

SPRINGFIELD RENEWABLES LTD.

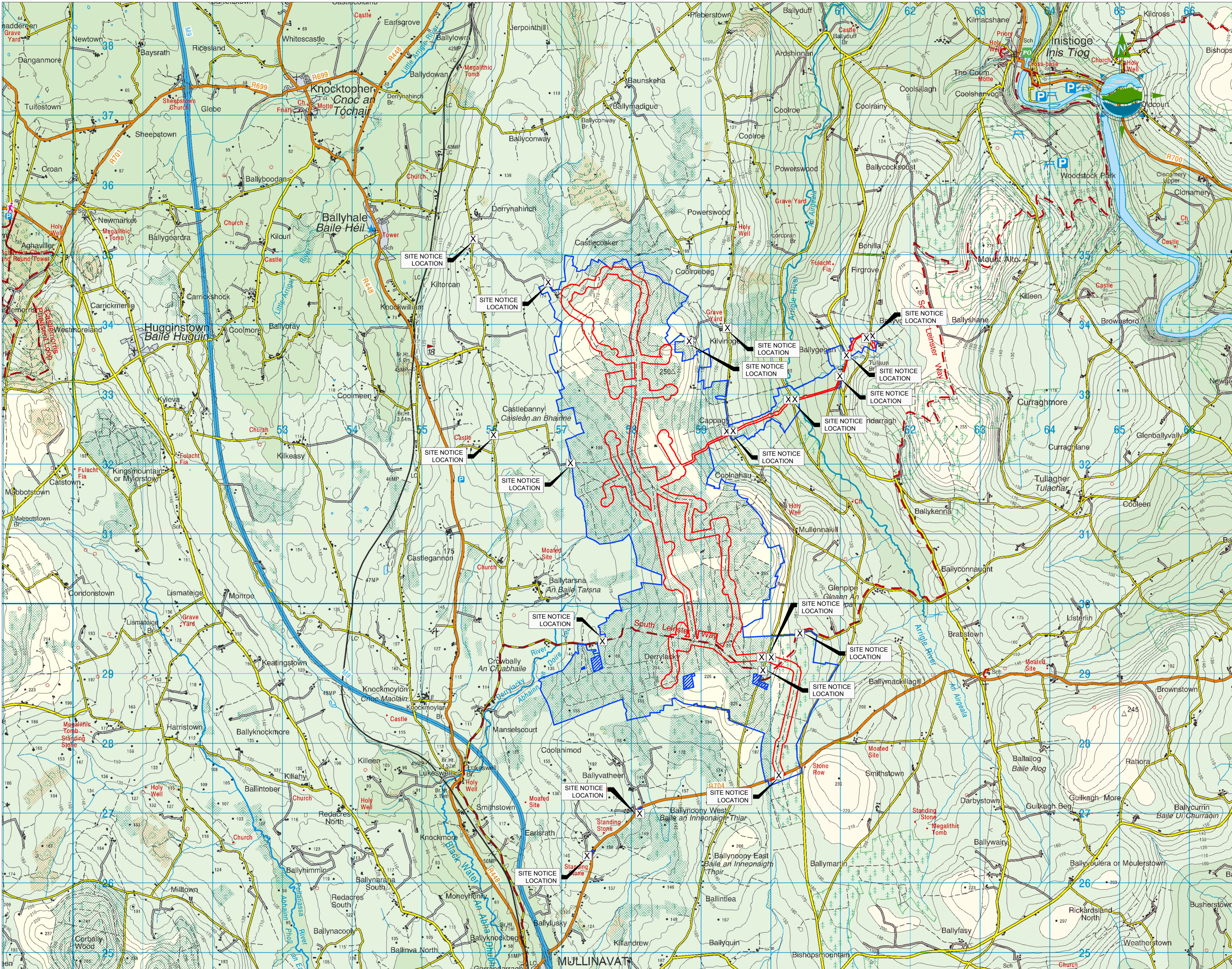
CASTLEBANNY
WIND FARM

PLANNING DRAWINGS
January 2021

TOBIN
CONSULTING ENGINEERS

CASTLEBANNY WIND FARM PLANNING DRAWINGS
January 2021

10730-2000	Regional Site Location Map	1:25,000	05699-DR-001	Overall Site Location Plan
10730-2001	Site Location Map	1:20,000	05699-DR-002	Site Layout Plan Sheet 1 of 3
10730-2005	Site Master Plan	1:20,000	05699-DR-003	Site Layout Plan Sheet 2 of 3
10730-2006	Site Layout Plan - Sheet 1 of 10	1:2,500	05699-DR-004	Site Layout Plan Sheet 3 of 3
10730-2007	Site Layout Plan - Sheet 2 of 10	1:2,500	05699-DR-100	Ducting through Off Road
10730-2008	Site Layout Plan - Sheet 3 of 10	1:2,500	05699-DR-101	Ducting through Regional Roads
10730-2009	Site Layout Plan - Sheet 4 of 10	1:2,500	05699-DR-102	Details of Comms Chamber
10730-2010	Site Layout Plan - Sheet 5 of 10	1:2,500	05699-DR-103	Details of Link Box
10730-2011	Site Layout Plan - Sheet 6 of 10	1:2,500	05699-DR-104	Details of Flat Formation
10730-2012	Site Layout Plan - Sheet 7 of 10	1:2,500	05699-DR-105	DC Ditch_Drain Crossing
10730-2013	Site Layout Plan - Sheet 8 of 10	1:2,500	05699-DR-106	Typical HDD
10730-2014	Site Layout Plan - Sheet 9 of 10	1:2,500	05699-DR-107	Joint Bay Details
10730-2015	Site Layout Plan - Sheet 10 of 10	1:2,500	05699-DR-108	Ducting through Forestry
			05699-DR-109	Watermain Overcrossing
10730-2030	Proposed Temporary Site Compound	As Shown	05699-DR-110	Watermain Undercrossing
10730-2031	Typical Turbine Hardstand Layout	1:250	05699-DR-111	Culvert Overcrossing
10730-2032	Typical Turbine Details	1:500	05699-DR-112	Culvert Undercrossing
10730-2033	Typical Road Construction Details	1:25	05699-DR-113	Culvert Crossing Schedule
10730-2034	Typical Surface Water Settlement Pond - Plan & Sections	As Shown	05699-DR-202	Substation Site Layout Plan
10730-2035	Typical Culvert Details	1:50	05699-DR-203	Substation Compound Elevations
			05699-DR-204	Substation Building Elevations
10730-2037	Typical Met Mast Details	As Shown	05699-DR-205	MV Customer Switchgear Room
10730-2038	Typical Fencing Details	As Shown	05699-DR-206	Palisade Fencing Details
			05699-DR-300	Loop In SLP
10730-2040	Proposed Self Contained, Temporary Wheelwash System - Typical Details	1:50	05699-DR-301	Loop-In Cross Sections
10730-2041	Proposed on Site Borrow Pits - Typical Details	As Shown	05699-DR-302	CSE Tower
			TLI-05699-GC-DR-P-002	110kV Loop-In Option 1
10730-2050	Site Entrance & Visibility Sightlines - R704	As Shown	TLI-05699-GC-DR-P-003	110kV Loop-In Option 2
10730-2051	Site Entrance & Visibility Sightlines - L7451	As Shown	TLI-05699-GC-DR-P-004	Cable Interface Tower Details
10730-2052	Site Entrance Improvement Works & Autotrack Assessment - R704	As Shown		
10730-2053	Site Entrance Improvement Works & Autotrack Assessment - L7451	As Shown	342068-100A1.1	R704 Improvement Works for Blade Delivery
10730-2055	Site Amenity / Recreation Plan	1:20,000	342068-110A1.1	R704 Improvement Works for Blade Delivery

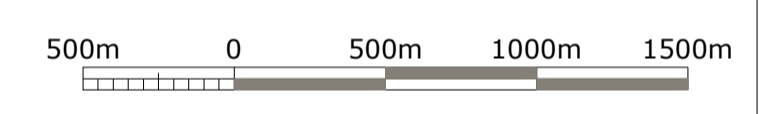


GENERAL LEGEND

PLANNING APPLICATION BOUNDARY	LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST
SITE NOTICE LOCATION	AREAS EXCLUDED FROM APPLICANT OWNERSHIP OR BENEFICIAL INTEREST

- NOTES:**
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A	18.12.20	PLANNING ISSUE	MN	JS

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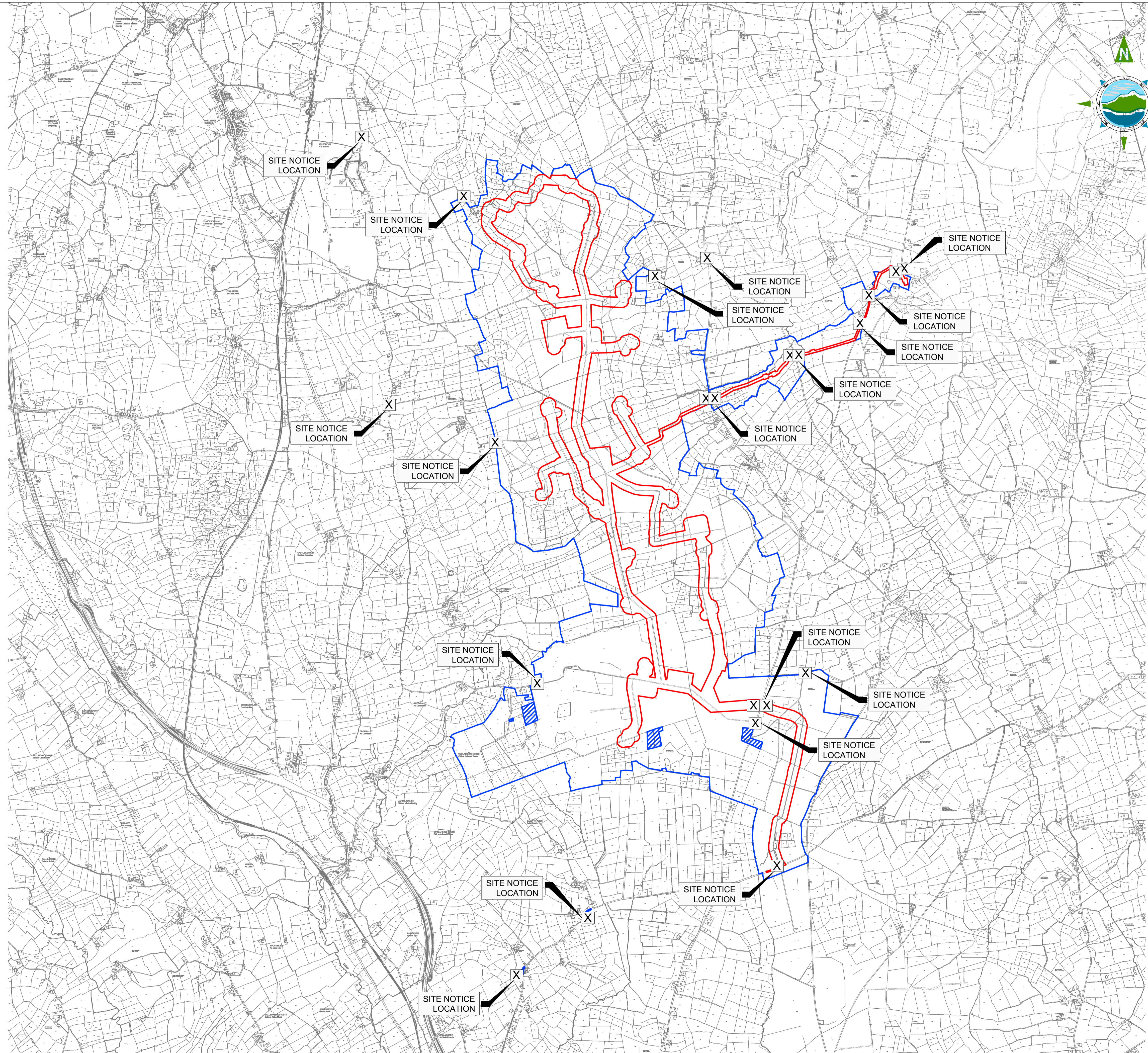
Project:
CASTLEBANNY WIND FARM

Title:
REGIONAL SITE LOCATION MAP

Scale @ A1: **1:25,000**
 Prepared by: M. Nolan
 Checked: J. Staunton
 Date: December 2020
 Project Director: D. Grehan
 Drawing Status: Planning

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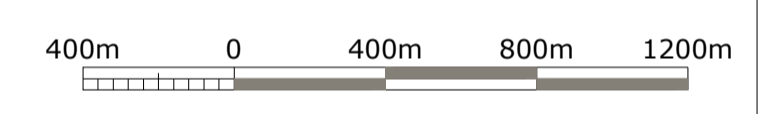
Drawing No.: **10730-2000**
 Revision: **A**



- GENERAL LEGEND**
- PLANNING APPLICATION BOUNDARY —
 - LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST —
 - SITE NOTICE LOCATION X
 - AREAS EXCLUDED FROM APPLICANT OWNERSHIP OR BENEFICIAL INTEREST

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Rev	Date	Description	By	Chkd.			

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
SITE LOCATION MAP

Scale @ A1: **1:20,000**

Prepared by: **M. Nolan** Checked: **J. Staunton** Date: **December 2020**

Project Director: **D. Grehan**

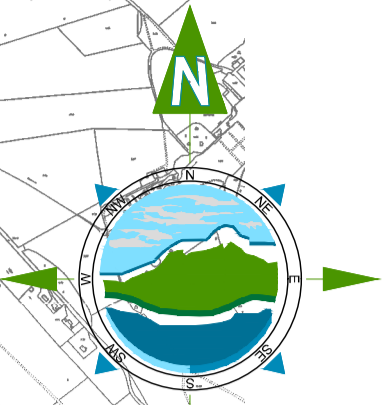
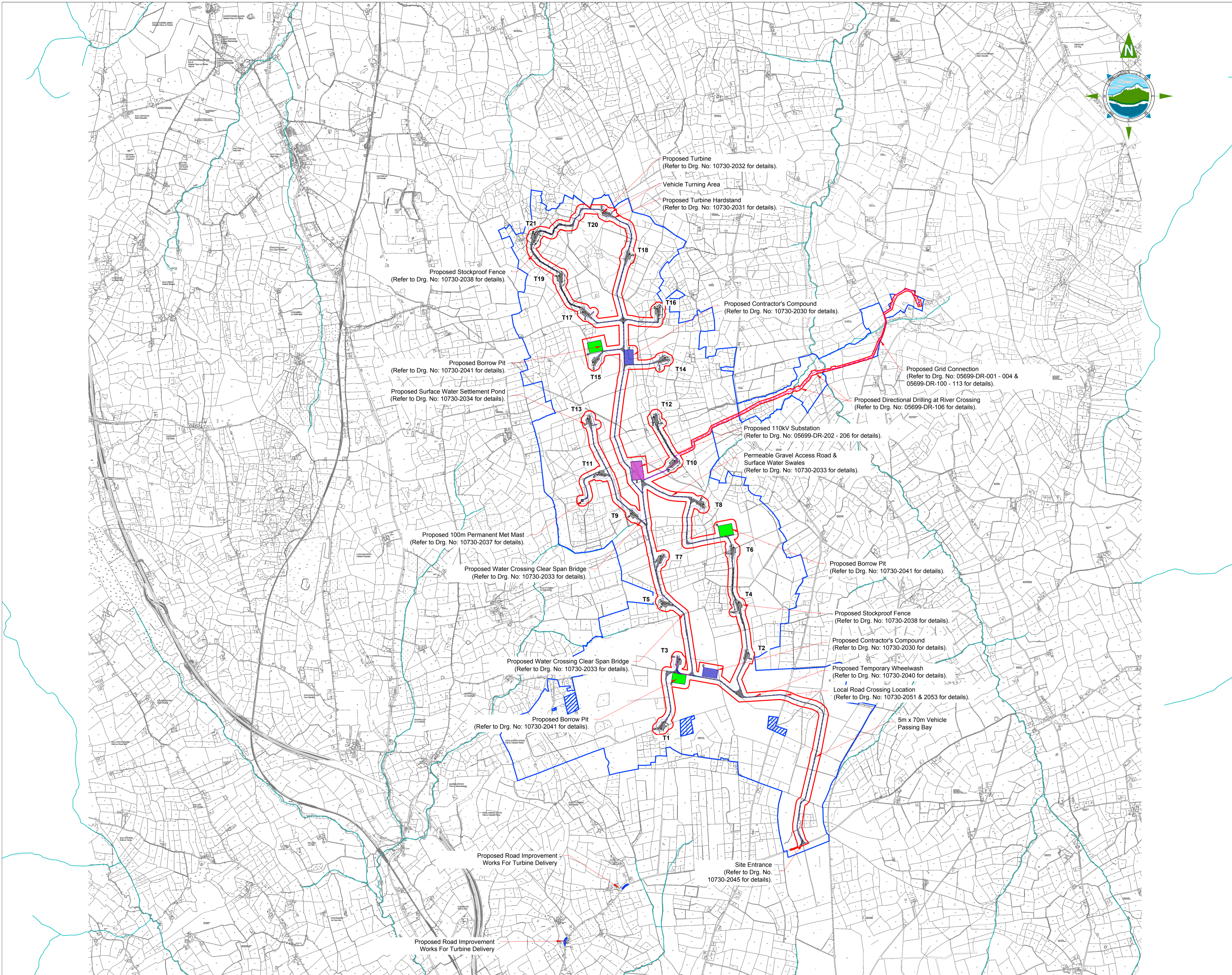
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Drawing No.: **10730-2001** Revision: **A**

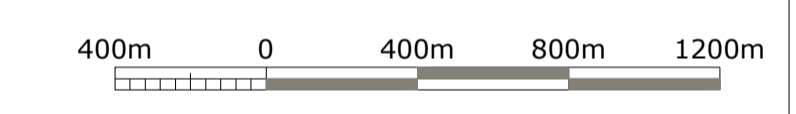


GENERAL LEGEND

PLANNING APPLICATION BOUNDARY	LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST
PROPOSED PERMANENT ACCESS ROAD	AREAS EXCLUDED FROM APPLICANT OWNERSHIP OR BENEFICIAL INTEREST
EXISTING ACCESS ROAD TO BE IMPROVED	PROPOSED TURBINE LOCATION
PROPOSED SURFACE WATER DRAIN	EXISTING STREAMS / RIVERS
PROPOSED TURBINE HARDSTAND	PROPOSED SW SETTLEMENT POND
PROPOSED STOCKPROOF FENCE	PROPOSED GRID CONNECTION

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Rev	Date	Description	By	Chkd.

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
SITE MASTER PLAN

Scale @ A1: **1:20,000**

Prepared by: **M. Nolan** Checked: **J. Staunton** Date: **December 2020**

Project Director: **D. Grehan**

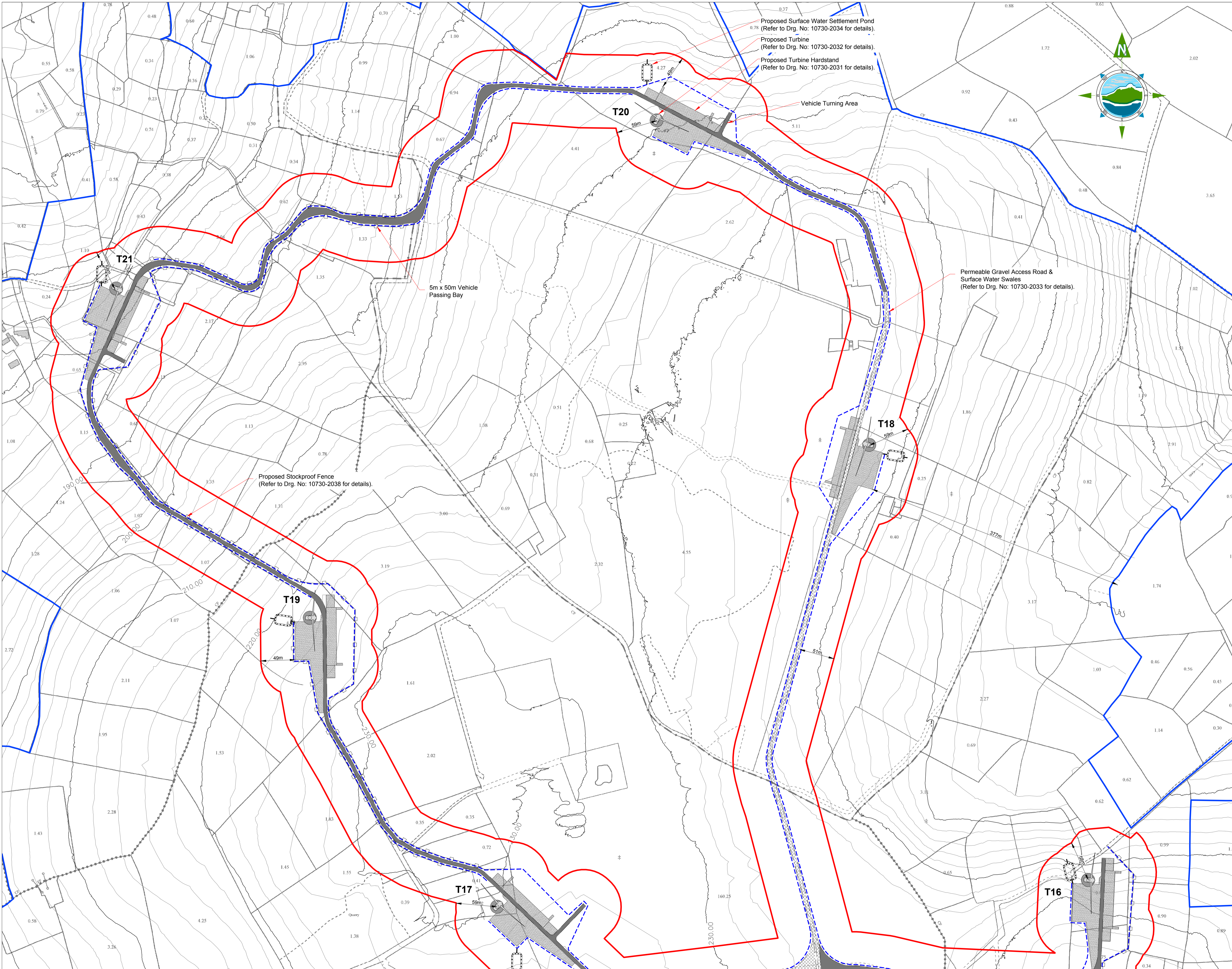
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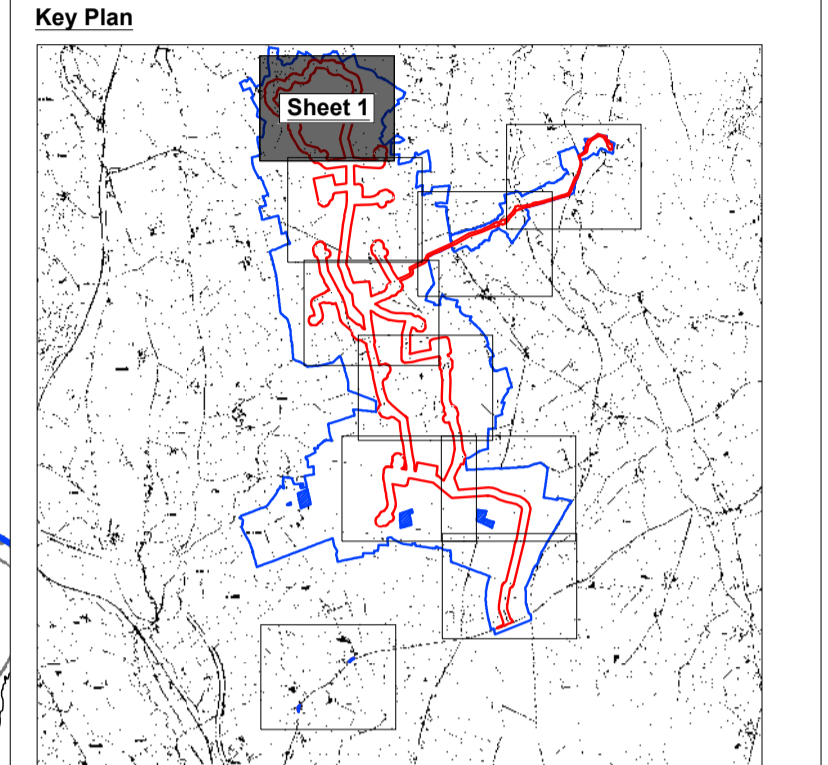
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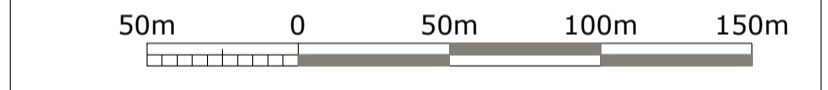
GENERAL LEGEND

PLANNING APPLICATION BOUNDARY	LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST
PROPOSED GRID CONNECTION	PROPOSED PERMANENT ACCESS ROAD
EXISTING ACCESS ROAD TO BE IMPROVED	PROPOSED TURBINE LOCATION
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EXISTING CONTOURS MAJOR (10m)	EXISTING CONTOURS MINOR (2m)
PROPOSED STOCKPROOF FENCE	



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A	18.12.20	PLANNING ISSUE	MN	JS

Client: **SPRINGFIELD RENEWABLES LTD.**

Project: **CASTLEBANNY WIND FARM**

Title: **SITE LAYOUT PLAN - Sheet 1 of 10 -**

Scale @ A1: **1:2,500**

Prepared by: **M. Nolan** Checked: **J. Staunton** Date: **December 2020**

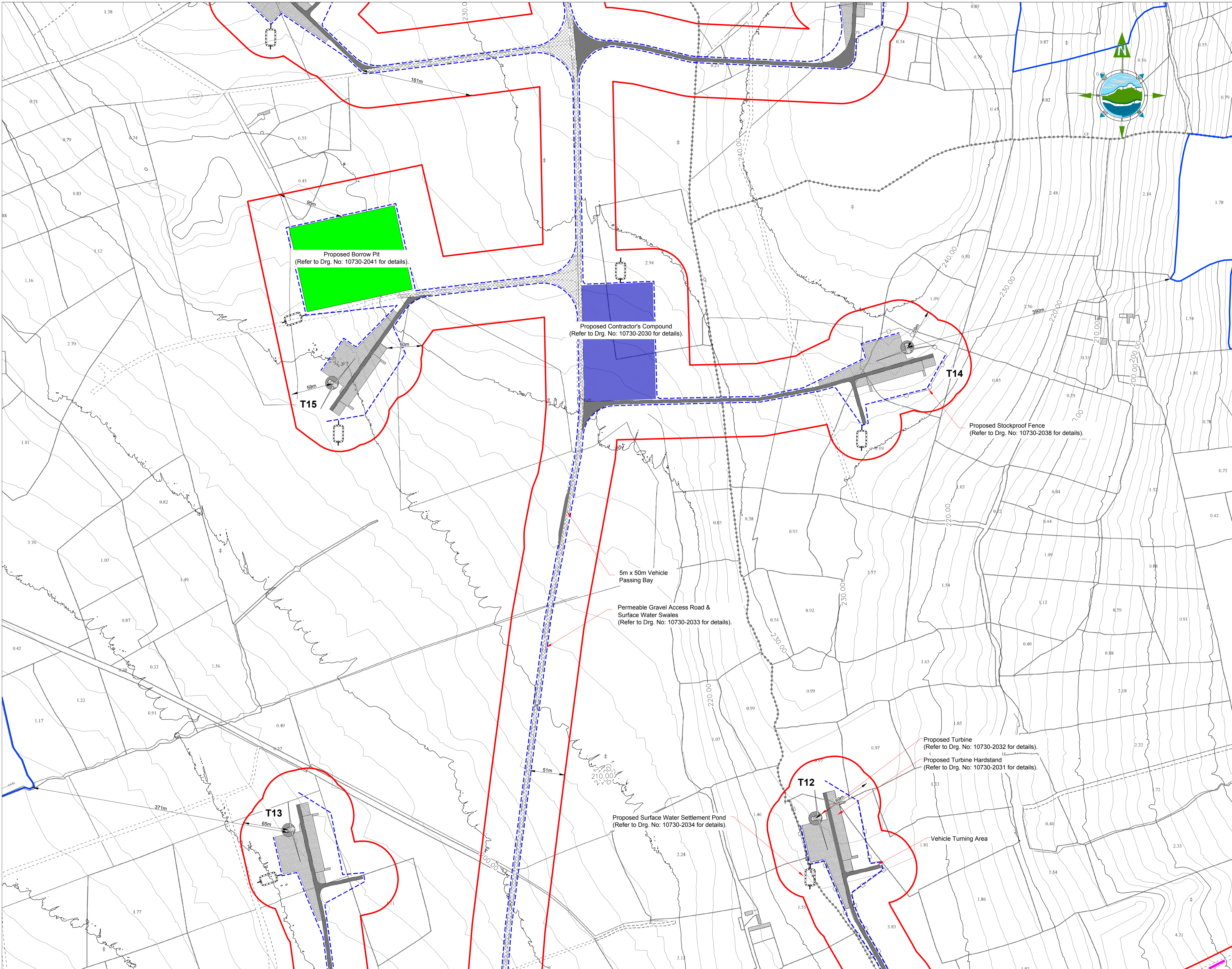
Project Director: **D. Grehan**

Drawing Status: **Planning**

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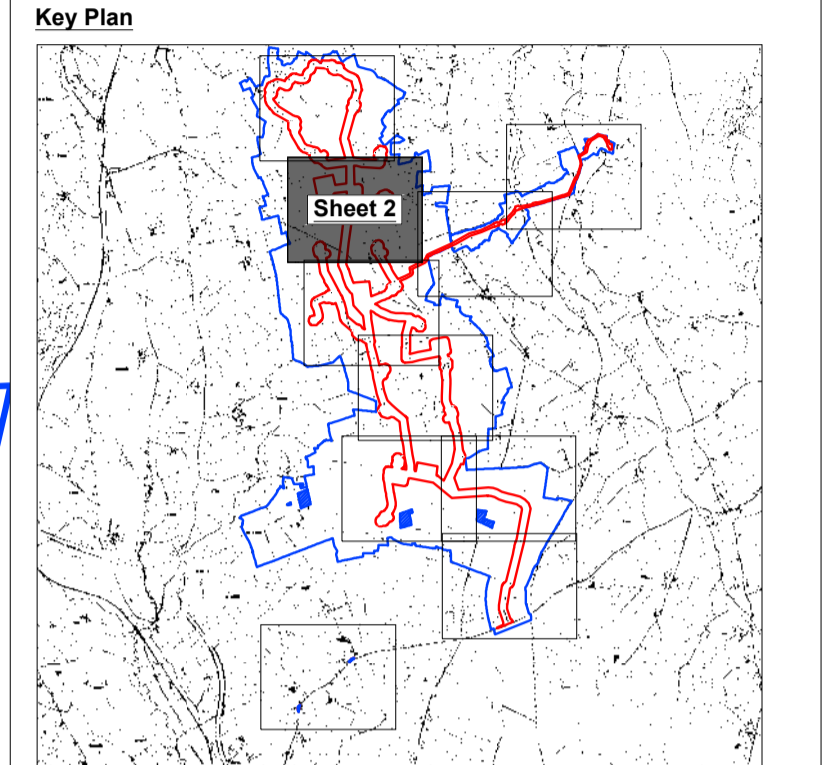
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Drawing No.: **10730-2006** Revision: **A**



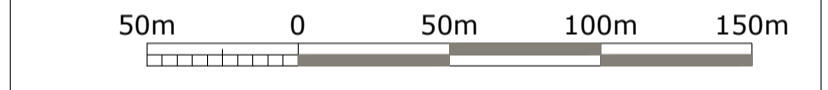
GENERAL LEGEND

PLANNING APPLICATION BOUNDARY	LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST
PROPOSED GRID CONNECTION	PROPOSED PERMANENT ACCESS ROAD
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Client:
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Project:
CASTLEBANNY WIND FARM

Title:
**SITE LAYOUT PLAN
 - Sheet 2 of 10 -**

Scale @ A1: **1:2,500**

Prepared by: **M. Nolan** Checked: **J. Staunton** Date: **December 2020**

Project Director: **D. Grehan**

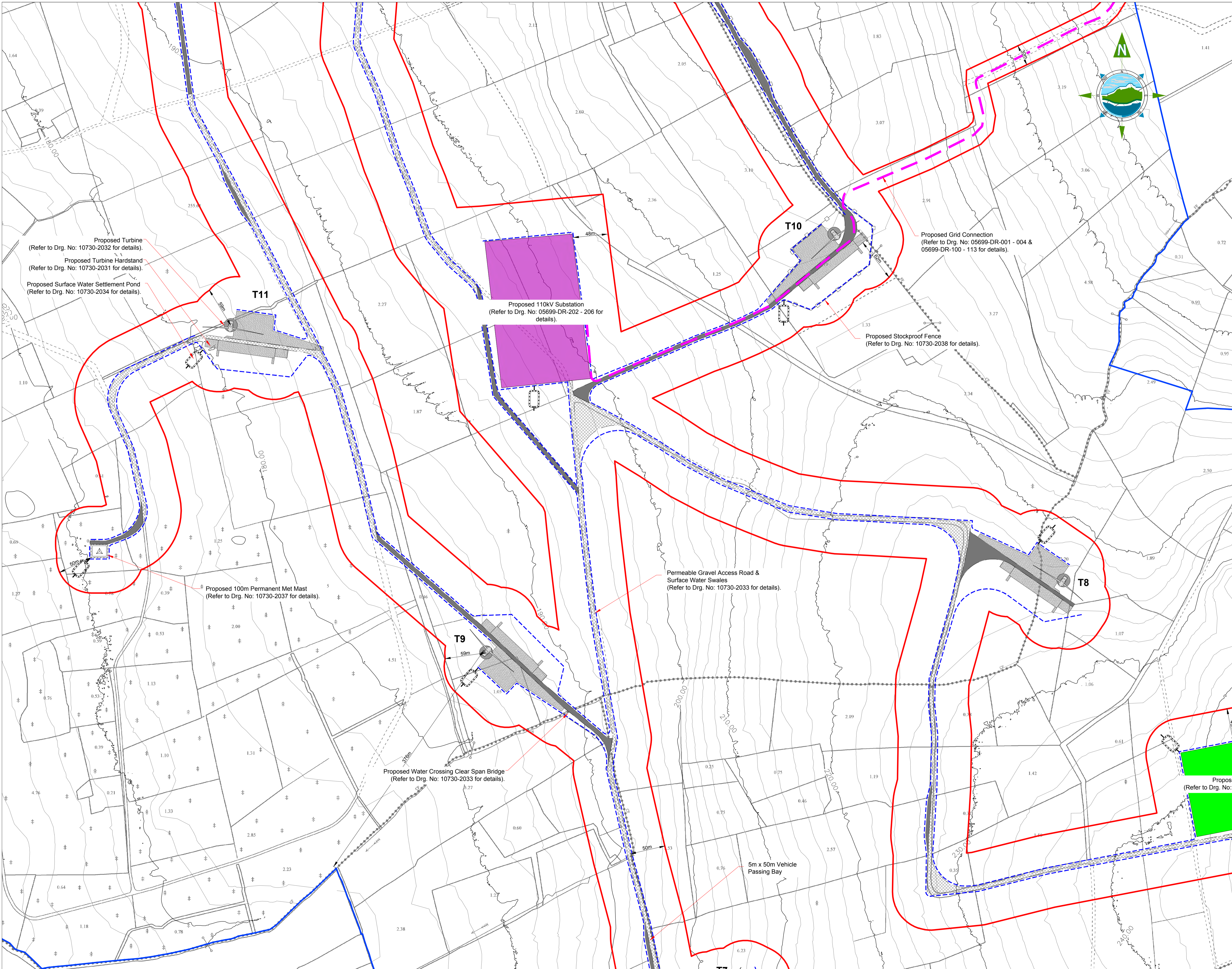
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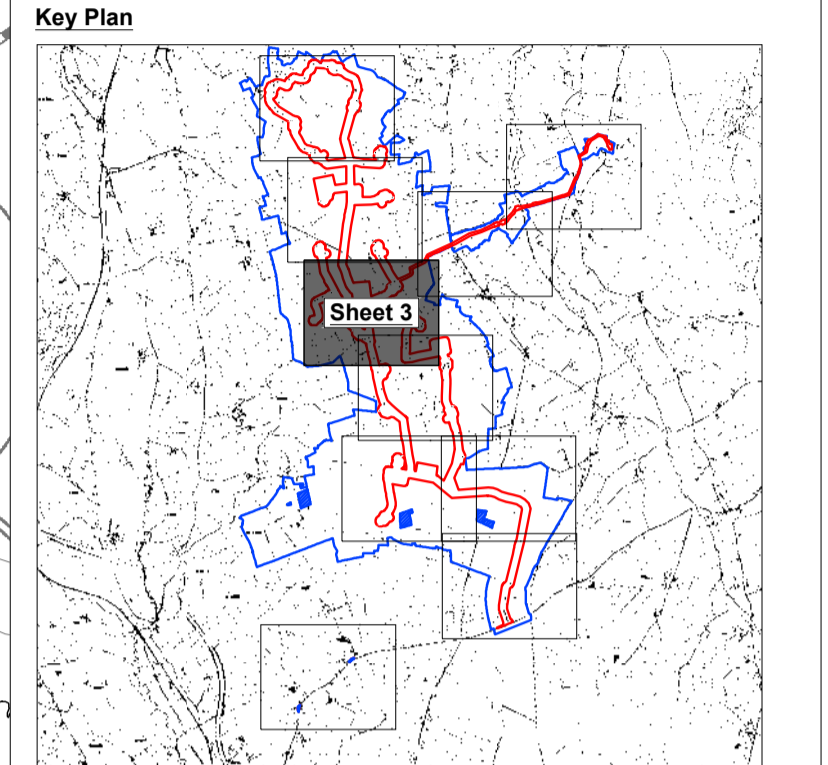
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Drawing No.: **10730-2007** Revision: **A**



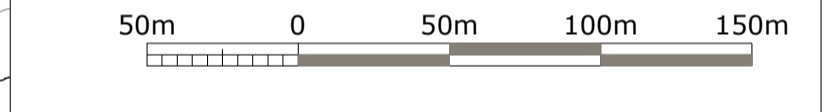
GENERAL LEGEND

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PROPOSED GRID CONNECTION	PROPOSED PERMANENT ACCESS ROAD
EXISTING ACCESS ROAD TO BE IMPROVED	PROPOSED TURBINE LOCATION
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PROPOSED STOCKPROOF FENCE	



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A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
**SITE LAYOUT PLAN
 - Sheet 3 of 10 -**

Scale @ A1: **1:2,500**

Prepared by: **M. Nolan** Checked: **J. Staunton** Date: **December 2020**

Project Director: **D. Grehan**

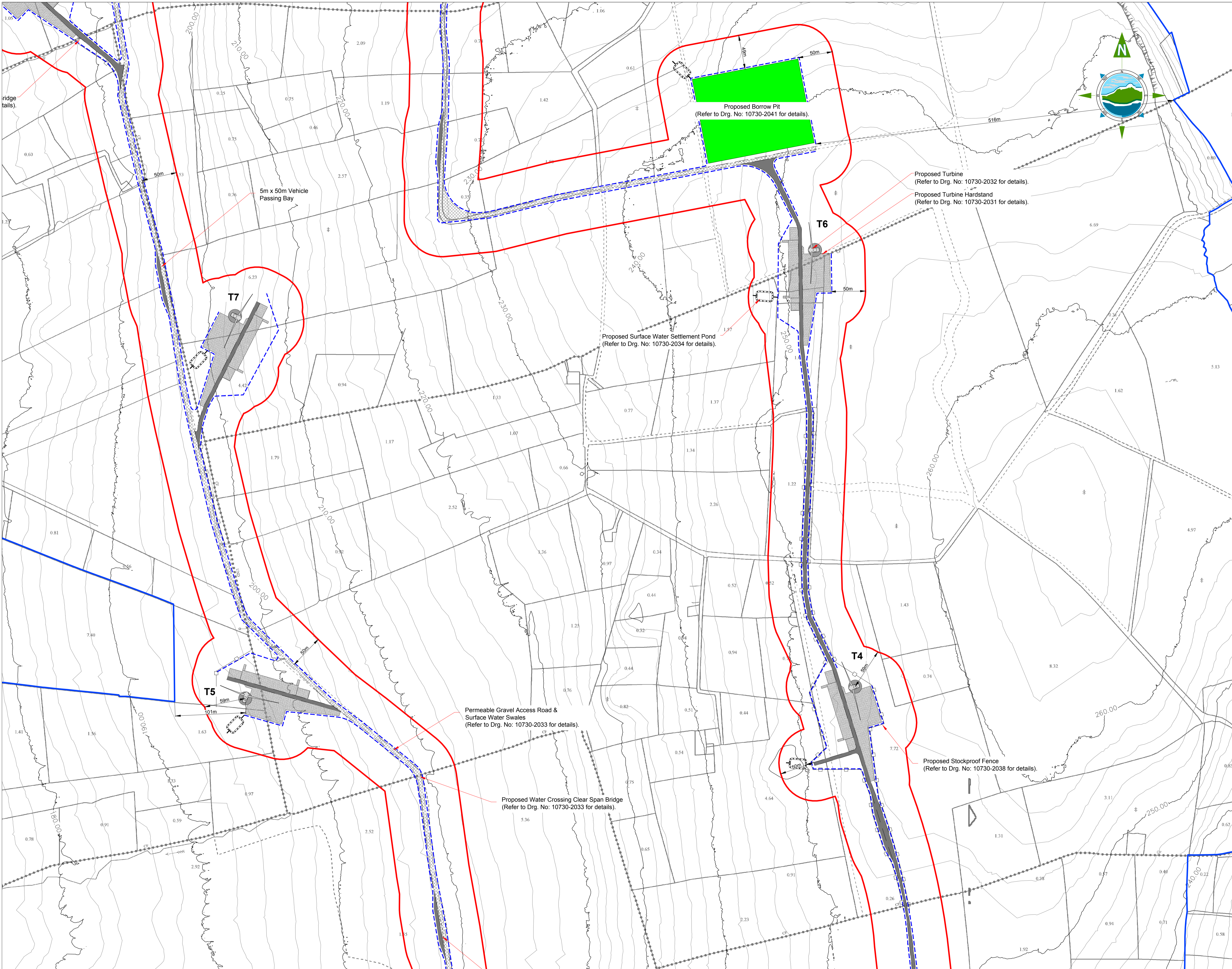
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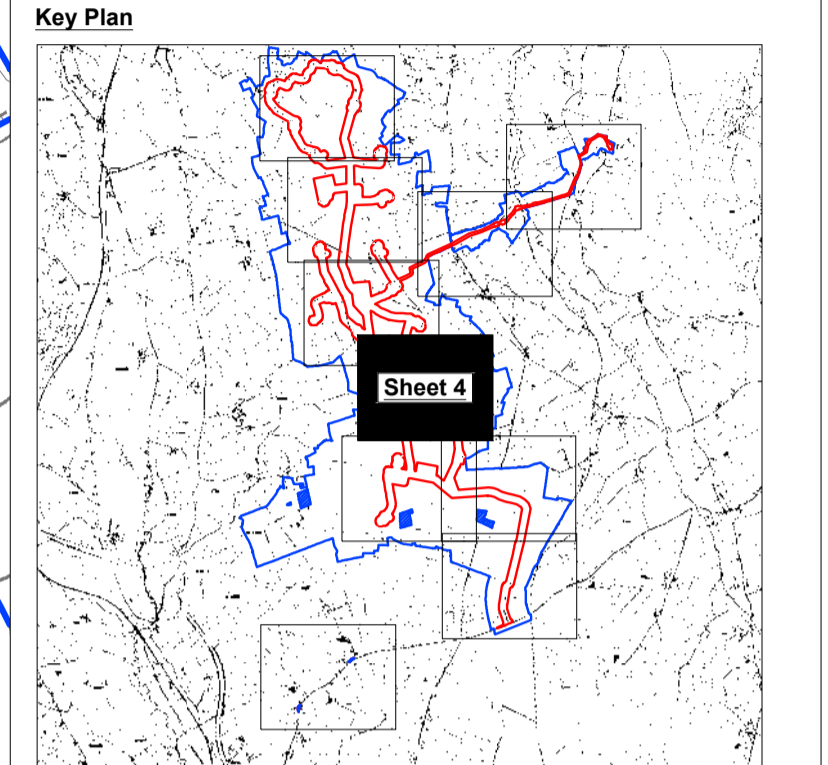
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Drawing No.: **10730-2008** Revision: **A**



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EXISTING ACCESS ROAD TO BE IMPROVED	PROPOSED TURBINE LOCATION
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Client: **SPRINGFIELD RENEWABLES LTD.**

Project: **CASTLEBANNY WIND FARM**

Title: **SITE LAYOUT PLAN - Sheet 4 of 10 -**

Scale @ A1: **1:2,500**

Prepared by: **M. Nolan** Checked: **J. Staunton** Date: **December 2020**

Project Director: **D. Grehan**

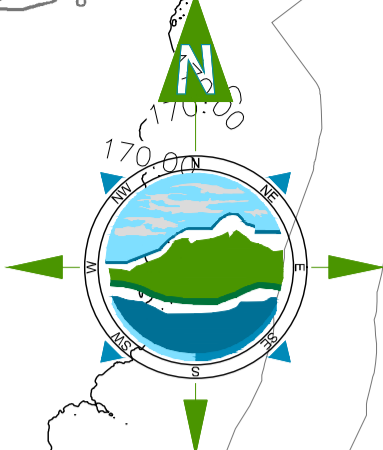
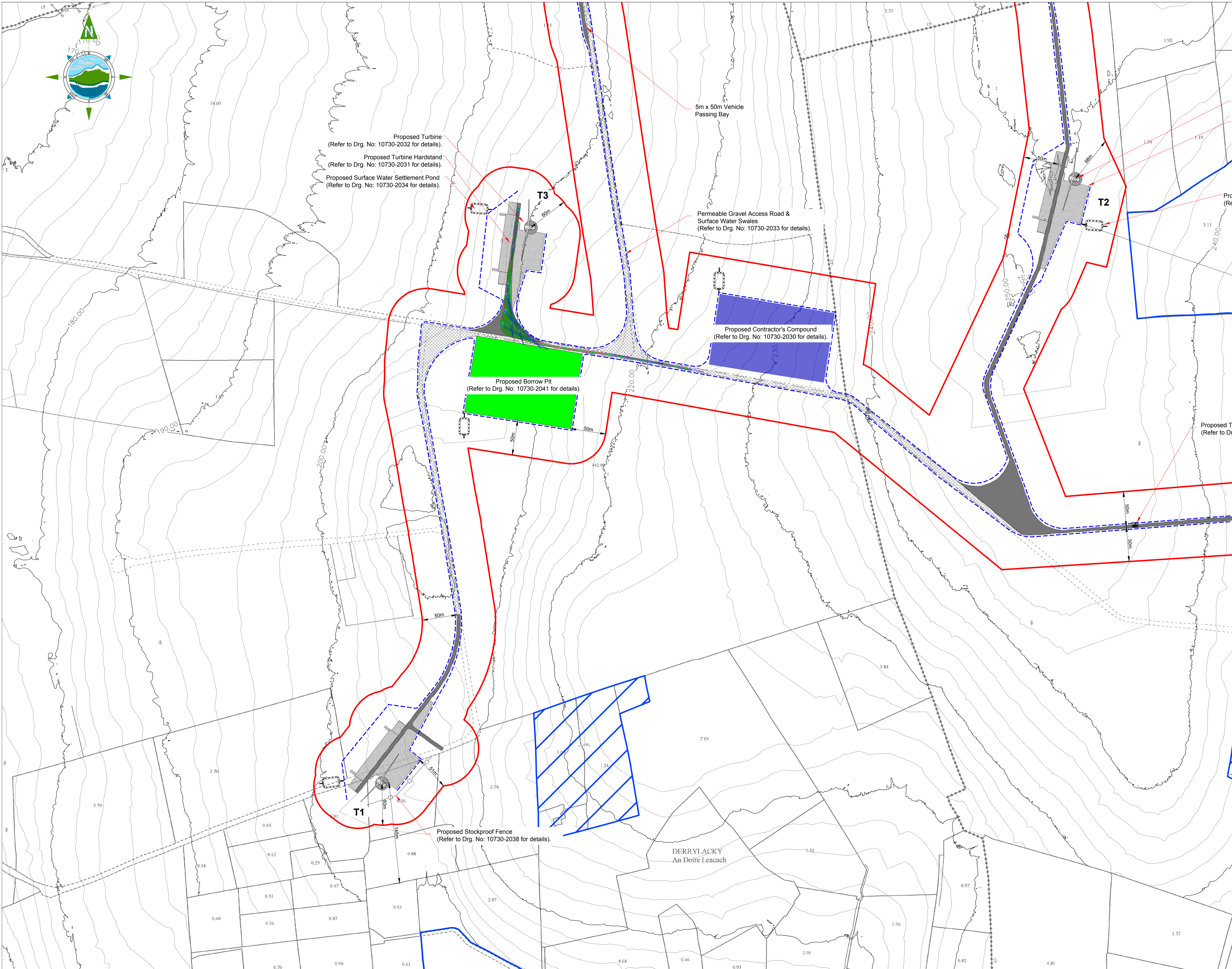
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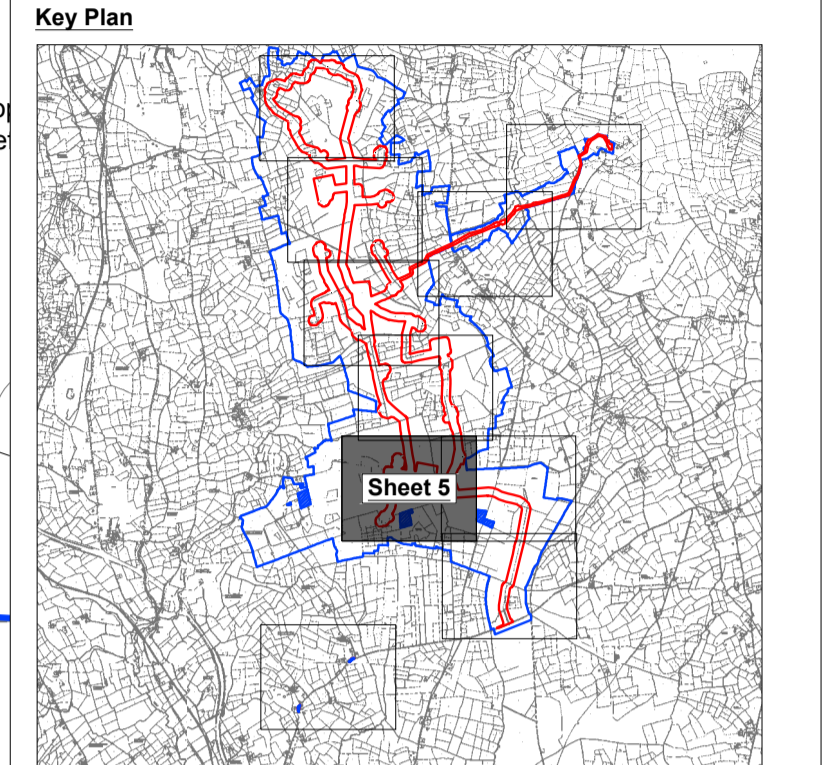
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Drawing No.: **10730-2009** Revision: **A**



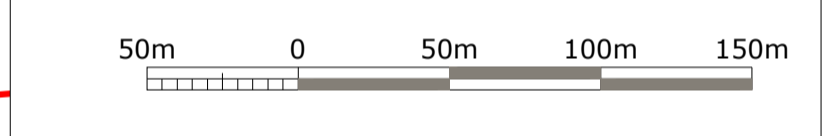
GENERAL LEGEND

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EXISTING ACCESS ROAD TO BE IMPROVED	PROPOSED TURBINE LOCATION
PROPOSED SURFACE WATER DRAIN	EXISTING STREAMS / RIVERS
PROPOSED TURBINE HARDSTAND	PROPOSED SW SETTLEMENT POND
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PROPOSED STOCKPROOF FENCE	AREAS EXCLUDED FROM APPLICANT OWNERSHIP OR BENEFICIAL INTEREST



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A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
**SITE LAYOUT PLAN
 - Sheet 5 of 10 -**

Scale @ A1: **1:2,500**

Prepared by: M. Nolan Checked: J. Staunton Date: December 2020

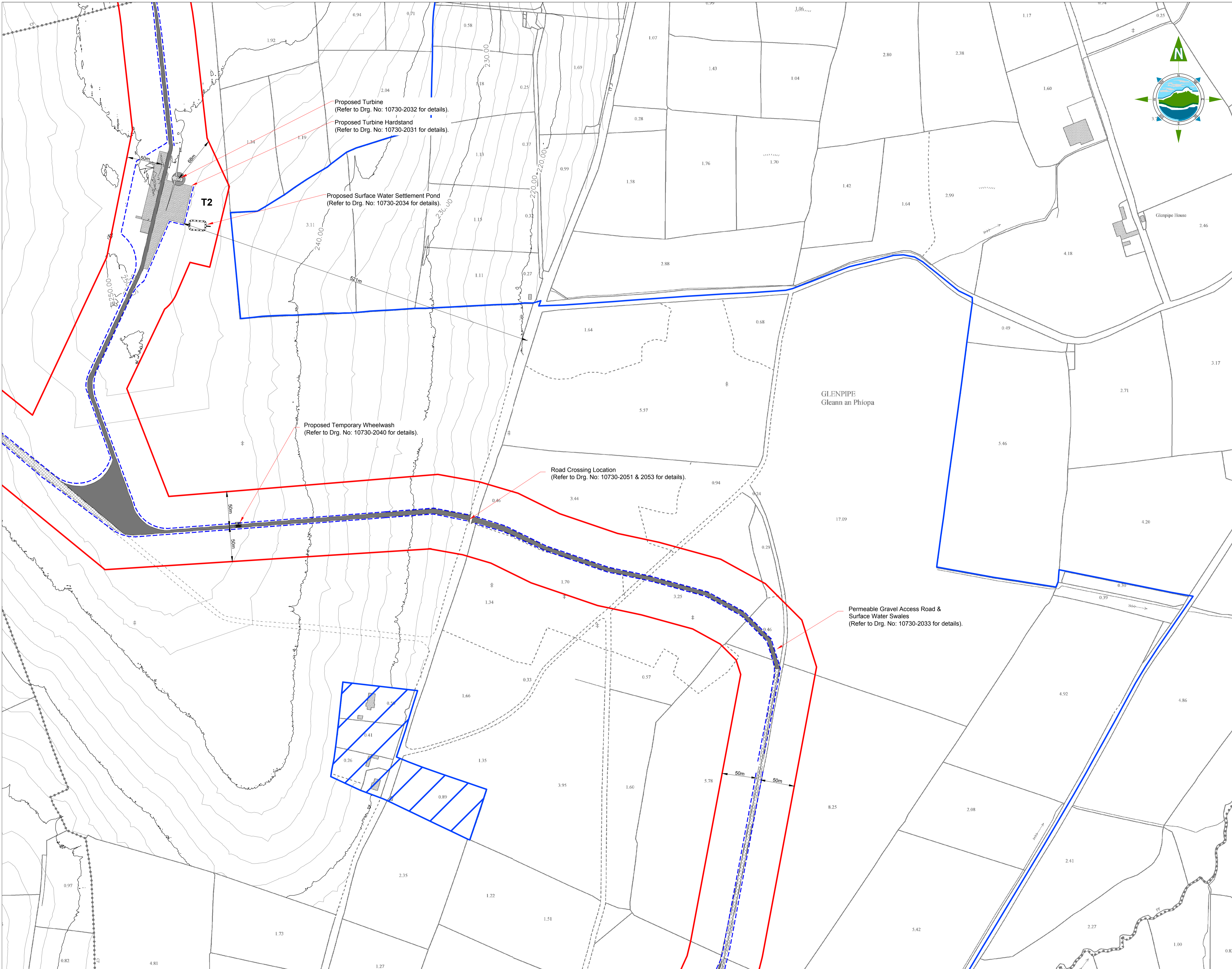
Project Director: D. Grehan

Drawing Status: **Planning**

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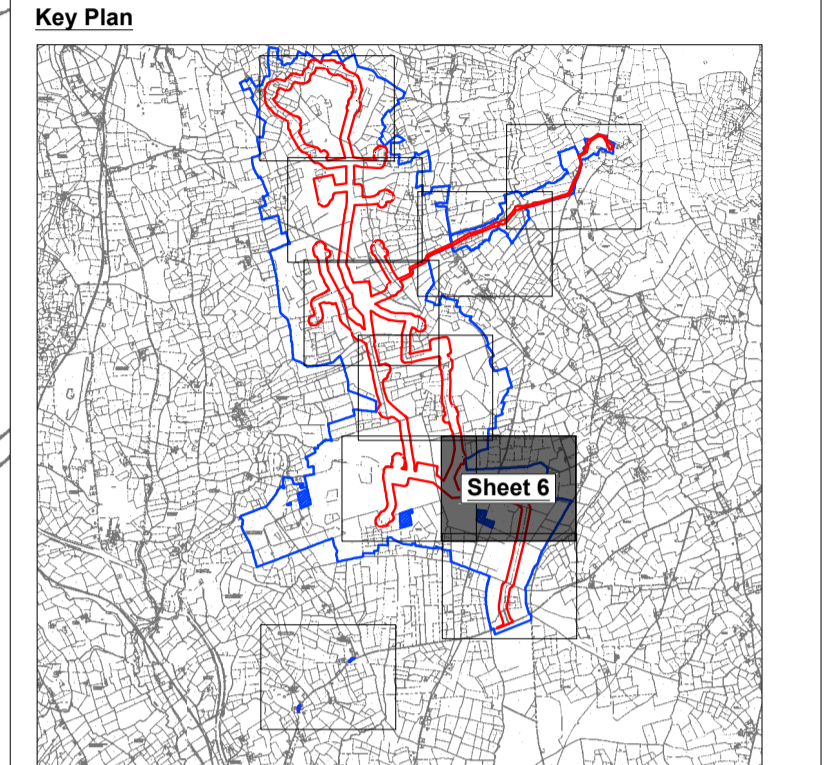
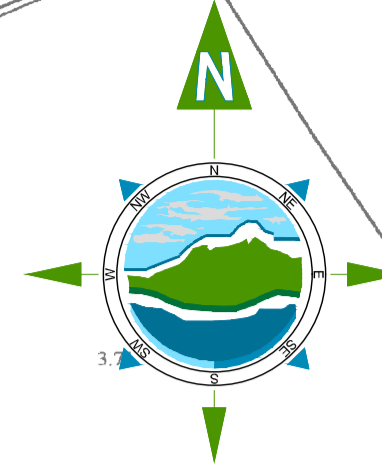
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Drawing No.: **10730-2010** Revision: **A**



