



Energy for  
generations

# North South 400 kV Interconnection Development

## ESB Networks

### Discharge of Condition 7 on Material Storage Yard of ABP Order 02.VA0017

Document No.: PE687-F0422-R422-025-000

Date: 30/04/2025

Engineering and Major Projects, One Dublin Airport Central, Dublin Airport, Cloghran, Co. Dublin,  
K67 XF72, Ireland.

**Phone** +353 (0)1 703 8000

**www.esb.ie**

|                          |  |                  |
|--------------------------|--|------------------|
| <b>File Reference:</b>   | PE687-F0422  |                  |
| <b>Client Recipient:</b> | / ESB NETWORKS   |                  |
| <b>Project Title:</b>    | North South 400 kV Interconnection Development                           |                  |
| <b>Report Title:</b>     | Discharge of Condition 7 on Material Storage Yard of ABP Order 02.VA0017 |                  |
| <b>Report No.:</b>       | PE687-F0422-R422-025-000   |                  |
| <b>Revision No.:</b>     | 000  |                  |
| <b>Prepared by:</b>      | E.Linehan  | Date: 30/04/2025 |
| <b>Title:</b>            | Senior Engineer  |                  |
| <b>Verified by:</b>      | K.OShea  | Date: 30/04/2025 |
| <b>Title:</b>            | Senior Team Lead   |                  |
| <b>Approved by:</b>      | B.Allen  | Date: 30/04/2025 |
| <b>Title:</b>            | Planning Team Leader   |                  |

Copyright © ESB.

All rights reserved. No part of this work may be modified, reproduced or copied in any form or by any means - graphic, electronic or mechanical, including photocopying, recording, taping or used for any purpose other than its designated purpose, without the written permission of ESB.

**Template Used:** T-020-017-Engineering and Major Projects Report Template

## Change History of Report

| Date | New Revision | Author | Summary of Change |
|------|--------------|--------|-------------------|
|      |              |        |                   |

## Executive Summary

ESB Engineering and Major Projects (EMP) have been appointed on behalf of ESB Networks to manage the construction and discharge of planning conditions for the construction of the 400 kV North – South Interconnector project.

The project consists of the following:

- Construction of a new 400 kV overhead line from structure no. 103 in County Monaghan to structure no. 410 in County Meath.
- Installation of new HV equipment and supporting civil works in Woodland 400 kV Station.
- Construction of the Material Storage Yard outside Carrickmacross, Co. Monaghan.

Planning approval for the Project was granted by An Bord Pleanála (ABP) (Board Order 02.VA0017) in December 2016.

The purpose of this report is to give a brief description of the proposed development and set out details of the external appearance of the construction material storage yard, details of the restoration of the site and a timescale for the implementation of restoration works.

## Contents

|   |    |
|---|----|
| Executive Summary   | 3  |
| 1 Introduction  | 6  |
| 1.1 Background  | 6  |
| 1.2 Report Aims   | 6  |
| 2 The Approved Development  | 7  |
| 2.1 Project Overview  | 7  |
| 2.2 The Material Storage Yard   | 9  |
| 2.3 Existing Environment  | 10 |
| 3 Approved Works  | 13 |
| 4 Proposed External Appearance  | 14 |
| 5 Proposed Restoration of The Site  | 16 |
| 5.1 Timescale for Implementation  | 17 |
| 6 Conclusion  | 18 |
| Appendix 1 – Material Storage Yard Planning Drawings  | 19 |
| Appendix 2 – Material Storage Yard Construction Drawings  | 20 |
| Appendix 3 – Material Storage Yard Demolition, Reinstatement and Reinstatement Details Drawings | 21 |



## List of Figures

|  |    |
|--|----|
| Figure 2-1 Cavan/Monaghan OHL Route  | 8  |
| Figure 2-2 Meath OHL Route   | 9  |
| Figure 2-3 Material Storage Yard Site Location                                   | 10 |
| Figure 2-4 Material Storage Yard Current Use                                     | 11 |
| Figure 2-5 Designated European Sites located within vicinity of the Storage Yard | 12 |
| Figure 4-1 Example of palisade fence behind hedgerow                             | 14 |
| Figure 4-2 Example of palisade fence gate  | 14 |
| Figure 4-3 Proposed Elevation Along Road L4700 (1 of 2)                          | 15 |
| Figure 4-4 Proposed Elevation along Road L4700 (2 of 2)                          | 15 |

## List of Tables

|   |    |
|---|----|
| Table 5-1 Proposed Material Storage Yard Reinstatement Timeline | 17 |
|---|----|

# 1 Introduction

## 1.1 Background

ESB Engineering and Major Projects (EMP) has been appointed on behalf of ESB Networks to manage the construction of the 400 kV North – South Interconnector. The purpose of this report is to discharge Condition 7 of the An Bord Pleanála (ABP) order VA0017. Condition 7 requires agreement with the relevant planning authority, Monaghan County Council.

