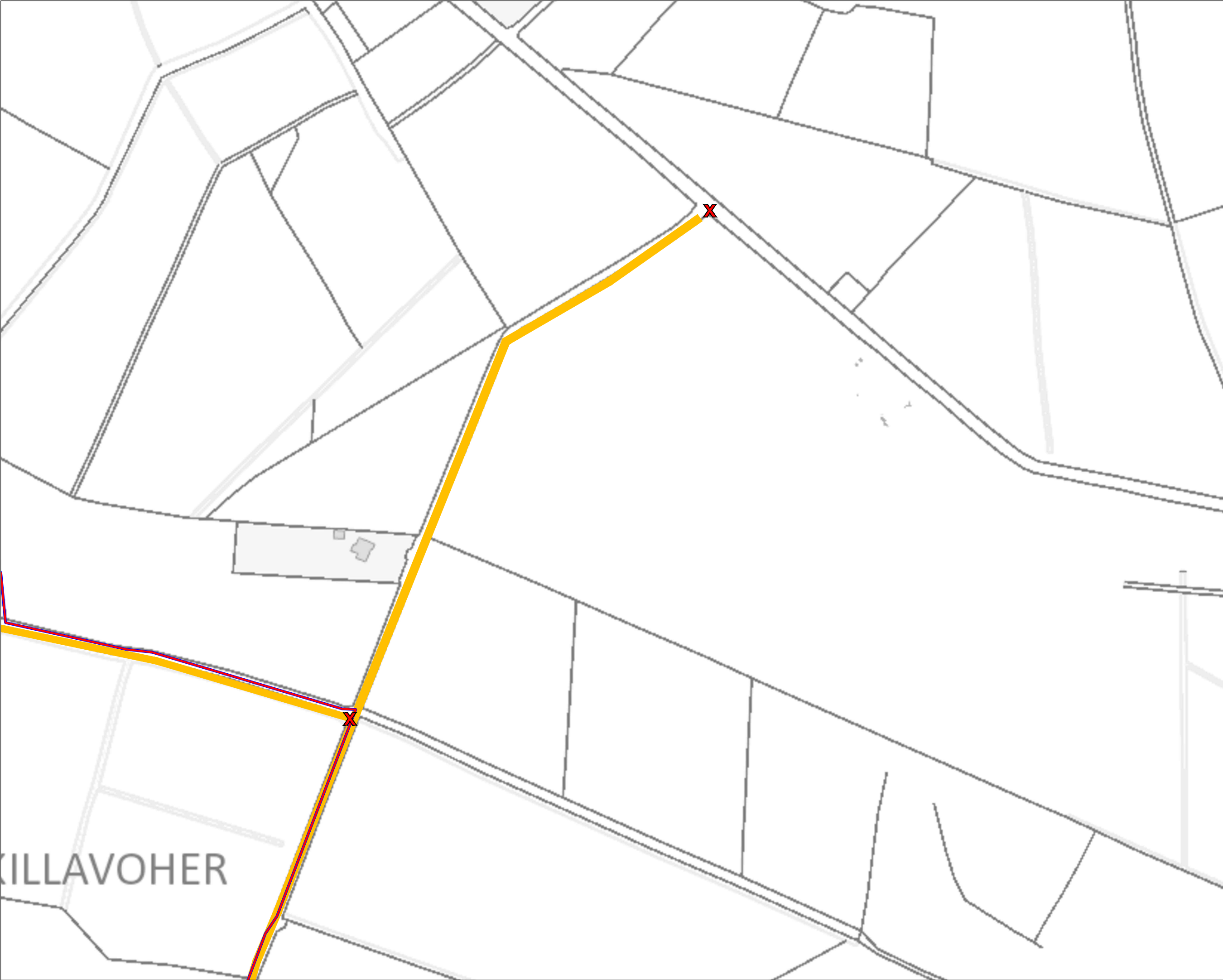
PROJECT TITLE: **Clonberne Wind Farm, Co. Galway**

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 02C
SCALE: 1:2,500 @ A3	DATE: 10.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818



MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Landowners Boundary
- X Site Notice
- Wayleaves



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/ Government of Ireland

DRAWING TITLE:

**Site Notice Location Map
Sheet D**

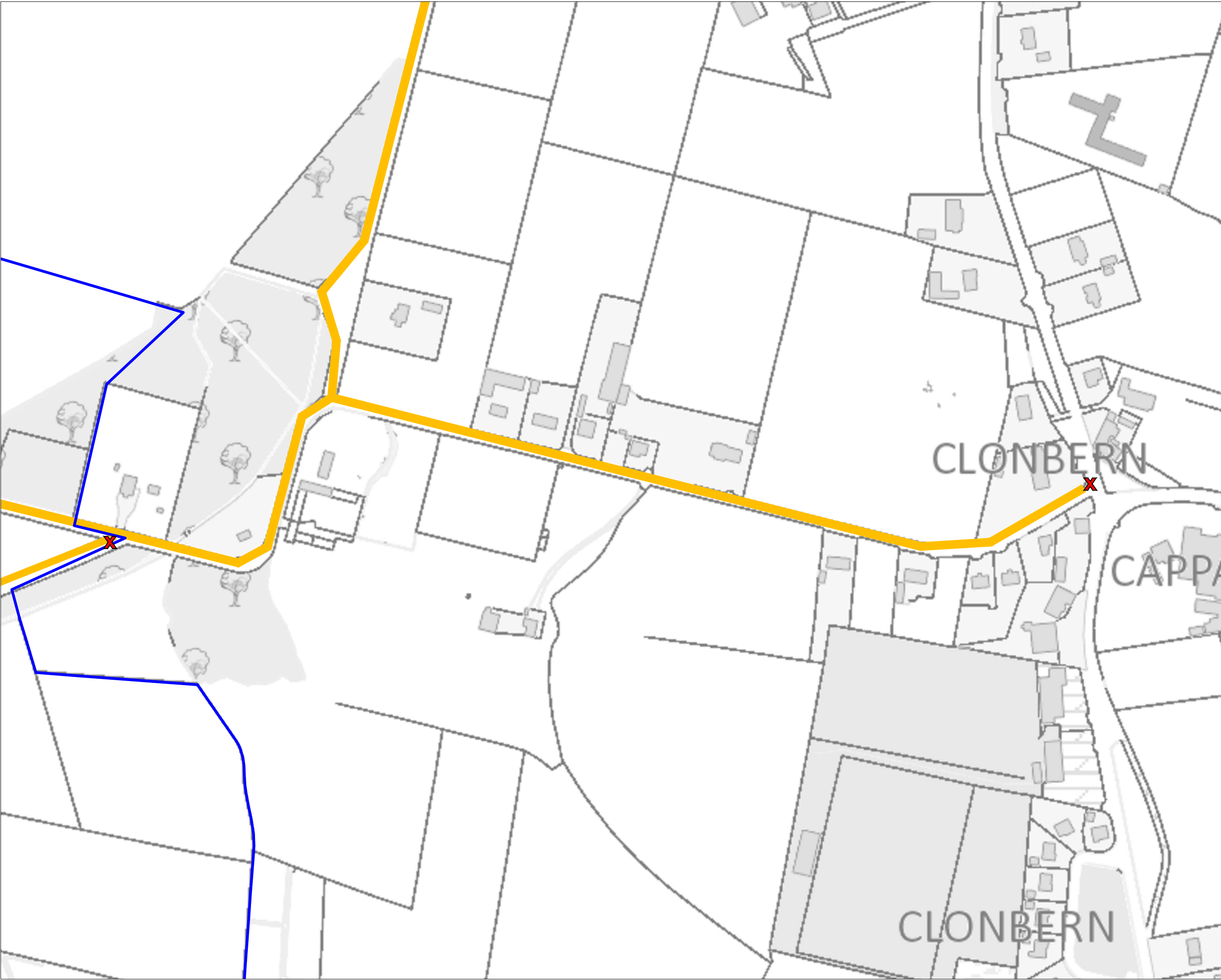
PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.:	DRAWING No.:
180740	180740 - 02D
SCALE:	DATE:
1:2,500 @ A3	10.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

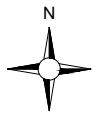
Drawing Legend

Landowners Boundary

X

Site Notice

Wayleaves



Ordnance Survey Ireland Licence No. CYAL50287517© Ordnance Survey Ireland/ Government of Ireland

DRAWING TITLE:

**Site Notice Location Map
Sheet E**

PROJECT TITLE:

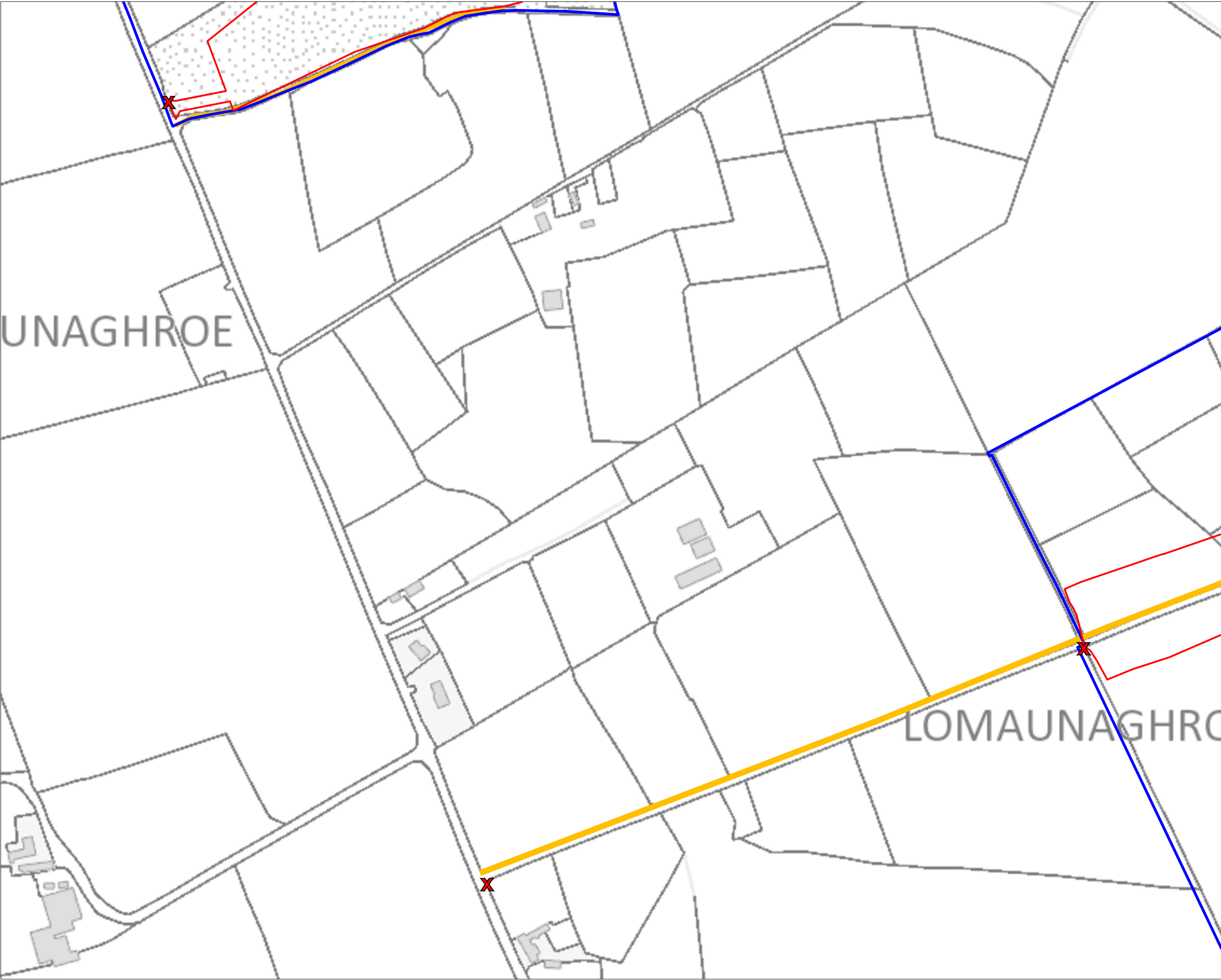
Clonberne Wind Farm, Co. Galway

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.:	DRAWING No.:
180740	180740 - 02E
SCALE:	DATE:
1:2,500 @ A3	10.06.2024

OS SHEET No.:

2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Landowners Boundary
- Site Notice
- Wayleaves

Site Notice Location Map Sheet F

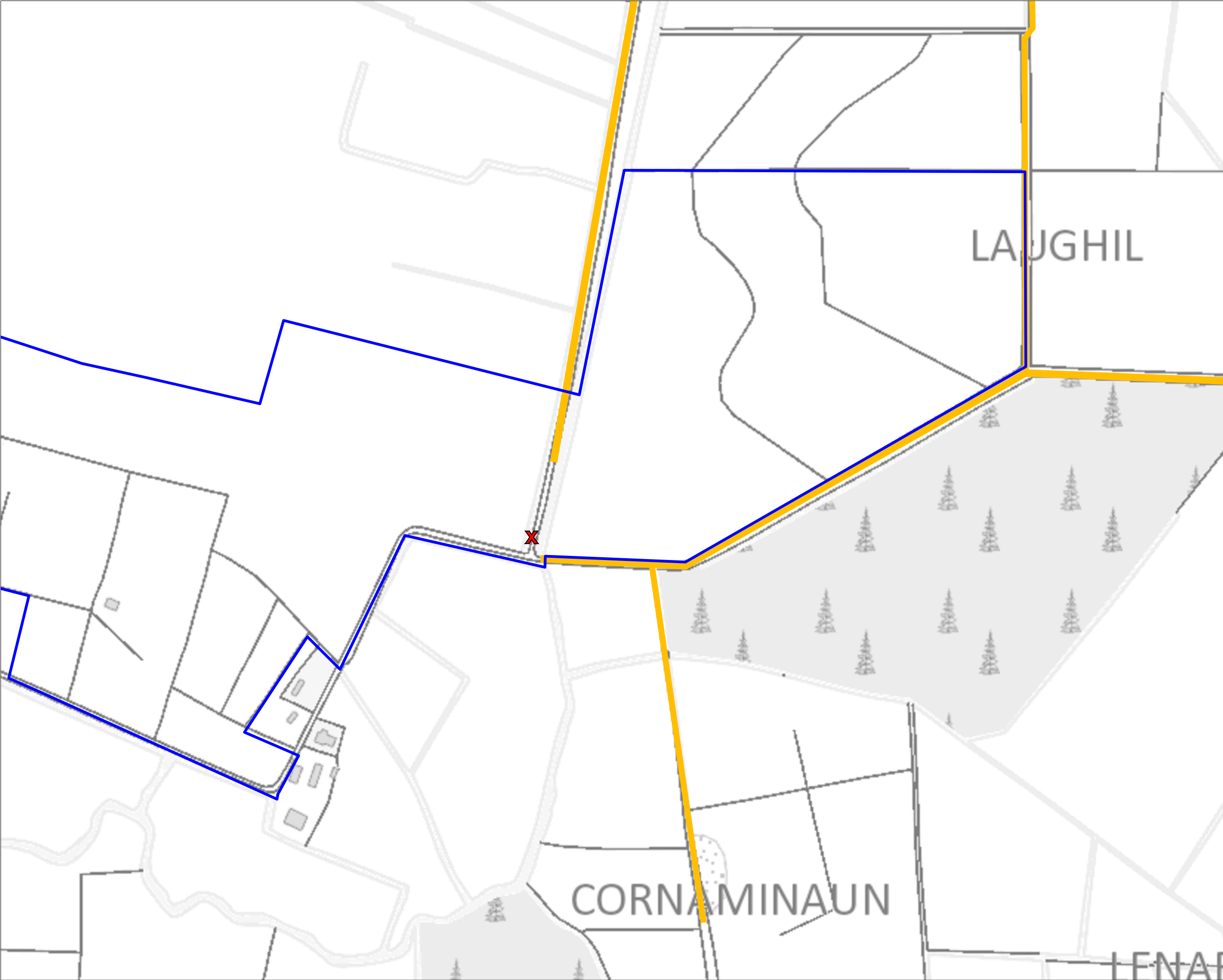
PROJECT TITLE: **Clonberne Wind Farm, Co. Galway**

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 02F
SCALE: 1:2,500 @ A3	DATE: 10.06.2024

OS SHEET: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818



MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

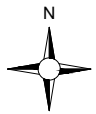
Drawing Legend

Landowners Boundary

X

Site Notice

Wayleaves



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/ Government of Ireland

DRAWING TITLE:

**Site Notice Location Map
Sheet G**

PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:

Joseph O'Brien

CHECKED BY:

Owen Cahill

PROJECT No.:

180740

DRAWING No.:

180740 - 02G

SCALE:

1:2,500 @ A3

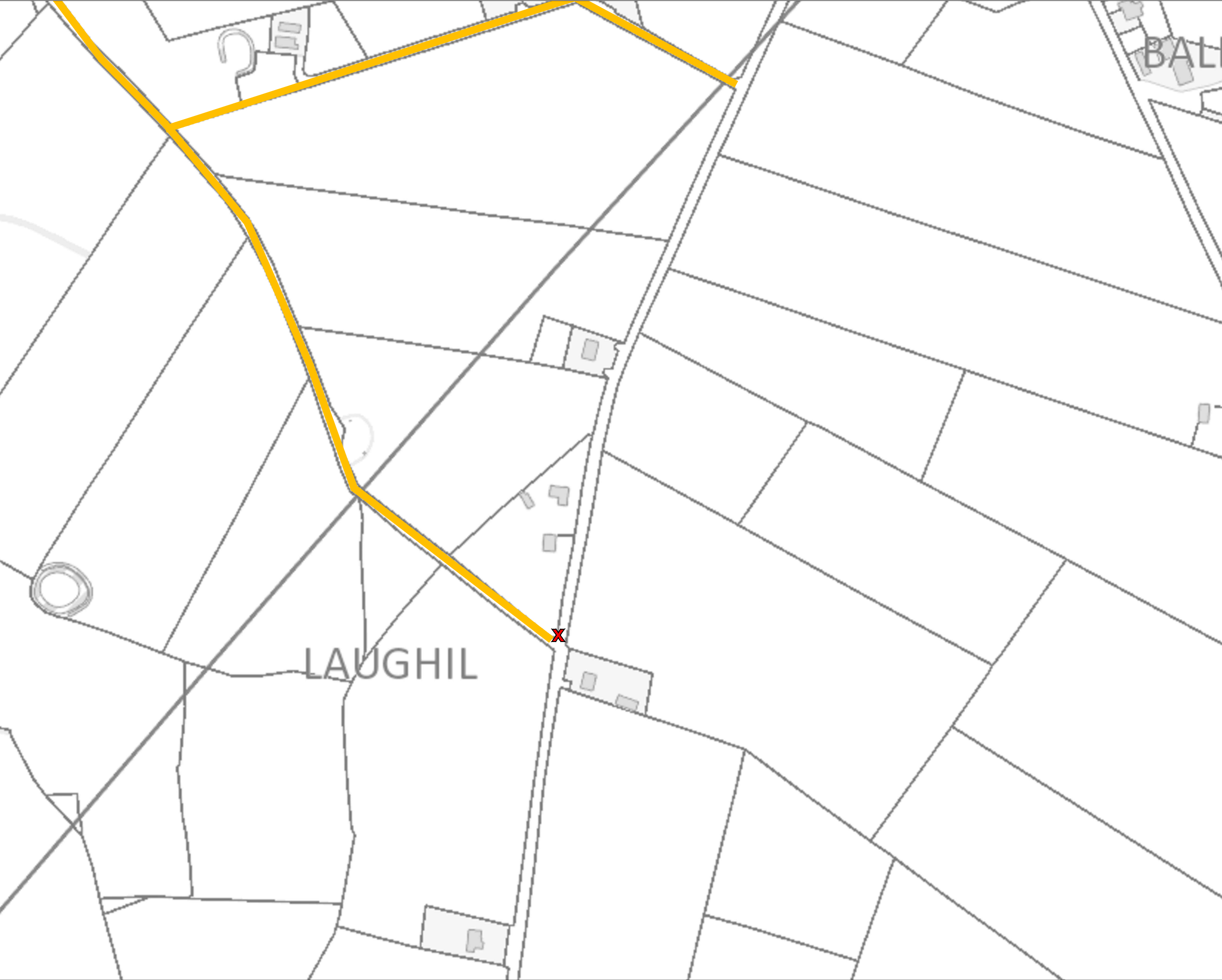
DATE:

10.06.2024

OS SHEET No.:

2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



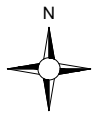
- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

X

Site Notice

Wayleaves



Ordnance Survey Ireland Licence No. CYAL5026751 © Ordnance Survey Ireland/ Government of Ireland

DRAWING TITLE:

**Site Notice Location Map
Sheet H**

PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:
Joseph O Brien

CHECKED BY:
Owen Cahill

PROJECT No.:
180740

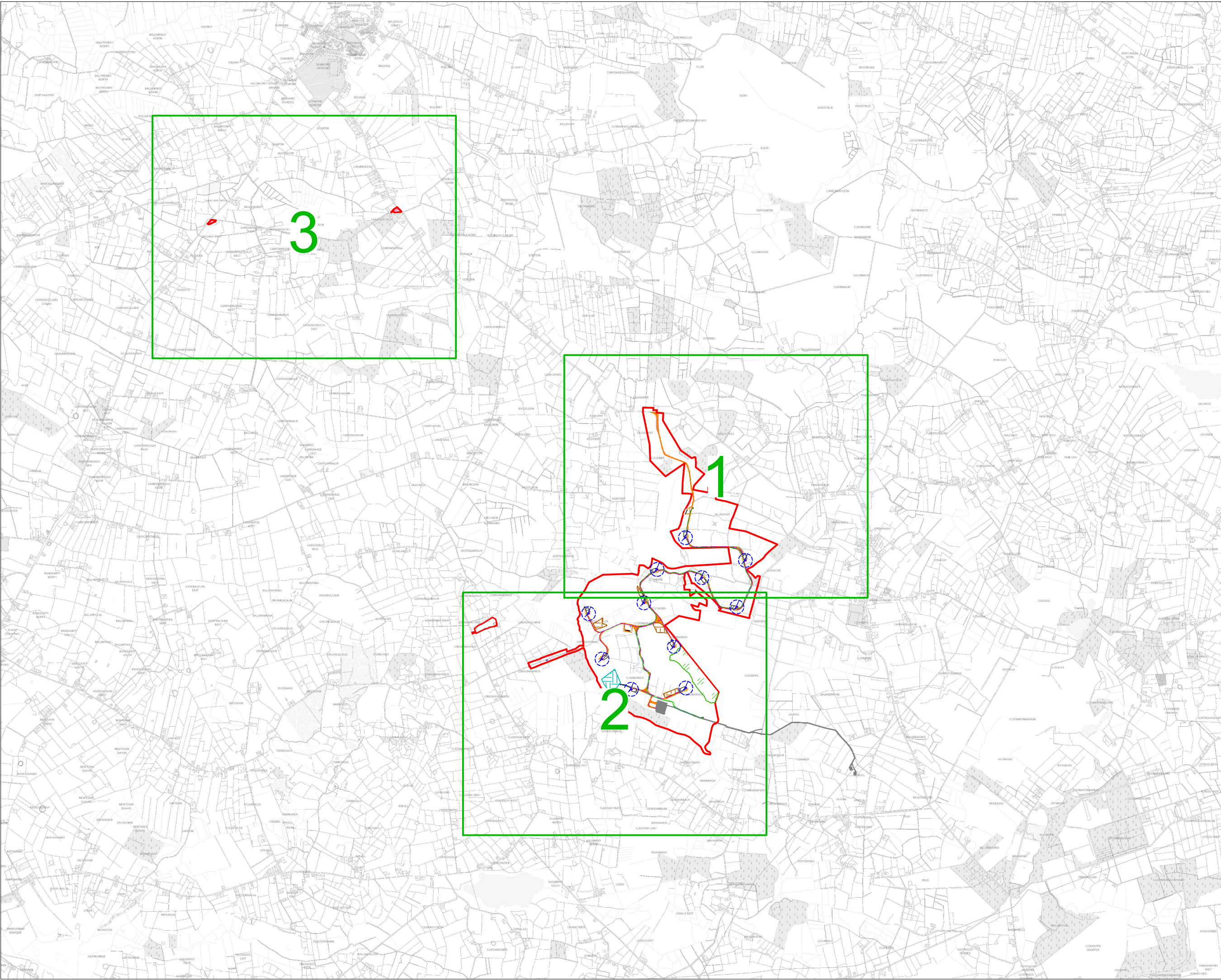
DRAWING No.:
180740 - 02H

SCALE:
1:2,500 @ A3

DATE:
10.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Existing Road to be Upgraded
- Proposed Road
- Temporary Access Road
- Temporary New Road (to facilitate delivery of abnormal loads).
- Passing Bay
- Electrical Cable Trench
- 38kV Underground Cabling
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Borrow Pit
- Peat Repository Area
- Spoil Repository Area
- Peatland Enhancement Area
- Area Part of Separate Application
- Cut
- Fill



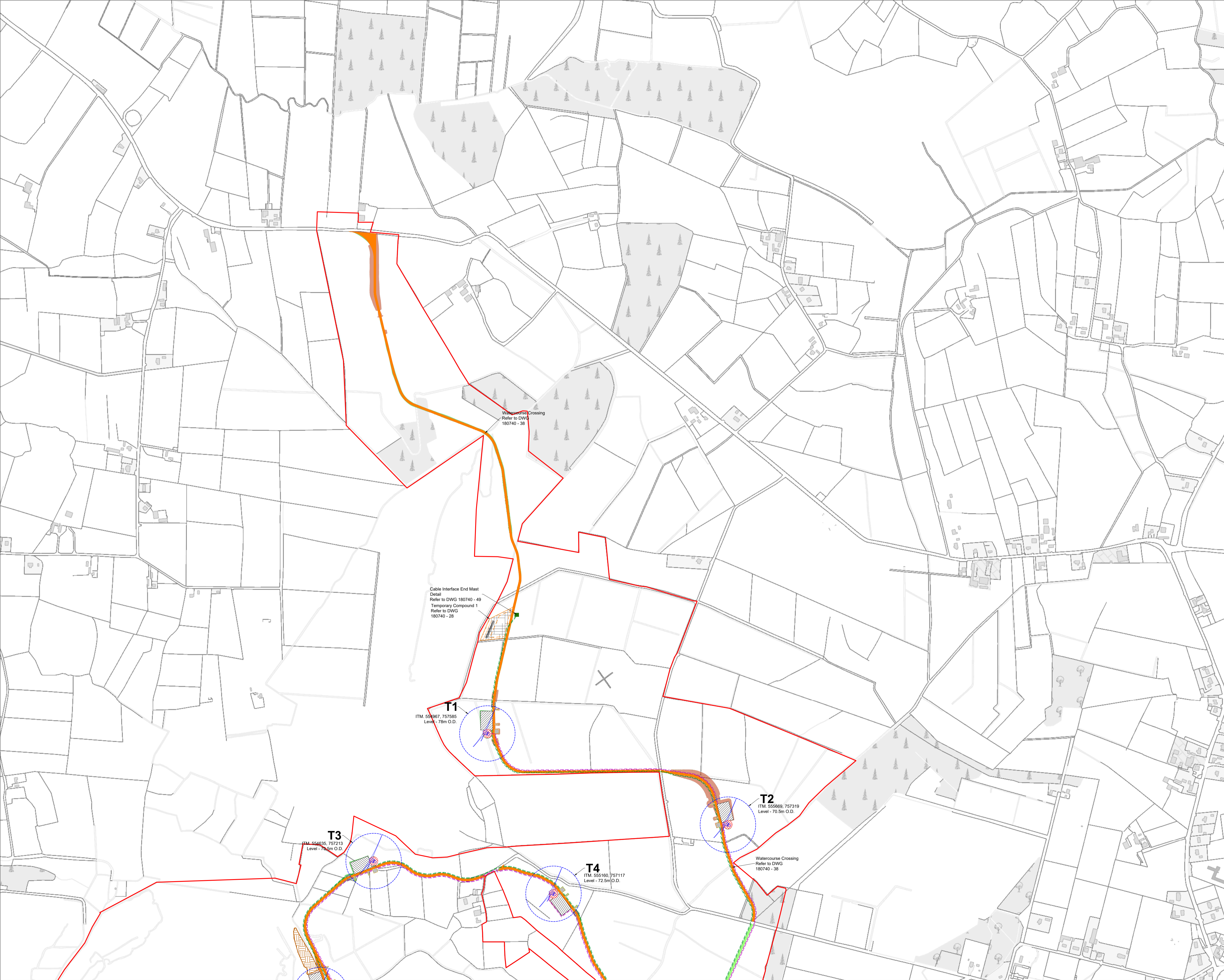
**Site Layout Key Plan
(1:5,000)**

PROJECT TITLE:
Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT NO.: 180740	DRAWING NO.: 180740 - 03
SCALE: 1:40,000 @ A3	DATE: 20.06.2024

OS SHEET: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie

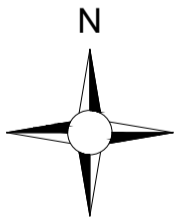


Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Proposed Road
- Electrical Cable Trench
- 38kV Underground Cabling
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Peat Repository Area
- Area Part of Separate Application
- Cut
- Fill



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/Government of Ireland

DRAWING TITLE:

Site Layout Plan Sheet 1 of 3

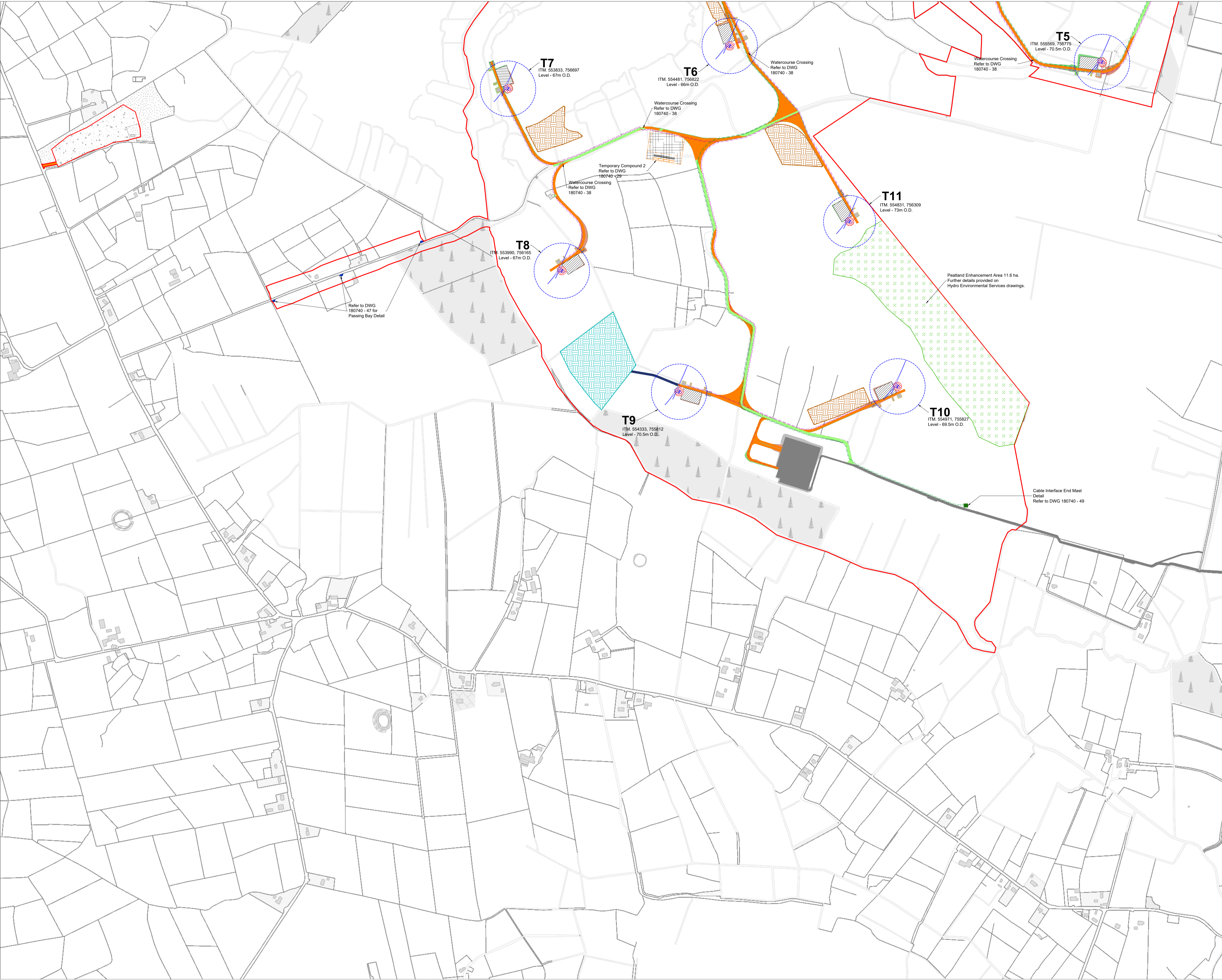
PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.:	DRAWING No.:
180740	180740 - 04
SCALE:	DATE:
1:5,000 @ A1	20.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

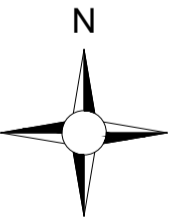
MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Existing Road to be Upgraded
- Proposed Road
- Temporary Access Road
- Passing Bay
- Electrical Cable Trench
- 38kV Underground Cabling
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Borrow Pit
- Peat Repository Area
- Spoil Repository Area
- Peatland Enhancement Area
- Area Part of Separate Application
- Cut
- Fill



Ordnance Survey Ireland Licence No. CYAL502675176 Ordnance Survey Ireland/Government of Ireland

DRAWING TITLE:

Site Layout Plan Sheet 2 of 3

PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 05
SCALE: 1:5,000 @ A1	DATE: 20.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

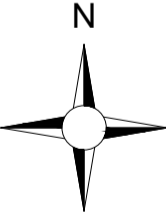
MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VNB4
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Temporary New Road (to facilitate delivery of abnormal loads).



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/Government of Ireland

DRAWING TITLE:

Site Layout Plan
Sheet 3 of 3

PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:

Joseph O'Brien

CHECKED BY:

Owen Cahill

PROJECT No.:

180740

DRAWING No.:

180740 - 06

SCALE:


1:5,000 @ A1

DATE:

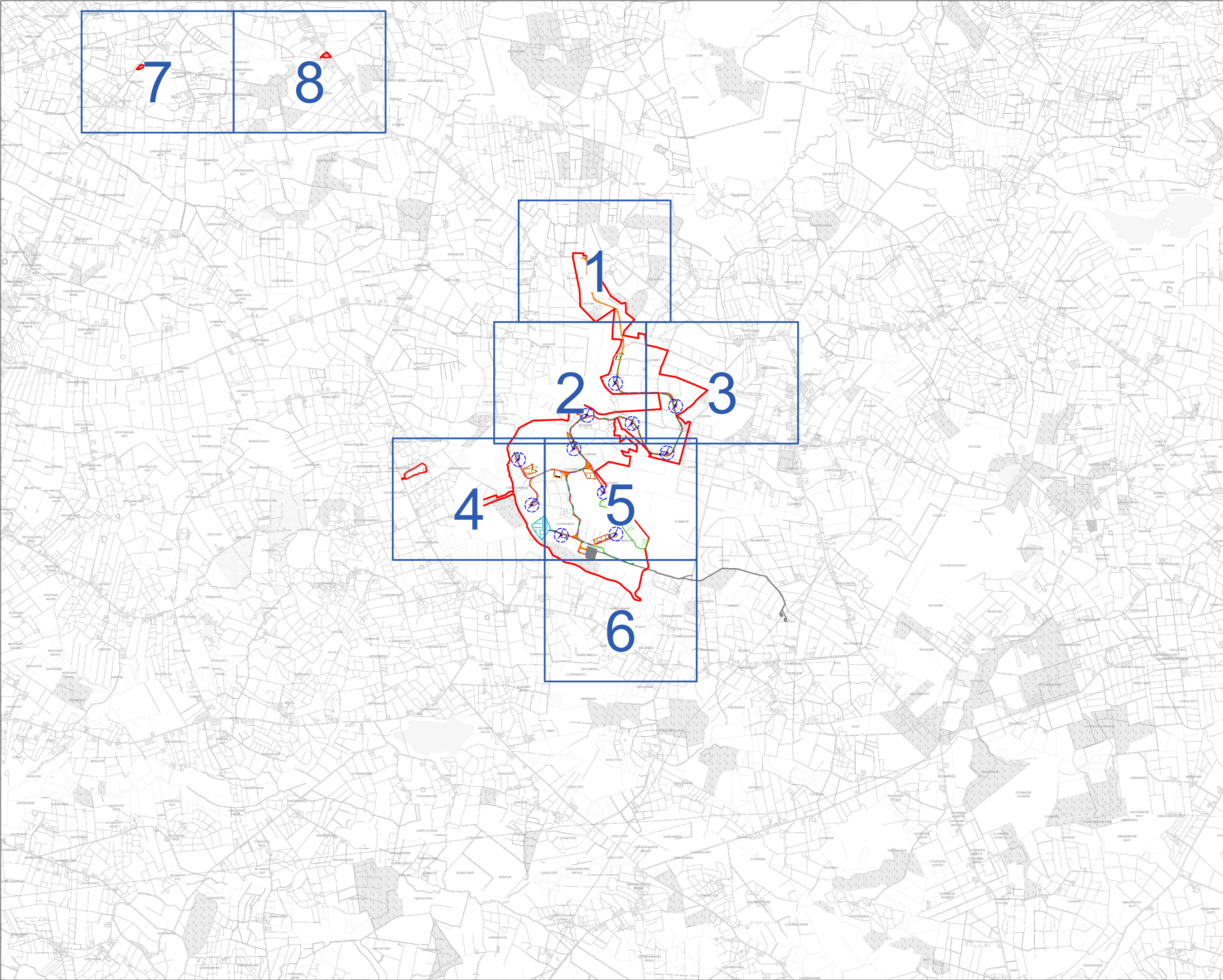
10.06.2024

OS SHEET No.:

2540, 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818



MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 YW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Existing Road to be Upgraded
- Proposed Road
- Temporary Access Road
- Temporary New Road (to facilitate delivery of abnormal loads)
- Passing Bay
- Electrical Cable Trench
- 38kV Underground Cabling
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Borrow Pit
- Peat Repository Area
- Spoil Repository Area
- Peatland Enhancement Area
- Area Part of Separate Application
- Cut
- Fill



**Site Layout Key Plan
(1:2,500)**

Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT NO.: 180740	DRAWING NO.: 180740 - 07
SCALE: 1:40,000 @ A3	DATE: 20.06.2024

OS SHEET: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

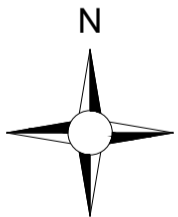
MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Proposed Road
- Watercourse
- Cut
- Fill




Ordnance Survey Ireland Licence No. CYAL502675176 Ordnance Survey Ireland/Government of Ireland

DRAWING TITLE:
**Site Layout Plan
Sheet 1 of 8**

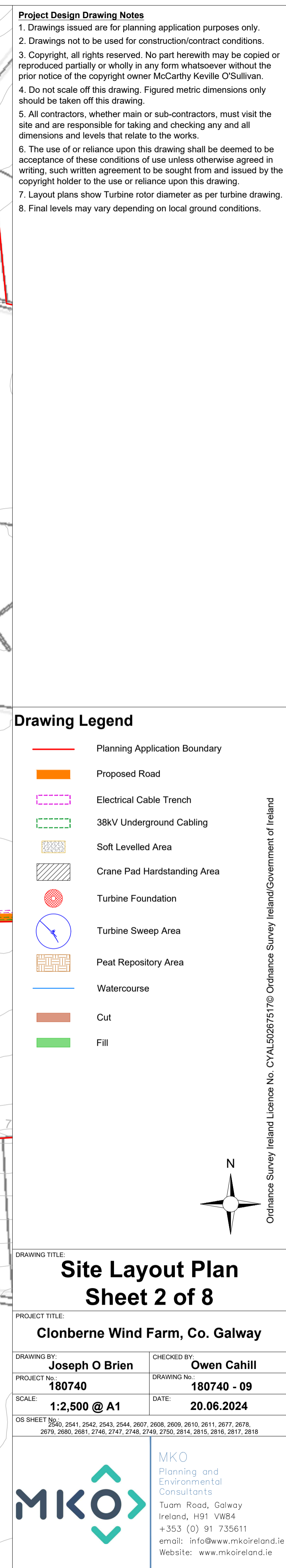
PROJECT TITLE:
Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 08
SCALE: 1:2,500 @ A1	DATE: 10.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818



MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 YW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie

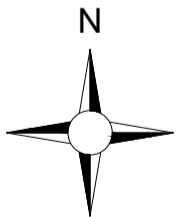




- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Existing Road to be Upgraded
- Proposed Road
- Electrical Cable Trench
- 38kV Underground Cabling
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Watercourse
- Cut
- Fill



Ordnance Survey Ireland Licence No. CYAL502675176 Ordnance Survey Ireland/Government of Ireland

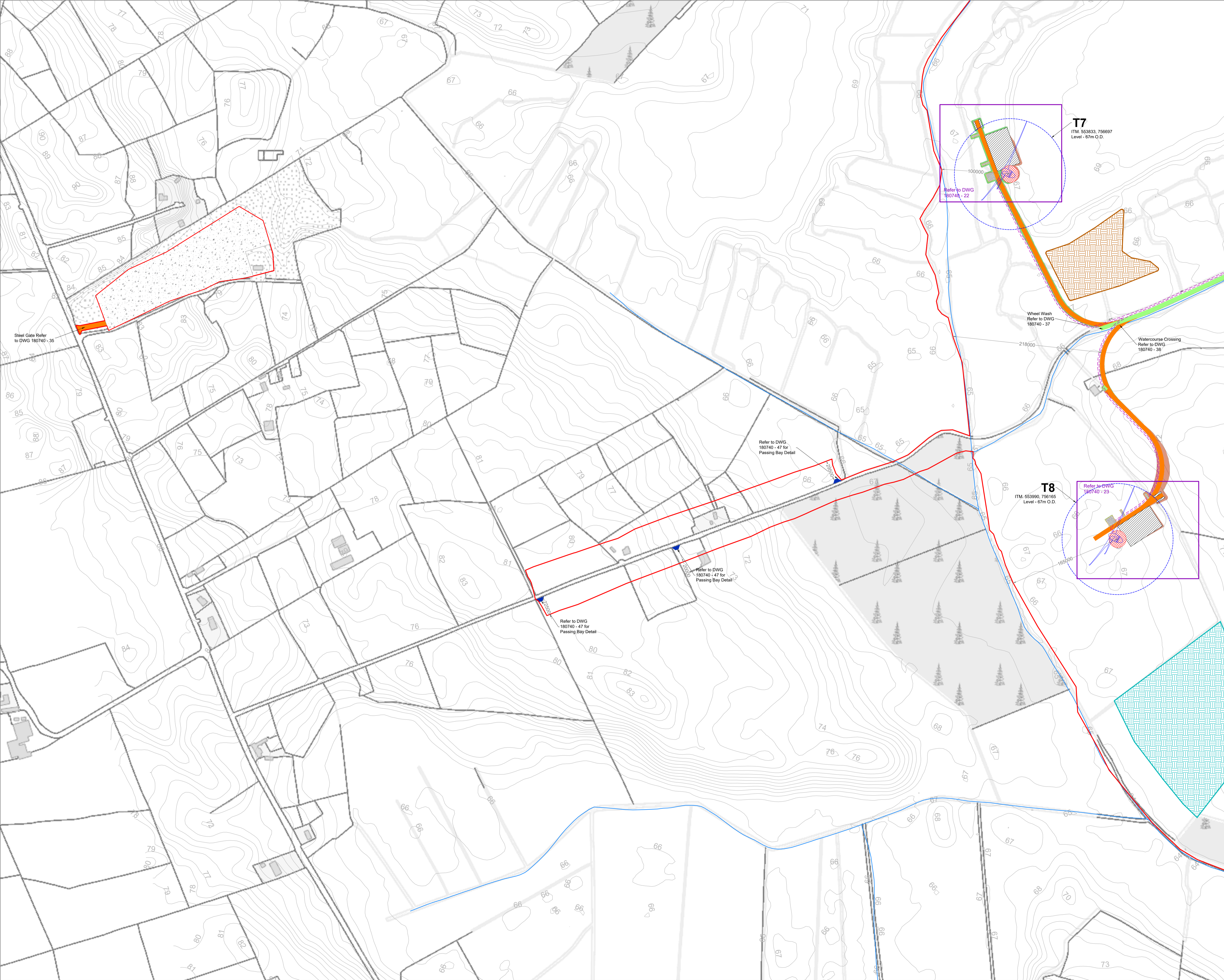
DRAWING TITLE:
**Site Layout Plan
Sheet 3 of 8**

PROJECT TITLE:
Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 10
SCALE: 1:2,500 @ A1	DATE: 20.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

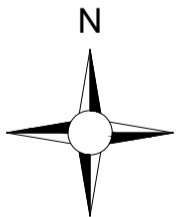
MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Existing Road to be Upgraded
- Proposed Road
- Passing Bay
- Electrical Cable Trench
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Borrow Pit
- Peat Repository Area
- Spoil Repository Area
- Watercourse
- Cut
- Fill



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/Government of Ireland

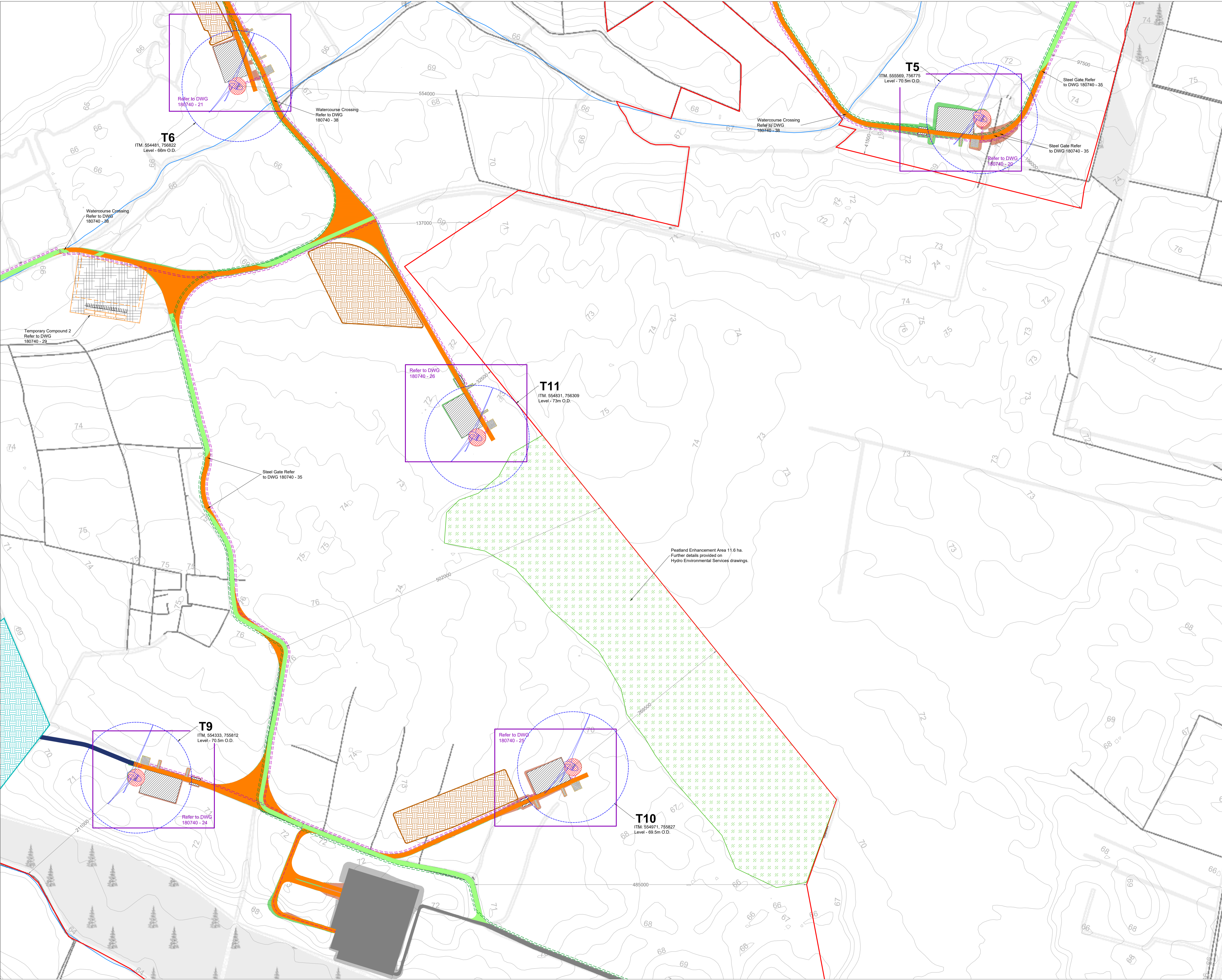
Site Layout Plan
Sheet 4 of 8

PROJECT TITLE:
Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 11
SCALE: 1:2,500 @ A1	DATE: 10.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

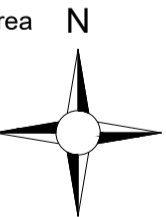
MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 YW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Existing Road to be Upgraded
- Proposed Road
- Temporary Access Road
- Electrical Cable Trench
- 38kV Underground Cabling
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Peat Repository Area
- Spoil Repository Area
- Watercourse
- Area Part of Separate Application
- Cut
- Fill
- Peatland Enhancement Area



Ordnance Survey Ireland Licence No. CYAL502675176 Ordnance Survey Ireland/Government of Ireland

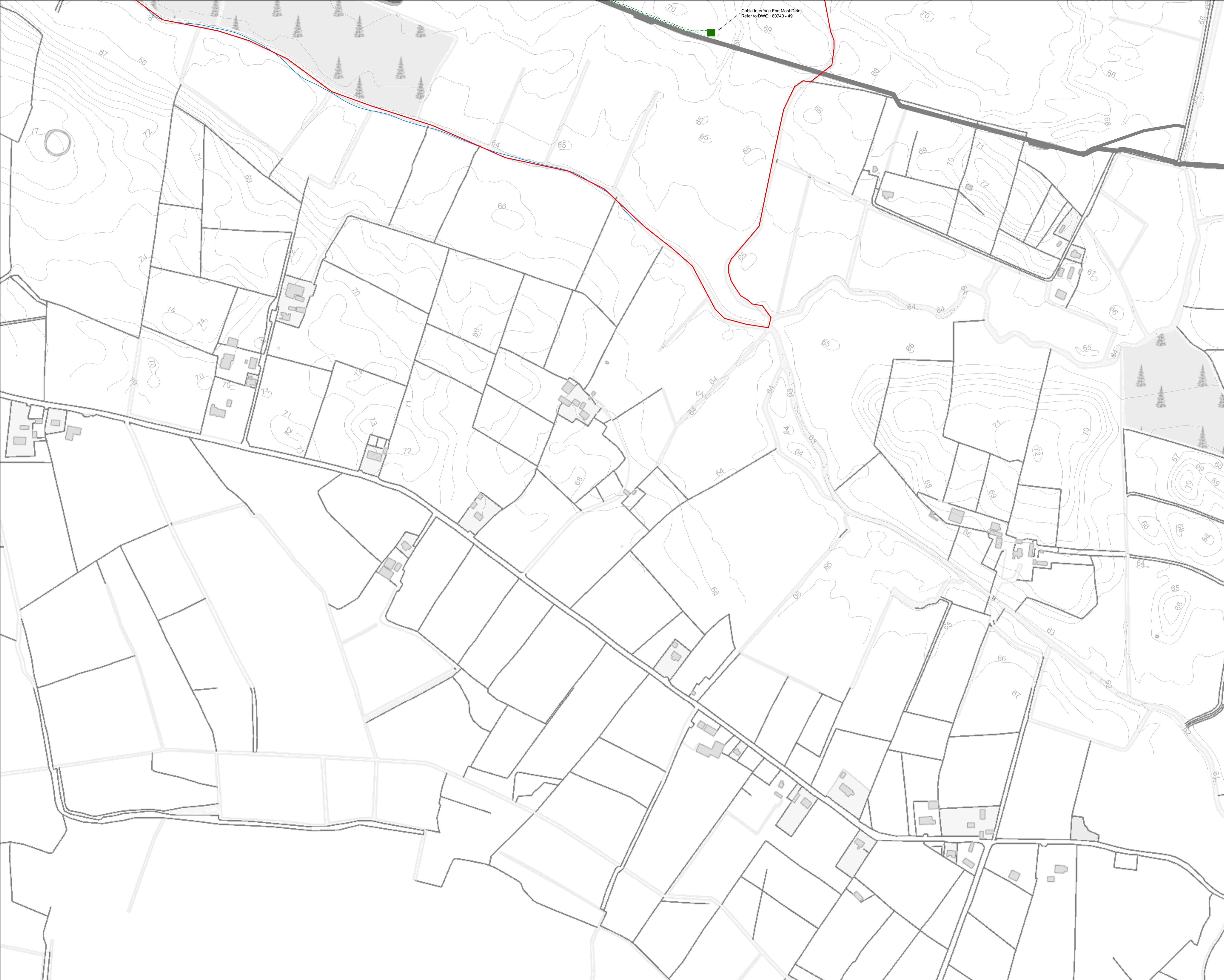
DRAWING TITLE:
**Site Layout Plan
Sheet 5 of 8**

PROJECT TITLE:
Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 12
SCALE: 1:2,500 @ A1	DATE: 20.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

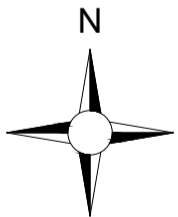
MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Area Part of Separate Application
- Watercourse
- 38kV Underground Cabling



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/Government of Ireland

DRAWING TITLE:

Site Layout Plan Sheet 6 of 8

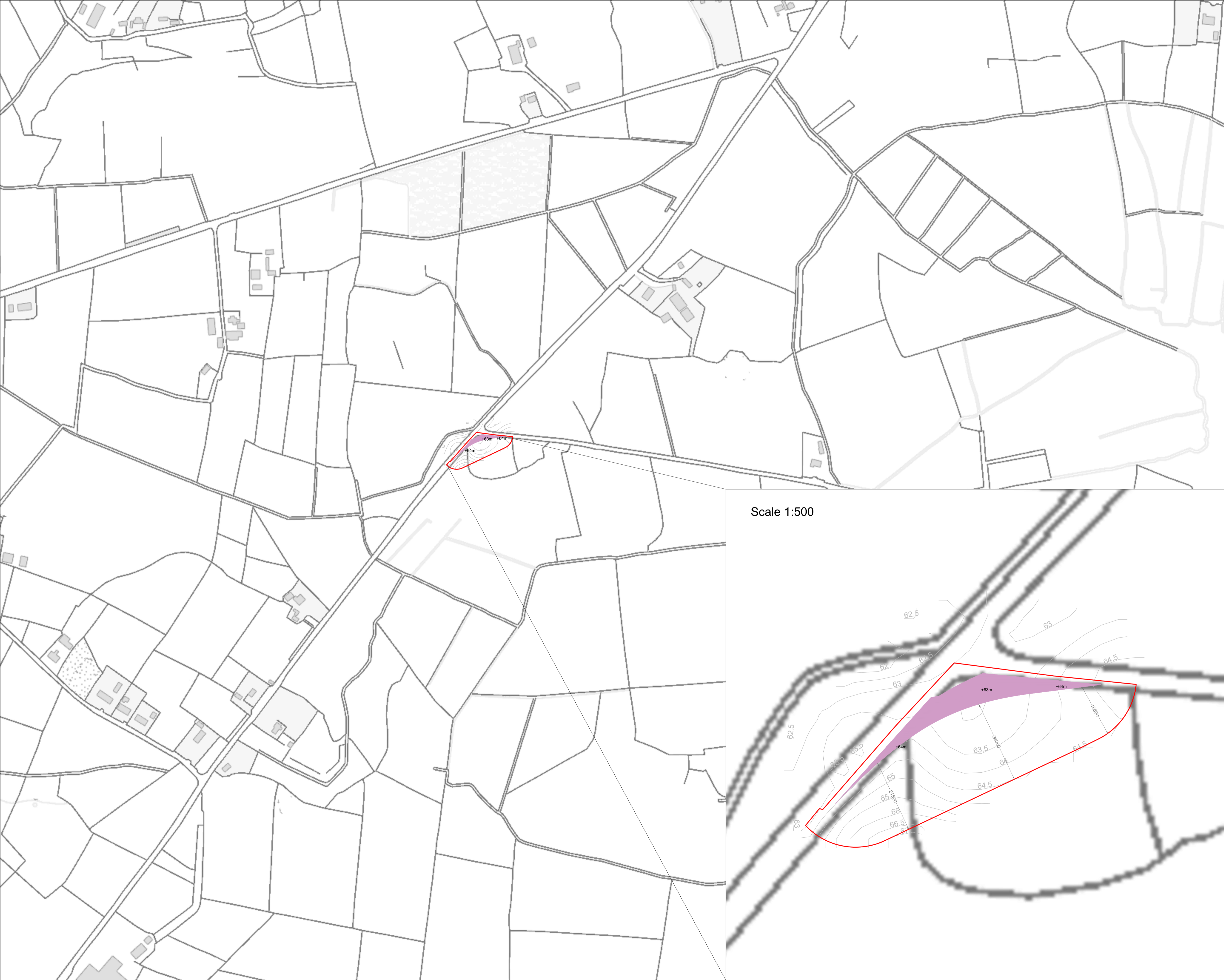
PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 13
SCALE: 1:2,500 @ A1	DATE: 20.06.2024

OS SHEET No.: 2540, 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie

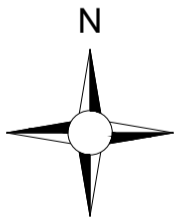


Scale 1:500

- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Temporary New Road (to facilitate delivery of abnormal loads).