GENERAL LEGEND

PLANNING APPLICATION BOUNDARY	LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST
PROPOSED GRID CONNECTION	PROPOSED PERMANENT ACCESS ROAD
EXISTING ACCESS ROAD TO BE IMPROVED	PROPOSED TURBINE LOCATION
PROPOSED SURFACE WATER DRAIN	EXISTING STREAMS / RIVERS
PROPOSED TURBINE HARDSTAND	PROPOSED SW SETTLEMENT POND
EXISTING CONTOURS MAJOR (10m)	EXISTING CONTOURS MINOR (2m)
PROPOSED STOCKPROOF FENCE	AREAS EXCLUDED FROM APPLICANT OWNERSHIP OR BENEFICIAL INTEREST



- NOTES:**
- DRAWINGS FOR PLANNING PURPOSES ONLY.
 - FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
 - GRID REFERENCES TO IRISH NATIONAL GRID.
 - ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Co. Kilkenny
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Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

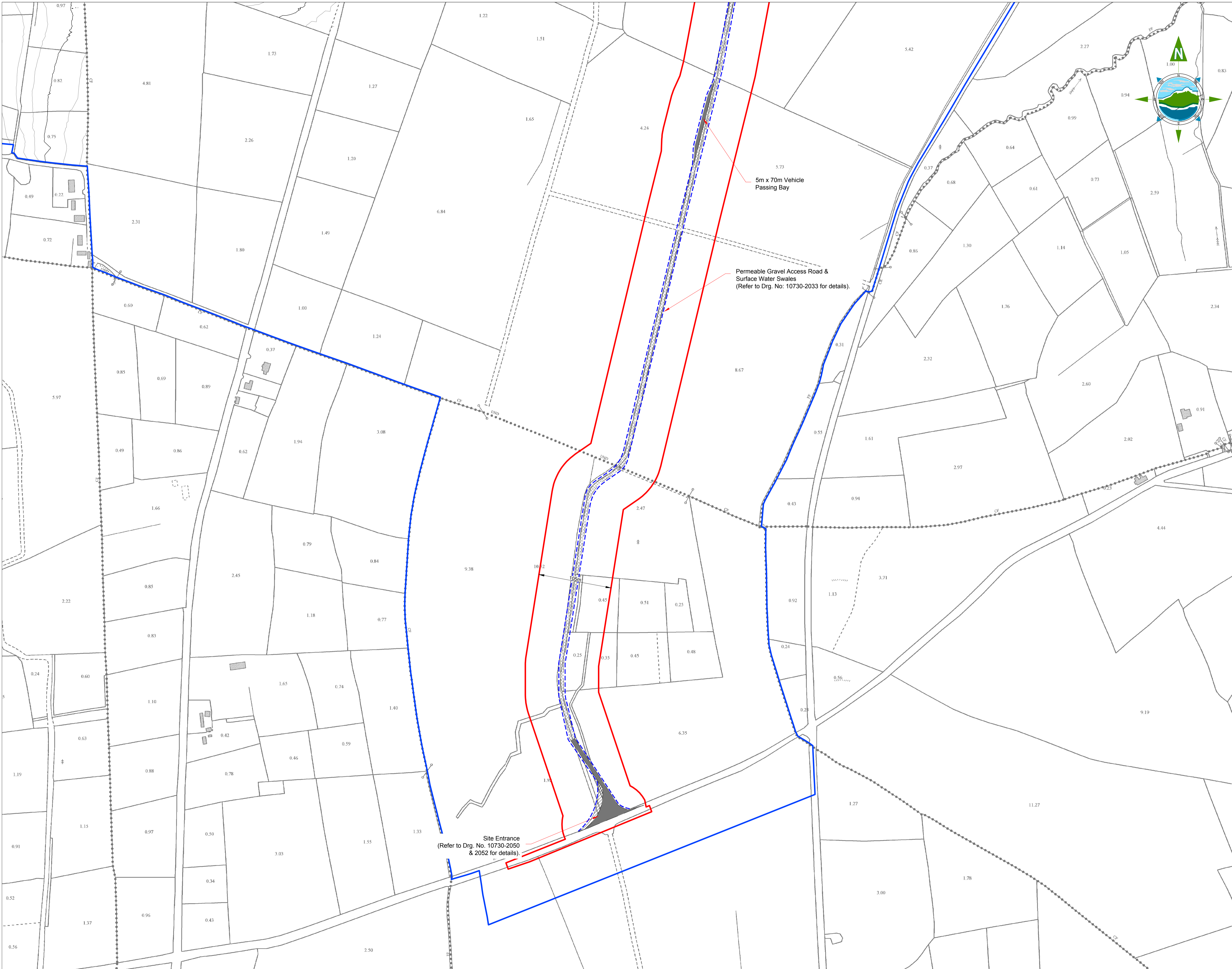
Title:
**SITE LAYOUT PLAN
 - Sheet 6 of 10 -**

Scale @ A1: **1:2,500**
 Prepared by: M. Nolan
 Checked: J. Staunton
 Date: December 2020
 Project Director: D. Grehan
 Drawing Status: Planning

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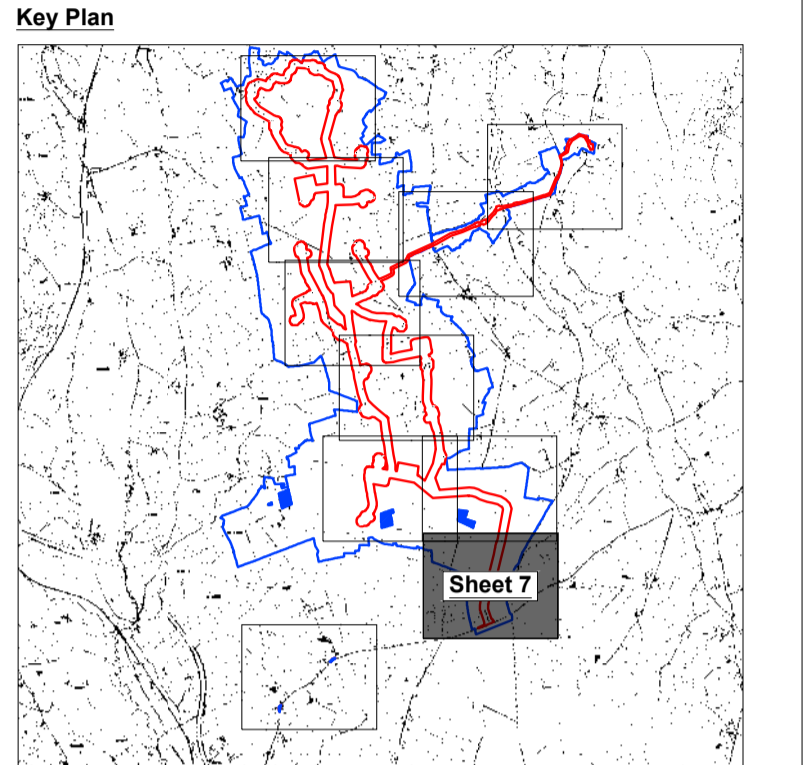
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Drawing No.: **10730-2011** Revision: **A**



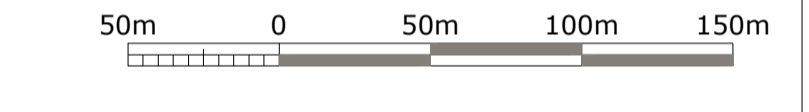
GENERAL LEGEND

PLANNING APPLICATION BOUNDARY	LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST
PROPOSED GRID CONNECTION	PROPOSED PERMANENT ACCESS ROAD
EXISTING ACCESS ROAD TO BE IMPROVED	PROPOSED TURBINE LOCATION
PROPOSED SURFACE WATER DRAIN	EXISTING STREAMS / RIVERS
PROPOSED TURBINE HARDSTAND	PROPOSED SW SETTLEMENT POND
EXISTING CONTOURS MAJOR (10m)	EXISTING CONTOURS MINOR (2m)



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Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

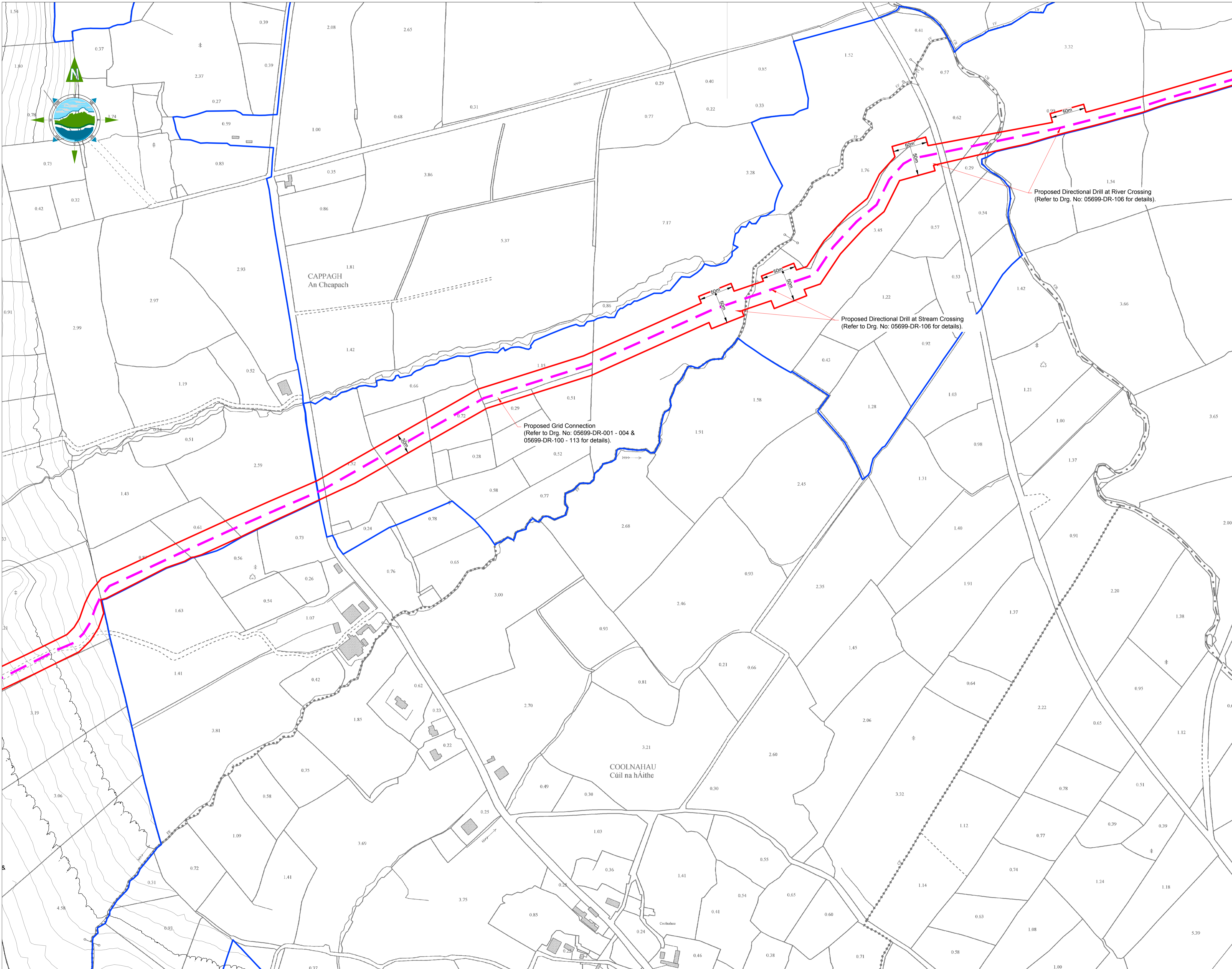
Title:
**SITE LAYOUT PLAN
 - Sheet 7 of 10 -**

Scale @ A1: **1:2,500**
 Prepared by: M. Nolan Checked: J. Staunton Date: December 2020
 Project Director: D. Grehan
 Drawing Status: **Planning**

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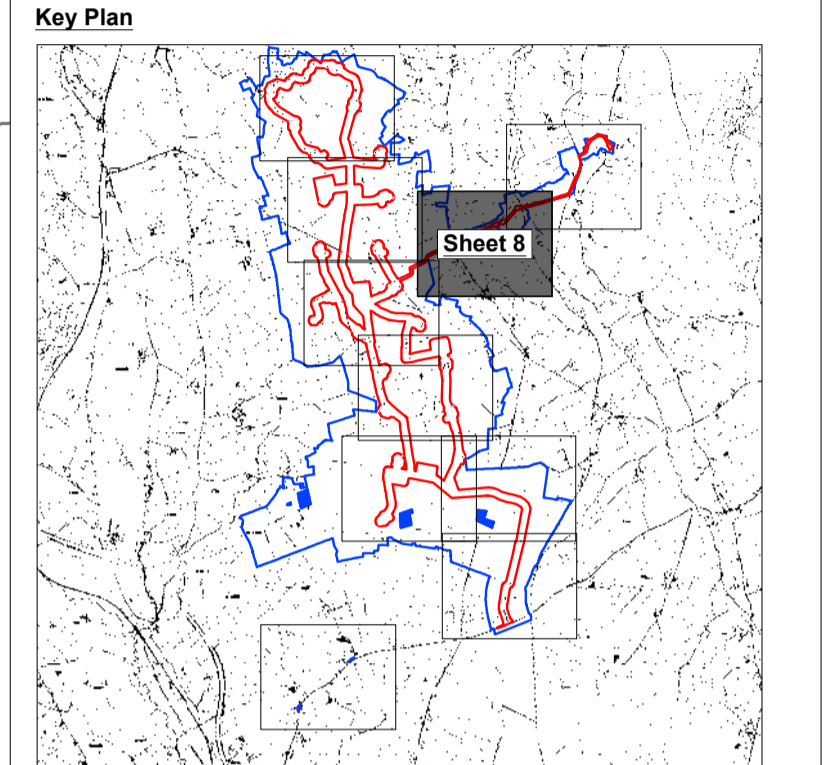
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Drawing No.: **10730-2012** Revision: **A**



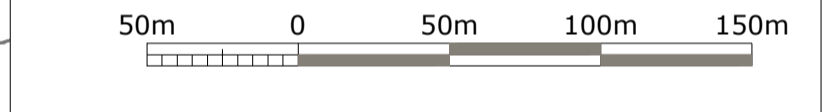
GENERAL LEGEND

PLANNING APPLICATION BOUNDARY	LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST
PROPOSED GRID CONNECTION	PROPOSED PERMANENT ACCESS ROAD
EXISTING ACCESS ROAD TO BE IMPROVED	PROPOSED TURBINE LOCATION
PROPOSED SURFACE WATER DRAIN	EXISTING STREAMS / RIVERS
PROPOSED TURBINE HARDSTAND	PROPOSED SW SETTLEMENT POND
EXISTING CONTOURS MAJOR (10m)	EXISTING CONTOURS MINOR (2m)



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Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
**SITE LAYOUT PLAN
 - Sheet 8 of 10 -**

Scale @ A1: **1:2,500**

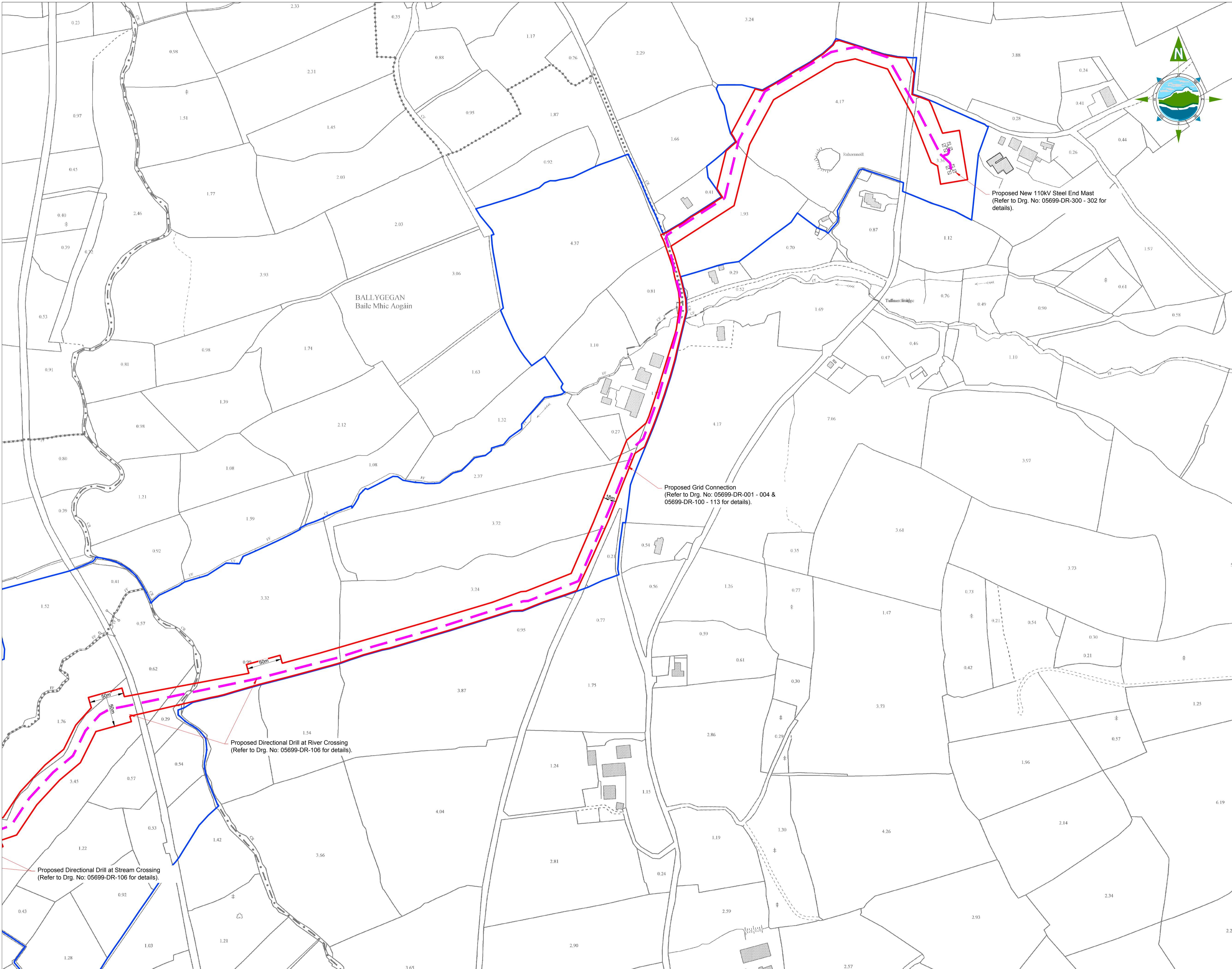
Prepared by:	Checked:	Date:
M. Nolan	J. Staunton	December 2020
Project Director:	D. Grehan	
Drawing Status:	Planning	

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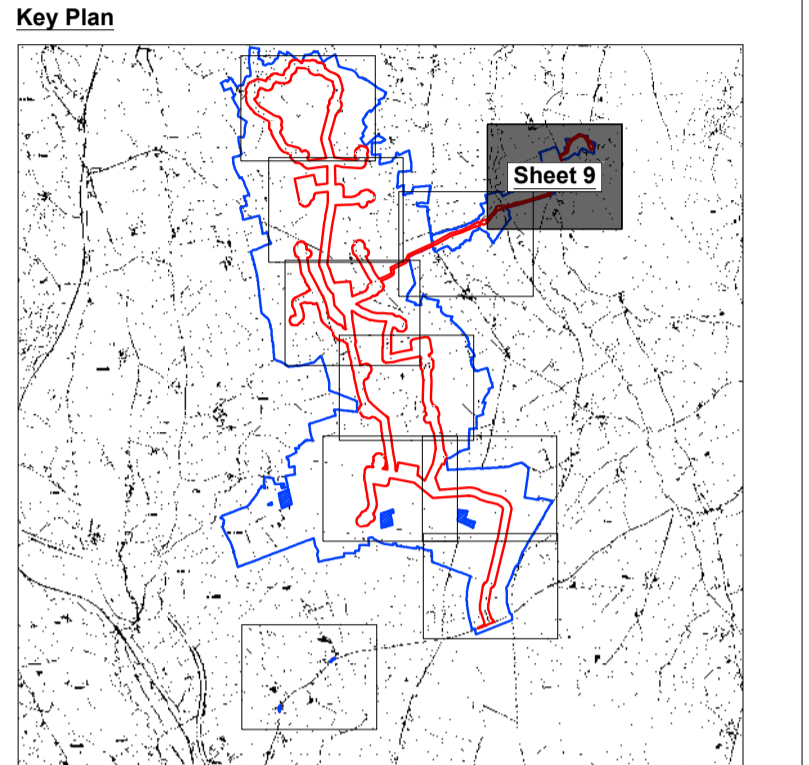
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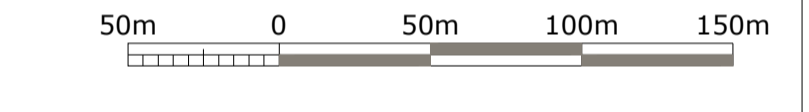
GENERAL LEGEND

PLANNING APPLICATION BOUNDARY	LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST
PROPOSED GRID CONNECTION	PROPOSED PERMANENT ACCESS ROAD
EXISTING ACCESS ROAD TO BE IMPROVED	PROPOSED TURBINE LOCATION
PROPOSED SURFACE WATER DRAIN	EXISTING STREAMS / RIVERS
PROPOSED TURBINE HARDSTAND	PROPOSED SW SETTLEMENT POND
EXISTING CONTOURS MAJOR (10m)	EXISTING CONTOURS MINOR (2m)
PROPOSED STOCKPROOF FENCE	



- NOTES:**
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Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
SITE LAYOUT PLAN - Sheet 9 of 10 -

Scale @ A1: **1:2,500**

Prepared by: M. Nolan	Checked: J. Staunton	Date: December 2020
Project Director: D. Grehan		
Drawing Status: Planning		

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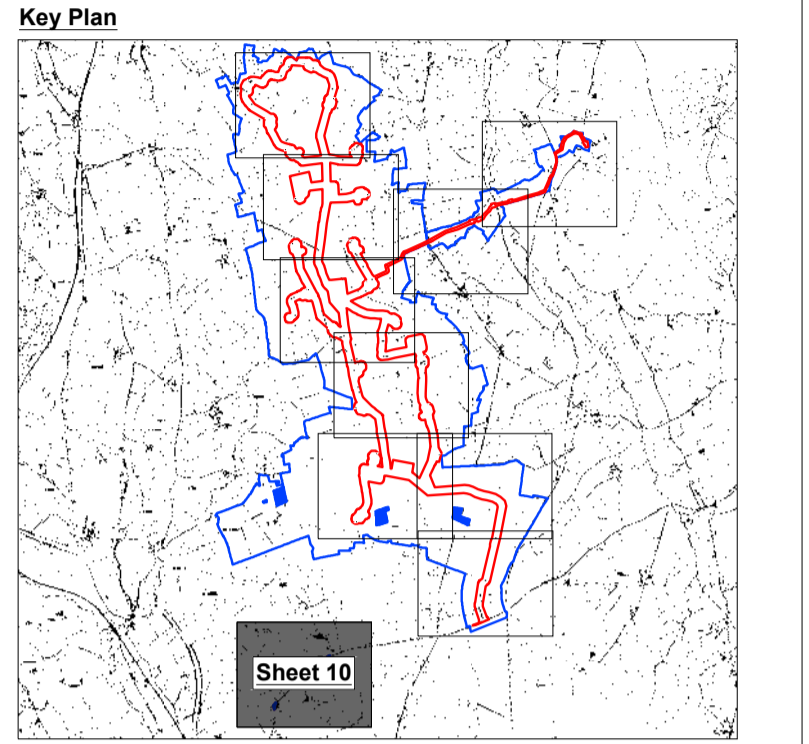
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Drawing No.: **10730-2014** Revision: **A**



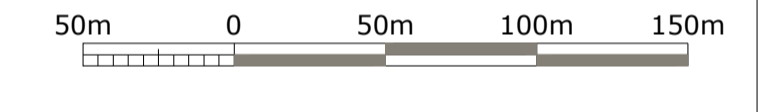
GENERAL LEGEND

PLANNING APPLICATION BOUNDARY	LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST
PROPOSED GRID CONNECTION	PROPOSED PERMANENT ACCESS ROAD
EXISTING ACCESS ROAD TO BE IMPROVED	PROPOSED TURBINE LOCATION
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- NOTES:**
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Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

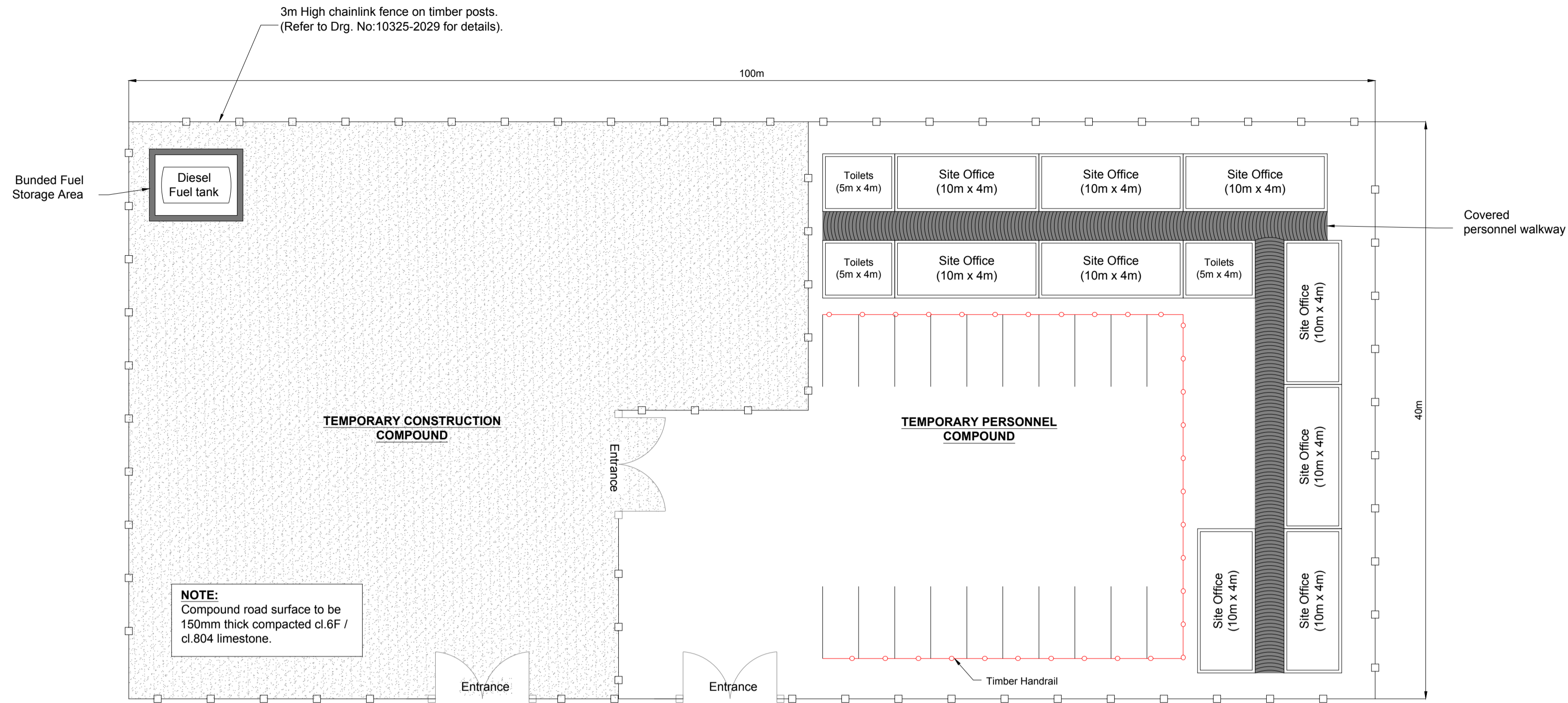
Title:
**SITE LAYOUT PLAN
 - Sheet 10 of 10 -**

Scale @ A1: **1:2,500**
 Prepared by: M. Nolan
 Checked: J. Staunton
 Date: December 2020
 Project Director: D. Grehan
 Drawing Status: Planning

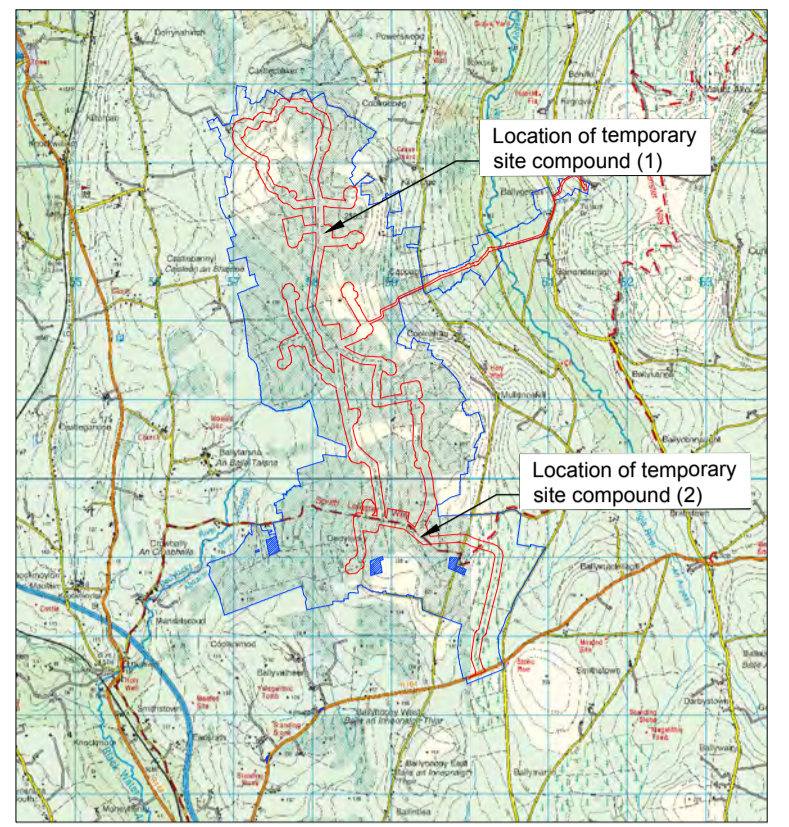
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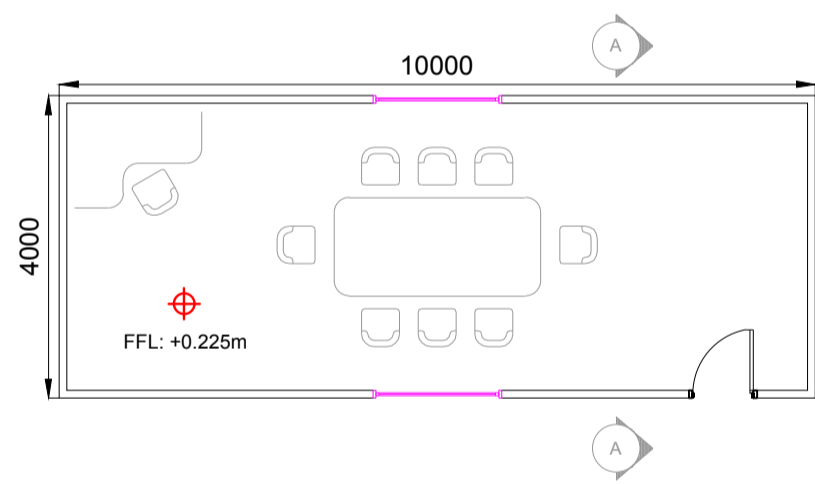
CONTRACTORS COMPOUND - LAYOUT PLAN
SCALE 1:250



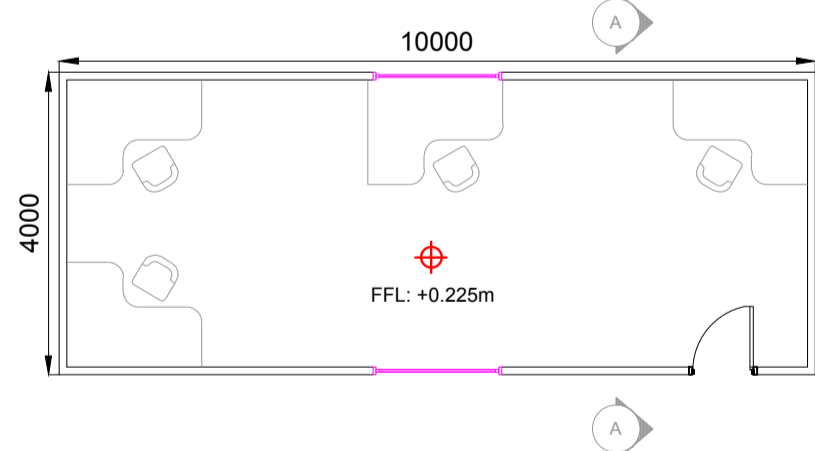
KEYPLAN
NTS

NOTES:

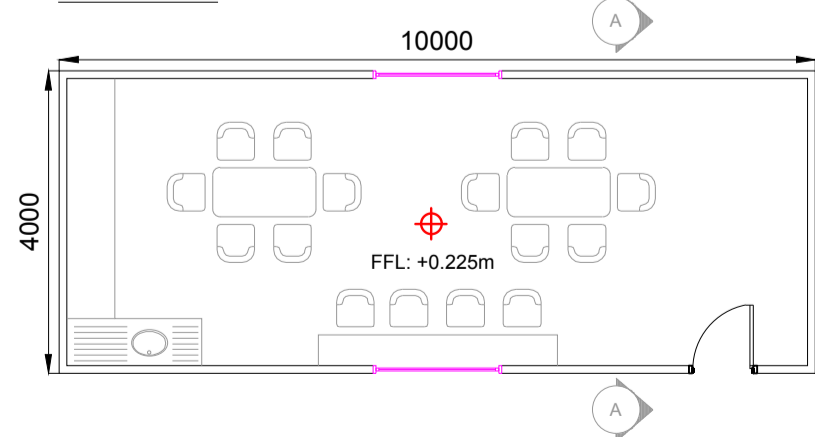
1. DRAWINGS FOR PLANNING PURPOSES ONLY.
2. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
3. GRID REFERENCES TO IRISH NATIONAL GRID.
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD



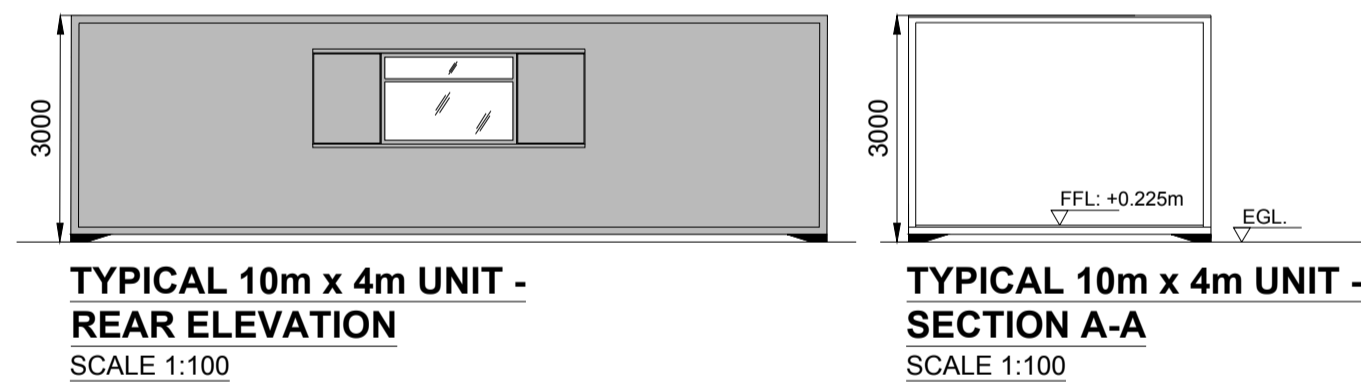
10m x 4m MEETING ROOM - FLOOR PLAN
SCALE 1:100



10m x 4m MEETING ROOM - FRONT ELEVATION
SCALE 1:100

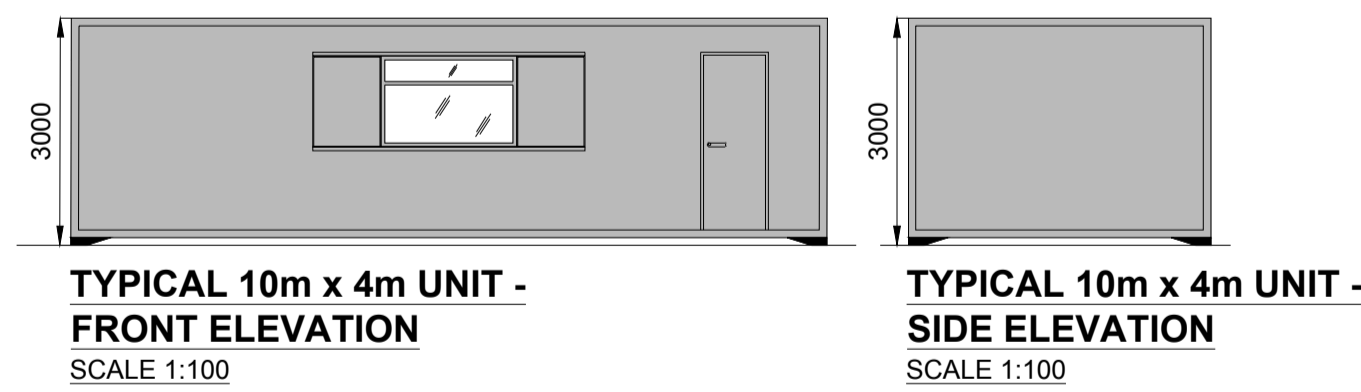


10m x 4m SITE OFFICE - FLOOR PLAN
SCALE 1:100



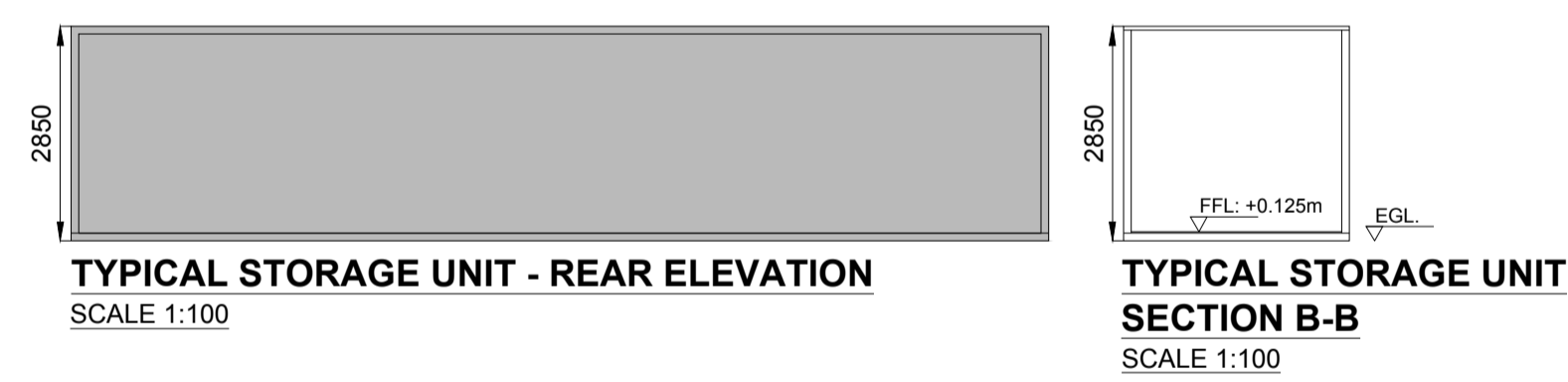
TYPICAL 10m x 4m UNIT - REAR ELEVATION
SCALE 1:100

TYPICAL 10m x 4m UNIT - SECTION A-A
SCALE 1:100



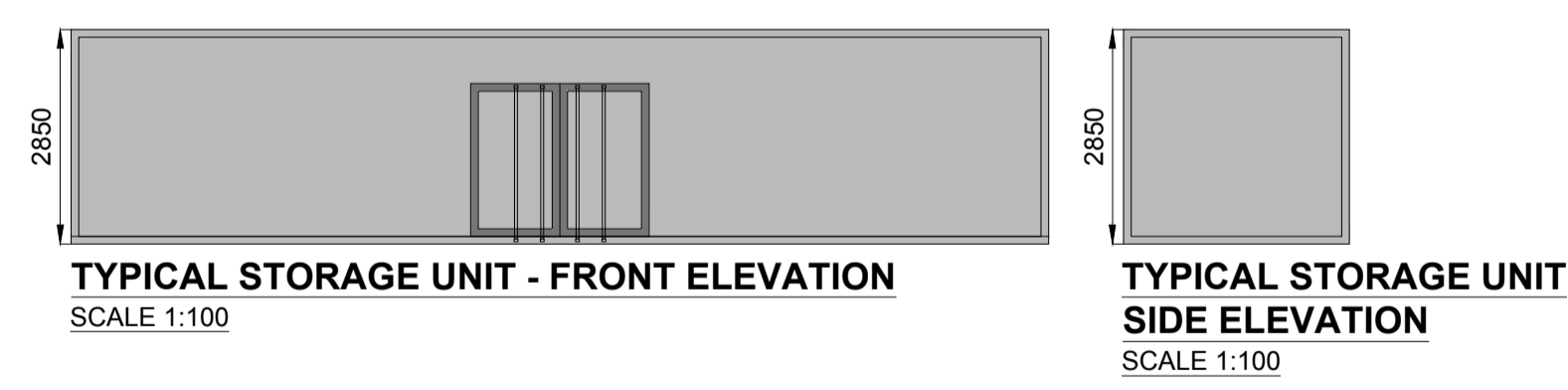
TYPICAL 10m x 4m UNIT - FRONT ELEVATION
SCALE 1:100

TYPICAL 10m x 4m UNIT - SIDE ELEVATION
SCALE 1:100



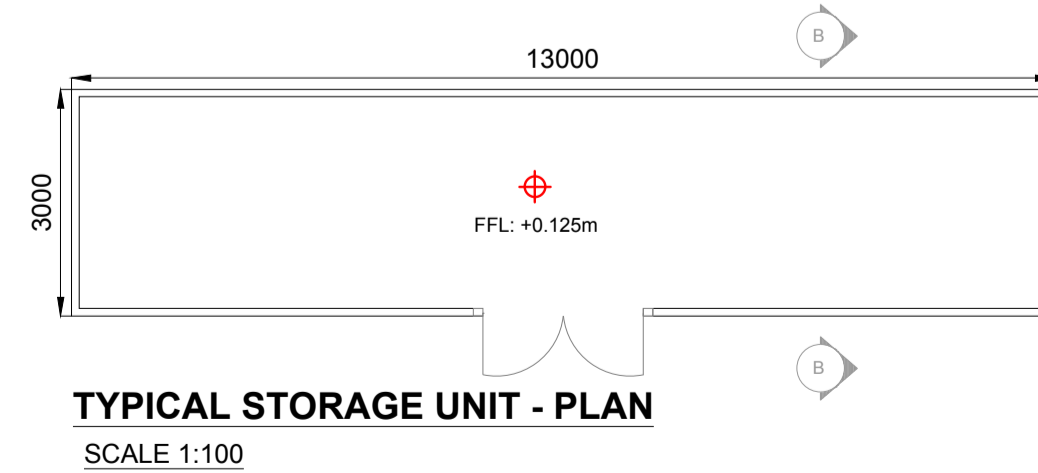
TYPICAL STORAGE UNIT - REAR ELEVATION
SCALE 1:100

TYPICAL STORAGE UNIT SECTION B-B
SCALE 1:100

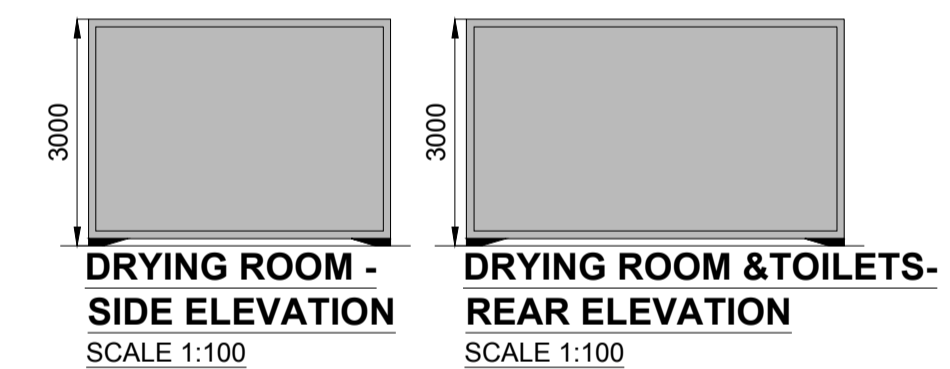


TYPICAL STORAGE UNIT - FRONT ELEVATION
SCALE 1:100

TYPICAL STORAGE UNIT SIDE ELEVATION
SCALE 1:100

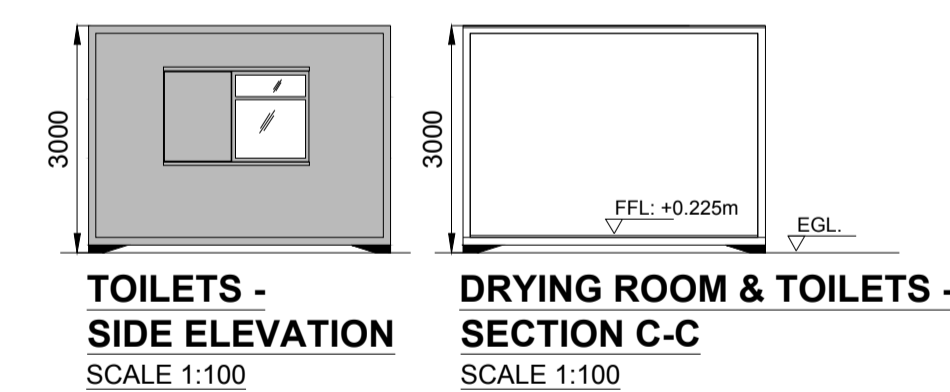


TYPICAL STORAGE UNIT - PLAN
SCALE 1:100



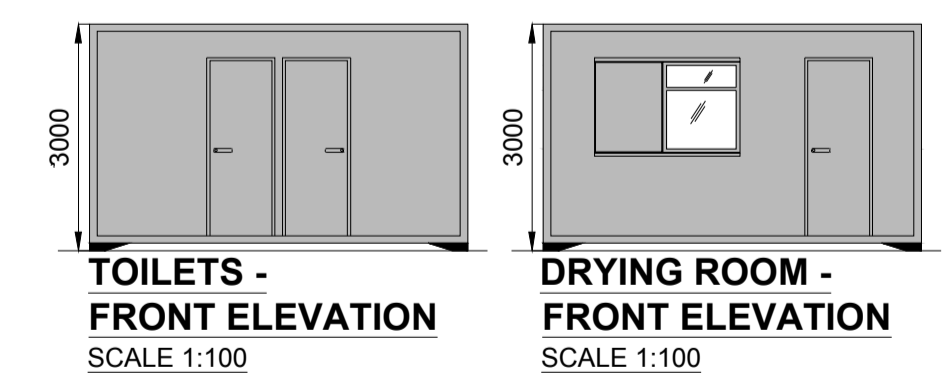
DRYING ROOM - SIDE ELEVATION
SCALE 1:100

DRYING ROOM & TOILETS - REAR ELEVATION
SCALE 1:100



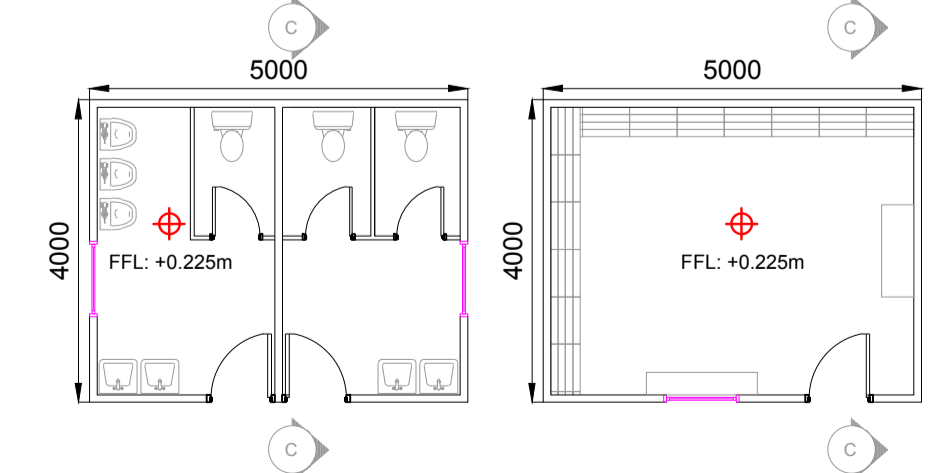
TOILETS - SIDE ELEVATION
SCALE 1:100

DRYING ROOM & TOILETS - SECTION C-C
SCALE 1:100



TOILETS - FRONT ELEVATION
SCALE 1:100

DRYING ROOM - FRONT ELEVATION
SCALE 1:100



TOILETS - FLOOR PLAN
SCALE 1:100

DRYING ROOM - FLOOR PLAN
SCALE 1:100

Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
PROPOSED TEMPORARY SITE COMPOUND & ELEVATIONS

Scale @ A1: **As Shown**

Prepared by: **Checked:**

M. Nolan J. Staunton December 2020

Project Director: **D. Grehan**

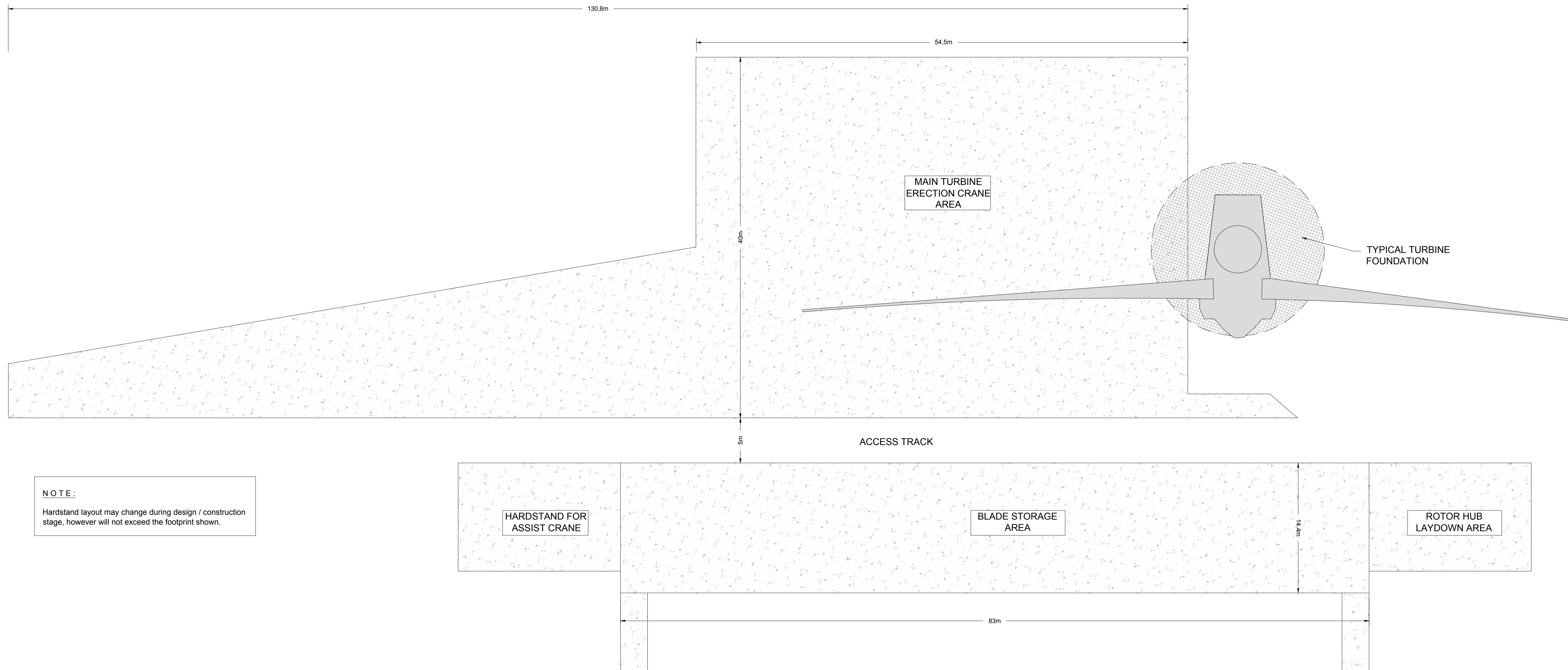
Drawing Status: **Planning**

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Drawing No.: **10730-2030** Revision: **A**



NOTE:
Hardstand layout may change during design / construction stage, however will not exceed the footprint shown.

Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
**TYPICAL TURBINE
HARDSTAND LAYOUT**

Scale @ A1:	1:250		
Prepared by:	Checked:		
M. Nolan	J. Staunton	December 2020	
Project Director:	D. Grehan		
Drawing Status:	Planning		

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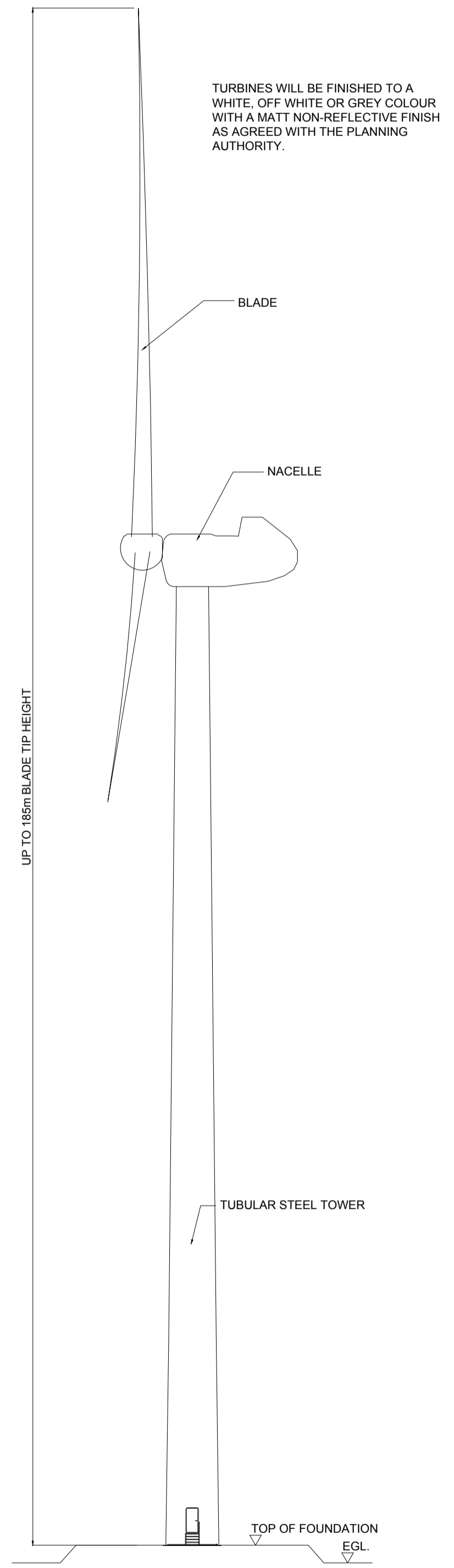
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Drawing No.: 10730-2031

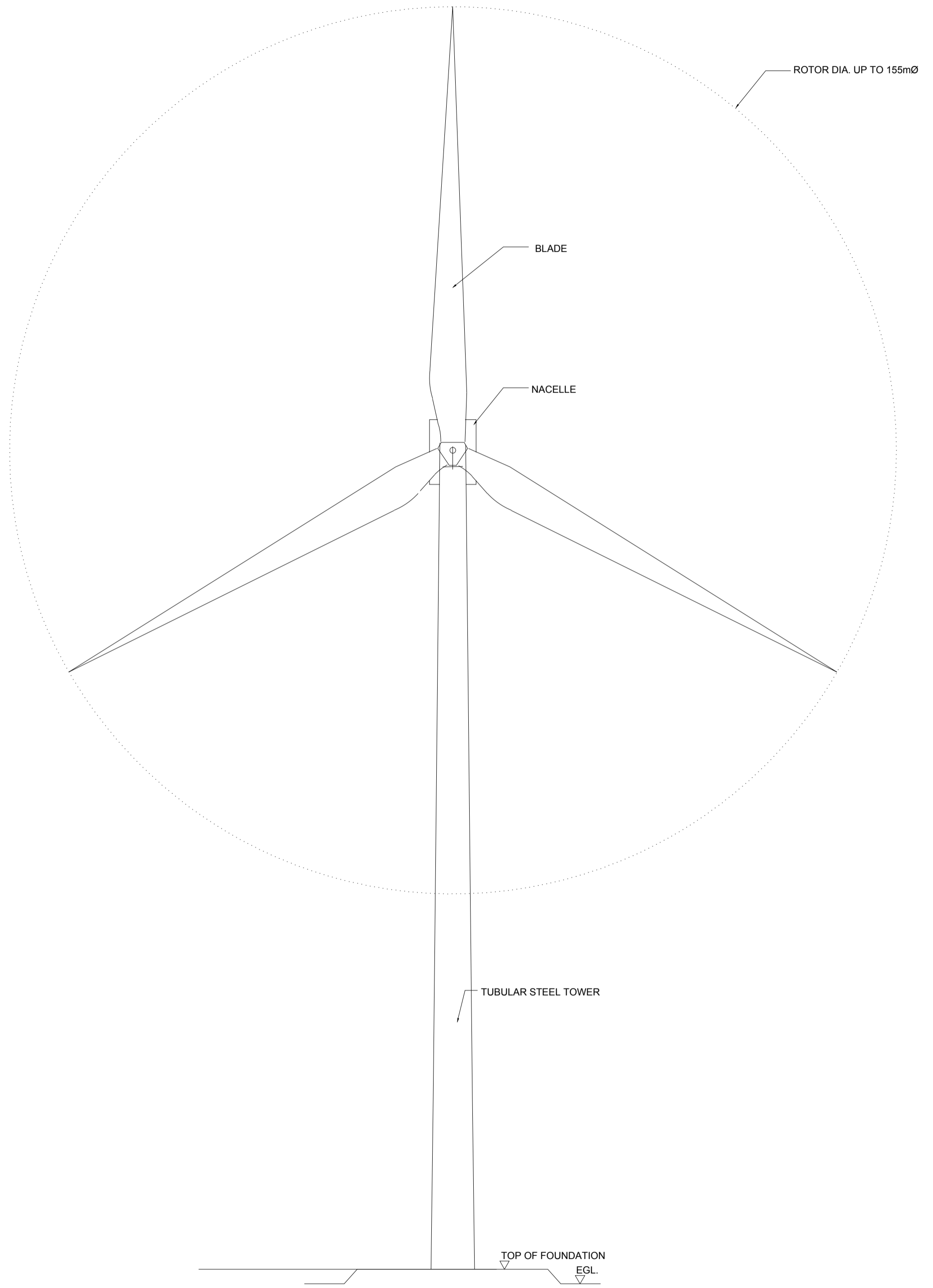
Revision:
A

TYPICAL TURBINE HARDSTAND - LAYOUT PLAN
SCALE 1:250



TYPICAL TURBINE SIDE ELEVATION

TURBINES WILL BE FINISHED TO A WHITE, OFF WHITE OR GREY COLOUR WITH A MATT NON-REFLECTIVE FINISH AS AGREED WITH THE PLANNING AUTHORITY.