Planning approval for the project was granted by ABP in December 2016.

Condition 7 of ABP's order states the following:

*“Prior to the commencement of development, details of the external appearance of the construction material storage yard, and also the restoration of the site, including a time scale for implementation, shall be submitted to, and agreed with, the relevant planning authority.*

*Reason: In the interest of visual amenity.”*

## 1.2 Report Aims

This report has been prepared for the Material Storage Yard near Carrickmacross for Monaghan County Council only. This report, along with accompanying drawings and images aims to set out to Monaghan County Council the following for their approval:

- Details of the external appearance of the construction material storage yard;
- Details of the restoration of the site; and,
- A timescale for implementation of restoration works.

## 2 The Approved Development

### 2.1 Project Overview

This approved project consists of the construction of a new 400 kV overhead line linking the existing Woodland 400 kV substation, located approximately 8km south of Dunshaughlin in Co. Meath, with a planned 400 kV substation, located approximately 3km north of the village of Moy in Turleenan, Co. Tyrone. The general alignment of the route is north to south, and the approved overhead line (OHL) is approximately 137.6 km in length. The line can be divided by county as follows:

- Monaghan County Council: Structures 103 to 212 inclusive of construction material storage yard in Carrickmacross.
- Cavan County Council: Structures 212 to 237.
- Meath County Council: Structures 237 to 410 inclusive of works in Woodland Sub-Station.

Figure 2-1 and Figure 2-2 present a condensed map depicting the approved OHL route.