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/Government of Ireland

DRAWING TITLE:

Site Layout Plan Sheet 7 of 8

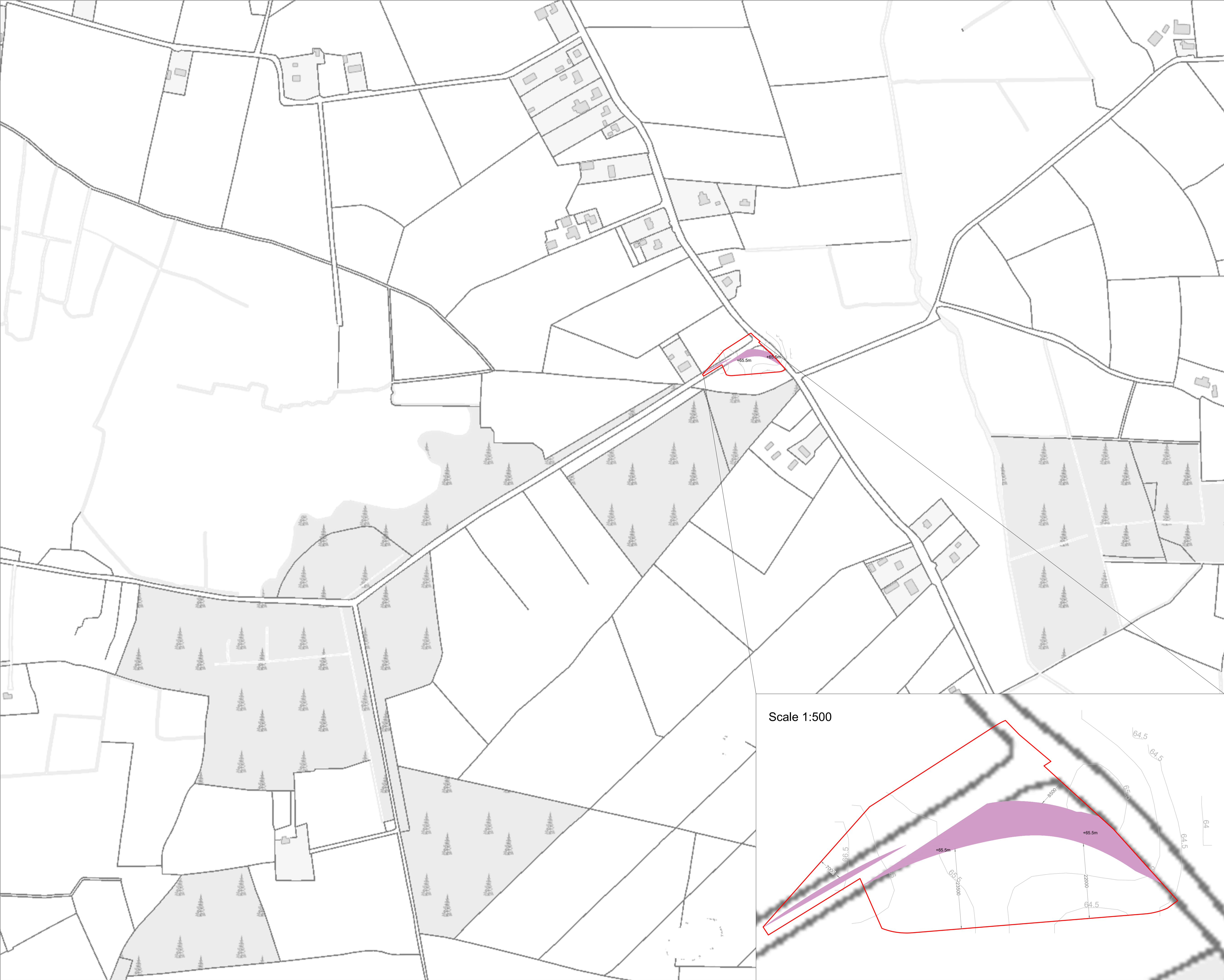
PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 14
SCALE: 1:2,500 @ A1	DATE: 27.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 YW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie

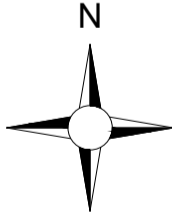
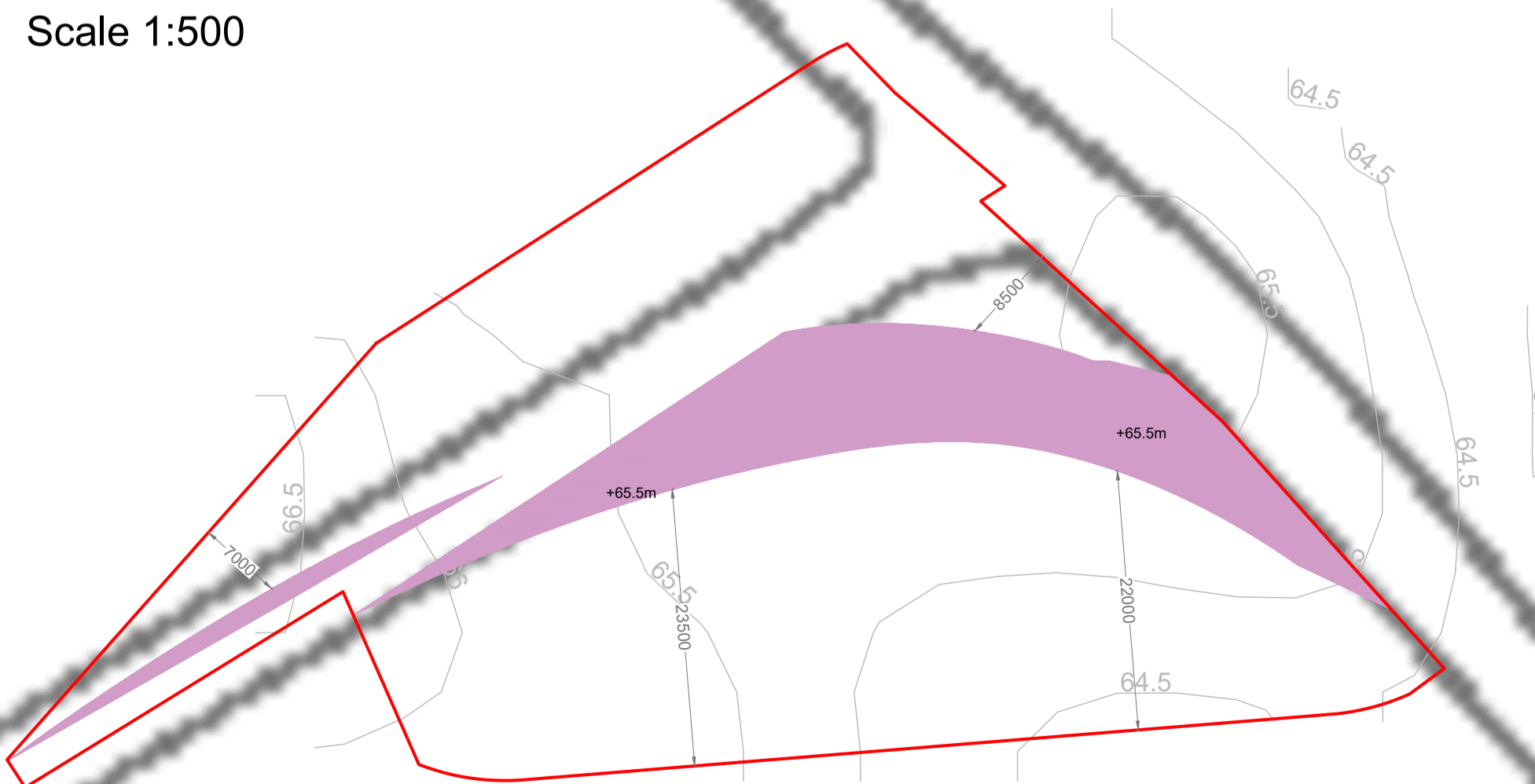


- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Temporary New Road (to facilitate delivery of abnormal loads).

Scale 1:500



Site Layout Plan
Sheet 8 of 8

Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 15
SCALE: 1:2,500 @ A1	DATE: 27.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 YW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie

~~76m~~

77m

80m

79m

+78m

5000-

2500+

2500

3000












3000

12000

120

25000

Drawing Legend

- | | |
|---|-----------------------------|
|  | Proposed Road |
|  | Electrical Cable Trench |
|  | 38kV Underground Cabling |
|  | Soft Levelled Area |
|  | Crane Pad Hardstanding Area |
|  | Turbine Foundation |
|  | Turbine Sweep Area |
|  | Cut |
|  | Fill |



Ordnance Survey Ireland Licence No. CYAL50267517 © Ordnance Survey Ireland/Government of Ireland

DRAWING TITLE:

Turbine 1 Layout

PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:	Joseph O Brien
-------------	----------------

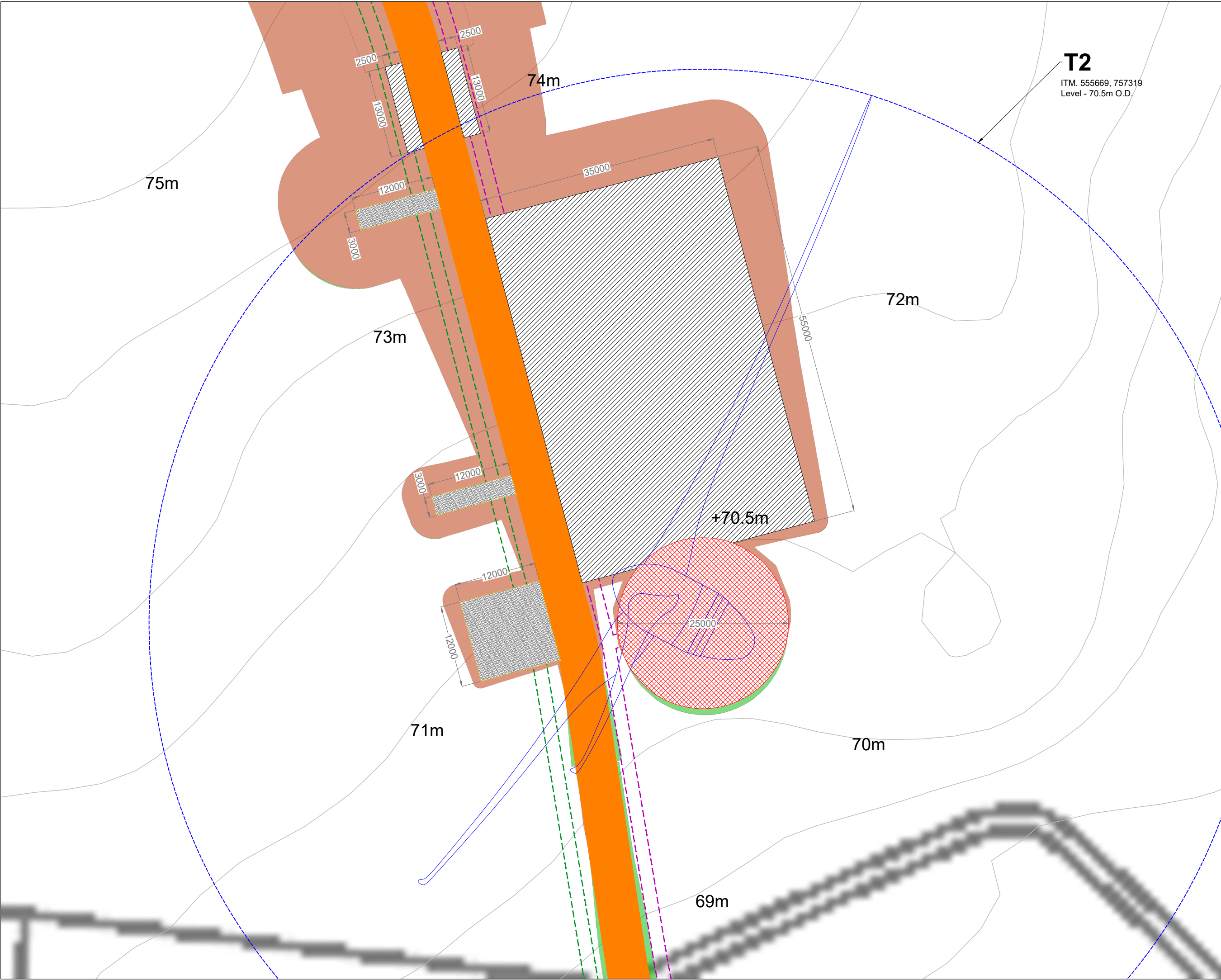
PROJECT No.: 180740	DRAWING No.: 180740 - 16
-------------------------------	------------------------------------

SCALE:	DATE:
1:500 @ A3	20.06.2024

OS SHEET No: 2540, 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818



MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Proposed Road
- Electrical Cable Trench
- 38kV Underground Cabling
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Cut
- Fill



Turbine 2 Layout

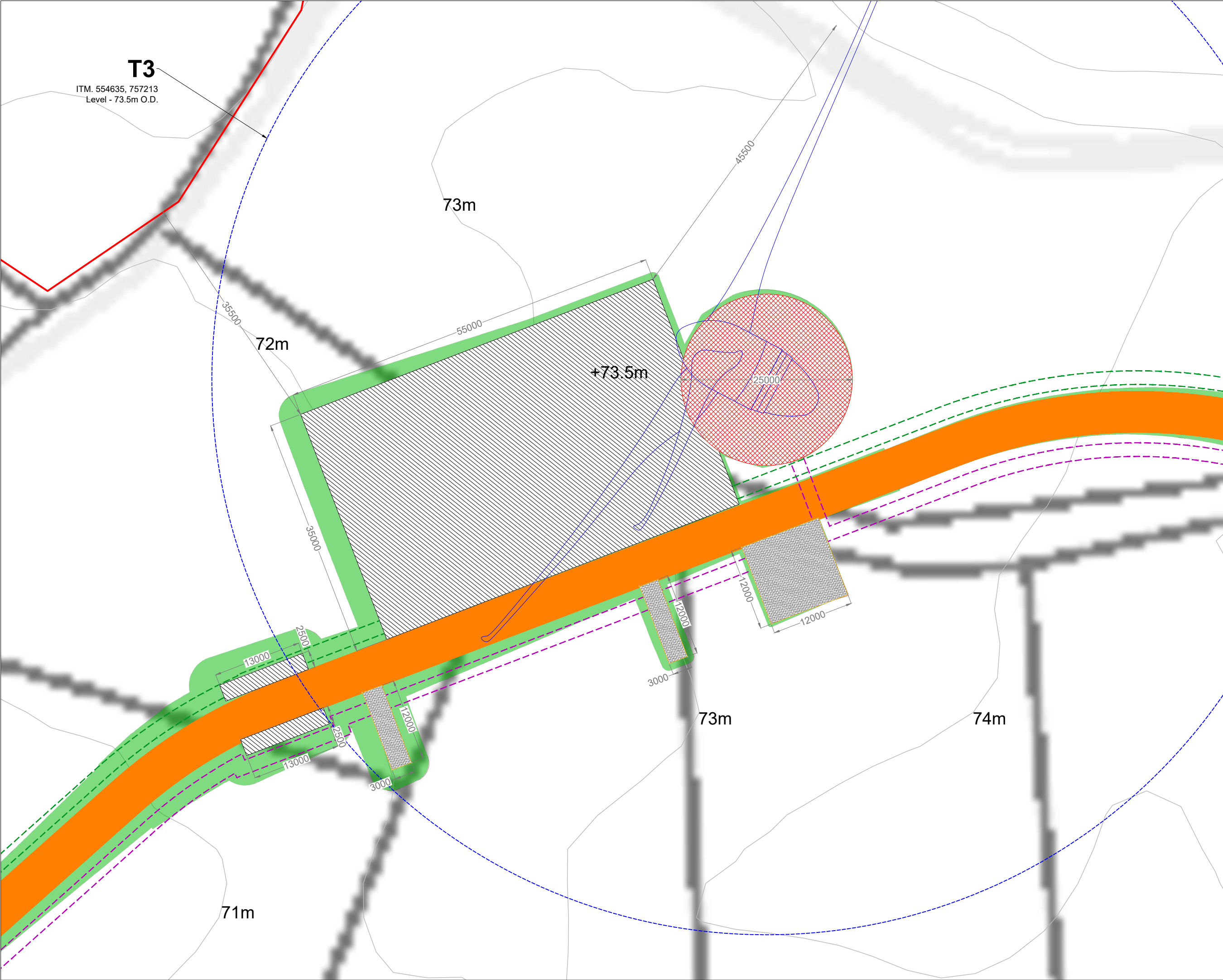
PROJECT TITLE: **Clonberne Wind Farm, Co. Galway**

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 17
SCALE: 1:500 @ A3	DATE: 20.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie

Ordnance Survey Ireland Licence No. CYAL50287517 © Ordnance Survey Ireland / Government of Ireland



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

- Drawing Legend**
- Planning Application Boundary
 - Proposed Road
 - Electrical Cable Trench
 - 38kV Underground Cabling
 - Soft Levelled Area
 - Crane Pad Hardstanding Area
 - Turbine Foundation
 - Turbine Sweep Area
 - Cut
 - Fill



DRAWING TITLE:

Turbine 3 Layout

PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.:	DRAWING No.:
180740	180740 - 18
SCALE:	DATE:
1:500 @ A3	20.06.2024

OS SHEET: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie

Ordnance Survey Ireland Licence No. CYAL50287517© Ordnance Survey Ireland/ Government of Ireland

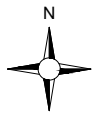


T4
ITM. 555160, 757117
Level - 72.5m O.D.

- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Proposed Road
- Electrical Cable Trench
- 38kV Underground Cabling
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Cut
- Fill



Ordnance Survey Ireland Licence No. CYAL50287517© Ordnance Survey Ireland/ Government of Ireland

DRAWING TITLE:


Turbine 4 Layout

PROJECT TITLE:

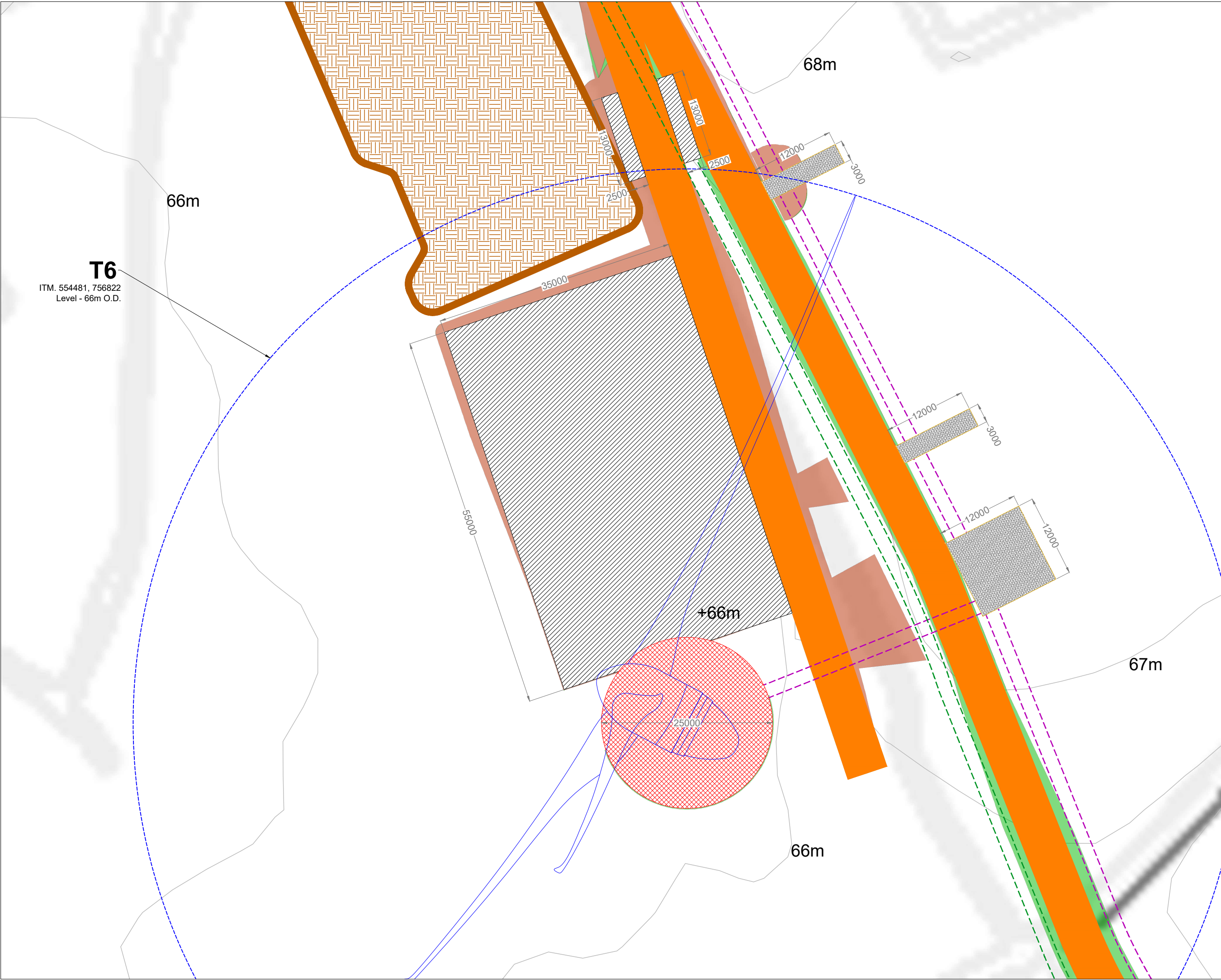
Clonberne Wind Farm, Co. Galway

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.:	DRAWING No.:
180740	180740 - 19
SCALE:	DATE:
1:500 @ A3	20.06.2024

OS SHEET No. 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818



MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Proposed Road
- Electrical Cable Trench
- 38kV Underground Cabling
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Peat Repository Area
- Cut
- Fill



Turbine 6 Layout

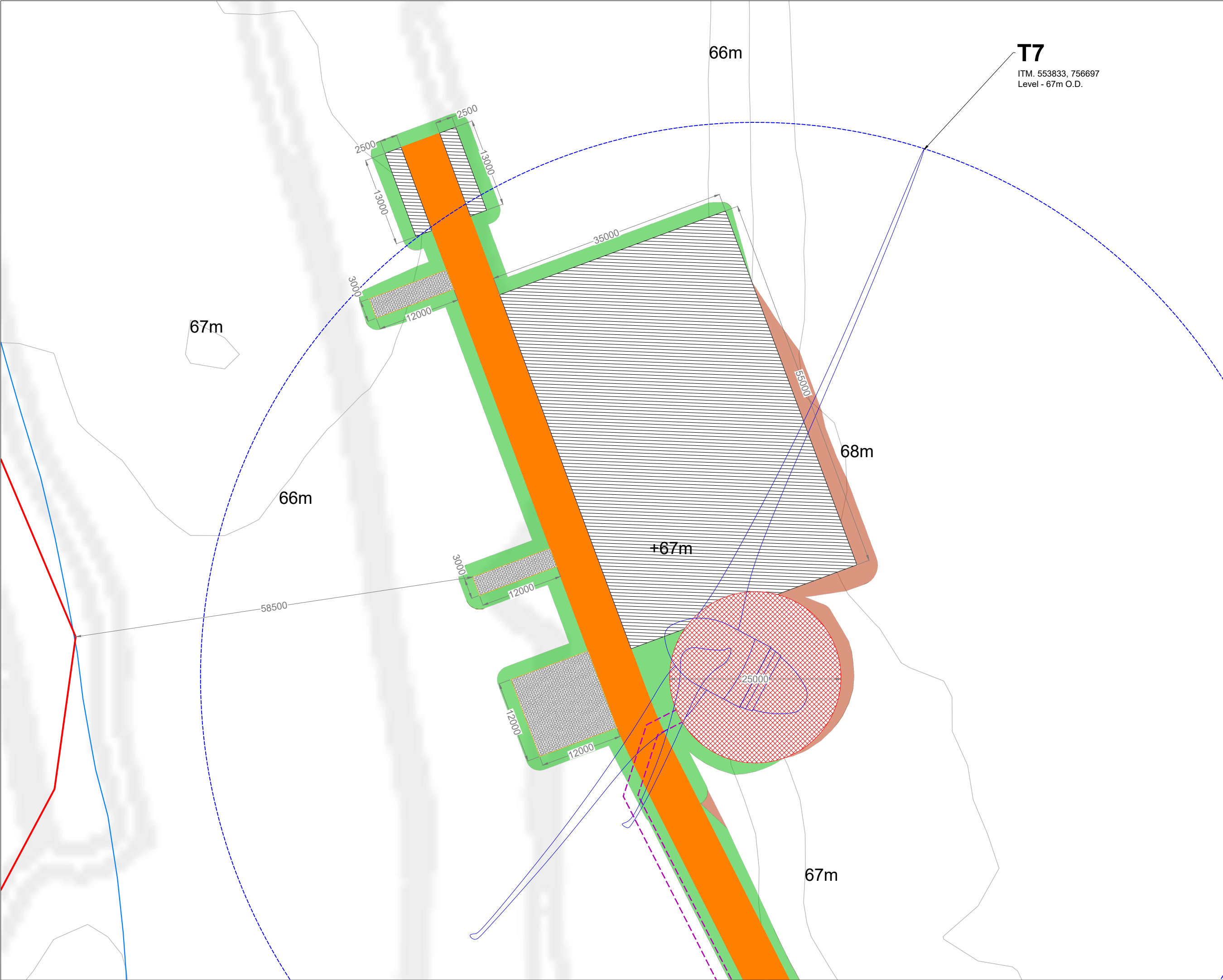
PROJECT TITLE: Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 21
SCALE: 1:500 @ A3	DATE: 20.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie

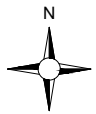
Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/Government of Ireland



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend	
	Planning Application Boundary
	Proposed Road
	Electrical Cable Trench
	Watercourse
	Soft Levelled Area
	Crane Pad Hardstanding Area
	Turbine Foundation
	Turbine Sweep Area
	Peat Repository Area
	Cut
	Fill



DRAWING TITLE:

Turbine 7 Layout

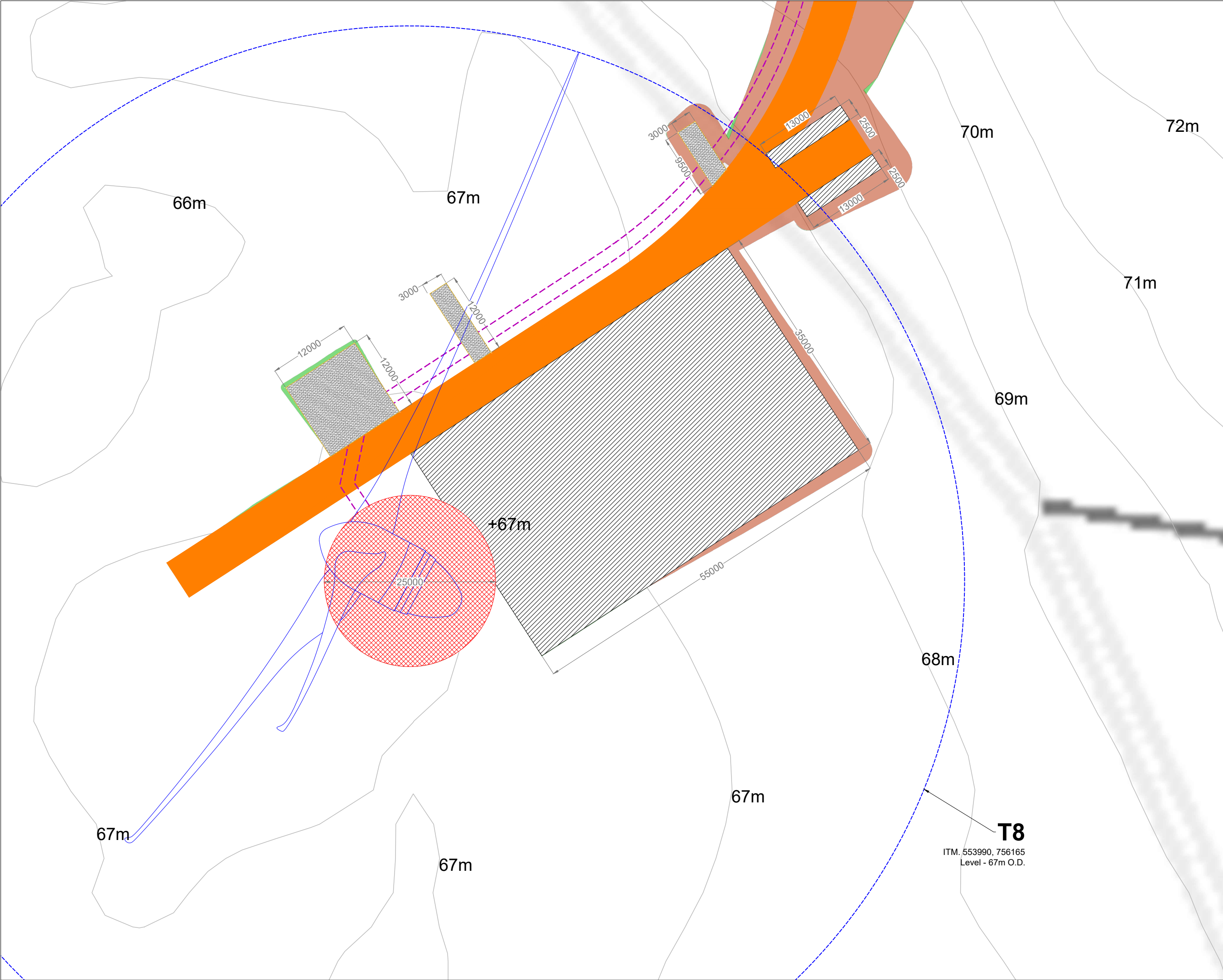
PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.:	DRAWING No.:
180740	180740 - 22
SCALE:	DATE:
1:500 @ A3	10.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend	
	Proposed Road
	Electrical Cable Trench
	Soft Levelled Area
	Crane Pad Hardstanding Area
	Turbine Foundation
	Turbine Sweep Area
	Cut
	Fill

DRAWING TITLE	
Turbine 8 Layout	
PROJECT TITLE	
Clonberne Wind Farm, Co. Galway	
DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.:	DRAWING No.:
180740	180740 - 23
SCALE:	DATE:
1:500 @ A3	10.06.2024
OS SHEET No. 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818	

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie










Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/Government of Ireland

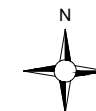


Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend

- | | |
|---|-----------------------------|
|  | Proposed Road |
|  | Temporary Access Road |
|  | Electrical Cable Trench |
|  | Soft Levelled Area |
|  | Crane Pad Hardstanding Area |
|  | Turbine Foundation |
|  | Turbine Sweep Area |
|  | Cut |
|  | Fill |



Ordnance Survey Ireland Licence No. CYAL50267517 © Ordnance Survey Ireland/Government of Ireland

DRAWING TITLE:

Turbine 9 Layout

PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:
Joseph O'Brien

CHECKED BY: **Owen Cahill**

PROJECT No.:
180740

DRAWING No.: **180740 - 24**

SCALE: **1:500 @ A3**

DATE:	10.06.2024
-------	------------

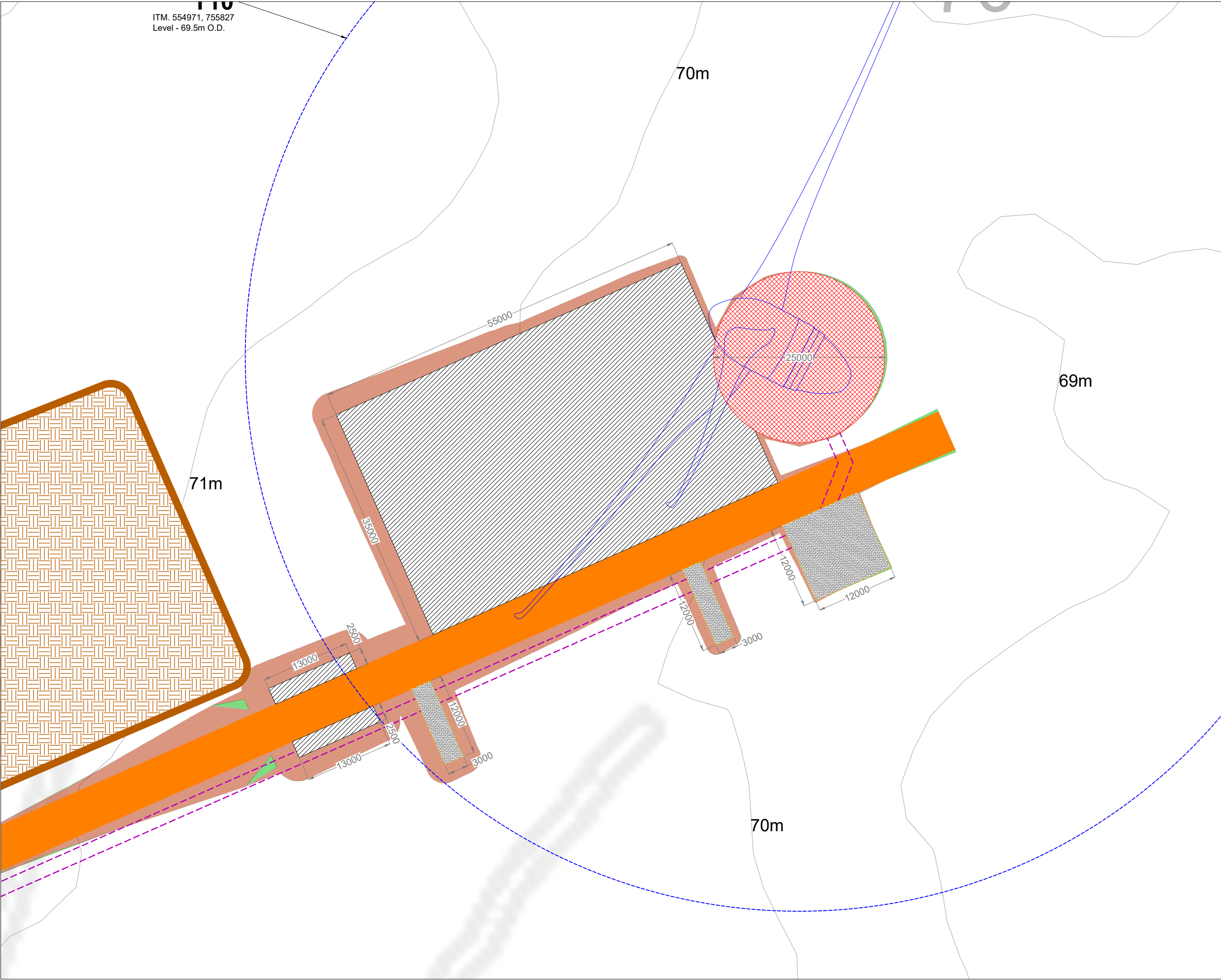
OS SHEET No.: 2540, 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

[Home](#)
[About Us](#)
[Contact Us](#)
[Privacy Policy](#)
[Terms of Service](#)
[FAQ](#)
[Sitemap](#)



MKO
Planning and
Environmental
Consultants

Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



ITM. 554971, 755827
Level - 69.5m O.D.

- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Existing Road to be Upgraded
- Proposed Road
- Electrical Cable Trench
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Peat Repository Area
- Cut
- Fill



Ordnance Survey Ireland Licence No. CYAL50287517© Ordnance Survey Ireland/ Government of Ireland

DRAWING TITLE:

Turbine 10 Layout

PROJECT TITLE:

Clonberne Wind Farm, Co. Galway

DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No.:	DRAWING No.:
180740	180740 - 25
SCALE:	DATE:
1:500 @ A3	10.06.2024

OS SHEET: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



T11

ITM. 554831, 756309
Level - 73m O.D.

- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Proposed Road
- Electrical Cable Trench
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Cut
- Fill



Ordnance Survey Ireland Licence No. CYAL50287517© Ordnance Survey Ireland/ Government of Ireland

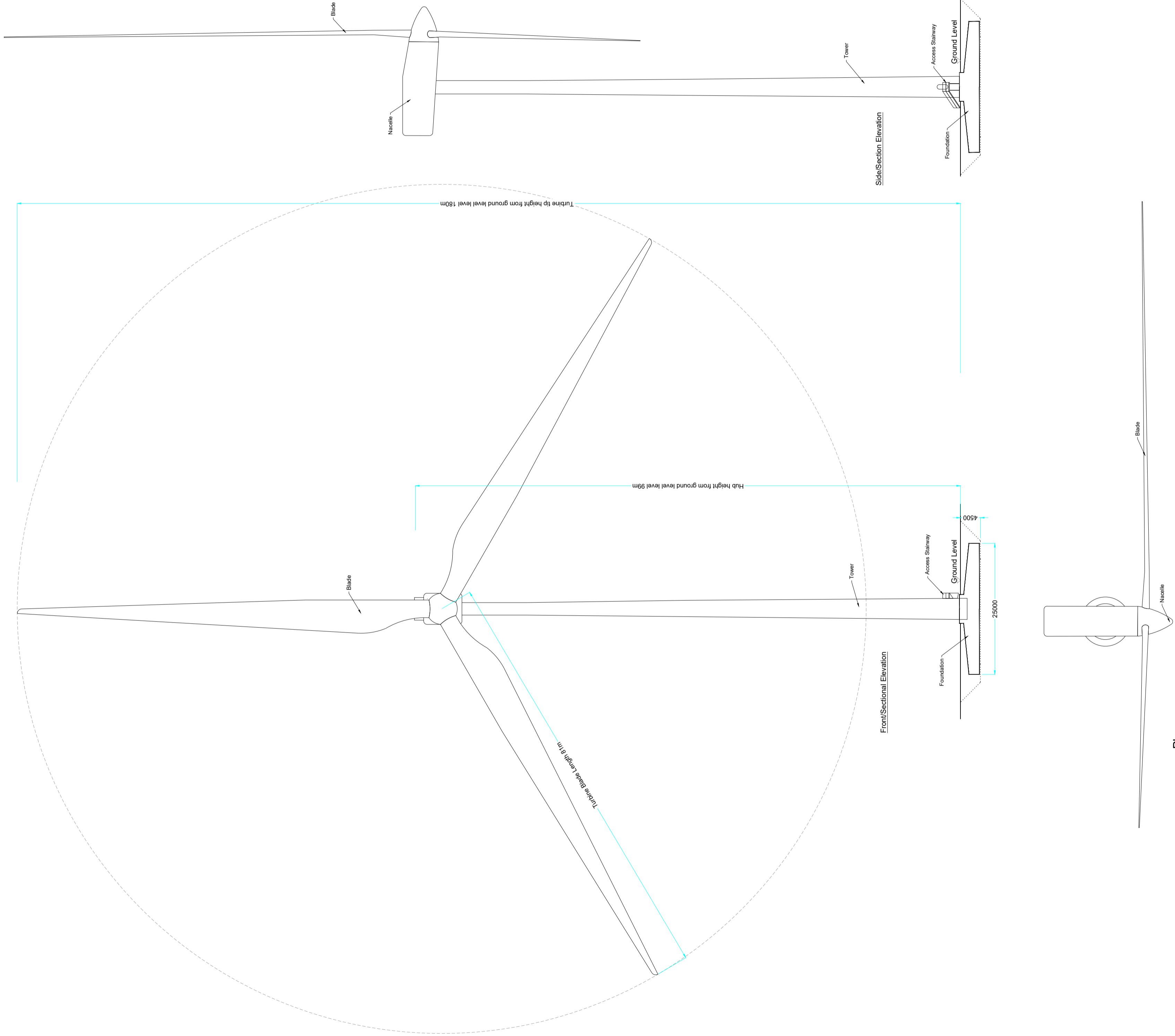
DRAWING TITLE:
Turbine 11 Layout

PROJECT TITLE:
Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 26
SCALE: 1:500 @ A3	DATE: 10.06.2024

OS SHEET No.: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie




Refer to DWGs 180740 - 28-30
for Foundation Details

DRAWING TITLE: Wind Turbine Elevations & Plan	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT NO: 180740	DRAWING NO: 180740 - 27
SCALE: 1:500 @A1	DATE: 10.06.2024

Drawing Notes

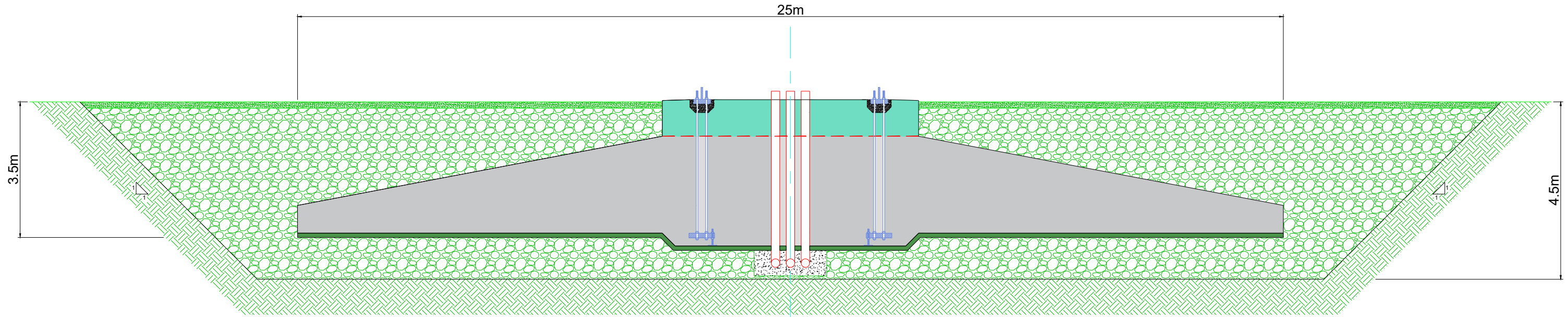
1. Proposed wind turbines to have a maximum ground to blade tip height of 180m, blade length of 81m and hub height of 99m

2. Ground level represents the top of turbine foundation.

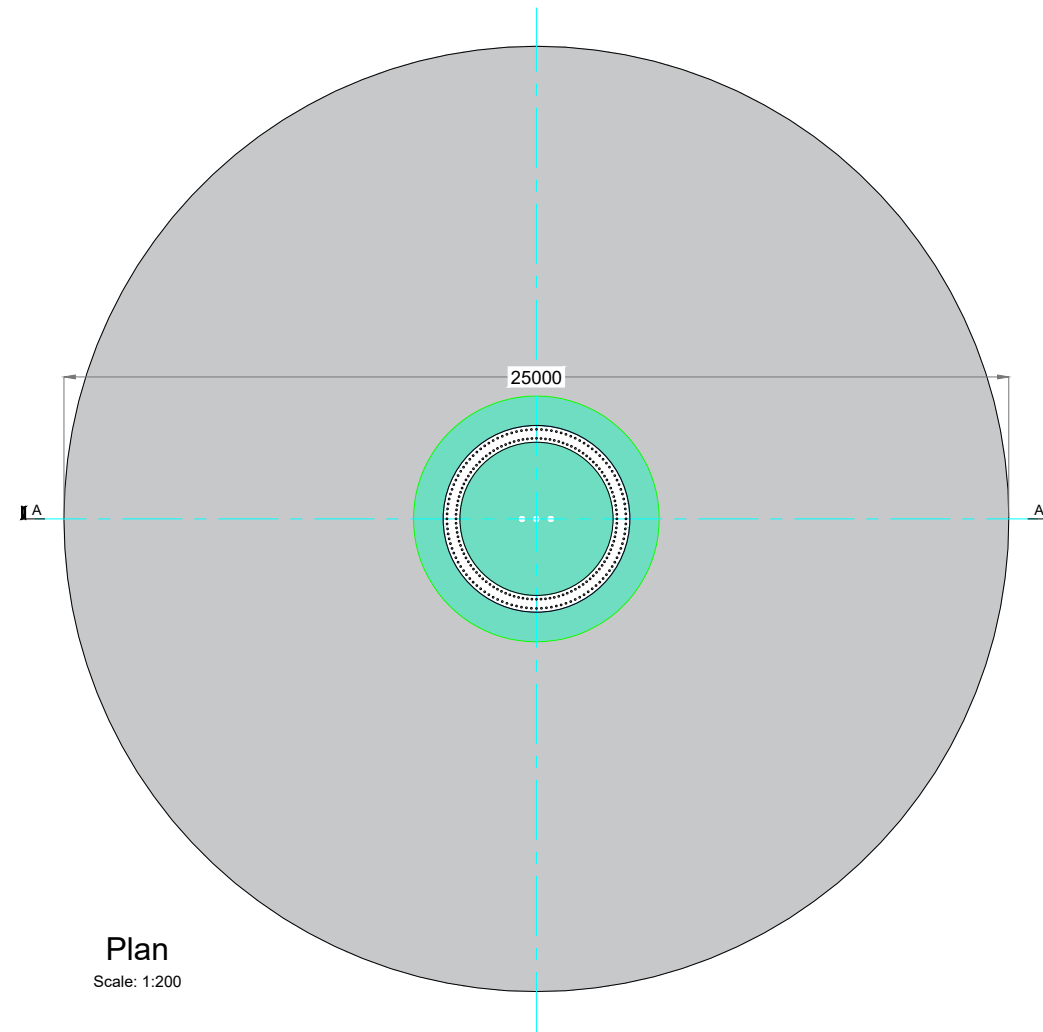
**MKO**

MKO


Tum Road, Galway
Ireland H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie

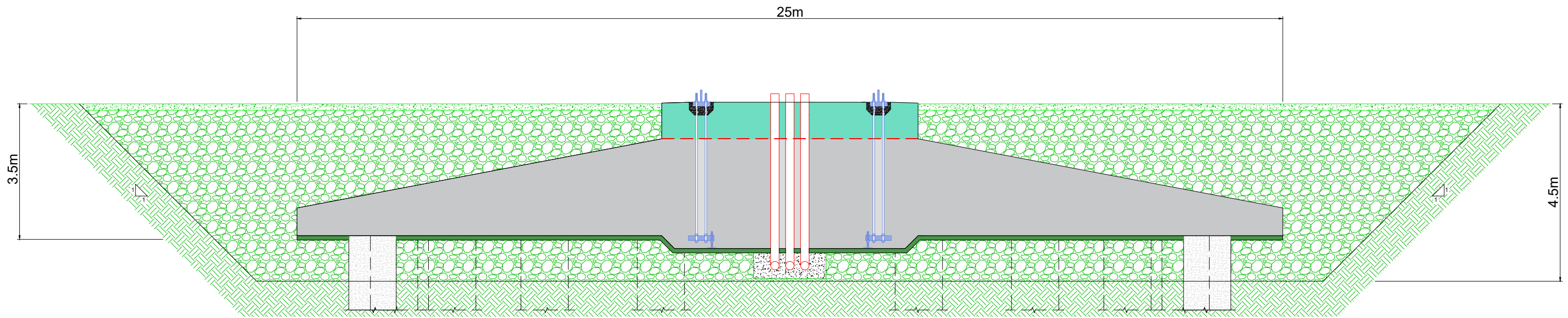


Section A-A
Scale 1:100

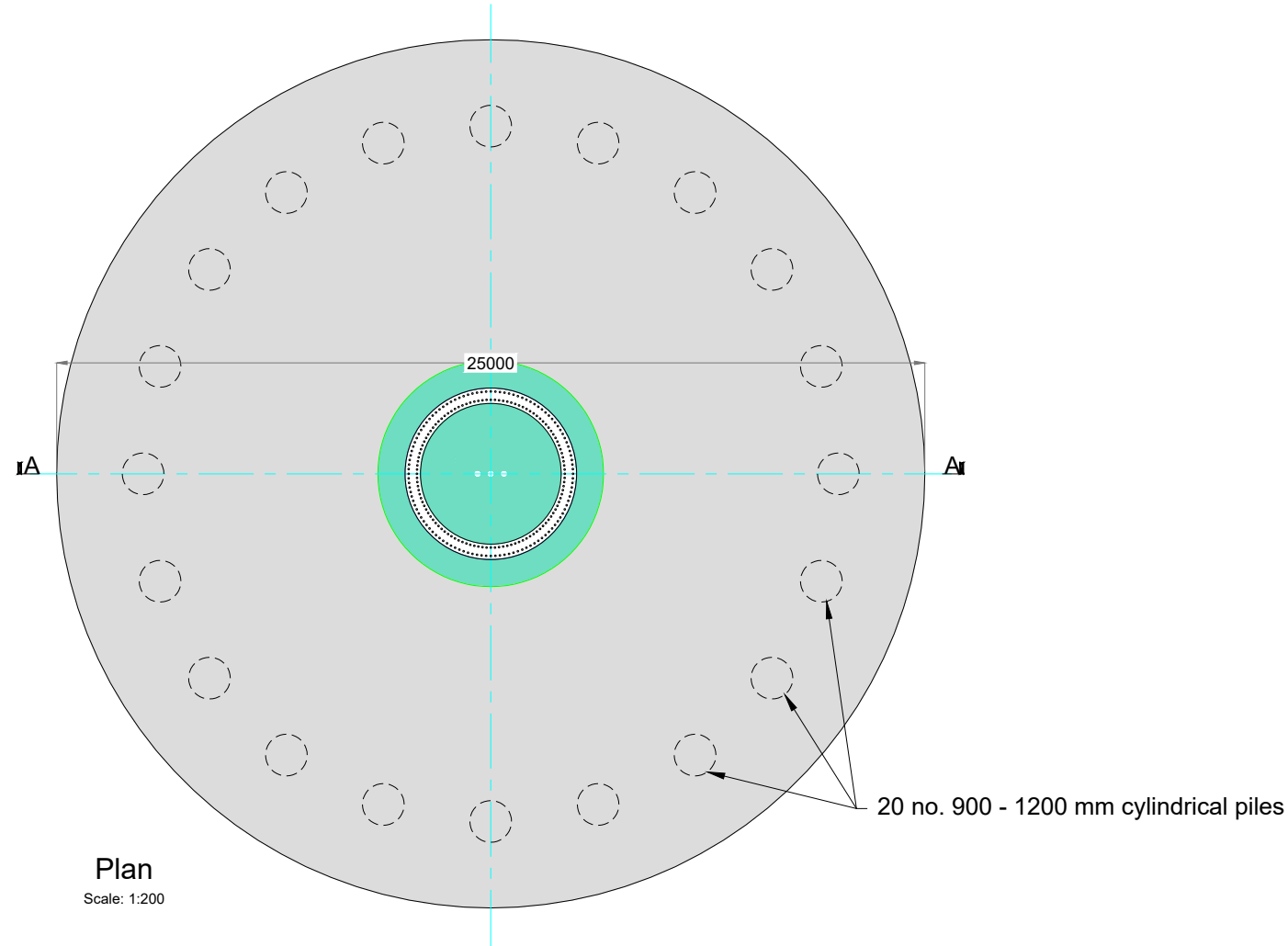


Plan
Scale: 1:200


DRAWING TITLE: Gravity Foundation Detail			
PROJECT TITLE: Clonberne Wind Farm, Co. Galway			
DRAWING BY: Joseph O'Brien		CHECKED BY: Owen Cahill	
PROJECT No.: 180740		DRAWING No.: 180740 - 28	
SCALE: As shown @ A3		DATE: 10.06.2024	
		MKO Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@www.mkofireland.ie Website: www.mkofireland.ie	



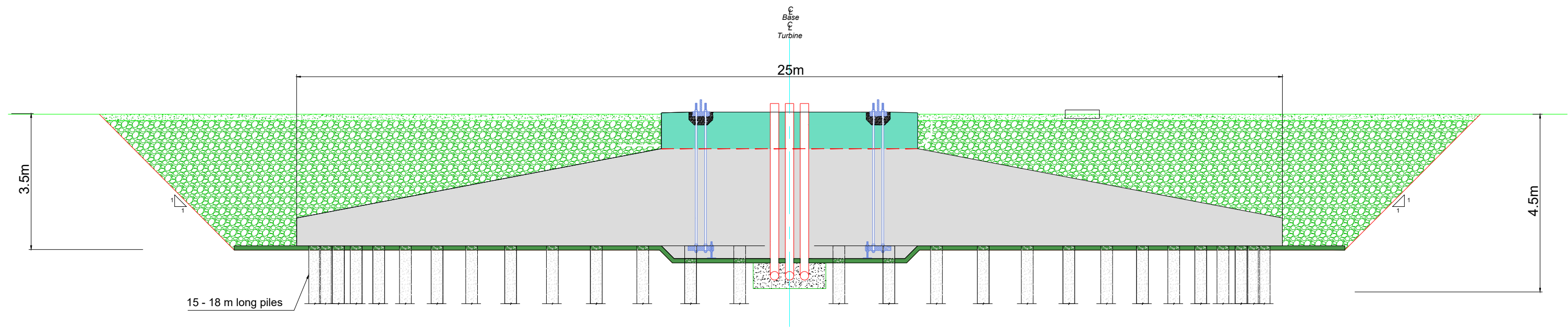
Section A-A
Scale 1:100



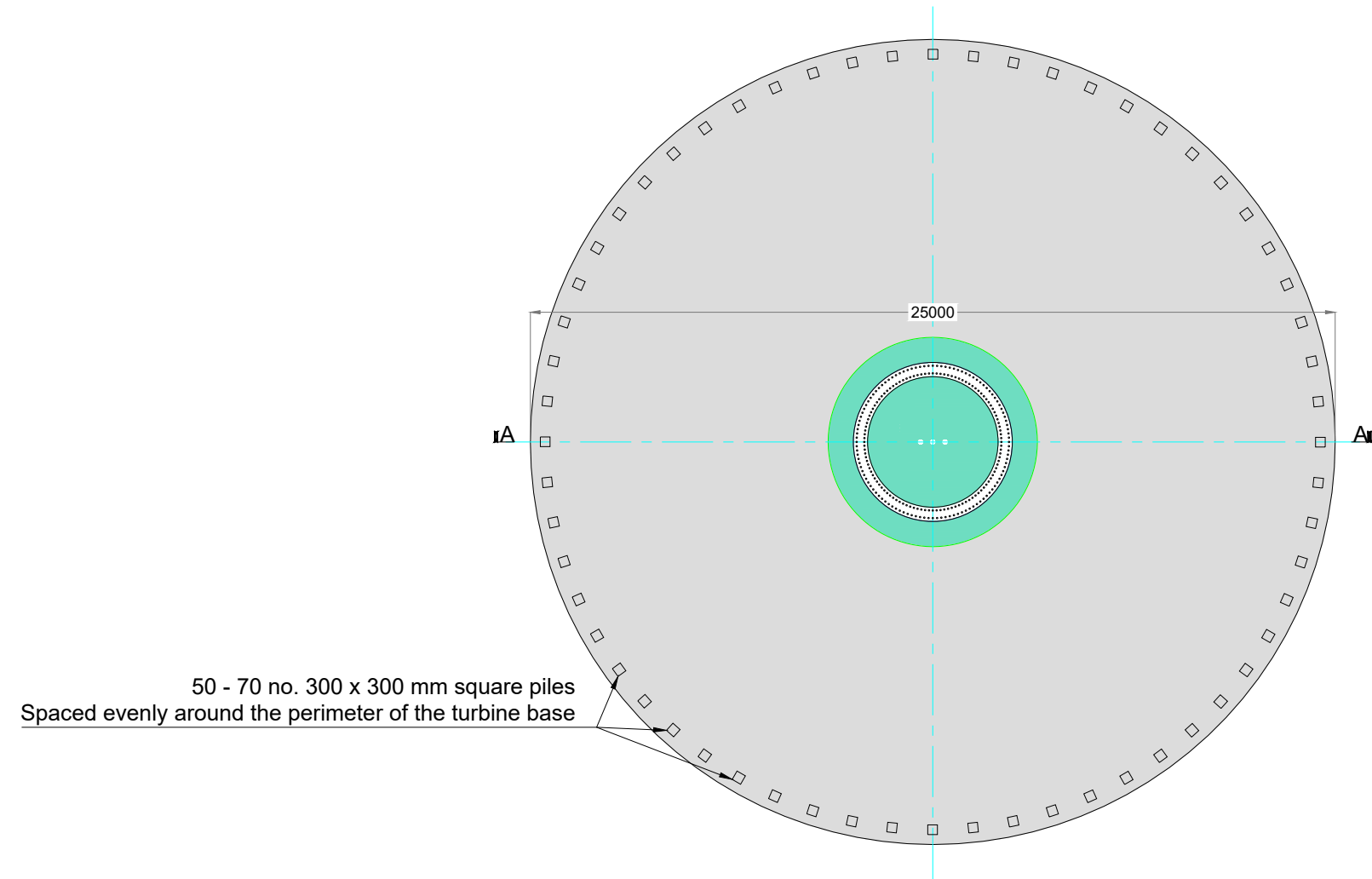
Plan
Scale: 1:200


DRAWING TITLE: Bored Pile Foundation Detail	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 29
SCALE: As shown @ A3	DATE: 10.06.2024
<div><div>MKO</div><div>Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@www.mkoireland.ie Website: www.mkoireland.ie</div></div>	

Section A-A
Scale 1:100



Plan
Scale: 1:200



DRAWING TITLE: Driven Pile Foundation Detail	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 30
SCALE: As shown @ A3	DATE: 28.06.2024
<div><div><p>MKO Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 YW84 +353 (0) 91 735611 email: info@www.mkoireland.ie Website: www.mkoireland.ie</p></div></div>	



- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Proposed Road
- Cut
- Fill
- 38kV Underground Cabling

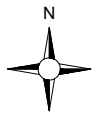
DRAWING TITLE:
Temporary Construction Compound 1

PROJECT TITLE:
Clonberne Wind Farm, Co. Galway

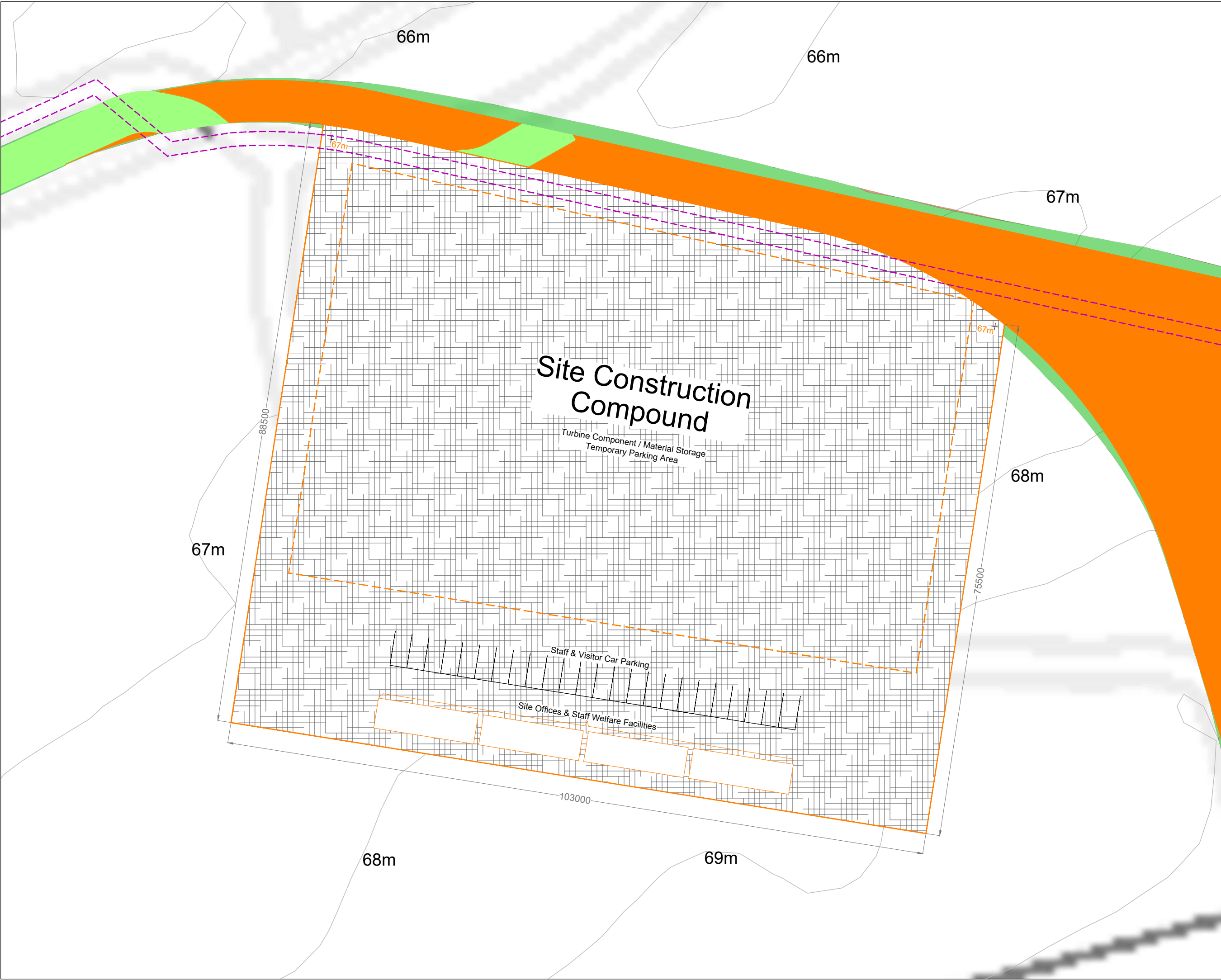
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 31
SCALE: 1:500 @ A3	DATE: 20.06.2024

OS SHEET: 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/Government of Ireland



Project Design Drawing Notes

1. Drawings issued are for planning application purposes only.
2. Drawings not to be used for construction/contract conditions.
3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
7. Layout plans show Turbine rotor diameter as per turbine drawing.
8. Final levels may vary depending on local ground conditions.

Drawing Legend	
<div></div>	Existing Road to be Upgraded
<div></div>	Proposed Road
<div></div>	Electrical Cable Trench
<div></div>	Cut
<div></div>	Fill

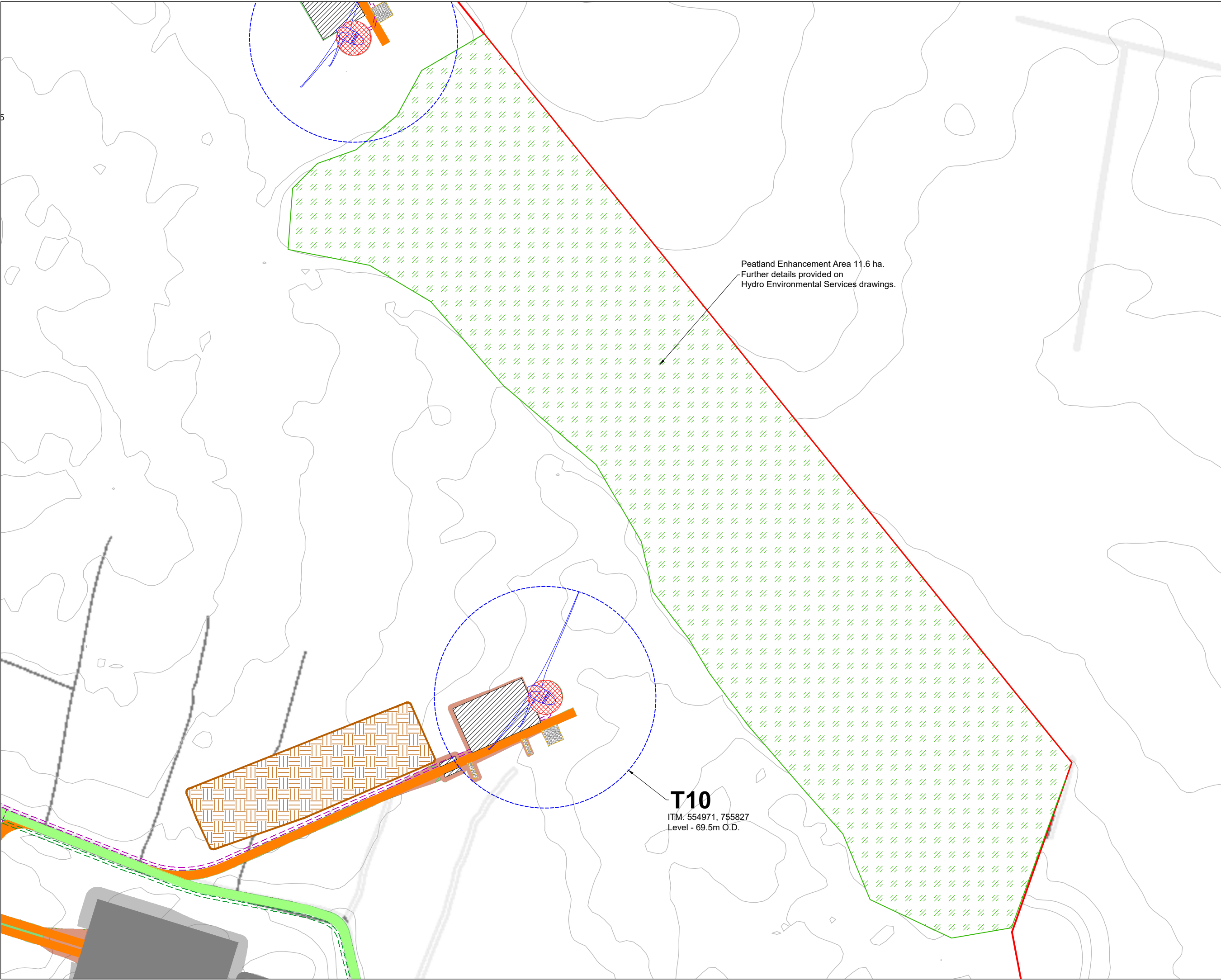
DRAWING TITLE:
Temporary Construction Compound 2

PROJECT TITLE:
Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 32
SCALE: 1:500 @ A3	DATE: 10.06.2024

OS SHEET 250, 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



Peatland Enhancement Area 11.6 ha.
Further details provided on
Hydro Environmental Services drawings.

T10
ITM: 554971, 755827
Level - 69.5m O.D.

- Project Design Drawing Notes**
1. Drawings issued are for planning application purposes only.
 2. Drawings not to be used for construction/contract conditions.
 3. Copyright, all rights reserved. No part herewith may be copied or reproduced partially or wholly in any form whatsoever without the prior notice of the copyright owner McCarthy Keville O'Sullivan.
 4. Do not scale off this drawing. Figured metric dimensions only should be taken off this drawing.
 5. All contractors, whether main or sub-contractors, must visit the site and are responsible for taking and checking any and all dimensions and levels that relate to the works.
 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

Drawing Legend

- Planning Application Boundary
- Existing Road to be Upgraded
- Proposed Road
- Electrical Cable Trench
- 38kV Underground Cabling
- Soft Levelled Area
- Crane Pad Hardstanding Area
- Turbine Foundation
- Turbine Sweep Area
- Cut
- Fill
- Peatland Enhancement Area
- Peat Repository Area
- Area Part of Separate Application



Ordnance Survey Ireland Licence No. CYAL50267517© Ordnance Survey Ireland/ Government of Ireland

DRAWING TITLE:
Peatland Enhancement Area

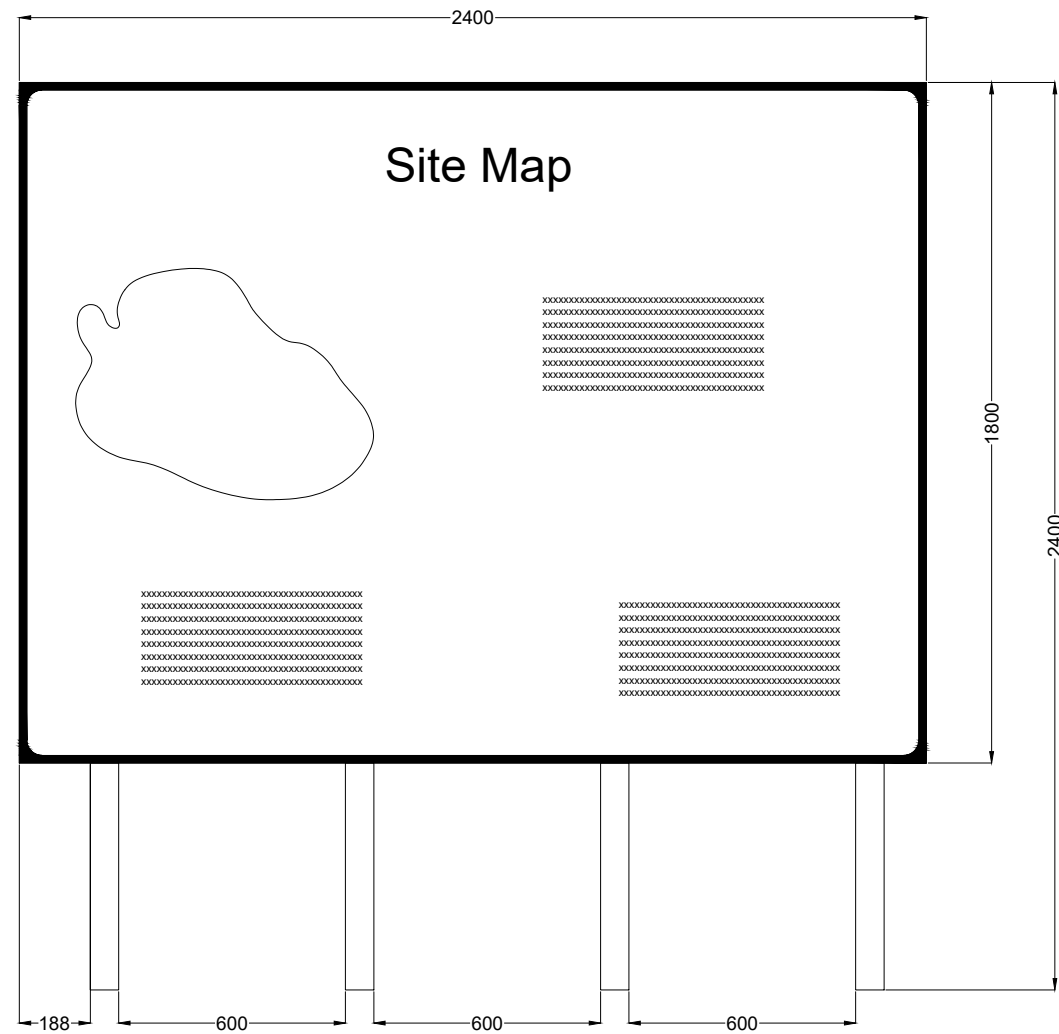
PROJECT TITLE:
Clonberne Wind Farm, Co. Galway

DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 33
SCALE: 1:2,500 @ A3	DATE: 20.06.2024

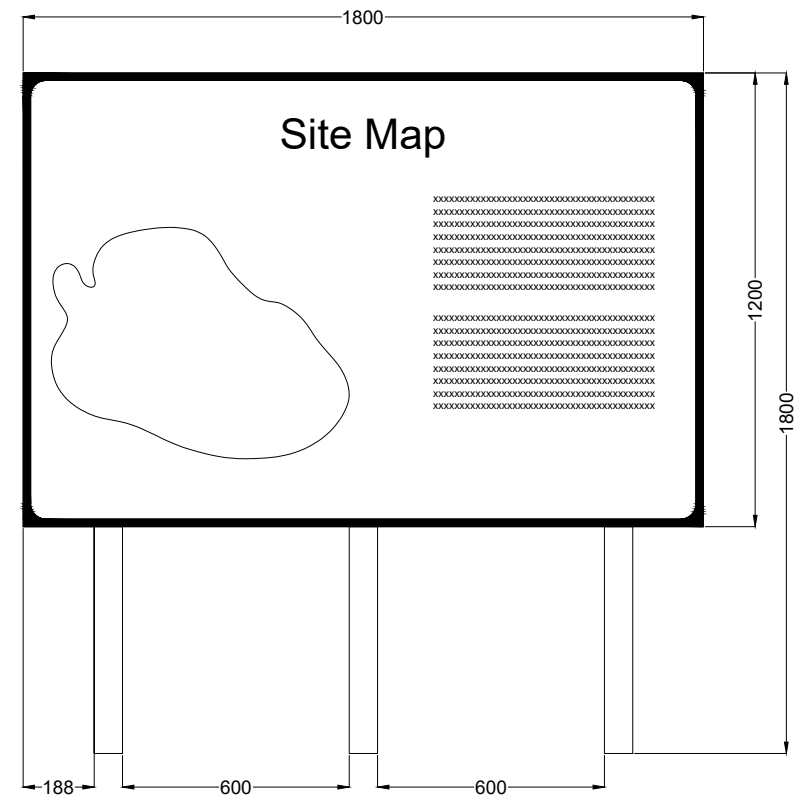
OS SHEET 2540, 2541, 2542, 2543, 2544, 2607, 2608, 2609, 2610, 2611, 2677, 2678, 2679, 2680, 2681, 2746, 2747, 2748, 2749, 2750, 2814, 2815, 2816, 2817, 2818

MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie

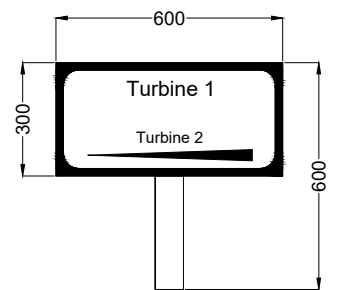
Note
For illustrative purposes only
exact details to be confirmed



Signage Type A - Waypoint Map Signage

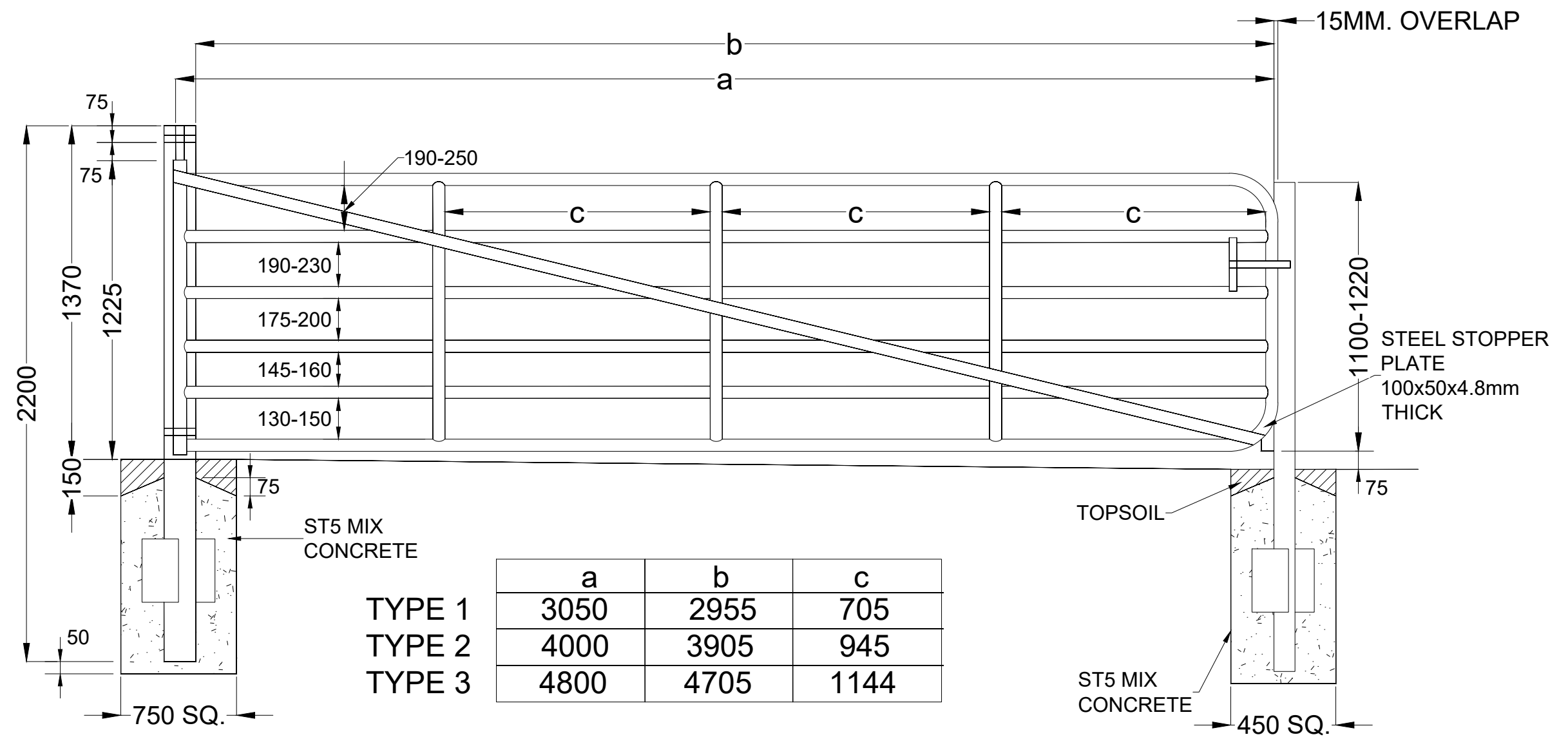


Signage Type B -Entry Point Signage

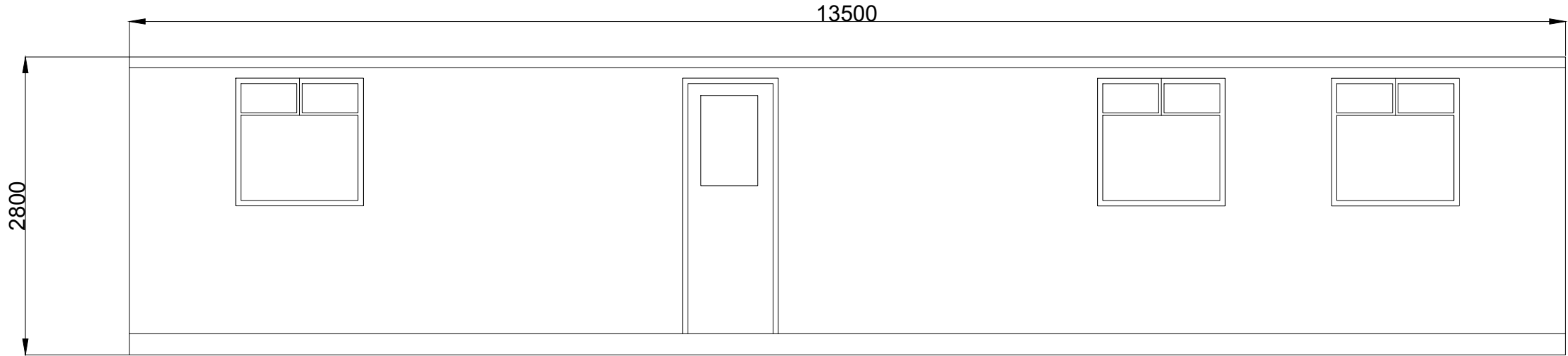


Signage Type C - Way Point Direction Signage

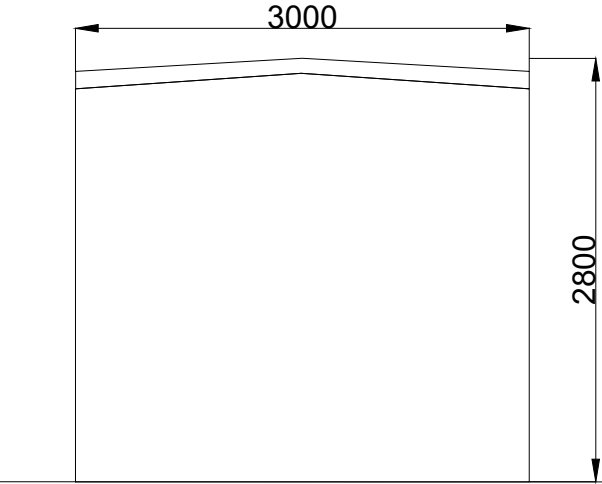
DRAWING TITLE:	
<h1>Signage Detail</h1>	
PROJECT TITLE:	
<h2>Clonberne Wind Farm, Co. Galway</h2>	
DRAWING BY:	CHECKED BY:
Joseph O'Brien	Owen Cahill
PROJECT No:	DRAWING No:
180740	180740 - 34
SCALE:	DATE:
1:20 @ A3	10.06.2024
<div style="display: flex; align-items: center;">  <div> <p>MKO</p> <p>Planning and Environmental Consultants</p> <p>Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@www.mkofireland.ie Website: www.mkofireland.ie</p> </div> </div>	



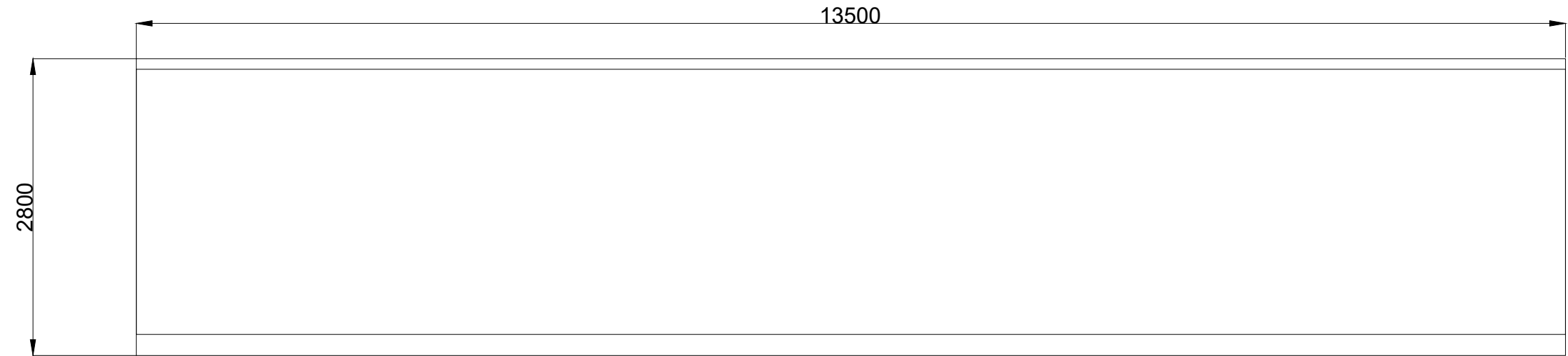
a	b	c
3050	2955	705
4000	3905	945
4800	4705	1144



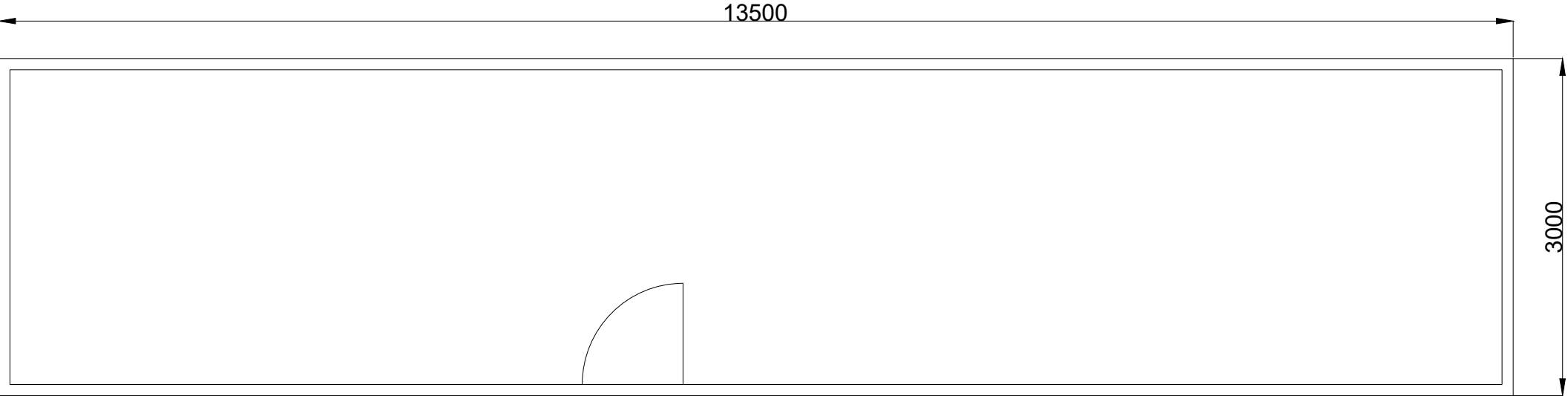
FRONT ELEVATION



SIDE ELEVATION

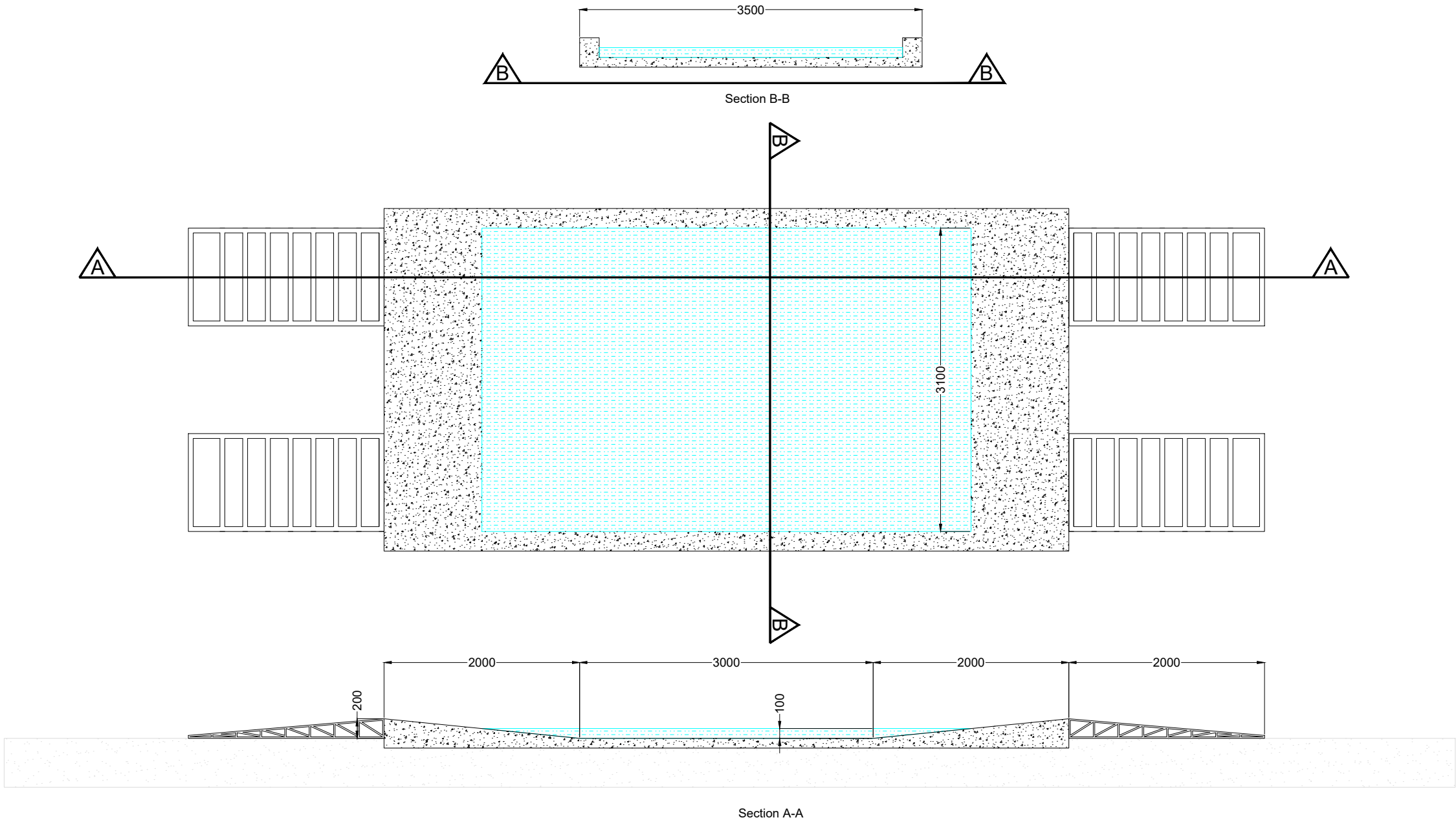


REAR ELEVATION

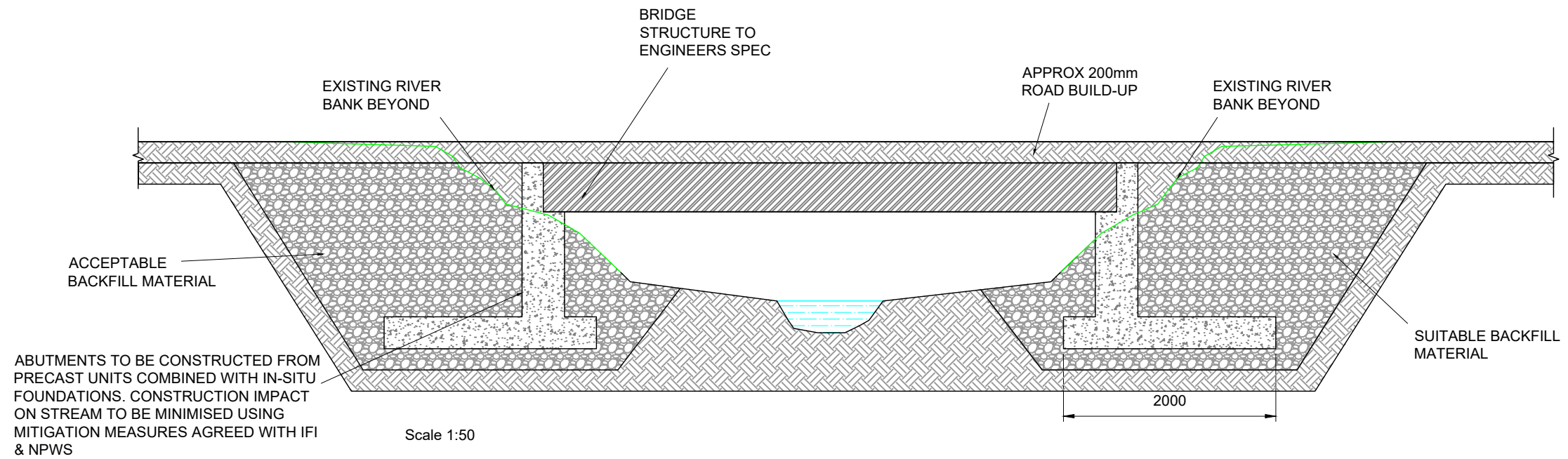


PLAN VIEW

DRAWING TITLE: Site Office & Staff Facilities Detail	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 36
SCALE: 1:50 @ A3	DATE: 10.06.2024
<div><div>MKO</div><div>Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 YW84 +353 (0) 91 735611 email: info@www.mkoireland.ie Website: www.mkoireland.ie</div></div>	



DRAWING TITLE: Wheel Wash Detail	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 37
SCALE: 1:50 @ A3	DATE: 10.06.2024
<div><div><div><div>MKO</div><div>Planning and Environmental Consultants</div></div></div><div><div>MKO</div><div>Planning and Environmental Consultants</div><div>Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@www.mkoireland.ie Website: www.mkoireland.ie</div></div></div>	



DRAWING TITLE: Clear Span Watercourse Crossing	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 38
SCALE: 1: 50 @ A3	DATE: 10.06.2024
<div><div>MKO Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@www.mkofireland.ie Website: www.mkofireland.ie</div></div>	



Access Junction A

Junction radii are 13m with 1:10 tapers for HGVs in accordance with TII DN-GEO-03060

Junction markings to be as per Figure 7.35 of the Traffic Signs Manual

- Centreline RM 001
- STOP line RRM 017
- STOP lettering M114.

Junction stop signs to be as per RUS 027 of the Traffic Signs Manual.

This junction will be managed by Flagman at all times when in use and closed with gate at all other times.

3m x 160m visibility splay

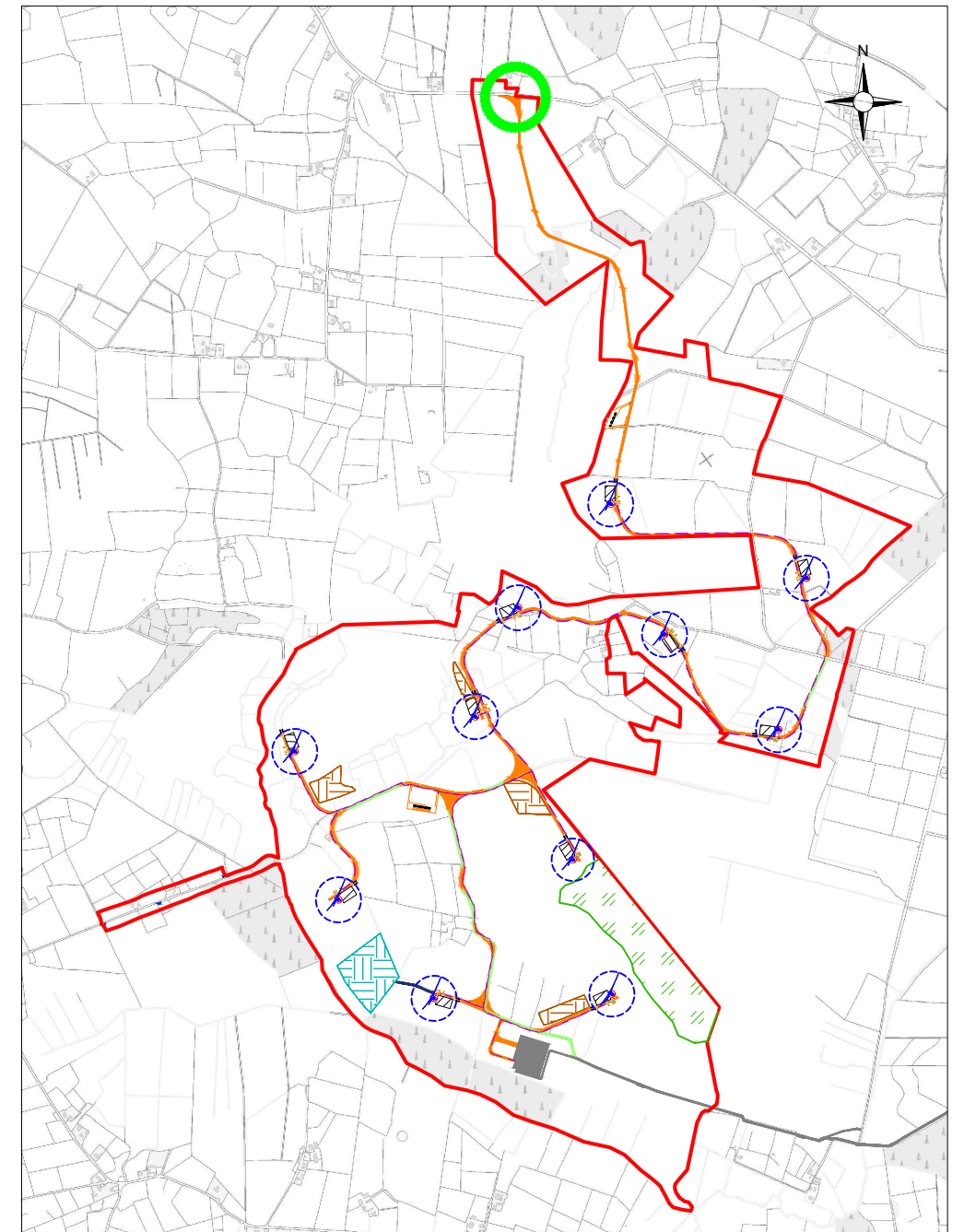
Run-over areas required for turbine plant deliveries


R328

3m x 67m visibility splay

Junction layout to be retained after turbine delivery stage (13m radii with 1:10 taper for left in and left out movements). Junction to be closed on completion of construction.