TYPICAL TURBINE FRONT ELEVATION

Rev	Date	Description	By	Chkd.
B	05.01.21	REVISED PLANNING ISSUE	SB	JS
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
TYPICAL TURBINE DETAILS

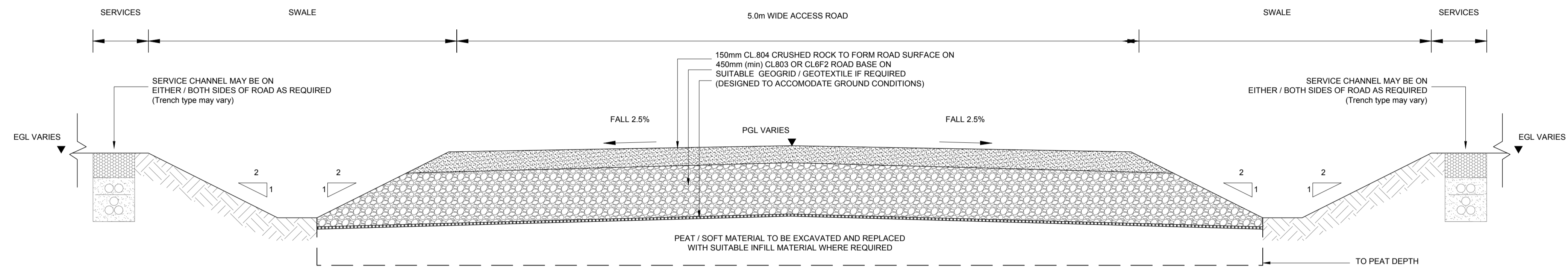
Scale @ A1:	1:500	Scale as agreed with A.B.P. 20/01/21.
Prepared by:	M. Nolan	Checked: J. Staunton December 2020
Project Director:	D. Grehan	
Drawing Status:	Planning	

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Drawing No.:	10730-2032	Revision:	B
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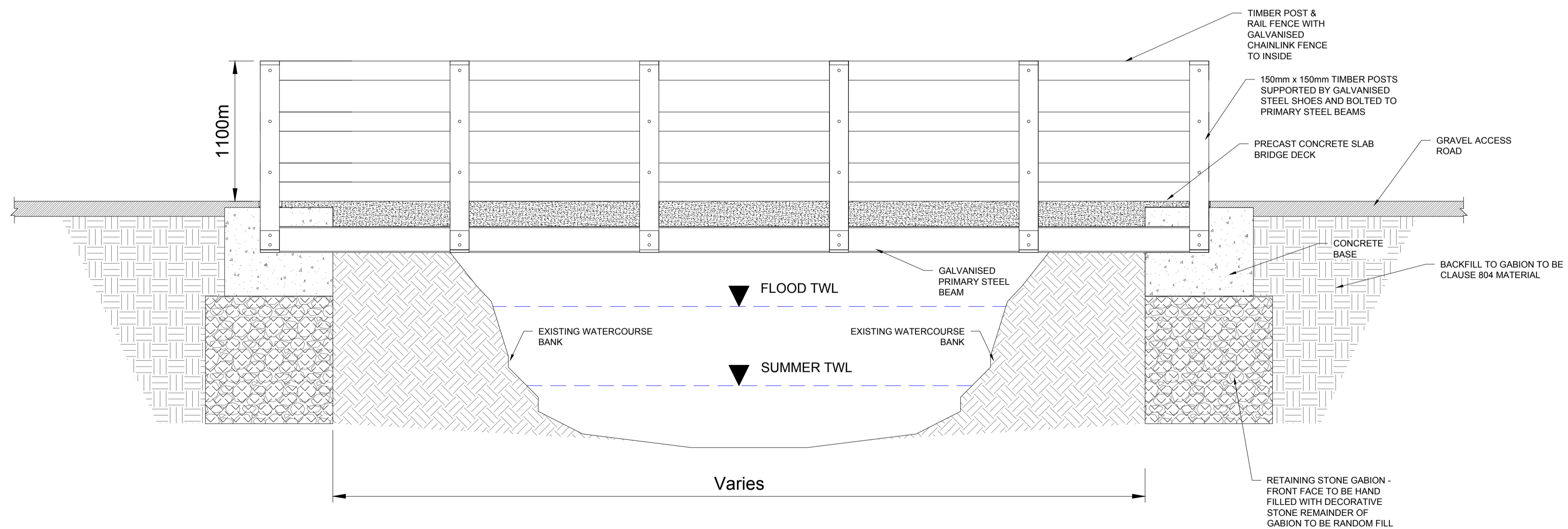
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5.0m CONSTRUCTION TRAFFIC ACCESS ROAD
CROSS SECTION EXCAVATE & REPLACE

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Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS



TYPICAL CLEAR SPAN BRIDGE DETAILS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
TYPICAL ROAD & CLEARSPAN BRIDGE CONSTRUCTION DETAILS

Scale @ A1: 1:25

Prepared by: M. Nolan
Checked: J. Staunton
December 2020

Project Director: D. Grehan

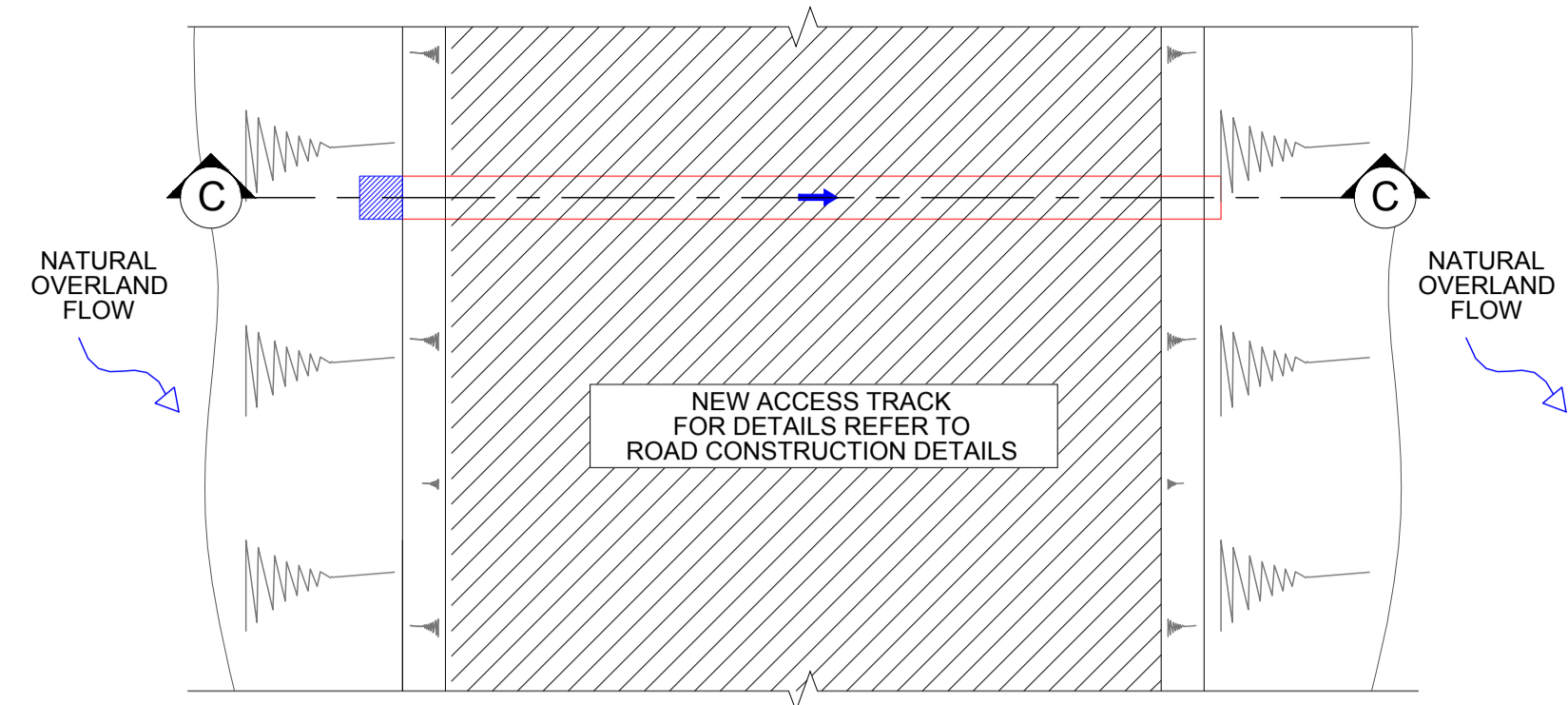
Drawing Status: Planning

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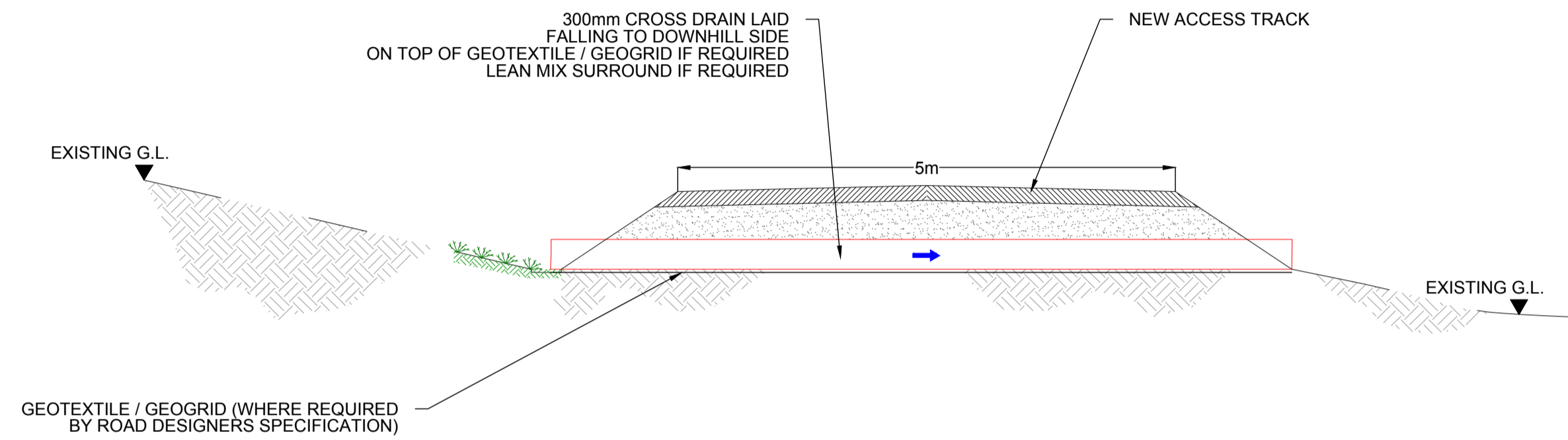
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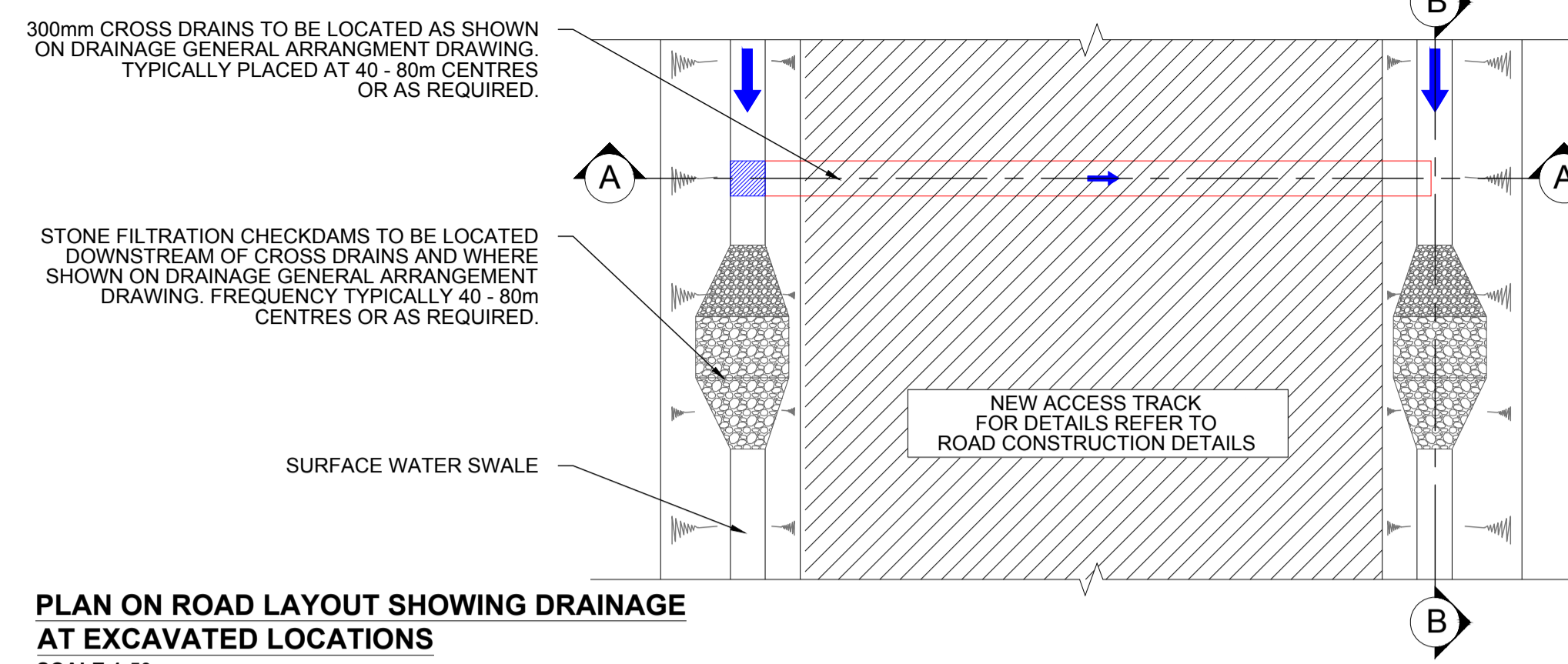
Drawing No.: 10730-2033
Revision: A



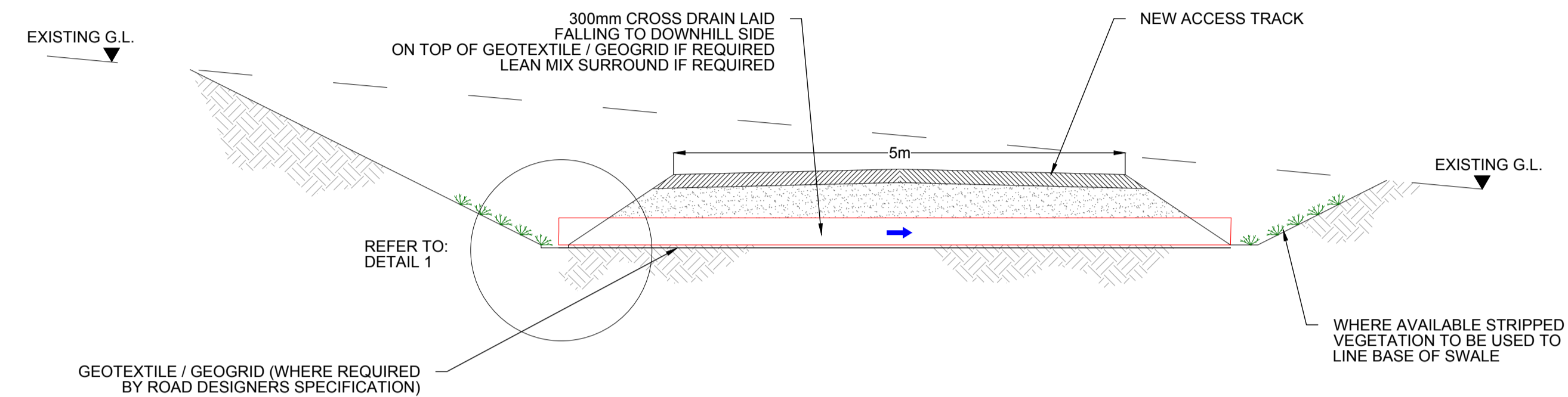
PLAN ON ROAD LAYOUT SHOWING DRAINAGE AT FLOATED LOCATIONS
SCALE 1:50



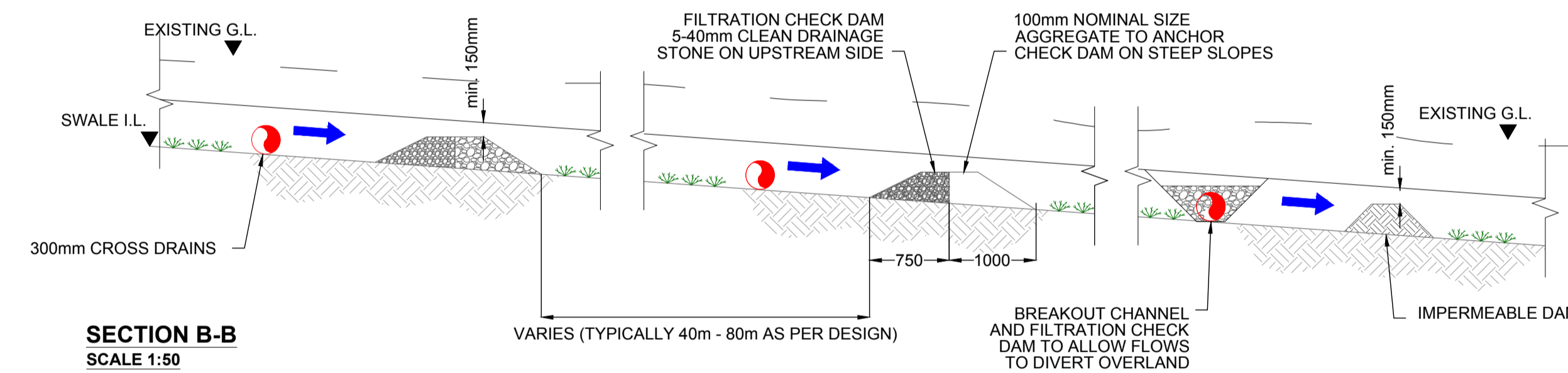
SECTION C-C
SCALE 1:50



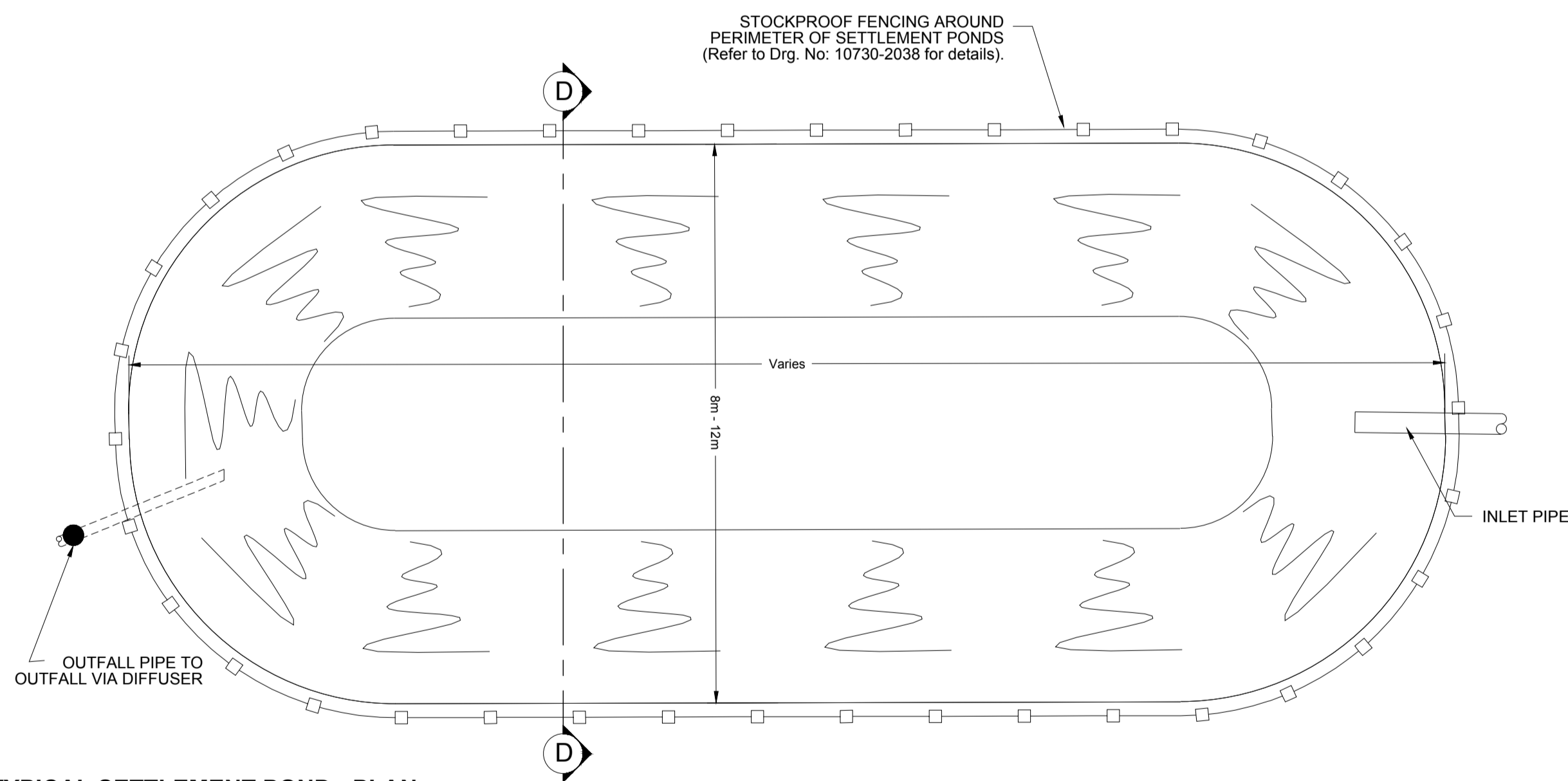
PLAN ON ROAD LAYOUT SHOWING DRAINAGE AT EXCAVATED LOCATIONS
SCALE 1:50



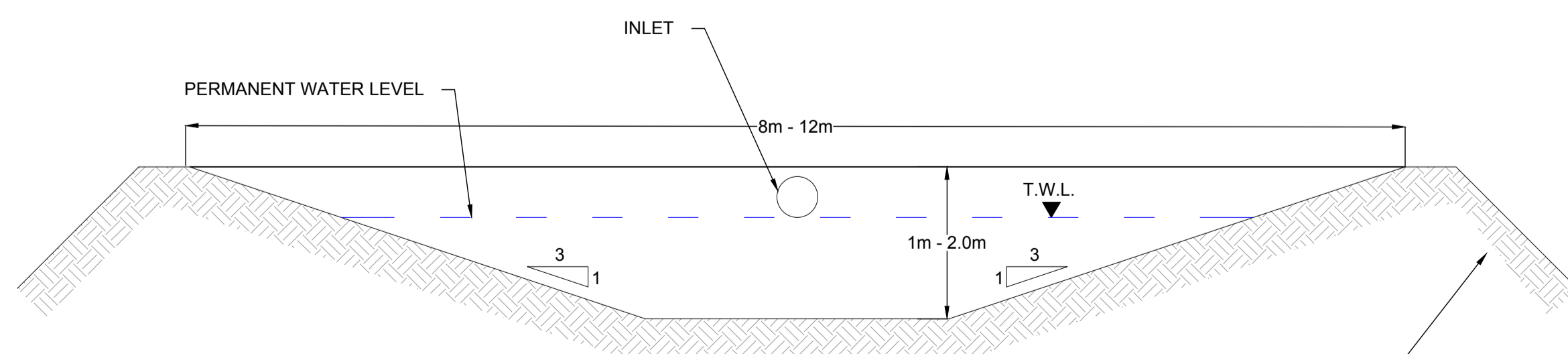
SECTION A-A
SCALE 1:50



SECTION B-B
SCALE 1:50

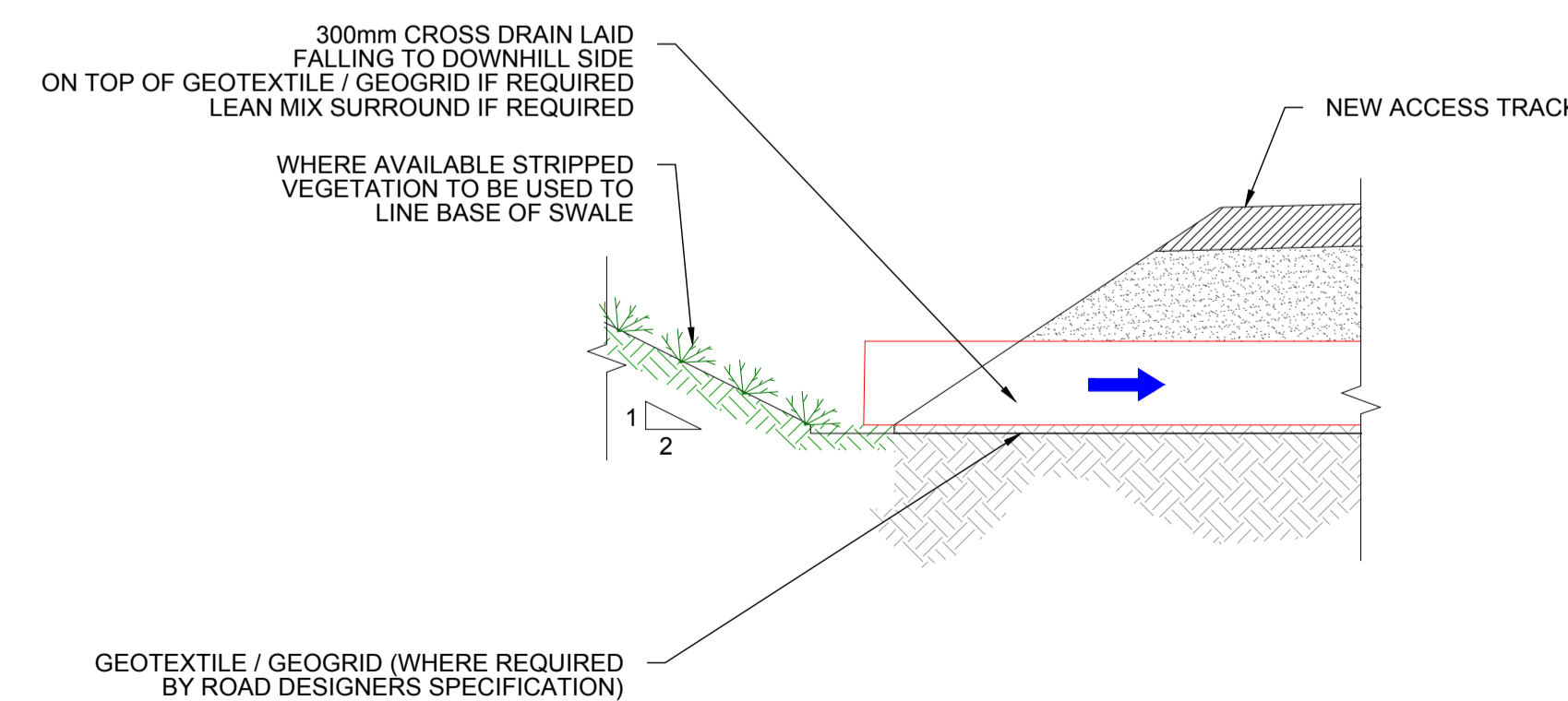


TYPICAL SETTLEMENT POND - PLAN
SCALE 1:50



SECTION D-D
SCALE 1:50

EMBANKMENTS TO BE CONSTRUCTED FROM SUITABLE EXCAVATED MATERIALS. POST CONSTRUCTION PHASE EMBANKMENT MATERIALS TO BE USED TO INFILL POND. PHASING OF INFILL TO BE AGREED WITH ENGINEER ON SITE.



DETAIL 1
SCALE 1:100

Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

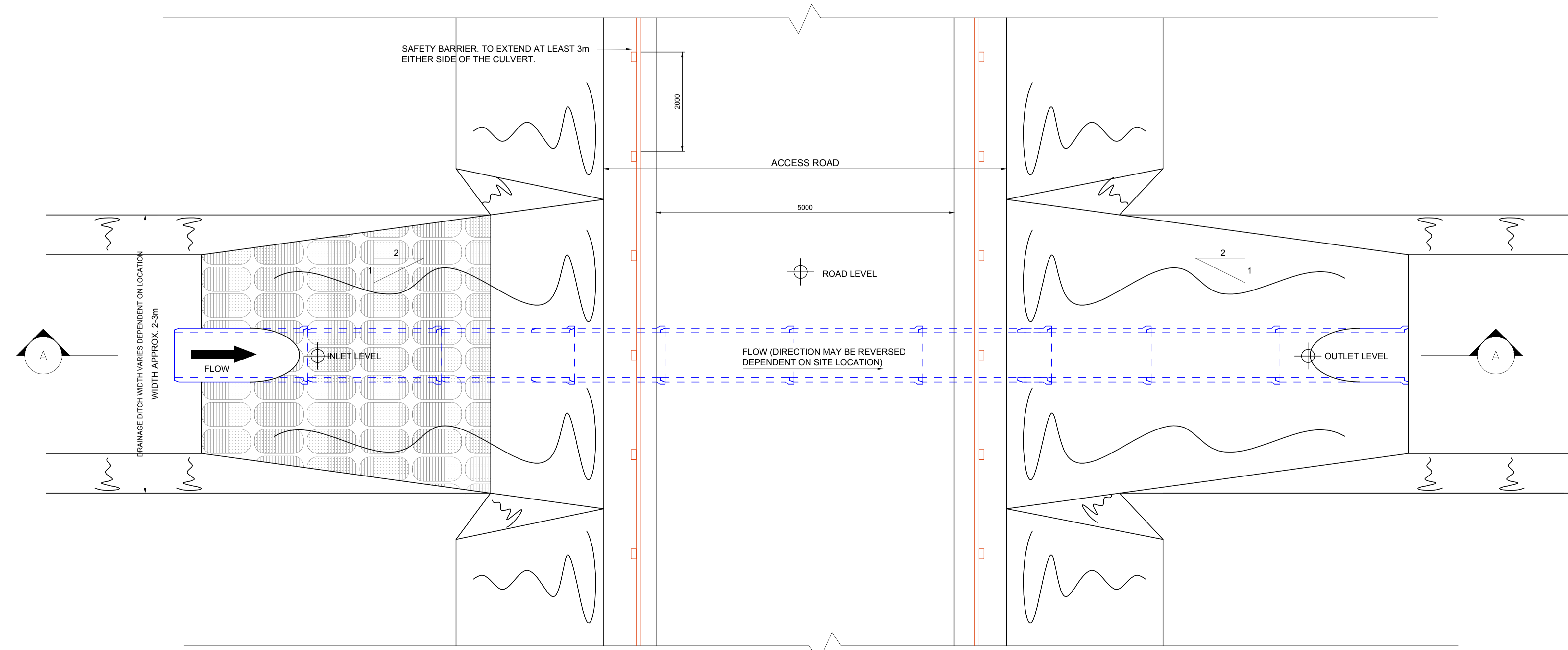
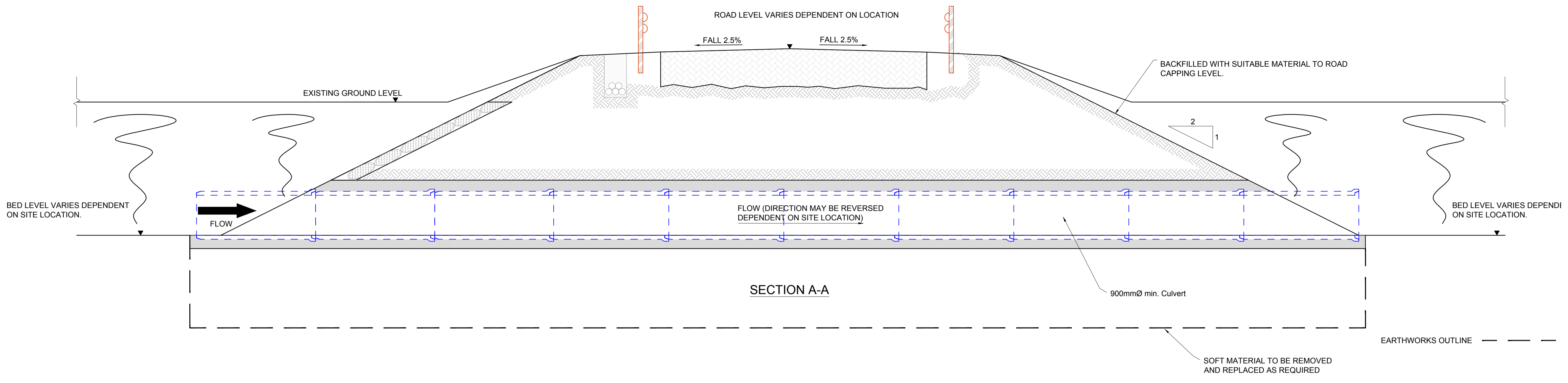
Project:
CASTLEBANNY WIND FARM

Title:
TYPICAL SURFACE WATER SETTLEMENT POND PLAN & SECTIONS

Scale @ A1: **As Shown**
Prepared by: **M. Nolan** Checked: **J. Staunton** December 2020
Project Director: **D. Grehan**
Drawing Status: **Planning**

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www.tobin.ie

Drawing No.: **10730-2034** Revision: **A**



PLAN OF TYPICAL MAIN DRAINAGE CULVERT CROSSING ON SITE ACCESS ROAD

Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
TYPICAL CULVERT AND BRIDGE DETAILS

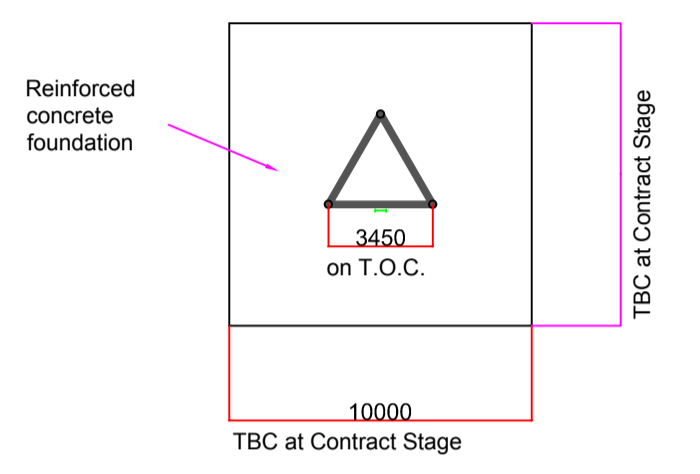
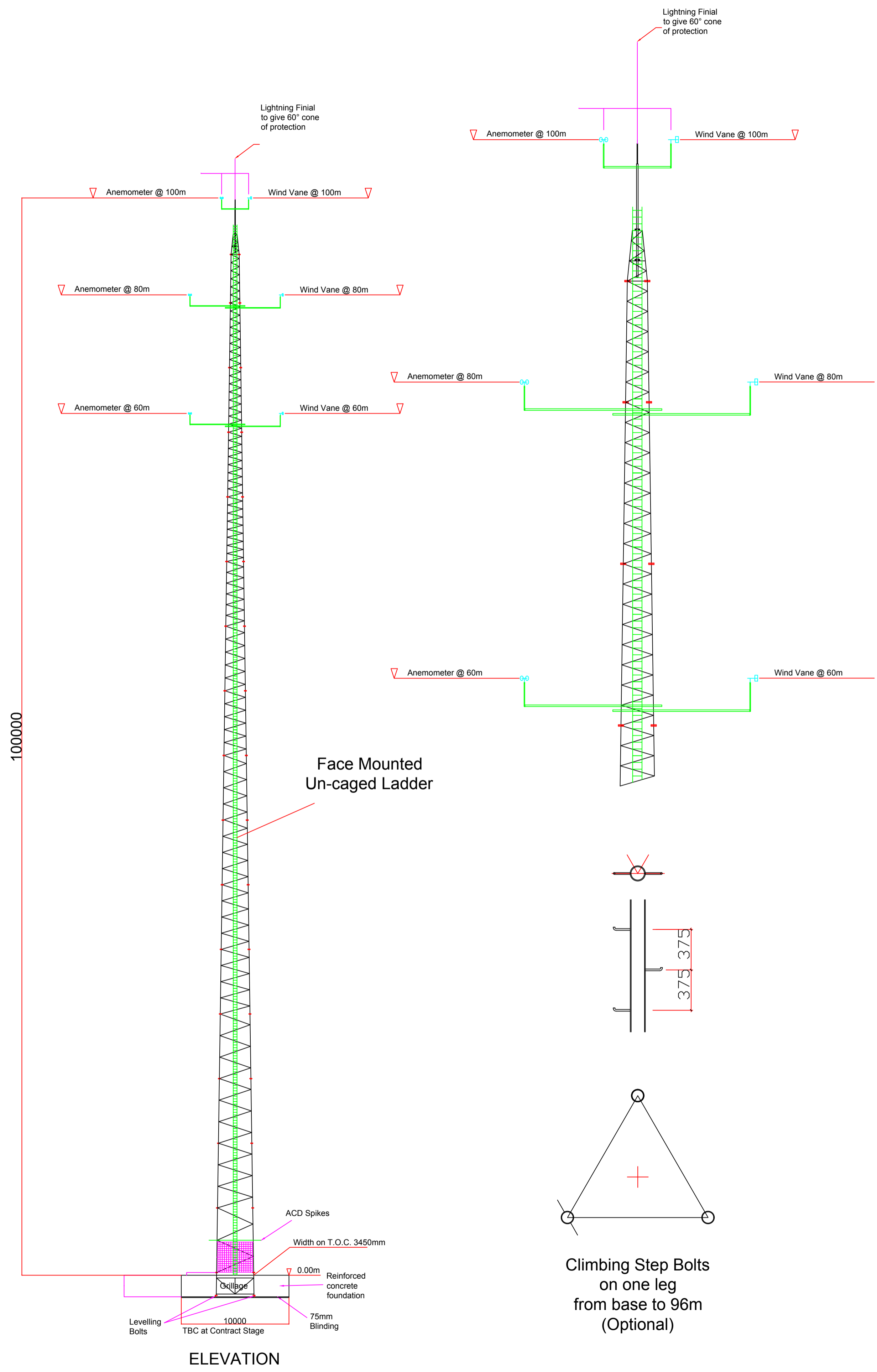
Scale @ A1: 1:50

Prepared by:	Checked:	
M. Nolan	J. Staunton	December 2020
Project Director:	D. Grehan	
Drawing Status:	Planning	

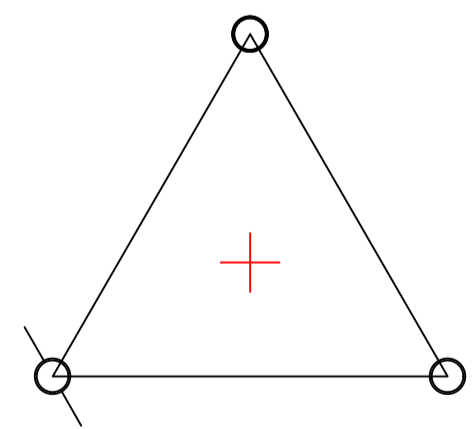
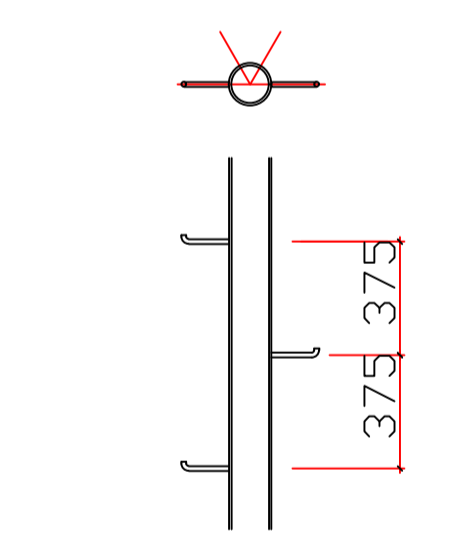
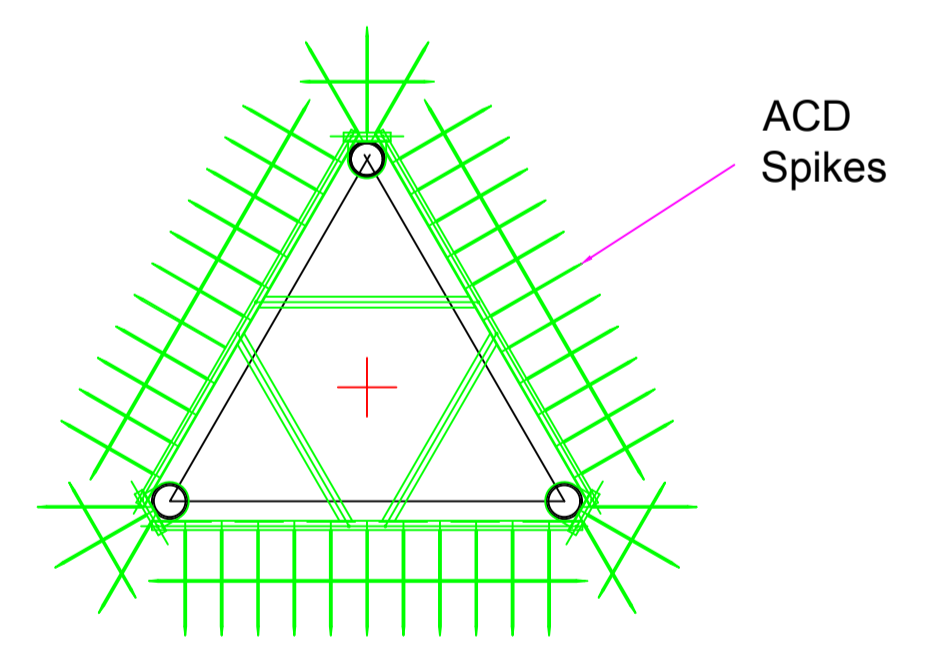
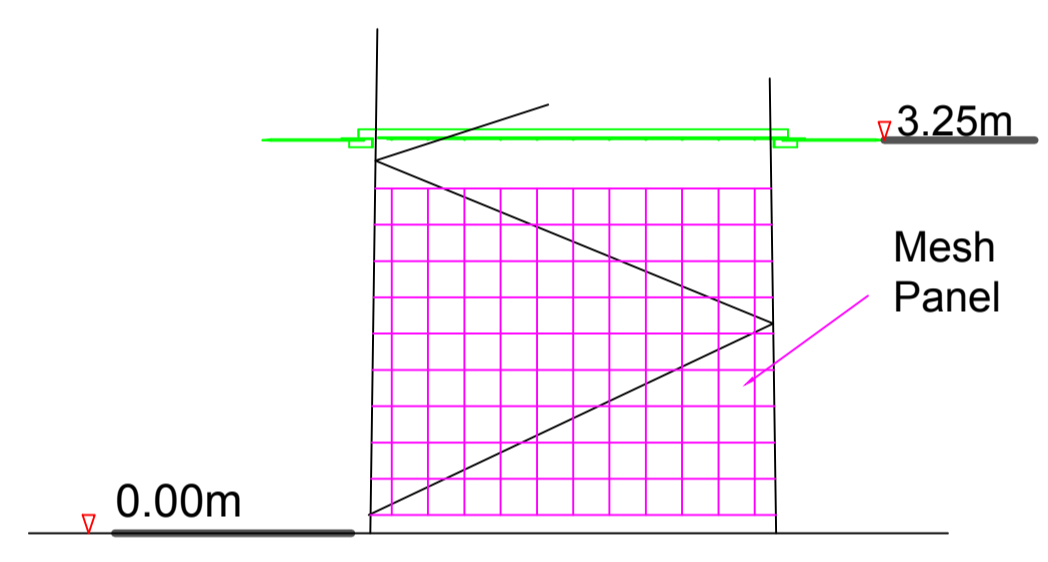
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PLAN



Climbing Step Bolts on one leg from base to 96m (Optional)

ELEVATION

NOTES:

- The tower is triangular lattice construction with circular hollow sections throughout.
- Wind loading and design in accordance with Eurocode Standards (NA ROI).
- Booms will be in compliance with IEC 61400-12-1 (2017) for wind deficit of 99.0% for Primary Booms.
- Fundamental Basic Wind Velocity; V_b , map of 25m/sec and design life of 25 years.
- Site altitude: 200m above sea level.
- Tower usage; Onshore Meteorological
- Reliability Class 1
- Terrain characteristics; Country
- The Tower is designed for Radial Ice Thickness of 55mm in still air condition and 5mm in conjunction with wind.
- The tower can be equipped with external face mounted un-caged ladder or climbing step bolts mounted on one of the legs.
- If climbing step bolts are required from above the anti climbing device, then a short external leg mounted access base ladder can be supplied with lockable cover plate.
- Tower could be fitted with adequate Anti Climbing Device (ACD) at 3.25m level.
- Mesh panels can be fitted on 3 faces on bottom module of the tower.
- All steelworks shall be supplied in accordance with the current European Standards EN 10025-2:2004 and EN 10210-1:2006 of grades S275 and S355.
- Fabrication complies with the CE requirements to EXC2 level and all certificates with CE marking will be provided.
- All connections for bracing members shall be of bolted type of grade 8.8 or 10.9 complete with nuts and spring washers.
- All steelworks shall be hot dip galvanised to European Standard EN ISO 1461 with minimum average coating of 85 microns.
- Lightning Finial would be fitted to tower top and each leg of the tower should be connected to adequate earth system with copper tapes.
- The tower can be fitted with adequate Latchways fall arrest system on the ladder or on the climbing leg if step bolts are requested.
- The proposed foundation for this tower could be monolithic raft foundation and the design will be carried out at contract stage once the soil report is available. The foundation size shown on this drawing is based on allowable soil bearing pressure of 150kN/m², non-buoyant condition and factor of safety of 2 against overturning moment.

Rev	Date	Description	By	Chkd.
B	05.01.21	REVISED PLANNING ISSUE	SB	JS
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
TYPICAL MET MAST DETAILS

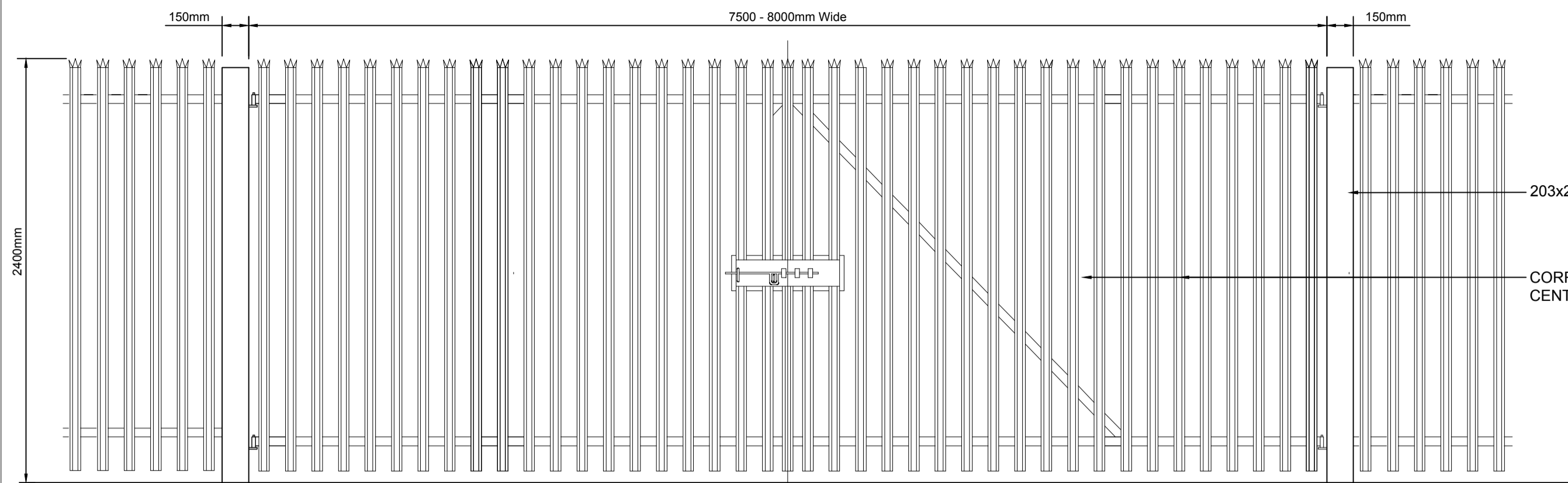
Scale @ A1:	1:250
Prepared by:	M. Nolan
Checked:	J. Staunton
Project Director:	D. Grehan
Drawing Status:	Planning

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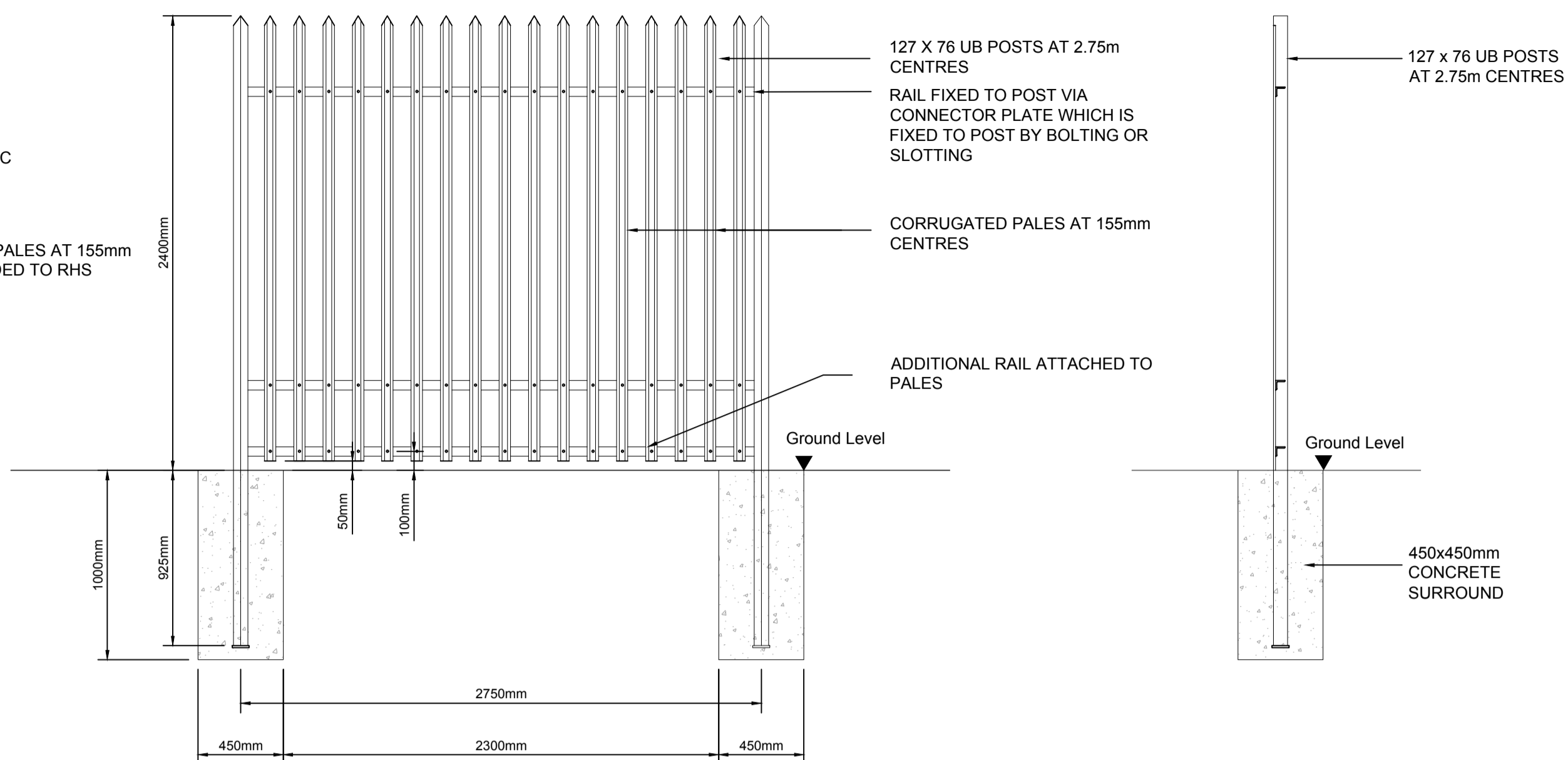
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Drawing No.:	10730-2037	Revision:	B
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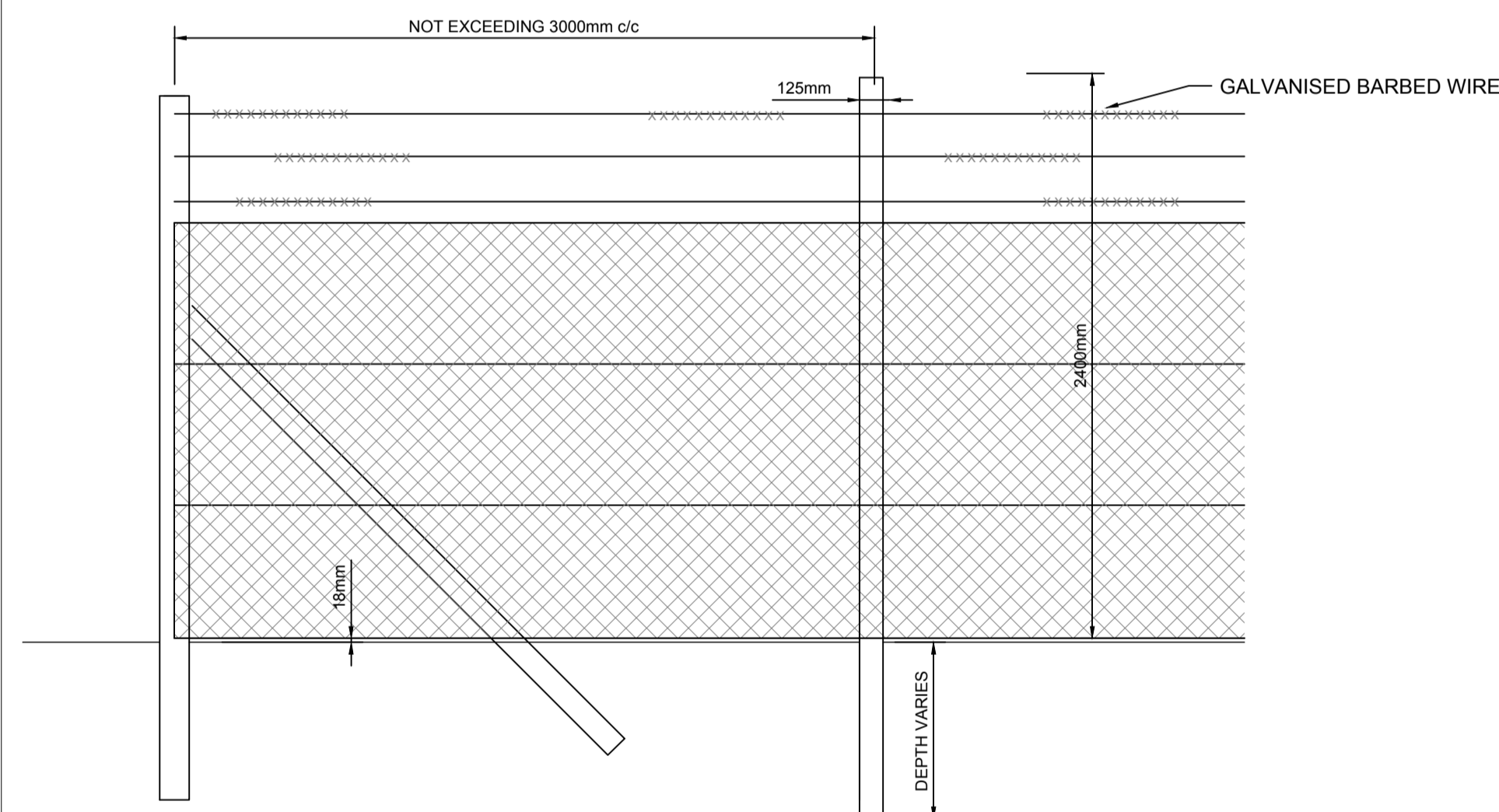