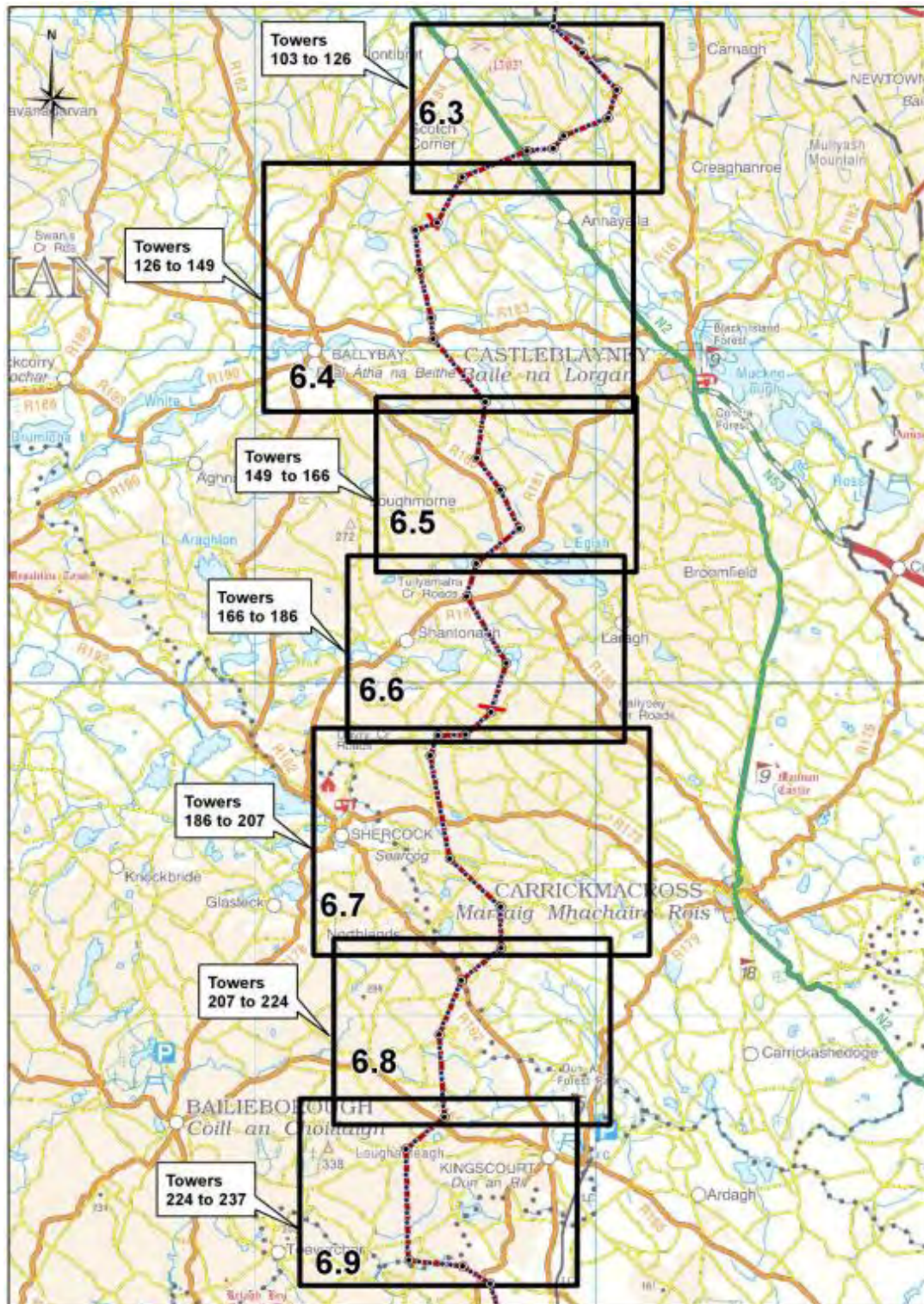


Figure 2-1 Cavan/Monaghan OHL Route



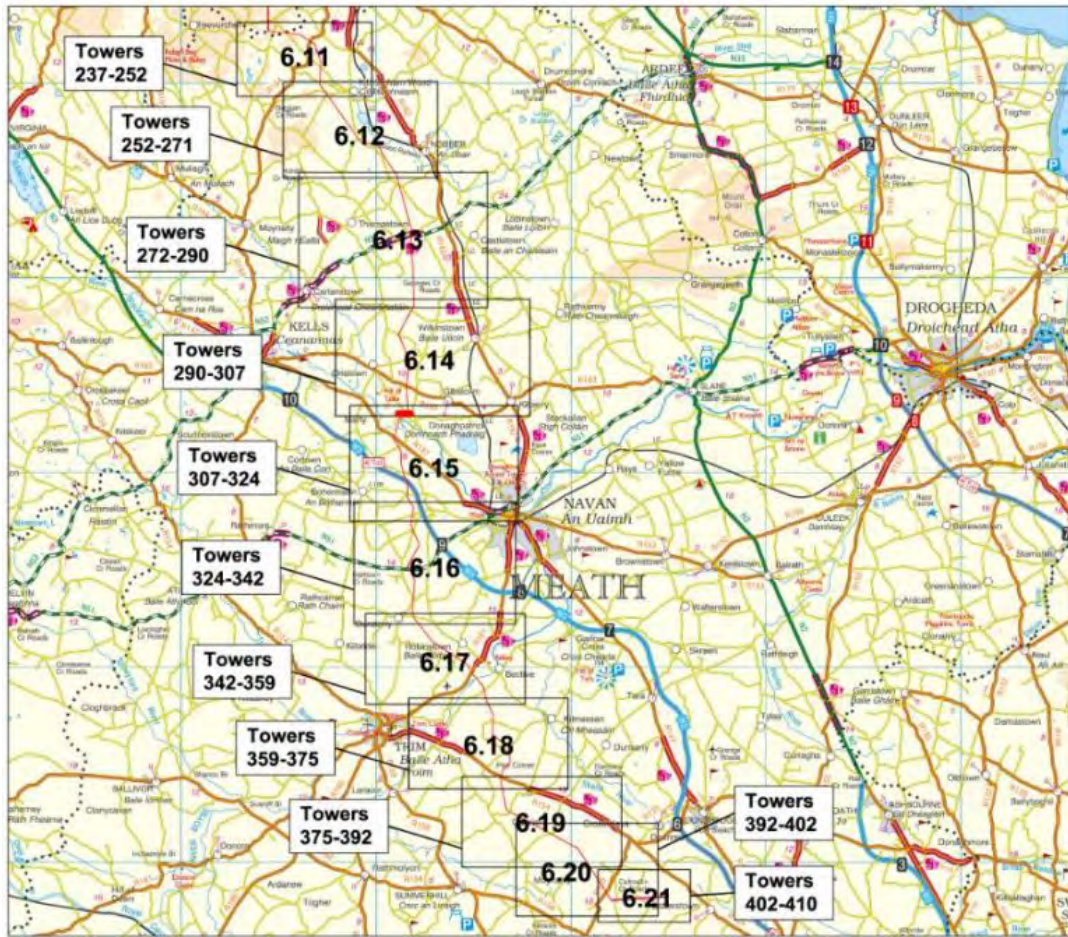


Figure 2-2 Meath OHL Route

## 2.2 The Material Storage Yard

The approved development includes the construction of a material storage yard for the overhead line works. It is approved to be located in the townlands of Monaltyduff and Monaltybane, Carrickmacross, County Monaghan. The yard is 1.4ha in area and is located immediately adjacent to the southern side of the N2. It is accessed via a local road (L4700). The location of the yard is shown in Figure 2-3 below.