Scale: 1:1,000

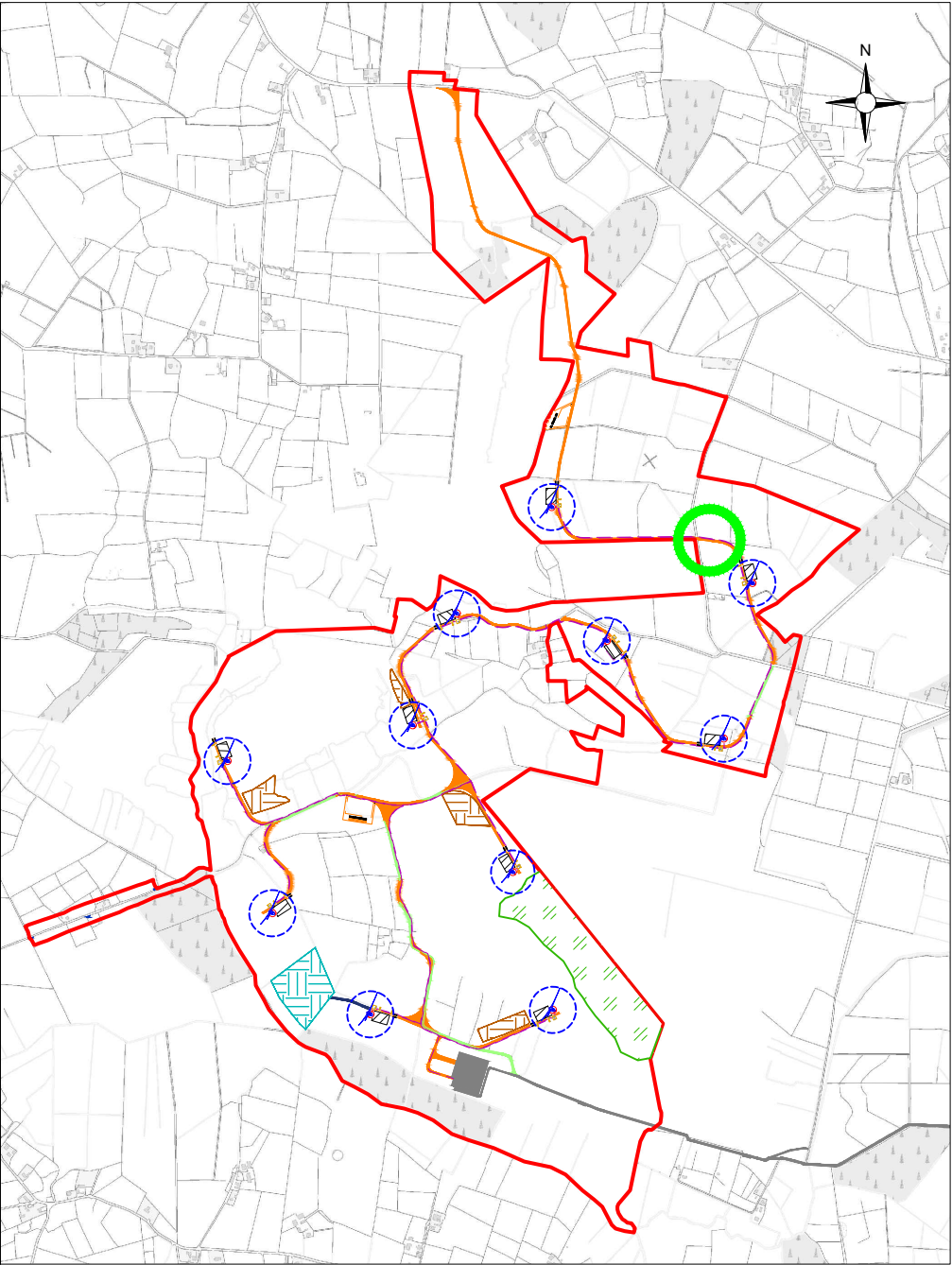
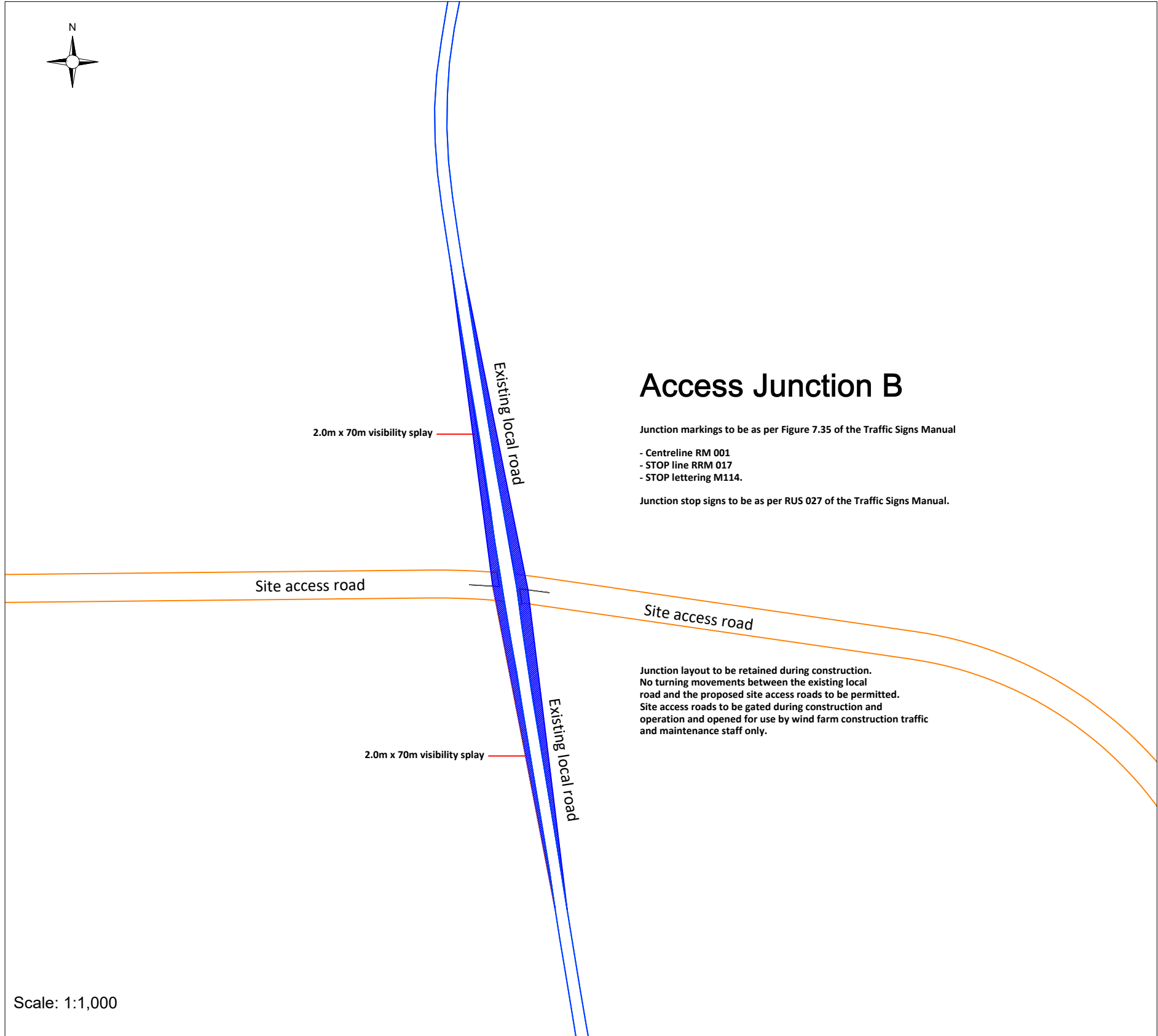



 1:25,000 Location on Context Map




Drawing Legend

-  Existing Road Edge
-  Proposed Road
-  Transport Runover Area
-  Sight Line

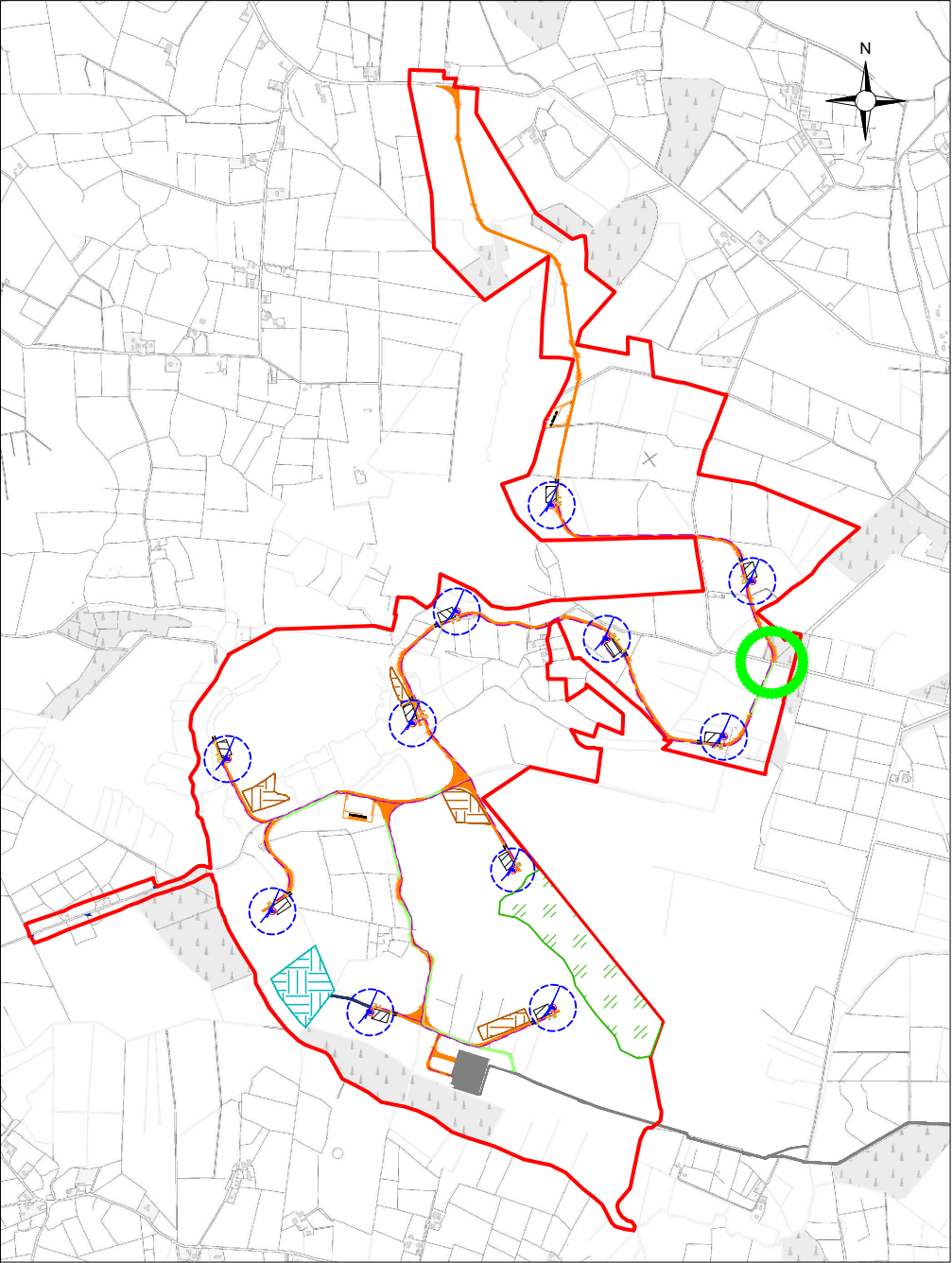
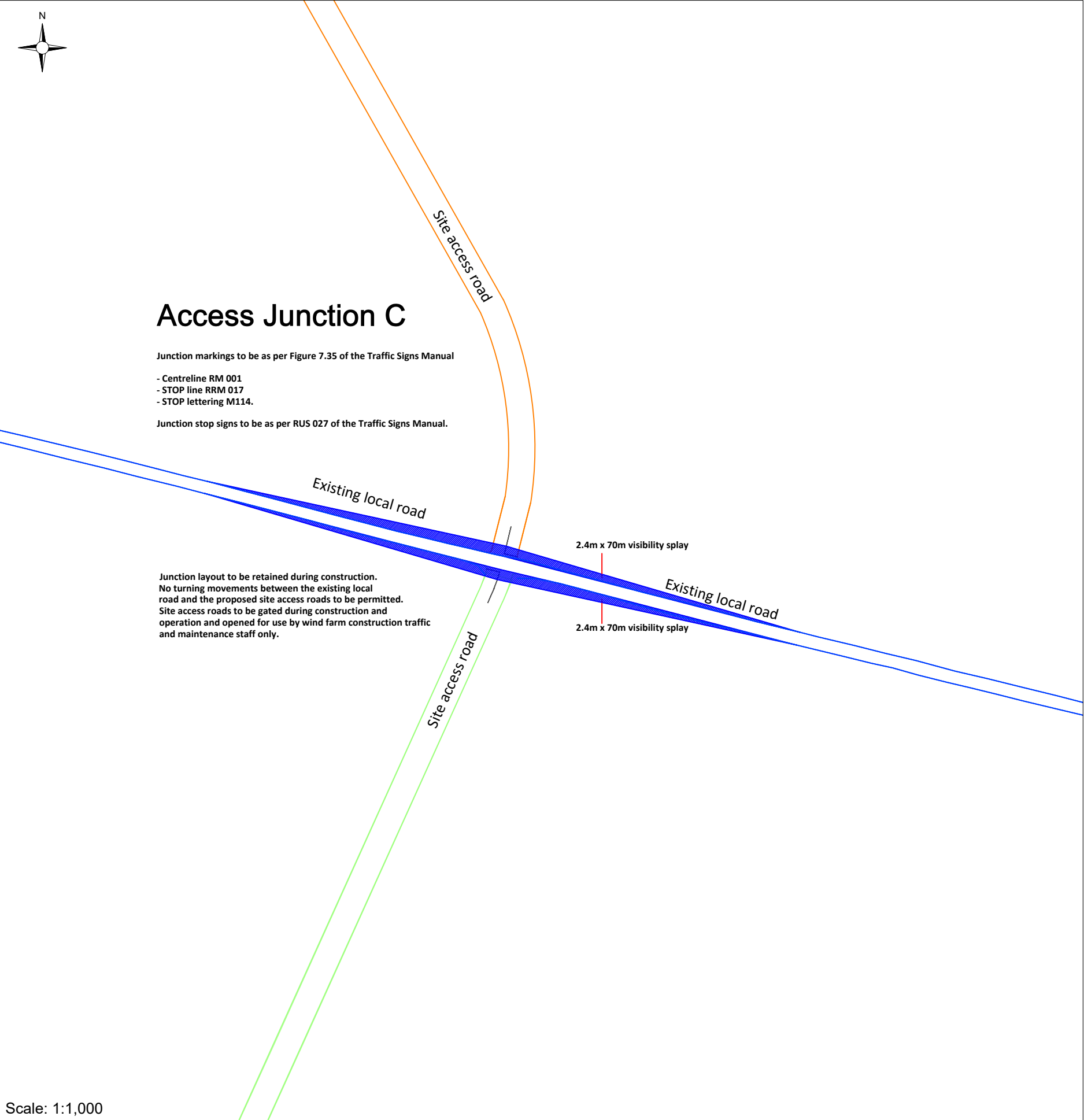
DRAWING TITLE: Proposed Access Junction A	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 39
SCALE: 1:1,000 @ A3	DATE: 10.06.2024
 MKO Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@www.mkofireland.ie Website: www.mkofireland.ie	



 1:25,000 Location on Context Map

Drawing Legend	
	Existing Road Edge
	Proposed Road
	Sight Line

DRAWING TITLE: Proposed Access Junction B	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 40
SCALE: 1:1,000 @ A3	DATE: 10.06.2024
 MKO Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@www.mkofireland.ie Website: www.mkofireland.ie	



1:25,000 Location on Context Map

Drawing Legend	
	Existing Road Edge
	Proposed Road
	Sight Line
	Existing Road to be Upgraded

DRAWING TITLE: Proposed Access Junction C	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 41
SCALE: 1:1,000 @ A3	DATE: 10.06.2024
MKO Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@www.mkofireland.ie Website: www.mkofireland.ie	



Access Junction D

Junction markings to be as per Figure 7.35 of the Traffic Signs Manual

- Centreline RM 001
- STOP line RRM 017
- STOP lettering M114.

Junction stop signs to be as per RUS 027 of the Traffic Signs Manual.

Existing local road

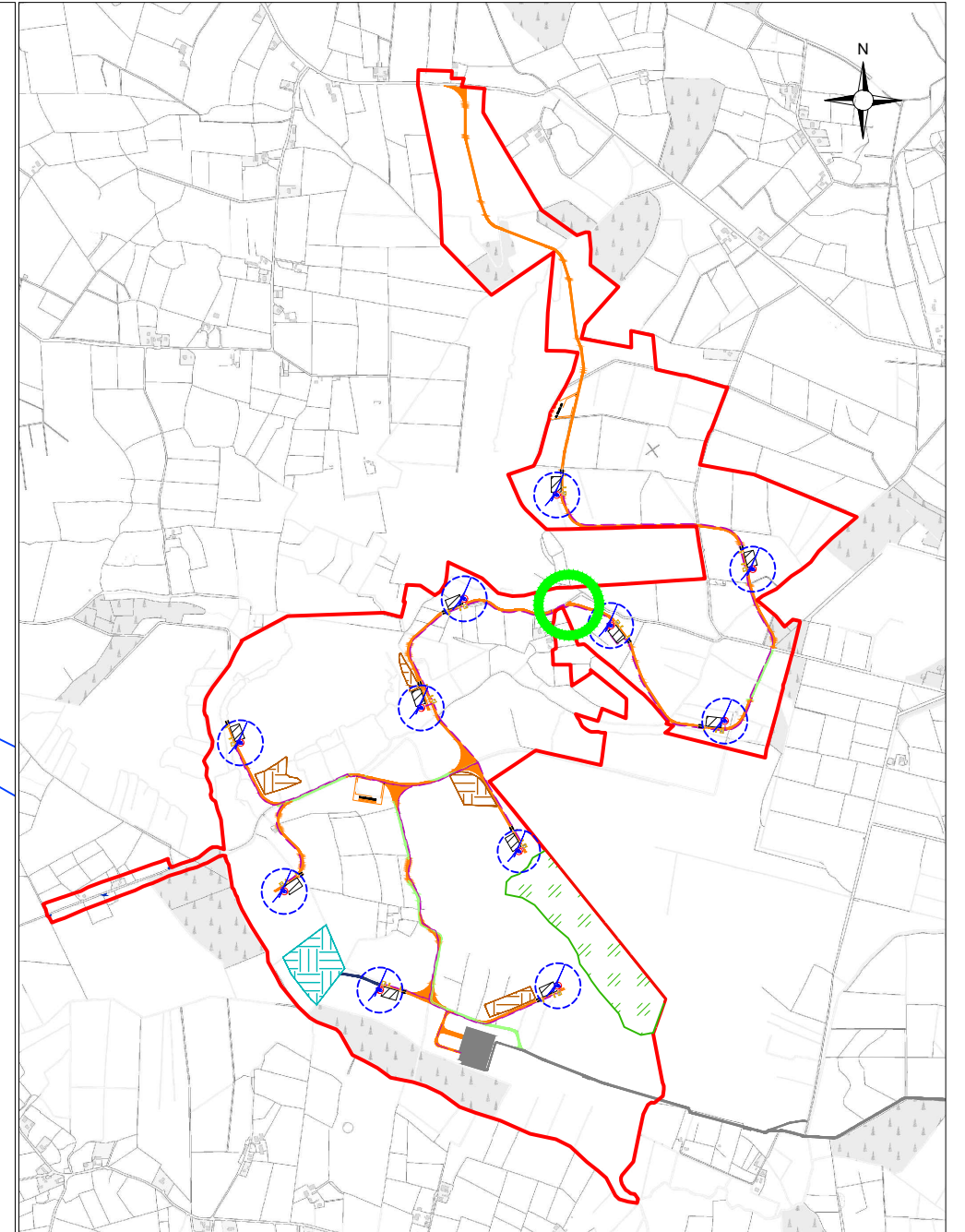
2.4m x 50m visibility splay

Access for general construction traffic

Site access road

Access for abnormally sized loads

Scale: 1:500



1:25,000 Location on Context Map

Drawing Legend

- Existing Road Edge
- Proposed Road
- Sight Line

DRAWING TITLE: Proposed Access Junction D	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 42
SCALE: 1:500 @ A3	DATE: 10.06.2024



Access Junction F

Junction markings to be as per Figure 7.35 of the Traffic Signs Manual

- Centreline RM 001
- STOP line RRM 017
- STOP lettering M114.

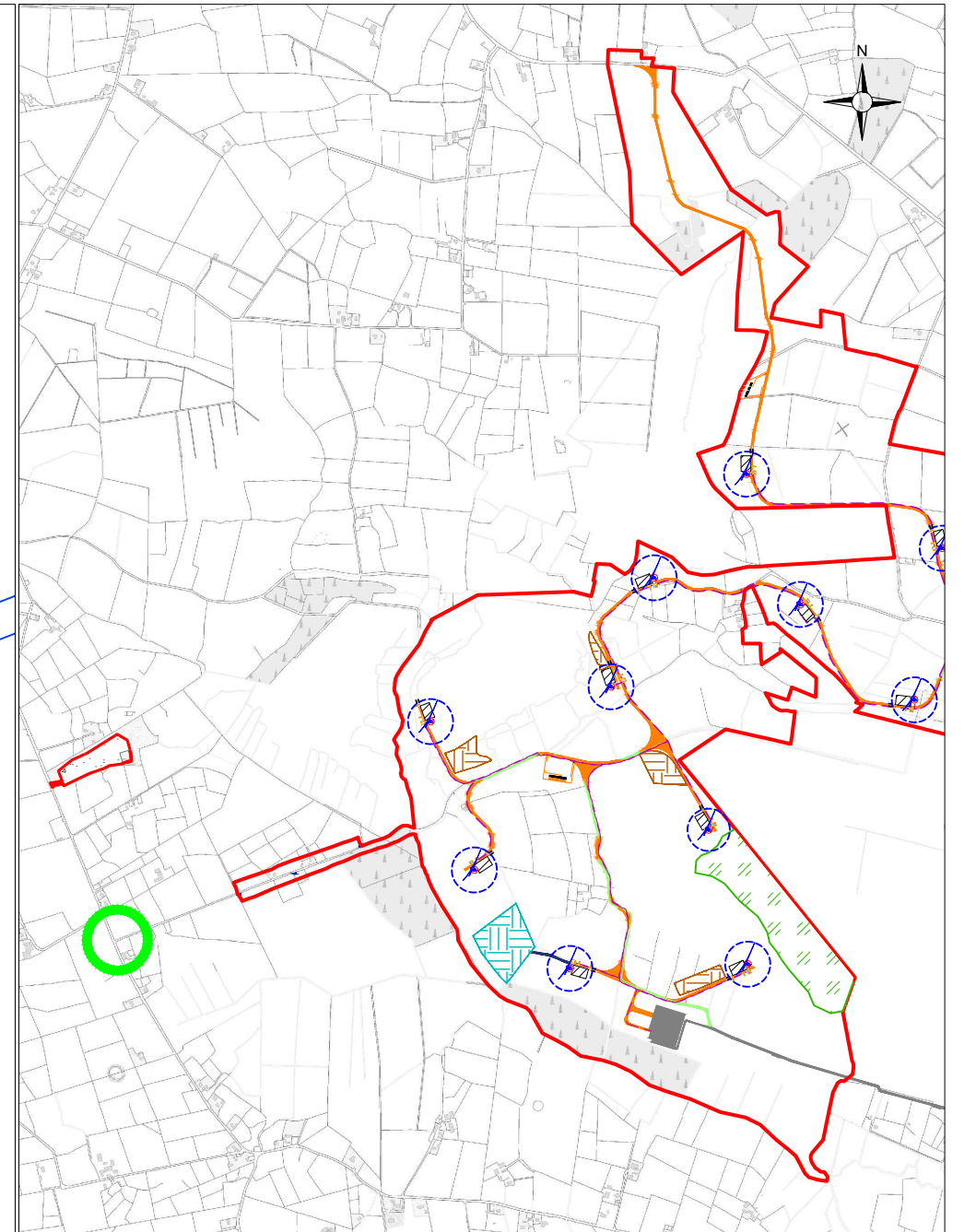
Junction stop signs to be as per RUS 027 of the Traffic Signs Manual.

This junction will be managed by Flagmen when in use for the Proposed Development.

Existing local road

L-2232

Scale: 1:500

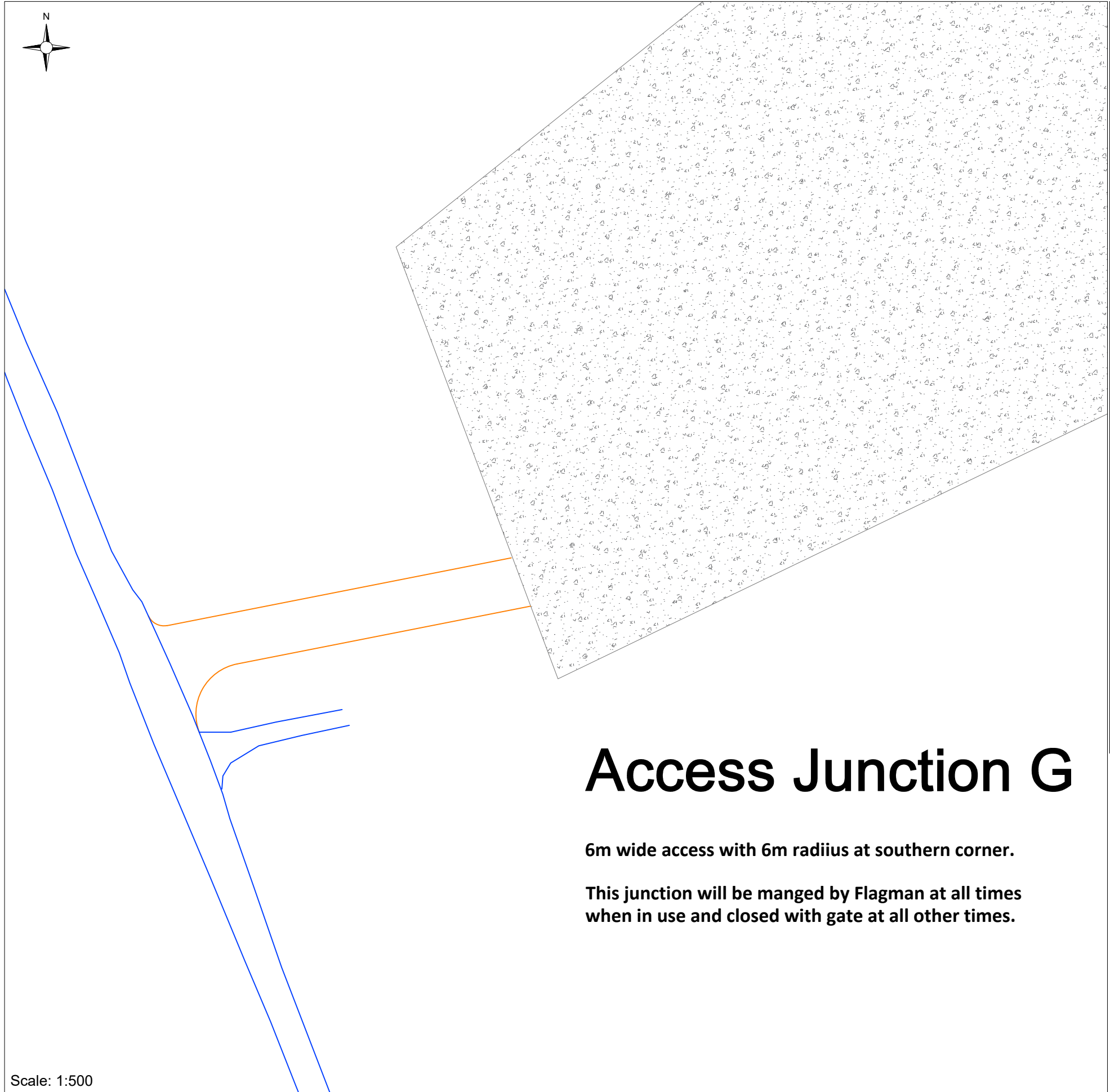


1:25,000 Location on Context Map

Drawing Legend

Existing Road Edge

DRAWING TITLE: Proposed Access Junction F	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 43
SCALE: 1:500 @ A3	DATE: 10.06.2024

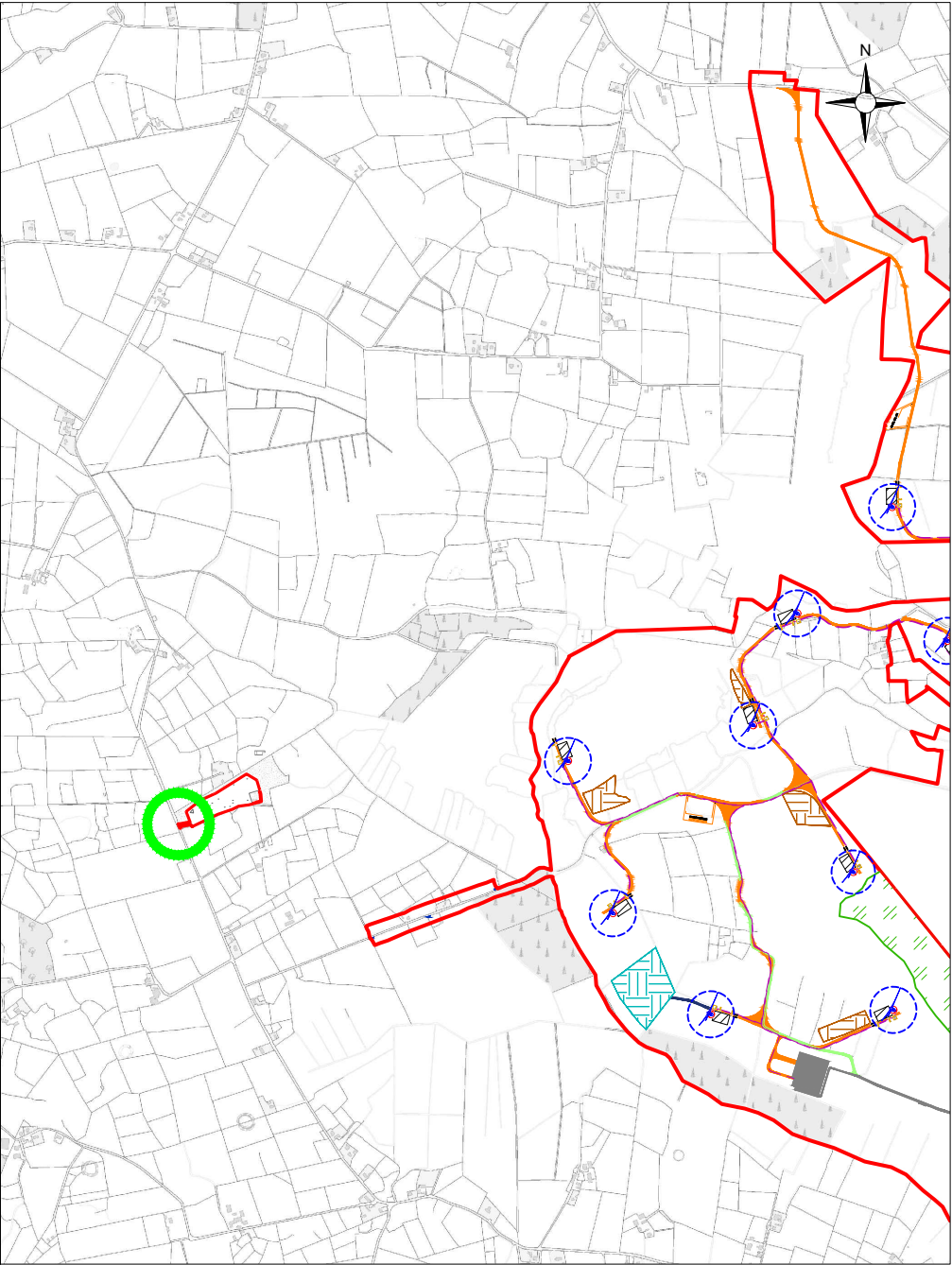



Scale: 1:500



Access Junction G

6m wide access with 6m radius at southern corner.

This junction will be managed by Flagman at all times when in use and closed with gate at all other times.



 1:25,000 Location on Context Map

Drawing Legend	
	Existing Road Edge
	Proposed Road

DRAWING TITLE: Proposed Access Junction G	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 44
SCALE: 1:500 @ A3	DATE: 10.06.2024
 MKO Planning and Environmental Consultants Tuum Road, Galway Ireland, H91 VW84 email: info@www.mkofireland.ie Website: www.mkofireland.ie	



Temporary Access Road (to facilitate delivery of abnormal loads) for construction access, finished with compacted Clause 804 material. Following commissioning of the wind farm, the hardcore area will be removed and the area reinstated to its original condition with all granular fill removed, topsoil reinstated and returned to original condition.

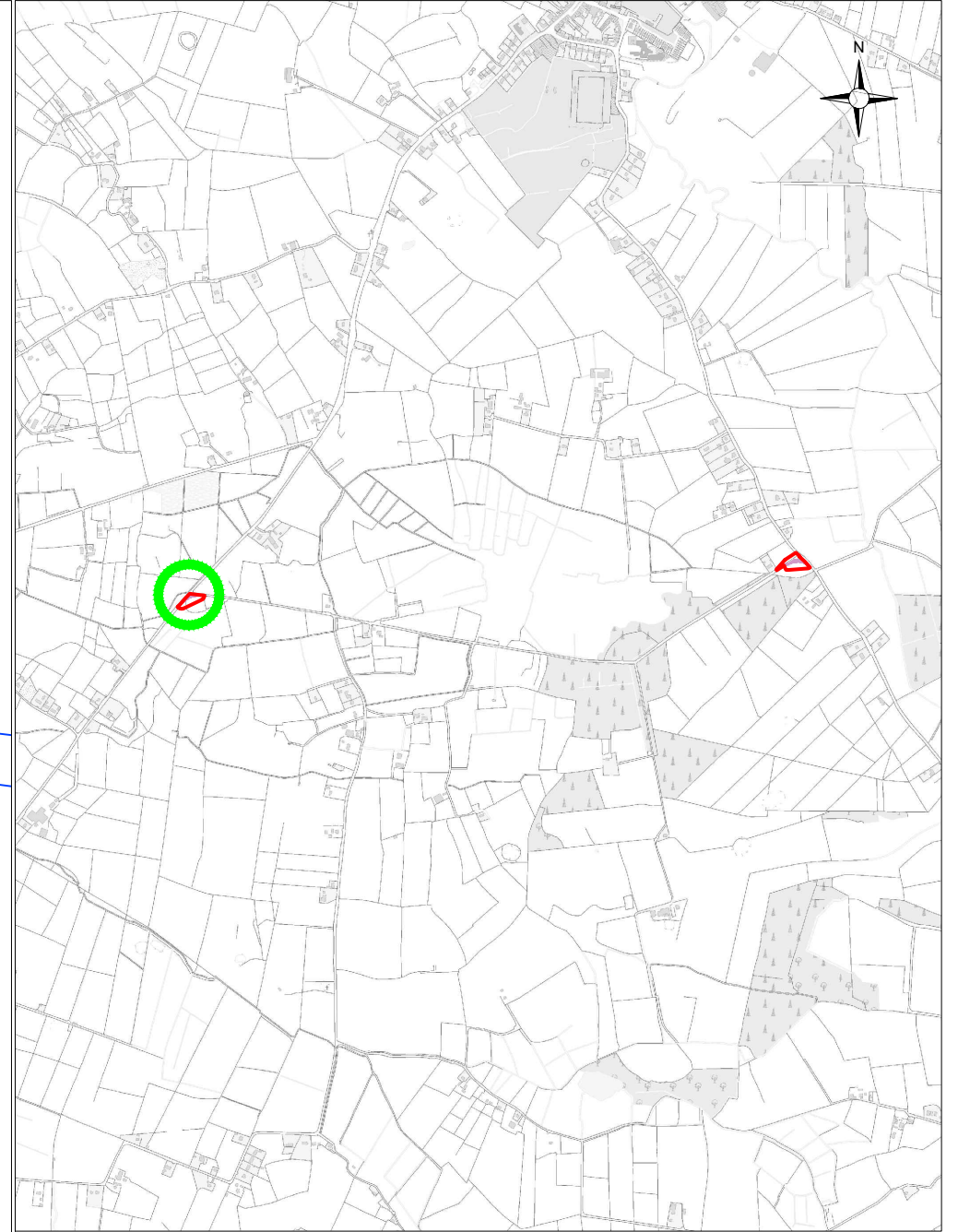
Existing stone wall to be removed and temporary Fencing (Refer to DWG 180740 - 48) to be installed during the installation of the 'Temporary Access Road' and for the duration of the construction phase. Following commissioning of the wind farm, temporary fencing will be removed and stone wall reinstated.

B

A

Existing fence line to be removed and temporary Fencing (Refer to DWG 180740 - 48) to be installed during the installation of the 'Temporary Access Road' and for the duration of the construction phase. Following commissioning of the wind farm, temporary fencing will be removed and fence line reinstated.

Scale: 1:500



1:25,000 Location on Context Map

Drawing Legend

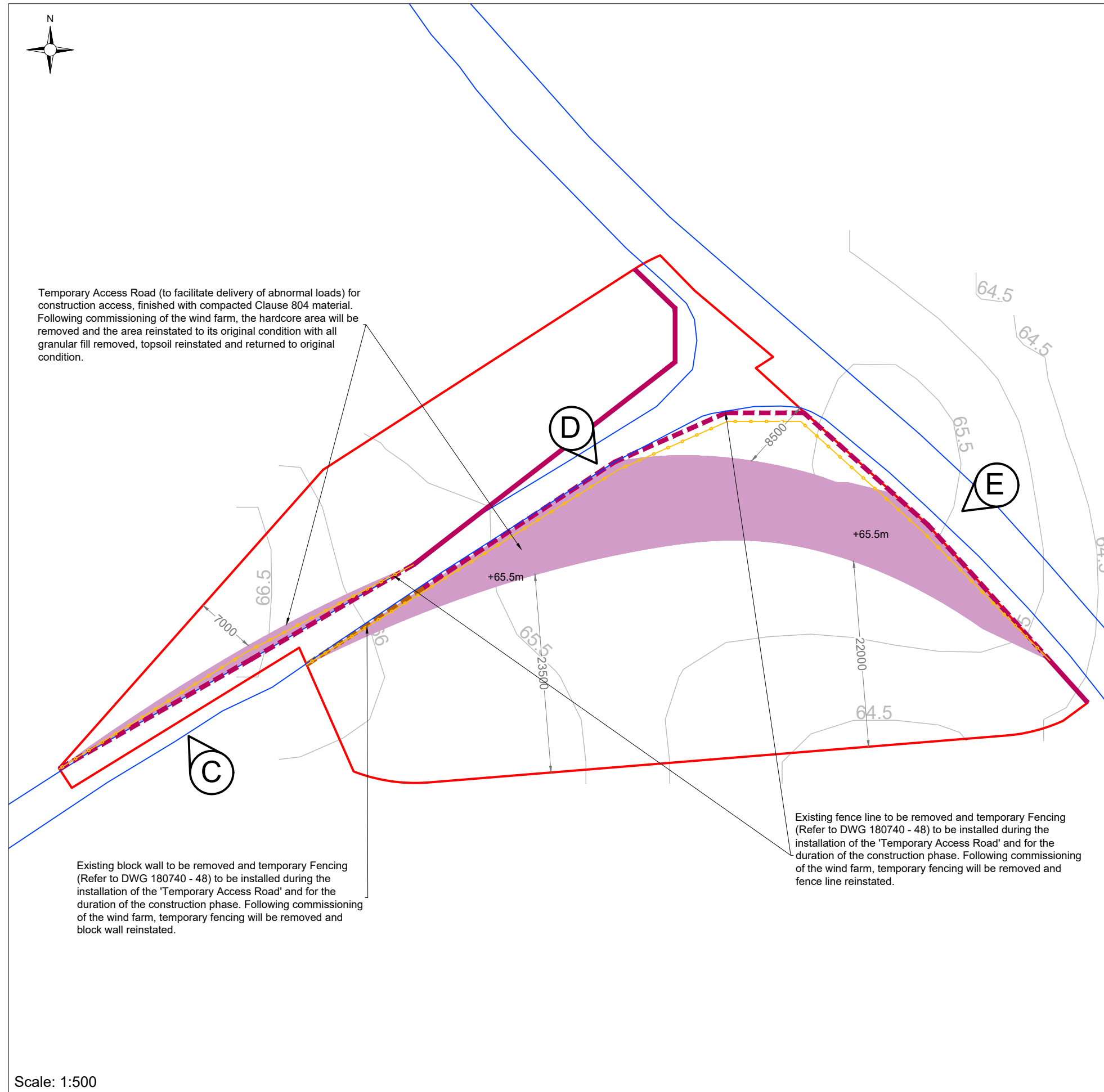
- Planning Application Boundary
- Temporary New Road (to facilitate delivery of abnormal loads).
- Existing Fencing to be Temporarily Removed/Reinstated
- Existing Stone Wall to be Temporarily Removed/Reinstated
- Temporary Fencing
- Existing Road Edge

Proposed Temporary Access Road A

PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 45
SCALE: 1:500 @ A3	DATE: 10.06.2024



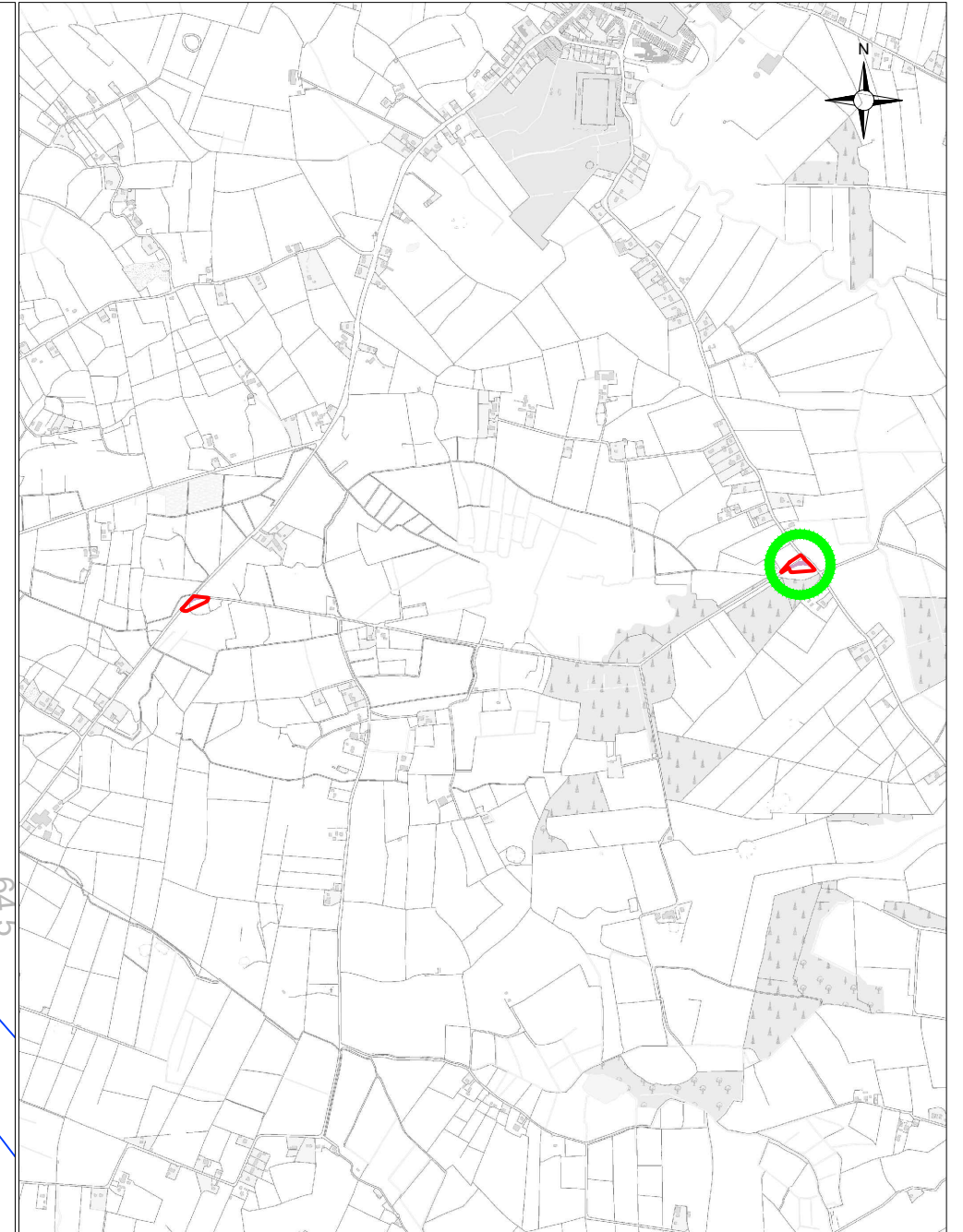
Temporary Access Road (to facilitate delivery of abnormal loads) for construction access, finished with compacted Clause 804 material. Following commissioning of the wind farm, the hardcore area will be removed and the area reinstated to its original condition with all granular fill removed, topsoil reinstated and returned to original condition.



Existing block wall to be removed and temporary Fencing (Refer to DWG 180740 - 48) to be installed during the installation of the 'Temporary Access Road' and for the duration of the construction phase. Following commissioning of the wind farm, temporary fencing will be removed and block wall reinstated.

Existing fence line to be removed and temporary Fencing (Refer to DWG 180740 - 48) to be installed during the installation of the 'Temporary Access Road' and for the duration of the construction phase. Following commissioning of the wind farm, temporary fencing will be removed and fence line reinstated.

Scale: 1:500



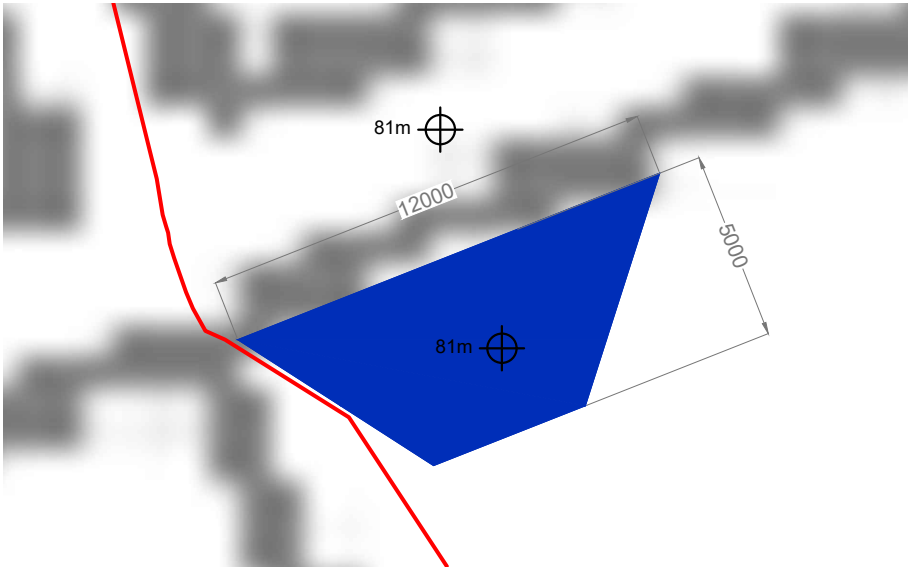
1:25,000 Location on Context Map

Drawing Legend

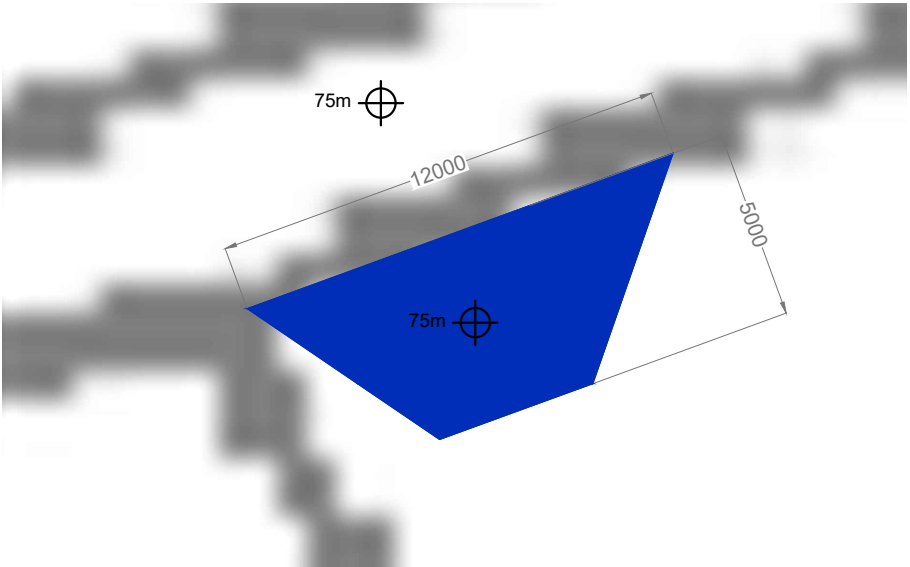
- Planning Application Boundary
- Temporary New Road (to facilitate delivery of abnormal loads).
- Existing Fencing to be Temporarily Removed/Reinstated
- Existing Stone Wall to be Temporarily Removed/Reinstated
- Temporary Fencing
- Existing Road Edge

Proposed Temporary Access Road B

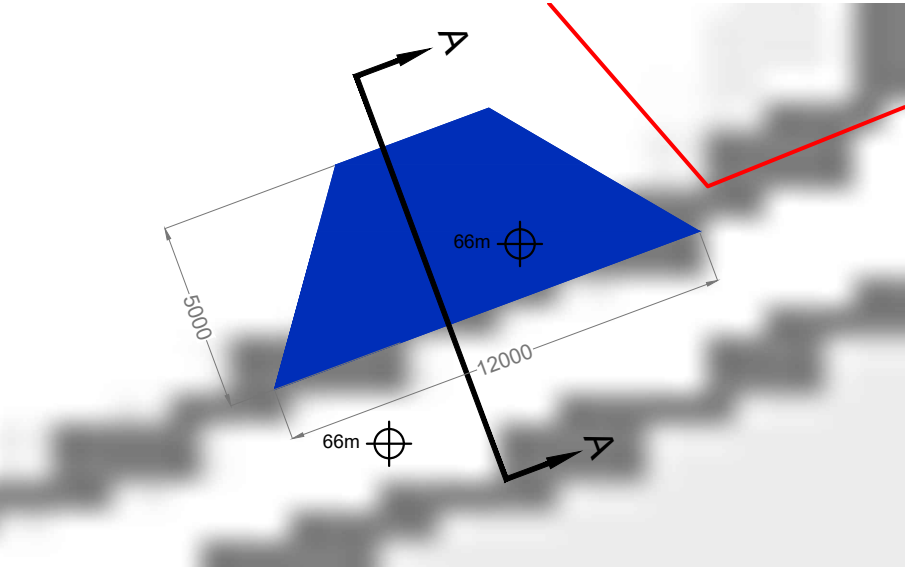
DRAWING TITLE: Proposed Temporary Access Road B	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No.: 180740	DRAWING No.: 180740 - 46
SCALE: 1:500 @ A3	DATE: 10.06.2024



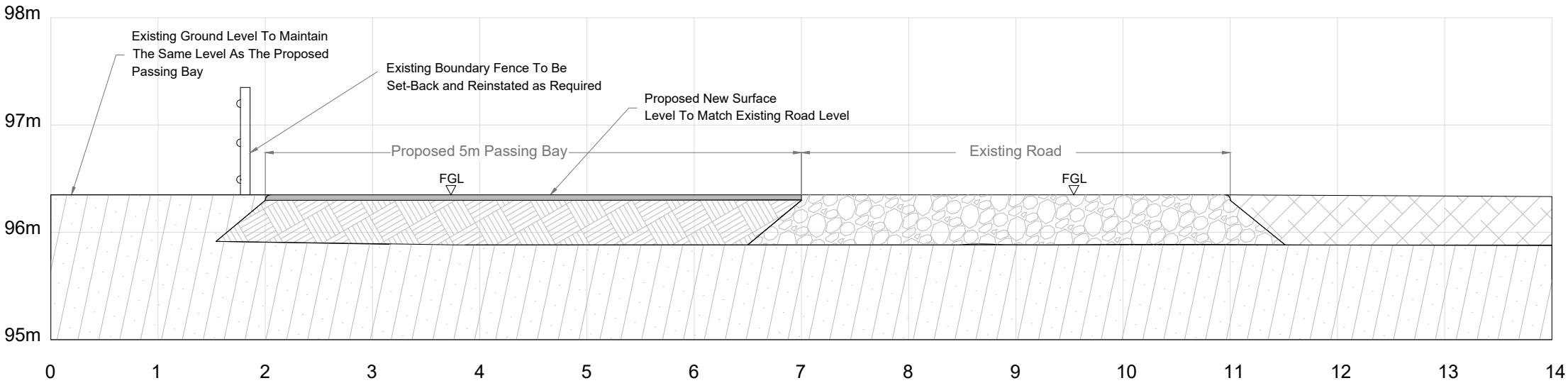
Plan View Passing Bay 1
1:200



Plan View Passing Bay 2
1:200



Plan View Passing Bay 3
1:200



Section A-A
1:50

- Road Verge
- Road And Verge Sub-Base
- Existing Roadway
- Proposed Passing Bay Sub-Base
- Proposed new surface

DRAWING TITLE:
Passing Bay Detail

PROJECT TITLE:
Clonberne Wind Farm, Co. Galway

DRAWING BY:
Joseph O'Brien

CHECKED BY:
Owen Cahill

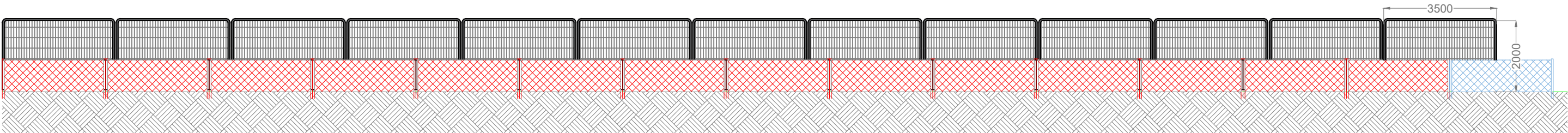
PROJECT No.:
180740

DRAWING No.:
180740 - 47

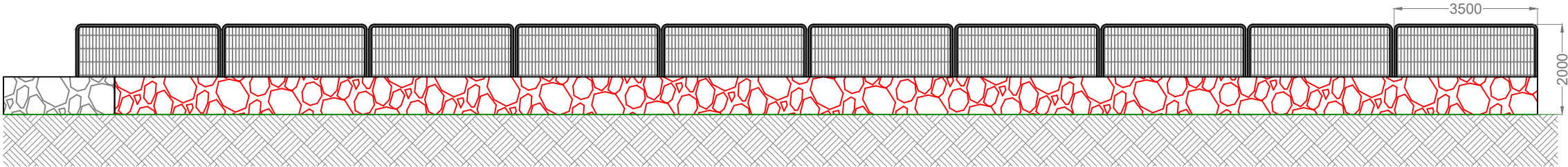
SCALE:
As Shown @ A3

DATE:
27.06.2024

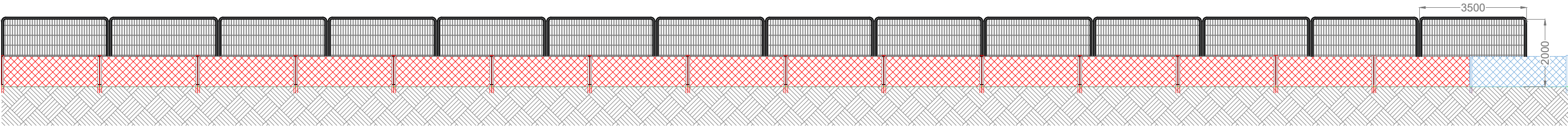
MKO
Planning and
Environmental
Consultants
Tuum Road, Galway
Ireland, H91 YW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