TYPICAL FACILITY ENTRANCE - GATE AND FENCE

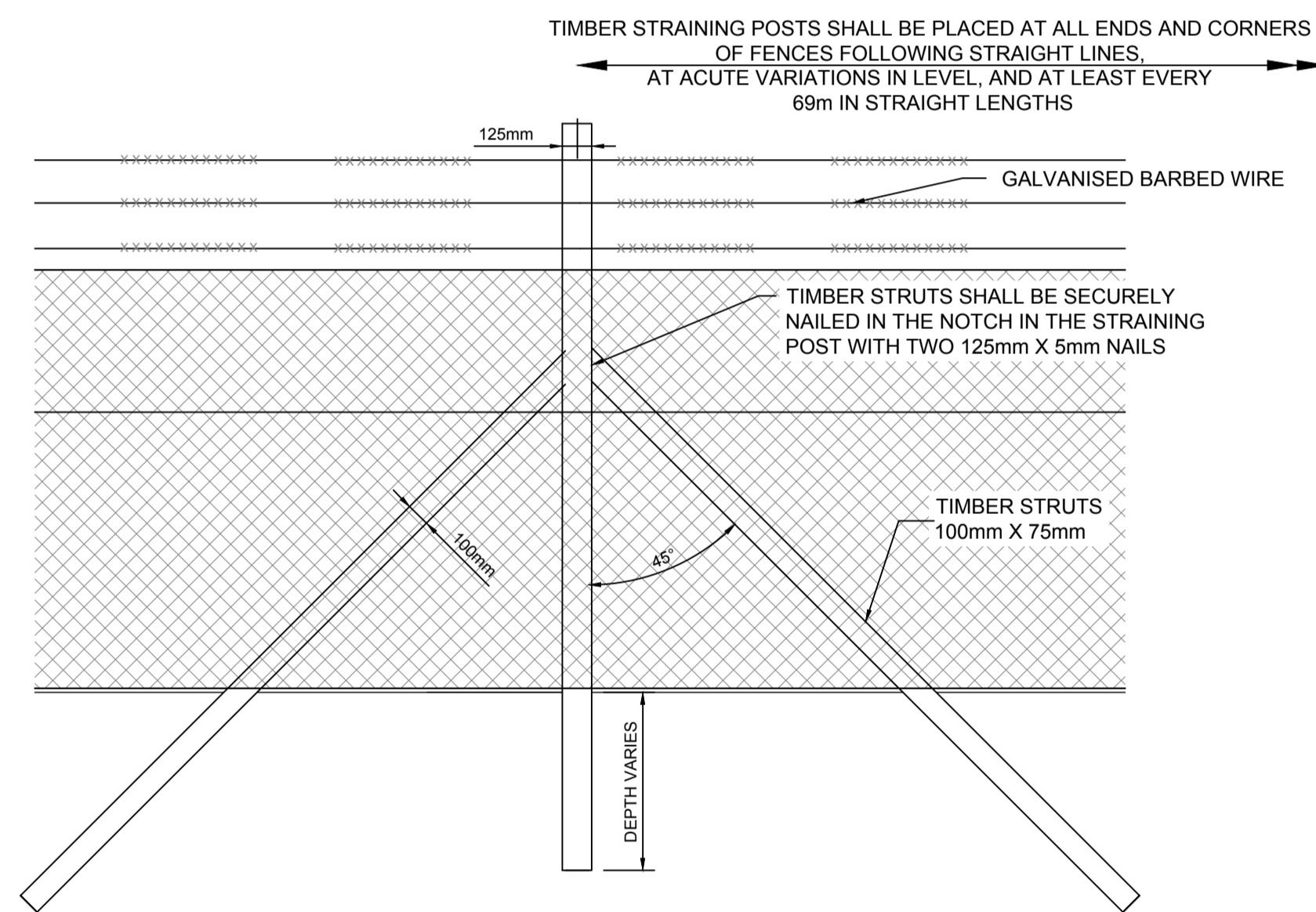


TYPICAL PALLISADE FENCE

TYPICAL PALLISADE POST

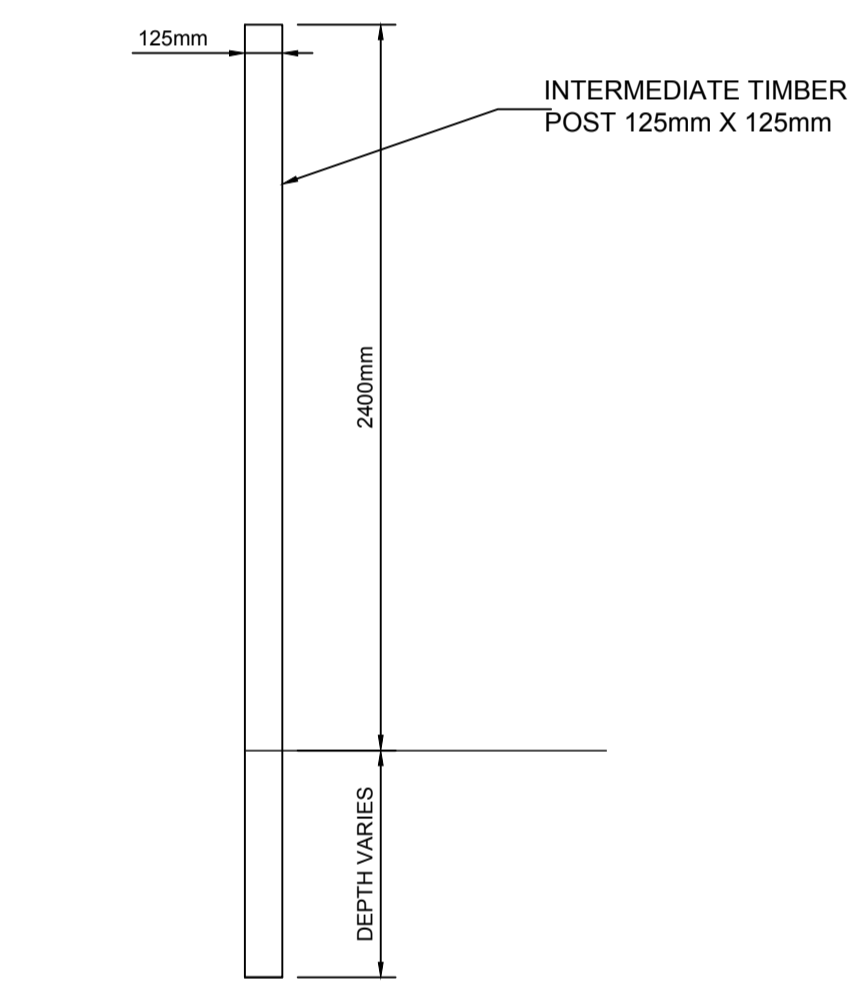


CORNER DETAIL

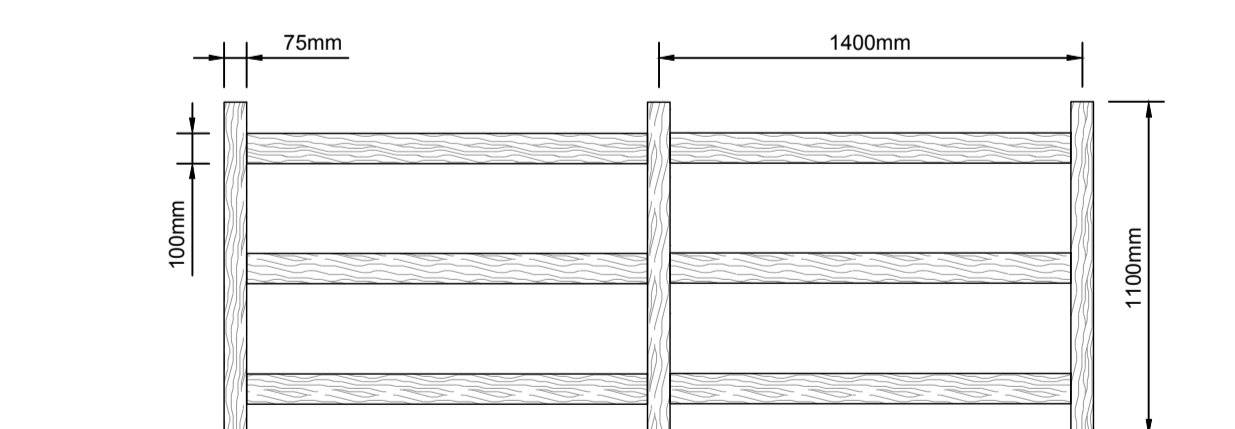


ELEVATION OF TIMBER STRAINING POST

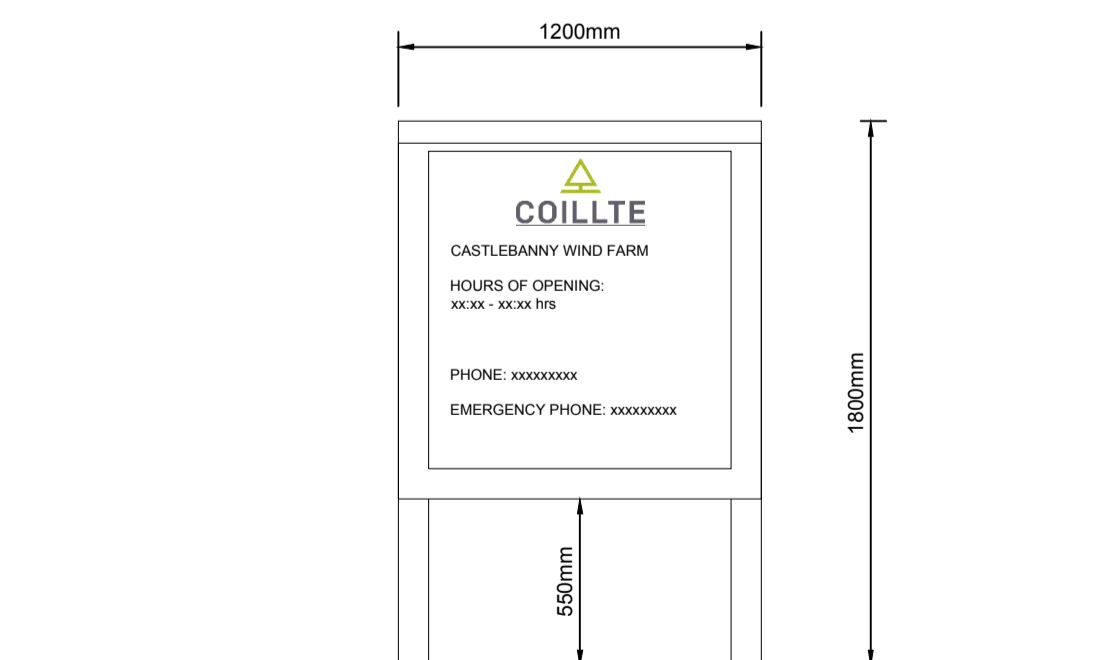
CHAINLINK PERIMETER SECURITY FENCE DETAILS



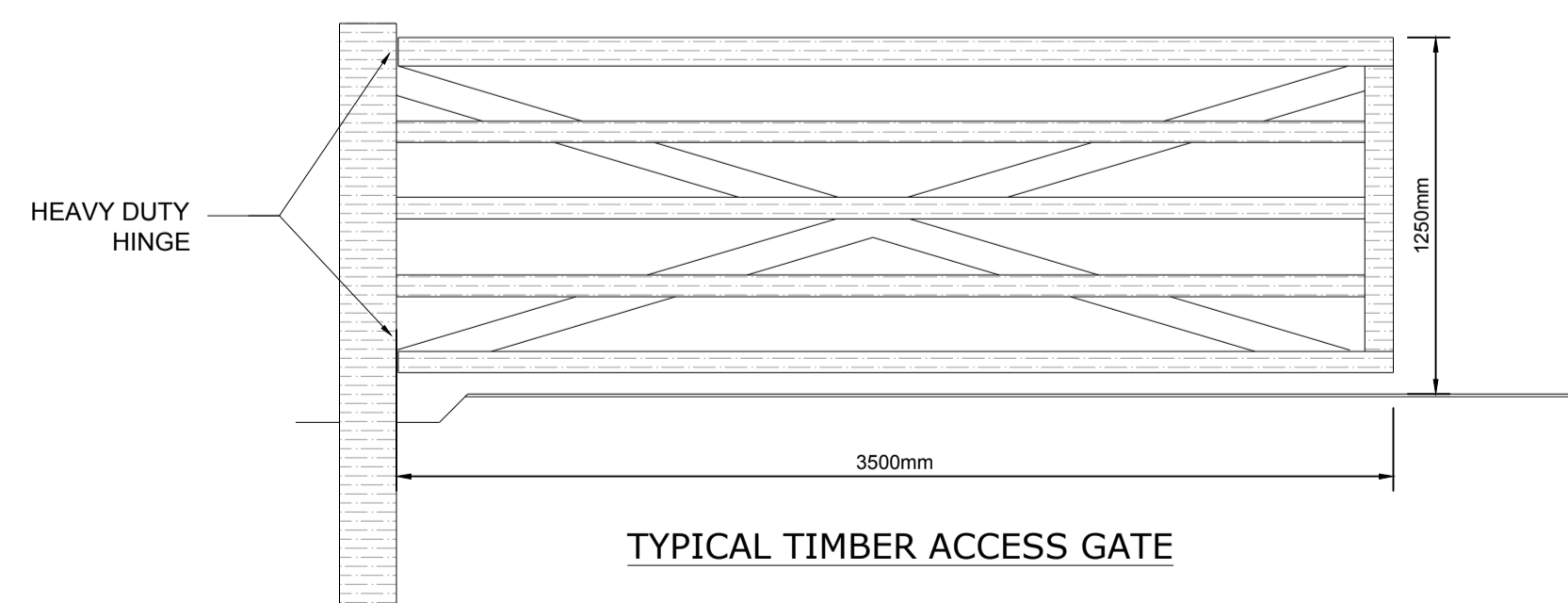
TYPICAL TIMBER POST DETAIL



TYPICAL TIMBER POST & RAIL FENCE DETAIL



TYPICAL ENTRANCE SIGNAGE DETAIL



TYPICAL TIMBER ACCESS GATE

Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
TYPICAL FENCING DETAILS

Scale @ A1: 1:25
Prepared by: M. Nolan
Checked: J. Staunton
Project Director: D. Grehan
Drawing Status: Planning
December 2020

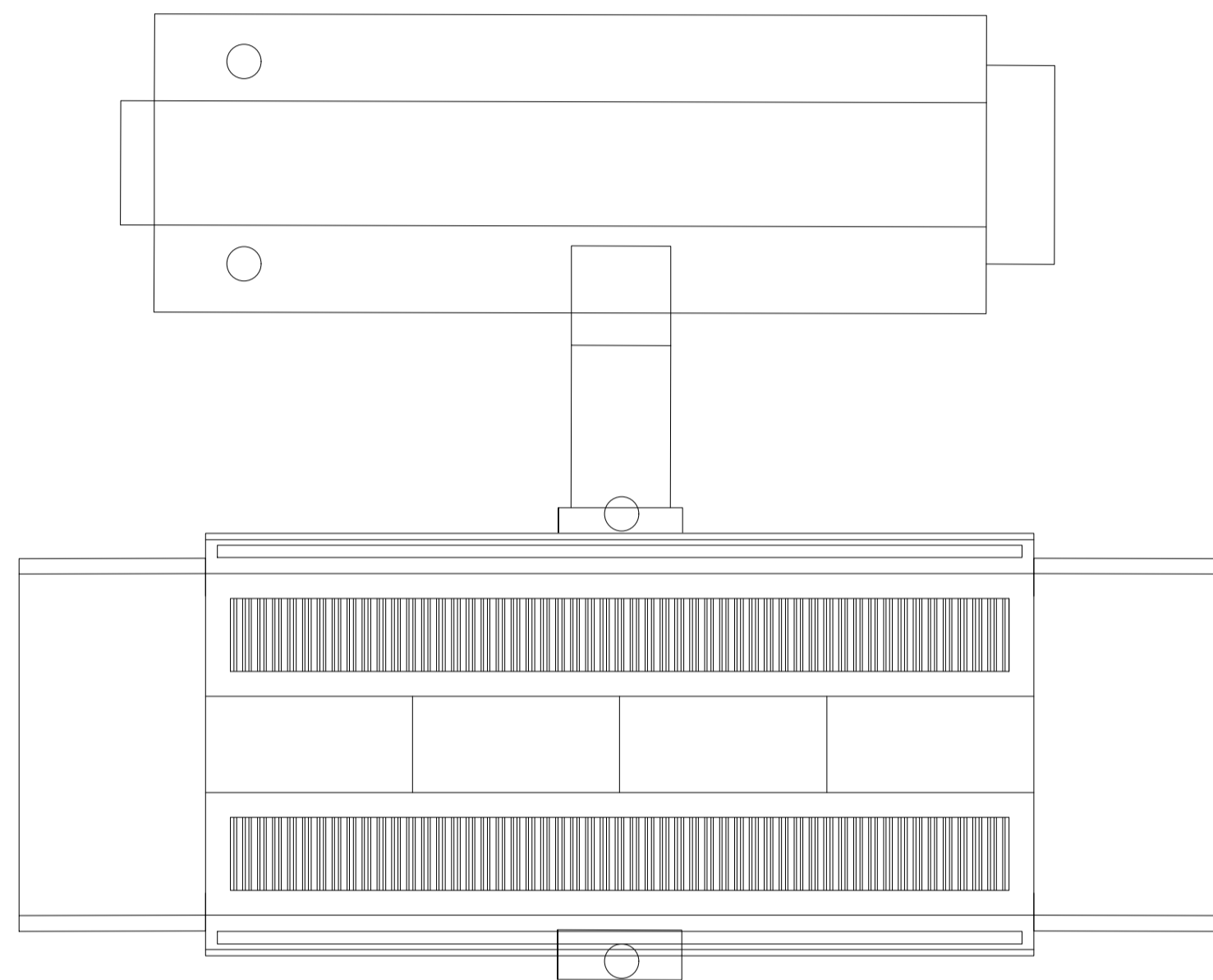
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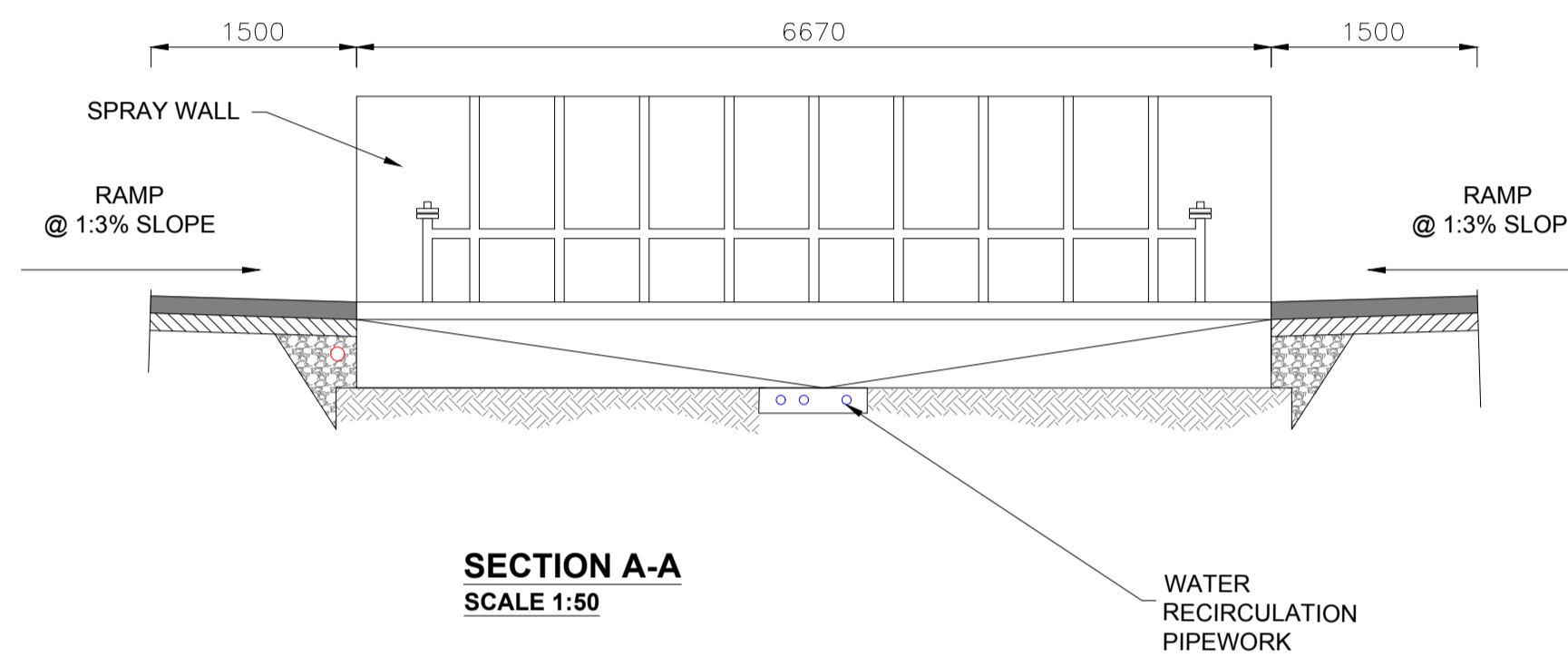
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Drawing No.: 10730-2038

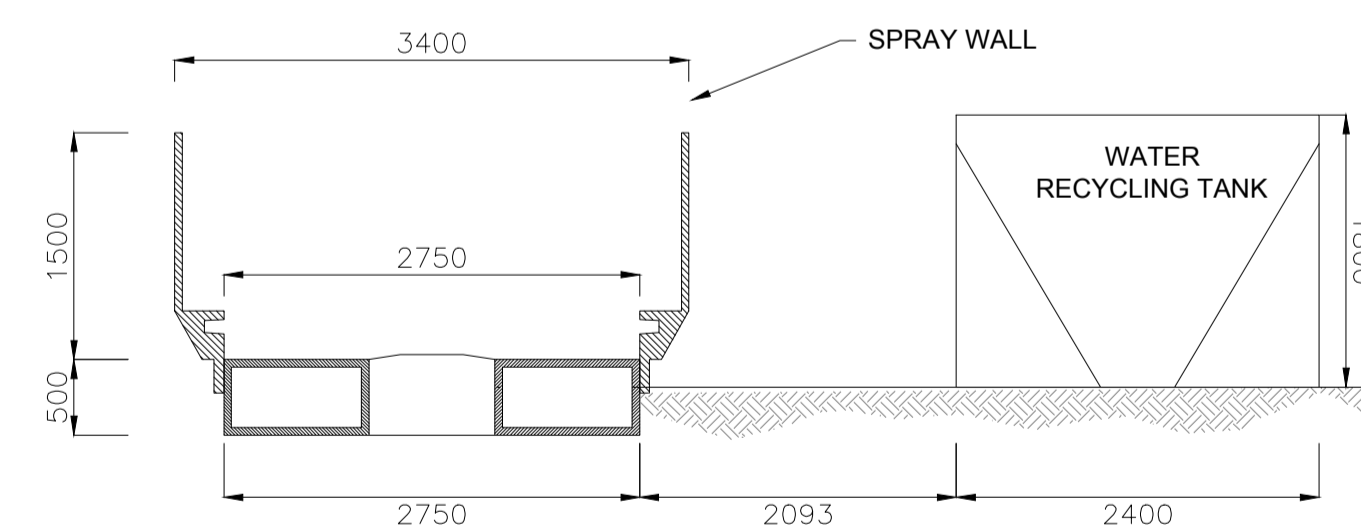
Revision:
A



TYPICAL WHEELWASH - PLAN
SCALE 1:50



SECTION A-A
SCALE 1:50



SECTION B-B
SCALE 1:50

NOTES:

1. DRAWINGS FOR PLANNING PURPOSES ONLY.
2. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
3. GRID REFERENCES TO IRISH NATIONAL GRID.
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
PROPOSED SELF CONTAINED TEMPORARY WHEELWASH SYSTEM DETAILS

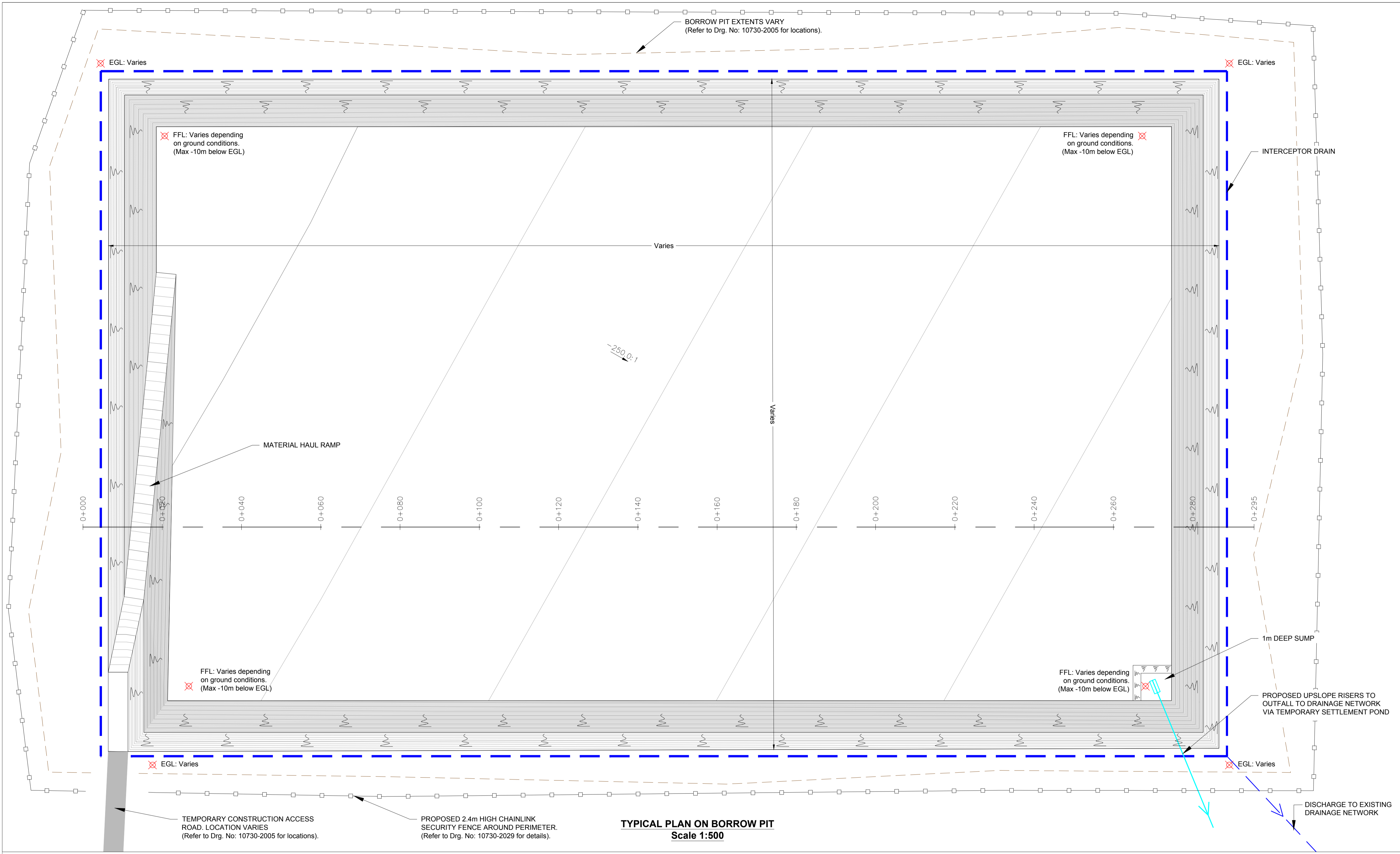
Scale @ A1: **1:50**
 Prepared by: **M. Nolan** Checked: **J. Staunton** December 2020
 Project Director: **D. Grehan**
 Drawing Status: **Planning**

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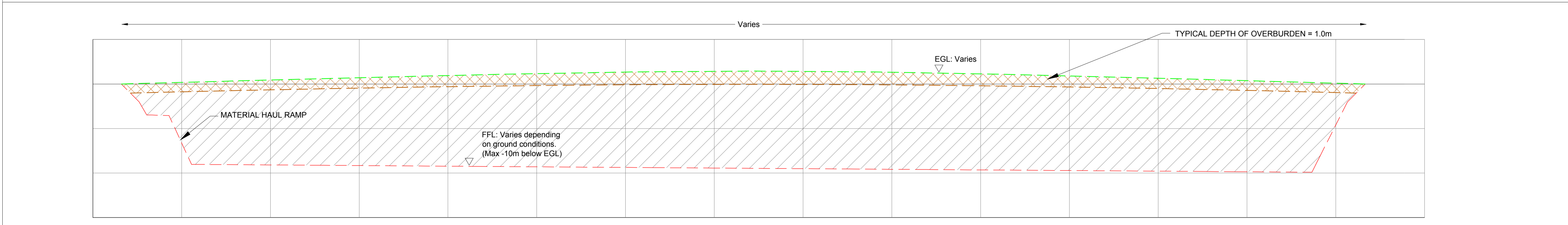
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Drawing No.: **10730-2040** Revision: **A**



TYPICAL PLAN ON BORROW PIT
Scale 1:500



TYPICAL SECTION THROUGH BORROW PIT
Scale 1:500 / 1:250

GENERAL LEGEND

PROPOSED BORROW PIT EXTENTS	PROPOSED CHAINLINK SECURITY FENCE
PROPOSED INTERCEPTOR DRAIN	GROUND LEVEL SPOT HEIGHTS

Rev	Date	Description	By	Chkd.
A1	18.12.20	PLANNING ISSUE	MN	JS

Client: **SPRINGFIELD RENEWABLES LTD.**

Project: **CASTLEBANNY WIND FARM**

Title: **PROPOSED ON SITE BORROW PIT TYPICAL DETAILS**

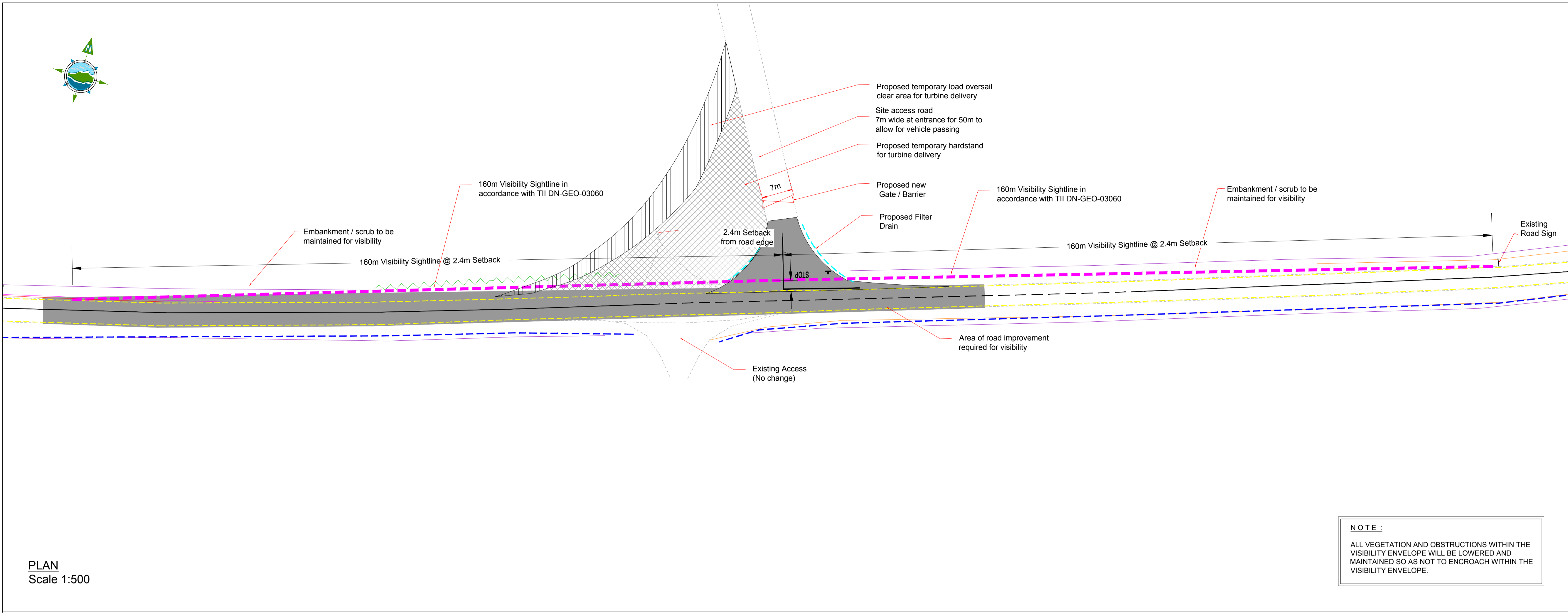
Scale @ A1:	As Shown
Prepared by:	M. Nolan
Checked:	J. Staunton
Project Director:	D. Grehan
Drawing Status:	Planning

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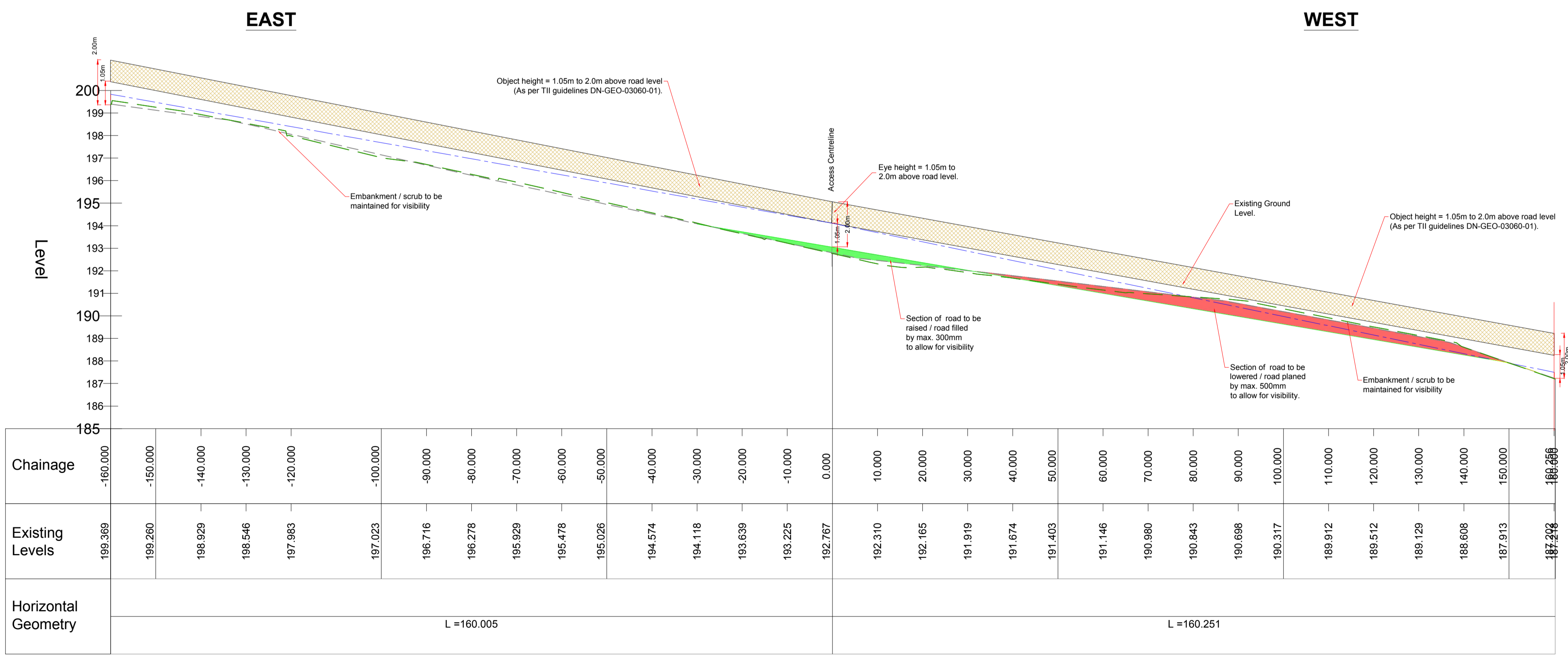
Drawing No.:	10730-2041	Revision:	A
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PLAN
Scale 1:500

- Plan Legend:**
- Visibility Sightline ---
 - Existing Road Edge ---
 - Existing Drain ---
 - Road Centerline ---
 - Road Edge Line ---
 - Road Verge ---
 - Top of Embankment ---
 - Existing Hedgerow ~
 - Existing Tree / Bush
 - Existing Road Sign
- Section Legend:**
- Visibility Envelope
 - Existing Ground Level ---
 - 0.26m Sightline ---
 - Existing Road Edge ---
 - Area of Cut
 - Area of Fill



CB_1-1 - LONGSECTION (1)
SCALE: H 1:500, V 1:100. DATUM: 185.000

Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
**SITE ENTRANCE
VISIBILITY SIGHTLINES
R704**

Scale @ A1: **As Shown**

Prepared by: **M. Nolan** Checked: **J. Staunton** December 2020

Project Director:

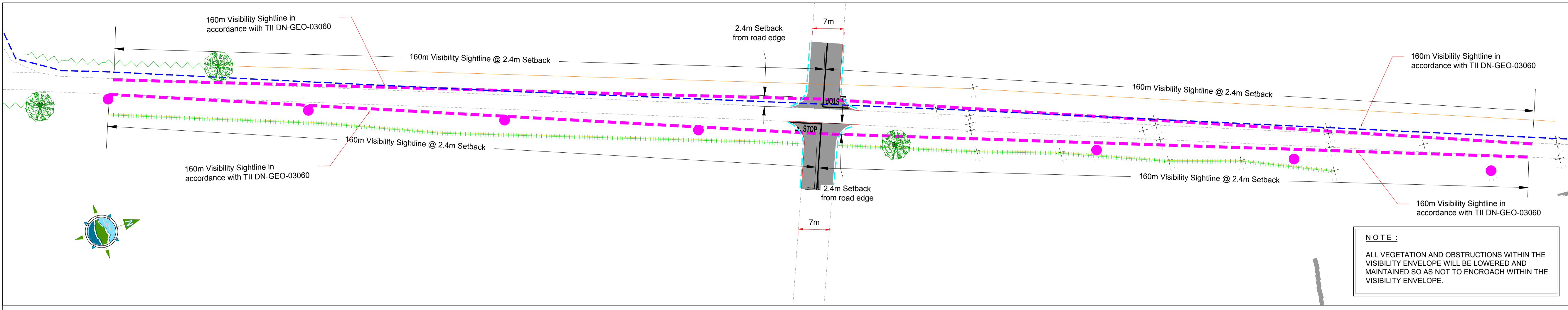
Drawing Status: **Planning**

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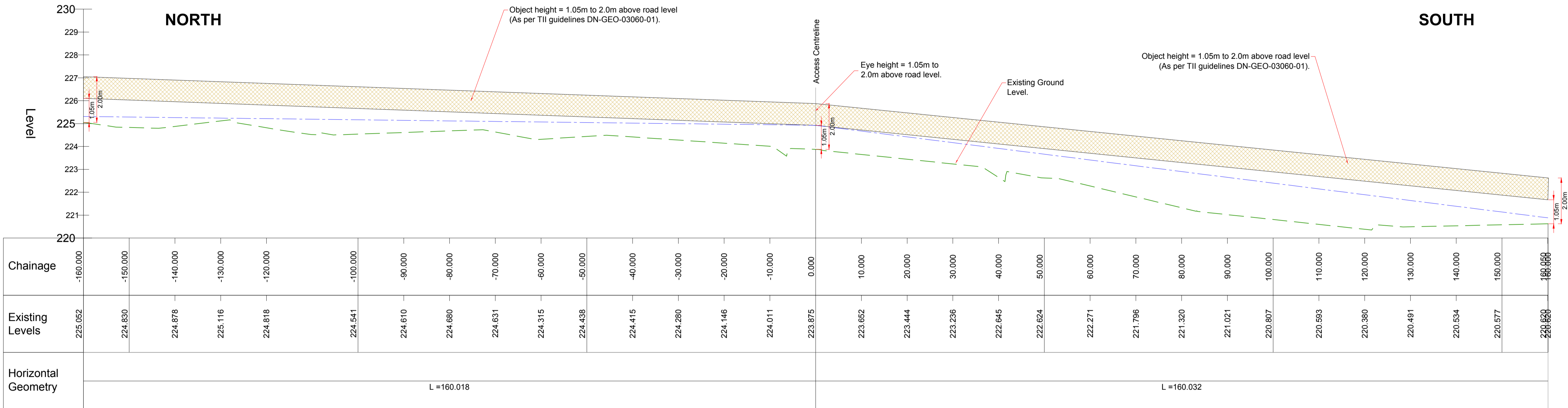
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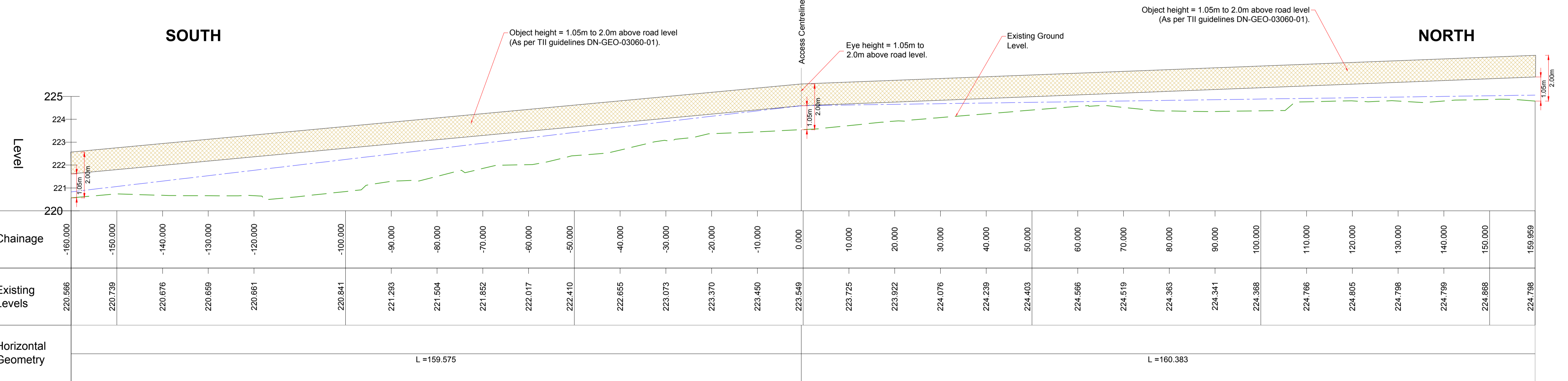
Drawing No.: **10730-2050** Revision: **A**



- Plan Legend:**
- Visibility Sightline ---
 - Existing Road Edge ---
 - Existing Drain ---
 - Road Centerline ---
 - Grass Edge Verge ---
 - Treeline ---
 - Existing Hedgerow ---
 - Existing Tree / Bush
 - Existing ESB Pole
- Section Legend:**
- Visibility Envelope
 - Existing Ground Level ---
 - 0.26m Sightline ---



EGRESS (FROM WEST) - LONGSECTION
SCALE: H 1:500, V 1:100. DATUM: 220.000



ACCESS (FROM EAST) - LONGSECTION
SCALE: H 1:500, V 1:100. DATUM: 220.000

NOTE:
DESIGNED IN ACCORDANCE WITH TII GUIDANCE
DN-GEO-03060 (June 2017).

Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
**SITE ENTRANCE
VISIBILITY SIGHTLINES
L7451 CROSSING POINT**

Scale @ A1: **As Shown**

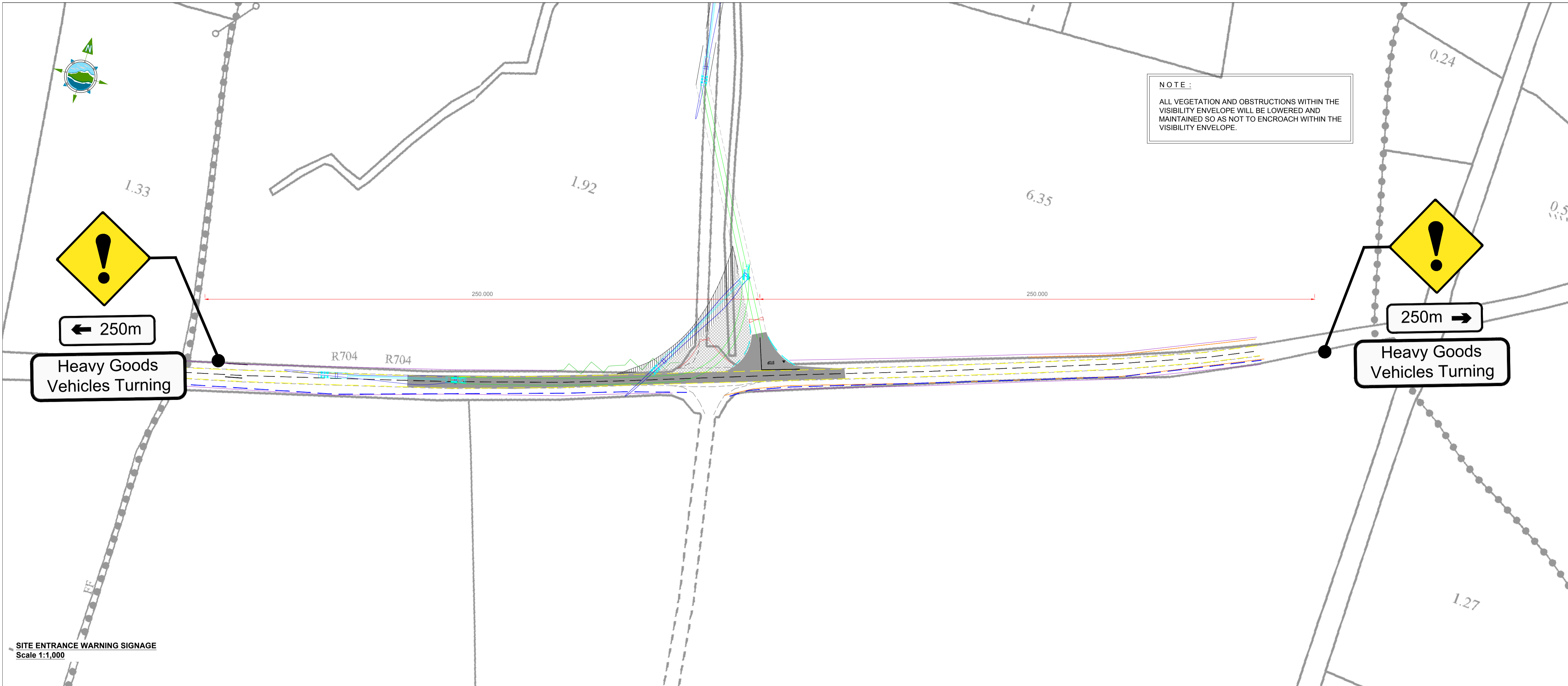
Prepared by:	Checked:	
M. Nolan	J. Staunton	December 2020
Project Director:		
Drawing Status: Planning		

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Drawing No.: **10730-2051** **A**

Revision:



Note:
Entrance designed for rigid vehicle and will also accommodate typical standard articulated vehicle (16.5m).

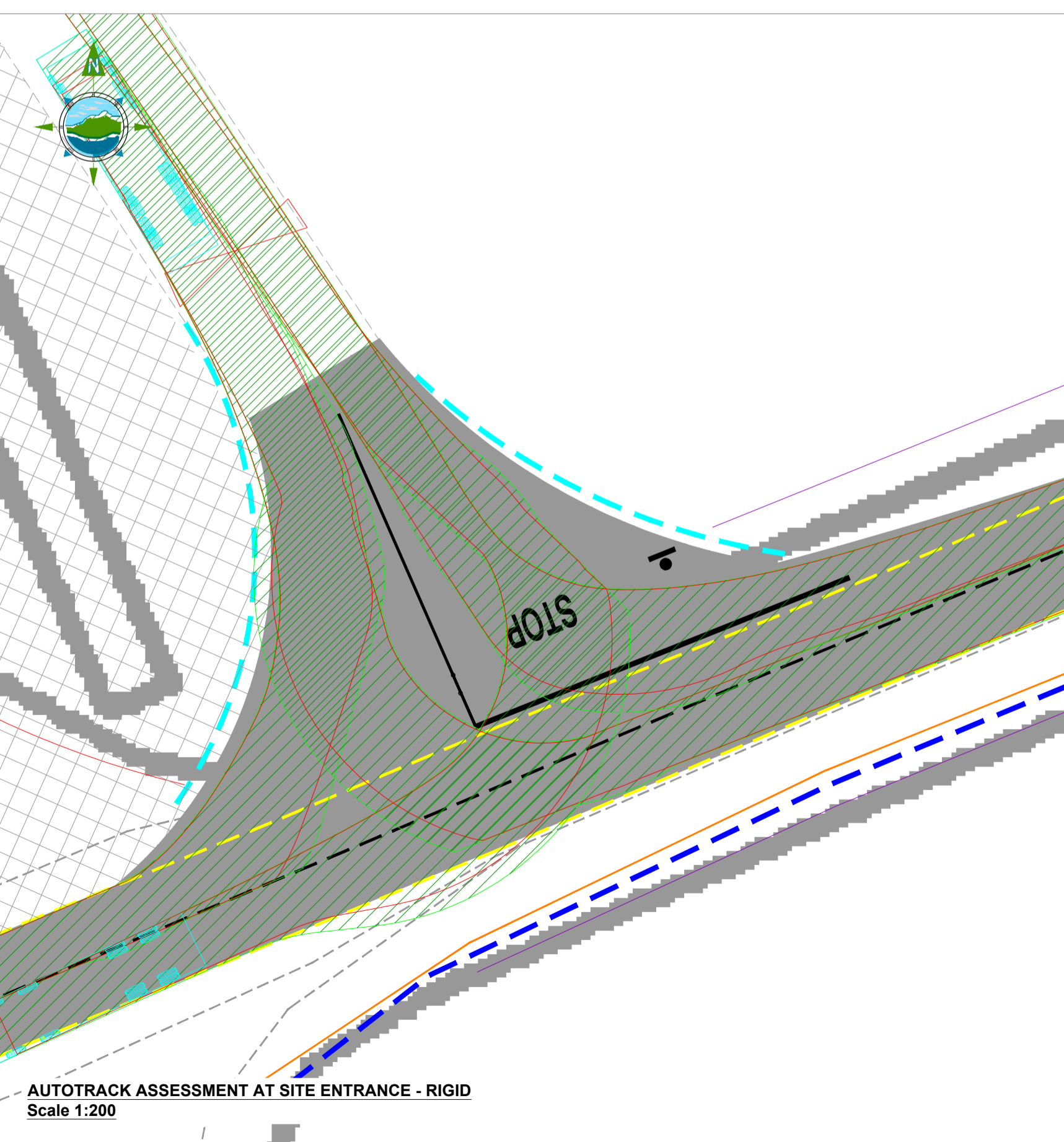
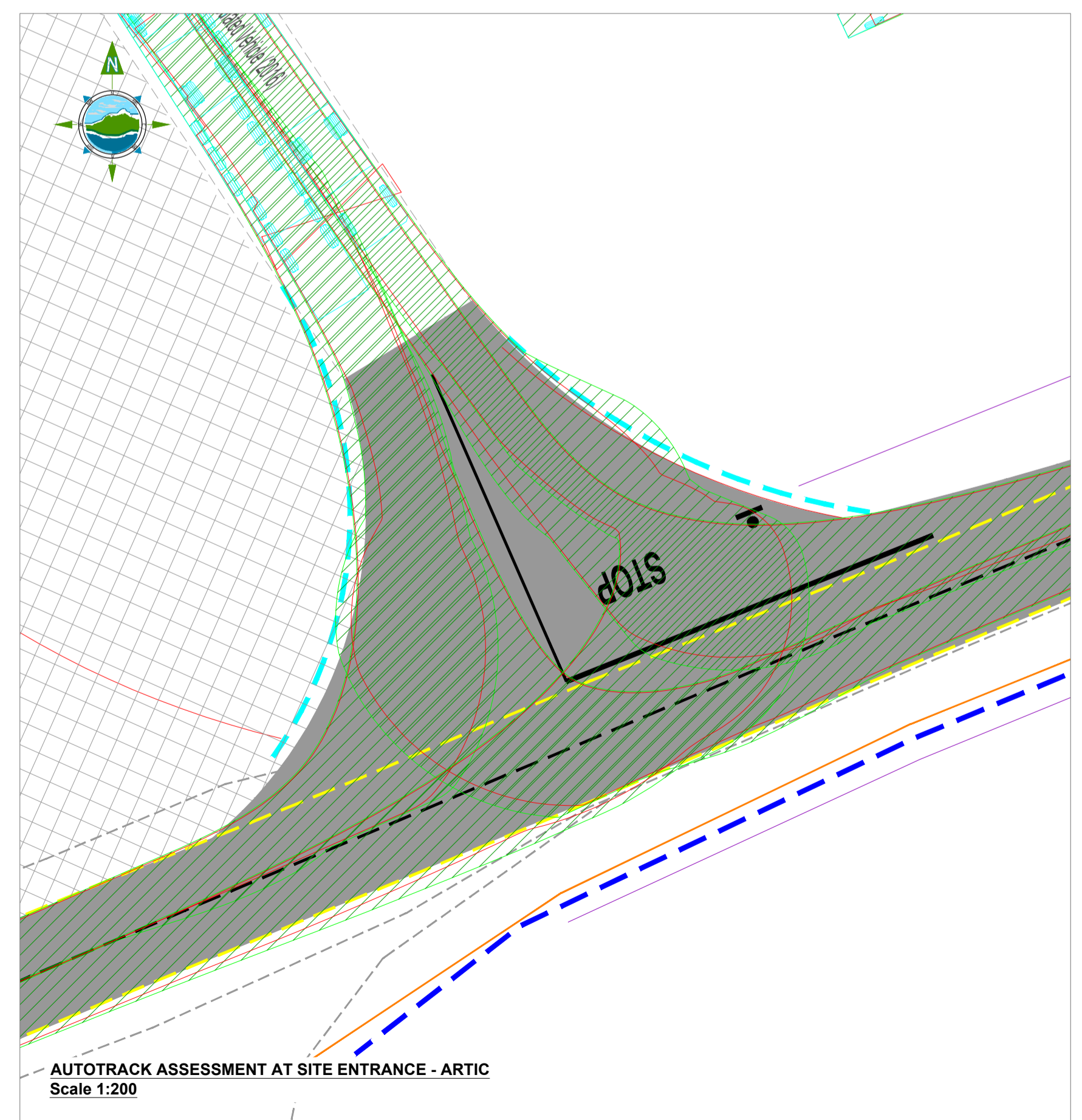
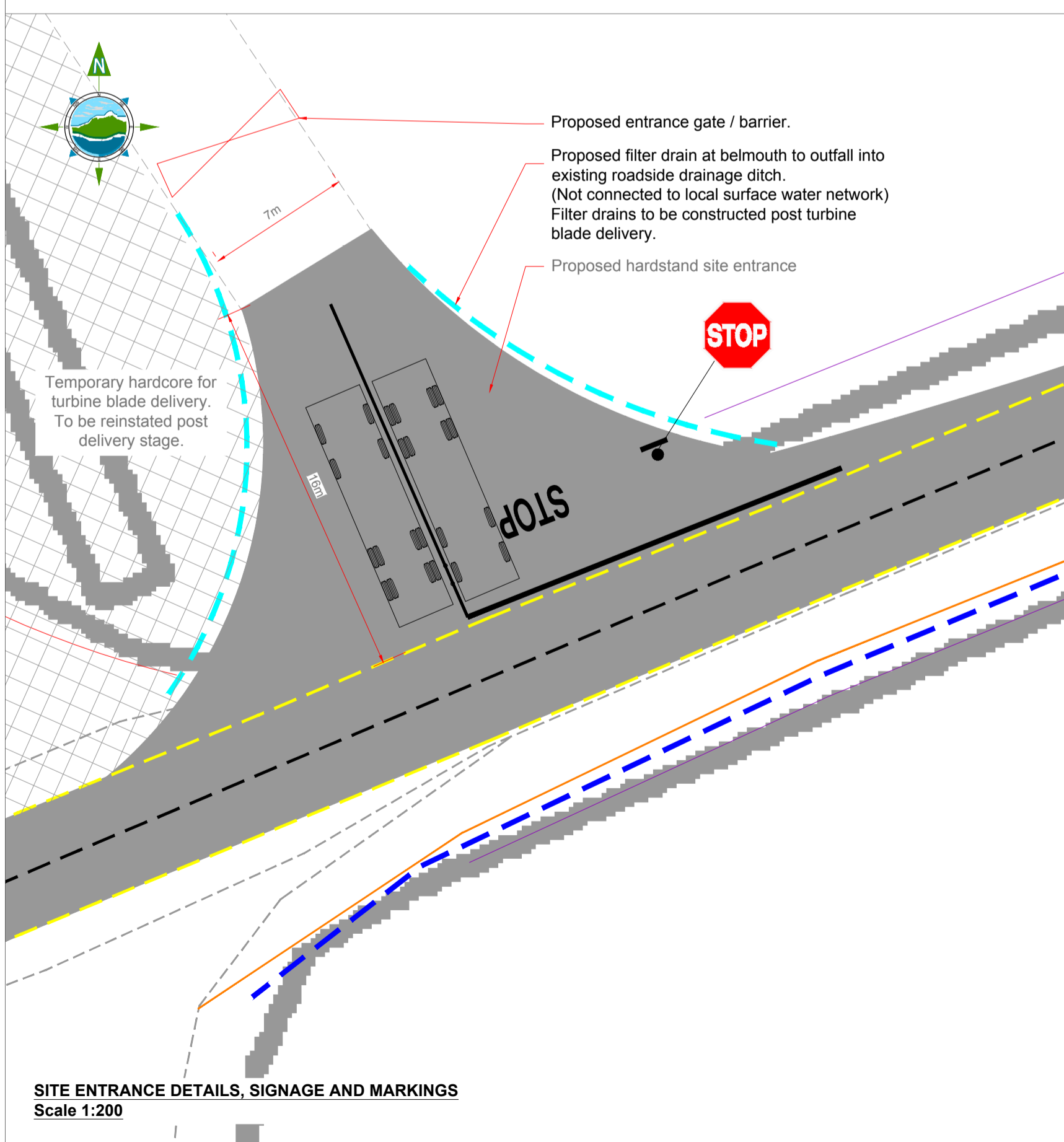
Large Tipper	10.201m
Overall Length	2.495m
Overall Width	2.890m
Overall Body Height	0.341m
Min Body Ground Clearance	2.471m
Track Width	6.00s
Lock-to-lock time	11.550m
Curb to Curb Turning Radius	

FTA Design Articulated Vehicle (2016)	16.480m
Overall Length	2.550m
Overall Width	3.870m
Overall Body Height	0.515m
Min Body Ground Clearance	2.470m
Max Track Width	3.00s
Lock-to-lock time	6.690m
Curb to Curb Turning Radius	

AUTOTRACK VEHICLE PROFILE

SITE ENTRANCE WARNING SIGNAGE
Scale 1:1,000

Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS



Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
SITE ENTRANCE IMPROVEMENT WORKS & AUTOTRACK ASSESSMENT R704

Scale @ A1: **As Shown**

Prepared by: **M. Nolan** | Checked: **J. Staunton** | December 2020

Project Director:

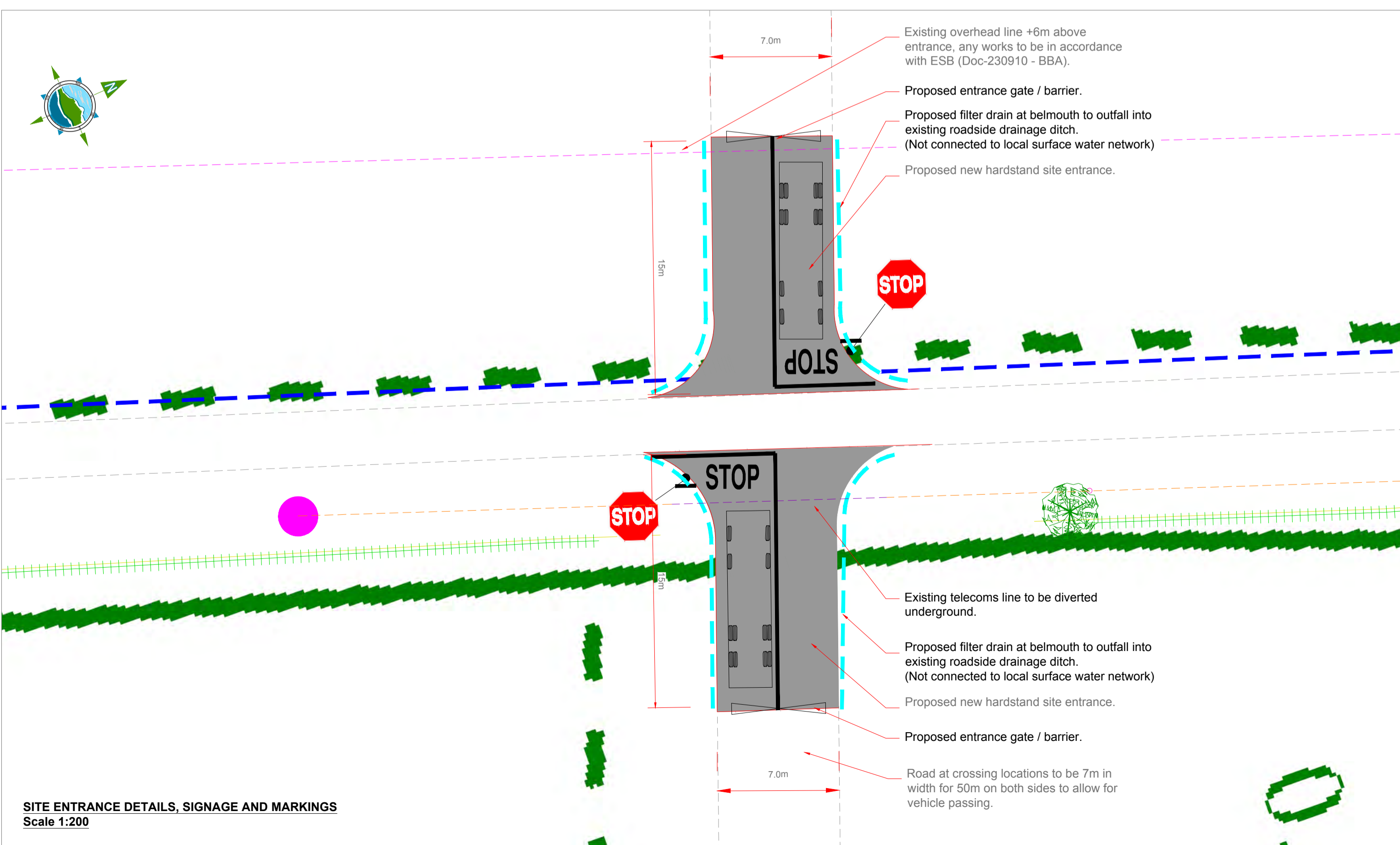
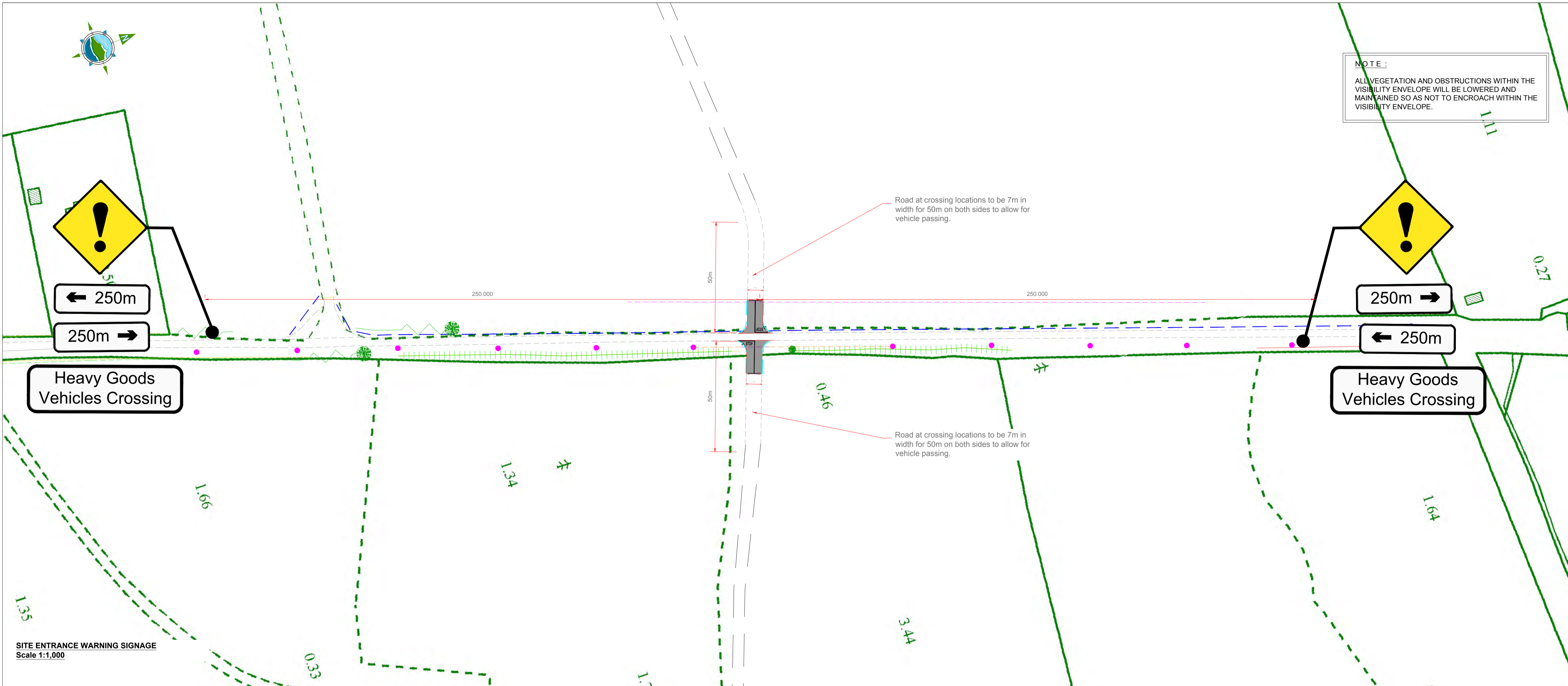
Drawing Status: **Planning**

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Drawing No.: **10730-2052** | Revision: **A**



Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

Client:
SPRINGFIELD RENEWABLES LTD.