Planning Drawing MT-009-002 titled “Proposed Temporary Construction / Material Storage Yard Site Layout Drawing” which was included in Volume 1B of the application documentation illustrates the approved works. Refer to Appendix 1 of this report for suite of drawings included in the application documentation.

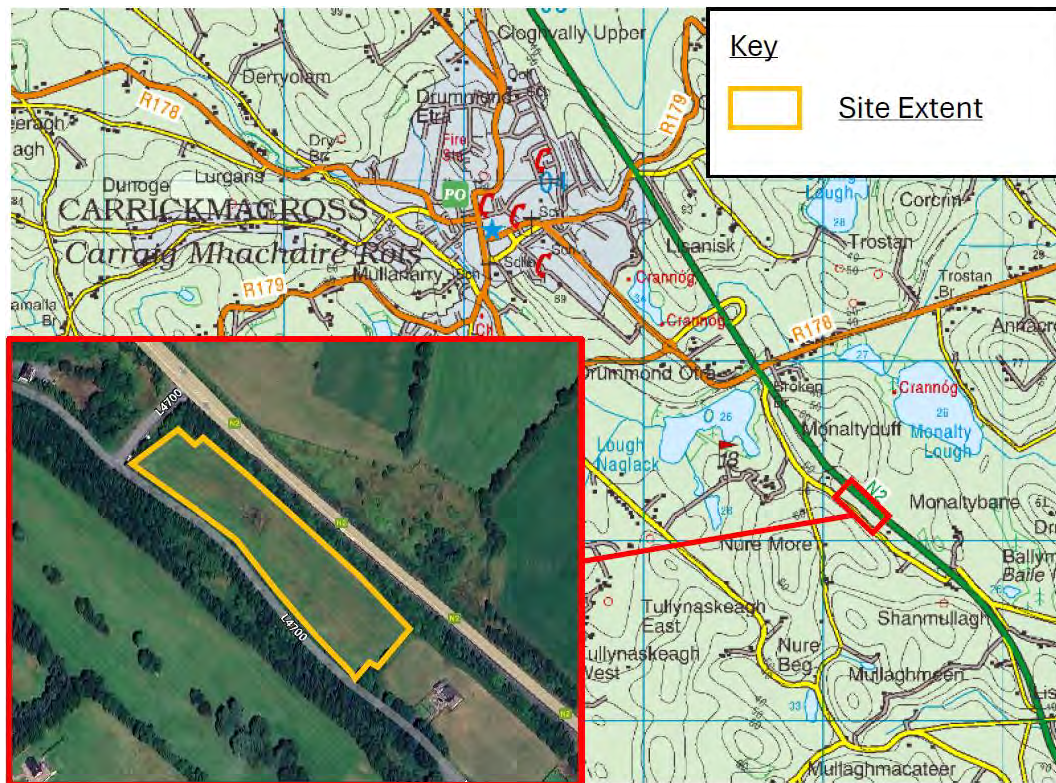


Figure 2-3 Material Storage Yard Site Location

## 2.3 Existing Environment

This section of the report summarises the existing conditions of the Material Storage Yard site as set out in the Environmental Impact Statement (EIS) submitted as part of the planning application, along with more up-to-date survey information including;

- Topographical survey undertaken on 24/07/2023
- Photographic survey undertaken on 26/02/2025
- Information obtained from the Geological Surveys of Ireland Database (GSI) 2025.

Further pre-construction confirmatory surveys will record existing conditions in advance of work commencing.

### 2.3.1 Location and Context

As described in Section 2.2 and illustrated in Figure 2-3, the construction yard is approved to be located in the townlands of Monaltyduff and Monaltybane, Carrickmacross, County Monaghan.

The approved site has a history of use as a construction yard. The site was used as a construction yard facility during the construction of the N2 National Primary Road and was reinstated to agricultural use. During a visit to site in February 2025, it was confirmed from visual inspection that the site is currently in agricultural use. As can be seen in Figure 2-4, the site is improved grassland, used for grazing, surrounded by hedgerows which had recently been cut at the time of visit in February 2025.





**Figure 2-4 Material Storage Yard Current Use**

While a potential turlough was marked near the site (Sheedy-Skeffinton et al, 1996), no evidence of a turlough was noted at the site or in the surrounding area in January 2014 and February 2025 or during the Wetland Survey County Monaghan (Foss & Crushell, 2011). It should be noted that the entire low lying area to the east was also modified to accommodate the N2 by-pass.