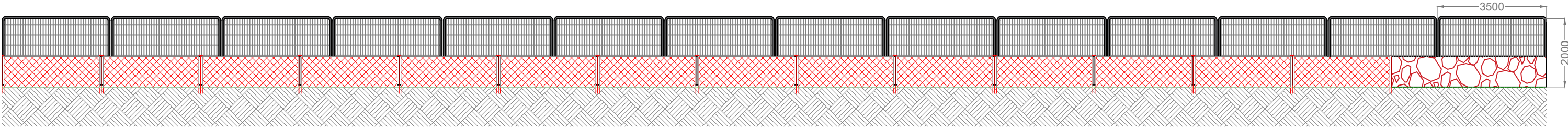
Elevation A - Wire Post Fencing to be removed and re-instated post construction
Scale: 1:125



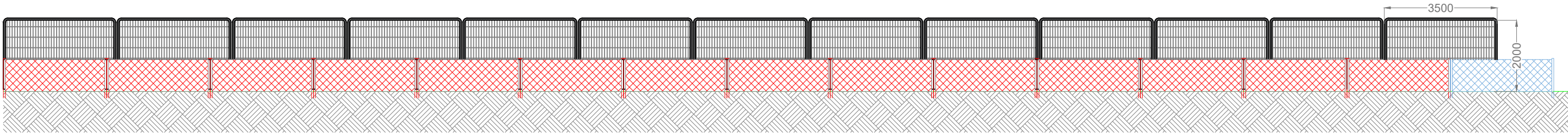
Elevation B - Stone Wall to be removed and re-instated post construction
Scale: 1:125



Elevation C - Wire Post Fencing to be removed and re-instated post construction
Scale: 1:125






Elevation D - Wire Post Fencing & Stone Wall to be removed and re-instated post construction
Scale: 1:125



Elevation E - Wire Post Fencing to be removed and re-instated post construction
Scale: 1:125

Legend:

-  Fencing to be temporarily removed/reinstated
-  Stone wall to be temporarily removed/reinstated
-  Temporary Fencing

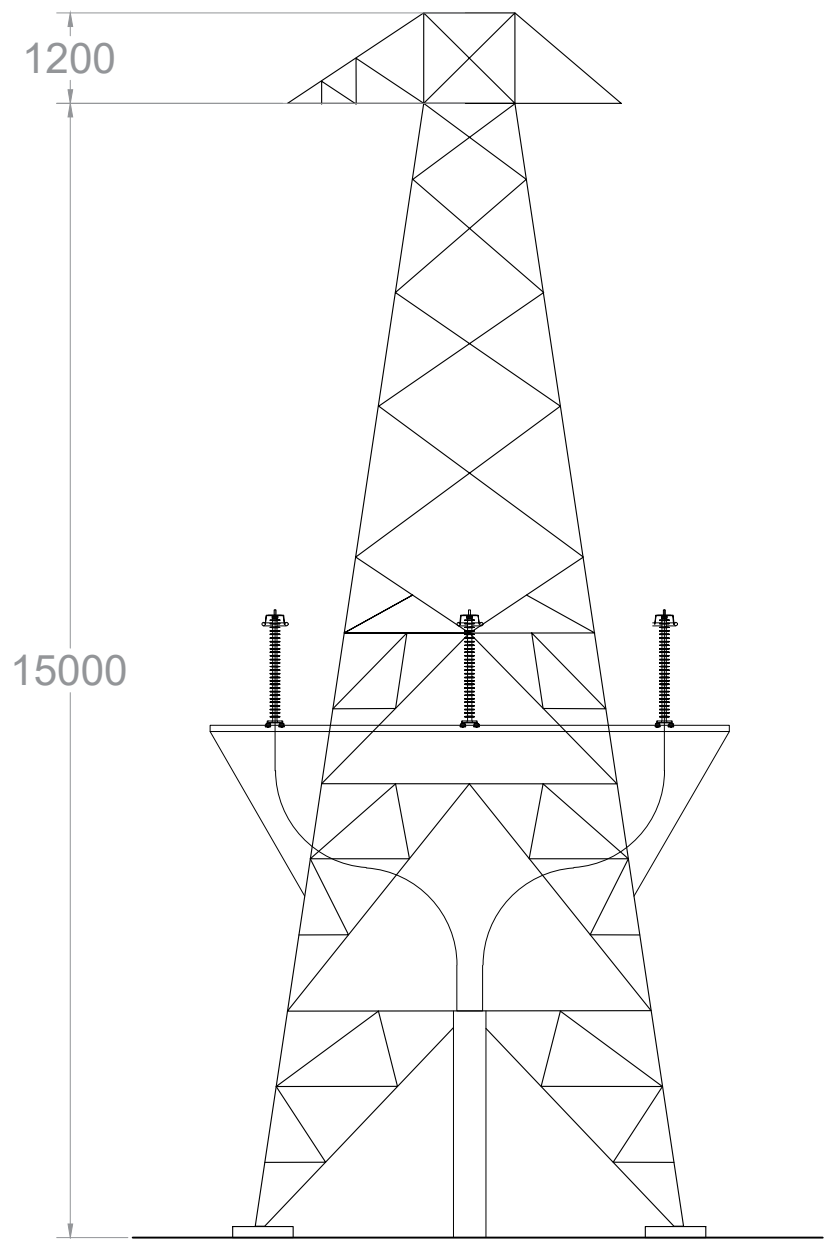
Temporary Boundary Treatment Works

PROJECT TITLE: Clonberne Wind Farm, Co. Galway

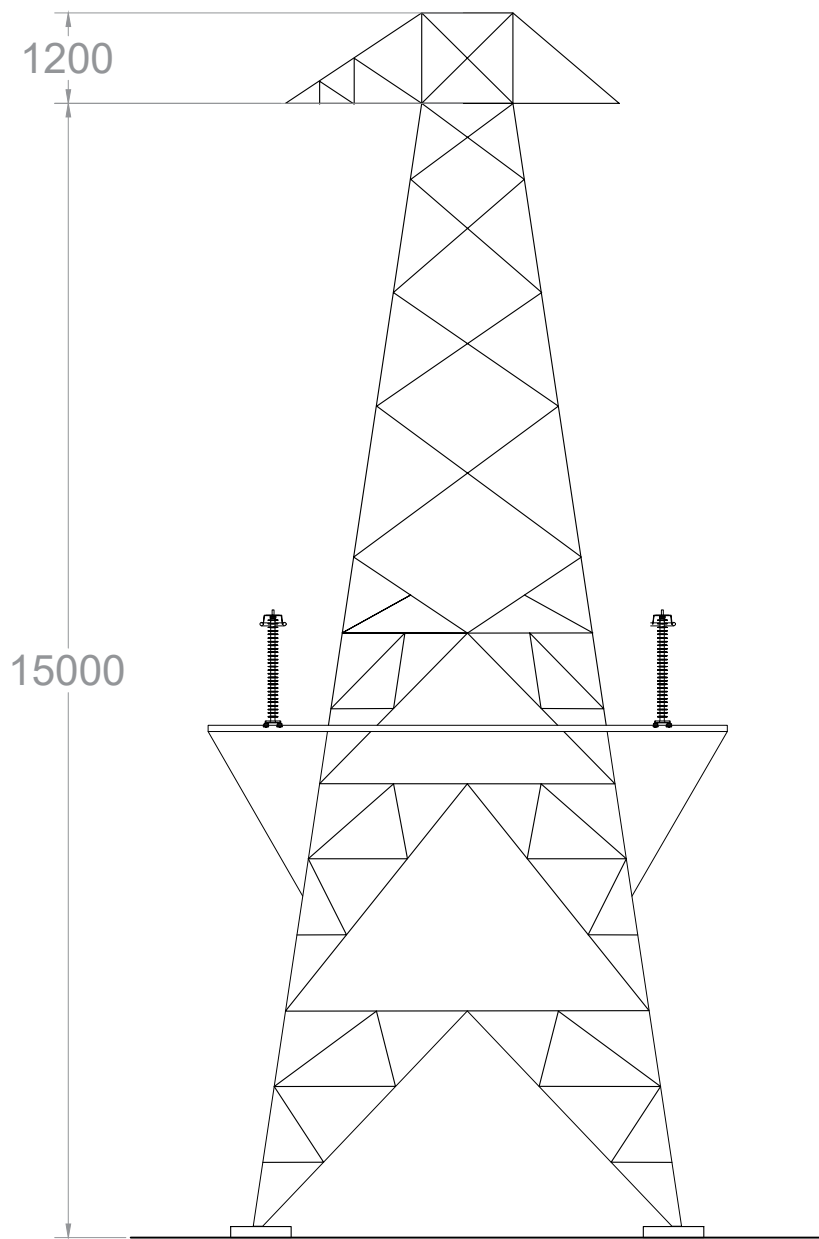
DRAWING BY: Joseph O'Brien
PROJECT No.: 180740
SCALE: 1:125 @ A3

CHECKED BY: Owen Cahill
DRAWING No.: 180740 - 48
DATE: 10.06.2024

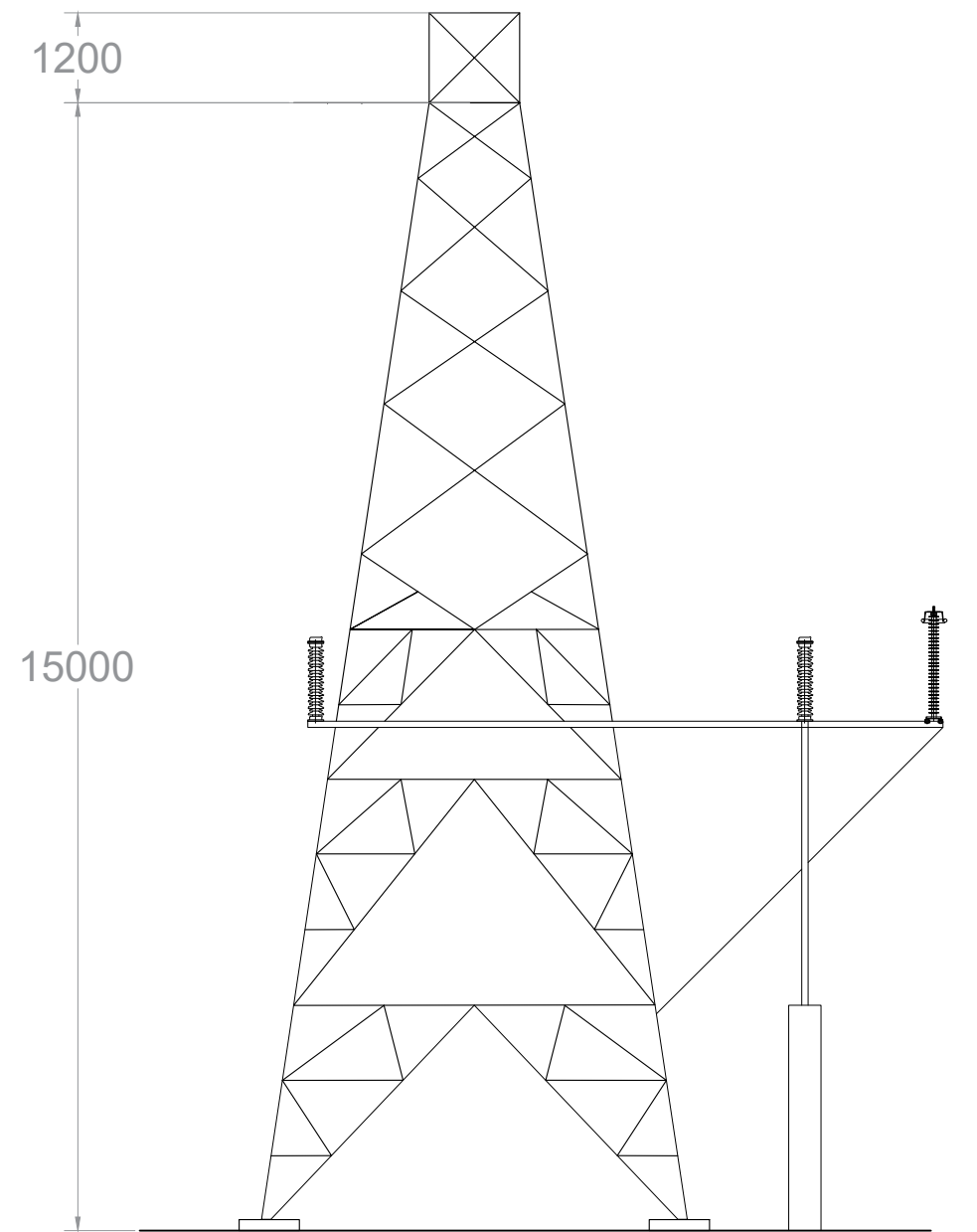
MKO
Planning and Environmental Consultants
Tuum Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkofireland.ie
Website: www.mkofireland.ie



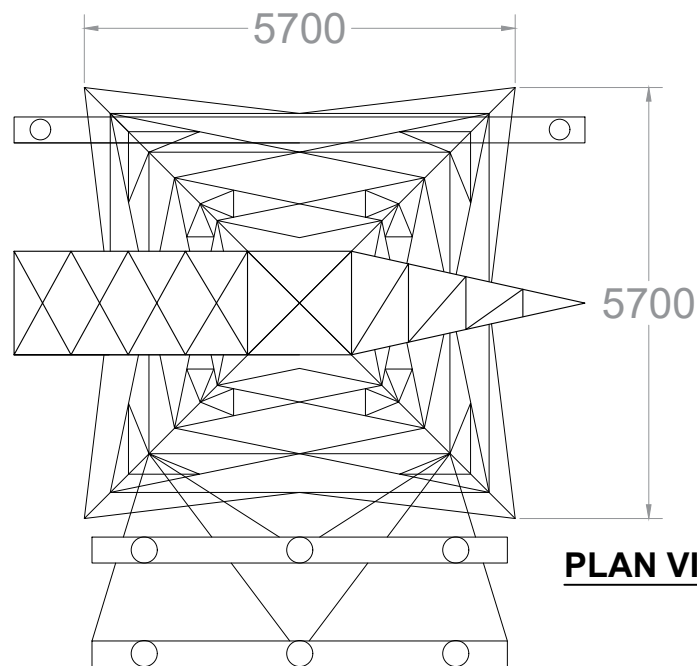
FRONT ELEVATION



REAR ELEVATION




SIDE ELEVATION

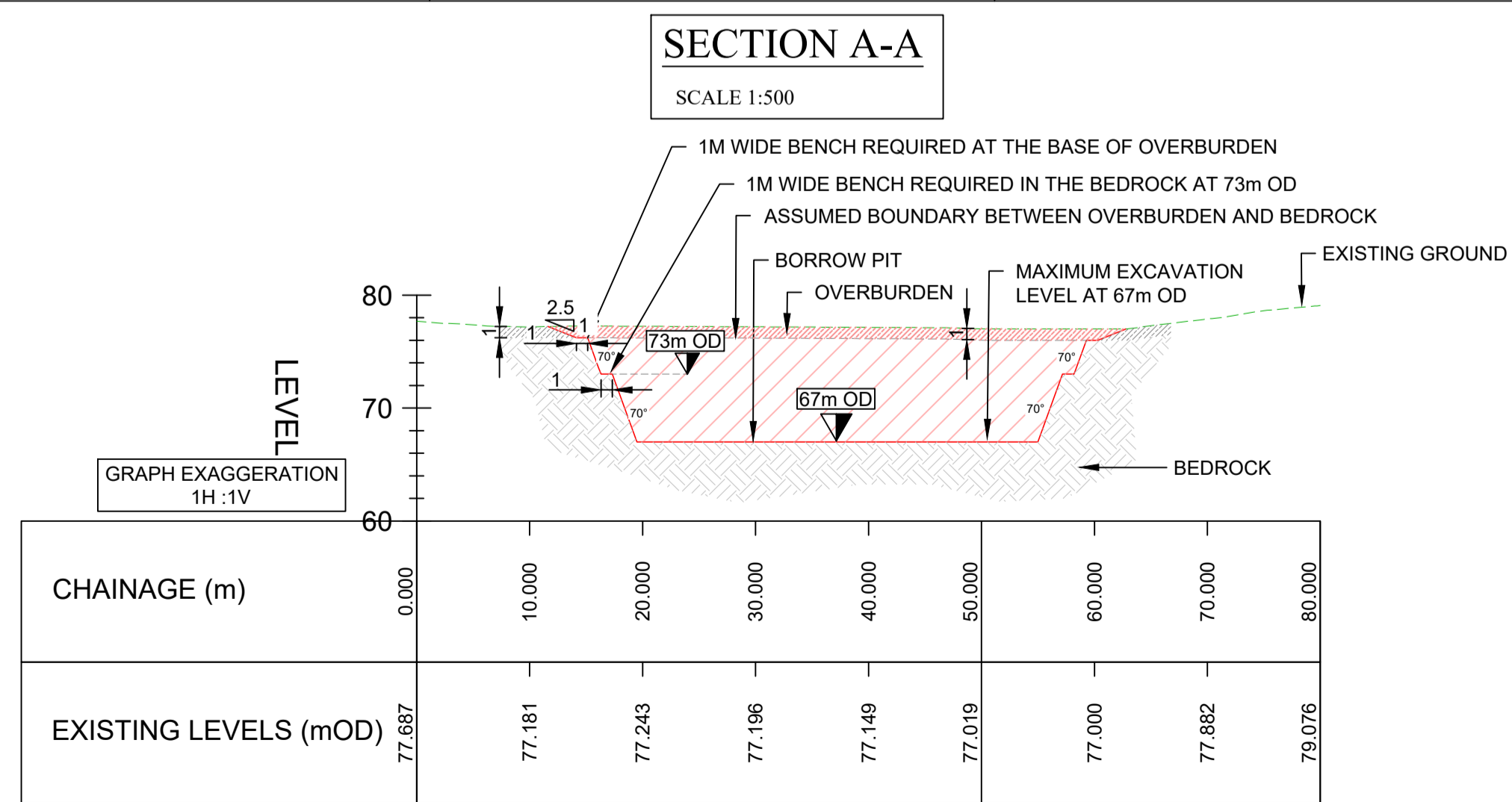
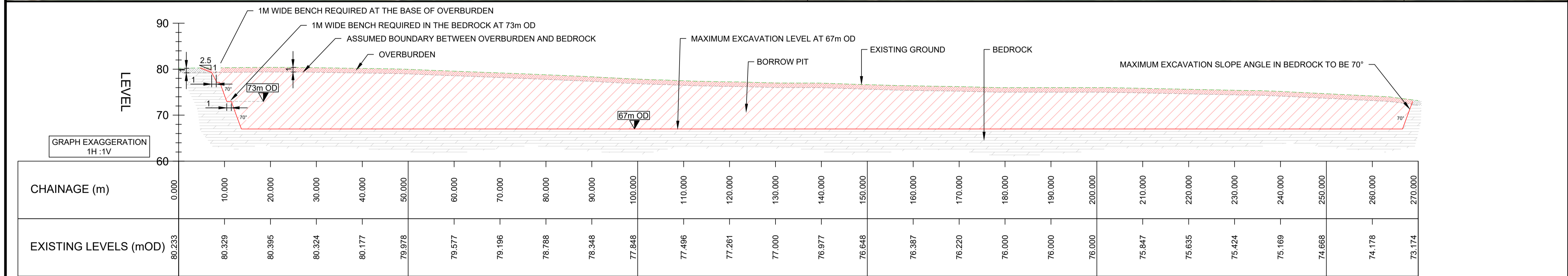
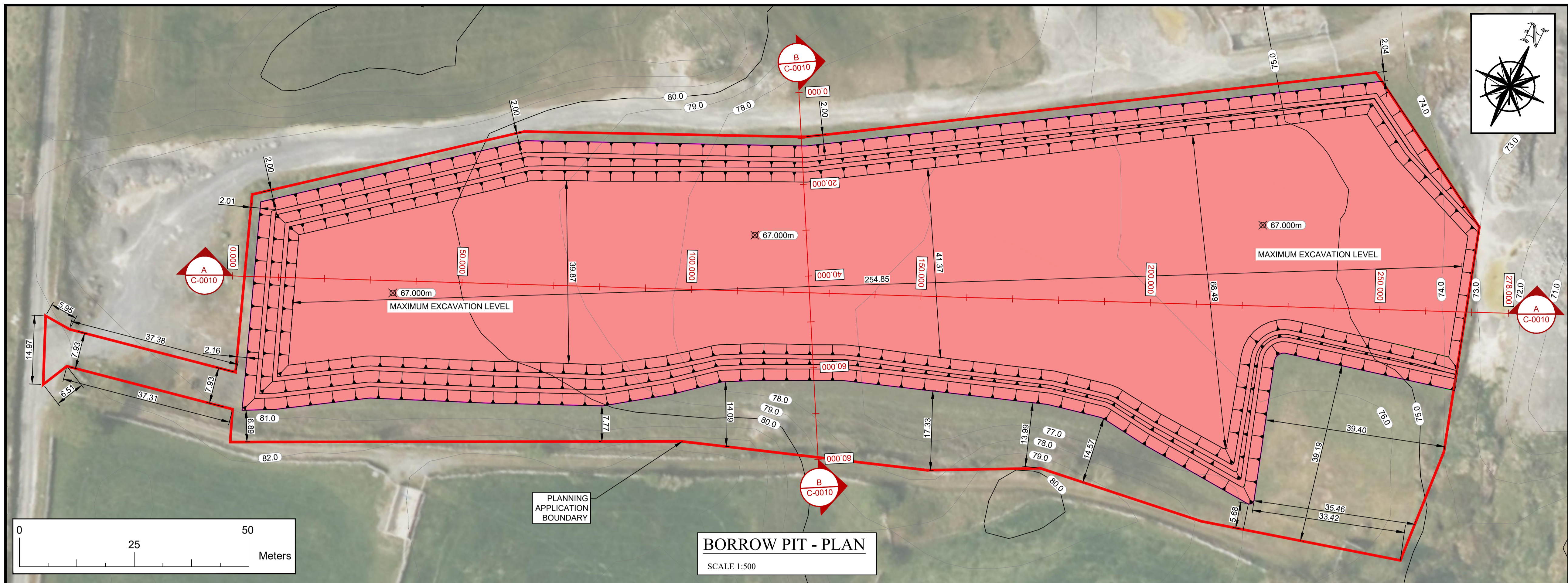


PLAN VIEW

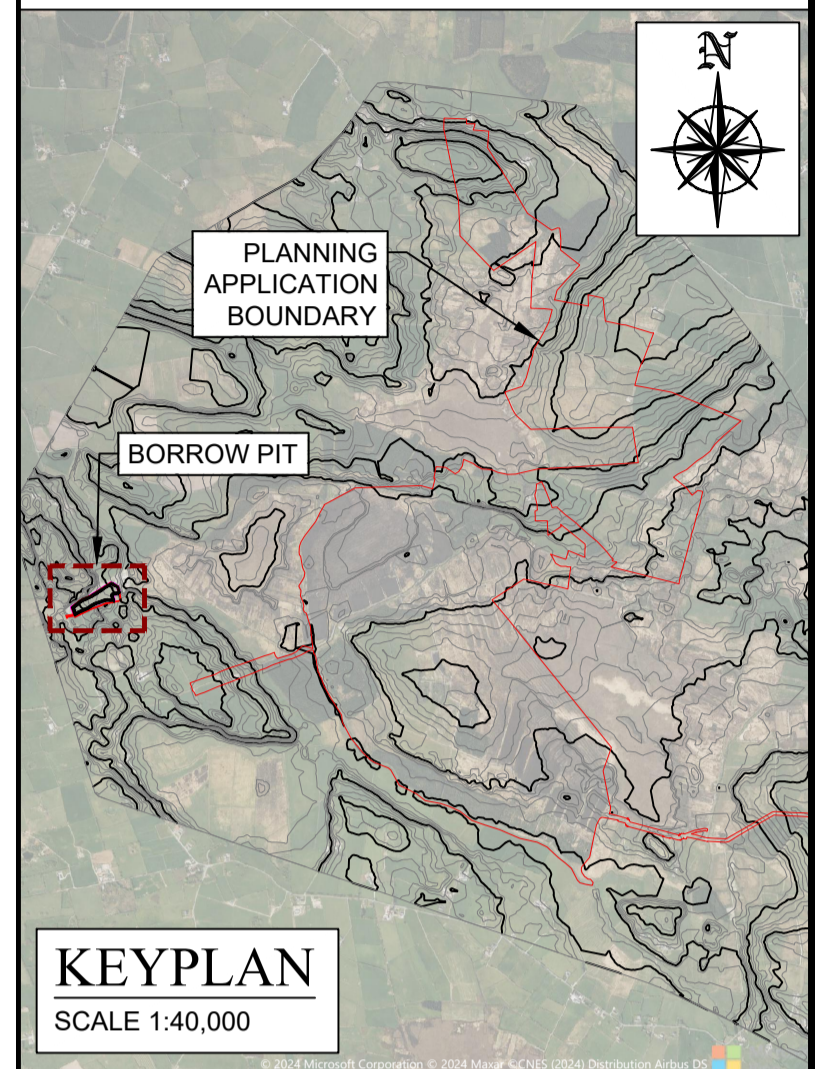
NOTES:

Cable Interface End Masts proposed within the Clonberne Wind Farm site to facilitate the undergrounding of a section of a 38kV overhead electrical line which is currently proposed under PL ref. no. 24/ 60230 to traverse the Clonberne Wind Farm site in a north-south direction. The proposal which is included in this application as detailed includes the provision of 38kV Line to Cable Interface End Masts and 38kV Underground Cabling.

DRAWING TITLE: Cable Interface End Mast Detail	
PROJECT TITLE: Clonberne Wind Farm, Co. Galway	
DRAWING BY: Joseph O'Brien	CHECKED BY: Owen Cahill
PROJECT No: 180740	DRAWING No: 180740 - 49
SCALE: 1:100 @ A3	DATE: 20.06.2024
<div></div> <div>MKO Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@www.mkofireland.ie Website: www.mkofireland.ie</div>	



- NOTES:**
- THIS DRAWING IS FOR PLANNING AND ENVIRONMENTAL IMPACT ASSESSMENT PURPOSES AND SHOULD NOT BE USED AS DETAILED DESIGN OR FOR CONSTRUCTION DRAWINGS.
 - ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 - THE OUTLINE AND SECTIONS ARE INDICATIVE AND ARE SUBJECT TO DETAILED DESIGN, SLOPE STABILITY ASSESSMENT AND ADDITIONAL GROUND INVESTIGATION.
 - IN-SITU ROCK SLOPE SHALL BE FORMED AT STABLE INCLINATIONS TO SUIT LOCAL ROCK CONDITIONS AND SUBJECT TO DETAILED DESIGN.
 - THE EXCAVATABILITY OF THE ROCK AND DEPTH TO TOP OF ROCK WITHIN EACH OF THE BORROW AREAS WILL NEED TO BE DETERMINED FROM A GROUND INVESTIGATION.
 - BORROW PIT 3D MODEL BASED ON TOPOGRAPHICAL SURVEY: 1m CONTOURS, RECEIVED 02.10.2023.
 - BORROW PIT EXTENTS TAKEN FROM MKO SHAPE FILE BP 2023.09.21, RECEIVED 21.09.2023. BORROW PIT EXTENT HAS BEEN MODIFIED BY GDG TO REFLECT OFFSETS FROM EXISTING SLOPES.
 - AERIAL MAP SOURCE: ©2024 MICROSOFT CORPORATION ©2024 MAXAR ©CNES(2024) DISTRIBUTION AIRBUS DS MICROSOFT BING.



- LEGEND:**
- BEDROCK (IN-SITU)
 - BEDROCK (EXCAVATED)
 - OVERBURDEN (IN-SITU)
 - OVERBURDEN (EXCAVATED)

BORROW PIT VOLUMES	
AREA	VOLUME
OVERBURDEN	14,456m³
BEDROCK	106,770m³
TOTAL EXCAVATION	121,226m³

REV:	S2-P02	DATE:	15/03/24	DRAWN BY:	E.F.C.	CHECKED BY:	C.E.
DESCRIPTION:	ISSUED FOR PLANNING						
REV:	S2-P01	DATE:	12/03/24	DRAWN BY:	E.F.C.	CHECKED BY:	C.E.
DESCRIPTION:	BORROW PIT BOUNDARY AND REVISION NUMBERING UPDATED						
REV:	FI -02	DATE:	23/02/24	DRAWN BY:	R.R.	CHECKED BY:	C.E.
DESCRIPTION:	UPDATE TO REFLECT UPDATED EIR BOUNDARY						
REV:	FI -01	DATE:	27/11/23	DRAWN BY:	K.H.	CHECKED BY:	C.E.
DESCRIPTION:	REVISED BORROW PIT MODELLING						
REV:	FI -00	DATE:	11/02/22	DRAWN BY:	K.H.	CHECKED BY:	A.A.
DESCRIPTION:	ISSUED FOR INFORMATION						

GDG

GAVIN & DOHERTY

GEOSOLUTIONS

Unit A2,
Nuttgrove Office Park,
Rathfarnham,
Dublin 14, D14 X627
Ireland.
T +353 (0)1-2071000
E info@gdgeo.com
www.gdgeo.com

ISSUED AS:FOR PLANNING

CLIENT:

PROJECT TITLE:CLOMBERNE WIND FARM

DRAWING No:20221-GDG-ZZ-XX-DR-C-0010

Revision:-S2-P02

DRAWING TITLE:

BORROW PIT PLAN & SECTIONS

SCALE:1:500

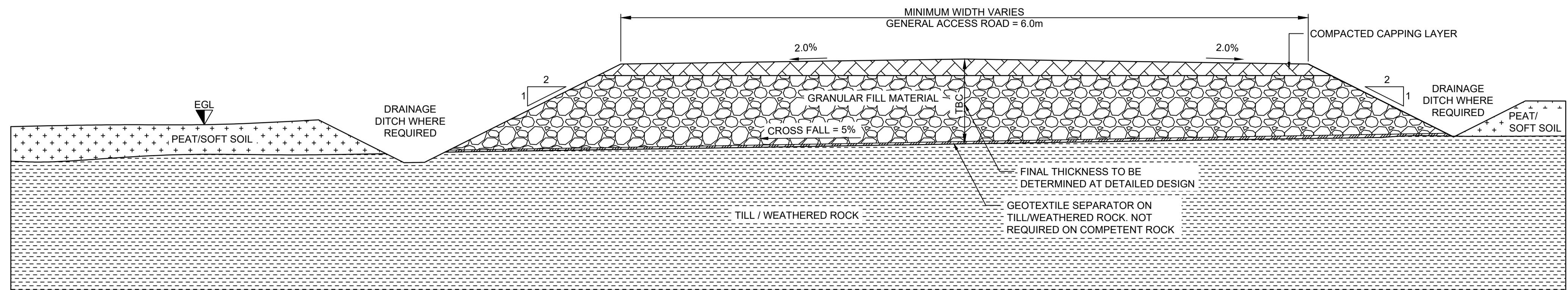
SHEET SIZE:A1

DATE:11/02/2022

DRAWN BY:K.H.

CHECKED BY:AA

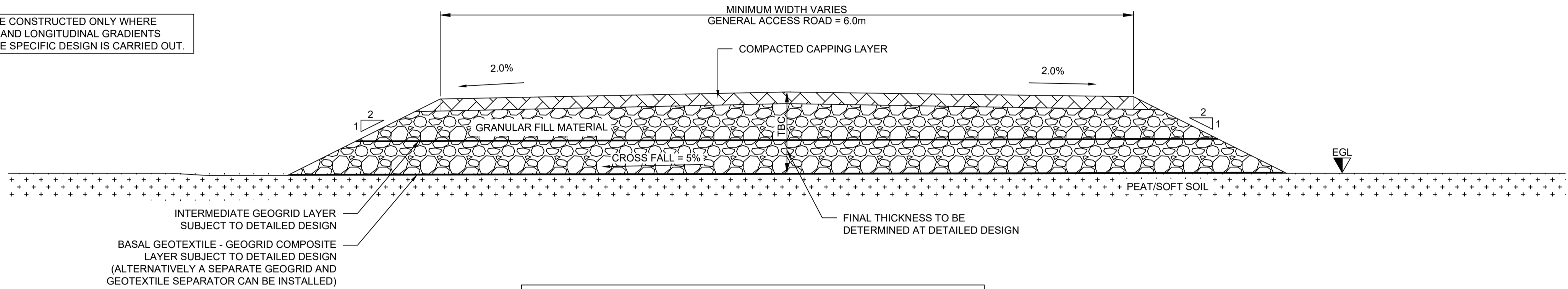
APPROVED BY:J.O'D



SECTION THROUGH ACCESS ROAD
NEW CONSTRUCTION: FOUNDED - DETAIL 01

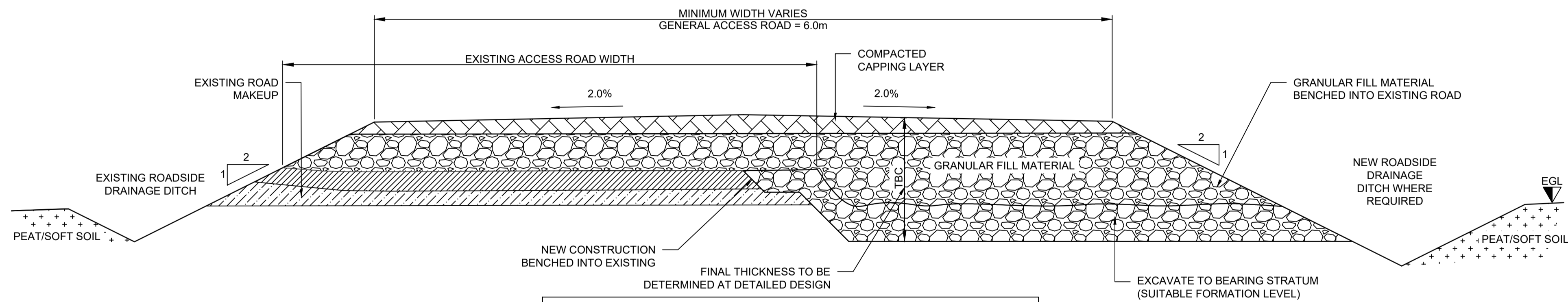
SCALE: N.T.S.

FLOATING ROADS TO BE CONSTRUCTED ONLY WHERE
CROSSFALLS ARE <5% AND LONGITUDINAL GRADIENTS
ARE <5% UNLESS A SITE SPECIFIC DESIGN IS CARRIED OUT.



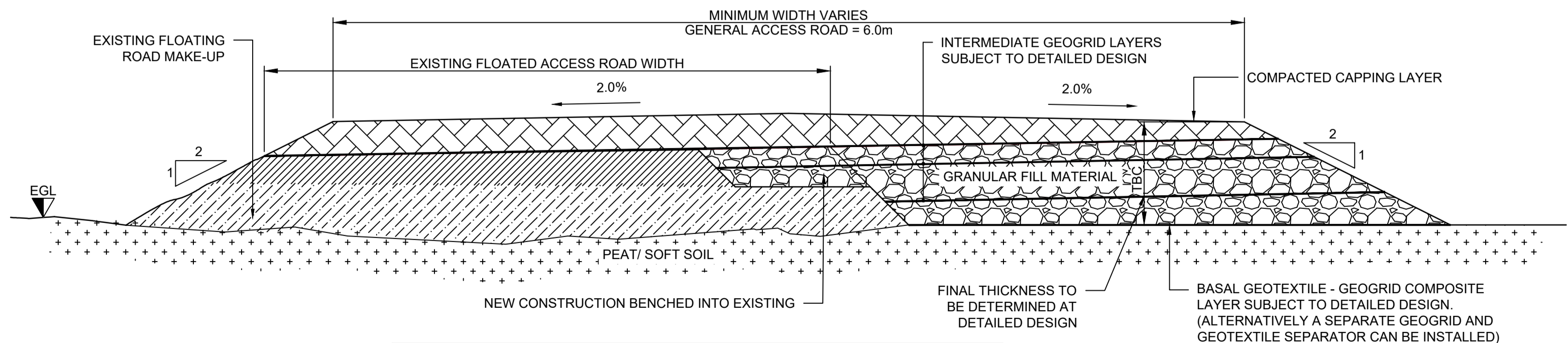
SECTION THROUGH ACCESS ROAD
NEW CONSTRUCTION: FLOATED - DETAIL 02

SCALE: N.T.S.



SECTION THROUGH WIDENING OF EXISTING
ACCESS ROAD: FOUNDED - DETAIL 03

SCALE: N.T.S.



SECTION THROUGH WIDENING OF EXISTING
ACCESS ROAD: FLOATED - DETAIL 04

SCALE: N.T.S.

NOTES:

1. THIS DRAWING IS FOR PLANNING AND ENVIRONMENTAL IMPACT ASSESSMENT PURPOSES AND SHOULD NOT BE USED AS DETAILED DESIGN OR FOR CONSTRUCTION.
2. DO NOT SCALE FROM DRAWINGS.
3. THE STRENGTH OF THE SUBFORMATION SOILS TO BE ASSESSED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION / PLACEMENT OF FILL.
4. DRAINAGE TO BE PROVIDED TO PREVENT WATER DEGRADATION OF THE SUBFORMATION SOILS IN-LINE WITH DRAINAGE STRATEGY.

HEALTH & SAFETY:

1. NO OPERATIVES TO ACCESS ANY UNSUPPORTED TRENCHES. TRENCHES TO BE ADEQUATELY BATTERED BACK OR SUPPORTED WHERE NECESSARY. SAFE TEMPORARY BATTER ANGLES TO BE ASSESSED IN ACCORDANCE WITH CIRIA REPORT 97 'TRENCHING PRACTICE'.

REV:	S2-P01	DATE:	18/12/23	DRAWN BY:	EFC	CHECKED BY:	C.E.
DESCRIPTION:	ISSUED FOR INFORMATION						

GDG
GAVIN & DOHERTY
GEOSOLUTIONS

Unit A2,
Nugroove Office Park,
Rathfarnham,
Dublin 14, D14 X627
Ireland.
T +353 (0)1-2071000
E info@gdgeo.com
www.gdgeo.com

ISSUED AS: FOR INFORMATION



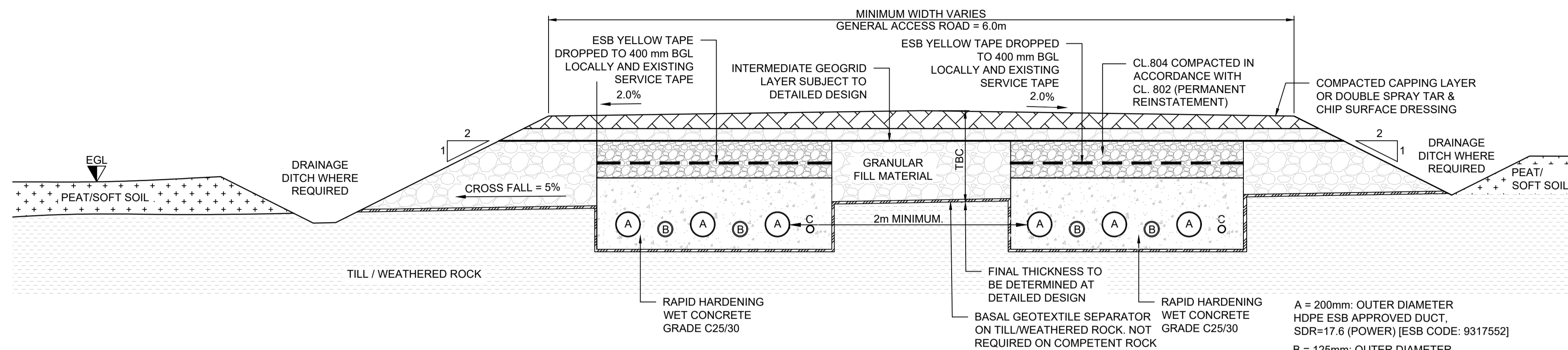
PROJECT TITLE: CLONBERNE
WIND FARM

DRAWING No: 20221-GDG-ZZ-XX-DR-C-0100

Revision: -S2-P01

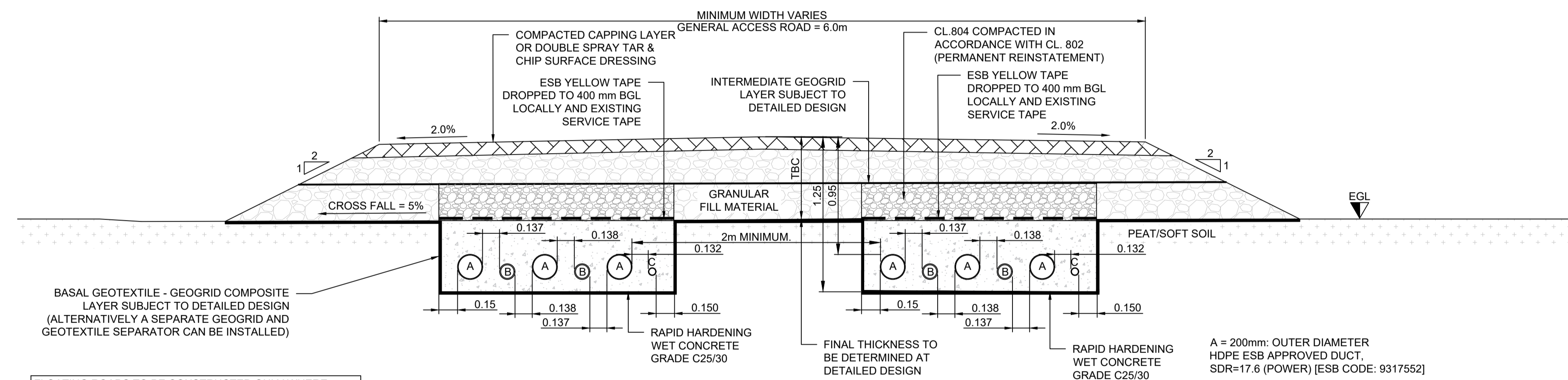
DRAWING TITLE:
ACCESS ROAD
STANDARD DETAILS

SCALE:	N.T.S.	SHEET SIZE:	A1	DATE:	18/12/2023
DRAWN BY:	EFC	CHECKED BY:	C.E.	APPROVED BY:	J.O'D.



SECTION THROUGH CABLE TRENCH NEW CONSTRUCTION: FOUNDED - DETAIL 01

SCALE: N.T.S.



SECTION THROUGH CABLE TRENCH NEW CONSTRUCTION: FLOATED - DETAIL 02

SCALE: N.T.S.

FLOATING ROADS TO BE CONSTRUCTED ONLY WHERE
CROSSFALLS ARE <5% AND LONGITUDINAL GRADIENTS
ARE <5% UNLESS A SITE SPECIFIC DESIGN IS CARRIED OUT.

NOTES:

1. THIS DRAWING IS FOR PLANNING AND ENVIRONMENTAL IMPACT ASSESSMENT PURPOSES AND SHOULD NOT BE USED AS DETAILED DESIGN OR FOR CONSTRUCTION.
2. DO NOT SCALE FROM DRAWINGS.
3. THE STRENGTH OF THE SUBFORMATION SOILS TO BE ASSESSED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION / PLACEMENT OF FILL.
4. DRAINAGE TO BE PROVIDED TO PREVENT WATER DEGRADATION OF THE SUBFORMATION SOILS IN-LINE WITH DRAINAGE STRATEGY.
5. BURIED CABLE SPACING TO BE DETERMINED DURING DETAILED DESIGN
6. DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED

HEALTH & SAFETY:

1. NO OPERATIVES TO ACCESS ANY UNSUPPORTED TRENCHES. TRENCHES TO BE ADEQUATELY BATTERED BACK OR SUPPORTED WHERE NECESSARY. SAFE TEMPORARY BATTER ANGLES TO BE ASSESSED IN ACCORDANCE WITH CIRIA REPORT 97 "TRENCHING PRACTICE".

REV:	S2-P02	DATE:	23/02/24	DRAWN BY:	RR	CHECKED BY:	C.E
DESCRIPTION:	UPDATE TO ADDRESS MKO COMMENTS						
REV:	S2-P01	DATE:	21/12/23	DRAWN BY:	EFC	CHECKED BY:	C.E
DESCRIPTION:	ISSUED FOR INFORMATION						

GDG
GAVIN & DOHERTY
GEOSOLUTIONS

Unit A2,
Nugrove Office Park,
Rathfarnham,
Dublin 14, D14 X627
Ireland.
T +353 (0)1-2071000
E info@gdgeo.com
www.gdgeo.com

ISSUED AS: FOR INFORMATION

CLIENT:



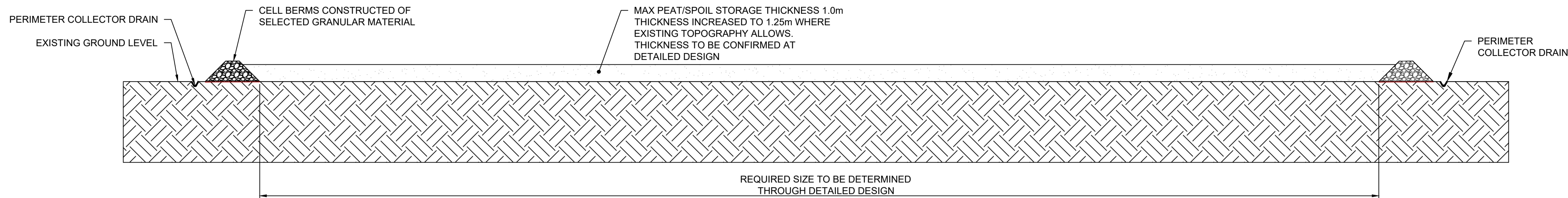
PROJECT TITLE: CLONBERNE
WIND FARM

DRAWING No: 20021-GDG-ZZ-XX-DR-C-0101

Revision: -S2-P02

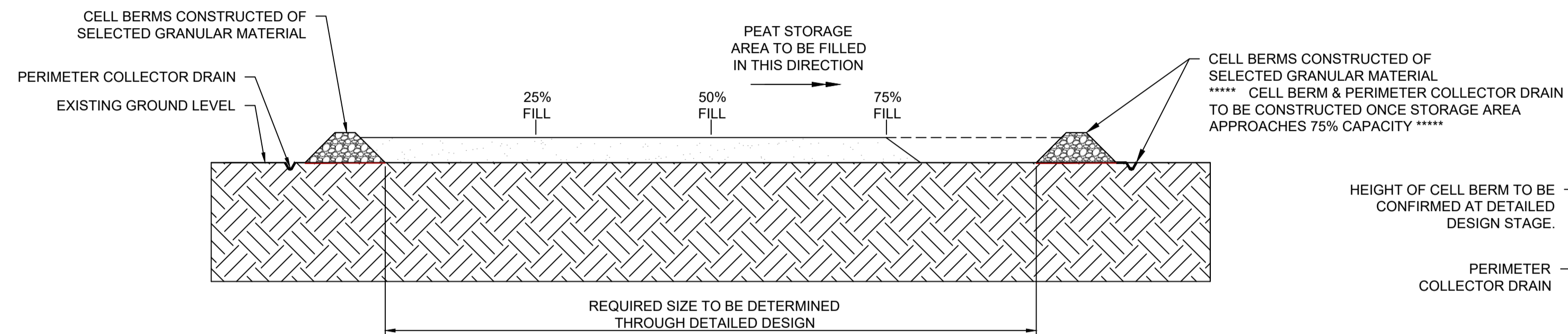
DRAWING TITLE:
CABLE TRENCH
STANDARD DETAILS

SCALE:	N.T.S.	SHEET SIZE:	A1	DATE:	21/12/2023
DRAWN BY:	EFC	CHECKED BY:	C.E.	APPROVED BY:	J.O'D.



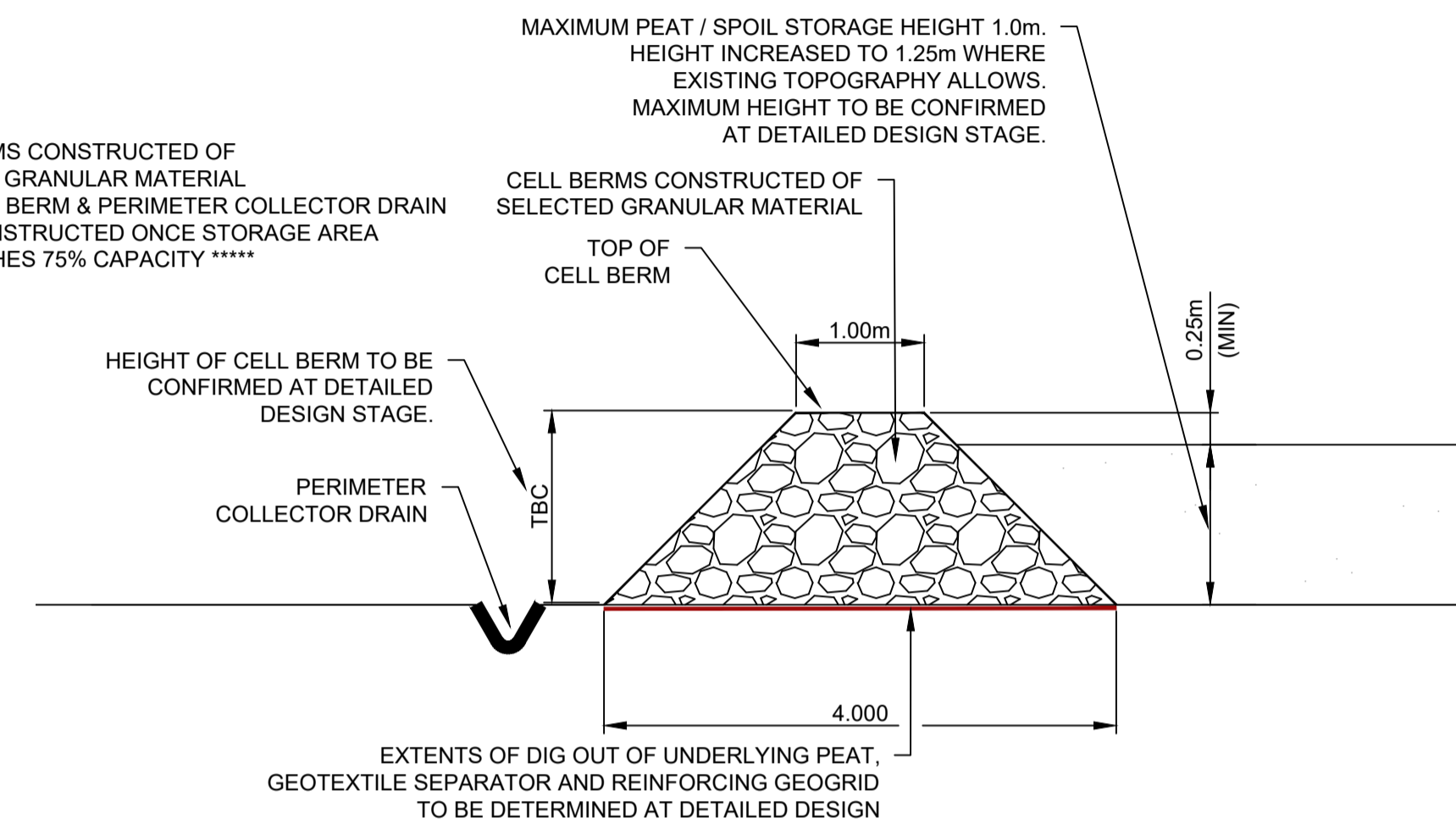
PEAT / SPOIL STORAGE - TYPICAL SECTION A-A

SCALE 1:200



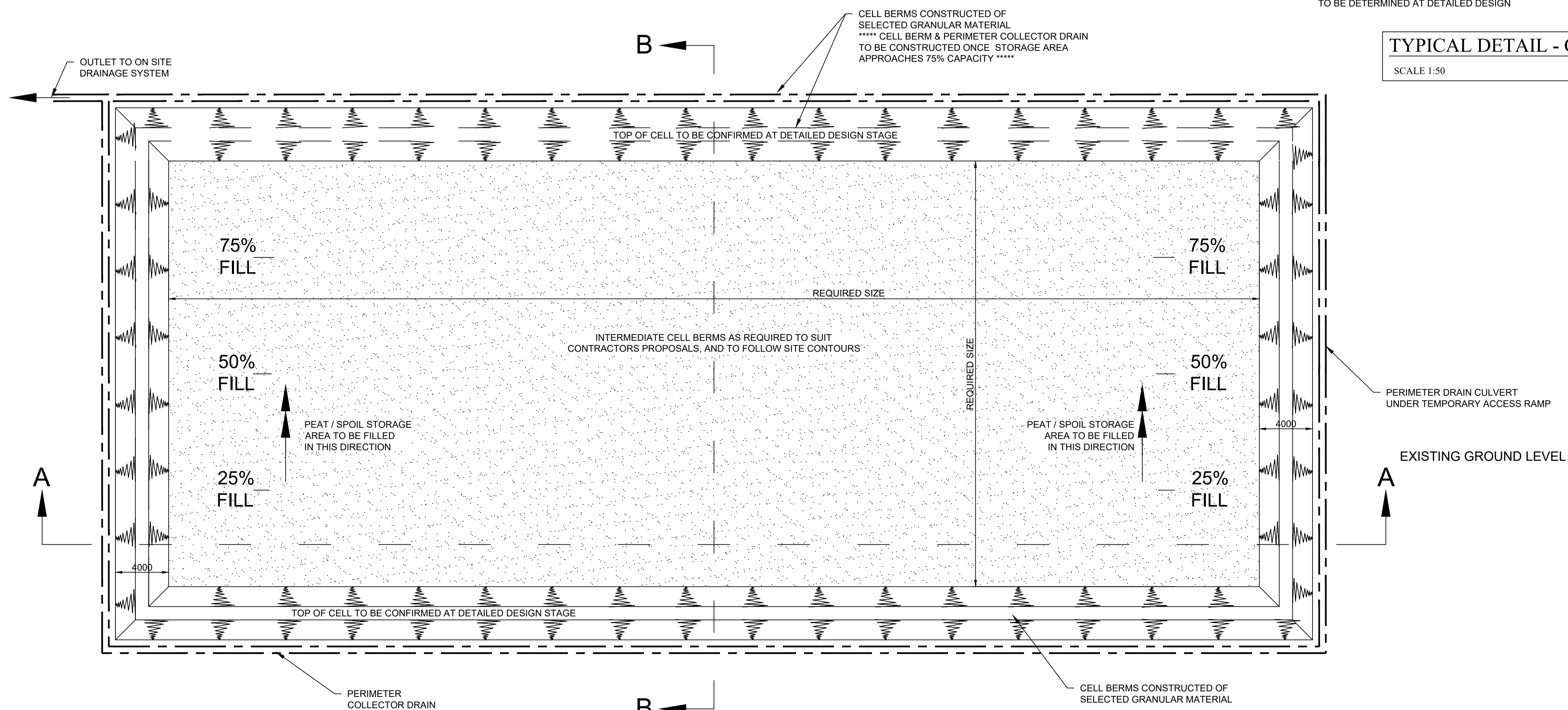
PEAT / SPOIL STORAGE - TYPICAL SECTION B-B

SCALE 1:200



TYPICAL DETAIL - CELL BERM

SCALE 1:50



PEAT / SPOIL STORAGE - TYPICAL PLAN

SCALE 1:200

NOTES:

- THIS DRAWING IS FOR PLANNING AND ENVIRONMENTAL IMPACT ASSESSMENT PURPOSES AND SHOULD NOT BE USED AS DETAILED DESIGN OR FOR CONSTRUCTION.
- ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED.
- DO NOT SCALE FROM THIS DRAWING.
- ALL PLACED MATERIAL WILL BE ALLOWED TO REVEGETATE NATURALLY FROM THE EXTENSIVE SEED SOURCE OF THE PLANTS THAT HAVE ALREADY COLONISED IN THE AREA. ALTERNATIVELY AND POSSIBLY IN ADDITION, SEEDING OF THE PLACED SPOIL COULD BE CARRIED OUT WHICH WOULD AID IN STABILISING THE PLACED SPOIL IN THE LONG TERM.
- WHERE POSSIBLE, THE ACROTELM SHALL BE STORED WITH THE VEGETATION PART OF THE SOD FACING THE RIGHT WAY UP TO ENCOURAGE GROWTH OF PLANTS AND VEGETATION AT THE SURFACE OF THE STORED PEAT WITHIN THE PEAT STORAGE AREAS.
- BOG MATS TO BE USED WHERE NECESSARY TO FACILITATE PLANT & MACHINERY ACCESS OVER SOFT GROUND.