Project:
CASTLEBANNY WIND FARM

Title:
SITE ENTRANCE IMPROVEMENT WORKS
L7451 CROSSING POINT

Scale @ A1: **As Shown**

Prepared by: **M. Nolan** Checked: **J. Staunton** December 2020

Project Director:

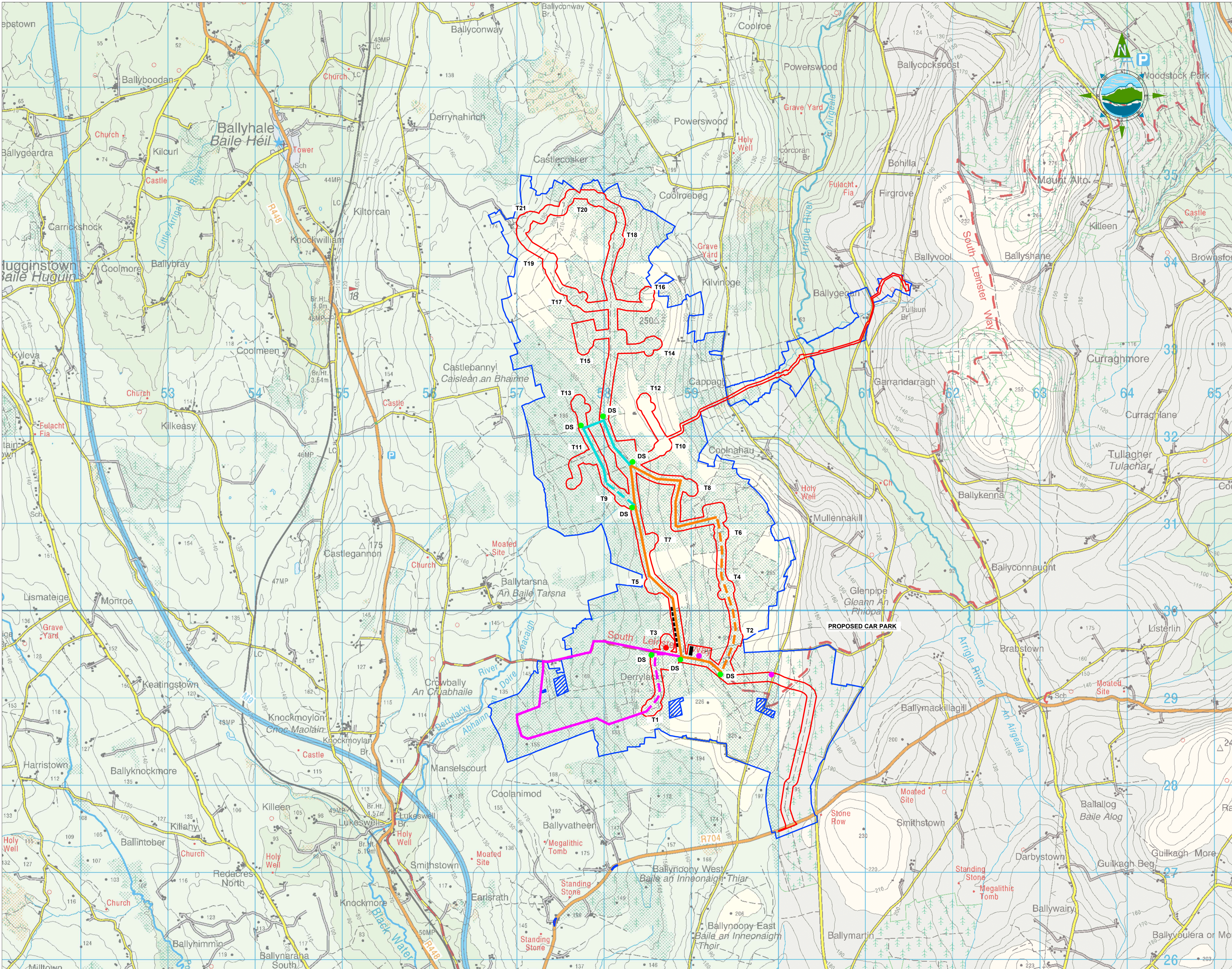
Drawing Status: **Planning**

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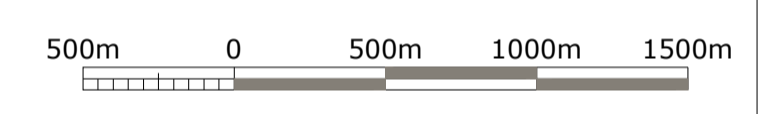
Drawing No.: **10730-2053** Revision: **A**



- GENERAL LEGEND**
- PLANNING APPLICATION BOUNDARY
 - AREAS EXCLUDED FROM APPLICANT OWNERSHIP OR BENEFICIAL INTEREST
 - MULLENAKILL (Existing Upgraded)
 - DERRYLACKEY (Existing Upgraded)
 - CASTLEBANNY (Existing Upgraded)
 - TURBINE / ENERGY INFORMATION BOARD
 - PICNIC AREA / BENCHES (4)
 - DIRECTIONAL SIGNAGE
 - LAND WHERE APPLICANT HAS OWNERSHIP OR BENEFICIAL INTEREST
 - MULLENAKILL (New Road Section)
 - DERRYLACKEY (New Road Section)
 - CASTLEBANNY (New Road Section)
 - OUTDOOR EXERCISE STATIONS (8)
 - GENERAL INFORMATION BOARD

- NOTES:**
- DRAWINGS FOR PLANNING PURPOSES ONLY. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
 - GRID REFERENCES TO IRISH NATIONAL GRID.
 - ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

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Rev	Date	Description	By	Chkd.
A	18.12.20	PLANNING ISSUE	MN	JS

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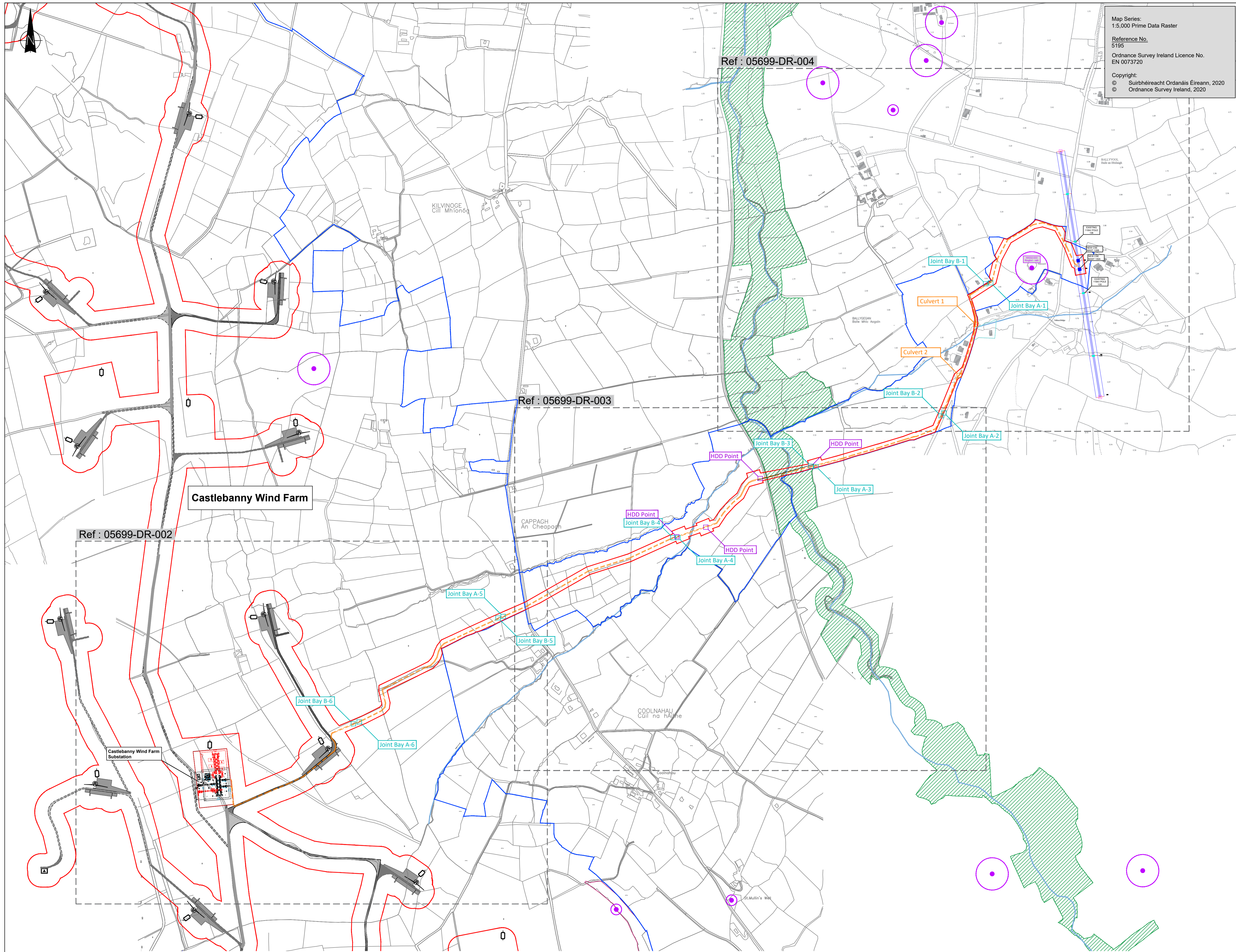
Project:
CASTLEBANNY WIND FARM

Title:
SITE AMENITY / RECREATION PLAN

Scale @ A1: **1:20,000**
 Prepared by: **M. Nolan** Checked: **J. Staunton** Date: **December 2020**
 Project Director: **D. Grehan**
 Drawing Status: **Planning**

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Drawing No.: **10730-2055** Revision: **A**



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PROJECT
**Castlebanny Wind Farm
110kV Grid Connection**

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NOTES:-
Path of cable route and location of associated Joint Bays, Link Boxes and Comms Chambers may vary depending on site conditions.

Other services may be encountered along the route.
This drawing is to be used only for the purpose of the planning application and is subject to detailed design.

LEGEND:-

Proposed 110kV UGC	
Special Area of Conservation	
Planning Application Boundary	
Land where applicant has ownership or beneficial interest	
National Monuments	
Rivers Network	
Joint Bay Locations	
HDD Locations	
Culvert/Drain/Watercourse Locations	
Proposed Cable Interface Towers	
Existing 110kV Poleset	

ISSUE/REVISION

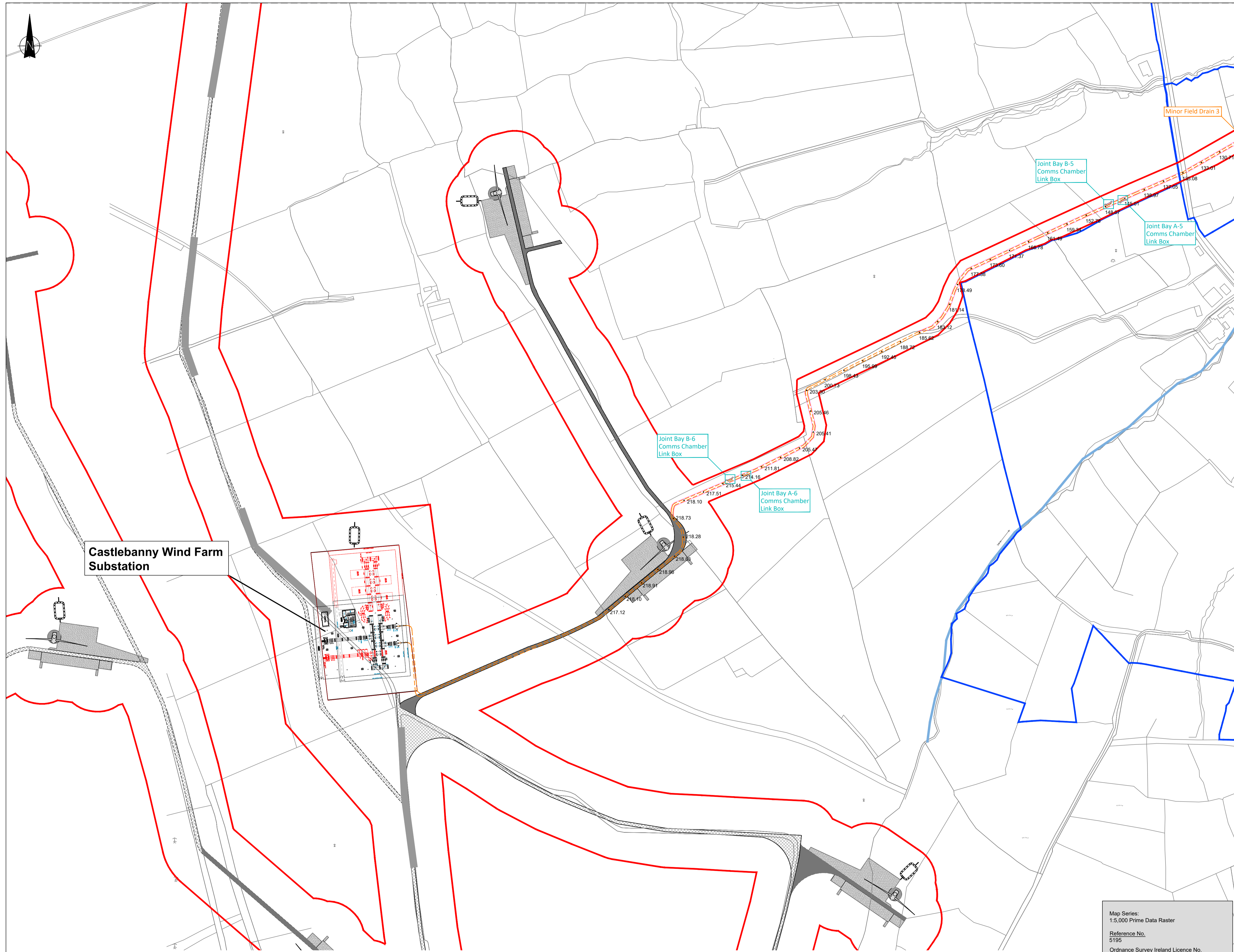
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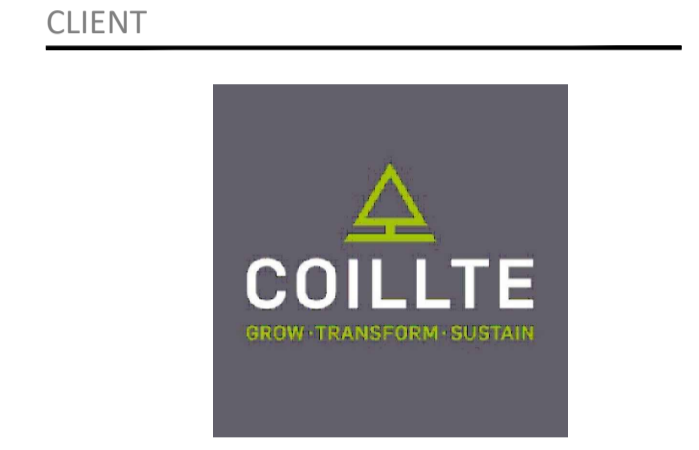
SHEET TITLE
Grid Connection Overall Layout Plan

SHEET NUMBER
05699-DR-001

Grid Connection Overall Layout Plan
SCALE : NTS



PROJECT
**Castlebanny Wind Farm
 110kV Grid Connection**



NOTES: -
 Path of cable route and location of associated Joint Bays, Link Boxes and Comms Chambers may vary depending on site conditions.

Other services may be encountered along the route.

This drawing is to be used only for the purpose of the planning application and is subject to detailed design.

- LEGEND: -
- Proposed 110kV UGC ---
 - Proposed Permanent Access Track ---
 - Planning Application Boundary ---
 - Land where applicant has ownership or beneficial interest ---
 - Rivers Network ---
 - Joint Bay Locations shown thus □
 - Existing Ground Levels + 151.57

ISSUE/REVISION

NO	DATE	DESCRIPTION
P04	16.12.20	Issue for Planning
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SHEET TITLE
**Grid Connection Layout Plan
 Sheet 1 of 3**

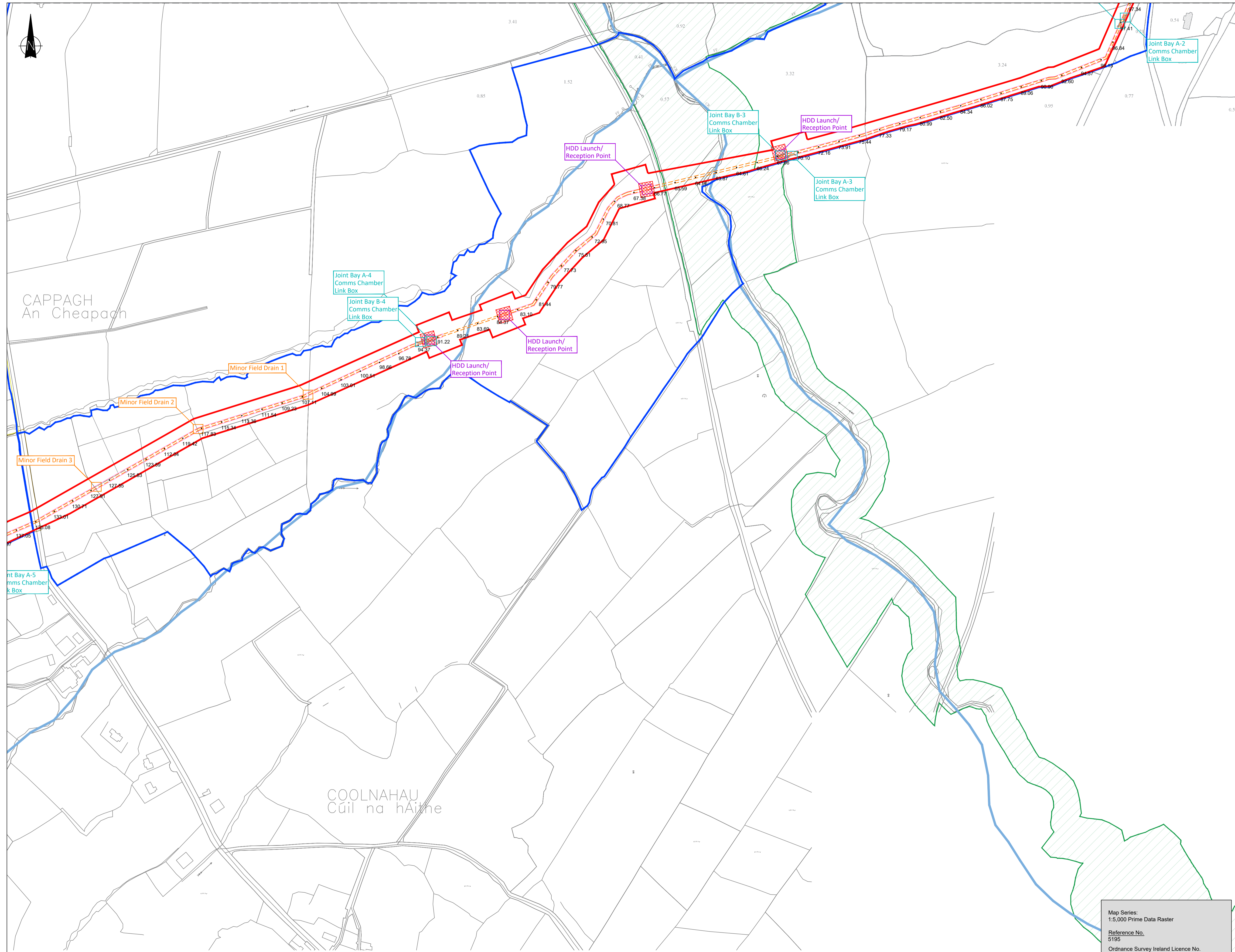
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Grid Connection Layout Plan (2 of 3)

SCALE :1:2,500

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PROJECT

Castlebanny Wind Farm 110kV Grid Connection

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NOTES:-

Path of cable route and location of associated Joint Bays, Link Boxes and Comms Chambers may vary depending on site conditions.

Other services may be encountered along the route.

This drawing is to be used only for the purpose of the planning application and is subject to detailed design.

LEGEND:-

- Proposed Grid Route ---
- Proposed Permanent Access Track ---
- Special Area of Conservation ▨
- Planning Application Boundary ---
- Land where applicant has ownership or beneficial interest ---
- Rivers Network ---
- Joint Bay Locations
- HDD Locations
- Culvert/Drain/Watercourse Locations
- Temporary Working Area
- Existing Ground Levels + 151.57

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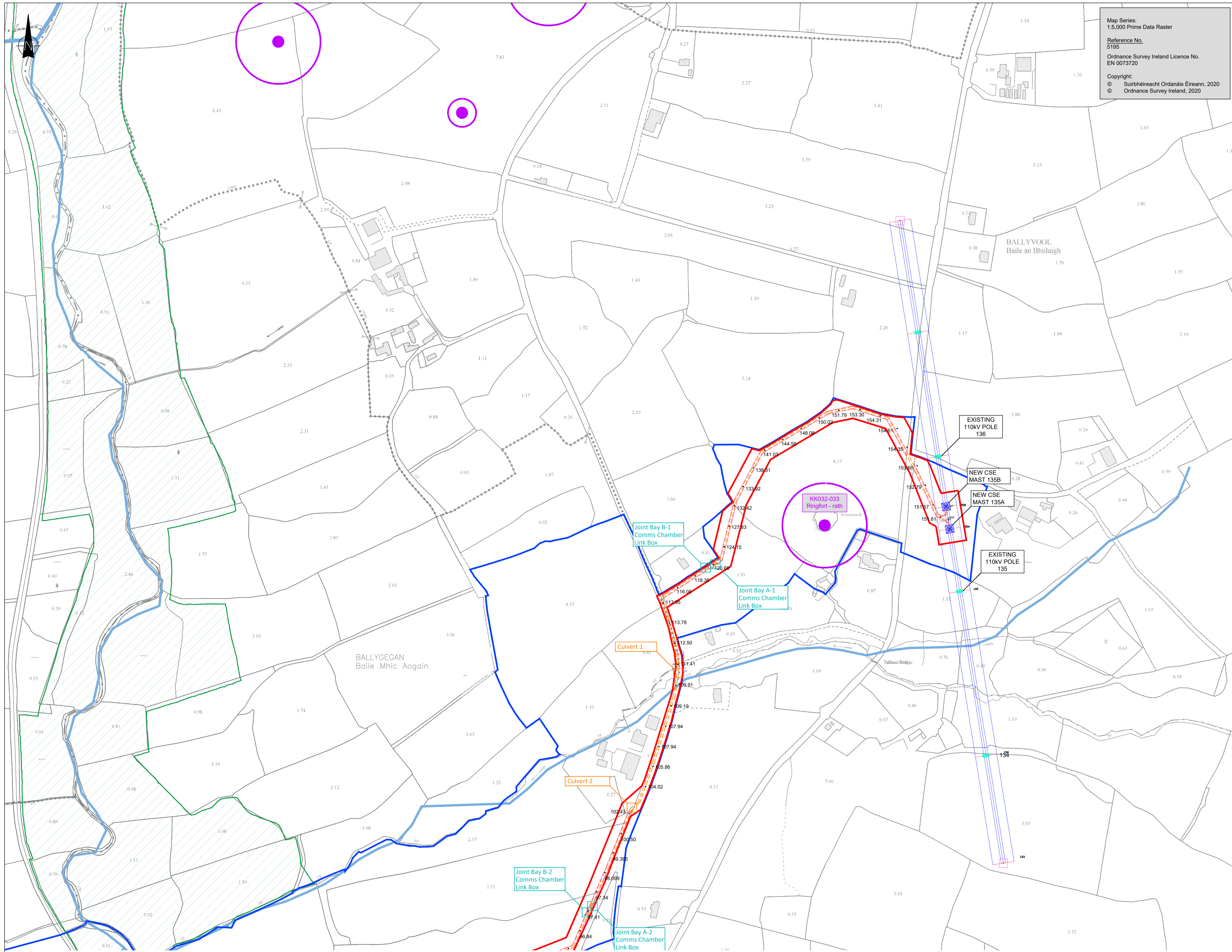
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SHEET TITLE

Grid Connection Layout Plan
Sheet 2 of 3

SHEET NUMBER

05699-DR-003



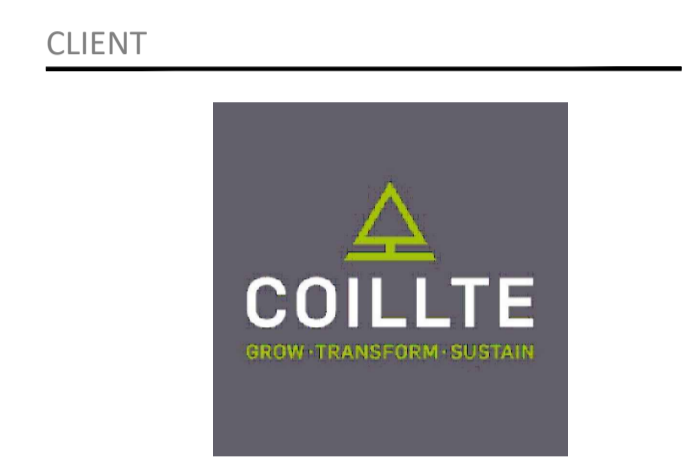
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PROJECT
**Castlebanny Wind Farm
110kV Grid Connection**



NOTES: -
Path of cable route and location of associated Joint Bays, Link Boxes and Comms Chambers may vary depending on site conditions.

Other services may be encountered along the route.

This drawing is to be used only for the purpose of the planning application and is subject to detailed design.

- LEGEND: -
- Proposed Grid Route shown thus —
 - Proposed Permanent Access Track —
 - Special Area of Conservation
 - National Monuments
 - Planning Application Boundary
 - Land where applicant has ownership or beneficial interest
 - Rivers/Stream Network —
 - Joint Bay Locations
 - Culvert/Drain/Watercourse Locations
 - Proposed Cable Interface Towers ⊠
 - Existing 110kV Poleset ⊕
 - Existing Ground Levels • 151.57

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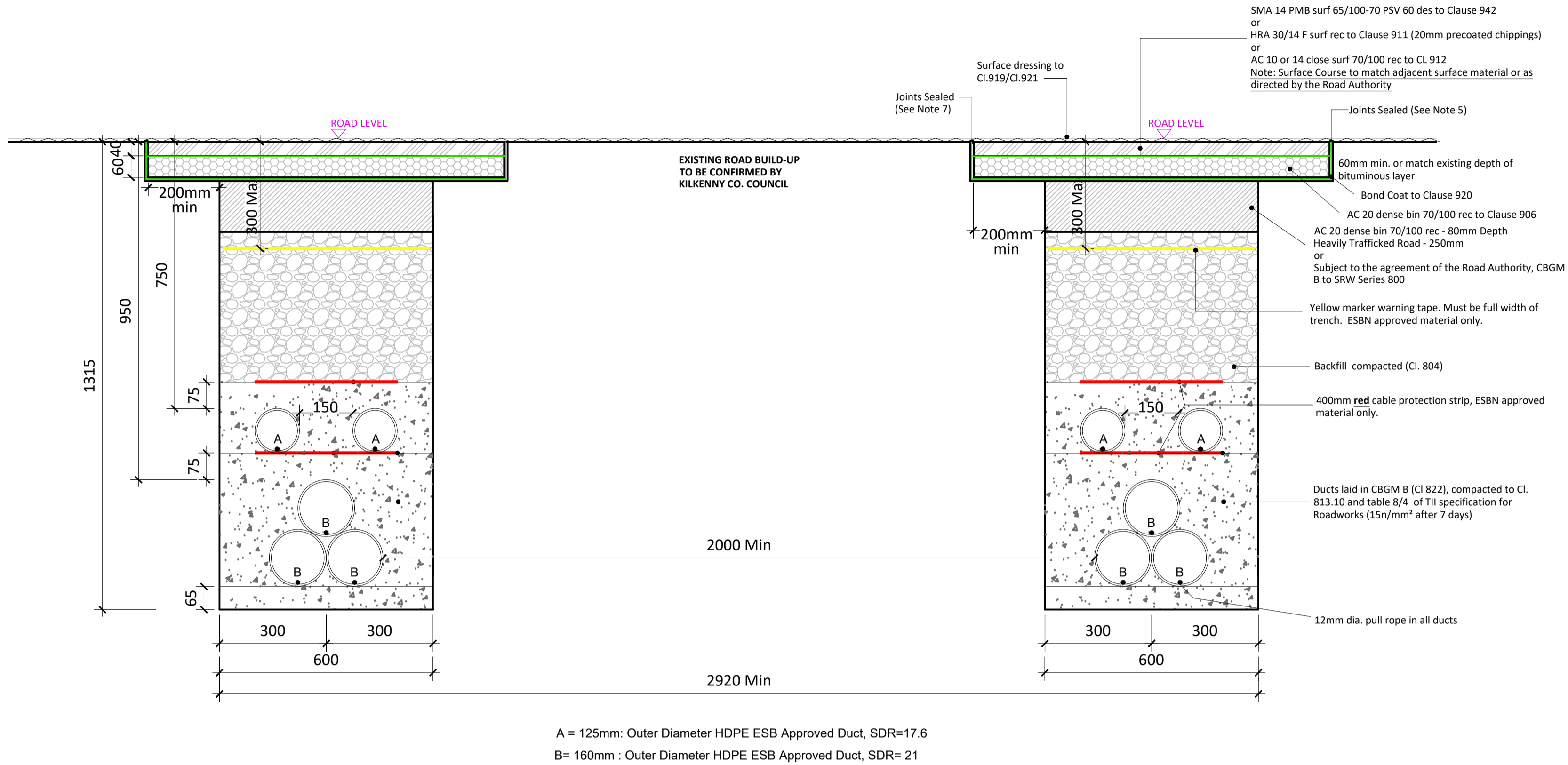
PROJECT NUMBER
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SHEET TITLE
**Grid Connection Layout Plan
Sheet 3 of 3**

SHEET NUMBER
05699-DR-004

Permanent Reinstatement

Reinstatement details based on Guidelines for Managing Openings in Public Roads - SD4



Typical Section Through Permanent Reinstatement of Longitudinal Opening in Roadway

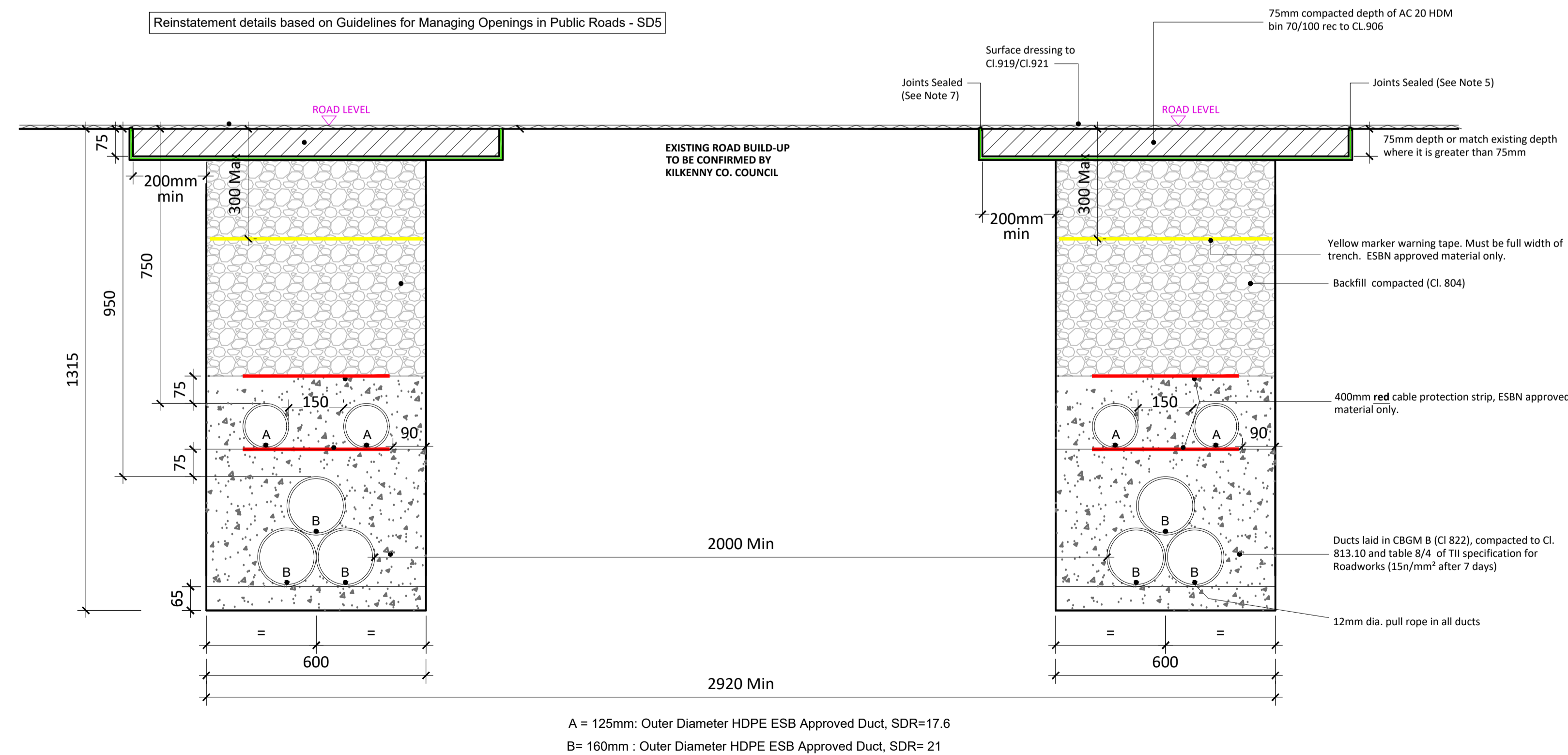
SCALE 1:10

A = 125mm: Outer Diameter HDPE ESB Approved Duct, SDR=17.6
 B = 160mm: Outer Diameter HDPE ESB Approved Duct, SDR= 21

ALL REINSTATEMENT WORKS ARE TO BE IN ACCORDANCE WITH LOCAL AREA ENGINEERS REQUIREMENTS AND GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS

- Note:**
- Refer to Guidelines for managing Openings in Public Roads (Purple Book - April 2017), Chapter 6 'Specifications' for guidance on Duct type / colour and Marker Tape type / colour.
 - All bound edges shall be saw cut to expose the full vertical thickness of each layer prior to excavation. All edges shall be essentially straight, smooth and vertical.
 - Where a temporary surface has been used, material shall be planed out to the depth specified in this drawing. The new permanent surface shall be machined laid and mechanically compacted with a vibrating roller.
 - Where the trimmed edge of excavation is within 400mm* of a joint / edge, ironwork or other reinstatement, this trimmed edge shall be extended to include same and the area of reinstatement shall be extended accordingly (* increase to 800mm where this is pre-existing practice).
 - Any damaged area adjacent to the opening and resulting from the excavation operation shall be included within the area to be reinstated.
 - Clause 808 or Cement Bound Granular Material surface to be sprayed per clause 920 prior to application of Asphalt Concrete Layer.
 - Joint sealer shall be a hot 50 pen bitumen binder or cold thixotropic bitumen 50-70 pen to be applied to all vertical cuts in accordance with B.S.594987 prior to application of bituminous materials.
 - For roads without asphalt concrete surface (e.g. may be CI.804 with double surface dressing), the road authority may as its discretion permit the temporary reinstatement surface of asphalt concrete to be regulated in lieu of excavation and reinstatement; and subsequently surface dressed.
 - On highly trafficked roads services must have a minimum cover of 750mm.
 - Where required by the Road authority the trench may be reinstated with a Cement Bound Granular Material.

Reinstatement details based on Guidelines for Managing Openings in Public Roads - SD5



Typical Section Through Permanent Reinstatement of Longitudinal Opening in Dressed Rural Unbound Roadway

SCALE 1:10

A = 125mm: Outer Diameter HDPE ESB Approved Duct, SDR=17.6
 B = 160mm: Outer Diameter HDPE ESB Approved Duct, SDR= 21

- NOTES:**
- The following design is subject to EirGrid design approval.
 - This drawing is to be read in conjunction with all other relevant documentation.
 - Dimensions are in millimeters, unless noted otherwise.
 - Drawings are not to be scaled use figured dimensions only.
 - Geogrid may be implemented along the cable trench route where deemed necessary by the Contractor or as required by Kilkenny County Council.
 - Existing road build up and reinstatement requirements to be confirmed with Kilkenny Co Co.

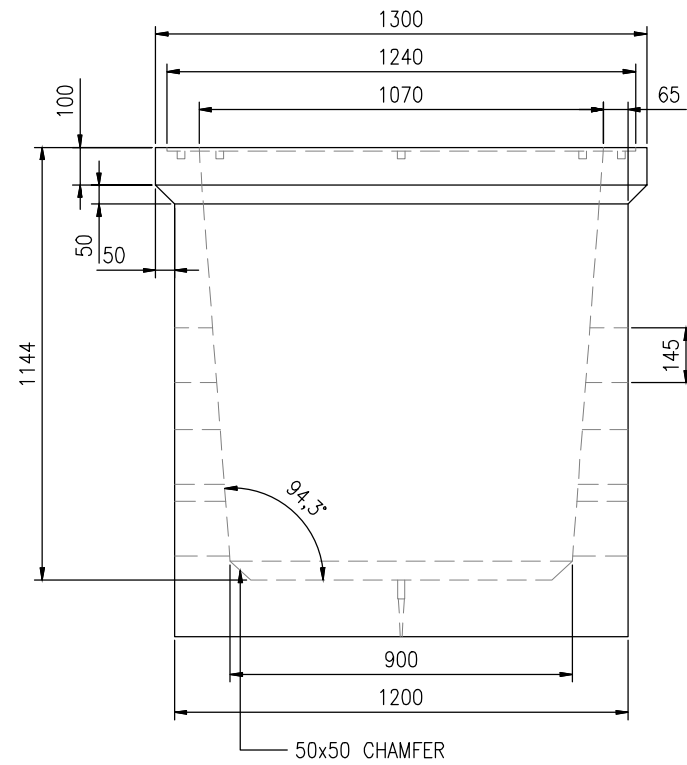
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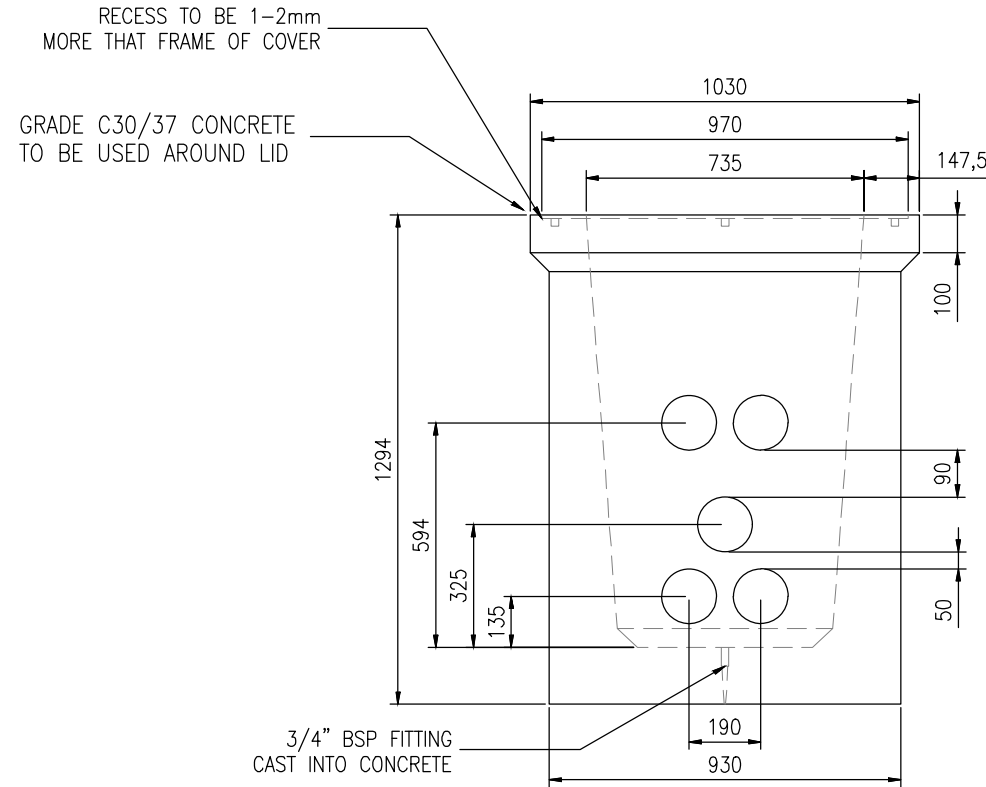
PROJECT NUMBER
 05-699

SHEET TITLE
 Typical Double Circuit 110kV Ducting Through Regional/Local Roads

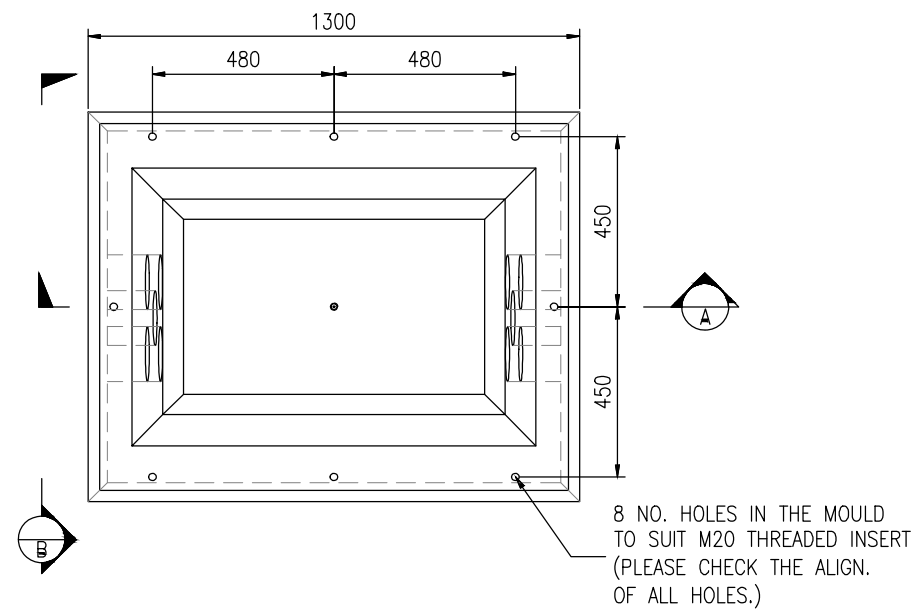
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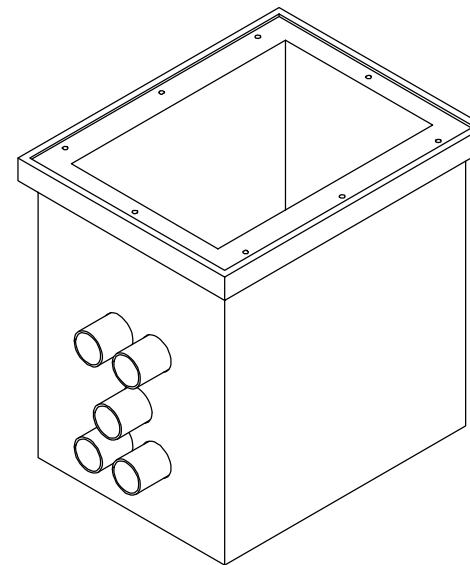
C2 Chamber Detail - Section A
SCALE 1:20



C2 Chamber Detail - Section B
SCALE 1:20



Typical Plan of Joint Bay
SCALE 1:20



Isometric : C2 Chamber Arrangement
SCALE 1:20

NOTES:

1. This design is subject to EirGrid design approval.
2. This drawing is to be read in conjunction with all other relevant documentation.
3. Dimensions are in millimetres, unless noted otherwise.
4. Drawings are not to be scaled use figured dimensions only.
5. Reinstatement to comply with requirements of the relevant Local Authority/Asset owner
6. Entrance & Exit ducts to be in line
7. All material and workmanship to be in accordance with the NRA./TII specification for Roadworks, May 2005 and subsequent revisions.
8. Reinforced concrete to be a minimum grade C32/40, Sulphate resisting cement to be used where aggressive soil conditions apply, refer to table 6.1 of B.S. 8110.
9. Carraigeway covers and frames to be to B.S. 124.
10. All covers to have ESB logo incorporated in them to the approval of EirGrid.
11. Step irons to be hot dipped galvanised to B.S. 729 and positioned as shown on any chamber deeper than 700mm on the end remote from any side entry duct.
12. Concrete precast chamber and cover should be tested through a 5 point 40 tonnes vertical static loading test by an independent test company, if required, further details will be provided by EirGrid.
13. Final position of C2 chambers shall be agreed with EirGrid.
14. In a forest environment backfill with lean mix outside the cover frame.



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Castlebanny Wind Farm
110kV Grid Connection

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05-699

SHEET NUMBER
05699-DR-102

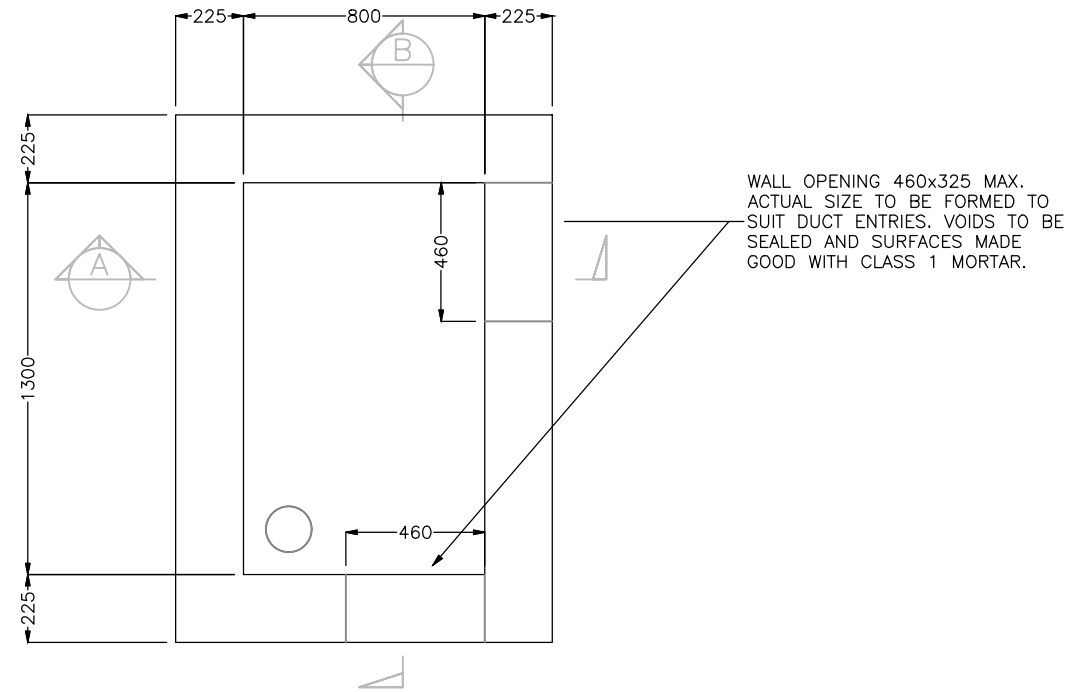
SHEET TITLE

Typical Comms Chamber Details
General Arrangement

DRAWING STATUS
For Planning

ISSUE/REVISION

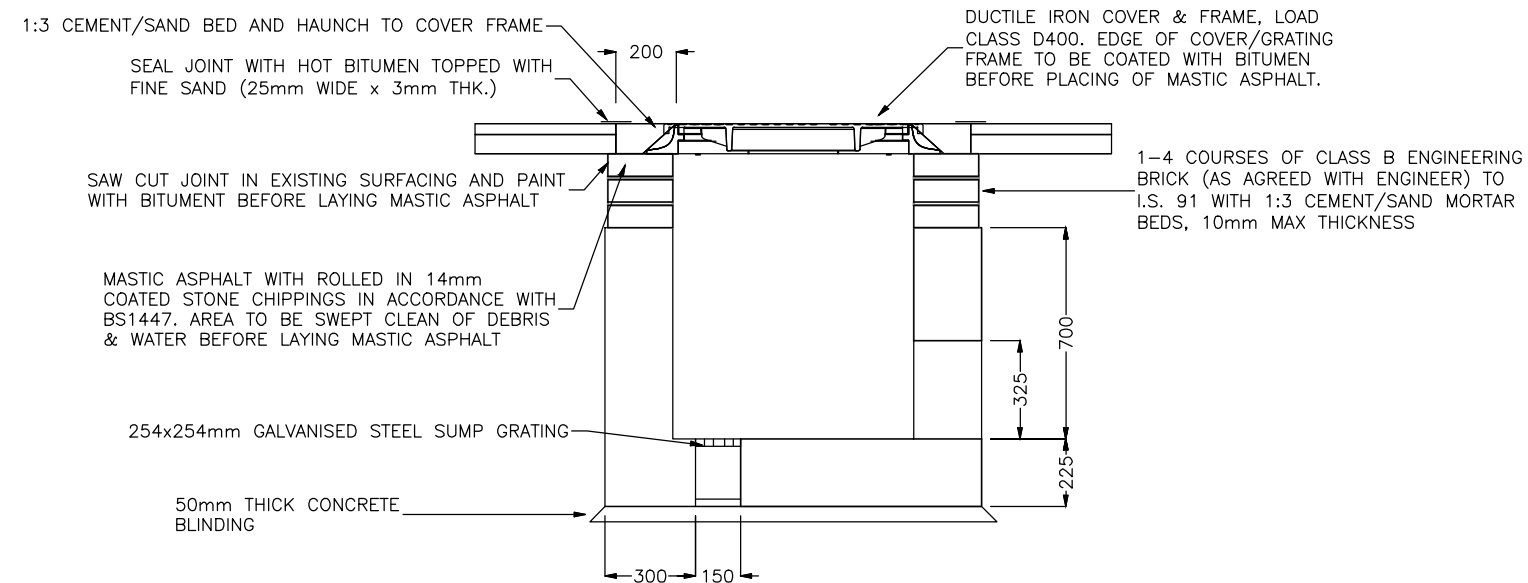
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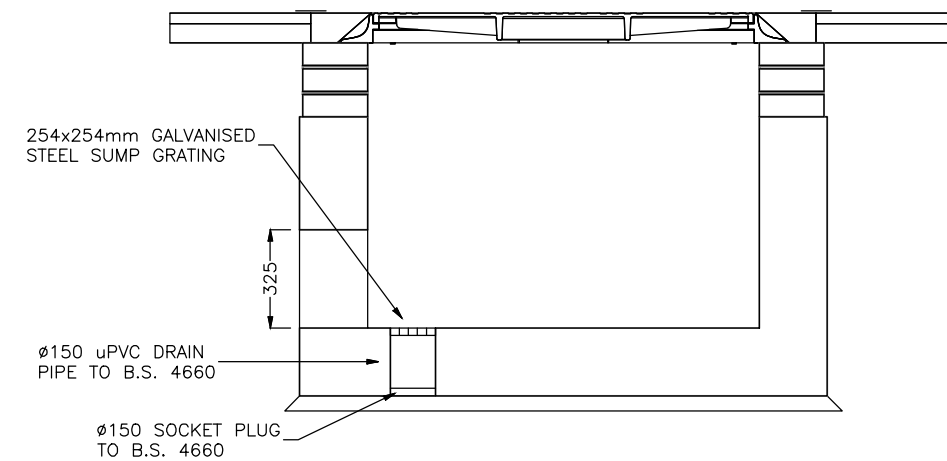
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2. This drawing is to be read in conjunction with all other relevant documentation.
3. Dimensions are in millimeters, unless noted otherwise.
4. Drawings are not to be scaled use figured dimensions only.
5. All material and workmanship to be in accordance with the NRA./TII specification for Roadworks, May 2005 and subsequent revisions.
6. Reinforced concrete to be a minimum grade C32/40, Sulphate resisting cement to be used where aggressive soil conditions apply.
7. Carriageway covers and frames to be to B.S. 124.
8. All covers to have ESB logo incorporated in them to the approval of EirGrid.
9. Brickwork to be class B Engineering, beds and Joints to be Class 1 mortar.
10. Final position of Link Box to be agreed with EirGrid prior to installation.
13. In a forest environment backfill with lean mix outside the cover frame.

Link Box Chamber Detail - Plan
SCALE 1:20



Link Box Chamber Detail - Section A-A
SCALE 1:20



Link Box Chamber Detail - Section B-B
SCALE 1:20



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PROJECT

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110kV Grid Connection

PROJECT NUMBER
05-699

SHEET NUMBER
05699-DR-103

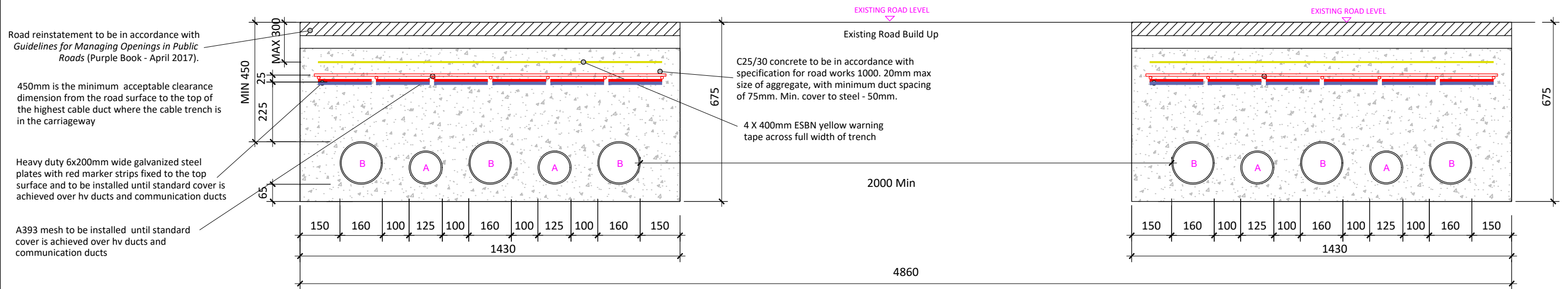
SHEET TITLE

Typical Link Box
Chamber Details

DRAWING STATUS
For Planning

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A = 125mm: Outer Diameter HDPE ESB Approved Duct, SDR=17.6
B = 160mm : Outer Diameter HDPE ESB Approved Duct, SDR=21

Typical Section Through Double Circuit 110kV Ducting in Flat Formation
SCALE 1:20

Note:

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- This drawing is to be read in conjunction with all other relevant documentation.
- Dimensions are in millimeters, unless noted otherwise.
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110kV Grid Connection

PROJECT NUMBER
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05699-DR-104

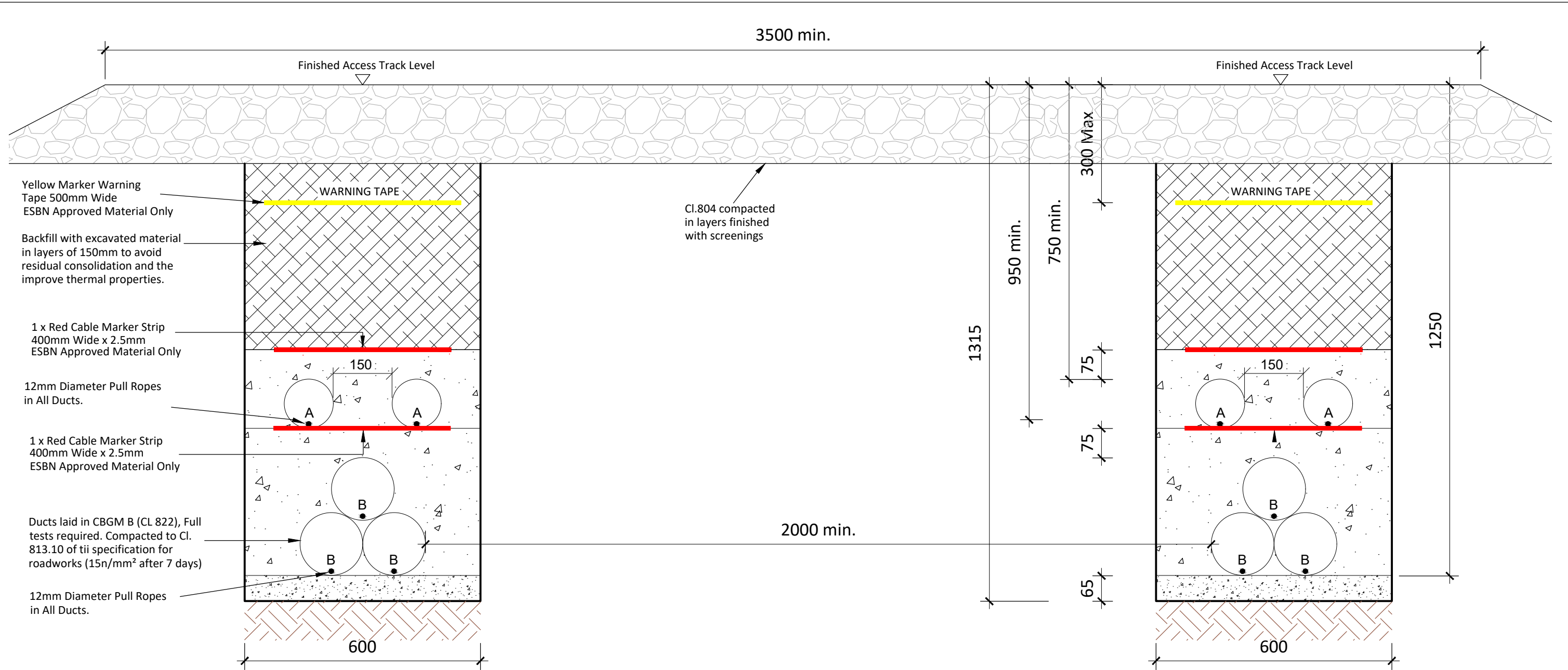
SHEET TITLE

Typical DC 110kV Trench in
Flat Formation

DRAWING STATUS
For Planning

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Yellow Marker Warning Tape 500mm Wide
ESBN Approved Material Only

Backfill with excavated material in layers of 150mm to avoid residual consolidation and the improve thermal properties.

1 x Red Cable Marker Strip 400mm Wide x 2.5mm
ESBN Approved Material Only

12mm Diameter Pull Ropes in All Ducts.

1 x Red Cable Marker Strip 400mm Wide x 2.5mm
ESBN Approved Material Only

Ducts laid in CBGM B (CL 822), Full tests required. Compacted to Cl. 813.10 of tii specification for roadworks (15n/mm² after 7 days)

12mm Diameter Pull Ropes in All Ducts.

CI.804 compacted in layers finished with screenings

Typical Section Through Off Road Sections

SCALE 1:10

A = 125mm: Outer Diameter HDPE ESB Approved Duct, SDR=17.6

B= 160mm : Outer Diameter HDPE ESB Approved Duct, SDR=21

NOTES:

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- This drawing is to be read in conjunction with all other relevant documentation.
- Dimensions are in millimeters, unless noted otherwise.
- Drawings are not to be scaled use figured dimensions only.



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SHEET NUMBER
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SHEET TITLE

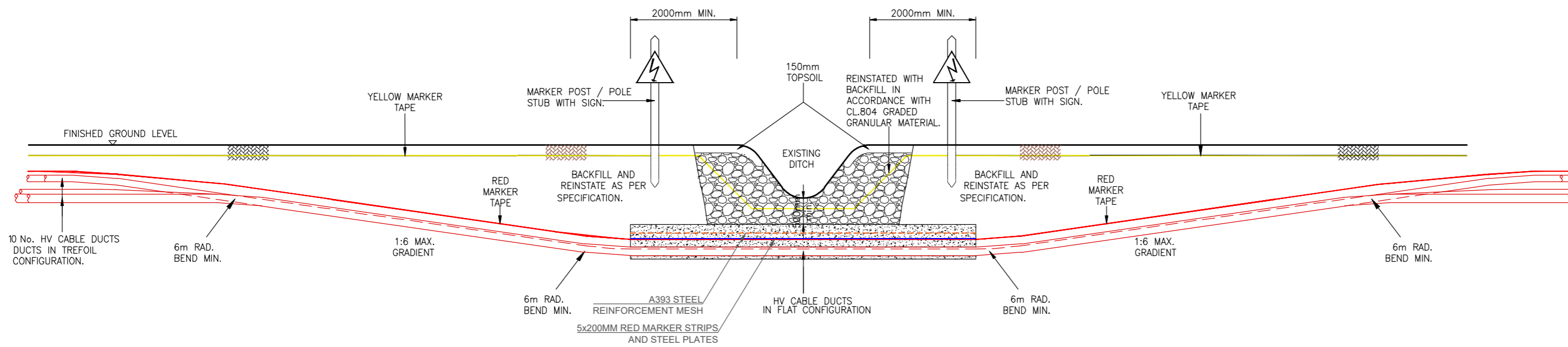
Typical Double Circuit 110kV Ducting
through Off Road Section

DRAWING STATUS
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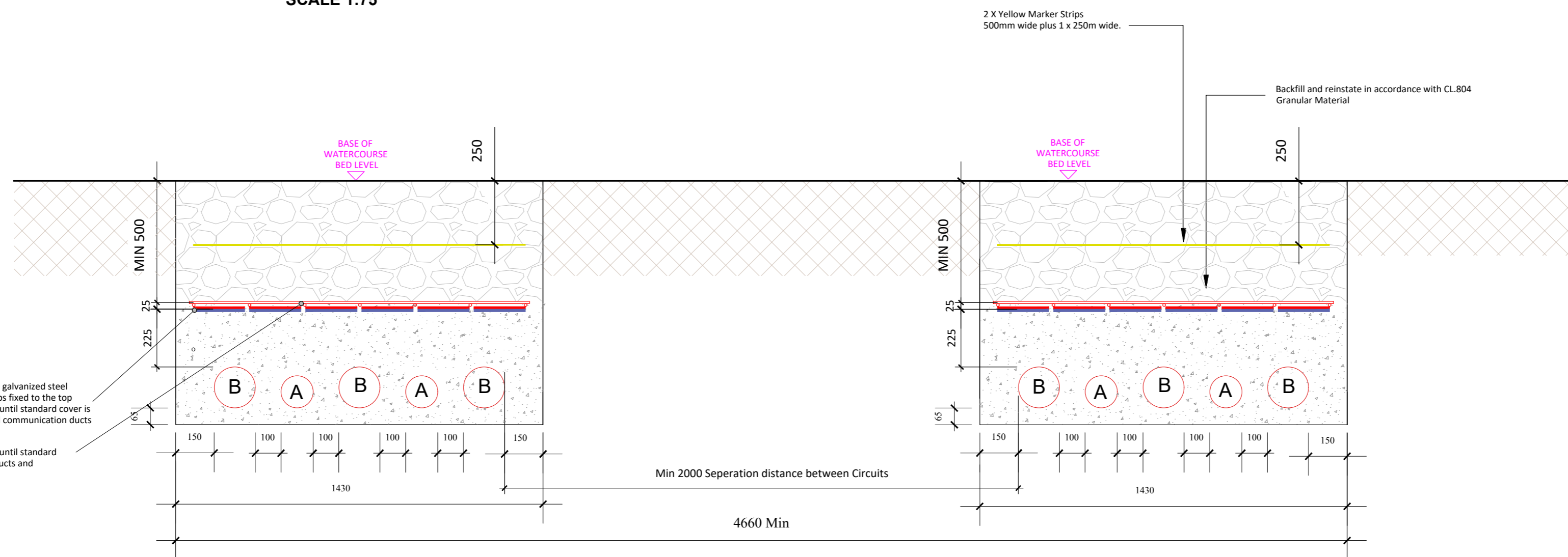
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 2. This drawing is to be read in conjunction with all other relevant documentation.
 3. Do not scale from this drawing, use figured dimensions only.
 4. All dimensions are in millimeters, unless noted otherwise.
 5. This drawing is to be read in conjunction with the Project Health and Safety File for any identified potential risks.
 6. No excavation shall commence until the contractor has consulted up to date services drawings and carried out an electromagnetic locator (EML) scan.
 7. Hand dig only within 500mm of existing services.
 8. Where depths exceed 3000mm to top of duct the contractor shall consult the cable system design engineer for phase spacing requirements.
 9. All approvals for watercourse crossing and required minimum cover to be obtained by the contractor prior to commencement of works.
 10. ESB marker post (ESB Code: 8327355) or stub pole (2m above ground) and warning sign (ESB Code: 8238339)



Double Trench Ditch/ Drain Crossing Elevation
SCALE 1:75

- NOTES:**
- See notes in drawing window

LEGEND:



Heavy duty 6x200mm wide galvanized steel plates with red marker strips fixed to the top surface and to be installed until standard cover is achieved over hv ducts and communication ducts

A393 mesh to be installed until standard cover is achieved over hv ducts and communication ducts

A = 125mm OUTER DIAMETER HDPE ESB APPROVED DUCT, SDR=17.6
B = 160mm OUTER DIAMETER HDPE ESB APPROVED DUCT, SDR=21

Concrete Bed & Surround Method Under Ditch/ Drain
SCALE 1:20

ISSUE/REVISION		
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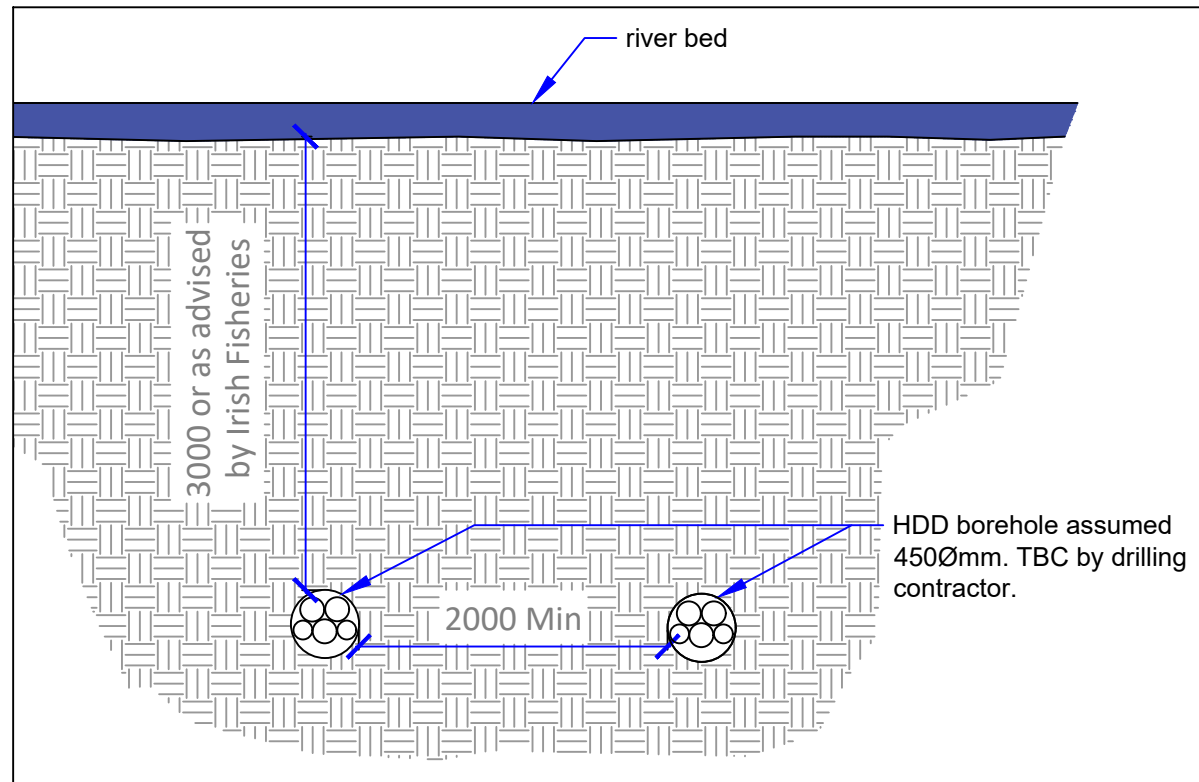
PROJECT NUMBER
05-669

SHEET TITLE
**DC 110kV Trench Typical Ditch/
Drain Crossing Detail**

SHEET NUMBER
05669-DR-105



Image 1 : Typical Directional Drilling Rig

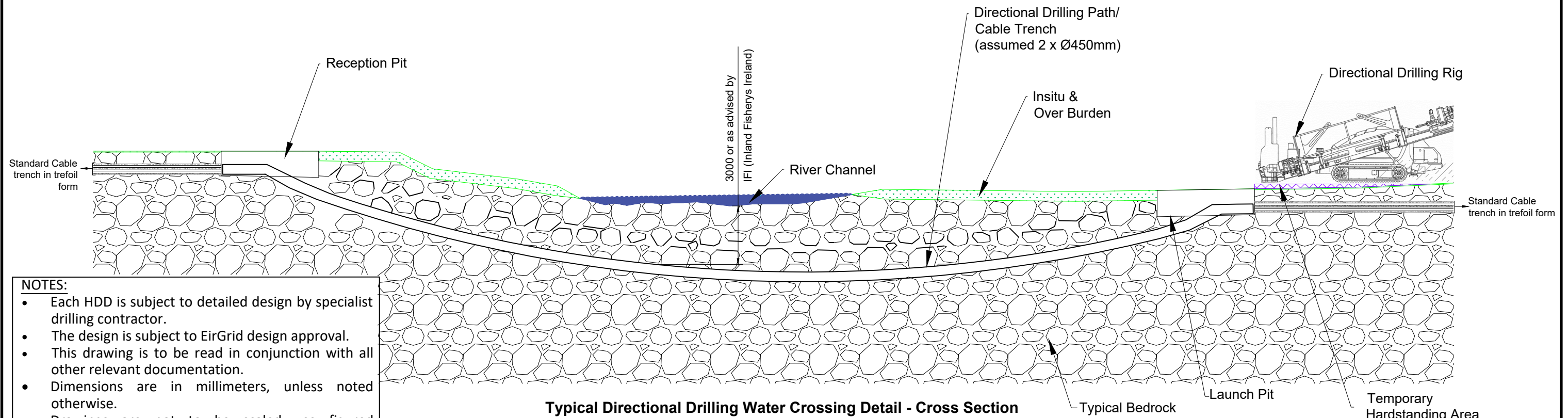


Typical Directional Drilling Water Crossing Detail-Longitudinal Section

SCALE - 1:50



Image 2 : Typical Drilling Rig and Launch Pit



Typical Directional Drilling Water Crossing Detail - Cross Section

SCALE - 1:200

- NOTES:**
- Each HDD is subject to detailed design by specialist drilling contractor.
 - The design is subject to EirGrid design approval.
 - This drawing is to be read in conjunction with all other relevant documentation.
 - Dimensions are in millimeters, unless noted otherwise.
 - Drawings are not to be scaled use figured dimensions only.



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Tel: 00353 66 7135710

CLIENT



PROJECT

Castlebanny Wind Farm
110kV Grid Connection

PROJECT NUMBER
05-699

SHEET NUMBER
05699-DR-106

SHEET TITLE

Typical Horizontal Directional
Drilling Crossing Detail

DRAWING STATUS
For Planning

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P02	02.12.20	Issued for Planning
P01	27.10.20	Issued for Information
P00	03.09.20	Issued for Information

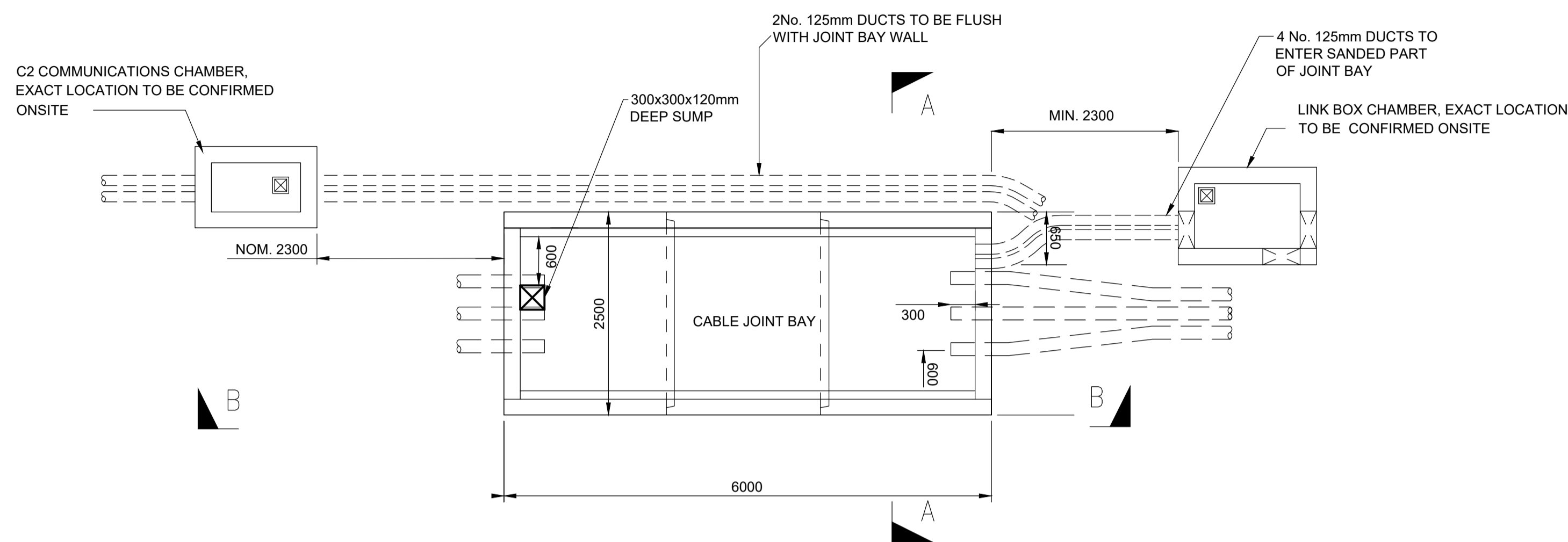
PROJECT

Castlebanny Wind Farm
 110kV Grid Connection

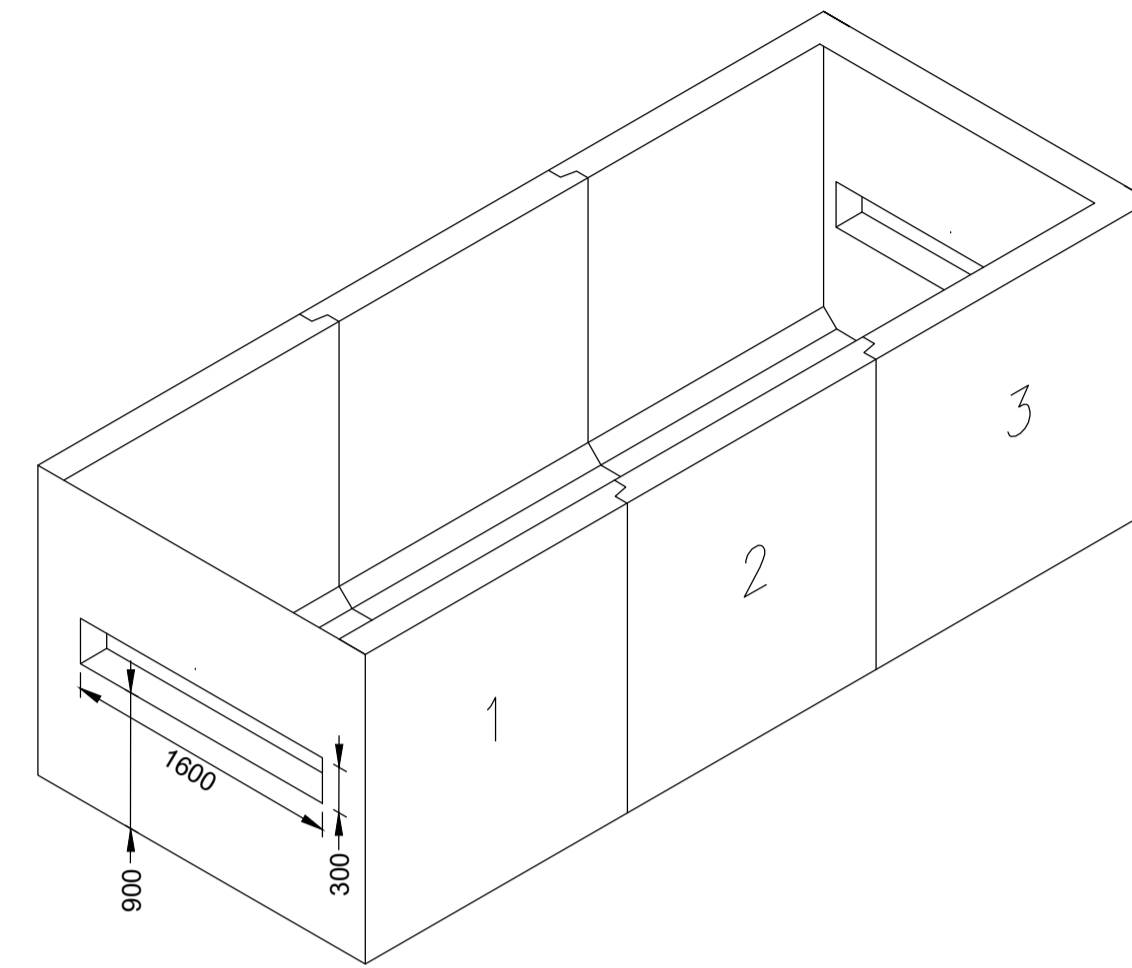
CLIENT



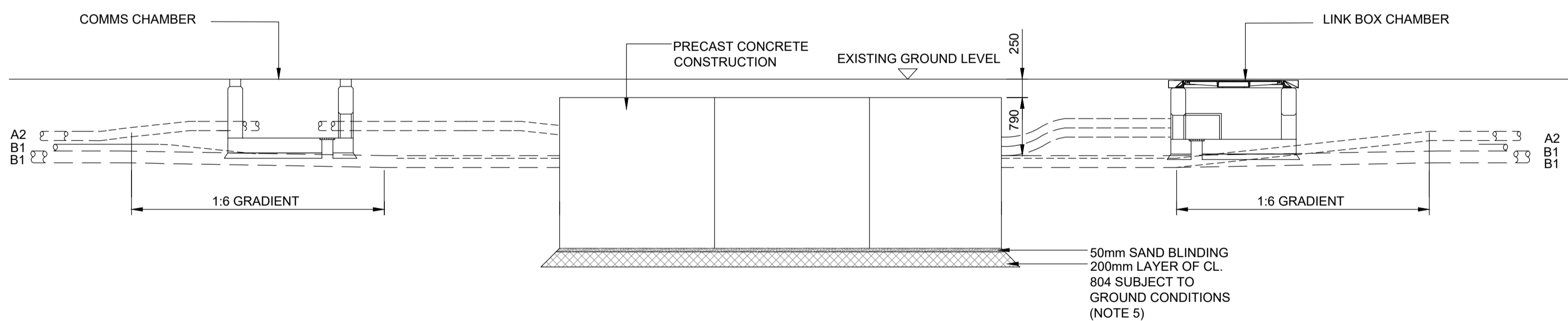
CONSULTANTS



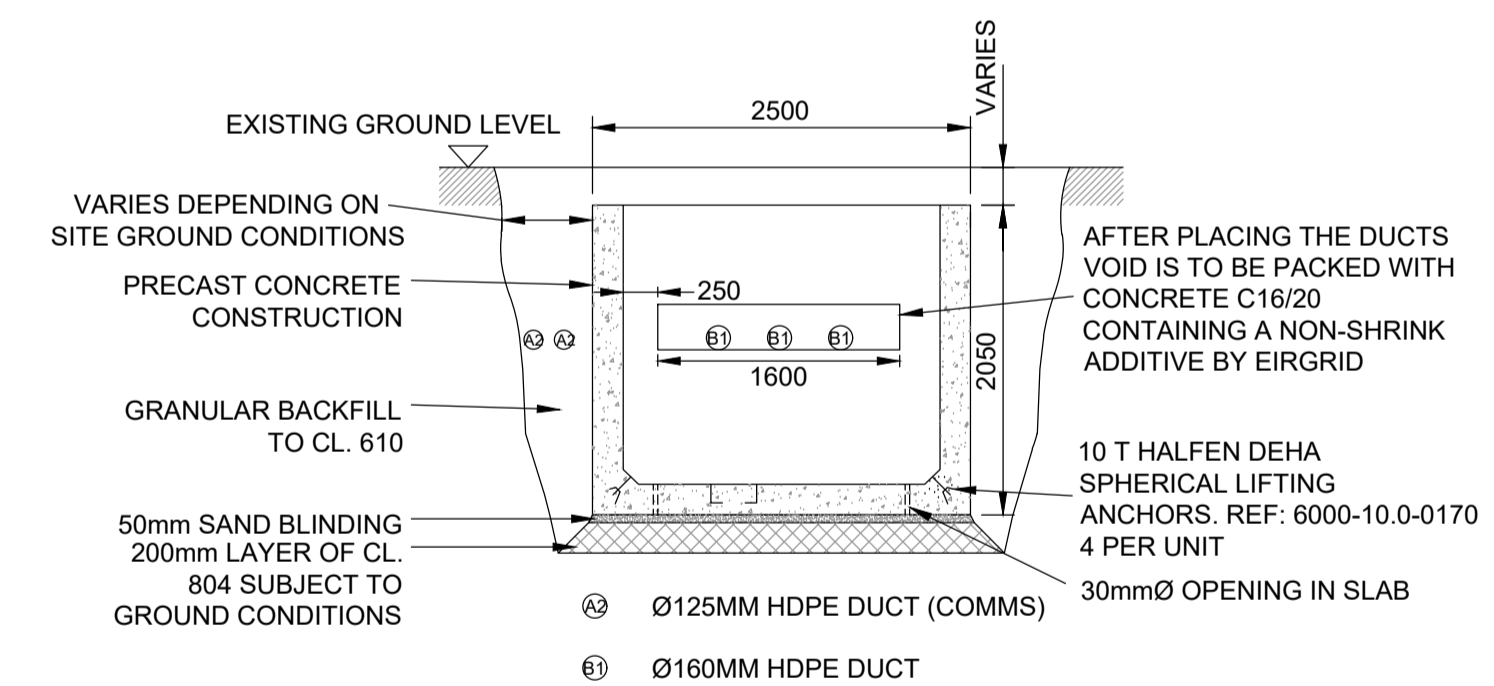
PLAN VIEW
 SCALE 1:50



ISOMETRIC VIEW PRECAST CHAMBER
 SCALE 1:50



SECTION B-B
 SCALE 1:50



SECTION A-A
 SCALE 1:50

- GENERAL NOTES:**
- THIS DESIGN IS SUBJECT TO EIRGRID DESIGN APPROVAL.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
 - DO NOT SCALE FROM THIS DRAWING, USE ONLY PRINTED DIMENSIONS.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS DEFINED OTHERWISE.
 - STANDARD FOUNDATIONS ARE BASED ON THE FORMATION AT THE BASE OF THE EXCAVATION SHOWN BEING SUITABLE FOR A MINIMUM BEARING PRESSURE OF 100kN/m². SUITABILITY OF STANDARD JOINT BAY FOUNDATIONS CAN ONLY BE CONFIRMED FOLLOWING GROUND INVESTIGATION. HAND VANE TESTS SHALL BE REQUIRED AS PER G1 SPECIFICATION. WHERE SPECIFIED MINIMUM BEARING PRESSURE IS NOT ACHIEVABLE, AND WHERE PEAT IS ENCOUNTERED, THE CONTRACTOR SHALL REFER TO THE ENGINEER FOR GUIDANCE.
 - THE LENGTH OF BONDING LEAD LENGTH SHALL IN NO CASE EXCEED 10M. NO JOINTS IN BONDING CABLE ARE PERMITTED.
 - ALL EARTHING SHALL BE IN ACCORDANCE WITH ENA ER C55 AND EIRGRID/ESBN FUNCTIONAL SPECIFICATION.
 - THE DEPTH FROM GROUND LEVEL TO THE TOP OF THE CONCRETE WALL SHALL BE
 - A. 500MM - IN CULTIVATED FIELDS & GRASS LAND
 - B. 300MM - IN PAVED ROADS AND GRASS VERGES
 - C. 350MM - IN PAVED CITY ROADS AND GRASS VERGES
 - LINK BOX CHAMBERS TO BE POSITIONED AT THE EDGE OR OFF ROAD
 - LINK BOX CHAMBERS AND C2 COMM CHAMBERS FINAL POSITIONING TO BE AGREED WITH EIRGRID PRIOR TO INSTALLATION

NOTES: -

- See General Notes

LEGEND: -

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P02	16.12.20	Issued for Planning
P01	02.12.20	Issued for Planning
P00	08.09.20	Issued for Information

PROJECT NUMBER

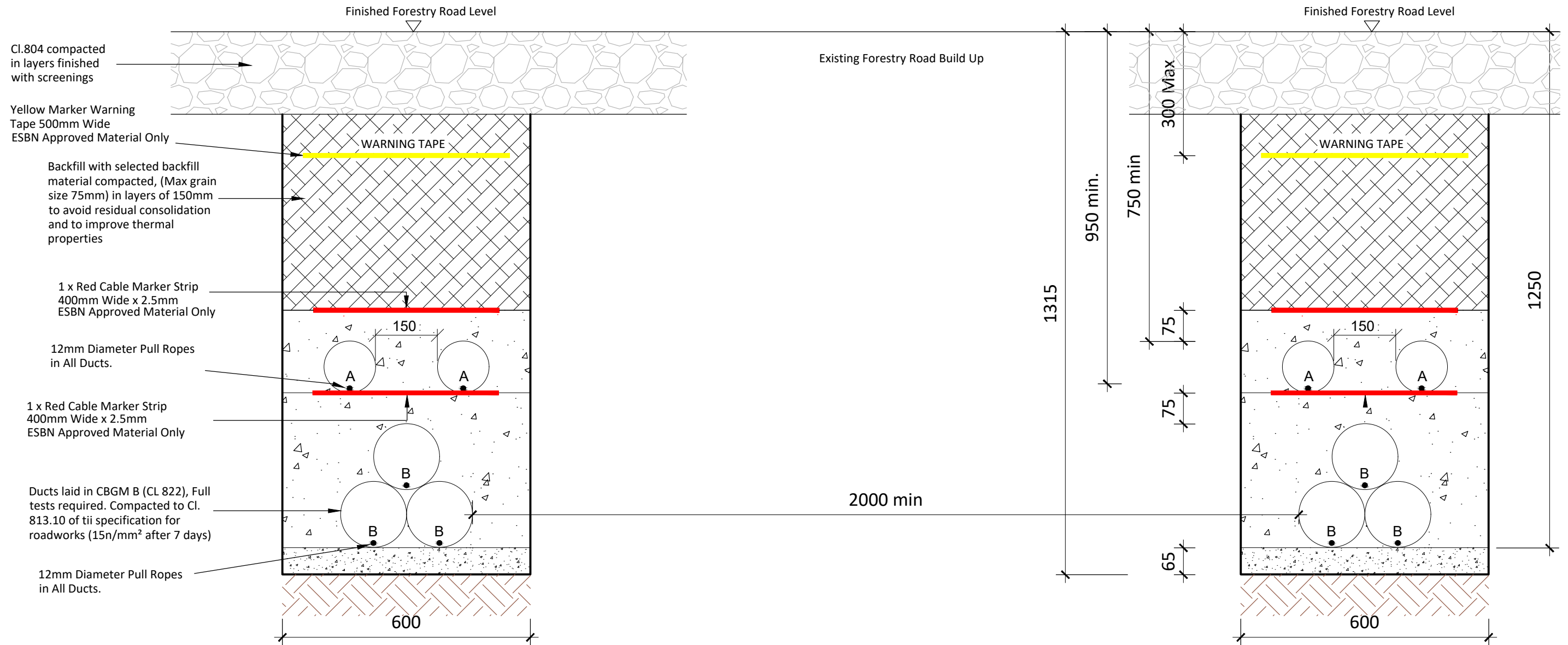
05-699

SHEET TITLE

110kV Joint Bay General
 Arrangement and Details

SHEET NUMBER

05699-DR-107




Typical Section Through Off Road Sections

SCALE 1:10

A = 125mm: Outer Diameter HDPE ESB Approved Duct, SDR=17.6
 B = 160mm : Outer Diameter HDPE ESB Approved Duct, SDR=21

- NOTES:**
- This design is subject to EirGrid design approval.
 - This drawing is to be read in conjunction with all other relevant documentation.
 - Dimensions are in millimeters, unless noted otherwise.
 - Drawings are not to be scaled use figured dimensions only.



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PROJECT
Castlebanny Wind Farm
 110kV Grid Connection

PROJECT NUMBER
 05-699

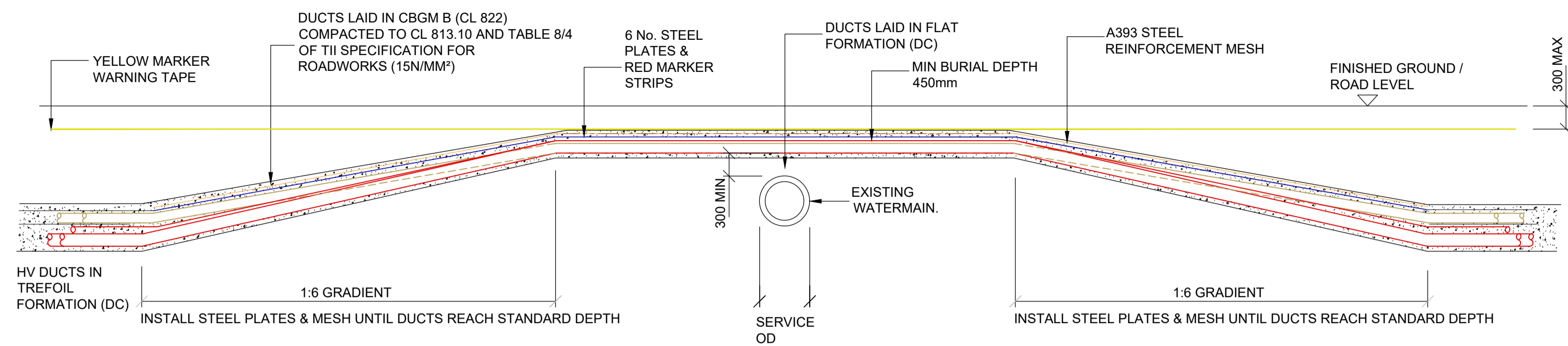
SHEET NUMBER
 05699-DR-108

SHEET TITLE
Typical Double Circuit 110kV Ducting through Forestry Road

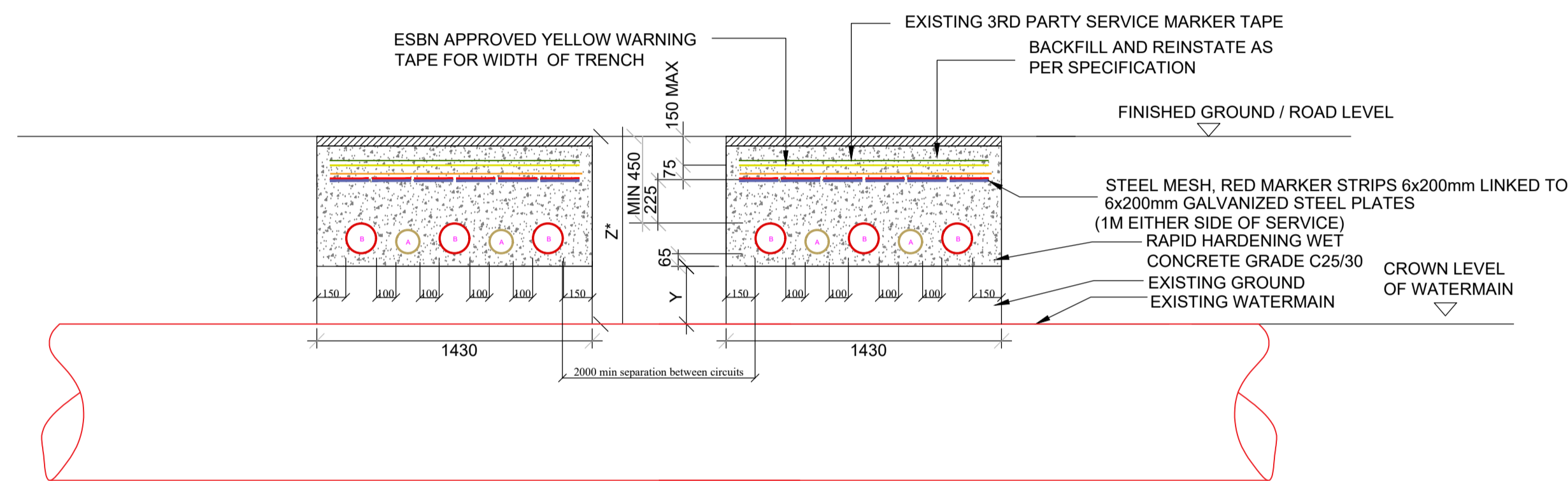
DRAWING STATUS
 For Planning

ISSUE/REVISION		
I/R	DATE	DESCRIPTION
P02	16.12.20	Issued for Planning
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WATERMAIN OVERCROSSING



SECTION A-A
SCALE 1:50



SECTION B-B
SCALE: NTS

EXISTING WATERMAIN	Y (mm)	Z* (mm)
<=300	235	885 MIN
>300	435	1085 MIN

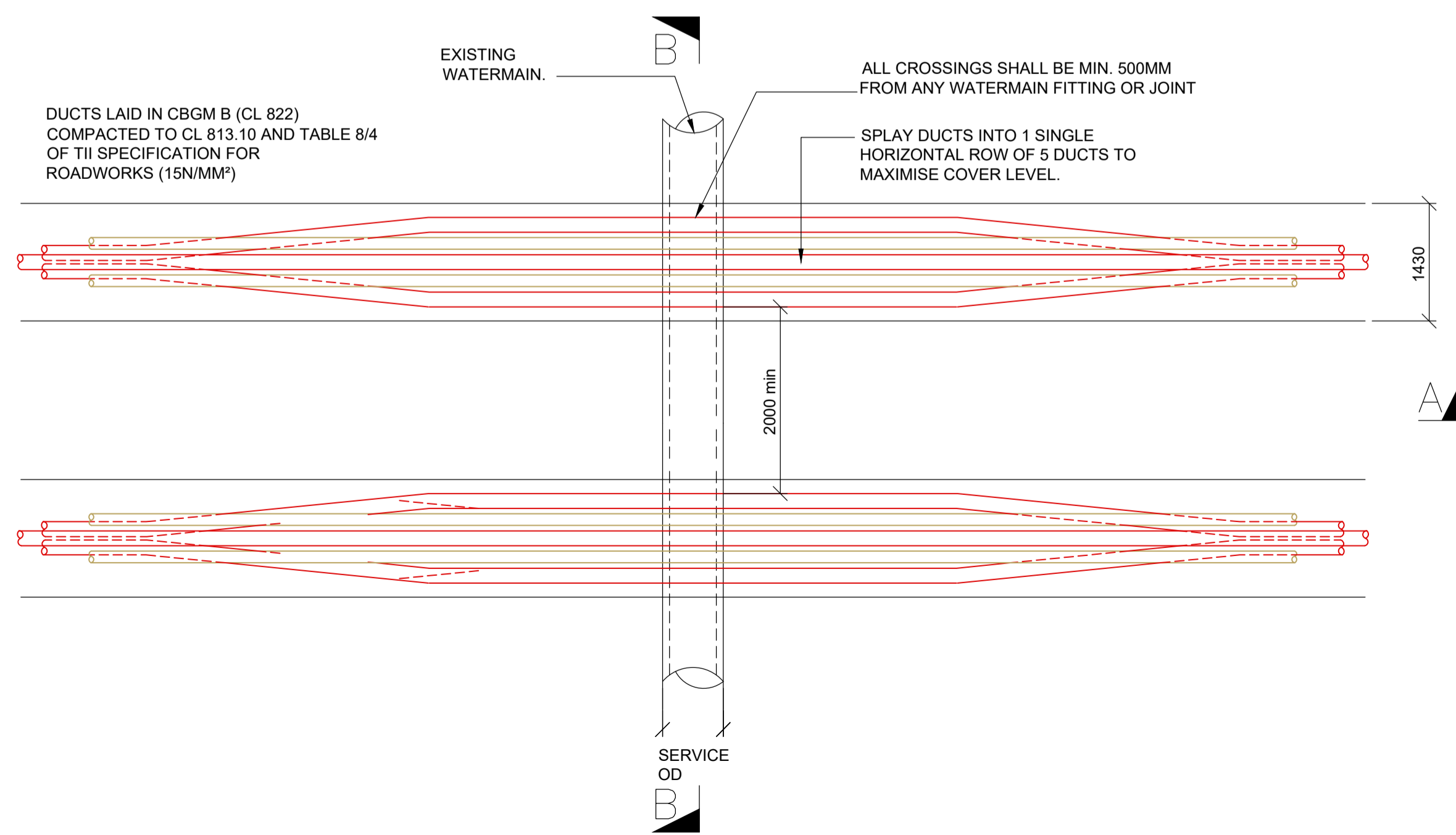
* ALL EXISTING SERVICES WITH COVER LESS THAN MIN. DIMENSIONS ABOVE SHALL BE CROSSED BY UNDERCROSSING METHOD

GENERAL NOTES

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- This drawing is to be read in conjunction with all other relevant documentation.
- Do not scale from this drawing use only printed dimensions.
- All dimensions are in millimetres, all chainages, levels and co-ordinates are in metres unless defined otherwise.
- This drawing is to be read in conjunction with the project Health & Safety file for any identified potential risks.
- No excavation shall commence until the contractor has consulted up to date services drawings and carried out an Electromagnetic Locator (EML) Scan.
- Hand dig only within 500mm of existing services.
- If compacting CBGM B could cause damage to the culvert / service below, use rapid hardening cement grade C25/30 following engineers prior approval.
- For standard trench cross section drawings and minimum horizontal separation to existing services, see 05699-100,101, 108 (TREFOIL) and 05699-104 (FLAT).
- Where depths exceed 3000mm to the top of duct the contractor shall consult the cable system design engineer for phase spacing requirements.
- All works shall be in accordance with Irish Water code of practice for infrastructure.
- Backfill as per guidelines for the opening, backfilling and reinstatement of openings in public roads (2015)
- As per WIS 4-08-02 & IGN 4-08-01 granular material shall be 14mm to 5mm graded aggregate or 10mm single sized aggregate
- All Products and materials to be utilised during construction to comply with EirGrid functional specification for road works and all relevant Irish (European) and British standards
- 300mm minimum vertical and horizontal clearances to be observed between cable ducts and third party services (e.g. gas pipes, water mains, culverts etc.) In the case of high risk 3rd party services, greater clearances may be required. Designer to consult EirGrid and 3rd party service owners for guidance
- Steel plates must cover ducts. No overlap is required however standard dimensions may result in an overlap. Spacing of 10mm to be maintained between steel plates to prevent the transfer of stray current.
- Templates are to be used at 5m intervals during duct installation in CBGM. Pre-made 75mm wide concrete spacers to be used during duct installation in wet concrete
- If existing service marker tape is not present, the ESBN yellow marker tape should be installed at maximum 300mm below finished surface level

LEGEND

- 160mm Ø HDPE POWER DUCT WITH 12mm DIAMETER PULL ROPE
- YELLOW MARKER WARNING TAPE
- 125mm Ø HDPE COMMUNICATION DUCT WITH 12mm DIAMETER PULL ROPE
- A393 STEEL REINFORCEMENT MESH
- RED MARKER STRIP OR STEEL PLATES
- 6mm GALVANISED STEEL PLATE
- EXISTING 3RD PARTY MARKER TAPE



PLAN VIEW
SCALE 1:50

PROJECT

Castlebanny Wind Farm
110kV Grid Connection

CLIENT



CONSULTANTS



NOTES:

- See General Notes

LEGEND:

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	02.12.20	Issued for Planning
P00	08.09.20	Issued for Information
I/R	DATE	DESCRIPTION

PROJECT NUMBER

05-699

SHEET TITLE

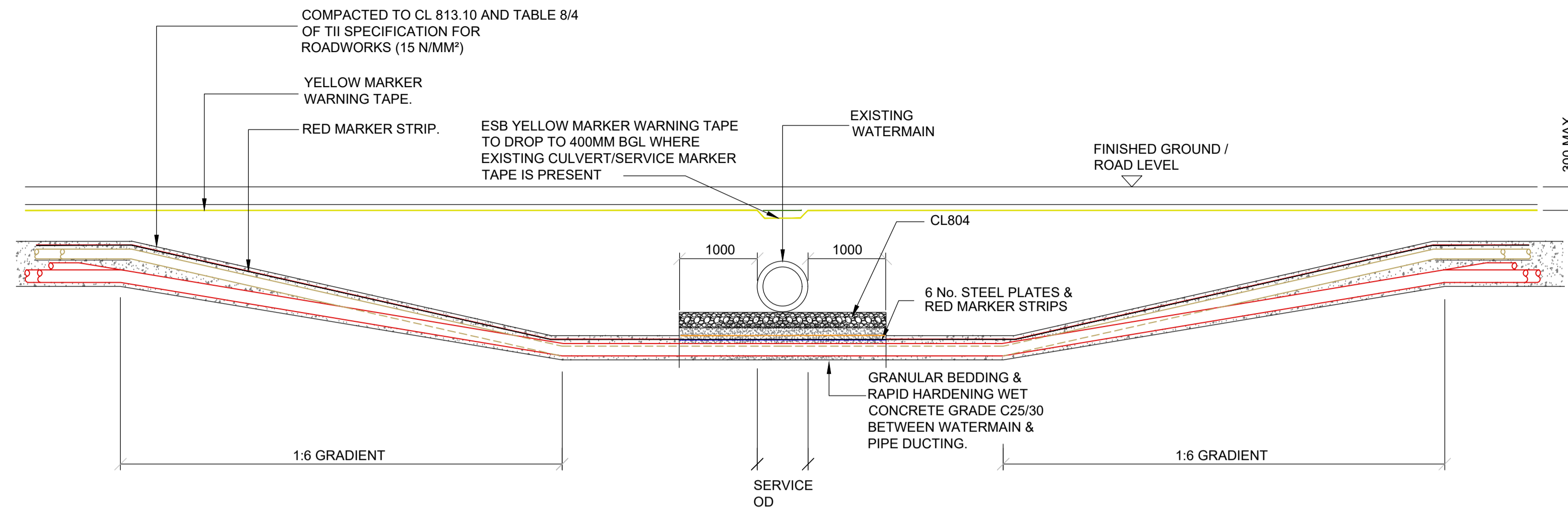
Typical Trench DC Trench Section
for crossing over Watermain

SHEET NUMBER

05699-DR-109

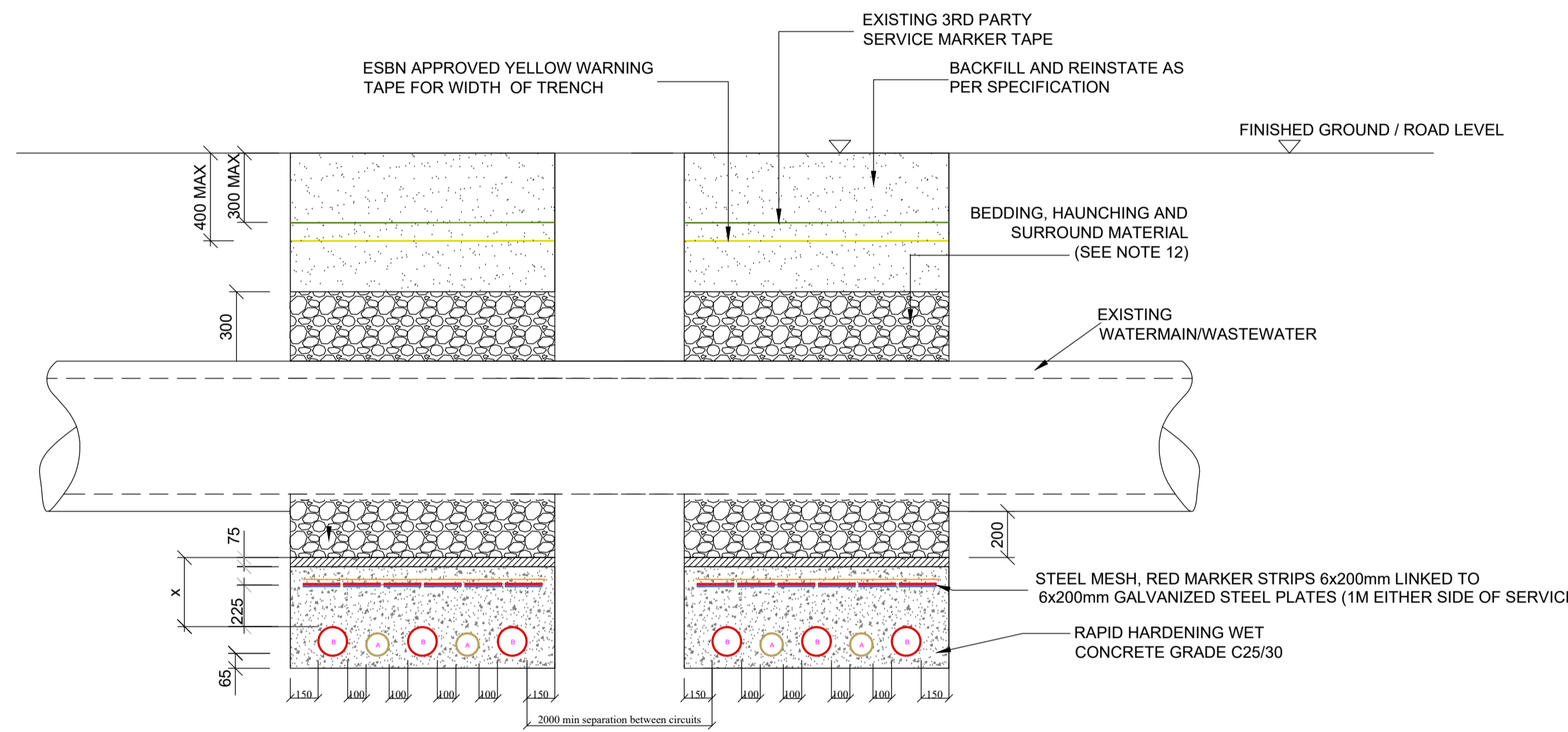
ISO A1 594mm x 841mm

WATERMAIN UNDERCROSSING



SECTION A-A

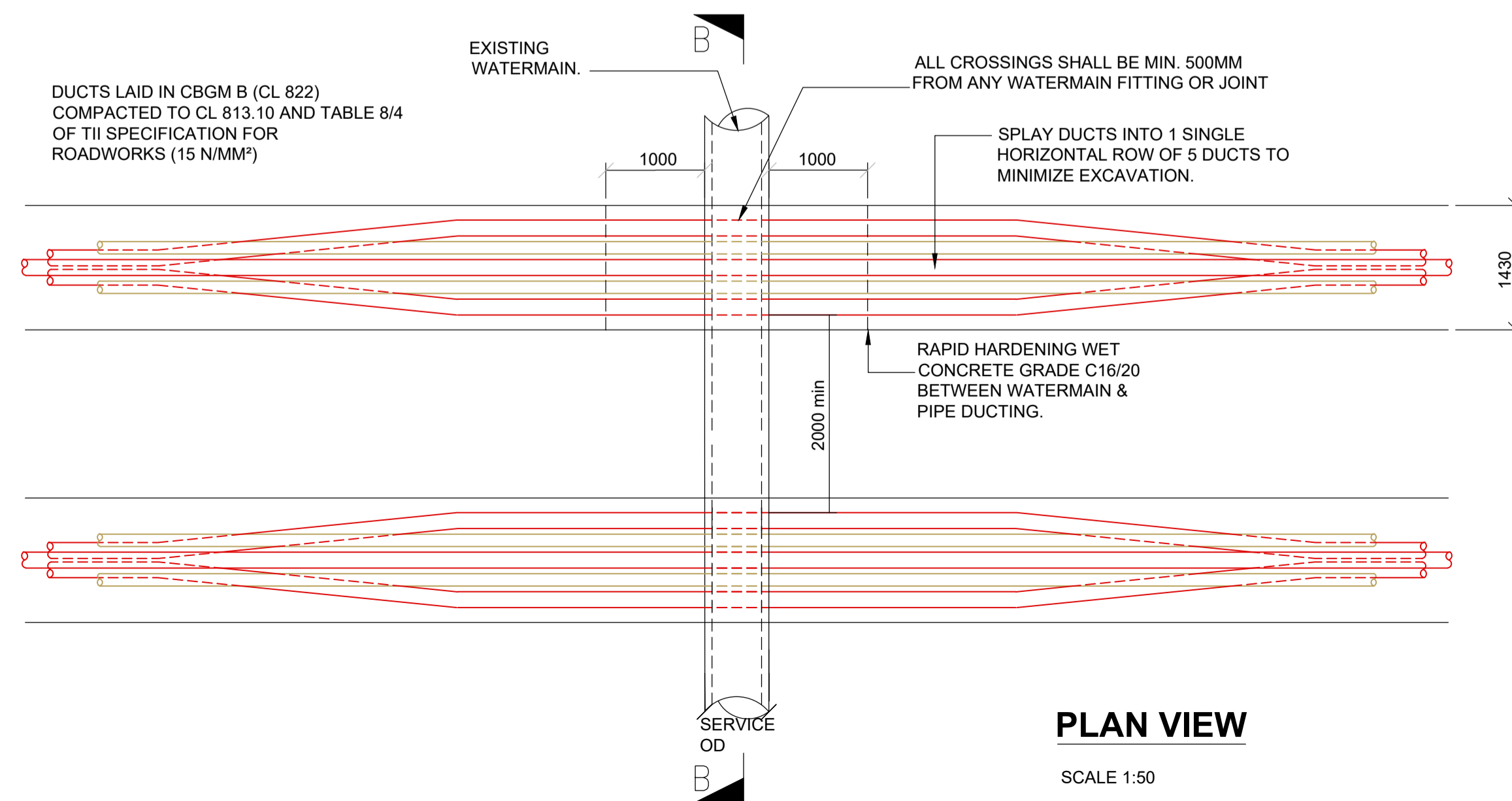
SCALE 1:50



A = 125mm OUTER DIAMETER HDPE ESB APPROVED DUCT, SDR=17.6
 B = 160mm OUTER DIAMETER HDPE ESB APPROVED DUCT, SDR=21

SECTION B-B

SCALE: NTS



PLAN VIEW

SCALE 1:50

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LEGEND

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- A393 STEEL REINFORCEMENT MESH
- RED MARKER STRIP OR STEEL PLATES
- 6mm GALVANISED STEEL PLATE
- EXISTING 3RD PARTY MARKER TAPE

EXISTING WATERMAIN	X (mm)
<=300	200
>300	300



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PROJECT

Castlebanny Wind Farm
 110kV Grid Connection

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NOTES: -

- See General Notes

LEGEND: -

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	02.12.20	Issued for Planning
P00	08.09.20	Issued for Information
I/R	DATE	DESCRIPTION