REV:	S2-P01	DATE:	11/07/23	DRAWN BY:	EFC	CHECKED BY:	CE
DESCRIPTION:	ISSUED FOR INFORMATION						

GDG
GAVIN & DOHERTY
GEOSOLUTIONS

Unit A2,
Nutgrove Office Park,
Rathfarnham,
Dublin 14, D14 X627
Ireland.
T +353 (0)1-2071000
E info@gdgeo.com
www.gdgeo.com

ISSUED AS: FOR INFORMATION

CLIENT:



PROJECT TITLE: CLONBERNE WIND FARM

DRAWING No: 20021-GDG-ZZ-XX-DR-C-2000

Revision: -S2-P01

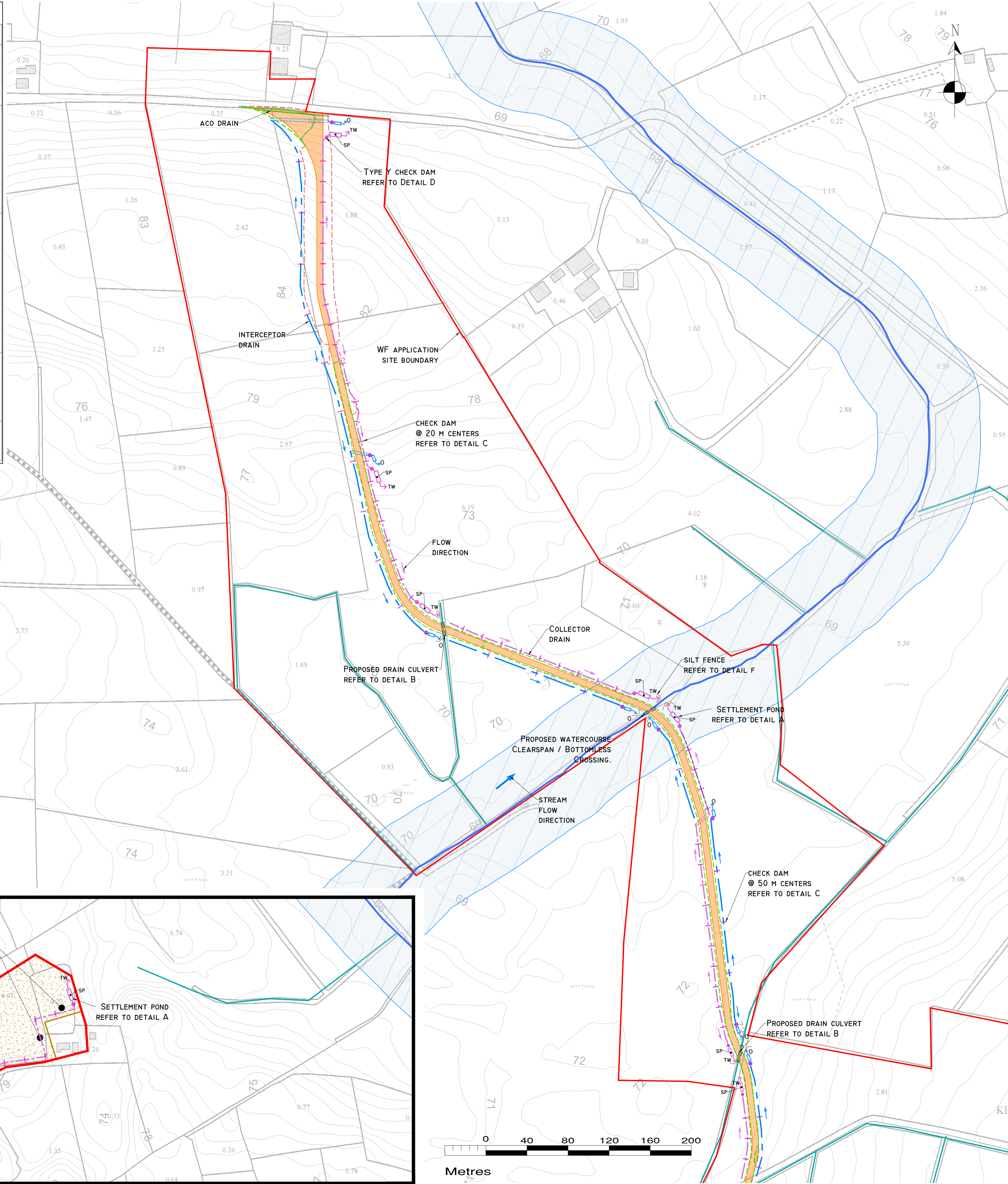
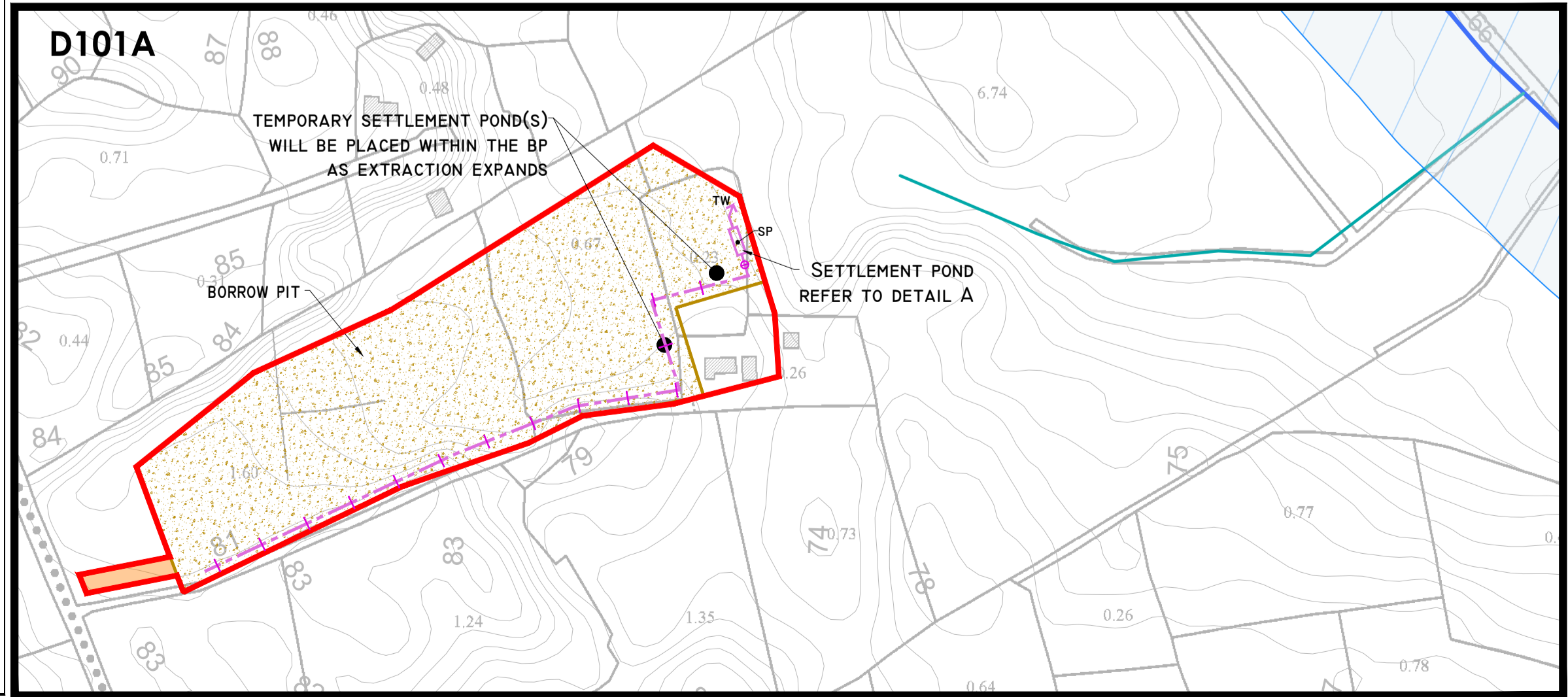
DRAWING TITLE: PEAT AND SPOIL STORAGE AREA TYPICAL DETAILS

SCALE:	SHOWN	SHEET SIZE:	A1	DATE:	11/07/2023
DRAWN BY:	EFC	CHECKED BY:	C.E.	APPROVED BY:	J.O'D

POLLUTION PREVENTION NOTES:

1. SITE MANAGEMENT PROPOSALS ARE INTENDED TO ENSURE PROTECTION AGAINST SURFACE WATER AND GROUNDWATER POLLUTION, SILTATION AND EROSION.
 2. SUITABLE DRAINAGE CONTROL MEASURES SHOULD BE IN PLACE AT ALL TIMES TO PREVENT CONVEYANCE OF SIGNIFICANT VOLUMES OF SILT TO OFF SITE RECEIVING WATERCOURSES.
 3. SILTY WATER CAN ARISE FROM DEWATERING EXCAVATIONS, EROSION OF EXPOSED/DISTURBED GROUND, TEMPORARY STOCKPILES, PLANT AND WHEEL WASH, SITE ROADS/TRACKS, AND DISTURBANCE OF EXISTING FIELD DRAINS AND DITCHES.
- DISCHARGES
4. WATER CONTAINING SILT WILL NOT BE PUMPED DIRECTLY TO ANY NATURAL WATERCOURSE. ALL DISCHARGES TO BE MADE OVER OPEN GROUND OR INTO EXISTING FIELD DRAIN WITH SILT TRAP AT A MINIMUM OF 20M FROM NEAREST WATERCOURSE UNLESS OTHERWISE STATED.
 5. NO EXCAVATED MATERIAL IS TO BE STORED WITHIN ANY SURFACE WATER BUFFER ZONE.
 6. PUMPED WATER WILL BE DIRECTED INTO TRACK SIDE DITCHES AND TREATED IN SETTLEMENT PONDS AND VEGETATION SWALES PRIOR TO OVERLAND DISCHARGE.
 7. PUMPING OF CLEAN WATER FROM EXCAVATIONS / OR OVER-PUMPING IN DRAINS/DITCHES/STREAMS WILL BE COMPLETED IN A MANNER THAT DOES NOT CAUSE SCOUR OR EROSION AT THE POINT OF RELEASE/DISCHARGE. THIS WILL BE DONE BY REDUCING THE FLOW VELOCITIES OR BY USE OF SPLASH PLATES, AND OTHER SIMILAR DISCHARGE CONTROLS.
 8. VEGETATION WILL NOT BE STRIPPED FROM EXISTING DRAINS/DITCHES UNLESS ABSOLUTELY NECESSARY.
- EXCAVATIONS
9. WHERE DEEP EXCAVATIONS ARE PROPOSED CUT-OFF DRAINS WILL BE USE TO REDUCE THE AMOUNT OF SURFACE WATER ENTERING THE EXCAVATION. THIS WILL BE THE CASE AROUND TURBINE BASE EXCAVATIONS.
- EXPOSED GROUND & STOCKPILES
10. THE AMOUNT OF EXPOSED GROUND AND TEMPORARY STOCKPILES OPEN AT ANY ONE TIME WILL BE MINIMISED, AS FAR AS PRACTICABLE.
- SITE TRACKS
11. USE OF TRACK SIDE SWALES WITH CHECK DAMS, AND/OR FILTRATION CHECK DAMS WILL REDUCE SILT IN RUNOFF WATER AS REQUIRED.
 12. CHECK DAMS TO BE INSPECTED AND CLEANED REGULARLY.
- REFUELLING
13. REFUELLING OF MOBILE PLANT WILL BE COMPLETED IN DESIGNATED REFUELLING AREAS ONLY, PREFERABLY ON AN IMPERMEABLE SURFACE AND AWAY FROM FIELD DRAINS / DITCHES AND WATERCOURSES / WATERBODIES.
 14. SPILL KITS AND DRIP TRAYS WILL BE AVAILABLE ON SITE FOR USE AS REQUIRED.
- CONCRETE
15. CARE WILL BE TAKEN WHEN COMPLETING CONCRETE WORKS ON SITE TO ENSURE NO DISCHARGES OCCUR.
 16. CONCRETE WASH WATER, AND WASTE CONCRETE WILL BE MANAGED APPROPRIATELY ON SITE.
- IF WATER POLLUTION IS IDENTIFIED THE FOLLOWING STEPS WOULD BE ADHERED TO:
- STOP - WORK IN THE IMMEDIATE AREA SHOULD BE STOPPED AND THE SOURCE OF THE POLLUTION IDENTIFIED.
- CONTAIN - THE SOURCE OF THE POLLUTION SHOULD BE BUNDED USING A SUITABLE METHOD. NATURAL WATERCOURSES SHOULD BE TEMPORARILY DIVERTED AROUND THE SOURCE OF POLLUTION.
- NOTIFY - THE RELEVANT AUTHORITIES (SITE MANAGER / FISHERIES / NPWS / LOCAL AUTHORITY ETC.) SHOULD BE NOTIFIED IMMEDIATELY TO ENSURE THAT MEASURES CAN BE IMPLEMENTED DOWNSTREAM TO PROTECT FISHERIES AND OTHER SENSITIVE AREAS.
- DRAINAGE NOTES:
1. ROADWAY SURFACING DESIGN AND CONSTRUCTION TO ENGINEER'S SPECIFICATION (I.E. BY OTHERS).
 2. SPARE STRAW BALES/SILT FENCING/ OR SIMILAR, TO BE STORED ON SITE. THE LEVEL OF SILT IN RUNOFF DURING CONSTRUCTION IS TO BE MONITORED VISUALLY AND EXCESSIVE SILT LEVELS IN ANY AREA TO BE TEMPORARILY MANAGED BY PLACING SILT FENCES, STRAW BALES / OR SIMILAR OR ADDITIONAL CHECK DAMS AT THE PROBLEM AREAS. MOBILE SILTBUSTER SYSTEM TO BE AVAILABLE ON-SITE FOR USE AS REQUIRED ALSO.
 3. SUDS SYSTEM TO BE CONSTRUCTED PRIOR TO, OR AT THE SAME TIME AS THE ACCESS TRACKS. INTERIM MEASURES SUCH AS THE PLACEMENT OF STRAW BALES/SILT FENCING/OR SIMILAR APPROVED METHOD OR ADDITIONAL CHECK DAMS AND SILT FENCES TO BE EMPLOYED IN ALL INSTANCES WHERE WORK CARRIED OUT TO CONSTRUCT THE ACCESS TRACKS IS LIKELY TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS THROUGH INCREASED SILT LOADINGS BEING GENERATED DURING THE CONSTRUCTION PHASE.
 4. SUITABLE PREVENTION MEASURES SHOULD BE IN PLACE AT ALL TIMES TO PREVENT THE CONVEYANCE OF SIGNIFICANT VOLUMES OF SILT TO RECEIVING WATERCOURSES. SEE NOTES ON POLLUTION PREVENTION.
 5. INTERCEPTOR SWALES / DITCHES TO BE USED TO COLLECT UPSTREAM SURFACE WATER FLOWS. REGULAR CROSS DRAINS / DISCHARGE TO FIELD DITCHES/DRAINS WILL BE REQUIRED TO TRANSFER / DISCHARGE SURFACE WATER IN INTERCEPTOR DRAINS TO SUITABLE FIELD DRAIN OUTFALL POINTS.
 6. DRAINAGE SWALES / DITCHES TO BE EXCAVATED ADJACENT TO THE ACCESS TRACKS. REGULAR CROSS DRAINS TO BE LOCATED ALONGS ACCESS TRACKS TO PREVENT EXCESSIVE VOLUMES OF WATER COLLECTING IN THE SWALES / DITCHES. LOCATIONS OF CROSS DRAINS TO BE AGREED WITH THE ENGINEER ON SITE. SURFACE WATER WILL NOT BE ALLOWED TO DISCHARGE DIRECTLY INTO EXISTING WATERCOURSES.
 7. WHERE POSSIBLE, A BUFFER ZONE OF >20M TO ANY EXISTING WATERCOURSE WILL BE REQUIRED WHERE OVER LAND DISCHARGES ARE PROPOSED FROM ACCESS TRACK SWALES / DITCHES.
 8. BATTERS OF ALL PROPOSED SWALES / DITCHES TO HAVE A SLOPE OF BETWEEN 1 : 1.5 TO 1 : 2 DEPENDING UPON DEPTH OF SWALE/DITCH AND WILL BE LEFT AS CUT TO RE-VEGETATE WITH LOCAL SPECIES.
 9. TRACK SIDE SWALES / DITCHES TO BE SHALLOW WITH MODERATE GRADIENTS TO PREVENT SCOURING. IN STEEP AREAS CHECK DAMS SHOULD BE INSTALLED TO REDUCE FLOW VELOCITIES AND PROVIDE SOURCE CONTROL OF SILT CONTAINMENT. WHERE NECESSARY THESE HAVE BEEN DESIGNATED IN CONJUNCTION WITH SETTLEMENT PONDS AND SILT TRAPS, PRIOR TO DISCHARGE.
 10. SETTLEMENT PONDS TO BE CONSTRUCTED FOR SILT REMOVAL AT TURBINE BASES AND HARD STAND AREAS. POND SIZES DEPENDS ON CATCHMENT AREA SERVED. SAMPLE POND SIZES SHOWN ON DRAWING D501.
 11. STRAW BALES / OR SIMILAR AND SILT FENCES TO BE USED ALSO AROUND SPOIL HEAPS TO MITIGATE SILT RUNOFF. SILT FENCES MAY BE REMOVED WHEN SUITABLE VEGETATION COVER IS ESTABLISHED.
 12. SILT FENCES TO BE PROVIDE ALONG EDGE OF EXISTING WATERCOURSE WHERE WORKS COMES WITHIN <15M OF EDGE OF ANY DITCH / EPHEMERAL CHANNELS.
 13. SLOPES OF THE SWALES / DITCHES TO BE VEGETATED OR PROTECTED FROM EROSION UNTIL VEGETATION HAS BEEN ESTABLISHED. STRIPPED VEGETATIVE LAYER ('PEAT' 'SOD' OR 'SCRAW') FROM EXCAVATIONS TO BE STORED LOCALLY AND USED TO LINE SLOPES AND BASE OF SWALES / DITCHES OR LONGITUDINAL MOUNDS OF VEGETATION SWALES AT FIELD DRAIN DISCHARGE POINTS.
 14. AREAS STRIPPED OF VEGETATION SHOULD BE KEPT TO A MINIMUM.
 15. CLEAN STONE FLOW CONTROL CHECK DAMS TO BE MADE OF LOCALLY WON / GEOLOGICALLY SIMILAR WELL GRADED STONE. AGGREGATE SIZE FOR STONE CHECK DAMS TO BE TYPICALLY 20- 40MM CLEAN STONE. ON SLOPING SECTIONS OF THE ACCESS TRACKS, 40MM CHECK DAMS TO BE PROTECTED FROM WASHING AWAY THROUGH THE PLACEMENT OF 100M STONE ON THE DOWNHILL FACE OF THE CHECK DAM AND BY WRAPPING IN GEOTEXTILE.
 16. BUILD UP OF SILT LEVELS AT CHECK DAMS TO BE REMOVED AND DISPOSED OF APPROPRIATELY. SILT LEVELS AT CHECK DAMS TO BE VISUALLY INSPECTED AS PART OF AN ONGOING DRAINAGE MAINTENANCE PROGRAMME DURING THE CONSTRUCTION PHASE. WHERE CHECK DAMS BECOME CLOGGED WITH SILT OR VEGETATION, STONE CHECK DAM TO BE REMOVED AND REPLACED SUBSEQUENT TO THE REMOVAL OF SILT.
 17. SPACING AND FREQUENCY OF CHECK DAMS WILL BE DEPENDENT UPON LONGITUDINAL GRADIENT OF SWALE.
 18. LOCATION OF FILTRATION CHECK DAMS (IF REQUIRED) TO BE AGREED ON SITE WITH ENGINEER. SETTLEMENT PONDS TO BE CONSTRUCTED IN A MANNER WHERE THEY MAY BE EASILY INFILLED AT A LATER DATE (POST COMPLETION OF THE TURBINE BASE AND HARDSTAND CONSTRUCTION). ONLY SUITABLE MATERIALS EXCAVATED FROM THE POND TO BE USED TO FORM PART OF THE ENHANCEMENT AROUND THE POND.
 19. OIL FUEL SHOULD BE STORED WITHIN BUNDED CONTAINMENT STRUCTURES.
 20. SILT BAGS WILL BE USED ON SITE AT FIELD DRAIN DISCHARGE LOCATIONS, AS NECESSARY.

MITIGATION / DRAINAGE CONTROLS AVAILABLE FOR USE ACROSS THE SITE	
MANAGEMENT TYPE	DESCRIPTION OF SUDS DRAINAGE CONTROL METHODS
AVOIDANCE CONTROLS	1) APPLICATION OF 50M BUFFER ZONES TO NATURAL WATERCOURSES WHERE POSSIBLE
	2) APPLICATION OF 10M BUFFER ZONES TO MAIN DRAINS WHERE POSSIBLE
SOURCE CONTROLS	1) USE OF UPSTREAM INTERCEPTOR DRAINS AND DOWNSTREAM COLLECTOR DRAINS / OVERSIZED SWALES, VEE-DRAINS, DIVERSION DRAINS, FLUMES AND CULVERT PIPES
	2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) AND OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS
IN-LINE CONTROLS	1) INTERCEPTOR DRAINS, VEE-DRAINS, OVERSIZED SWALES/COLLECTOR DRAINS
	2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) STRAW BALES E) FLOW LIMITERS F) WEIRS OR BAFFLES G) AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS
WATER TREATMENT CONTROLS	1) TEMPORARY SUMPS
	2) ATTENUATION PONDS
OUTFALL CONTROLS	1) LEVELSPREADERS
	2) BUFFERED OUTFALLS



DRAWING LEGEND :

- RIVERS/STREAMS
- DRAINS
- DRAINS TO BE REDIRECTED
- NEW REDIRECTED DRAINS
- RIVERS/STREAMS 50M BUFFER
- STREAM FLOW DIRECTION
- BOG DRAINS
- UPSTREAM INTERCEPTOR DRAIN
- SWALES/DOWNSTREAM COLLECTOR DRAIN
- DIRECTION OF FLOW
- SILT FENCES
- DOUBLE SILT FENCES
- SETTLEMENT POND - LEVEL SPREADER
- CHECK DAM 'TYPE A'
- CHECK DAM 'TYPE B'
- PROPOSED WC CROSSING
- EXISTING WC CROSSING
- INTERCEPTOR DITCH CULVERT
- COLLECTOR DITCH CULVERT
- OVERLAND FLOW DISCHARGE
- TREATED WATER DISCHARGE
- SETTLEMENT POND
- SEMI-NATURAL VEGETATION
- SWALE / FILTER BED /SECONDARY SP
- PUMPING SUMP

KEY PLAN

DRAWING NOTES

1. DRAWINGS ISSUED ARE FOR PLANNING APPLICATION PURPOSES ONLY.

2. COPYRIGHT, ALL RIGHTS RESERVED. NO PART HERE WITH MAY BE COPIED OR REPRODUCED PARTIALLY OR WHOLLY IN ANY FORM WHATSOEVER WITHOUT THE PRIOR NOTICE OF THE COPYRIGHT OWNER HYDRO-ENVIRONMENTAL SERVICES.

3. DO NOT SCALE OFF THIS DRAWING. FIGURED METRIC DIMENSIONS ONLY SHOULD BE TAKEN OFF THIS DRAWING.

4. ALL DIMENSIONS ARE IN METRES.

Ordnance Survey Ireland Licence No. EN 0044724
© Ordnance Survey Ireland/Government of Ireland

Date	Description	Chkd	Signed

Revisions

HYDRO ENVIRONMENTAL SERVICES

22 Lower Main St
Dunganan
Co. Waterford
Ireland

tel: +353 (0) 58-44122
tel: +353 (0) 58-44244
email: info@hydroenvironmental.ie
web: www.hydroenvironmental.ie

Client: MKO

Job: CLONBERNE, CO. GALWAY - WIND FARM APPLICATION

Title: PROPOSED DRAINAGE LAYOUT

Figure No: D101

Drawing No: P1508-0-0624-A1-D101-00B

Sheet Size: A1 Project No.: P1508-0

Scale: 1:2,000 (A1) Drawn By: GA

Date: 10/06/2024 Checked By: MG

POLLUTION PREVENTION NOTES:

1. SITE MANAGEMENT PROPOSALS ARE INTENDED TO ENSURE PROTECTION AGAINST SURFACE WATER AND GROUNDWATER POLLUTION, SILTATION AND EROSION.

2. SUITABLE DRAINAGE CONTROL MEASURES SHOULD BE IN PLACE AT ALL TIMES TO PREVENT CONVEYANCE OF SIGNIFICANT VOLUMES OF SILT TO OFF SITE RECEIVING WATERCOURSES.

3. SILTY WATER CAN ARISE FROM DEWATERING EXCAVATIONS, EROSION OF EXPOSED/DISTURBED GROUND, TEMPORARY STOCKPILES, PLANT AND WHEEL WASH, SITE ROADS/TRACKS, AND DISTURBANCE OF EXISTING FIELD DRAINS AND DITCHES.

DISCHARGES

4. WATER CONTAINING SILT WILL NOT BE PUMPED DIRECTLY TO ANY NATURAL WATERCOURSE. ALL DISCHARGES TO BE MADE OVER OPEN GROUND OR INTO EXISTING FIELD DRAIN WITH SILT TRAP AT A MINIMUM OF 20M FROM NEAREST WATERCOURSE UNLESS OTHERWISE STATED.

5. NO EXCAVATED MATERIAL IS TO BE STORED WITHIN ANY SURFACE WATER BUFFER ZONE.

6. PUMPED WATER WILL BE DIRECTED INTO TRACK SIDE DITCHES AND TREATED IN SETTLEMENT PONDS AND VEGETATION SWALES PRIOR TO OVERLAND DISCHARGE.

7. PUMPING OF CLEAN WATER FROM EXCAVATIONS / OR OVER-PUMPING IN DRAINS/DITCHES/STREAMS WILL BE COMPLETED IN A MANNER THAT DOES NOT CAUSE SCOUR OR EROSION AT THE POINT OF RELEASE/DISCHARGE. THIS WILL BE DONE BY REDUCING THE FLOW VELOCITIES OR BY USE OF SPLASH PLATES, AND OTHER SIMILAR DISCHARGE CONTROLS.

8. VEGETATION WILL NOT BE STRIPPED FROM EXISTING DRAINS/DITCHES UNLESS ABSOLUTELY NECESSARY.

EXCAVATIONS

9. WHERE DEEP EXCAVATIONS ARE PROPOSED CUT-OFF DRAINS WILL BE USE TO REDUCE THE AMOUNT OF SURFACE WATER ENTERING THE EXCAVATION. THIS WILL BE THE CASE AROUND TURBINE BASE EXCAVATIONS.

EXPOSED GROUND & STOCKPILES

10. THE AMOUNT OF EXPOSED GROUND AND TEMPORARY STOCKPILES OPEN AT ANY ONE TIME WILL BE MINIMISED, AS FAR AS PRACTICABLE.

SITE TRACKS

11. USE OF TRACK SIDE SWALES WITH CHECK DAMS, AND/OR FILTRATION CHECK DAMS WILL REDUCE SILT IN RUNOFF WATER AS REQUIRED.

12. CHECK DAMS TO BE INSPECTED AND CLEANED REGULARLY.

REFUELLING

13. REFUELLING OF MOBILE PLANT WILL BE COMPLETED IN DESIGNATED REFUELLING AREAS ONLY, PREFERABLY ON AN IMPERMEABLE SURFACE AND AWAY FROM FIELD DRAINS / DITCHES AND WATERCOURSES / WATERBODIES.

14. SPILL KITS AND DRIP TRAYS WILL BE AVAILABLE ON SITE FOR USE AS REQUIRED.

CONCRETE

15. CARE WILL BE TAKEN WHEN COMPLETING CONCRETE WORKS ON SITE TO ENSURE NO DISCHARGES OCCUR.

16. CONCRETE WASH WATER, AND WASTE CONCRETE WILL BE MANAGED APPROPRIATELY ON SITE.

IF WATER POLLUTION IS IDENTIFIED THE FOLLOWING STEPS WOULD BE ADHERED TO:

STOP - WORK IN THE IMMEDIATE AREA SHOULD BE STOPPED AND THE SOURCE OF THE POLLUTION IDENTIFIED.

CONTAIN - THE SOURCE OF THE POLLUTION SHOULD BE BUNDED USING A SUITABLE METHOD. NATURAL WATERCOURSES SHOULD BE TEMPORARILY DIVERTED AROUND THE SOURCE OF POLLUTION.

NOTIFY - THE RELEVANT AUTHORITIES (SITE MANAGER / FISHERIES / NPWS / LOCAL AUTHORITY ETC.) SHOULD BE NOTIFIED IMMEDIATELY TO ENSURE THAT MEASURES CAN BE IMPLEMENTED DOWNSTREAM TO PROTECT FISHERIES AND OTHER SENSITIVE AREAS.

DRAINAGE NOTES:

1. ROADWAY SURFACING DESIGN AND CONSTRUCTION TO ENGINEER'S SPECIFICATION (I.E. BY OTHERS).

2. SPARE STRAW BALES/SILT FENCING/ OR SIMILAR, TO BE STORED ON SITE. THE LEVEL OF SILT IN RUNOFF DURING CONSTRUCTION IS TO BE MONITORED VISUALLY AND EXCESSIVE SILT LEVELS IN ANY AREA TO BE TEMPORARILY MANAGED BY PLACING SILT FENCES, STRAW BALES / OR SIMILAR OR ADDITIONAL CHECK DAMS AT THE PROBLEM AREAS. MOBILE SILTBUSTER SYSTEM TO BE AVAILABLE ON-SITE FOR USE AS REQUIRED ALSO.

3. SUDS SYSTEM TO BE CONSTRUCTED PRIOR TO, OR AT THE SAME TIME AS THE ACCESS TRACKS. INTERIM MEASURES SUCH AS THE PLACEMENT OF STRAW BALES/SILT FENCING/OR SIMILAR APPROVED METHOD OR ADDITIONAL CHECK DAMS AND SILT FENCES TO BE EMPLOYED IN ALL INSTANCES WHERE WORK CARRIED OUT TO CONSTRUCT THE ACCESS TRACKS IS LIKELY TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS THROUGH INCREASED SILT LOADINGS BEING GENERATED DURING THE CONSTRUCTION PHASE.

4. SUITABLE PREVENTION MEASURES SHOULD BE IN PLACE AT ALL TIMES TO PREVENT THE CONVEYANCE OF SIGNIFICANT VOLUMES OF SILT TO RECEIVING WATERCOURSES. SEE NOTES ON POLLUTION PREVENTION.

5. INTERCEPTOR SWALES / DITCHES TO BE USED TO COLLECT UPSTREAM SURFACE WATER FLOWS. REGULAR CROSS DRAINS / DISCHARGE TO FIELD DITCHES/DRAINS WILL BE REQUIRED TO TRANSFER / DISCHARGE SURFACE WATER IN INTERCEPTOR DRAINS TO SUITABLE FIELD DRAIN OUTFALL POINTS.

6. DRAINAGE SWALES / DITCHES TO BE EXCAVATED ADJACENT TO THE ACCESS TRACKS. REGULAR CROSS DRAINS TO BE LOCATED ALONG ACCESS TRACKS TO PREVENT EXCESSIVE VOLUMES OF WATER COLLECTING IN THE SWALES / DITCHES. LOCATIONS OF CROSS DRAINS TO BE AGREED WITH THE ENGINEER ON SITE. SURFACE WATER WILL NOT BE ALLOWED TO DISCHARGE DIRECTLY INTO EXISTING WATERCOURSES.

7. WHERE POSSIBLE, A BUFFER ZONE OF >20M TO ANY EXISTING WATERCOURSE WILL BE REQUIRED WHERE OVER LAND DISCHARGES ARE PROPOSED FROM ACCESS TRACK SWALES / DITCHES.

8. BATTERS OF ALL PROPOSED SWALES / DITCHES TO HAVE A SLOPE OF BETWEEN 1 : 1.5 TO 1 : 2 DEPENDING UPON DEPTH OF SWALE/DITCH AND WILL BE LEFT AS CUT TO RE-VEGETATE WITH LOCAL SPECIES.

9. TRACK SIDE SWALES / DITCHES TO BE SHALLOW WITH MODERATE GRADIENTS TO PREVENT SCOURING. IN STEEP AREAS CHECK DAMS SHOULD BE INSTALLED TO REDUCE FLOW VELOCITIES AND PROVIDE SOURCE CONTROL OF SILT CONTAINMENT. WHERE NECESSARY THESE HAVE BEEN DESIGNATED IN CONJUNCTION WITH SETTLEMENT PONDS AND SILT TRAPS, PRIOR TO DISCHARGE.

10. SETTLEMENT PONDS TO BE CONSTRUCTED FOR SILT REMOVAL AT TURBINE BASES AND HARD STAND AREAS. POND SIZES DEPENDS ON CATCHMENT AREA SERVED. SAMPLE POND SIZES SHOWN ON DRAWING D501.

11. STRAW BALES / OR SIMILAR AND SILT FENCES TO BE USED ALSO AROUND SPOIL HEAPS TO MITIGATE SILT RUNOFF. SILT FENCES MAY BE REMOVED WHEN SUITABLE VEGETATION COVER IS ESTABLISHED.

12. SILT FENCES TO BE PROVIDE ALONG EDGE OF EXISTING WATERCOURSE WHERE WORKS COMES WITHIN <15M OF EDGE OF ANY DITCH / EPHEMERAL CHANNELS.

13. SLOPES OF THE SWALES / DITCHES TO BE VEGETATED OR PROTECTED FROM EROSION UNTIL VEGETATION HAS BEEN ESTABLISHED. STRIPPED VEGETATIVE LAYER (PEAT 'SOD' OR 'SCRAW') FROM EXCAVATIONS TO BE STORED LOCALLY AND USED TO LINE SLOPES AND BASE OF SWALES / DITCHES OR LONGITUDINAL MOUNDS OF VEGETATION SWALES AT FIELD DRAIN DISCHARGE POINTS.

14. AREAS STRIPPED OF VEGETATION SHOULD BE KEPT TO A MINIMUM.

15. CLEAN STONE FLOW CONTROL CHECK DAMS TO BE MADE OF LOCALLY WON / GEOLOGICALLY SIMILAR WELL GRADED STONE. AGGREGATE SIZE FOR STONE CHECK DAMS TO BE TYPICALLY 20- 40MM CLEAN STONE. ON SLOPING SECTIONS OF THE ACCESS TRACKS, 40MM CHECK DAMS TO BE PROTECTED FROM WASHING AWAY THROUGH THE PLACEMENT OF 100M STONE ON THE DOWNHILL FACE OF THE CHECK DAM AND BY WRAPPING IN GEOTEXTILE.

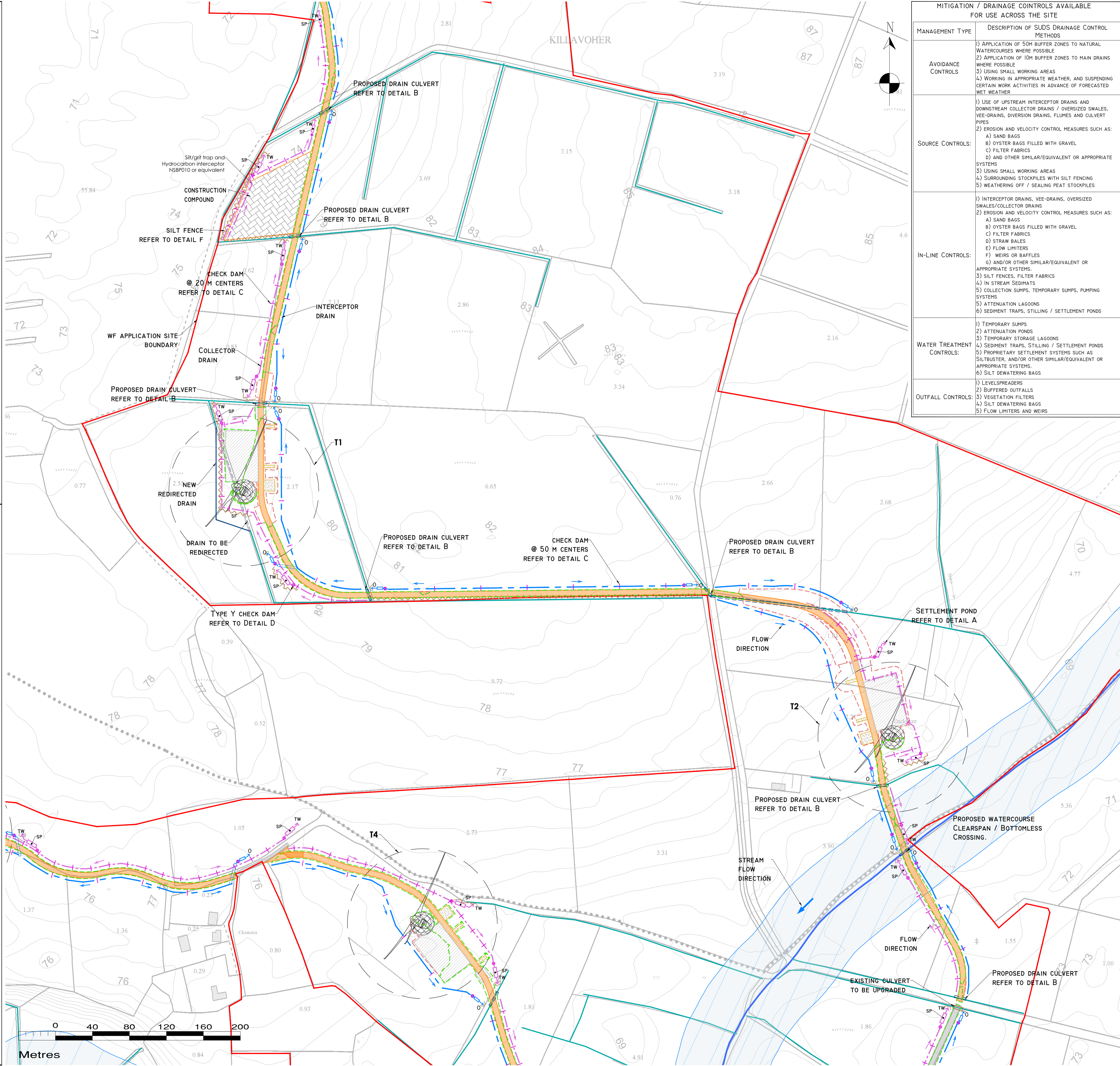
16. BUILD UP OF SILT LEVELS AT CHECK DAMS TO BE REMOVED AND DISPOSED OF APPROPRIATELY. SILT LEVELS AT CHECK DAMS TO BE VISUALLY INSPECTED AS PART OF AN ONGOING DRAINAGE MAINTENANCE PROGRAMME DURING THE CONSTRUCTION PHASE. WHERE CHECK DAMS BECOME CLOGGED WITH SILT OR VEGETATION, STONE CHECK DAM TO BE REMOVED AND REPLACED SUBSEQUENT TO THE REMOVAL OF SILT.

17. SPACING AND FREQUENCY OF CHECK DAMS WILL BE DEPENDENT UPON LONGITUDINAL GRADIENT OF SWALE.

18. LOCATION OF FILTRATION CHECK DAMS (IF REQUIRED) TO BE AGREED ON SITE WITH ENGINEER. SETTLEMENT PONDS TO BE CONSTRUCTED IN A MANNER WHERE THEY MAY BE EASILY INFILLED AT A LATER DATE (POST COMPLETION OF THE TURBINE BASE AND HARDSTAND CONSTRUCTION). ONLY SUITABLE MATERIALS EXCAVATED FROM THE POND TO BE USED TO FORM PART OF THE EMBANKMENT AROUND THE POND.

19. OIL FUEL SHOULD BE STORED WITHIN BUNDED CONTAINMENT STRUCTURES.

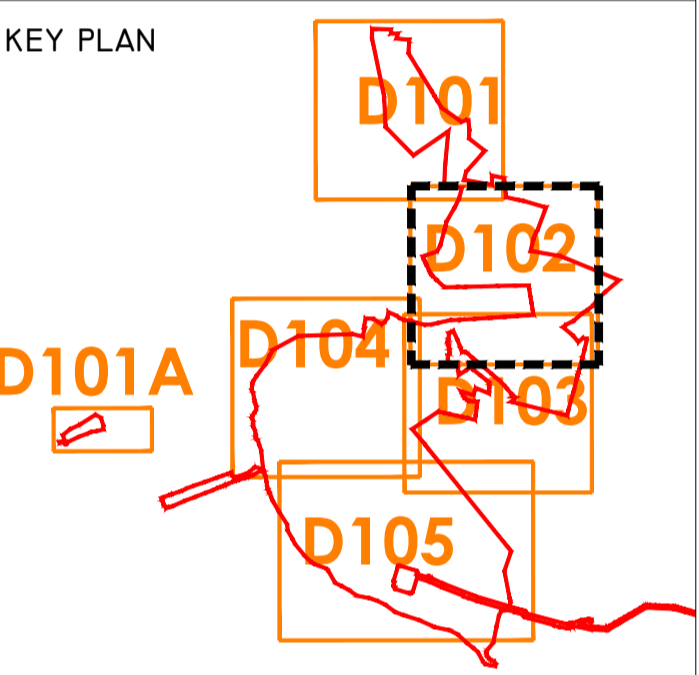
20. SILT BAGS WILL BE USED ON SITE AT FIELD DRAIN DISCHARGE LOCATIONS, AS NECESSARY.



MITIGATION / DRAINAGE CONTROLS AVAILABLE FOR USE ACROSS THE SITE	
MANAGEMENT TYPE	DESCRIPTION OF SUDS DRAINAGE CONTROL METHODS
AVOIDANCE CONTROLS	1) APPLICATION OF 50M BUFFER ZONES TO NATURAL WATERCOURSES WHERE POSSIBLE
	2) APPLICATION OF 10M BUFFER ZONES TO MAIN DRAINS WHERE POSSIBLE
SOURCE CONTROLS:	3) USING SMALL WORKING AREAS
	4) WORKING IN APPROPRIATE WEATHER, AND SUSPENDING CERTAIN WORK ACTIVITIES IN ADVANCE OF FORECASTED WET WEATHER
IN-LINE CONTROLS:	1) USE OF UPSTREAM INTERCEPTOR DRAINS AND DOWNSTREAM COLLECTOR DRAINS / OVERSIZED SWALES, VEE-DRAINS, DIVERSION DRAINS, FLUMES AND CULVERT PIPES
	2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) AND OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS
WATER TREATMENT CONTROLS:	3) USING SMALL WORKING AREAS
	4) SURROUNDING STOCKPILES WITH SILT FENCING
OUTFALL CONTROLS:	5) WEATHERING OFF / SEALING PEAT STOCKPILES
	1) INTERCEPTOR DRAINS, VEE-DRAINS, OVERSIZED SWALES/COLLECTOR DRAINS
	2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) STRAW BALES E) FLOW LIMITERS F) WEIRS OR BAFFLES G) AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS
	3) SILT FENCES, FILTER FABRICS
	4) IN STREAM SEDIMENTS
	5) COLLECTION SUMPS, TEMPORARY SUMPS, PUMPING SYSTEMS
	6) ATTENUATION LAGOONS
	7) SEDIMENT TRAPS, STILLING / SETTLEMENT PONDS
	1) TEMPORARY SUMPS
	2) ATTENUATION PONDS
	3) TEMPORARY STORAGE LAGOONS
	4) SEDIMENT TRAPS, STILLING / SETTLEMENT PONDS
	5) PROPRIETARY SETTLEMENT SYSTEMS SUCH AS SILTBUSTER, AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS
	6) SILT DEWATERING BAGS
	1) LEVELSPREADERS
	2) BUFFERED OUTFALLS
	3) VEGETATION FILTERS
	4) SILT DEWATERING BAGS
	5) FLOW LIMITERS AND WEIRS

DRAWING LEGEND :

- RIVERS/STREAMS
- DRAINS TO BE REDIRECTED
- NEW REDIRECTED DRAINS
- RIVERS/STREAMS 50M BUFFER
- STREAM FLOW DIRECTION
- BOG DRAINS
- UPSTREAM INTERCEPTOR DRAIN
- SWALES/DOWNSTREAM COLLECTOR DRAIN
- SILT FENCES
- DOUBLE SILT FENCES
- SETTLEMENT POND - LEVEL SPREADER
- CHECK DAM 'TYPE A'
- CHECK DAM 'TYPE B'
- PROPOSED WC CROSSING
- EXISTING WC CROSSING
- INTERCEPTOR DITCH CULVERT
- COLLECTOR DITCH CULVERT
- OVERLAND FLOW DISCHARGE
- TREATED WATER DISCHARGE
- SETTLEMENT POND
- SP-NATURAL VEGETATION
- VS - FILTER BED /SECONDARY SP
- PUMPING SUMP
- WIND FARM PLANNING APPLICATION BOUNDARY
- EXISTING GROUND SURFACE
- MINOR CONTOUR (1 M INTERVAL)
- TURBINE AND SWEEP AREA
- CRANE PLATFORM
- PROPOSED NEW ROADS
- EXISTING ROADS TO BE UPGRADED
- CONSTRUCTION COMPOUND
- BORROW PIT
- PEAT REPOSITORY AREAS
- SPOIL STORAGE AREAS
- PEATLAND ENHANCEMENT AREA
- CUT AREA
- FILL AREA



DRAWING NOTES

1. DRAWINGS ISSUED ARE FOR PLANNING APPLICATION PURPOSES ONLY.

2. COPYRIGHT, ALL RIGHTS RESERVED. NO PART HERE WITH MAY BE COPIED OR REPRODUCED PARTIALLY OR WHOLLY IN ANY FORM WHATSOEVER WITHOUT THE PRIOR NOTICE OF THE COPYRIGHT OWNER HYDRO-ENVIRONMENTAL SERVICES.