PROJECT NUMBER

05-699

SHEET TITLE

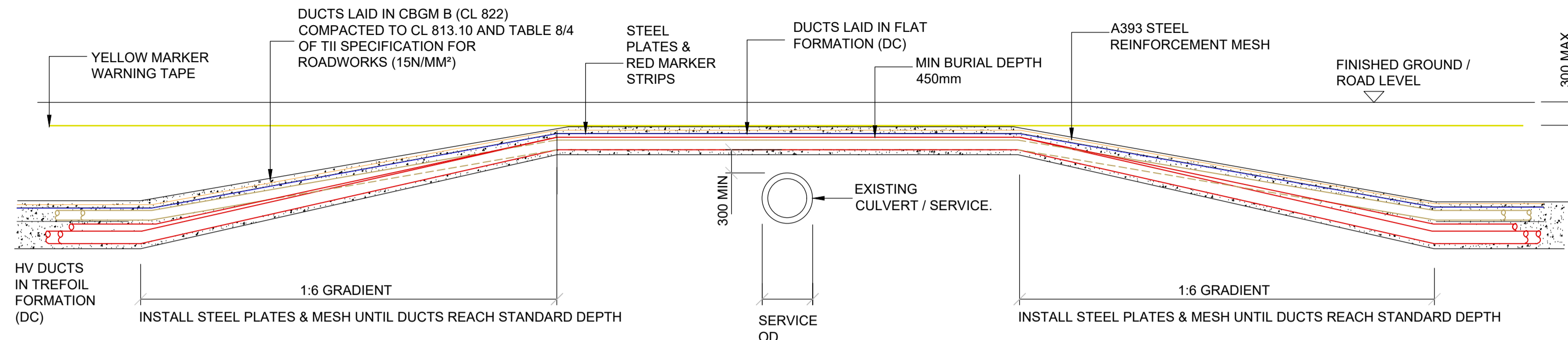
Typical DC Trench Sections for
 Crossing Under Watermain

SHEET NUMBER

05699-DR-110

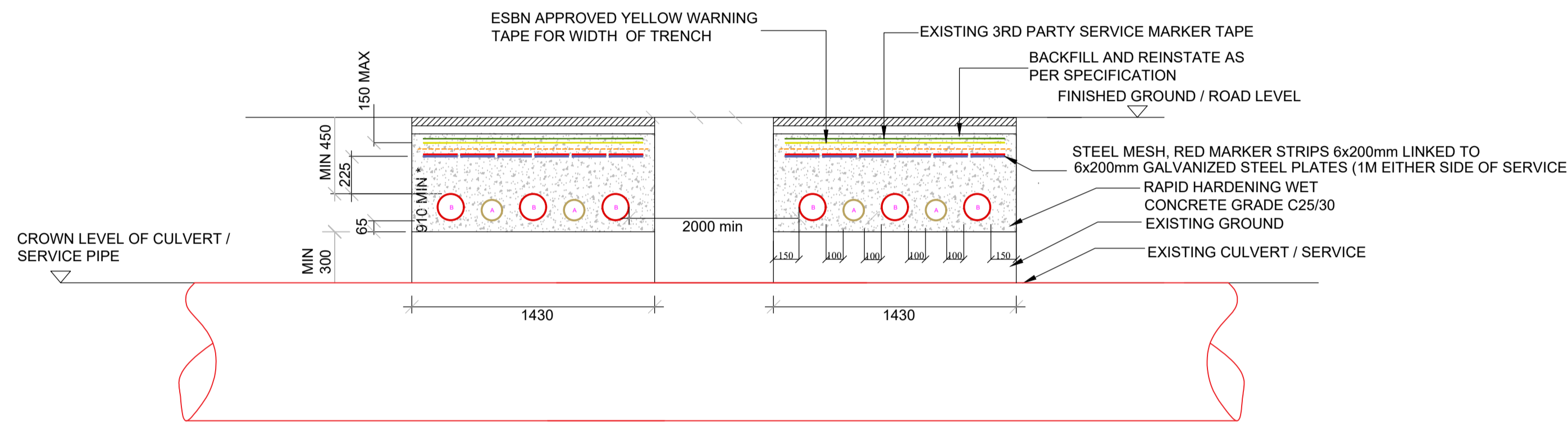
Project Management Initials: Designer: GB Checked: SK Approved: RG

CULVERT / SERVICE OVERCROSSING



SECTION A-A

SCALE 1:50



* ALL EXISTING SERVICES WITH COVER LESS THAN MIN. DIMENSIONS ABOVE SHALL BE CROSSED BY UNDERCROSSING METHOD

SECTION B-B

SCALE: NTS

A = 125mm OUTER DIAMETER HDPE ESB APPROVED DUCT, SDR=17.6

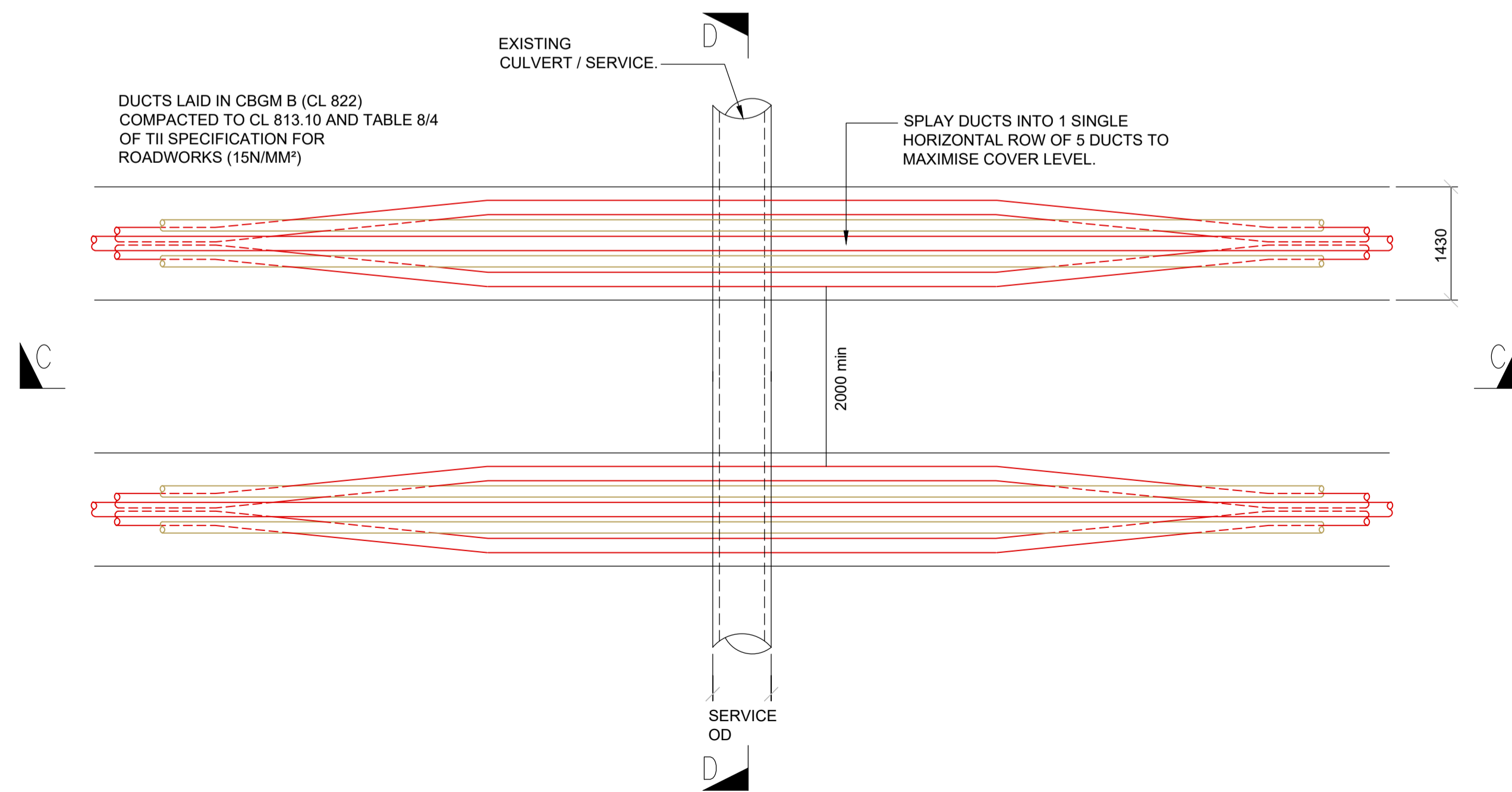
B = 160mm OUTER DIAMETER HDPE ESB APPROVED DUCT, SDR=21

GENERAL NOTES

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- Where depths exceed 3000mm to the top of duct the contractor shall consult the cable system design engineer for phase spacing requirements.
- For Watermain crossings, see 05699-109 and 110
- All Products and materials to be utilised during construction to comply with EirGrid functional specification for road works and all relevant Irish (European) and British standards
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LEGEND

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	125mm Ø HDPE COMMUNICATION DUCT WITH 12mm DIAMETER PULL ROPE		A393 STEEL REINFORCEMENT MESH
	RED MARKER STRIP OR STEEL PLATES		6mm GALVANISED STEEL PLATE
			EXISTING 3RD PARTY MARKER TAPE



PLAN VIEW

SCALE 1:50

PROJECT

Castlebanny Wind Farm
110kV Grid Connection

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NOTES: -

- See General Notes

LEGEND: -

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	02.12.20	Issued for Planning
P00	08.09.20	Issued for Information
I/R	DATE	DESCRIPTION

PROJECT NUMBER

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SHEET TITLE

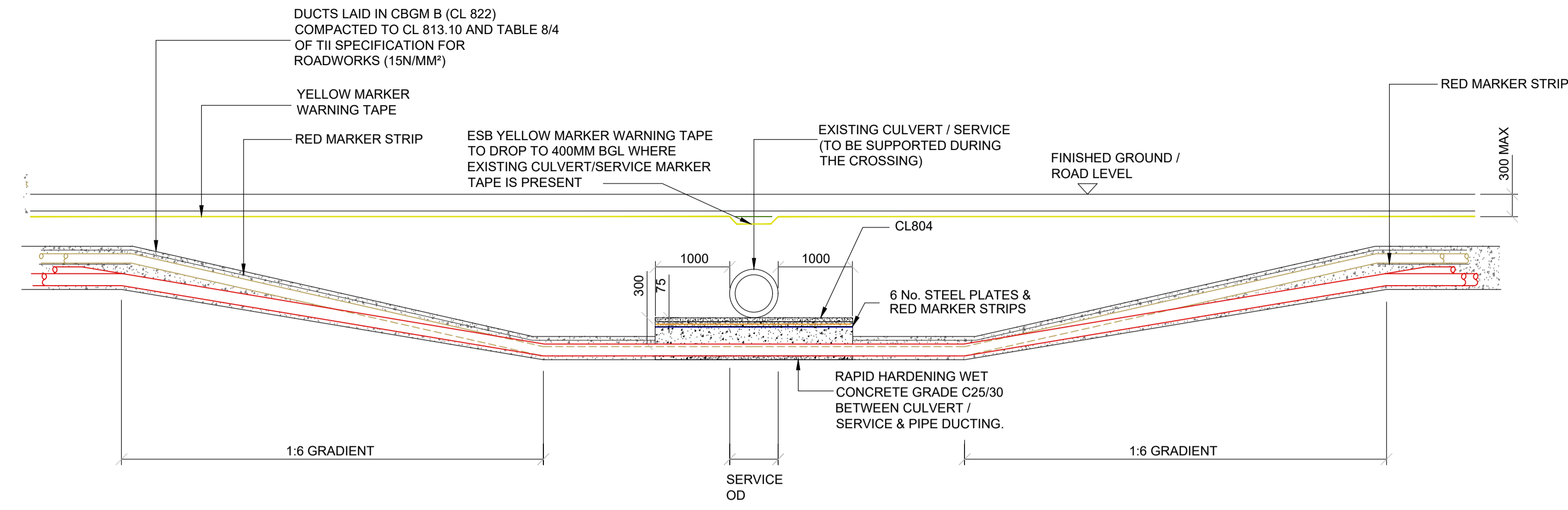
Typical Trench Sections for Crossing Over Existing Culverts/Services

SHEET NUMBER

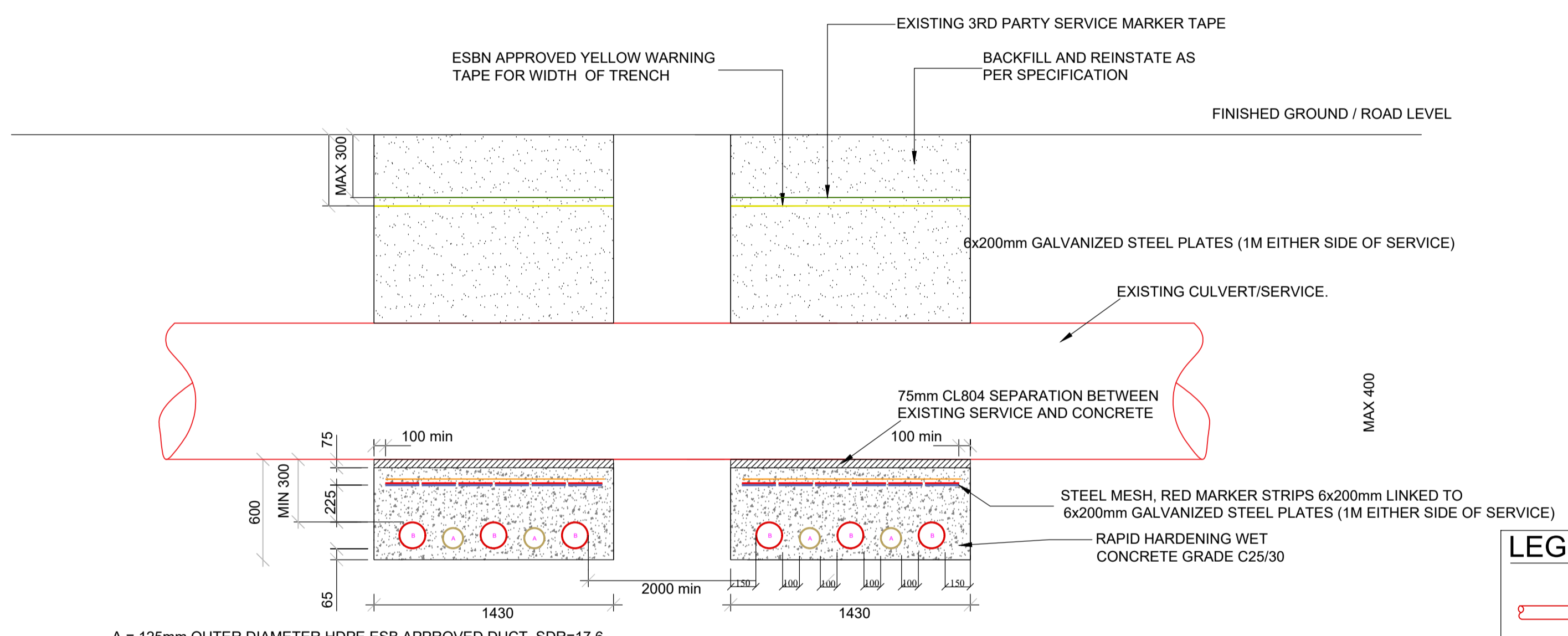
05699-DR-111

ISO A1 594mm x 841mm

CULVERT / SERVICE UNDERCROSSING

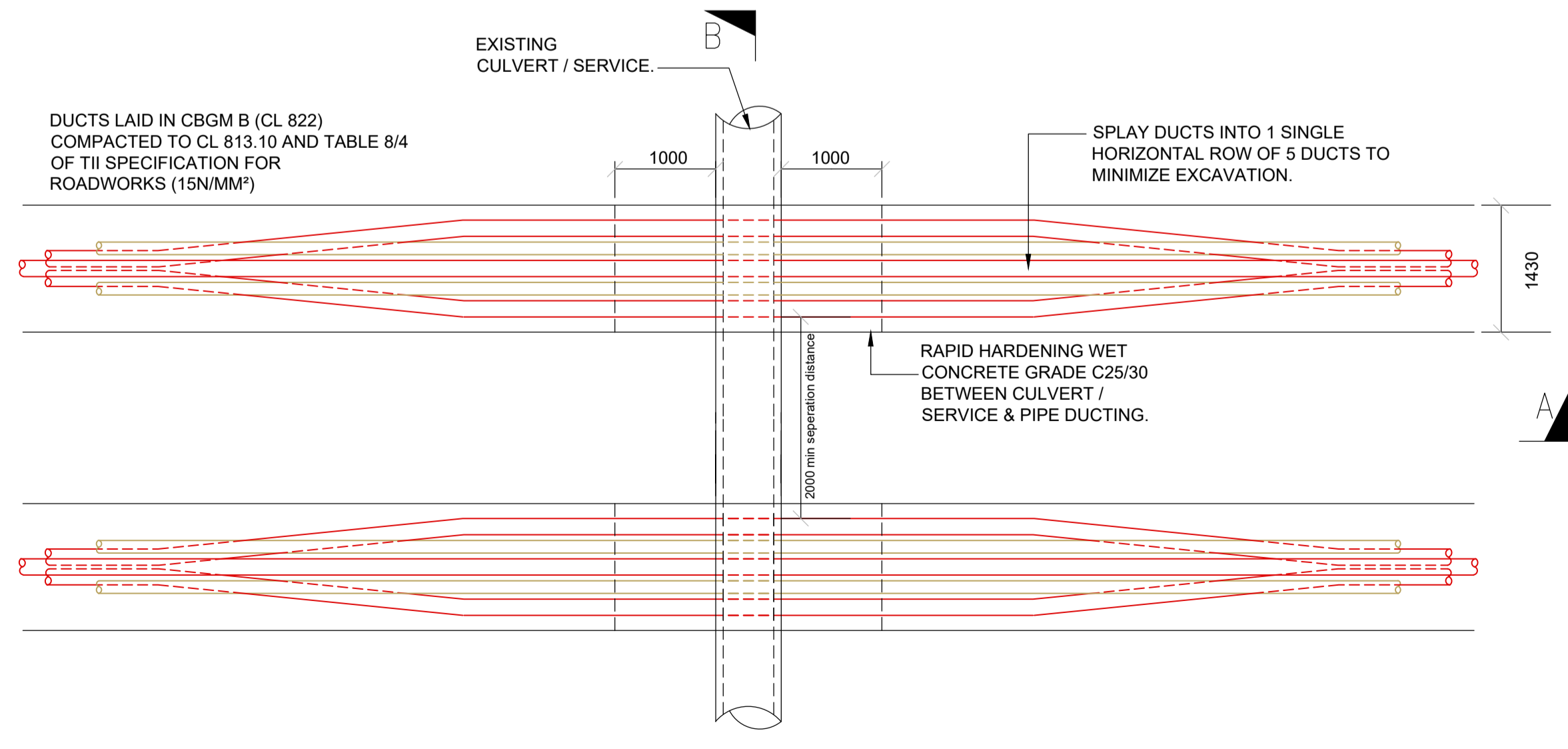


SECTION A-A
SCALE 1:50



A = 125mm OUTER DIAMETER HDPE ESB APPROVED DUCT, SDR=17.6
B = 160mm OUTER DIAMETER HDPE ESB APPROVED DUCT, SDR=21

SECTION B-B
SCALE: NTS



PLAN VIEW
SCALE 1:50

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LEGEND

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	RED MARKER STRIP OR STEEL PLATES		6mm GALVANISED STEEL PLATE
			EXISTING 3RD PARTY MARKER TAPE



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PROJECT
Castlebanny Wind Farm
110kV Grid Connection

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CONSULTING ENGINEERS



NOTES: -
• See General Notes

LEGEND: -

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	02.12.20	Issued for Planning
P00	08.09.20	Issued for Information
I/R	DATE	DESCRIPTION



PROJECT NUMBER
05-699

SHEET TITLE
Typical DC Trench Section for Crossing under Culverts/Services

SHEET NUMBER
05699-DR-112

Project Management Initials: Designer: GB Checked: SK Approved: RG

Culvert Crossing Schedule

Culvert No.	Dimensions (mm)	Material	Approx. Cover (mm)	Proposed Crossing Methodology	Photo
1.	1. 600 wide x 900 deep (x2) 2. 950mm (x2)	1. Masonry Box 2. HPDE	1. 1120 2. 1500	OVERCROSSING	
2.	450mm	Concrete	1400	OVERCROSSING	



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PROJECT

**Castlebanny Windfarm
110kV Grid Connection**

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NOTES: -

- No structural surveys have been carried out and the proposals are subject to detailed design.
- Crossings are in compliance with EirGrid specification requirements for shallow formation, min depth, etc.
- Additional culverts may be encountered on the route.

LEGEND: -

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P01	02.12.20	Issued for Planning
P00	25.09.20	Issued for Information

PROJECT NUMBER

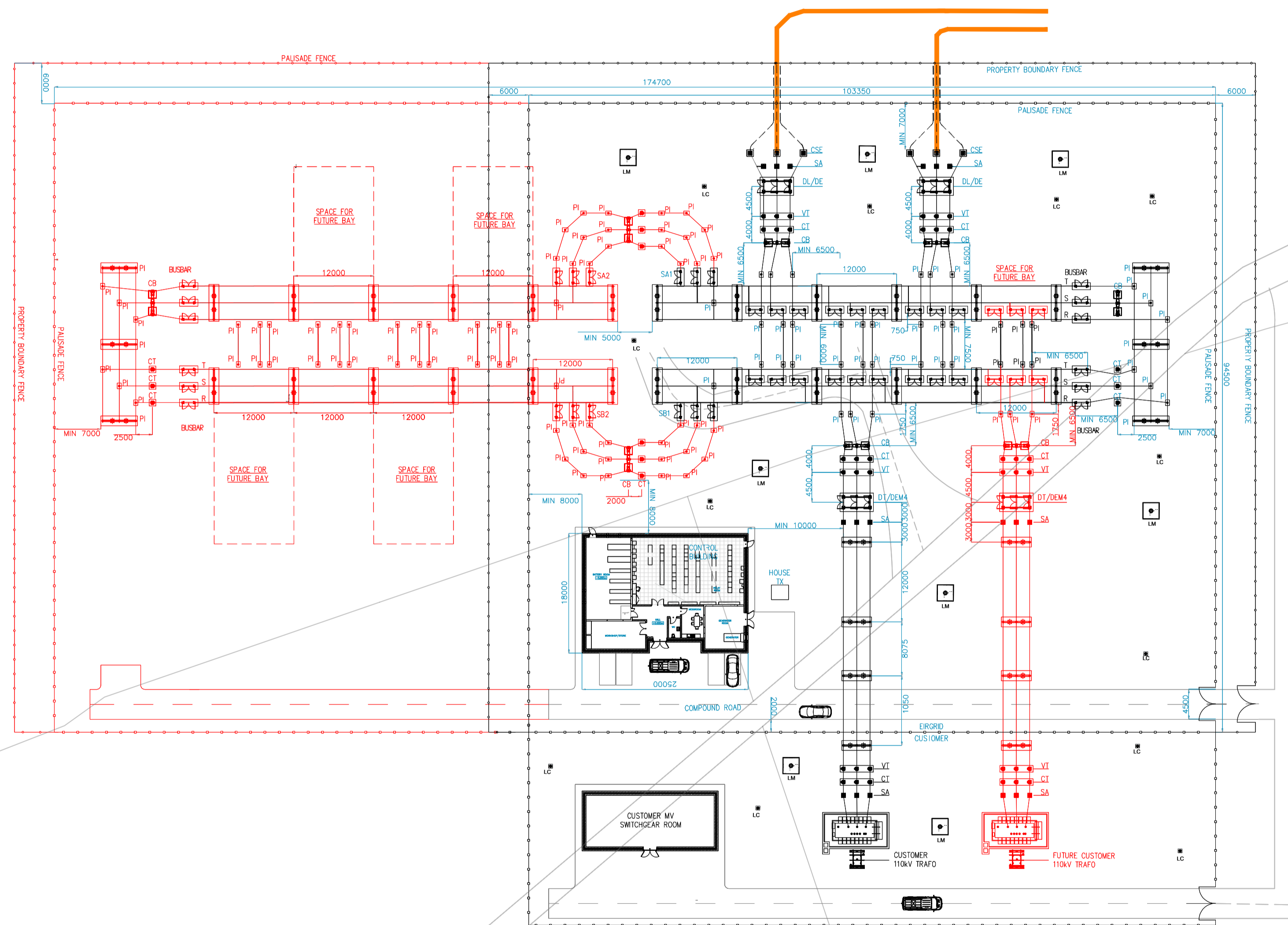
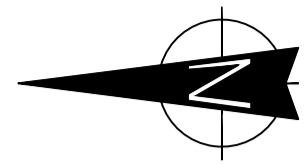
05-720

SHEET TITLE

Proposed Culvert Crossing
Schedule

SHEET NUMBER

05699-DR-113



Substation Layout Plan
SCALE: 1:500

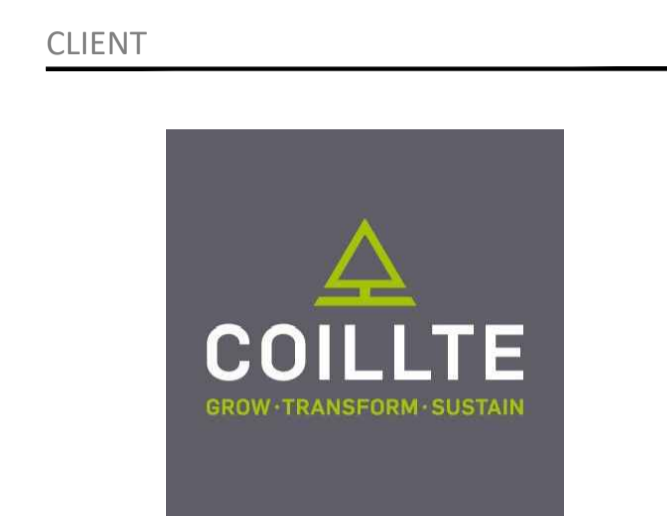
Project Management Initials: Designer: LG Checked: GH Approved: SK



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Tel: 00 44 1256406664

PROJECT
**Castlebanny Wind Farm
110kV Grid Connection**



- NOTES: -
1. Layout and Arrangements of Substation Building and Electrical Equipment is shown indicatively and for illustration purposes only.
 2. Dimensions shown are as per current EirGrid Specifications at the time of submission. Dimensions may vary at time of construction to reflect any revisions to EirGrid Specifications.
 3. Final Specifications of Buildings and Electrical Equipment is to be as per EirGrid and ESB Specifications.
 4. The Elevation of the Compound will be depicted by localized Topography such that Cut/Fill Earthworks associated with the construction of the Compound are balanced.
 5. An oil interceptor will be installed below ground, position TBC during detailed design.

- LEGEND: -
- Required Infrastructure
 - Future Infrastructure (Space Only - Not being constructed as part of the planning application)
 - Proposed UGC Route
 - Proposed Access Road

Symbol	Description
CSE	Cable Sealing End.
SA	Surge Arrester.
DL/DE	Line / Earth Disconnect.
DT/DEM1	Trails / Earth Disconnect.
VT	Voltage Transformer.
CT	Current Transformer.
CB	Circuit Breaker.
DA	Busbar Disconnect.
PI	Post Insulator.
LM	Lighting Mast.
LC	Lighting Column.

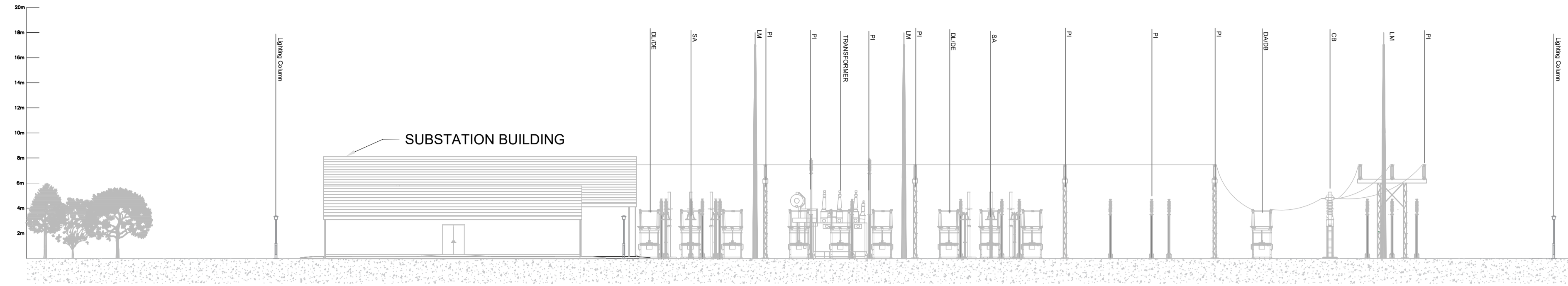
ISSUE/REVISION

Issue/Revision	DATE	DESCRIPTION
P04	19.01.21	Issued for Planning
P03	02.12.20	Issued for Planning
P02	04.09.20	Issued for Information
P01	07.08.20	Updated Layout
P00	17.07.20	Issued for Information

PROJECT NUMBER
05-699

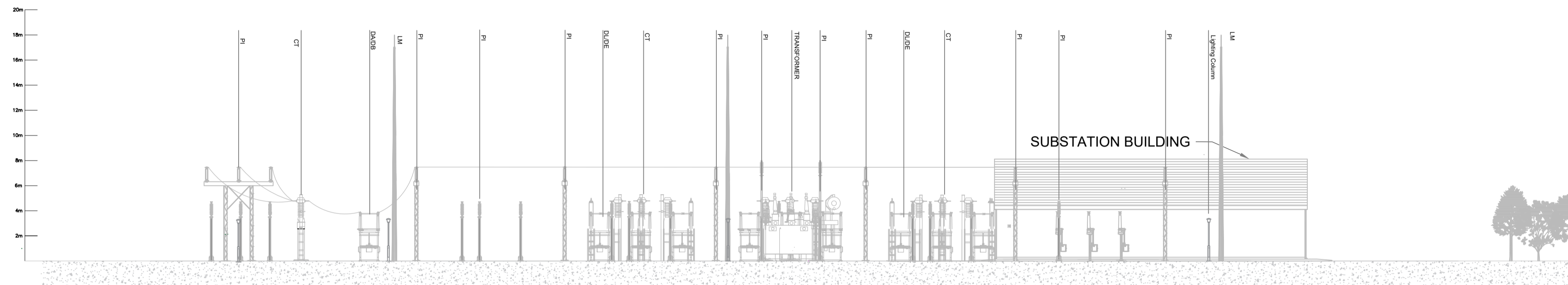
SHEET TITLE
Proposed 110kV AIS Loop Station Location

SHEET NUMBER
05699-DR-202



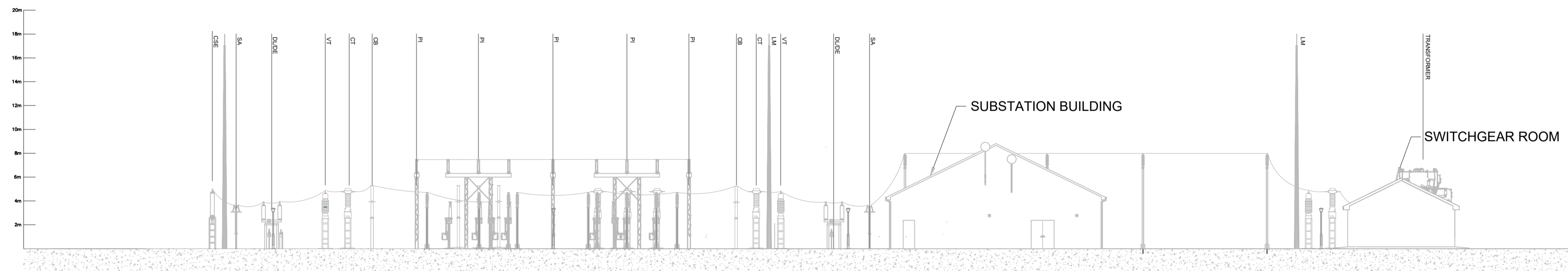
South West Elevation

SCALE 1:250



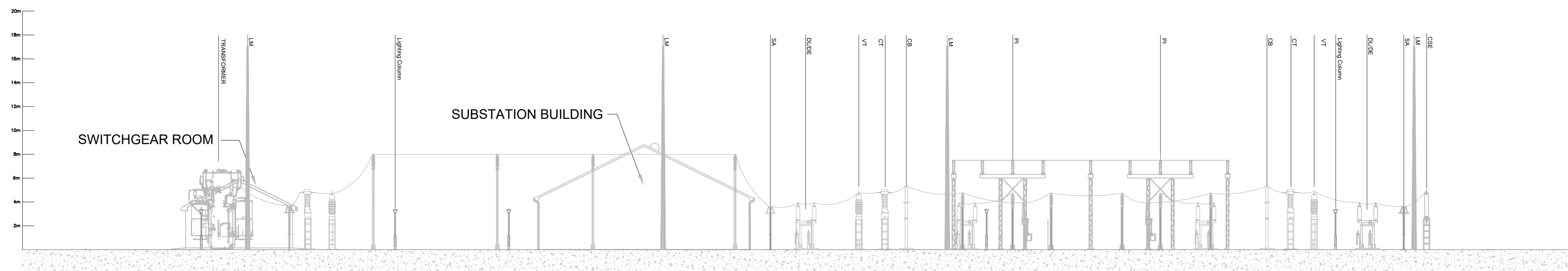
North East Elevation

SCALE 1:250



North West Elevation

SCALE 1:250



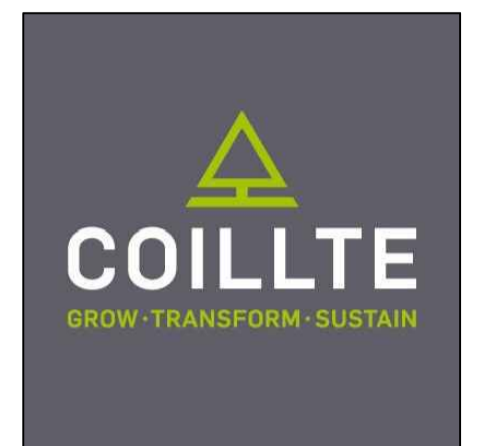
South East Elevation

SCALE 1:250

PROJECT

**Castlebanny Wind Farm
 110kV Grid Connection**

CLIENT



CONSULTANTS



NOTES: -

1. Layout and Arrangements of Substation Building and Electrical Equipment is shown indicatively and for illustration purposes only.
2. Dimensions shown are as per current EirGrid Specifications at the time of submission. Dimensions may vary at time of construction to reflect any revisions to EirGrid Specifications.
3. Final Specifications of Buildings and Electrical Equipment is to be as per EirGrid and ESB Specifications.
4. The Elevation of the Compound will be depicted by localized Topography such that Cut/Fill Earthworks associated with the construction of the Compound are balanced.

LEGEND: -

	Description
CSE	Cable Sealing End.
SA	Surge Arrester.
DL/DE	Line / Earth Disconnect.
DT/DEMI	Trafo / Earth Disconnect.
VT	Voltage Transformer.
CT	Current Transformer.
CB	Circuit Breaker.
DA	Busbar Disconnect.
PI	Post Insulator.
LM	Lightning Mast.
LC	Lighting Column

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	02.12.20	Issued for Planning
P00	04.09.20	Issued For Information
I/R	DATE	DESCRIPTION

PROJECT NUMBER

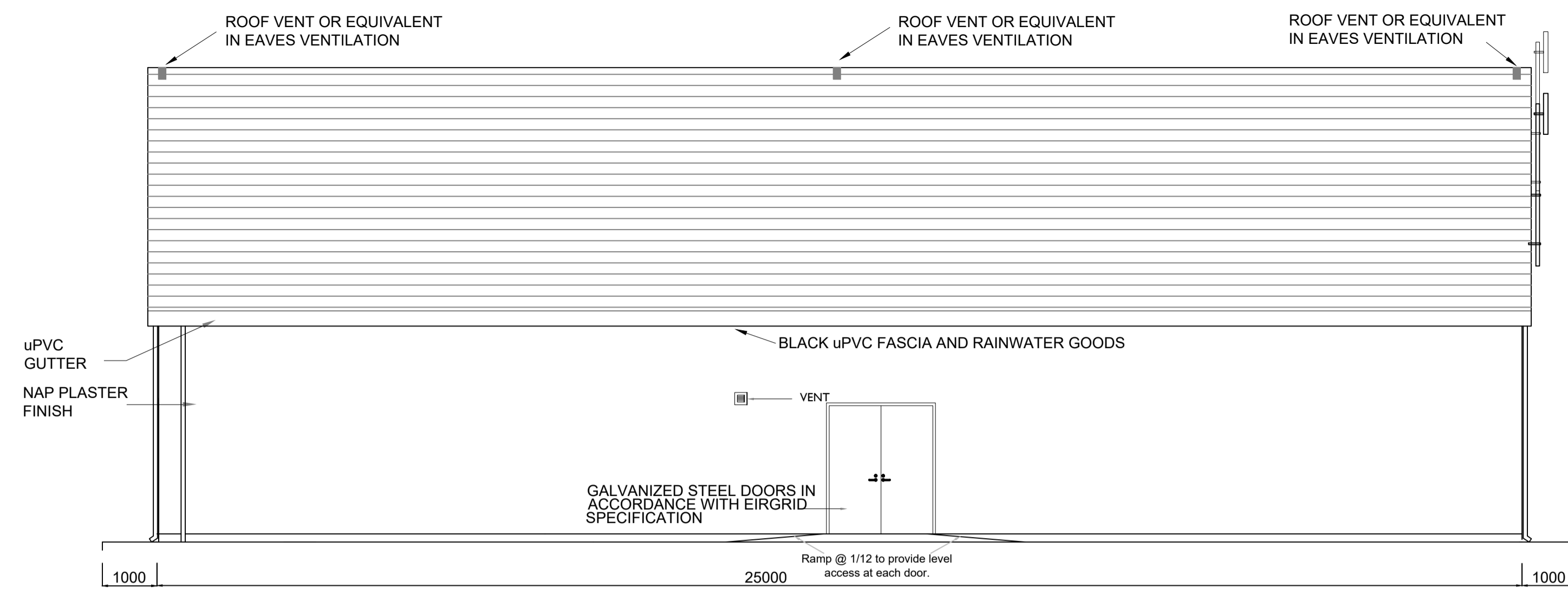
05-699

SHEET TITLE

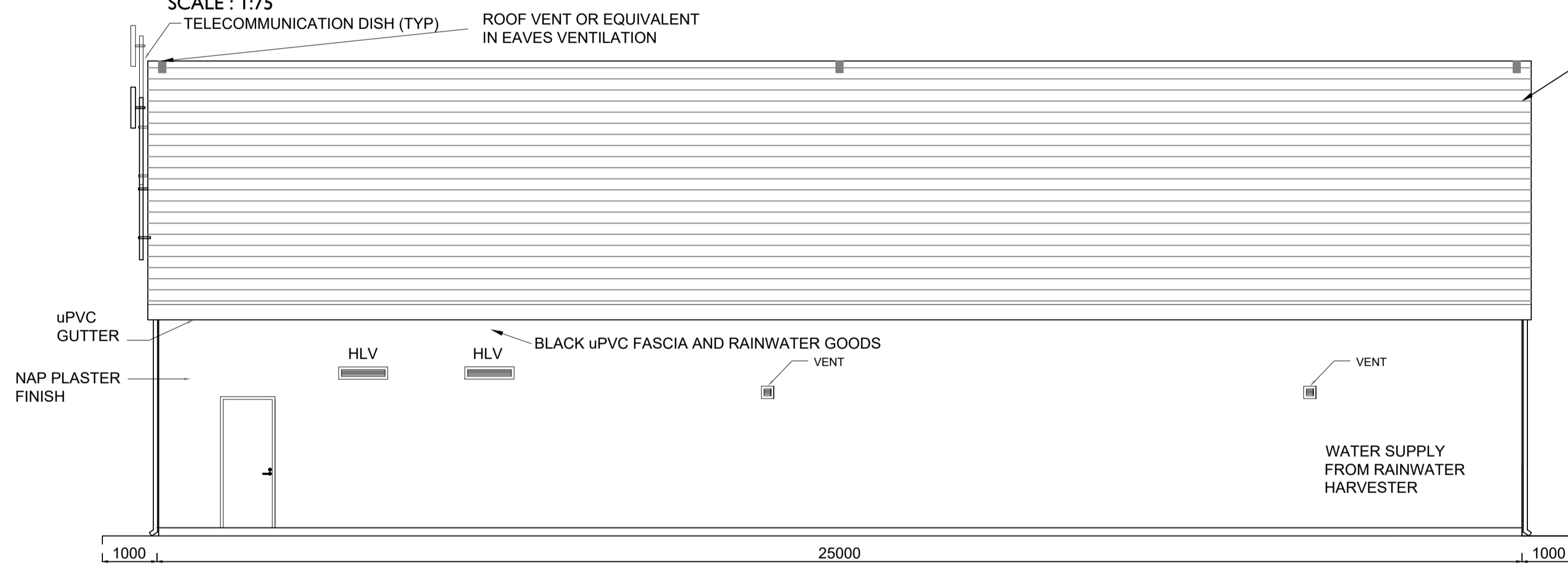
Proposed 110kV AIS Loop Station Elevations

SHEET NUMBER

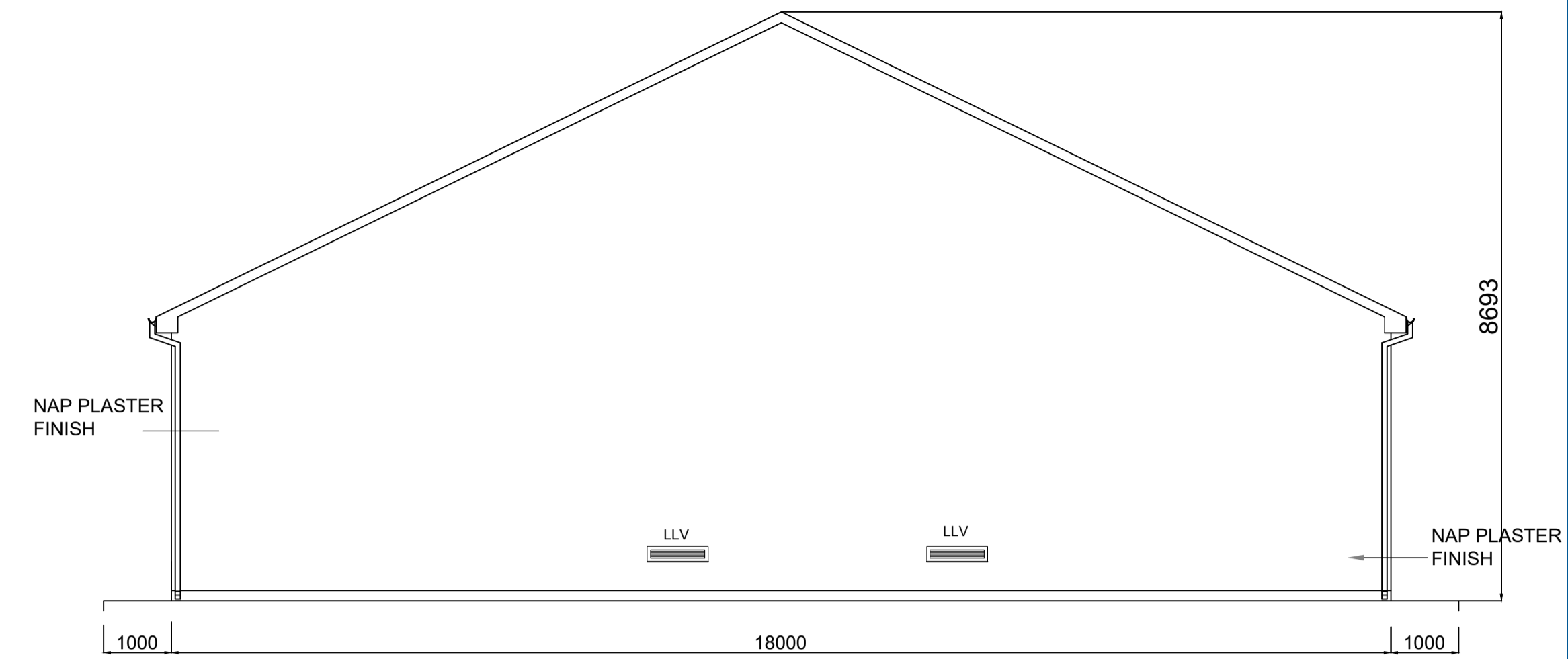
05699-DR-203



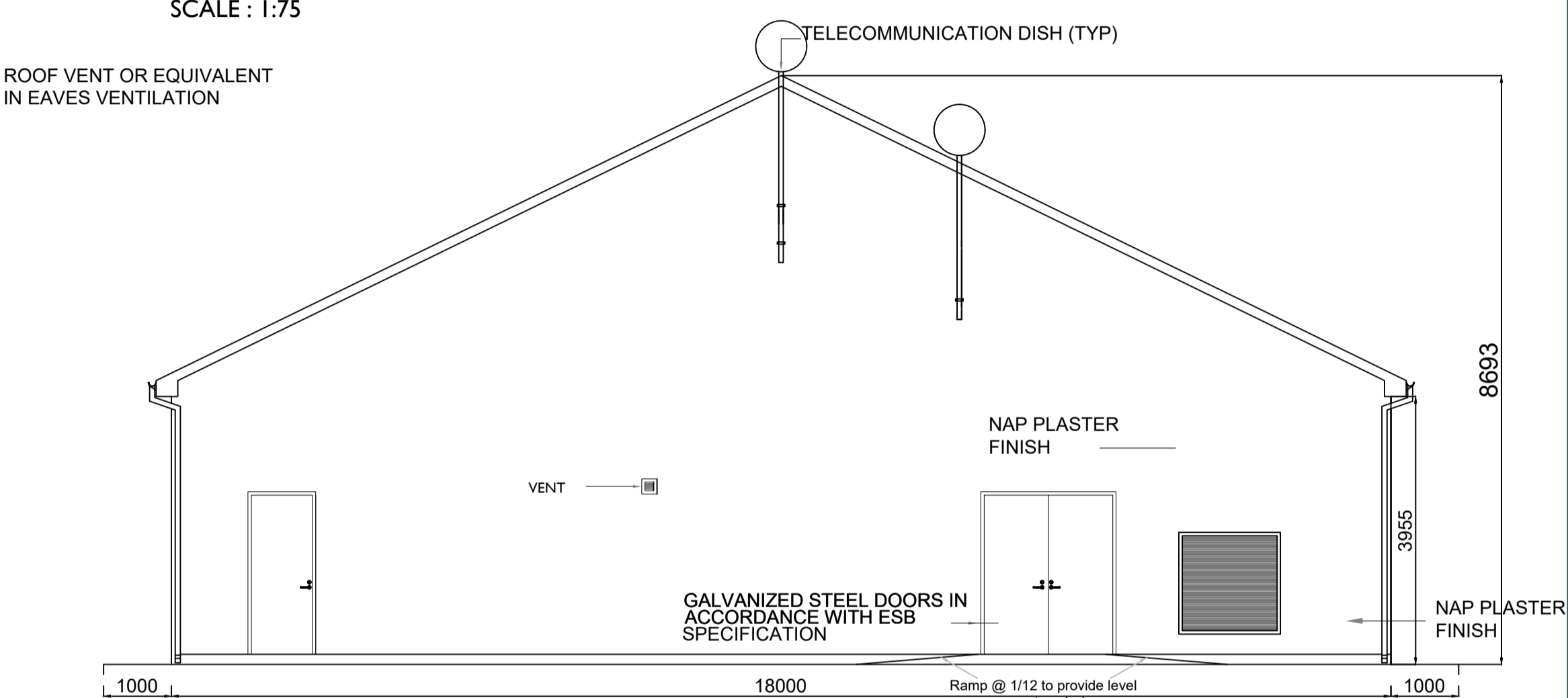
NORTH ELEVATION
SCALE : 1:75



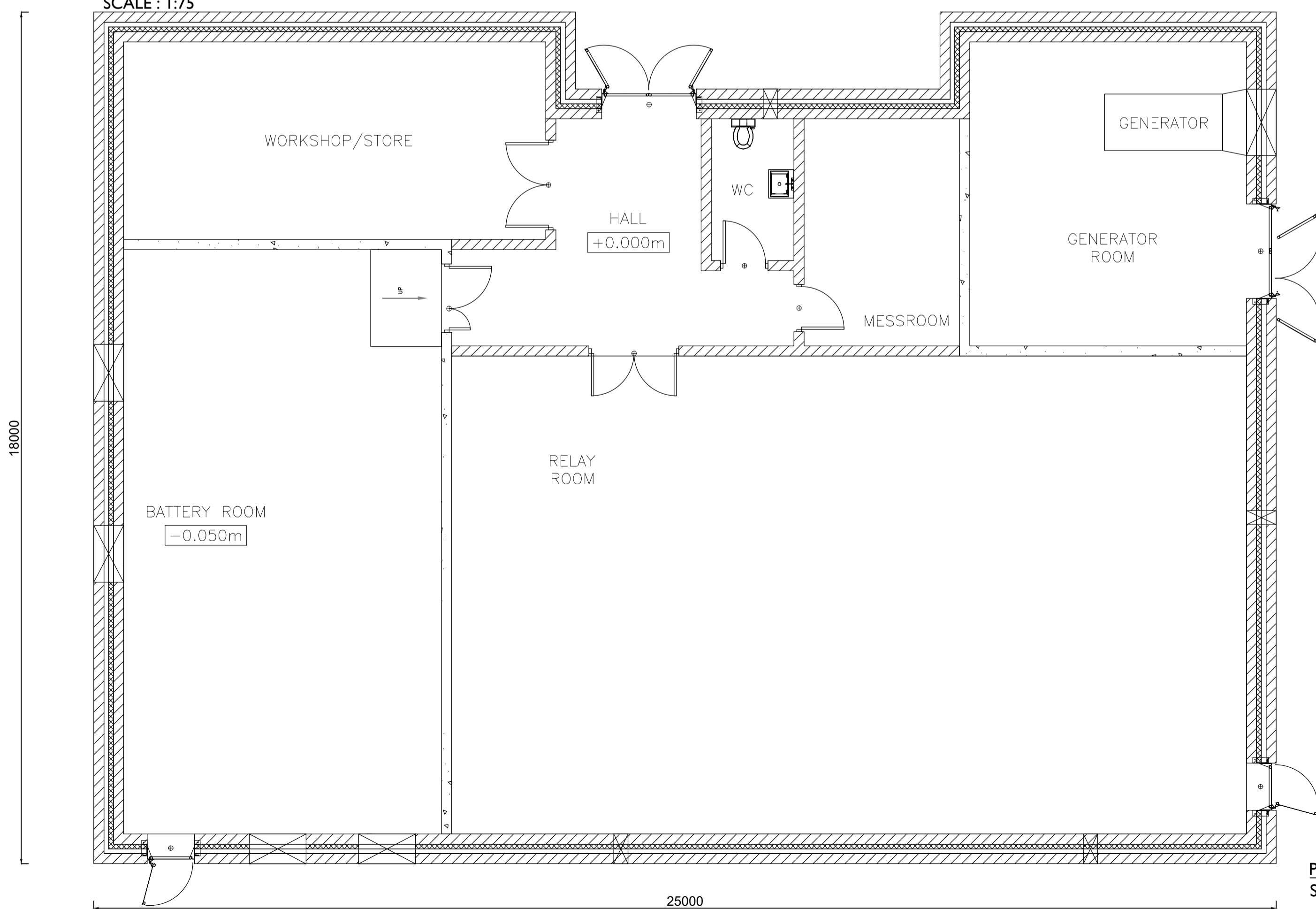
SOUTH ELEVATION
SCALE : 1:75



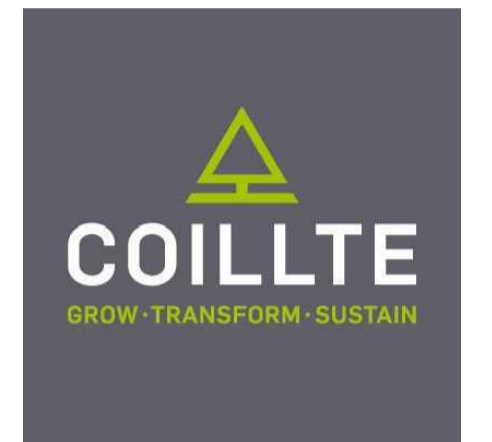
WEST ELEVATION
SCALE : 1:75



EAST ELEVATION
SCALE : 1:75

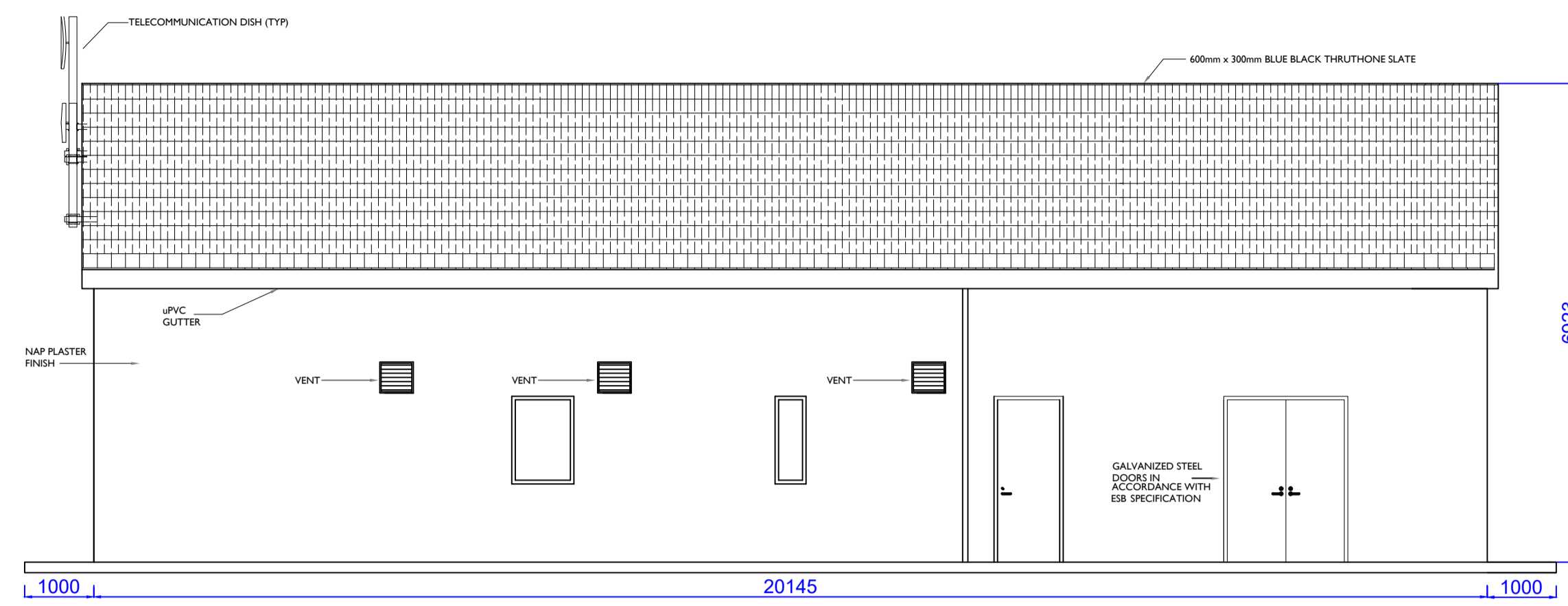


PLAN
SCALE : 1:75

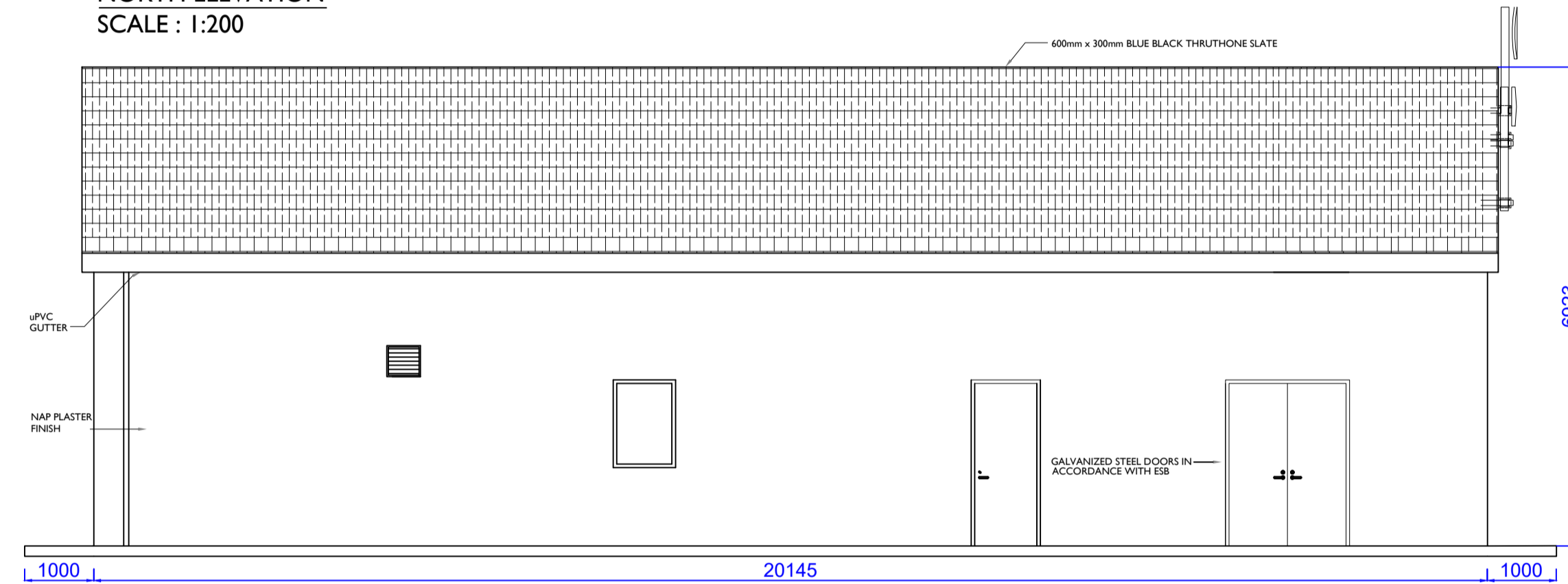


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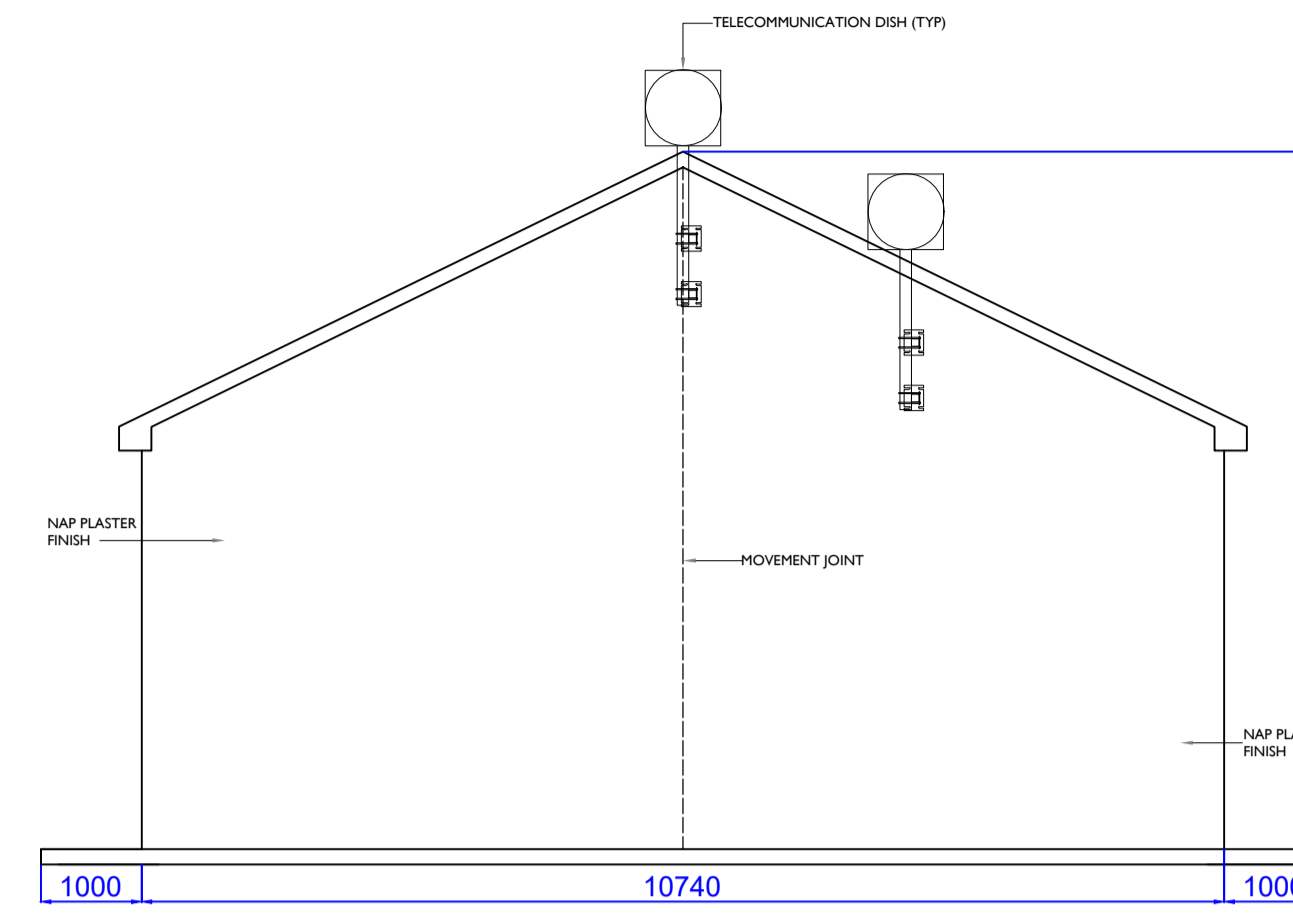
I/R	DATE	DESCRIPTION
P02	02.12.20	Issued For Planning
P01	04.09.20	Issued for Information
P00	07.08.20	Issued for Information



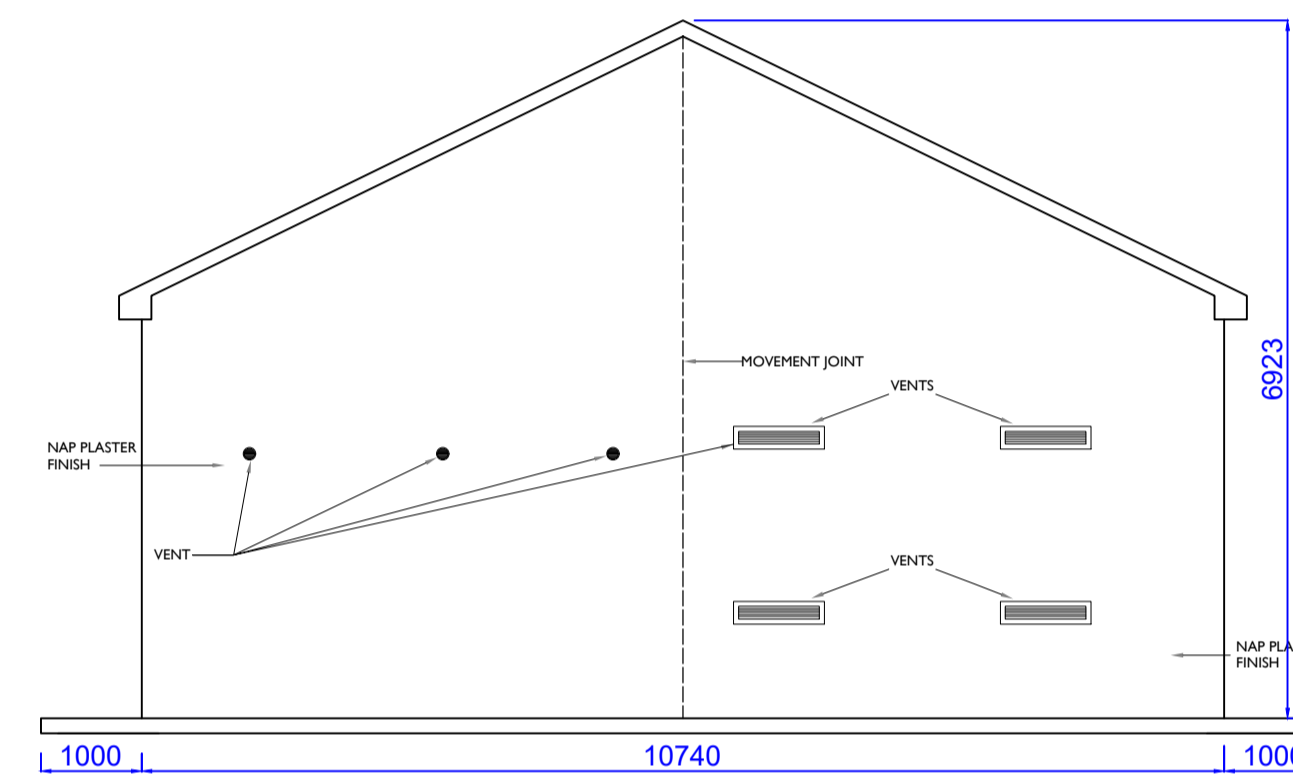
NORTH ELEVATION
SCALE : 1:200



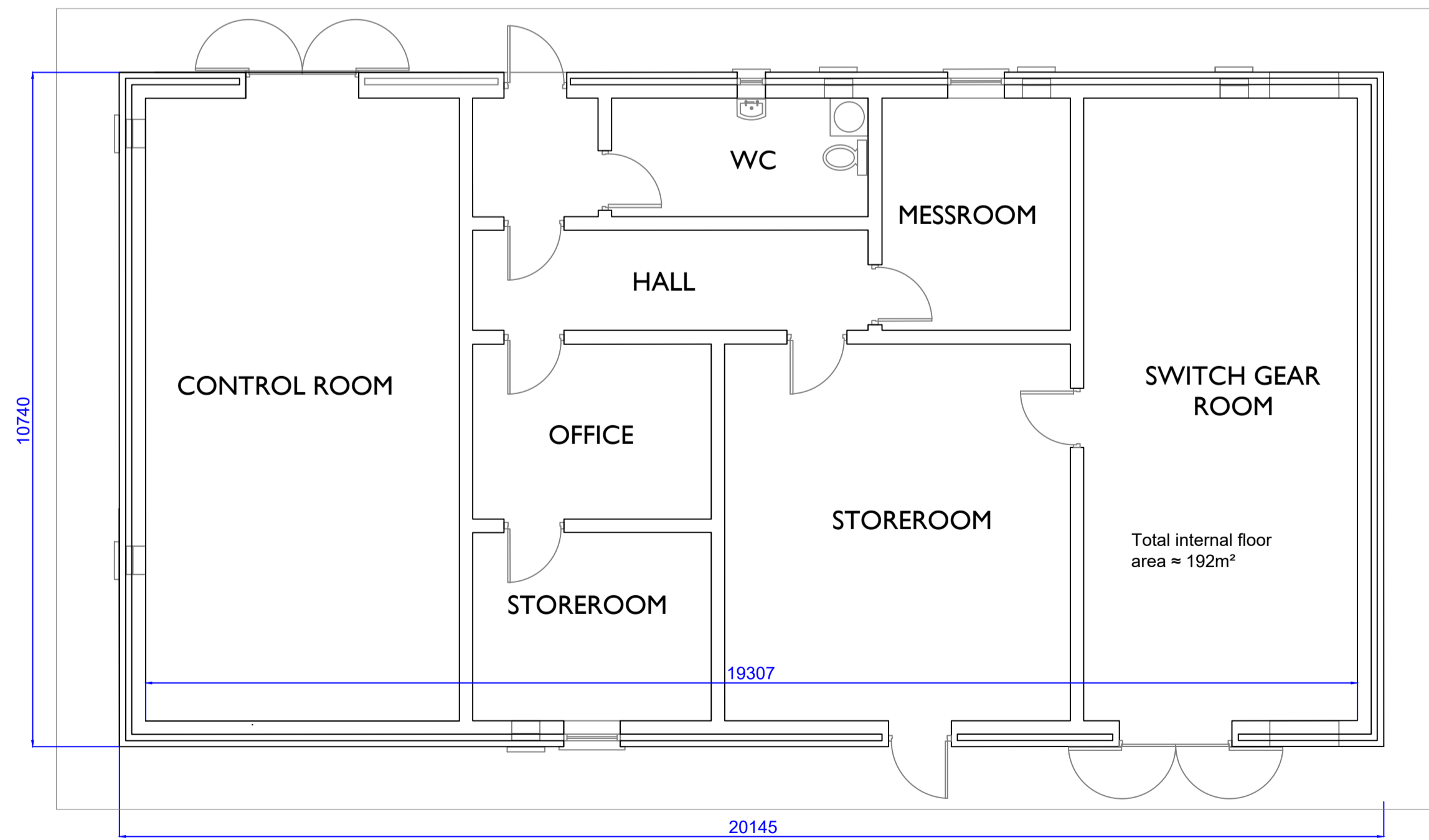
SOUTH ELEVATION
SCALE : 1:200



WEST ELEVATION
SCALE : 1:200



EAST ELEVATION
SCALE : 1:200



PLAN VIEW
SCALE : 1:200

PROJECT

**Castlebanny Wind Farm
110kV Grid Connection**

CLIENT



CONSULTANTS



NOTES: -

1. Layout and Arrangements of Substation Building and Electrical Equipment is shown indicatively and for illustration purposes only.
2. Dimensions shown are as per current Eirgrid Specifications at the time of submission. Dimensions may vary at time of construction to reflect any revisions to Eirgrid.
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LEGEND: -

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P01	02.12.20	Issued For Planning
P00	04.09.20	Issued for Information

PROJECT NUMBER

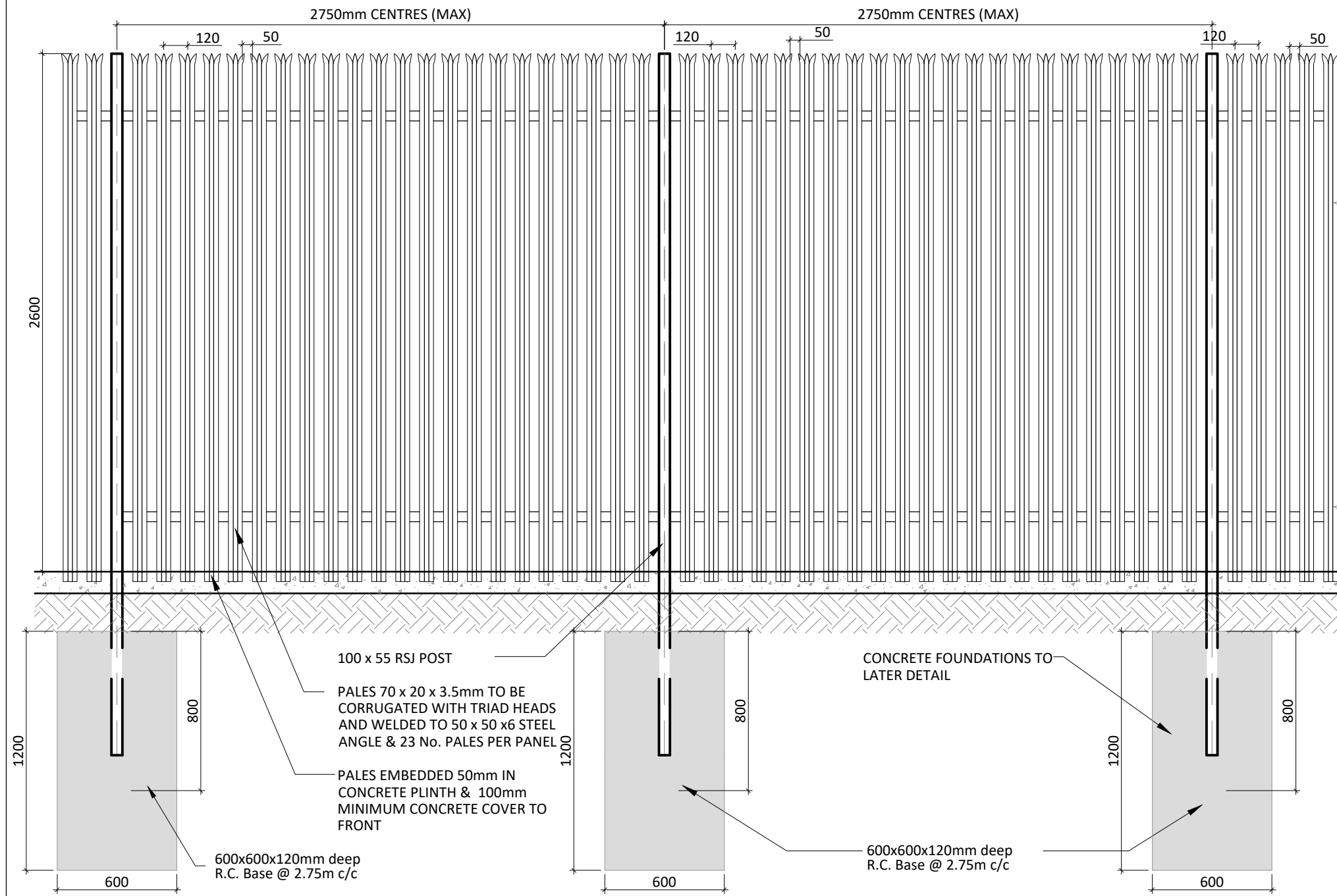
05-699

SHEET TITLE

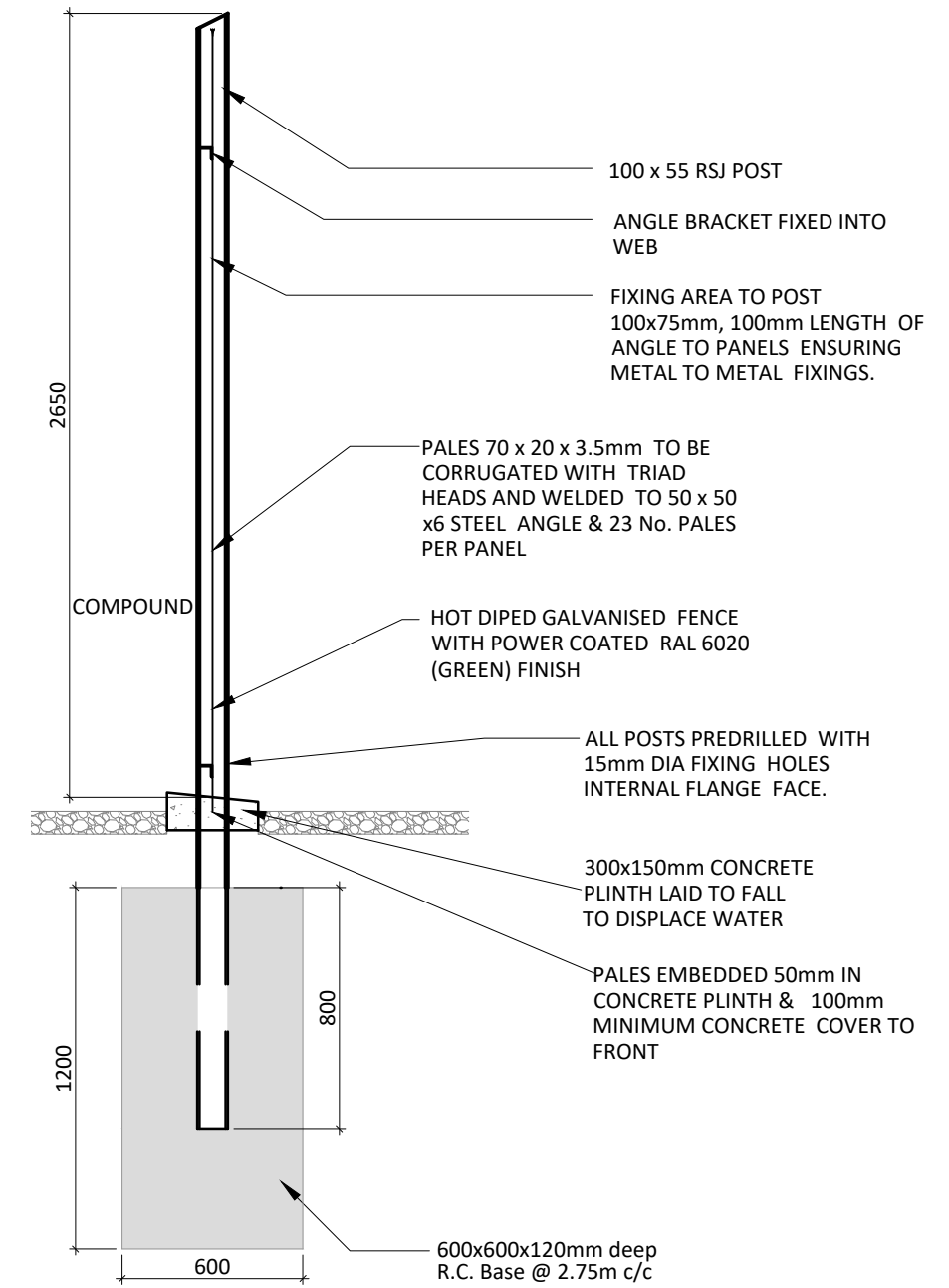
MV Customer Switchgear Room
Plan and Elevations

SHEET NUMBER

05764-DR-205



Palisade Fencing Elevation
SCALE 1:25



Palisade Fencing Section
SCALE 1:25



Head Office
Beenreigh,
Abbeydorney,
Tralee, Co. Kerry
Ireland
Tel: 00353 66 7135710



CLIENT
PROJECT
Castlebanny Wind Farm
110kV Grid Connection

PROJECT NUMBER
05-699

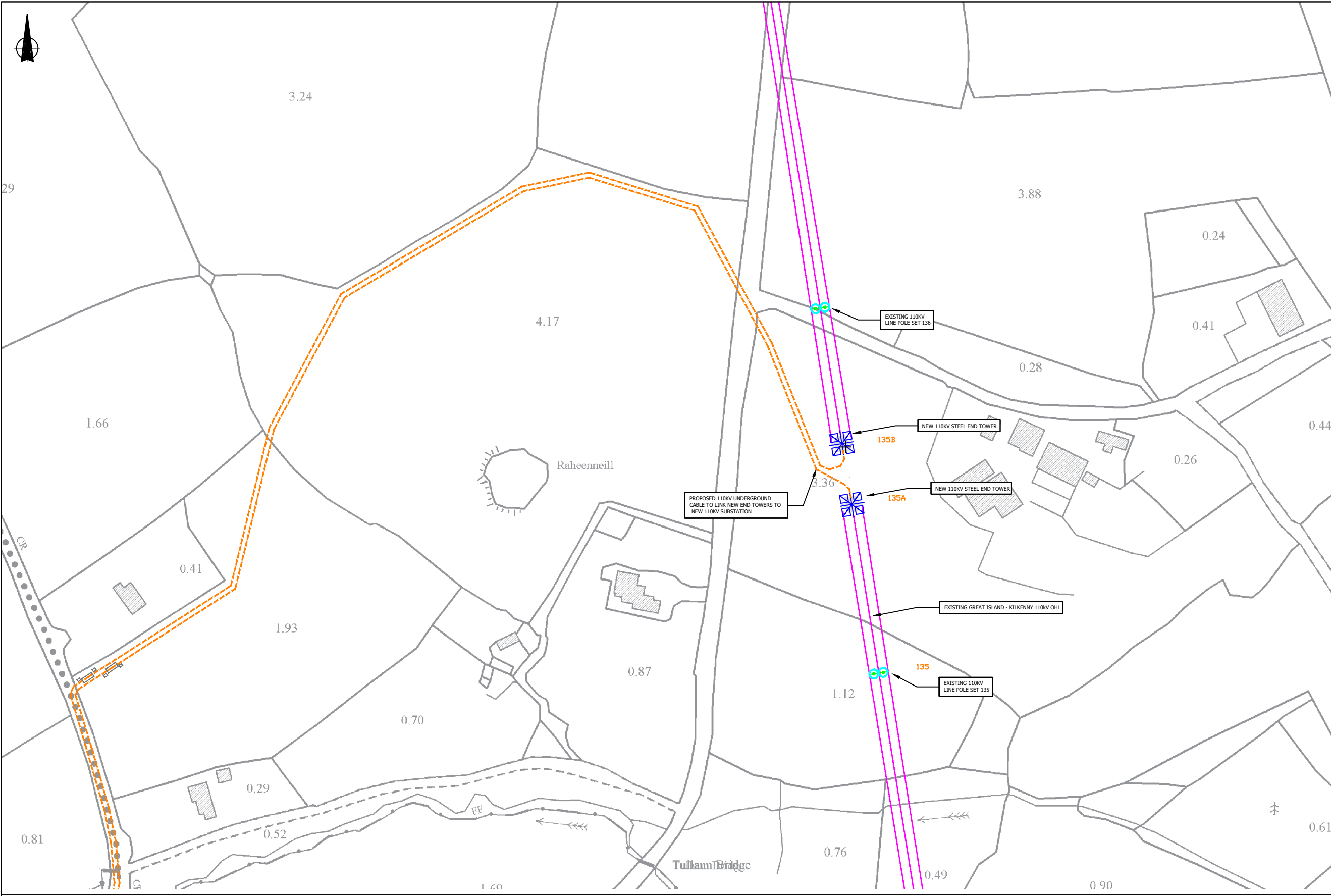
SHEET NUMBER
05699-DR-206

SHEET TITLE
Palisade Fencing Details

DRAWING STATUS
For Information

ISSUE/REVISION		
I/R	DATE	DESCRIPTION
P01	02.12.20	Issued For Planning
P00	04.09.20	Issued for Information

ISO A1 594mm x 841mm



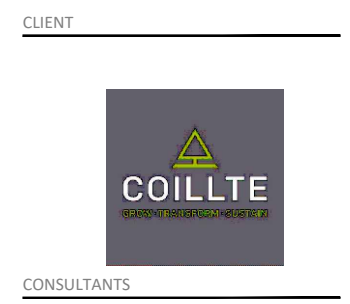
Site Location Map
SCALE :1:1,00



Head Office
Beenreigh,
Abbeydorney,
Tralee, Co. Kerry
Ireland
Tel: 00353 66 7135710

Regional Office
Basepoint Business Centre
Stroudley Road, Basingstoke,
Hampshire,
RG24 8UP, UK
Tel: 00 44 1256406664

PROJECT
**Castlebanny Wind Farm
110kV Grid Connection**



NOTES:-
Path of cable route and location of associated Joint Bays, Link Boxes and Comms Chambers may vary depending on site conditions.
Other services may be encountered along the route.
This drawing is to be used only for the purpose of the planning application and is subject to detailed design.

LEGEND:-
Proposed 110kV UGC ---
Existing ESB O/H 110kV & 38kV Network shown thus ---
Proposed Cable Interface Towers

ISSUE/REVISION		
I/R	DATE	DESCRIPTION
P02	02.12.20	Issued for Planning
P01	29.10.20	Issued for Information
P00	03.09.20	Issued for Information

PROJECT NUMBER
05-699

SHEET TITLE
**OHL Loop-In
Site Location Map**

SHEET NUMBER
05699-DR-300

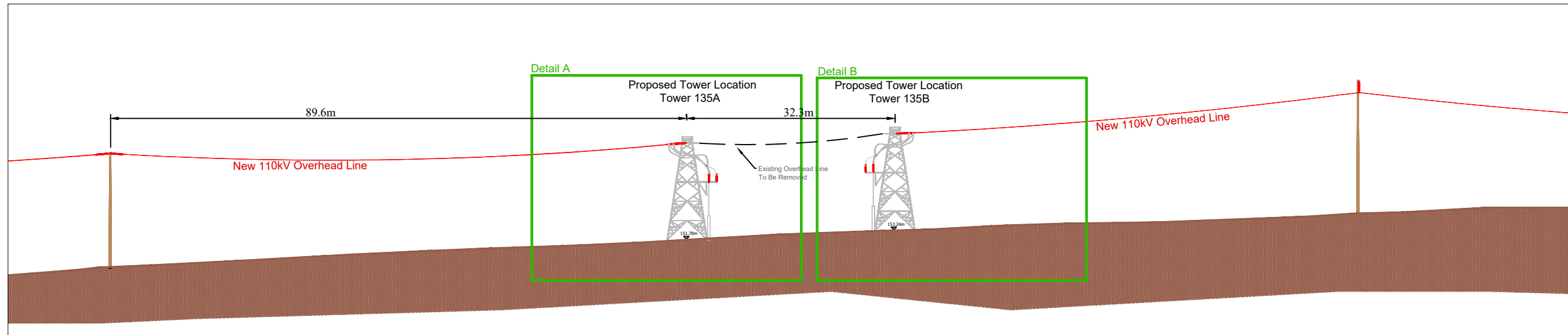
Note: -

- This design is subject to EirGrid design approval.
- This drawing is to be read in conjunction with all other relevant documentation.
- Dimensions are in millimetres, unless noted otherwise.
- Drawings are not to be scaled use figured dimensions only.
- Pole and tower heights indicative and may change due to EirGrid/ESB requirements.



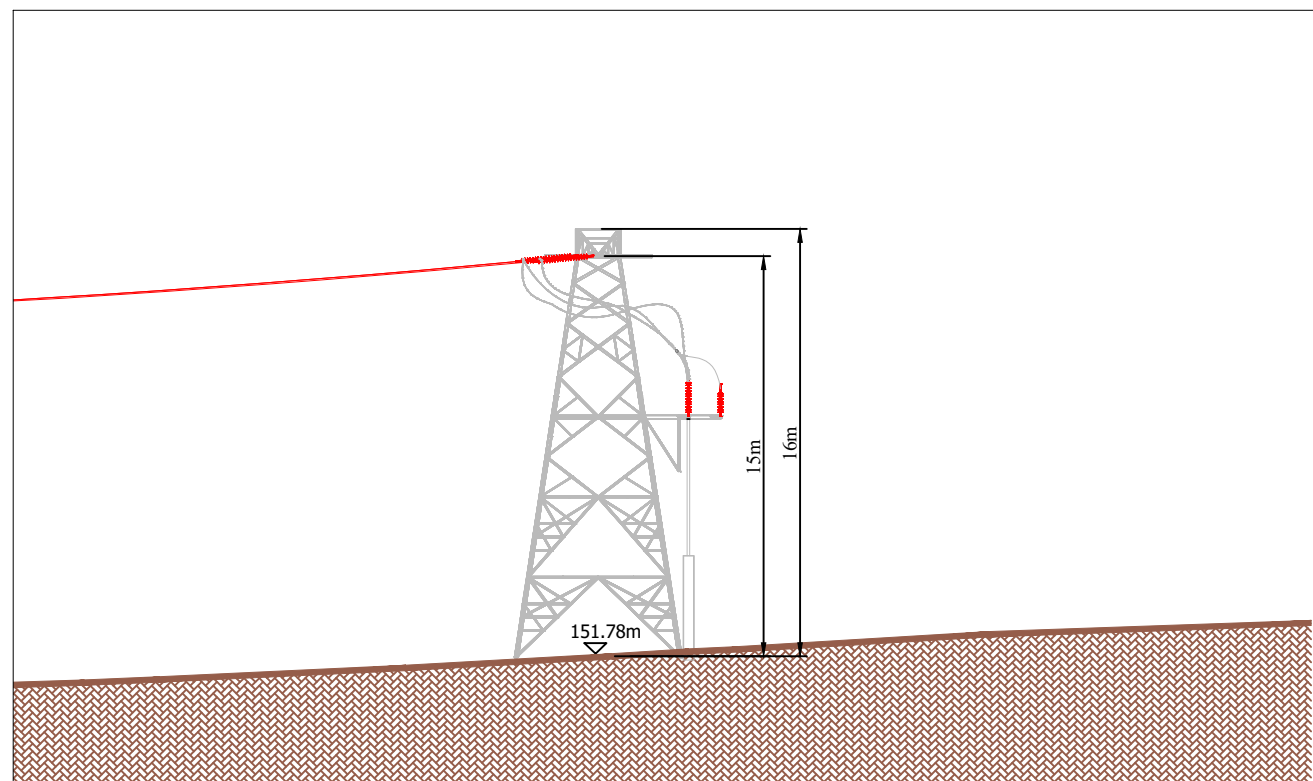
- See notes in drawing window.

NO	DATE	DESCRIPTION
P01	02.12.20	Issued for Planning
P02	03.09.20	For Information
I/R	DATE	DESCRIPTION



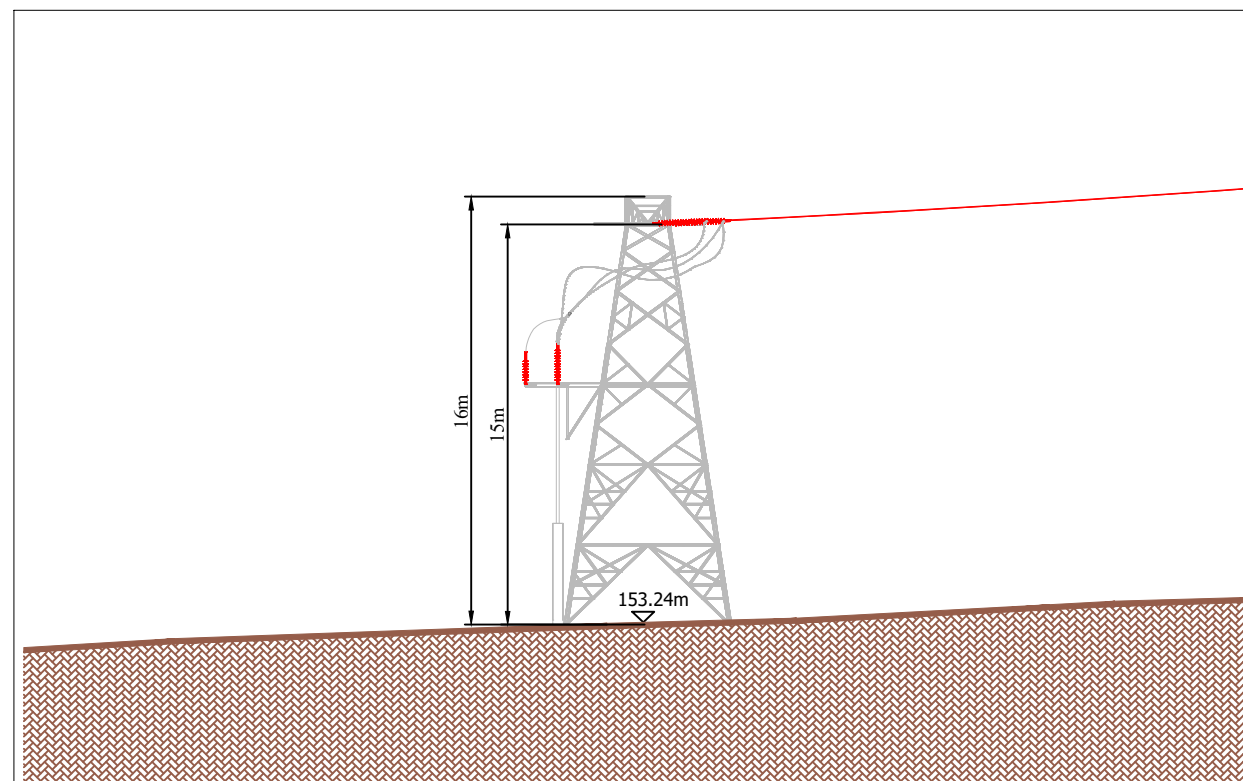
Section Through Proposed Tower Locations

SCALE - 1:500



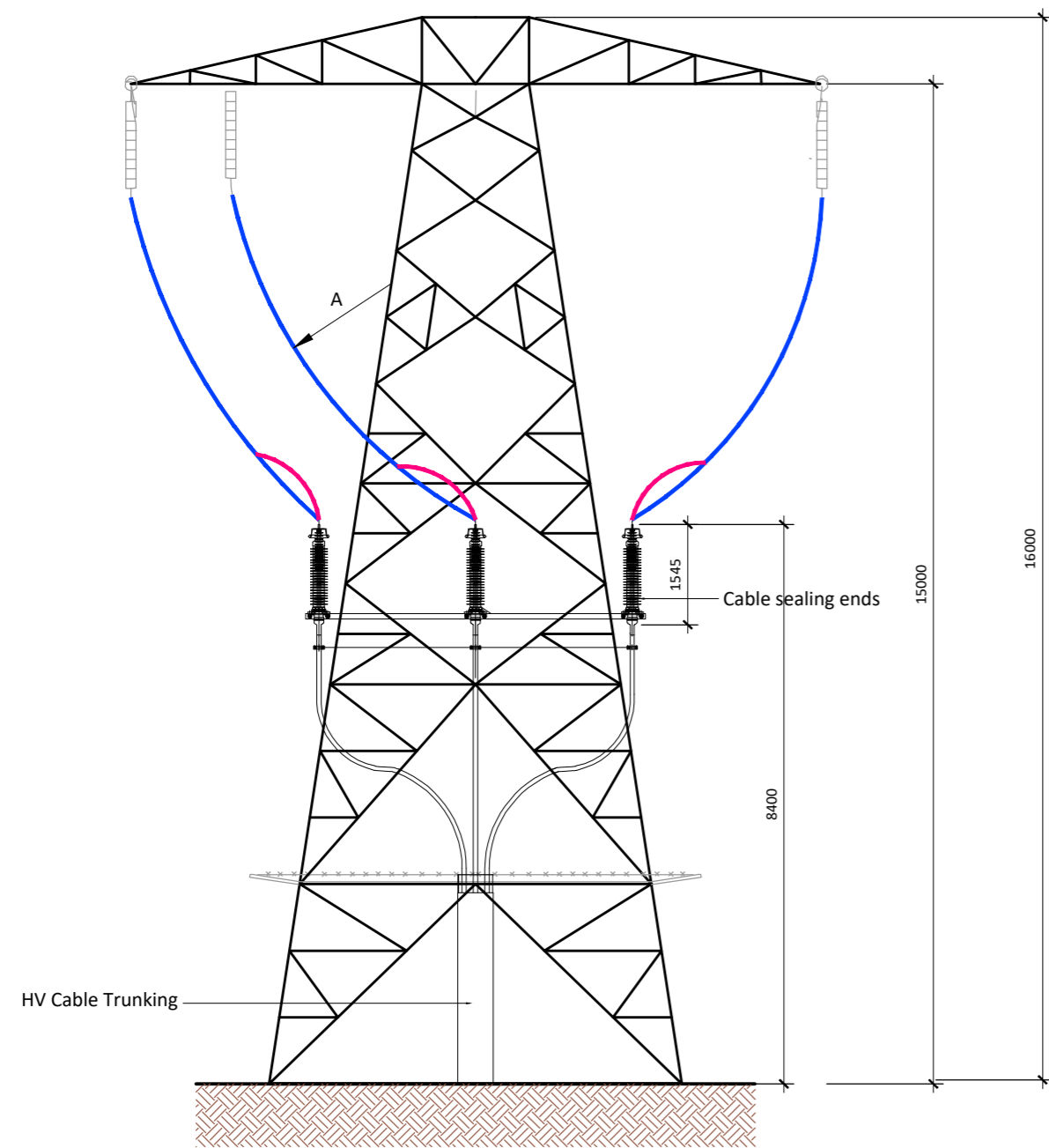
Detail A

SCALE - 1:200

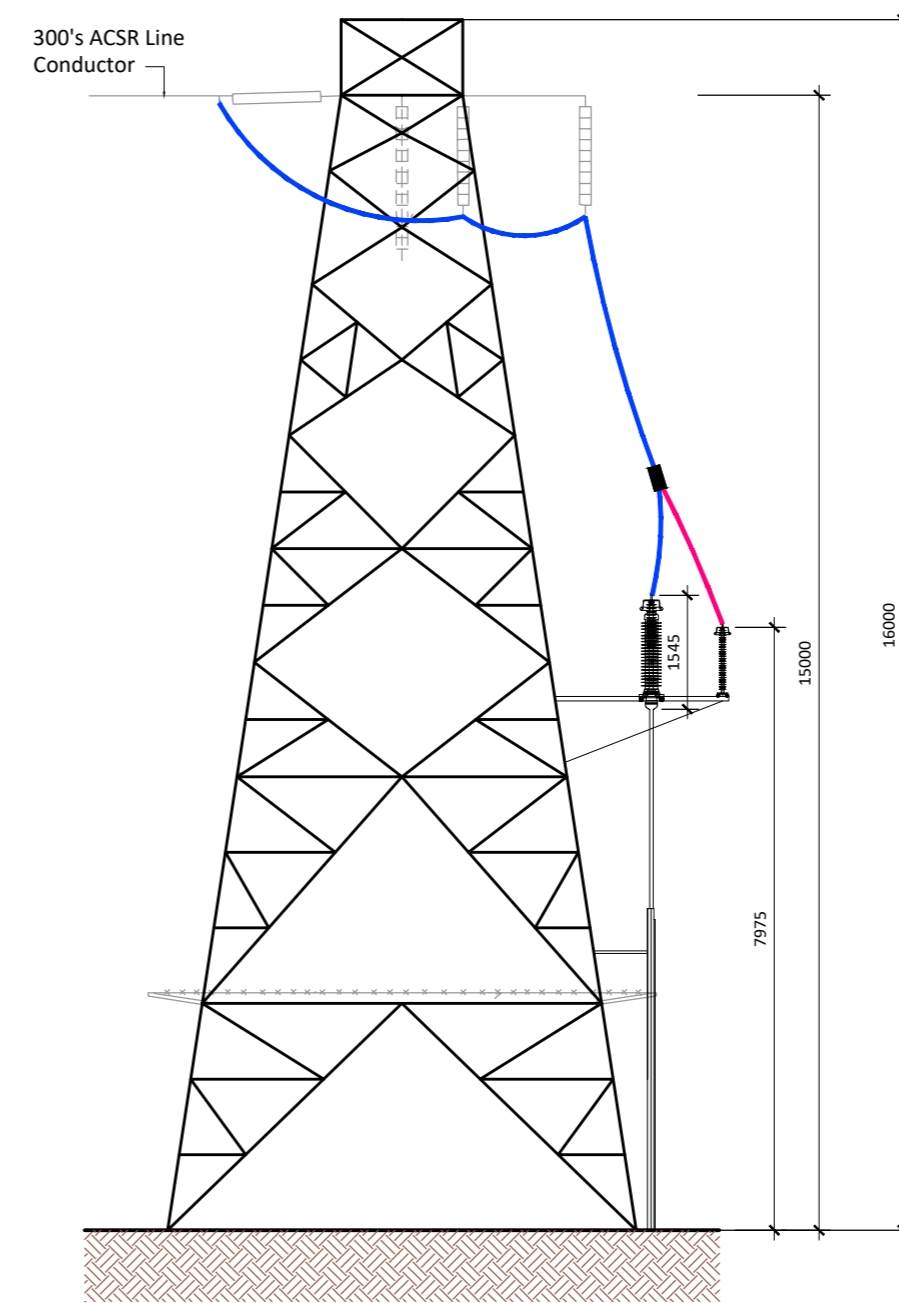


Detail B

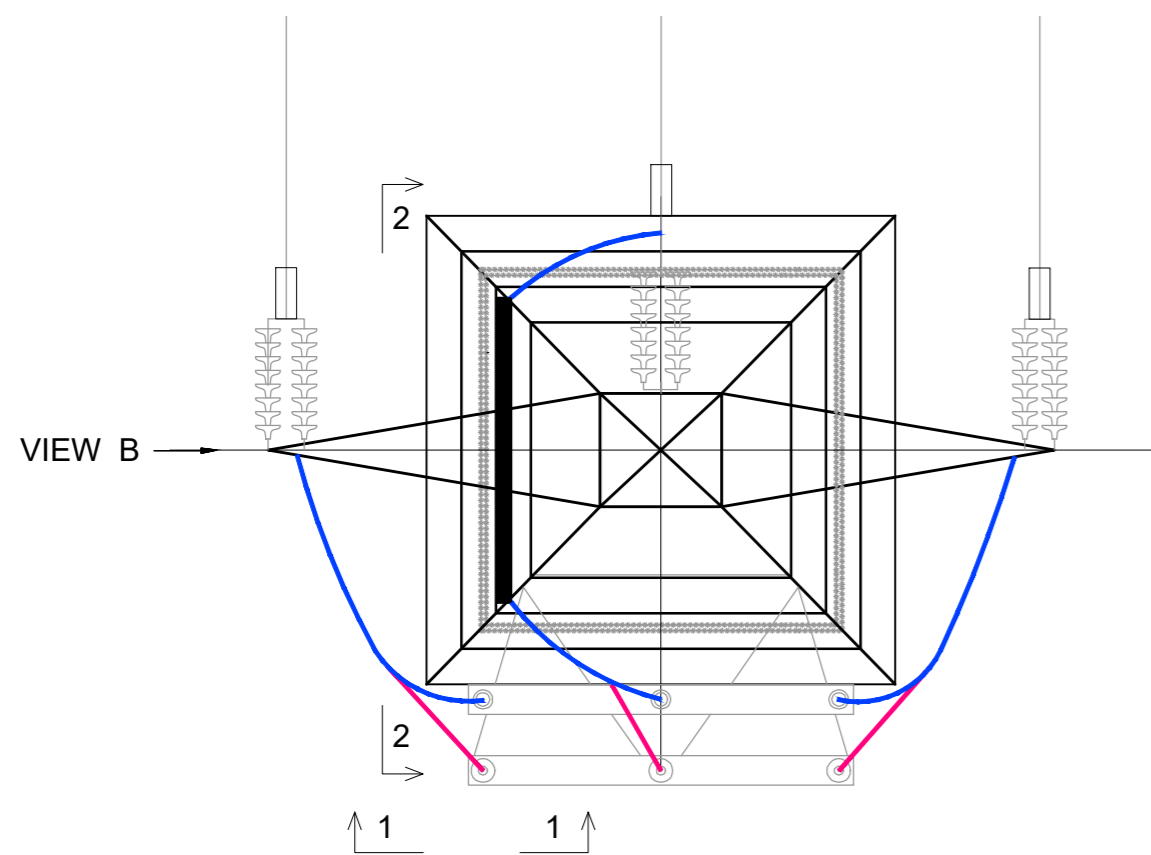
SCALE - 1:200



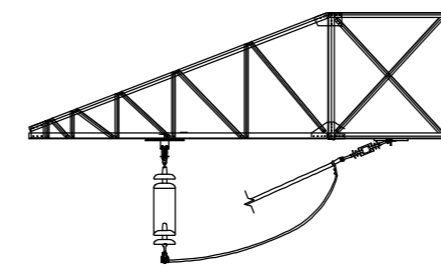
FRONT ELEVATION
(Rear Platform Removed for Clarity)



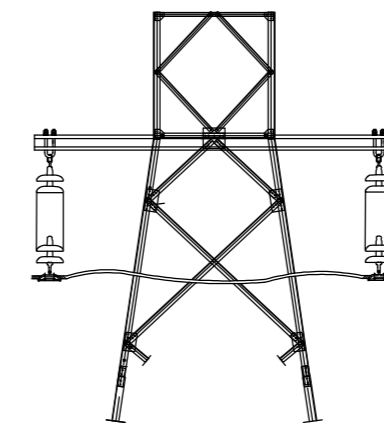
SIDE ELEVATION



PLAN VIEW



SECTION 1-1

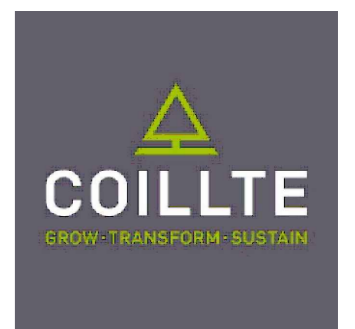


SECTION 2-2

PROJECT

Castlebanny Wind Farm
110kV Grid Connection

CLIENT



CONSULTANTS



NOTES: -

- This drawing is to be used for information only and is subject to design.
- Cable Sealing End Towers range between 15m - 22m, the final tower size will be selected as part of the detailed design phase.

LEGEND: -

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P01	02.12.20	Issued for Planning
P00	03.09.20	Issued for Information

PROJECT NUMBER

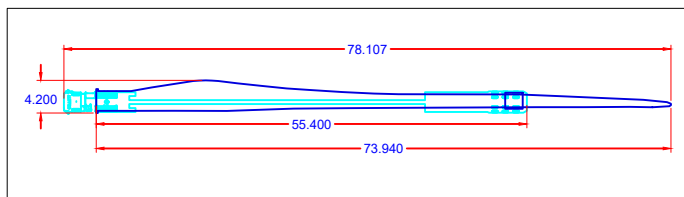
05-699

SHEET TITLE

1493ET excl. Shieldwire
Cable Interface Tower Details

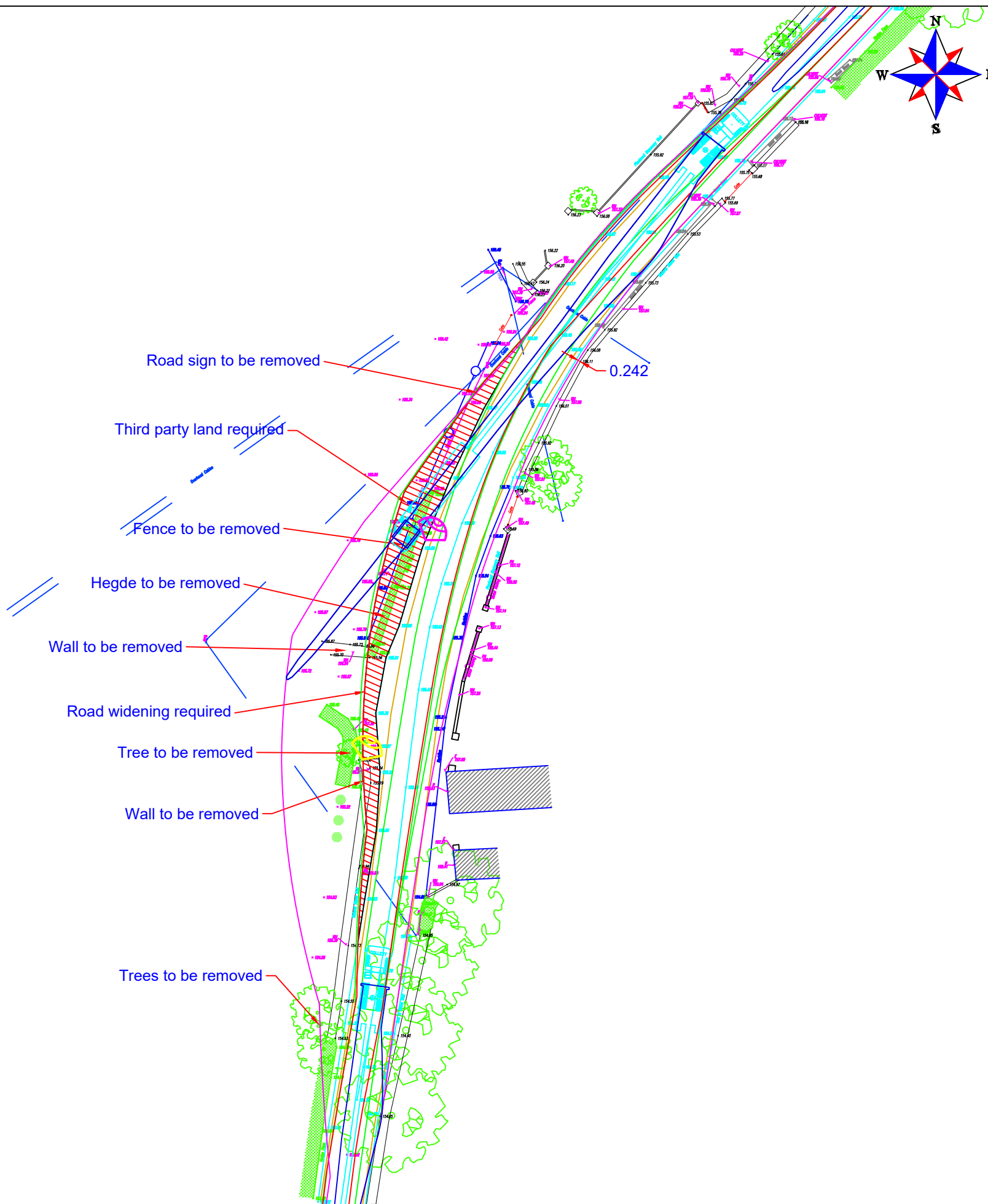
SHEET NUMBER

05699-DR-302



Swept Path indicates trailer utilising MANUAL steering

Vestas
V150 73.95m Blade
55.4m Super Wing Carrier



Continue on R704 to right hand bend at house.

****Caution****

- Widening required to provide a useable road surface as indicated by the red hatching.
- Third party land is required on nearside of R704 to avoid oversailing third party land on the offside and colliding with private wall.
- The obstructions on the nearside will require removal as shown, which includes fencing, hedge rows, walls and street furniture.
- Manual steering will be required to assist navigation.
- Loaded blade is 0.242m from private wall on the offside.
- Ground to be prepared to accept suitable axle loadings.

Irish Grid Reference: S 57431 26454

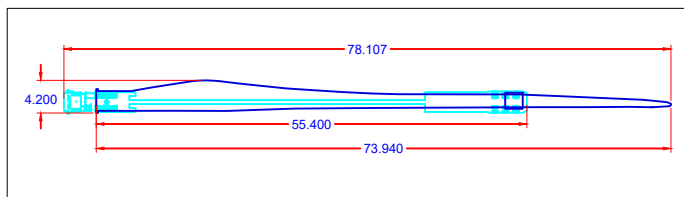
- The swept path analysis provided is produced from a purely transport orientated view, and does not consider any political issues in terms of land ownership, or any other precincts raised, that may otherwise be restrictive.
- The drawing has been produced from Survey Data supplied by Coillte.
- All swept path diagrams and assessments are made and calculated for the road movement of loaded trailer equipment carrying Turbine components. These dimensions are based on the turning circles and specification of Collett & Sons Ltd trailer equipment.
- This SPA is a means of providing evidence of minimum requirements of any one vehicle as a footprint and there is no safety factor or margin included.
- Turbine delivery vehicles can be both left and right hand drive vehicles, therefore due to drivers perception it must be assumed that every vehicle will not follow the exact same line and so a margin of additional space should be allowed for.
- Land take is usually referred to when land is required from Private Land Owners; road widening is usually referred to when land is required within highways boundaries. The boundaries between private land and highways property are assumed by using obvious demarcation such as fence lines/hedges etc. It should be noted that actual boundaries between highways and private land are not substantiated in this report and can only be authenticated by carrying out land searches.
- Police escorts and permits will be required for the movement of all of the components. Form 'BE16' permits will also be required to undertake the movement of the vehicle shown in the swept path analysis. These permits are at the discretion of the Highway Agency (HA). Therefore, approval of these 'permits for movements' by the HA are a major consideration before the physical capability to deliver these components are undertaken.
- In critical areas, where modifications are required, the road construction must be formed to the minimum specification contained in the Turbine Manufactures Transport Guidance Notes.
- The Turbine Manufactures Transport Guidance Notes will state the minimum road width required for the transport of components. Any roads below this stated width will require widening to reflect this regardless of any swept path analysis not indicating modifications.
- The information is privileged and confidential and is for the exclusive use of the nominated client.
- All dimensions in meters.

- Area within red outline will be swept by tractor and trailer axles
- ▨ Hatched area within red outline to be levelled and prepared to accept axle loadings
- Area within magenta outline will be oversailed by load and projections
- Area within green outline will be oversailed by trailer body



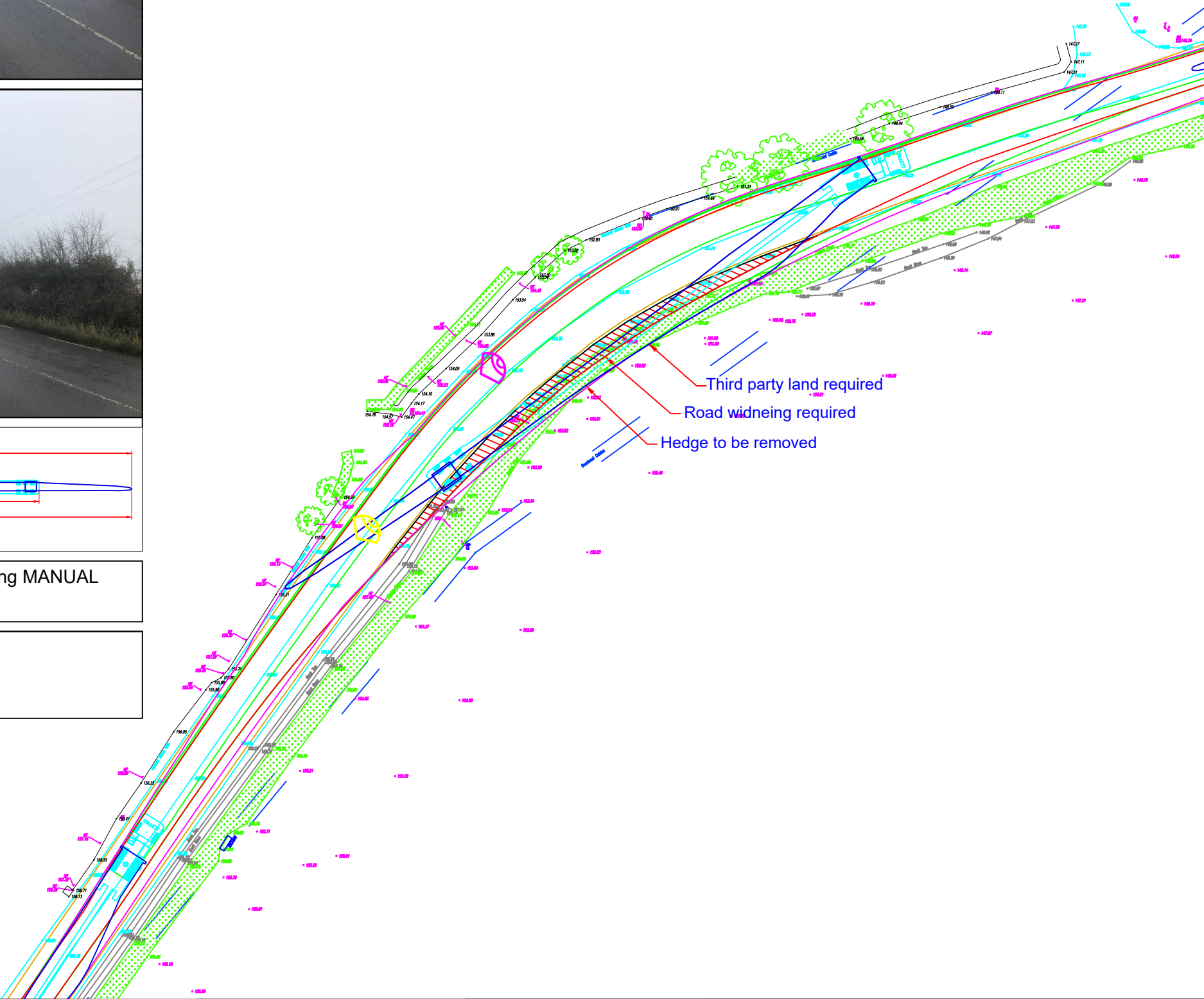
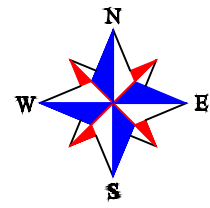
COLLETT & SONS LIMITED
Victoria Terminal TEL: +44(0)8456 255288
Albert Road FAX: +44(0)8456 255244
Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN	J.HALSTEAD	TITLE	RIGHT HAND BEND ON R704		
DATE	27/02/2020	MAPPING	PROVIDED BY CLIENT	CUSTOMER	COILTTE
SCALE	1:500	SIZE	A3	PINCH POINT IDENTIFIED BY	CLIENT
				SITE	SPRINGFIELD WIND FARM
				DWG.	342068-100A1.1



Swept Path indicates trailer utilising MANUAL steering

Vestas
V150 73.95m Blade
55.4m Super Wing Carrier



Continue on R704 to right hand bend in Ballynooney.

****Caution****

- Widening required to provide a useable road surface as indicated by the red hatching.
- Third party land is required on offside of R704.
- Hedge row on the offside to be removed.
- Manual steering will be required to assist navigation.
- Ground to be prepared to accept suitable axle loadings.

Irish Grid Reference: S 58107 27084

- The swept path analysis provided is produced from a purely transport orientated view, and does not consider any political issues in terms of land ownership, or any other precincts raised, that may otherwise be restrictive.
- The drawing has been produced from Survey Data supplied by Colitte.
- All swept path diagrams and assessments are made and calculated for the road movement of loaded trailer equipment carrying Turbine components. These dimensions are based on the turning circles and specification of Collett & Sons Ltd trailer equipment.
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- Area within red outline will be swept by tractor and trailer axles
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Albert Road FAX: +44(0)8456 255244
Halifax, HX2 0DF WEB: www.collett.co.uk

DRAWN	J.HALSTEAD	TITLE	RIGHT HAND BEND ON R704		
DATE	27/02/2020	MAPPING	PROVIDED BY CLIENT	CUSTOMER	COILTTE
SCALE	1:500	SIZE	A3	PINCH POINT IDENTIFIED BY	CLIENT
				SITE	SPRINGFIELD WIND FARM
				DWG.	342068-110A1.1