3. DO NOT SCALE OFF THIS DRAWING. FIGURED METRIC DIMENSIONS ONLY SHOULD BE TAKEN OFF THIS DRAWING.

4. ALL DIMENSIONS ARE IN METRES.

Ordnance Survey Ireland Licence No. EN 0044724
© Ordnance Survey Ireland/Government of Ireland

Date	Description	Chkd	Signed

Revisions

HYDRO ENVIRONMENTAL SERVICES

22 Lower Main St
Dungarvan
Co. Waterford
Ireland

tel: +353 (0) 58-44122
tel: +353 (0) 58-44244
email: info@hydroenvironmental.ie
web: www.hydroenvironmental.ie

Client: MKO

Job: CLONBERNE, Co. GALWAY - WIND FARM APPLICATION

Title: PROPOSED DRAINAGE LAYOUT

Figure No: D102

Drawing No: P1508-0-0624-A1-D102-00B

Sheet Size: A1 Project No.: P1508-0

Scale: 1:2,000 (A1) Drawn By: GA

Date: 10/06/2024 Checked By: MG

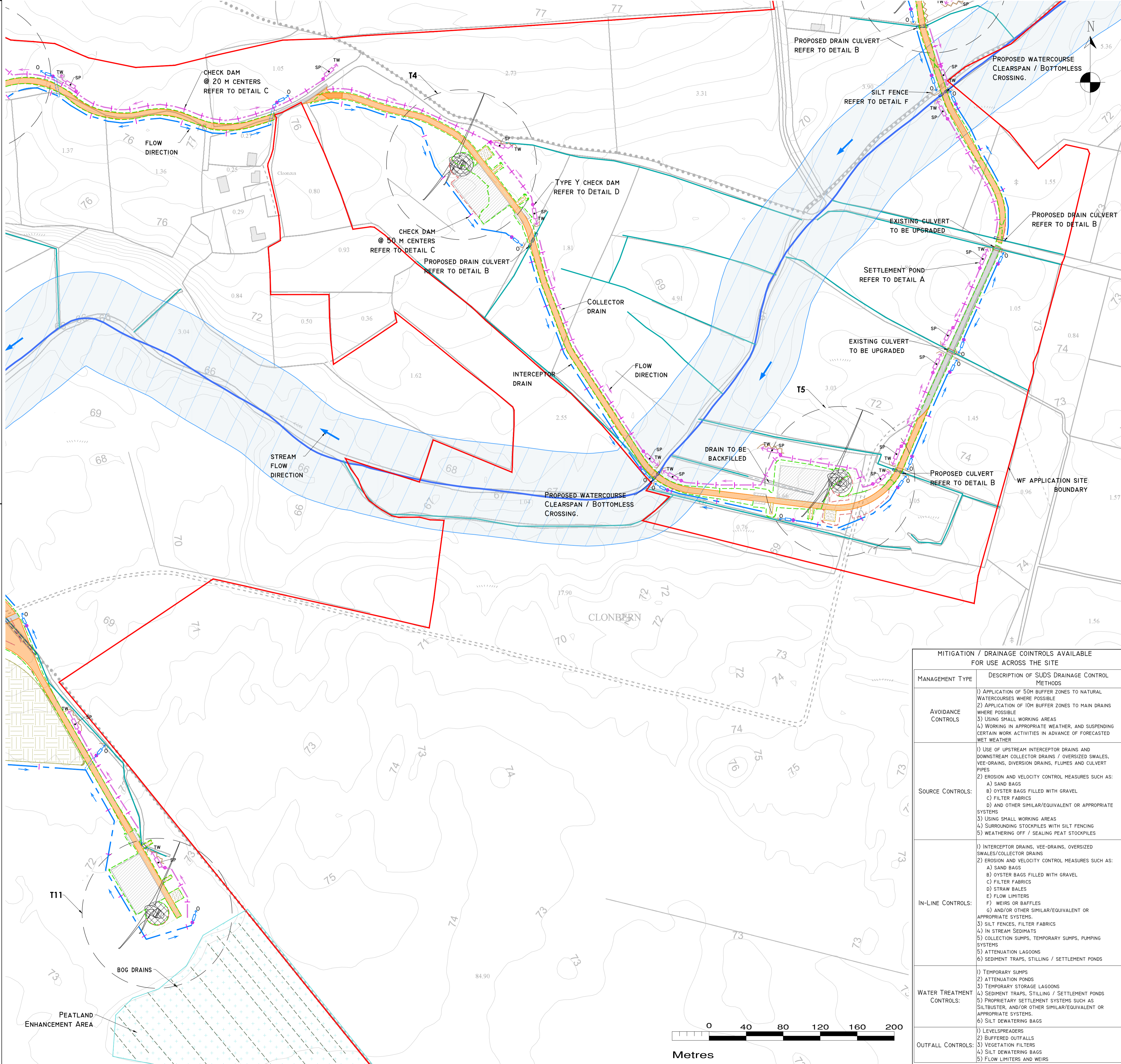
POLLUTION PREVENTION NOTES:

1. SITE MANAGEMENT PROPOSALS ARE INTENDED TO ENSURE PROTECTION AGAINST SURFACE WATER AND GROUNDWATER POLLUTION, SILTATION AND EROSION.
2. SUITABLE DRAINAGE CONTROL MEASURES SHOULD BE IN PLACE AT ALL TIMES TO PREVENT CONVEYANCE OF SIGNIFICANT VOLUMES OF SILT TO OFF SITE RECEIVING WATERCOURSES.
3. SILTY WATER CAN ARISE FROM DEWATERING EXCAVATIONS, EROSION OF EXPOSED/DISTURBED GROUND, TEMPORARY STOCKPILES, PLANT AND WHEEL WASH, SITE ROADS/TRACKS, AND DISTURBANCE OF EXISTING FIELD DRAINS AND DITCHES.
- DISCHARGES
 4. WATER CONTAINING SILT WILL NOT BE PUMPED DIRECTLY TO ANY NATURAL WATERCOURSE. ALL DISCHARGES TO BE MADE OVER OPEN GROUND OR INTO EXISTING FIELD DRAIN WITH SILT TRAP AT A MINIMUM OF 20M FROM NEAREST WATERCOURSE UNLESS OTHERWISE STATED.
 5. NO EXCAVATED MATERIAL IS TO BE STORED WITHIN ANY SURFACE WATER BUFFER ZONE.
 6. PUMPED WATER WILL BE DIRECTED INTO TRACK SIDE DITCHES AND TREATED IN SETTLEMENT PONDS AND VEGETATION SWALES PRIOR TO OVERLAND DISCHARGE.
 7. PUMPING OF CLEAN WATER FROM EXCAVATIONS / OR OVER-PUMPING IN DRAINS/DITCHES/STREAMS WILL BE COMPLETED IN A MANNER THAT DOES NOT CAUSE SCOUR OR EROSION AT THE POINT OF RELEASE/DISCHARGE. THIS WILL BE DONE BY REDUCING THE FLOW VELOCITIES OR BY USE OF SPLASH PLATES, AND OTHER SIMILAR DISCHARGE CONTROLS.
 8. VEGETATION WILL NOT BE STRIPPED FROM EXISTING DRAINS/DITCHES UNLESS ABSOLUTELY NECESSARY.
- EXCAVATIONS
 9. WHERE DEEP EXCAVATIONS ARE PROPOSED CUT-OFF DRAINS WILL BE USE TO REDUCE THE AMOUNT OF SURFACE WATER ENTERING THE EXCAVATION. THIS WILL BE THE CASE AROUND TURBINE BASE EXCAVATIONS.
- EXPOSED GROUND & STOCKPILES
 10. THE AMOUNT OF EXPOSED GROUND AND TEMPORARY STOCKPILES OPEN AT ANY ONE TIME WILL BE MINIMISED, AS FAR AS PRACTICABLE.
- SITE TRACKS
 11. USE OF TRACK SIDE SWALES WITH CHECK DAMS, AND/OR FILTRATION CHECK DAMS WILL REDUCE SILT IN RUNOFF WATER AS REQUIRED.
 12. CHECK DAMS TO BE INSPECTED AND CLEANED REGULARLY.
- REFUELLING
 13. REFUELLING OF MOBILE PLANT WILL BE COMPLETED IN DESIGNATED REFUELLING AREAS ONLY, PREFERABLY ON AN IMPERMEABLE SURFACE AND AWAY FROM FIELD DRAINS / DITCHES AND WATERCOURSES / WATERBODIES.
 14. SPILL KITS AND DRIP TRAYS WILL BE AVAILABLE ON SITE FOR USE AS REQUIRED.
- CONCRETE
 15. CARE WILL BE TAKEN WHEN COMPLETING CONCRETE WORKS ON SITE TO ENSURE NO DISCHARGES OCCUR.
 16. CONCRETE WASH WATER, AND WASTE CONCRETE WILL BE MANAGED APPROPRIATELY ON SITE.
- IF WATER POLLUTION IS IDENTIFIED THE FOLLOWING STEPS WOULD BE ADHERED TO:

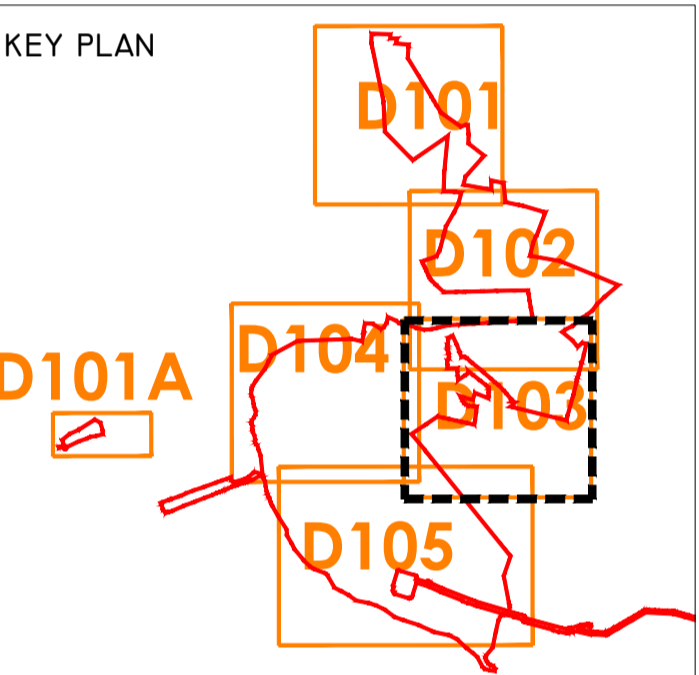
STOP - WORK IN THE IMMEDIATE AREA SHOULD BE STOPPED AND THE SOURCE OF THE POLLUTION IDENTIFIED.

CONTAIN - THE SOURCE OF THE POLLUTION SHOULD BE BUNDED USING A SUITABLE METHOD. NATURAL WATERCOURSES SHOULD BE TEMPORARILY DIVERTED AROUND THE SOURCE OF POLLUTION.

NOTIFY - THE RELEVANT AUTHORITIES (SITE MANAGER / FISHERIES / NPWS / LOCAL AUTHORITY ETC.) SHOULD BE NOTIFIED IMMEDIATELY TO ENSURE THAT MEASURES CAN BE IMPLEMENTED DOWNSTREAM TO PROTECT FISHERIES AND OTHER SENSITIVE AREAS.
- DRAINAGE NOTES:
 1. ROADWAY SURFACING DESIGN AND CONSTRUCTION TO ENGINEER'S SPECIFICATION (I.E. BY OTHERS).
 2. SPARE STRAW BALES/SILT FENCING/ OR SIMILAR, TO BE STORED ON SITE. THE LEVEL OF SILT IN RUNOFF DURING CONSTRUCTION IS TO BE MONITORED VISUALLY AND EXCESSIVE SILT LEVELS IN ANY AREA TO BE TEMPORARILY MANAGED BY PLACING SILT FENCES, STRAW BALES / OR SIMILAR OR ADDITIONAL CHECK DAMS AT THE PROBLEM AREAS. MOBILE SILTBUSTER SYSTEM TO BE AVAILABLE ON-SITE FOR USE AS REQUIRED ALSO.
 3. SUDS SYSTEM TO BE CONSTRUCTED PRIOR TO, OR AT THE SAME TIME AS THE ACCESS TRACKS. INTERIM MEASURES SUCH AS THE PLACEMENT OF STRAW BALES/SILT FENCING/OR SIMILAR APPROVED METHOD OR ADDITIONAL CHECK DAMS AND SILT FENCES TO BE EMPLOYED IN ALL INSTANCES WHERE WORK CARRIED OUT TO CONSTRUCT THE ACCESS TRACKS IS LIKELY TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS THROUGH INCREASED SILT LOADINGS BEING GENERATED DURING THE CONSTRUCTION PHASE.
 4. SUITABLE PREVENTION MEASURES SHOULD BE IN PLACE AT ALL TIMES TO PREVENT THE CONVEYANCE OF SIGNIFICANT VOLUMES OF SILT TO RECEIVING WATERCOURSES. SEE NOTES ON POLLUTION PREVENTION.
 5. INTERCEPTOR SWALES / DITCHES TO BE USED TO COLLECT UPSTREAM SURFACE WATER FLOWS. REGULAR CROSS DRAINS / DISCHARGE TO FIELD DITCHES/DRAINS WILL BE REQUIRED TO TRANSFER / DISCHARGE SURFACE WATER IN INTERCEPTOR DRAINS TO SUITABLE FIELD DRAIN OUTFALL POINTS.
 6. DRAINAGE SWALES / DITCHES TO BE EXCAVATED ADJACENT TO THE ACCESS TRACKS. REGULAR CROSS DRAINS TO BE LOCATED ALONG ACCESS TRACKS TO PREVENT EXCESSIVE WATER COLLECTING IN THE SWALES / DITCHES. LOCATIONS OF CROSS DRAINS TO BE AGREED WITH THE ENGINEER ON SITE. SURFACE WATER WILL NOT BE ALLOWED TO DISCHARGE DIRECTLY INTO EXISTING WATERCOURSES.
 7. WHERE POSSIBLE, A BUFFER ZONE OF >20M TO ANY EXISTING WATERCOURSE WILL BE REQUIRED WHERE OVER LAND DISCHARGES ARE PROPOSED FROM ACCESS TRACK SWALES / DITCHES.
 8. BATTERS OF ALL PROPOSED SWALES / DITCHES TO HAVE A SLOPE OF BETWEEN 1 : 1.5 TO 1 : 2 DEPENDING UPON DEPTH OF SWALE/DITCH AND WILL BE LEFT AS CUT TO RE-VEGETATE WITH LOCAL SPECIES.
 9. TRACK SIDE SWALES / DITCHES TO BE SHALLOW WITH MODERATE GRADIENTS TO PREVENT SCOURING. IN STEEP AREAS CHECK DAMS SHOULD BE INSTALLED TO REDUCE FLOW VELOCITIES AND PROVIDE SOURCE CONTROL OF SILT CONTAINMENT. WHERE NECESSARY THESE HAVE BEEN DESIGNATED IN CONJUNCTION WITH SETTLEMENT PONDS AND SILT TRAPS, PRIOR TO DISCHARGE.
 10. SETTLEMENT PONDS TO BE CONSTRUCTED FOR SILT REMOVAL AT TURBINE BASES AND HARD STAND AREAS. POND SIZES DEPENDS ON CATCHMENT AREA SERVED. SAMPLE POND SIZES SHOWN ON DRAWING D501.
 11. STRAW BALES / OR SIMILAR AND SILT FENCES TO BE USED ALSO AROUND SPOIL HEAPS TO MITIGATE SILT RUNOFF. SILT FENCES MAY BE REMOVED WHEN SUITABLE VEGETATION COVER IS ESTABLISHED.
 12. SILT FENCES TO BE PROVIDE ALONG EDGE OF EXISTING WATERCOURSE WHERE WORKS COMES WITHIN <15M OF EDGE OF ANY DITCH / EPHEMERAL CHANNELS.
 13. SLOPES OF THE SWALES / DITCHES TO BE VEGETATED OR PROTECTED FROM EROSION UNTIL VEGETATION HAS BEEN ESTABLISHED. STRIPPED VEGETATIVE LAYER (PEAT 'SOD' OR 'SCRAW') FROM EXCAVATIONS TO BE STORED LOCALLY AND USED TO LINE SLOPES AND BASE OF SWALES / DITCHES OR LONGITUDINAL MOUNDS OF VEGETATION SWALES AT FIELD DRAIN DISCHARGE POINTS.
 14. AREAS STRIPPED OF VEGETATION SHOULD BE KEPT TO A MINIMUM.
 15. CLEAN STONE FLOW CONTROL CHECK DAMS TO BE MADE OF LOCALLY WON / GEOLOGICALLY SIMILAR WELL GRADED STONE. AGGREGATE SIZE FOR STONE CHECK DAMS TO BE TYPICALLY 20- 40MM CLEAN STONE. ON SLOPING SECTIONS OF THE ACCESS TRACKS, 40MM CHECK DAMS TO BE PROTECTED FROM WASHING AWAY THROUGH THE PLACEMENT OF 100M STONE ON THE DOWNHILL FACE OF THE CHECK DAM AND BY WRAPPING IN GEOTEXTILE.
 16. BUILD UP OF SILT LEVELS AT CHECK DAMS TO BE REMOVED AND DISPOSED OF APPROPRIATELY. SILT LEVELS AT CHECK DAMS TO BE VISUALLY INSPECTED AS PART OF AN ONGOING DRAINAGE MAINTENANCE PROGRAMME DURING THE CONSTRUCTION PHASE. WHERE CHECK DAMS BECOME CLOGGED WITH SILT OR VEGETATION, STONE CHECK DAM TO BE REMOVED AND REPLACED SUBSEQUENT TO THE REMOVAL OF SILT.
 17. SPACING AND FREQUENCY OF CHECK DAMS WILL BE DEPENDENT UPON LONGITUDINAL GRADIENT OF SWALE.
 18. LOCATION OF FILTRATION CHECK DAMS (IF REQUIRED) TO BE AGREED ON SITE WITH ENGINEER. SETTLEMENT PONDS TO BE CONSTRUCTED IN A MANNER WHERE THEY MAY BE EASILY INFILLED AT A LATER DATE (POST COMPLETION OF THE TURBINE BASE AND HARDSTAND CONSTRUCTION). ONLY SUITABLE MATERIALS EXCAVATED FROM THE POND TO BE USED TO FORM PART OF THE ENHANCEMENT AROUND THE POND.
 19. OIL FUEL SHOULD BE STORED WITHIN BUNDED CONTAINMENT STRUCTURES.
 20. SILT BAGS WILL BE USED ON SITE AT FIELD DRAIN DISCHARGE LOCATIONS, AS NECESSARY.



- DRAWING LEGEND :**
- RIVERS/STREAMS
 - DRAINS
 - DRAINS TO BE REDIRECTED
 - NEW REDIRECTED DRAINS
 - RIVERS/STREAMS 50M BUFFER
 - STREAM FLOW DIRECTION
 - BOG DRAINS
 - UPSTREAM INTERCEPTOR DRAIN
 - SWALES/DOWNSTREAM COLLECTOR DRAIN
 - DIRECTION OF FLOW
 - SILT FENCES
 - DOUBLE SILT FENCES
 - SETTLEMENT POND - LEVEL SPREADER
 - CHECK DAM 'TYPE A'
 - CHECK DAM 'TYPE B'
 - PROPOSED W/C CROSSING
 - EXISTING W/C CROSSING
 - INTERCEPTOR DITCH CULVERT
 - COLLECTOR DITCH CULVERT
 - OVERLAND FLOW DISCHARGE
 - O TREATED WATER DISCHARGE
 - TW SETTLEMENT POND
 - VS SEMI-NATURAL VEGETATION
 - SWALE / FILTER BED /SECONDARY SP
 - PUMPING SUMP
- KEY PLAN**
- D101, D102, D101A, D104, D103, D105



- DRAWING NOTES**
1. DRAWINGS ISSUED ARE FOR PLANNING APPLICATION PURPOSES ONLY.
 2. COPYRIGHT, ALL RIGHTS RESERVED. NO PART HERE WITH MAY BE COPIED OR REPRODUCED PARTIALLY OR WHOLLY IN ANY FORM WHATSOEVER WITHOUT THE PRIOR NOTICE OF THE COPYRIGHT OWNER HYDRO-ENVIRONMENTAL SERVICES.
 3. DO NOT SCALE OFF THIS DRAWING. FIGURED METRIC DIMENSIONS ONLY SHOULD BE TAKEN OFF THIS DRAWING.
 4. ALL DIMENSIONS ARE IN METRES.

Ordnance Survey Ireland Licence No. EN 0044724
© Ordnance Survey Ireland/Government of Ireland

Date	Description	Chkd	Signed
------	-------------	------	--------

Revisions

HYDRO ENVIRONMENTAL SERVICES

22 Lower Main St
Dungarvan
Co. Waterford
Ireland

tel: +353 (0) 58-44122
tel: +353 (0) 58-44244
email: info@hydroenvironmental.ie
web: www.hydroenvironmental.ie

Client: MKO

Job: CLONBERNE, CO. GALWAY
- WIND FARM APPLICATION

Title: PROPOSED DRAINAGE LAYOUT

Figure No: D103

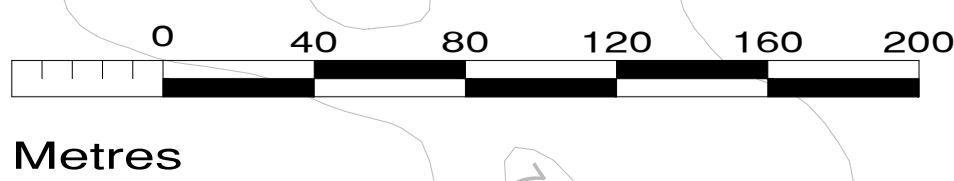
Drawing No: P1508-0-0624-A1-D103-00C

Sheet Size: A1 Project No.: P1508-0

Scale: 1:2,000 (A1) Drawn By: GA

Date: 10/06/2024 Checked By: MG

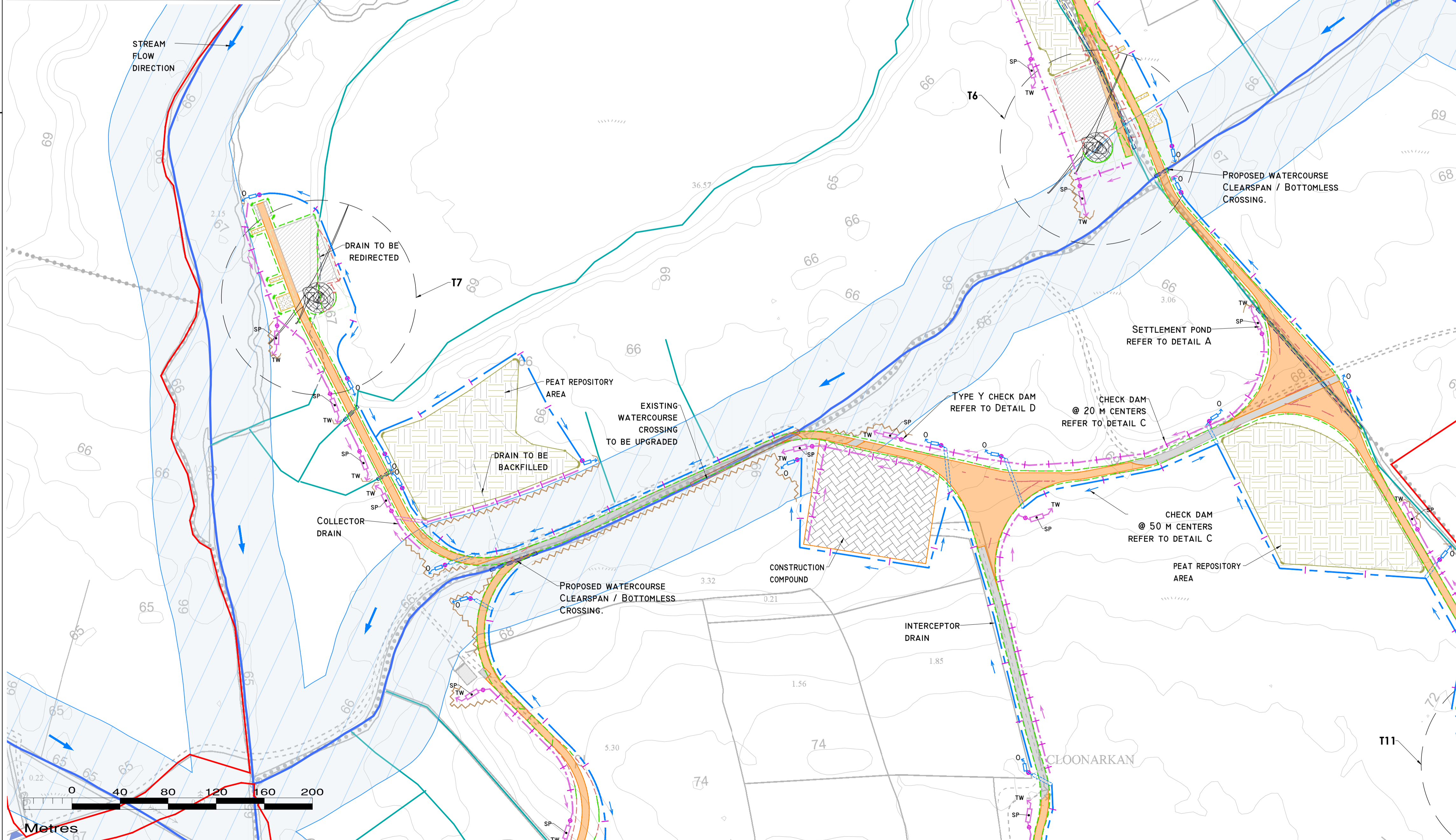
MITIGATION / DRAINAGE CONTROLS AVAILABLE FOR USE ACROSS THE SITE	
MANAGEMENT TYPE	DESCRIPTION OF SUDS DRAINAGE CONTROL METHODS
AVOIDANCE CONTROLS	1) APPLICATION OF 50M BUFFER ZONES TO NATURAL WATERCOURSES WHERE POSSIBLE
	2) APPLICATION OF 10M BUFFER ZONES TO MAIN DRAINS WHERE POSSIBLE
SOURCE CONTROLS:	3) USING SMALL WORKING AREAS
	4) WORKING IN APPROPRIATE WEATHER, AND SUSPENDING CERTAIN WORK ACTIVITIES IN ADVANCE OF FORECASTED WET WEATHER
IN-LINE CONTROLS:	1) USE OF UPSTREAM INTERCEPTOR DRAINS AND DOWNSTREAM COLLECTOR DRAINS / OVERSIZED SWALES, VEE-DRAINS, DIVERSION DRAINS, FLUMES AND CULVERT PIPES
	2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) AND OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS 3) USING SMALL WORKING AREAS 4) SURROUNDING STOCKPILES WITH SILT FENCING 5) WEATHERING OFF / SEALING PEAT STOCKPILES
WATER TREATMENT CONTROLS:	1) INTERCEPTOR DRAINS, VEE-DRAINS, OVERSIZED SWALES/COLLECTOR DRAINS
	2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) STRAW BALES E) FLOW LIMITERS F) WEIRS OR Baffles G) AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS 3) SILT FENCES, FILTER FABRICS 4) IN STREAM SEDIMENTS 5) COLLECTION SUMPS, TEMPORARY SUMPS, PUMPING SYSTEMS 6) ATTENUATION LAGOONS 7) SEDIMENT TRAPS, STILLING / SETTLEMENT PONDS
OUTFALL CONTROLS:	1) TEMPORARY SUMPS 2) ATTENUATION PONDS 3) TEMPORARY STORAGE LAGOONS 4) SEDIMENT TRAPS, STILLING / SETTLEMENT PONDS 5) PROPRIETARY SETTLEMENT SYSTEMS SUCH AS SILTBUSTER, AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS. 6) SILT DEWATERING BAGS
	1) LEVEL SPREADERS 2) BUFFERED OUTFALLS 3) VEGETATION FILTERS 4) SILT DEWATERING BAGS 5) FLOW LIMITERS AND WEIRS



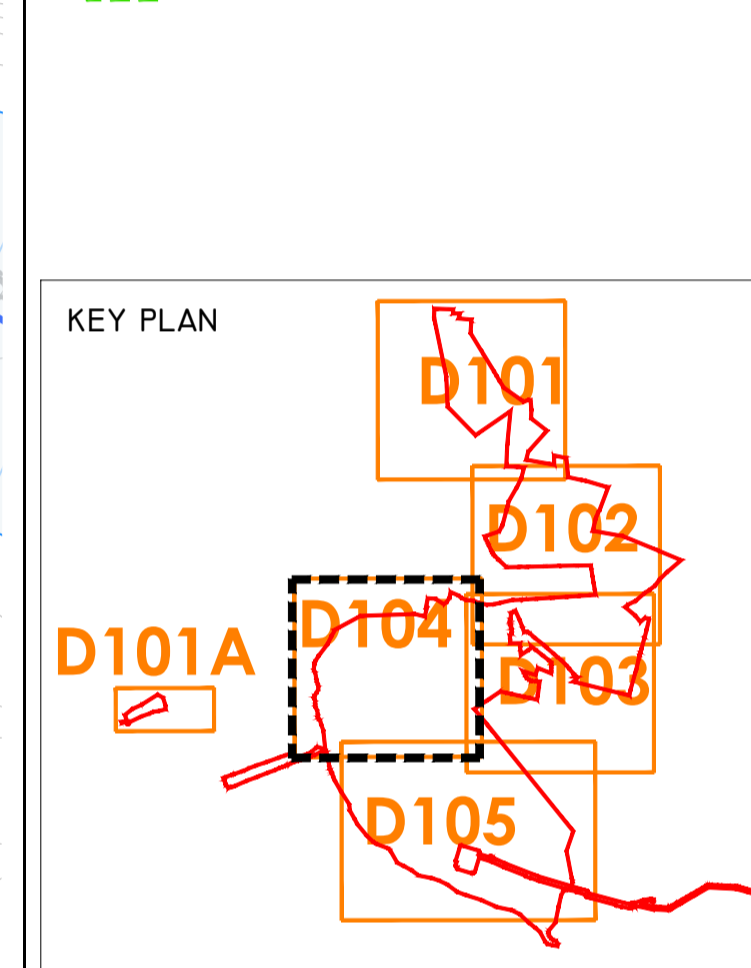
POLLUTION PREVENTION NOTES:

1. SITE MANAGEMENT PROPOSALS ARE INTENDED TO ENSURE PROTECTION AGAINST SURFACE WATER AND GROUNDWATER POLLUTION, SILTATION AND EROSION.
 2. SUITABLE DRAINAGE CONTROL MEASURES SHOULD BE IN PLACE AT ALL TIMES TO PREVENT CONVEYANCE OF SIGNIFICANT VOLUMES OF SILT TO OFF SITE RECEIVING WATERCOURSES.
 3. SILTY WATER CAN ARISE FROM DEWATERING EXCAVATIONS, EROSION OF EXPOSED/DISTURBED GROUND, TEMPORARY STOCKPILES, PLANT AND WHEEL WASH, SITE ROADS/TRACKS, AND DISTURBANCE OF EXISTING FIELD DRAINS AND DITCHES.
- DISCHARGES
4. WATER CONTAINING SILT WILL NOT BE PUMPED DIRECTLY TO ANY NATURAL WATERCOURSE. ALL DISCHARGES TO BE MADE OVER OPEN GROUND OR INTO EXISTING FIELD DRAIN WITH SILT TRAP AT A MINIMUM OF 20M FROM NEAREST WATERCOURSE UNLESS OTHERWISE STATED.
 5. NO EXCAVATED MATERIAL IS TO BE STORED WITHIN ANY SURFACE WATER BUFFER ZONE.
 6. PUMPED WATER WILL BE DIRECTED INTO TRACK SIDE DITCHES AND TREATED IN SETTLEMENT PONDS AND VEGETATION SWALES PRIOR TO OVERLAND DISCHARGE.
 7. PUMPING OF CLEAN WATER FROM EXCAVATIONS / OR OVER-PUMPING IN DRAINS/DITCHES/STREAMS WILL BE COMPLETED IN A MANNER THAT DOES NOT CAUSE SCOUR OR EROSION AT THE POINT OF RELEASE/DISCHARGE. THIS WILL BE DONE BY REDUCING THE FLOW VELOCITIES OR BY USE OF SPLASH PLATES, AND OTHER SIMILAR DISCHARGE CONTROLS.
 8. VEGETATION WILL NOT BE STRIPPED FROM EXISTING DRAINS/DITCHES UNLESS ABSOLUTELY NECESSARY.
- EXCAVATIONS
9. WHERE DEEP EXCAVATIONS ARE PROPOSED CUT-OFF DRAINS WILL BE USE TO REDUCE THE AMOUNT OF SURFACE WATER ENTERING THE EXCAVATION. THIS WILL BE THE CASE AROUND TURBINE BASE EXCAVATIONS.
- EXPOSED GROUND & STOCKPILES
10. THE AMOUNT OF EXPOSED GROUND AND TEMPORARY STOCKPILES OPEN AT ANY ONE TIME WILL BE MINIMISED, AS FAR AS PRACTICABLE.
- SITE TRACKS
11. USE OF TRACK SIDE SWALES WITH CHECK DAMS, AND/OR FILTRATION CHECK DAMS WILL REDUCE SILT IN RUNOFF WATER AS REQUIRED.
 12. CHECK DAMS TO BE INSPECTED AND CLEANED REGULARLY.
- REFUELLING
13. REFUELLING OF MOBILE PLANT WILL BE COMPLETED IN DESIGNATED REFUELLING AREAS ONLY, PREFERABLY ON AN IMPERMEABLE SURFACE AND AWAY FROM FIELD DRAINS / DITCHES AND WATERCOURSES / WATERBODIES.
 14. SPILL KITS AND DRIP TRAYS WILL BE AVAILABLE ON SITE FOR USE AS REQUIRED.
- CONCRETE
15. CARE WILL BE TAKEN WHEN COMPLETING CONCRETE WORKS ON SITE TO ENSURE NO DISCHARGES OCCUR.
 16. CONCRETE WASH WATER, AND WASTE CONCRETE WILL BE MANAGED APPROPRIATELY ON SITE.
- IF WATER POLLUTION IS IDENTIFIED THE FOLLOWING STEPS WOULD BE ADHERED TO:
- STOP - WORK IN THE IMMEDIATE AREA SHOULD BE STOPPED AND THE SOURCE OF THE POLLUTION IDENTIFIED.
- CONTAIN - THE SOURCE OF THE POLLUTION SHOULD BE BUNDED USING A SUITABLE METHOD. NATURAL WATERCOURSES SHOULD BE TEMPORARILY DIVERTED AROUND THE SOURCE OF POLLUTION.
- NOTIFY - THE RELEVANT AUTHORITIES (SITE MANAGER / FISHERIES / NPWS / LOCAL AUTHORITY ETC.) SHOULD BE NOTIFIED IMMEDIATELY TO ENSURE THAT MEASURES CAN BE IMPLEMENTED DOWNSTREAM TO PROTECT FISHERIES AND OTHER SENSITIVE AREAS.
- DRAINAGE NOTES:
1. ROADWAY SURFACING DESIGN AND CONSTRUCTION TO ENGINEER'S SPECIFICATION (I.E. BY OTHERS).
 2. SPARE STRAW BALES/SILT FENCING/ OR SIMILAR, TO BE STORED ON SITE. THE LEVEL OF SILT IN RUNOFF DURING CONSTRUCTION IS TO BE MONITORED VISUALLY AND EXCESSIVE SILT LEVELS IN ANY AREA TO BE TEMPORARILY MANAGED BY PLACING SILT FENCES, STRAW BALES / OR SIMILAR OR ADDITIONAL CHECK DAMS AT THE PROBLEM AREAS. MOBILE SILTBUSTER SYSTEM TO BE AVAILABLE ON-SITE FOR USE AS REQUIRED ALSO.
 3. SUDS SYSTEM TO BE CONSTRUCTED PRIOR TO, OR AT THE SAME TIME AS THE ACCESS TRACKS. INTERIM MEASURES SUCH AS THE PLACEMENT OF STRAW BALES/SILT FENCING/OR SIMILAR APPROVED METHOD OR ADDITIONAL CHECK DAMS AND SILT FENCES TO BE EMPLOYED IN ALL INSTANCES WHERE WORK CARRIED OUT TO CONSTRUCT THE ACCESS TRACKS IS LIKELY TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS THROUGH INCREASED SILT LOADINGS BEING GENERATED DURING THE CONSTRUCTION PHASE.
 4. SUITABLE PREVENTION MEASURES SHOULD BE IN PLACE AT ALL TIMES TO PREVENT THE CONVEYANCE OF SIGNIFICANT VOLUMES OF SILT TO RECEIVING WATERCOURSES. SEE NOTES ON POLLUTION PREVENTION
 5. INTERCEPTOR SWALES / DITCHES TO BE USED TO COLLECT UPSTREAM SURFACE WATER FLOWS. REGULAR CROSS DRAINS / DISCHARGE TO FIELD DITCHES/DRAINS WILL BE REQUIRED TO TRANSFER / DISCHARGE SURFACE WATER IN INTERCEPTOR DRAINS TO SUITABLE FIELD DRAIN OUTFALL POINTS.
 6. DRAINAGE SWALES / DITCHES TO BE EXCAVATED ADJACENT TO THE ACCESS TRACKS. REGULAR CROSS DRAINS TO BE LOCATED ALONG ACCESS TRACKS TO PREVENT EXCESSIVE VOLUMES OF WATER COLLECTING IN THE SWALES / DITCHES. LOCATIONS OF CROSS DRAINS TO BE AGREED WITH THE ENGINEER ON SITE. SURFACE WATER WILL NOT BE ALLOWED TO DISCHARGE DIRECTLY INTO EXISTING WATERCOURSES.
 7. WHERE POSSIBLE, A BUFFER ZONE OF >20M TO ANY EXISTING WATERCOURSE WILL BE REQUIRED WHERE OVER LAND DISCHARGES ARE PROPOSED FROM ACCESS TRACK SWALES / DITCHES.
 8. BATTERS OF ALL PROPOSED SWALES / DITCHES TO HAVE A SLOPE OF BETWEEN 1 : 1.5 TO 1 : 2 DEPENDING UPON DEPTH OF SWALE/DITCH AND WILL BE LEFT AS CUT TO RE-VEGETATE WITH LOCAL SPECIES.
 9. TRACK SIDE SWALES / DITCHES TO BE SHALLOW WITH MODERATE GRADIENTS TO PREVENT SCOURING. IN STEEP AREAS CHECK DAMS SHOULD BE INSTALLED TO REDUCE FLOW VELOCITIES AND PROVIDE SOURCE CONTROL OF SILT CONTAINMENT. WHERE NECESSARY THESE HAVE BEEN DESIGNATED IN CONJUNCTION WITH SETTLEMENT PONDS AND SILT TRAPS, PRIOR TO DISCHARGE.
 10. SETTLEMENT PONDS TO BE CONSTRUCTED FOR SILT REMOVAL AT TURBINE BASES AND HARD STAND AREAS. POND SIZES DEPENDS ON CATCHMENT AREA SERVED. SAMPLE POND SIZES SHOWN ON DRAWING D501.
 11. STRAW BALES / OR SIMILAR AND SILT FENCES TO BE USED ALSO AROUND SPOIL HEAPS TO MITIGATE SILT RUNOFF. SILT FENCES MAY BE REMOVED WHEN SUITABLE VEGETATION COVER IS ESTABLISHED.
 12. SILT FENCES TO BE PROVIDE ALONG EDGE OF EXISTING WATERCOURSE WHERE WORKS COMES WITHIN <15M OF EDGE OF ANY DITCH / EPHEMERAL CHANNELS.
 13. SLOPES OF THE SWALES / DITCHES TO BE VEGETATED OR PROTECTED FROM EROSION UNTIL VEGETATION HAS BEEN ESTABLISHED. STRIPPED VEGETATIVE LAYER (PEAT 'SOD' OR 'SCRAW') FROM EXCAVATIONS TO BE STORED LOCALLY AND USED TO LINE SLOPES AND BASE OF SWALES / DITCHES OR LONGITUDINAL MOUNDS OF VEGETATION SWALES AT FIELD DRAIN DISCHARGE POINTS.
 14. AREAS STRIPPED OF VEGETATION SHOULD BE KEPT TO A MINIMUM.
 15. CLEAN STONE FLOW CONTROL CHECK DAMS TO BE MADE OF LOCALLY WON / GEOLOGICALLY SIMILAR WELL GRADED STONE. AGGREGATE SIZE FOR STONE CHECK DAMS TO BE TYPICALLY 20- 40MM CLEAN STONE. ON SLOPING SECTIONS OF THE ACCESS TRACKS, 40MM CHECK DAMS TO BE PROTECTED FROM WASHING AWAY THROUGH THE PLACEMENT OF 100M STONE ON THE DOWNHILL FACE OF THE CHECK DAM AND BY WRAPPING IN GEOTEXTILE.
 16. BUILD UP OF SILT LEVELS AT CHECK DAMS TO BE REMOVED AND DISPOSED OF APPROPRIATELY. SILT LEVELS AT CHECK DAMS TO BE VISUALLY INSPECTED AS PART OF AN ONGOING DRAINAGE MAINTENANCE PROGRAMME DURING THE CONSTRUCTION PHASE. WHERE CHECK DAMS BECOME CLOGGED WITH SILT OR VEGETATION, STONE CHECK DAM TO BE REMOVED AND REPLACED SUBSEQUENT TO THE REMOVAL OF SILT.
 17. SPACING AND FREQUENCY OF CHECK DAMS WILL BE DEPENDENT UPON LONGITUDINAL GRADIENT OF SWALE.
 18. LOCATION OF FILTRATION CHECK DAMS (IF REQUIRED) TO BE AGREED ON SITE WITH ENGINEER. SETTLEMENT PONDS TO BE CONSTRUCTED IN A MANNER WHERE THEY MAY BE EASILY INFILLED AT A LATER DATE (POST COMPLETION OF THE TURBINE BASE AND HARDSTAND CONSTRUCTION). ONLY SUITABLE MATERIALS EXCAVATED FROM THE POND TO BE USED TO FORM PART OF THE EMBANKMENT AROUND THE POND.
 19. OIL FUEL SHOULD BE STORED WITHIN BUNDED CONTAINMENT STRUCTURES.
 20. SILT BAGS WILL BE USED ON SITE AT FIELD DRAIN DISCHARGE LOCATIONS, AS NECESSARY.

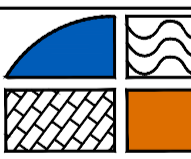
MITIGATION / DRAINAGE CONTROLS AVAILABLE FOR USE ACROSS THE SITE	
MANAGEMENT TYPE	DESCRIPTION OF SUDS DRAINAGE CONTROL METHODS
AVOIDANCE CONTROLS	1) APPLICATION OF 50M BUFFER ZONES TO NATURAL WATERCOURSES WHERE POSSIBLE 2) APPLICATION OF 10M BUFFER ZONES TO MAIN DRAINS WHERE POSSIBLE 3) USING SMALL WORKING AREAS 4) WORKING IN APPROPRIATE WEATHER, AND SUSPENDING CERTAIN WORK ACTIVITIES IN ADVANCE OF FORECASTED WET WEATHER
	1) USE OF UPSTREAM INTERCEPTOR DRAINS AND DOWNSTREAM COLLECTOR DRAINS / OVERSIZED SWALES, VEE-DRAINS, DIVERSION DRAINS, FLUMES AND CULVERT PIPES 2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) AND OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS 3) USING SMALL WORKING AREAS 4) SURROUNDING STOCKPILES WITH SILT FENCING 5) WEATHERING OFF / SEALING PEAT STOCKPILES
SOURCE CONTROLS:	1) INTERCEPTOR DRAINS, VEE-DRAINS, OVERSIZED SWALES/COLLECTOR DRAINS 2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) STRAW BALES E) FLOW LIMITERS F) WEIRS OR BAFFLES G) AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS 3) SILT FENCES, FILTER FABRICS 4) IN STREAM SEDIMENTS 5) COLLECTION SLUMPS, TEMPORARY SLUMPS, PUMPING SYSTEMS 5) ATTENUATION LAGOONS 6) SEDIMENT TRAPS, STILLING / SETTLEMENT PONDS
IN-LINE CONTROLS:	1) TEMPORARY SLUMPS 2) ATTENUATION PONDS 3) TEMPORARY STORAGE LAGOONS 4) SEDIMENT TRAPS, STILLING / SETTLEMENT PONDS 5) PROPRIETARY SETTLEMENT SYSTEMS SUCH AS SILTBUSTER, AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS. 6) SILT DEWATERING BAGS
WATER TREATMENT CONTROLS:	1) LEVELSPREADERS 2) BUFFERED OUTFALLS 3) VEGETATION FILTERS 4) SILT DEWATERING BAGS 5) FLOW LIMITERS AND WEIRS
OUTFALL CONTROLS:	

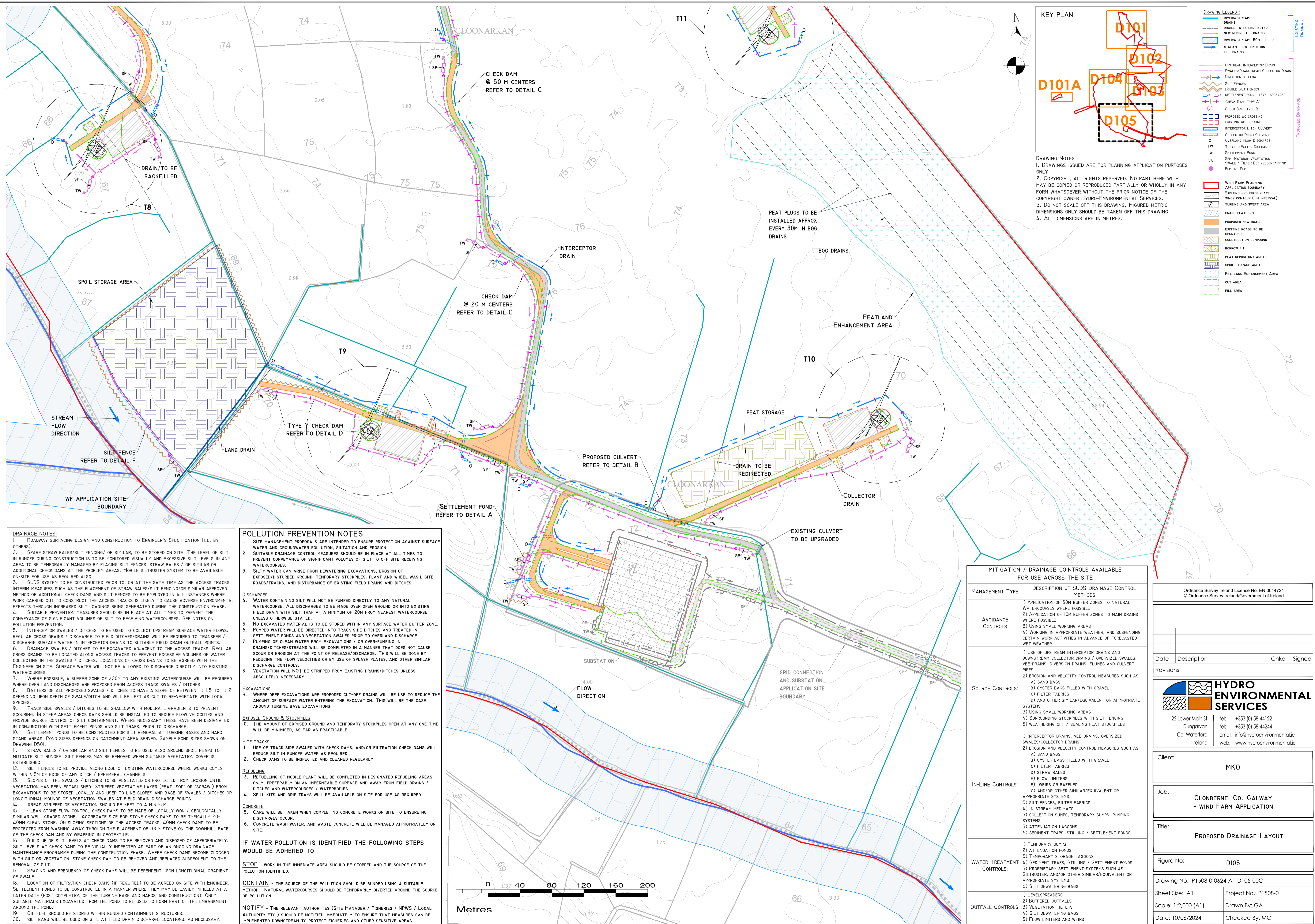


- DRAWING LEGEND :
- RIVERS/STREAMS
 - DRAINS
 - DRAINS TO BE REDIRECTED
 - NEW REDIRECTED DRAINS
 - RIVERS/STREAMS 50M BUFFER
 - STREAM FLOW DIRECTION
 - BOG DRAINS
 - UPSTREAM INTERCEPTOR DRAIN
 - SWALES/DOWNSTREAM COLLECTOR DRAIN
 - DIRECTION OF FLOW
 - SILT FENCES
 - DOUBLE SILT FENCES
 - SETTLEMENT POND - LEVEL SPREADER
 - CHECK DAM 'TYPE A'
 - CHECK DAM 'TYPE B'
 - PROPOSED WC CROSSING
 - EXISTING WC CROSSING
 - INTERCEPTOR DITCH CULVERT
 - COLLECTOR DITCH CULVERT
 - OVERLAND FLOW DISCHARGE
 - TREATED WATER DISCHARGE
 - SETTLEMENT POND
 - SEMI-NATURAL VEGETATION SWALE / FILTER BED /SECONDARY SP
 - PUMPING SLUMP
- EXISTING DRAINAGE
- PROPOSED DRAINAGE
- WIND FARM PLANNING APPLICATION BOUNDARY
 - EXISTING GROUND SURFACE
 - MINOR CONTOUR (1 M INTERVAL)
 - TURBINE AND SWEEP AREA
 - CRANE PLATFORM
 - PROPOSED NEW ROADS
 - EXISTING ROADS TO BE UPGRADED
 - CONSTRUCTION COMPOUND
 - BORROW PIT
 - PEAT REPOSITORY AREAS
 - SPOIL STORAGE AREAS
 - PEATLAND ENHANCEMENT AREA
 - CUT AREA
 - FILL AREA

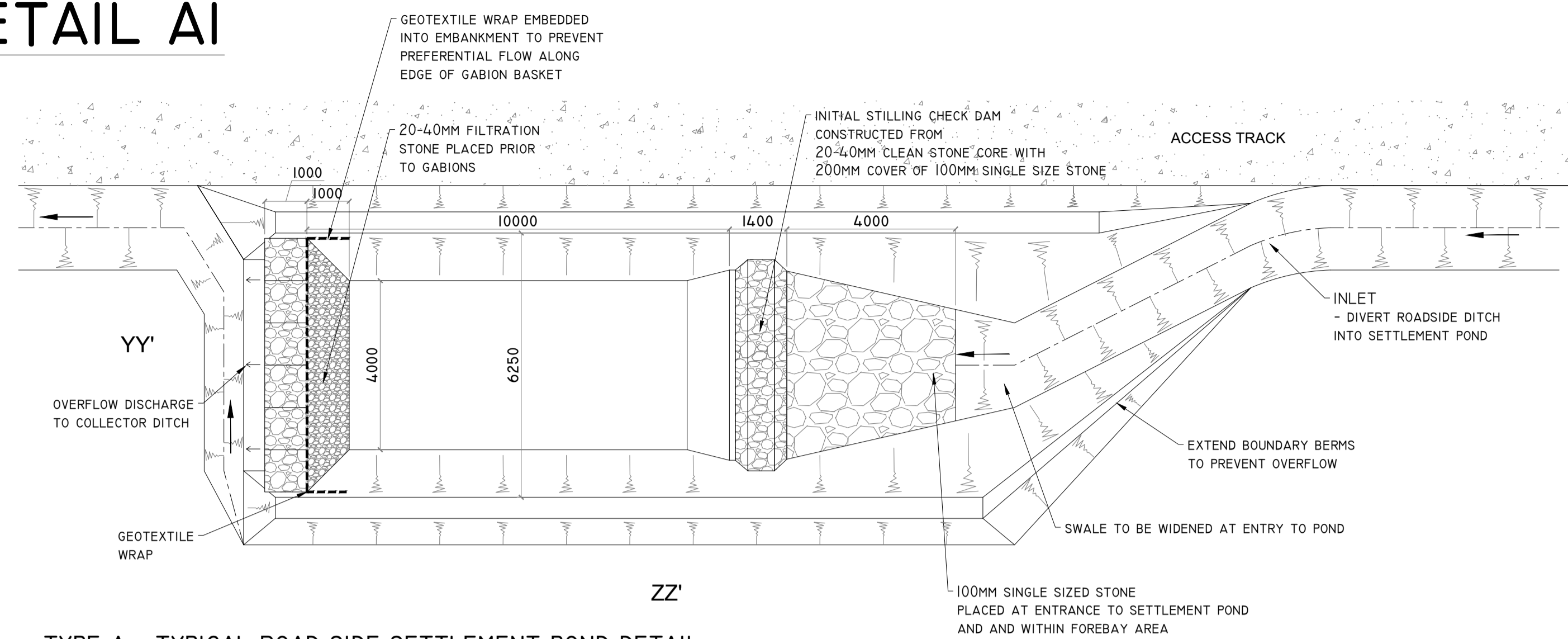


- DRAWING NOTES
1. DRAWINGS ISSUED ARE FOR PLANNING APPLICATION PURPOSES ONLY.
 2. COPYRIGHT, ALL RIGHTS RESERVED. NO PART HERE WITH MAY BE COPIED OR REPRODUCED PARTIALLY OR WHOLLY IN ANY FORM WHATSOEVER WITHOUT THE PRIOR NOTICE OF THE COPYRIGHT OWNER HYDRO-ENVIRONMENTAL SERVICES.
 3. DO NOT SCALE OFF THIS DRAWING. FIGURED METRIC DIMENSIONS ONLY SHOULD BE TAKEN OFF THIS DRAWING.
 4. ALL DIMENSIONS ARE IN METRES.

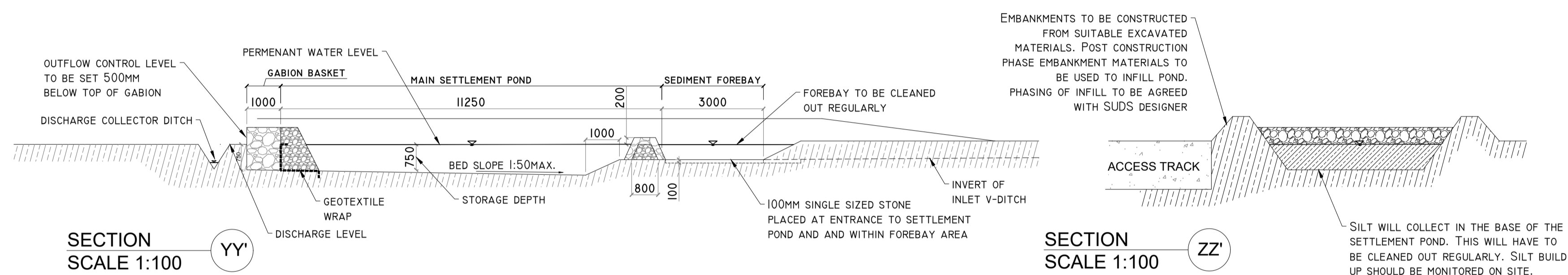
Ordnance Survey Ireland Licence No. EN 0044724 © Ordnance Survey Ireland/Government of Ireland			
Date	Description	Chkd	Signed
Revisions			
 HYDRO ENVIRONMENTAL SERVICES			
22 Lower Main St Dungarvan Co. Waterford Ireland		tel: +353 (0) 58-44122 tel: +353 (0) 58-44244 email: info@hydroenvironmental.ie web: www.hydroenvironmental.ie	
Client: MKO			
Job: CLONBERNE, CO. GALWAY - WIND FARM APPLICATION			
Title: PROPOSED DRAINAGE LAYOUT			
Figure No: D104			
Drawing No: P1508-0-0624-A1-D104-00B			
Sheet Size: A1		Project No.: P1508-0	
Scale: 1:2,000 (A1)		Drawn By: GA	
Date: 10/06/2024		Checked By: MG	



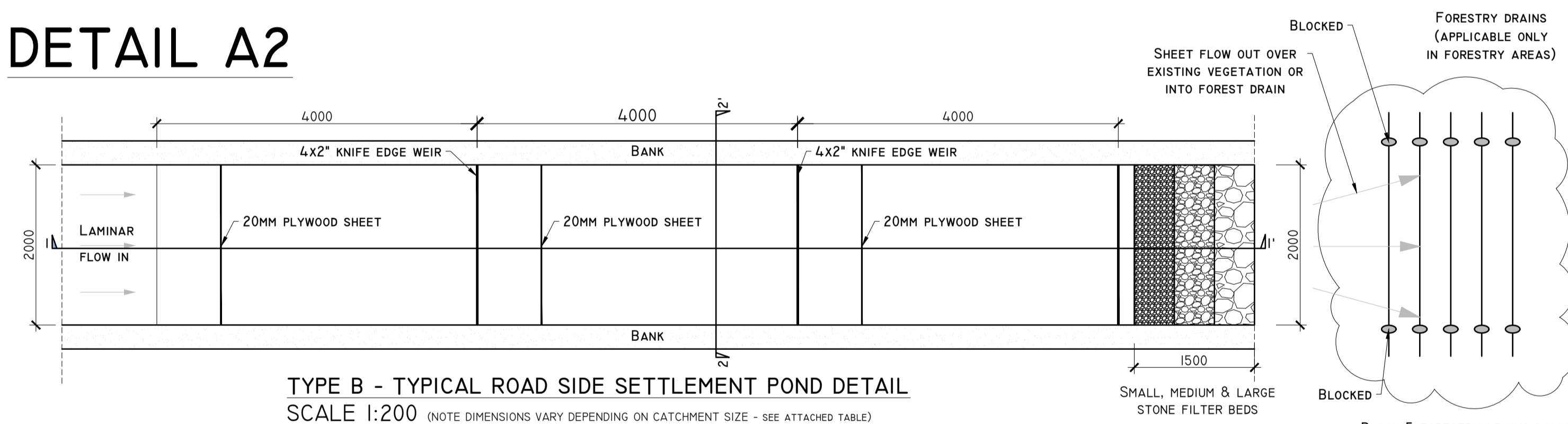
DETAIL AI



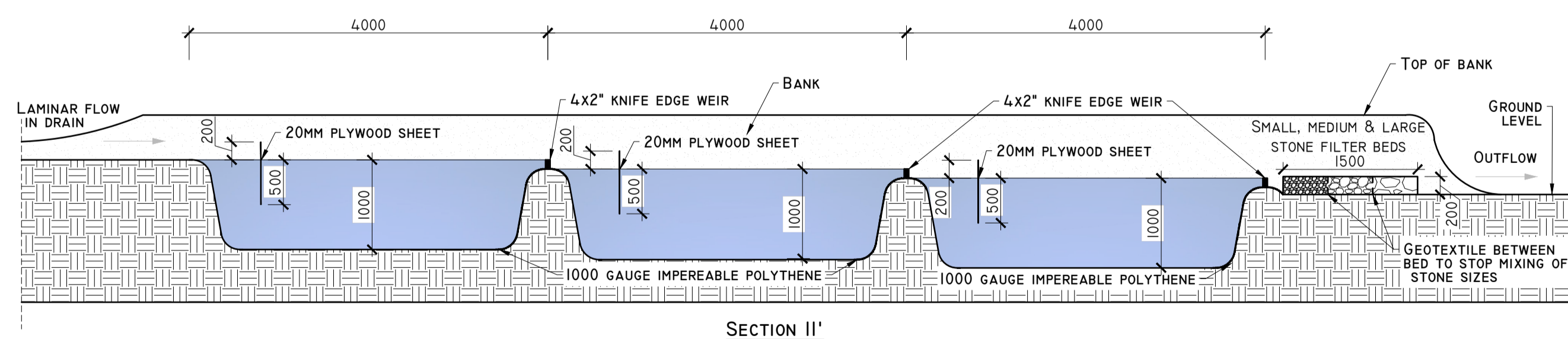
TYPE A - TYPICAL ROAD SIDE SETTLEMENT POND DETAIL
SCALE 1:200 (NOTE DIMENSIONS VARY DEPENDING ON CATCHMENT SIZE - SEE ATTACHED TABLE)



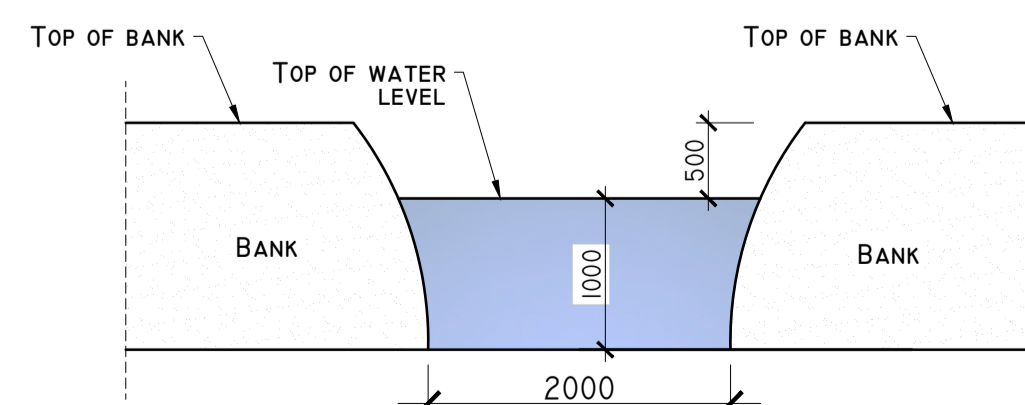
DETAIL A2



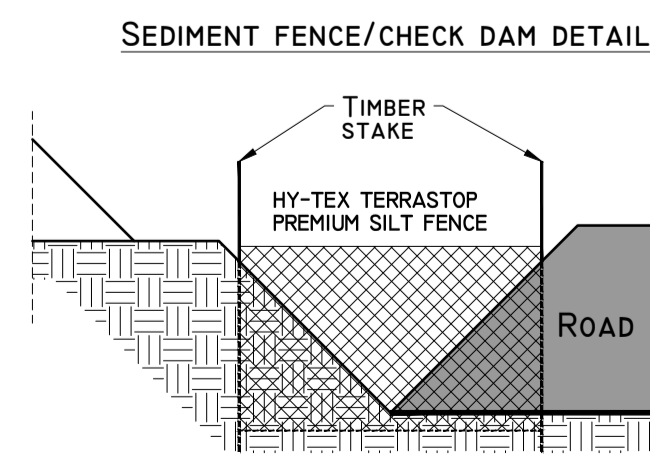
TYPE B - TYPICAL ROAD SIDE SETTLEMENT POND DETAIL
SCALE 1:200 (NOTE DIMENSIONS VARY DEPENDING ON CATCHMENT SIZE - SEE ATTACHED TABLE)



SECTION II'



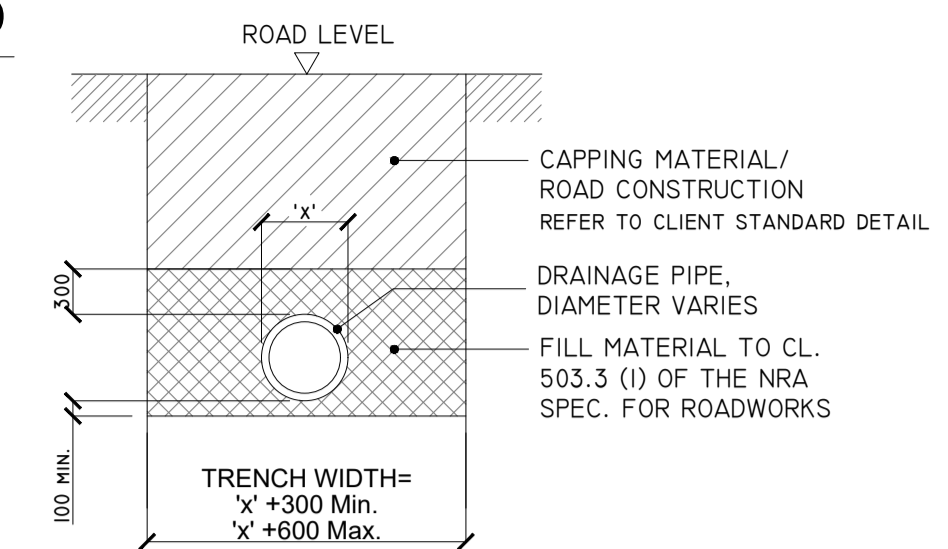
SECTION 22'



SEDIMENT FENCE/CHECK DAM DETAIL

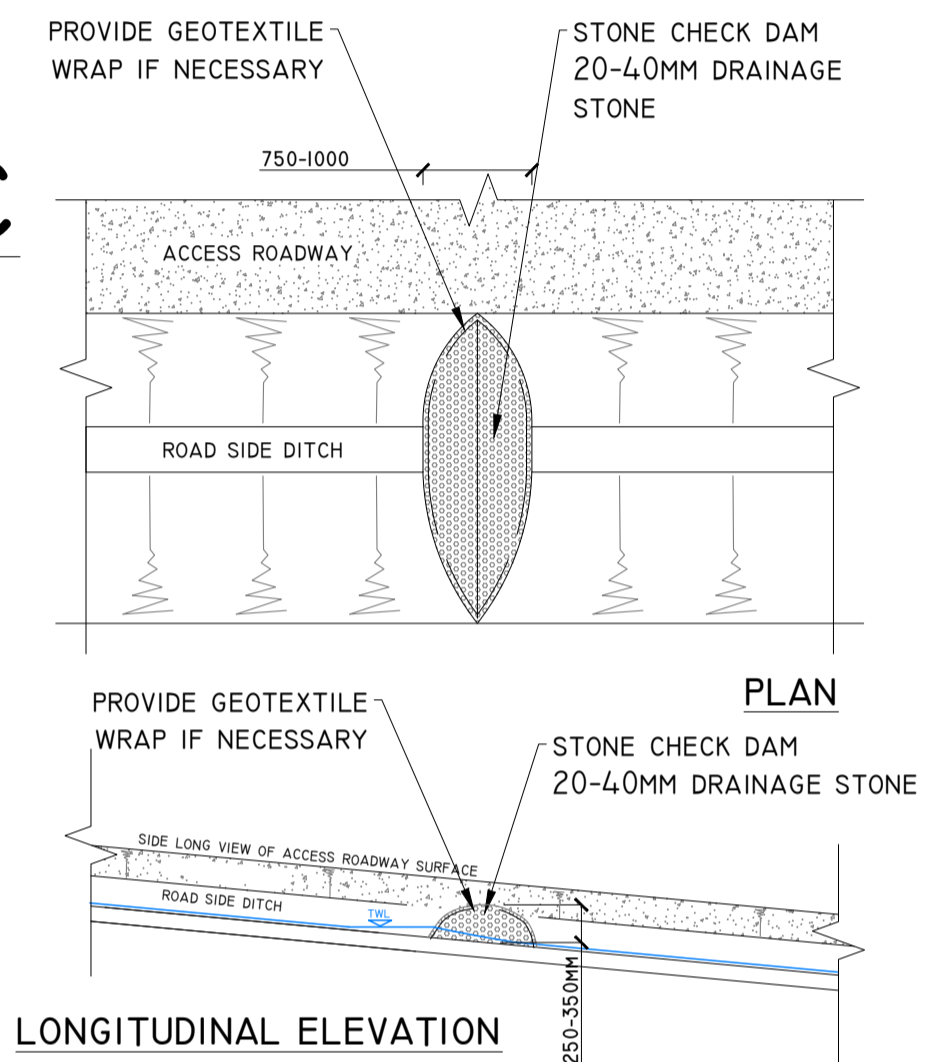
POND SIZE W [M] X L [M] X D [M]			TRACK/HARDSTAND CATCHMENT SIZE (M ²)		
RETURN PERIOD	10 YRS	STORM DURATION	500	1000	2000
6HR RETENTION FOR COARSE SILT		6 HRS	3.6 X 10.6 X 1 M	4.8 X 15.0 X 1 M	6.9 X 21.0 X 1 M
11HR RETENTION FOR MEDIUM SILT		12 HRS	3.8 X 12.0 X 1 M	5.5 X 16.5 X 1 M	7.5 X 24.2 X 1 M
24HR RETENTION FOR FINE SILT		24 HRS	4.2 X 13.8 X 1 M	6.2 X 18.6 X 1 M	8.6 X 27.0 X 1 M

DETAIL B



'TYPE B' CULVERT - DRAINAGE CROSSING BENEATH EXCAVATED ROAD
SCALE 1:50

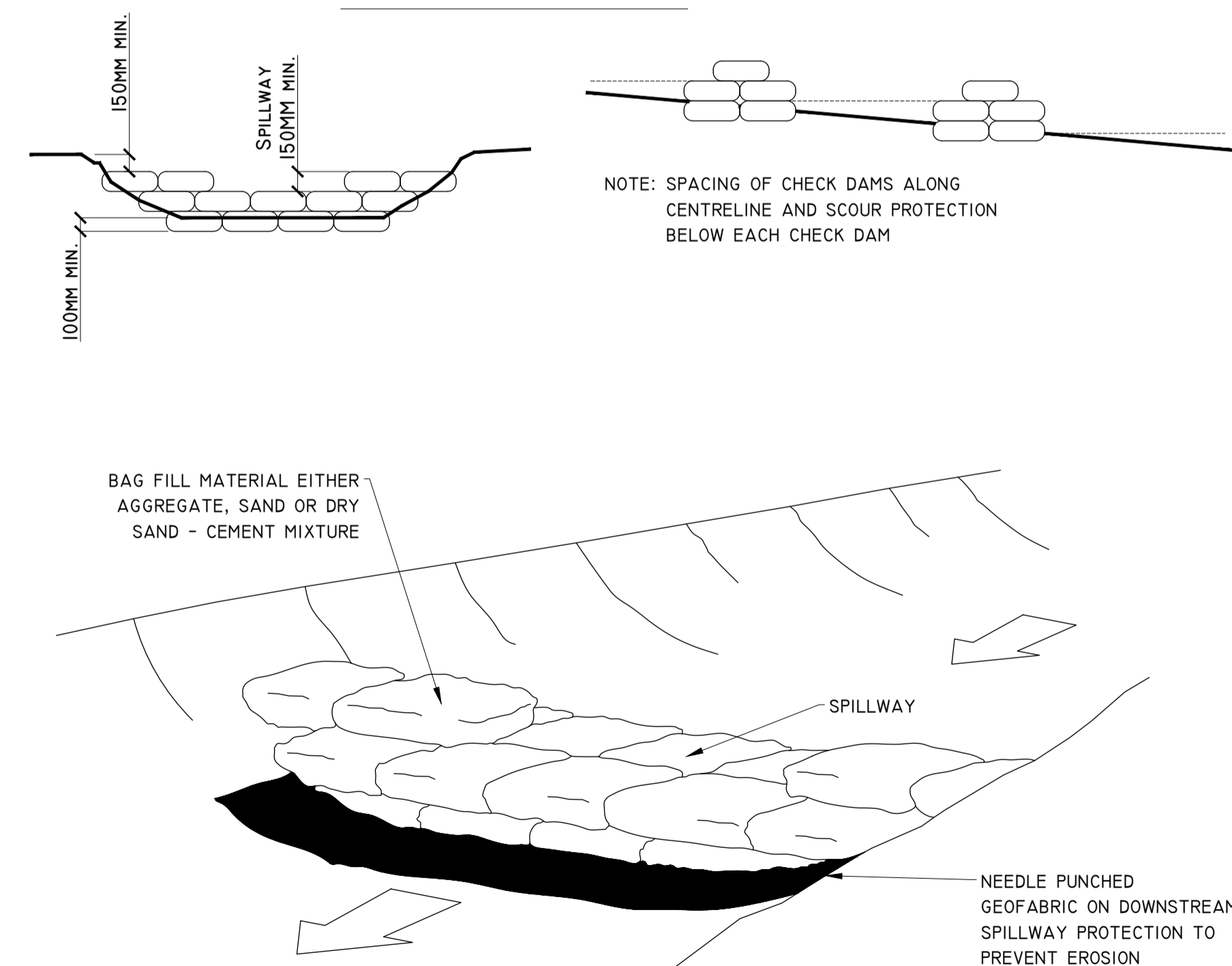
DETAIL C



TYPE X - CHECK DAM DETAIL

SCALE 1:50

DETAIL CI



TEMPORARY CHECK DAM / SETTLEMENT POND OVERFLOW
SAND FILLED BAG CONSTRUCTION
SCHEMATIC - NOT TO SCALE

10/06/24	Planning	MG	MG
Date	Description	Chkd	Signed
Revisions			



**HYDRO
ENVIRONMENTAL
SERVICES**

22 Lower Mount St
Dungavon
Co. Waterford
Ireland

tel: +353 (0) 58-44122
tel: +353 (0) 58-44244
email: info@hydroenvironmental.ie
web: www.hydroenvironmental.ie

Client: MKO

Job: CLONBERNE, CO. GALWAY

Title: DRAINAGE DETAILS I

Figure No: D50I

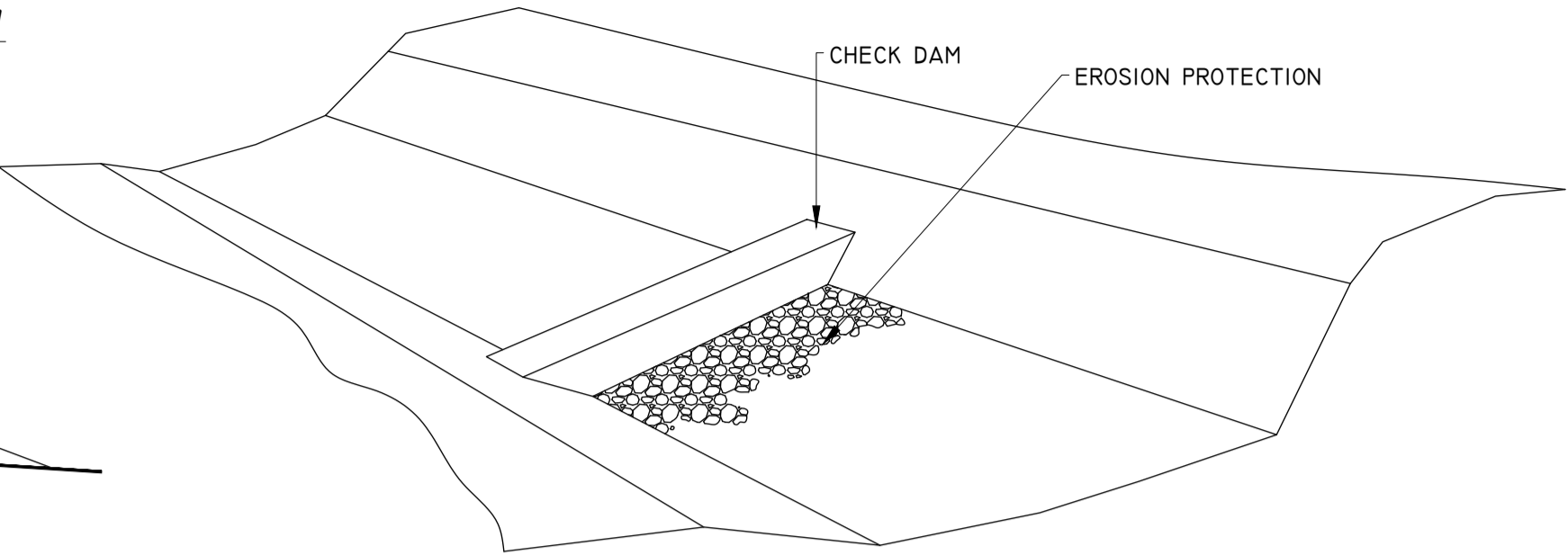
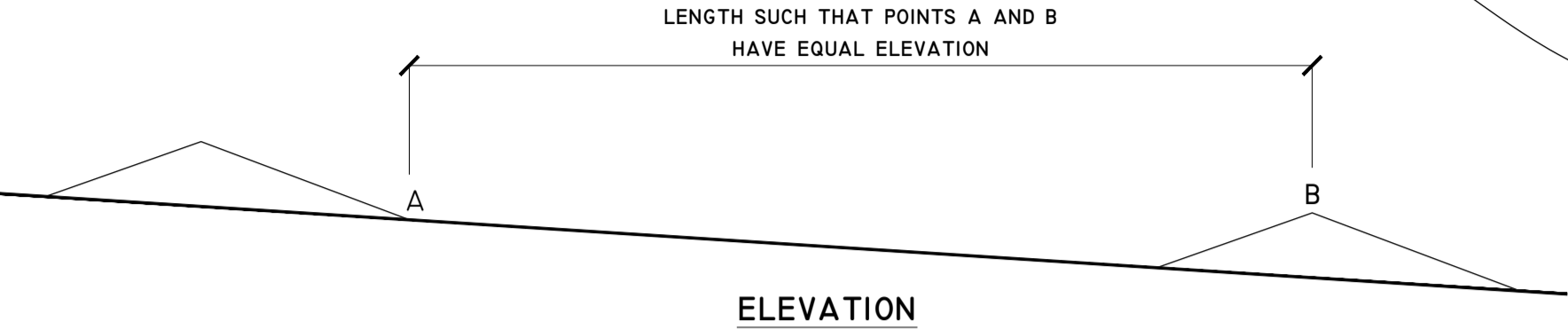
Drawing No: P1599-0-0624-A1-D501-00B

Sheet Size: A1	Project No.: P1508-0

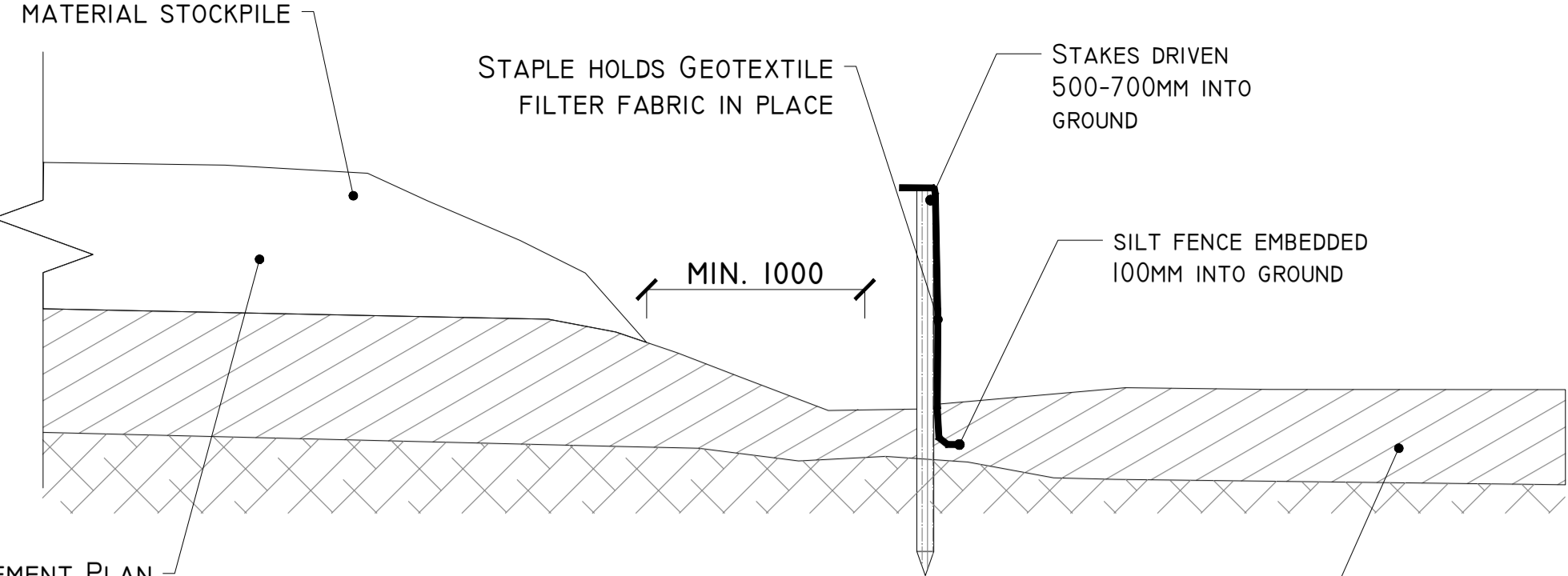
Scale: as shown (AT)	Drawn By: MG/GA
Date: 10/06/2024	Checked By: MG

DETAIL C2

TEMPORARY CHECK DAM / SETTLEMENT POND OVERFLOW
SCHEMATIC - NOT TO SCALE



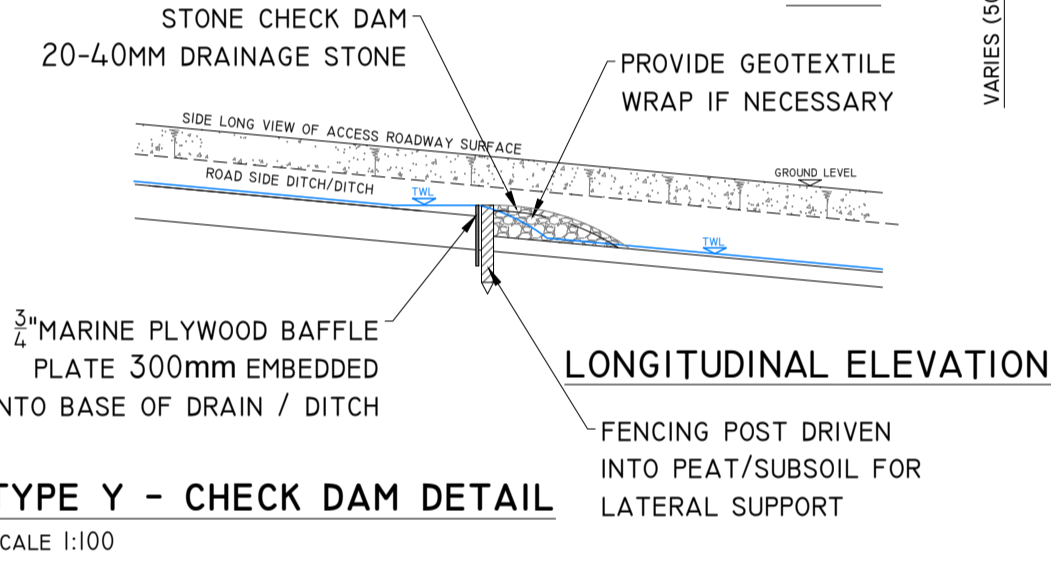
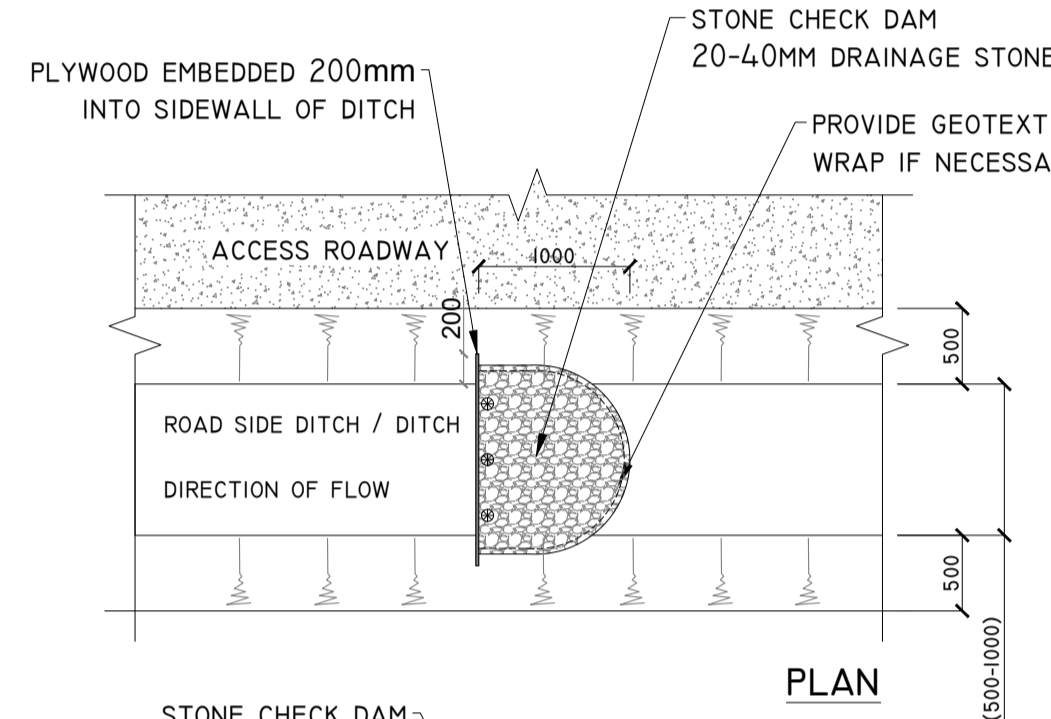
DETAIL F-I



REFER TO HABITAT MANAGEMENT PLAN
AND PEAT MANAGEMENT PLAN
FOR STOCKPILE MANAGEMENT NOTES

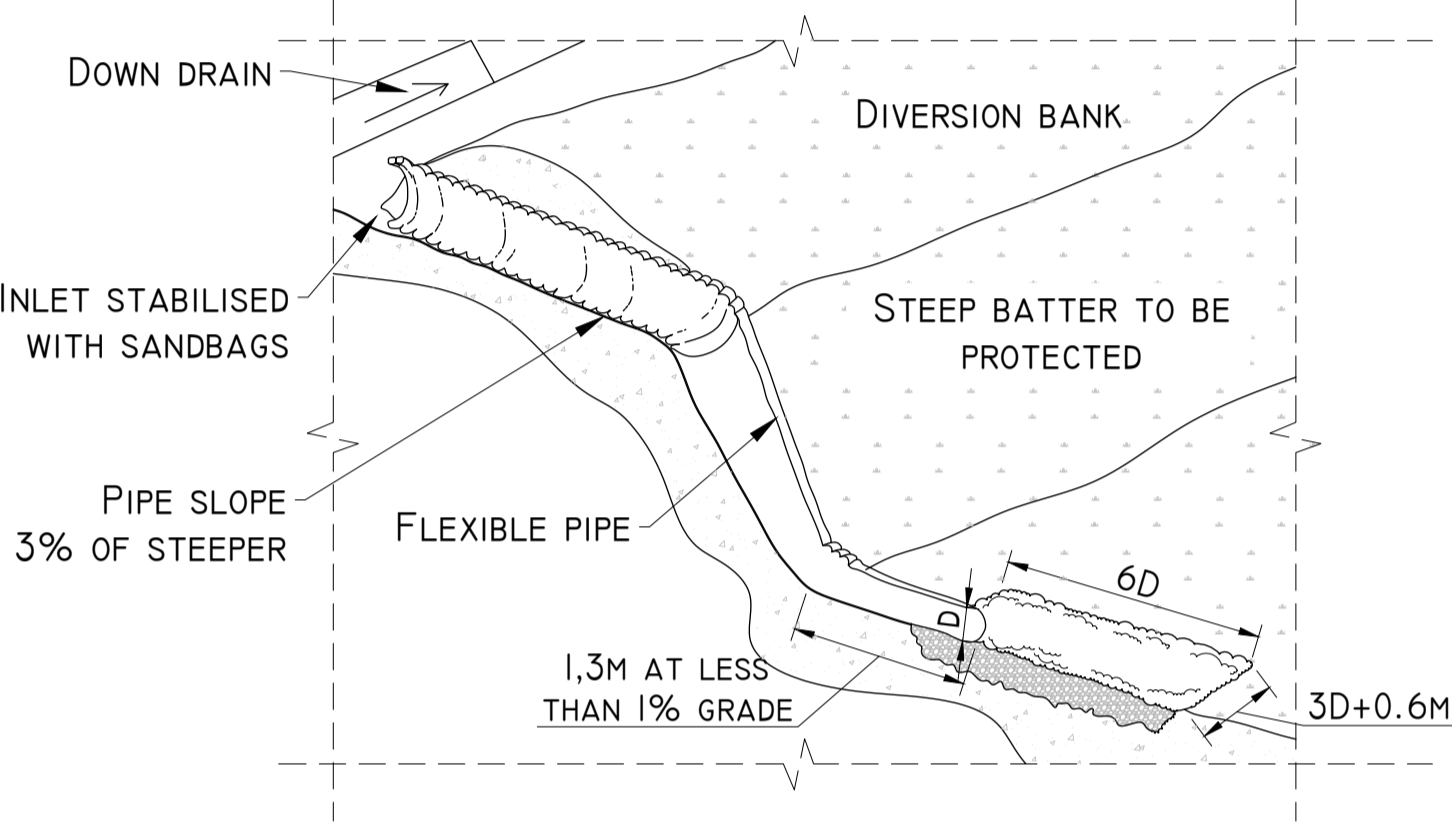
SILT FENCE
SCALE 1:25

DETAIL D

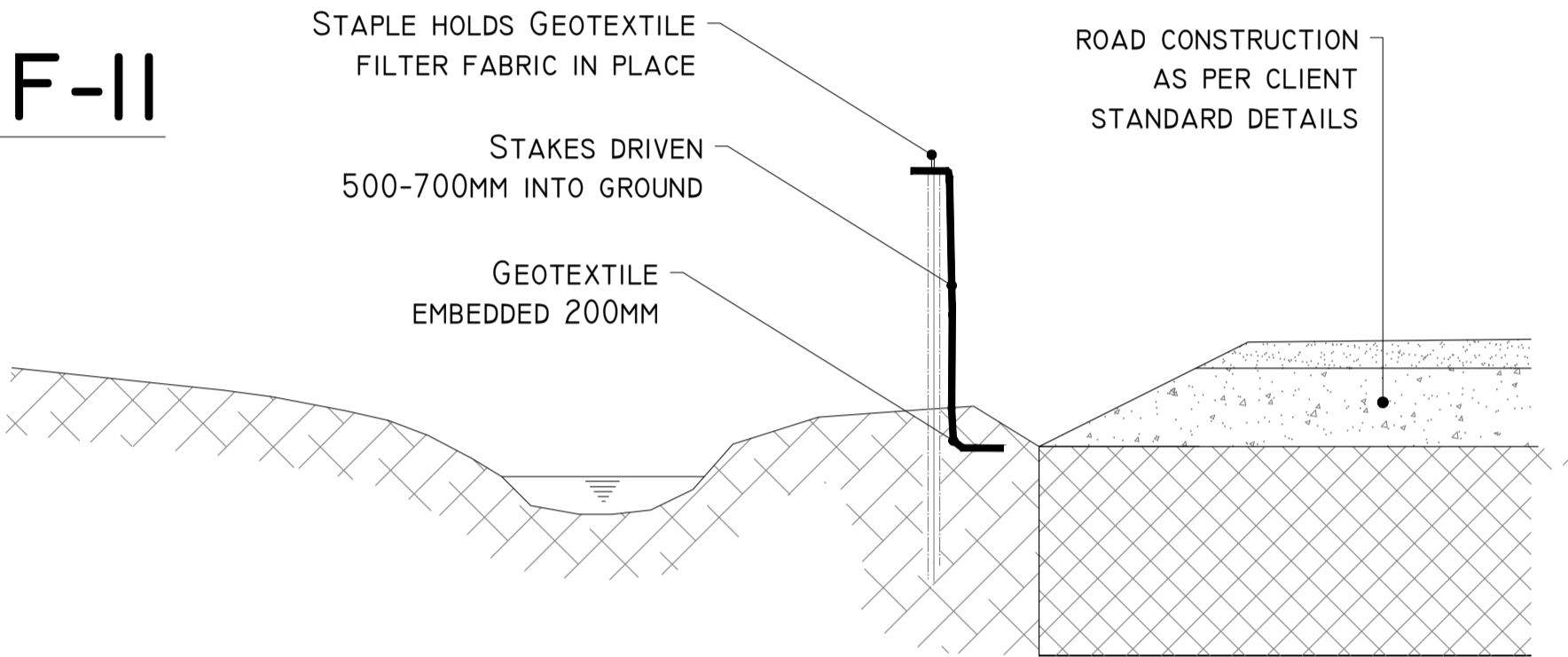


DETAIL G

TYPICAL PIPE SPILLWAY DETAIL
SCHEMATIC - NOT TO SCALE



DETAIL F-II

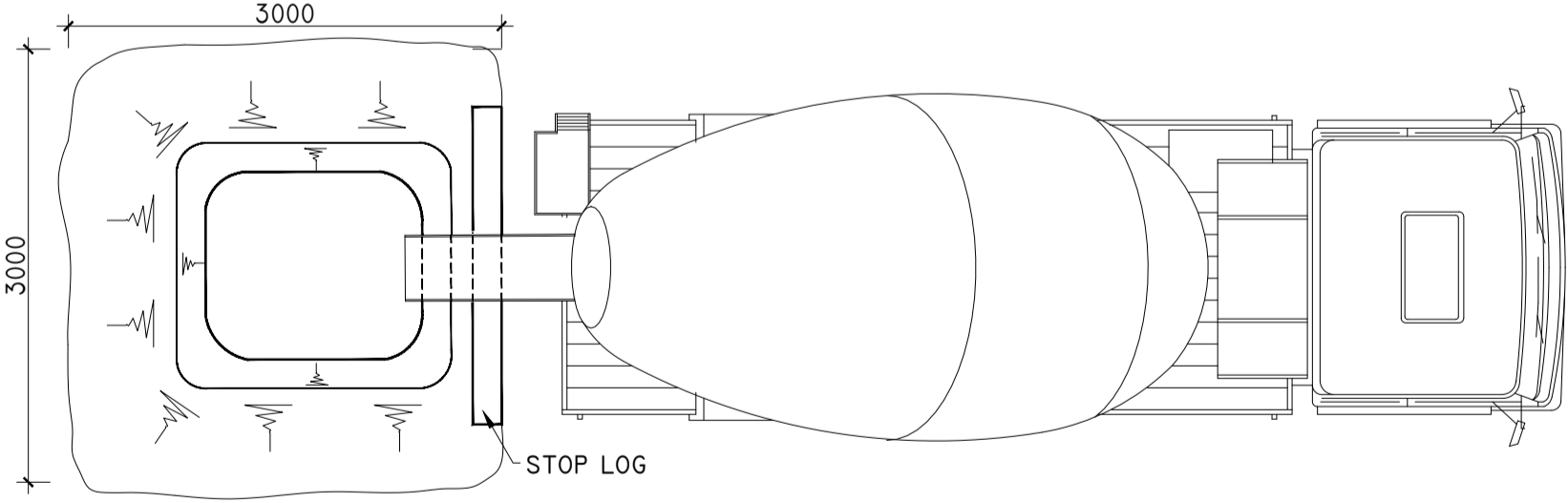


SILT FENCE FOR WATERCOURSE PROTECTION
SCALE 1:25

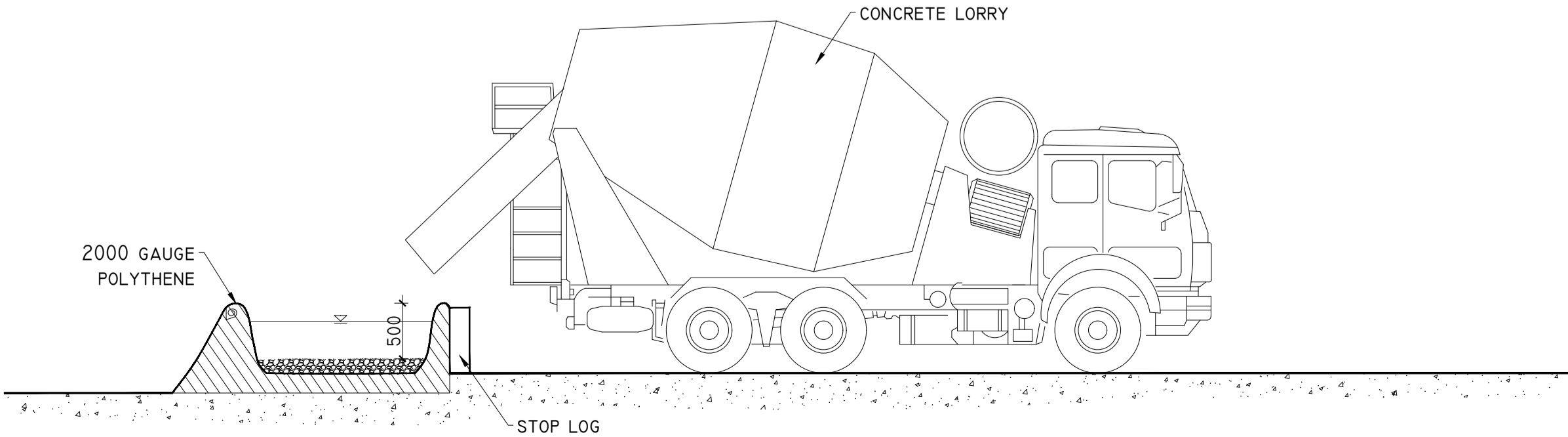
DETAIL I

TEMPORARY CONCRETE WASH OUT PIT
SCALE 1:50

PLAN

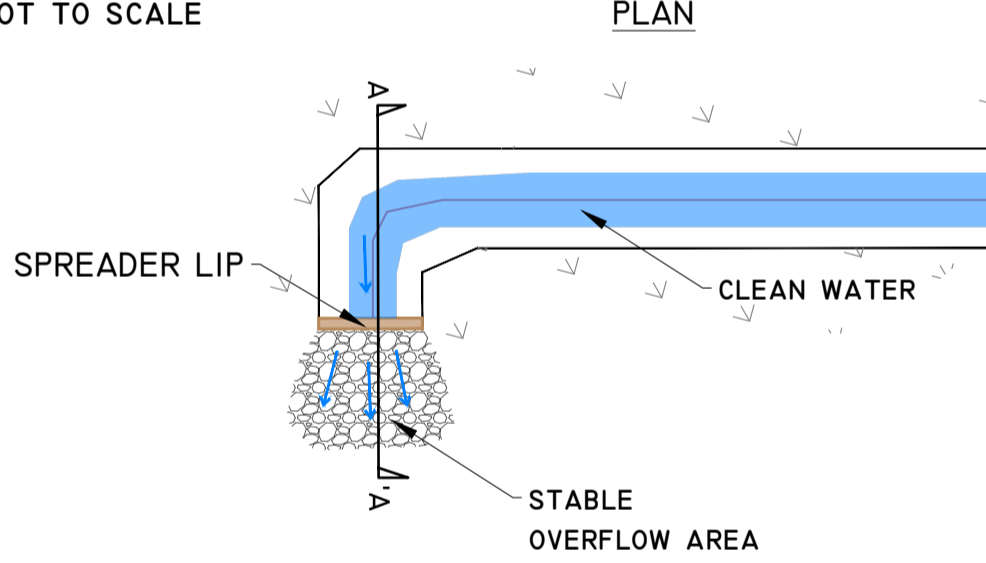
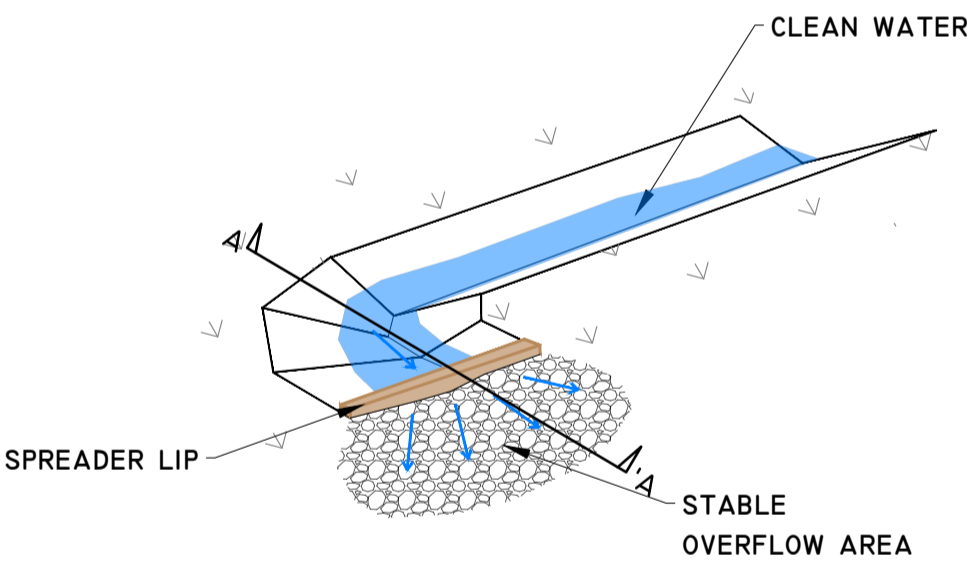


ELEVATION

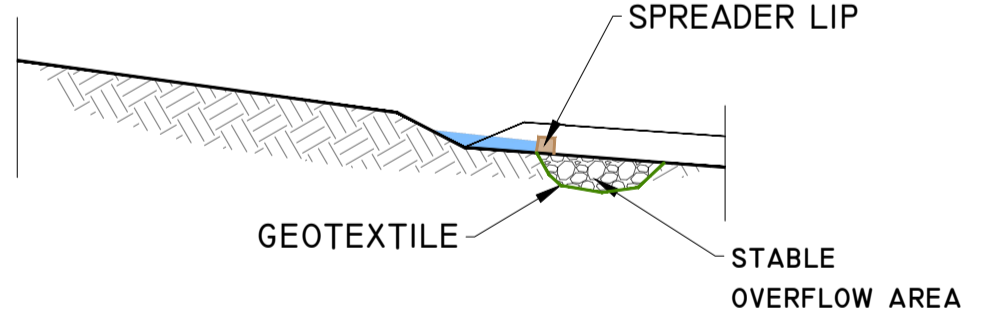


DETAIL J-I

LEVEL SPREADER DETAIL
SCHEMATIC - NOT TO SCALE

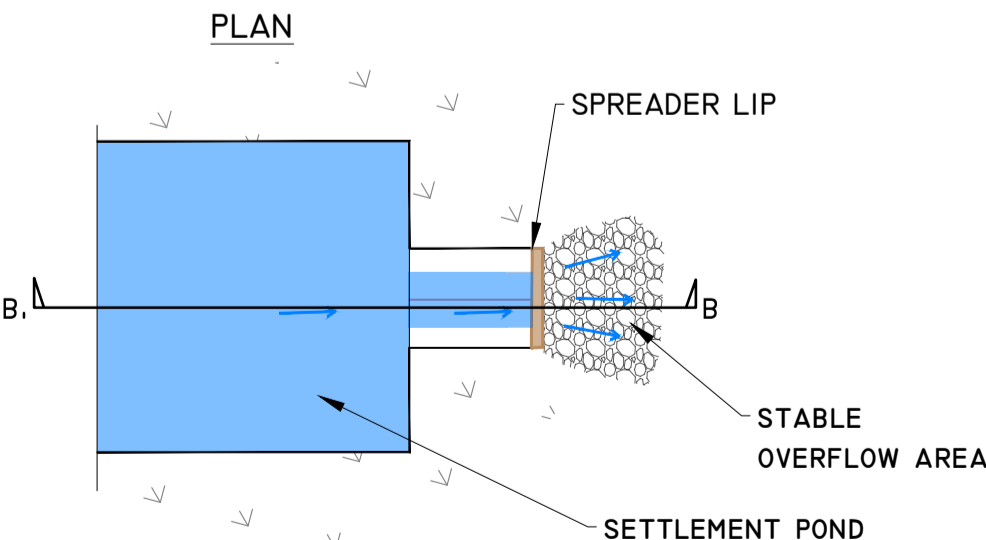
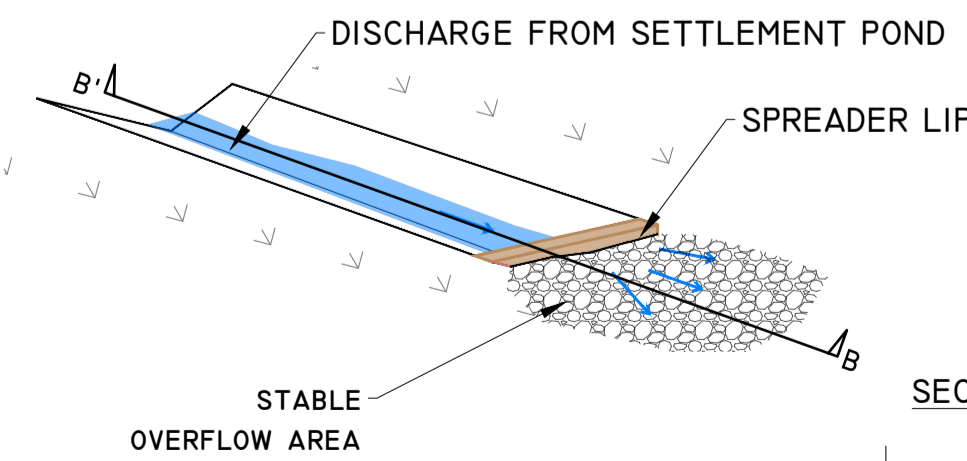


SECTION AA'

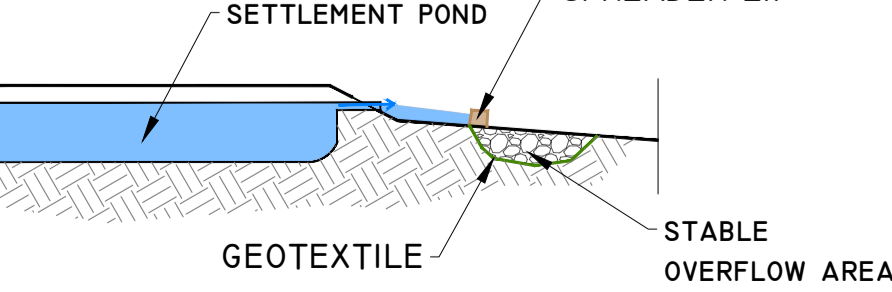


DETAIL J-2

LEVEL SPREADER DETAIL
SCHEMATIC - NOT TO SCALE



SECTION BB'



PROJECT DESIGN DRAWING NOTES
1. DRAWINGS ISSUED ARE FOR PLANNING STAGE ONLY.
2. COPYRIGHT, ALL RIGHTS RESERVED. NO PART HERE WITH MAY BE COPIED OR REPRODUCED PARTIALLY OR WHOLLY IN ANY FORM WHATSOEVER WITHOUT THE PRIOR NOTICE OF THE COPYRIGHT OWNER HYDRO-ENVIRONMENTAL SERVICES.
3. DO NOT SCALE OFF THIS DRAWING. FIGURED METRIC DIMENSIONS ONLY SHOULD BE TAKEN OFF THIS DRAWING.

07/03/24	Planning	MG	MG
Date	Description	Chkd	Signed
Revisions			

**HYDRO ENVIRONMENTAL SERVICES**
22 Lower Main St
Dungarvan
Co. Waterford
Ireland

tel: +353 (0) 58-44122
tel: +353 (0) 58-44244
email: info@hydroenvironmental.ie
web: www.hydroenvironmental.ie

Client: MKO

Job: CLONBERNE, CO. GALWAY

Title: DRAINAGE DETAILS 2

Figure No: D502

Drawing No: P1508-0624-A1-D502-00B	
Sheet Size: A1	Project No.: P1508-0
Scale: as shown (A1)	Drawn By: MG/GA
Date: 10/06/2024	Checked By: MG