### 2.3.2 Designated Ecological Sites

There are no European designated sites within the vicinity of the Material Storage Yard, as shown in Figure 2-5. The nearest European designated sites are located as follows:

- Dundalk Bay SAC located ca. 20km to the East of the Material Storage Yard.
- Stabannan-Braganstown SPA (site code 004091) located ca. 16km to the South East of the Material Storage Yard.

None of the European designated sites are directly hydrological linked or dependant on the Material Storage Yard site.

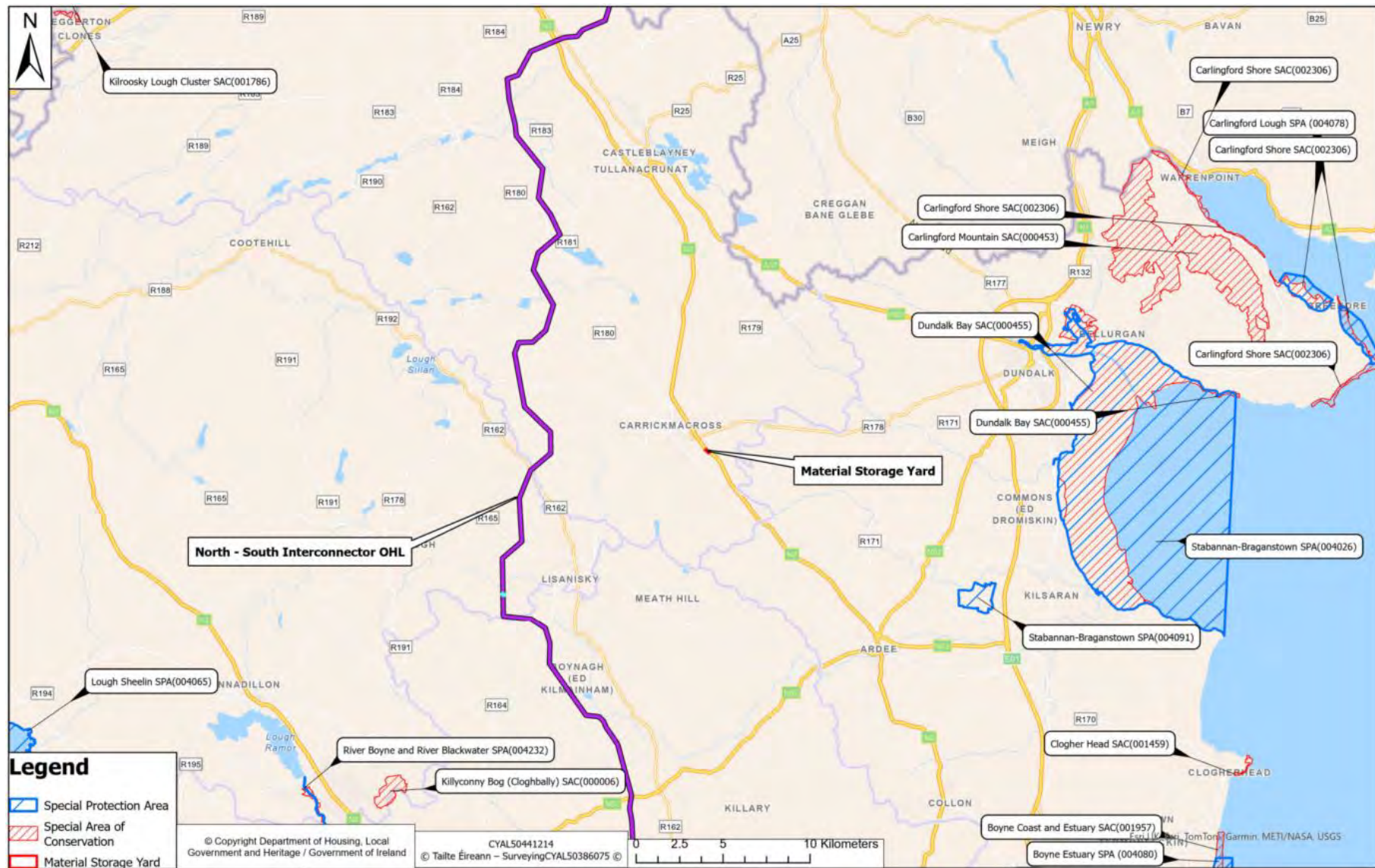


Figure 2-5 Designated European Sites located within vicinity of the Storage Yard



### 3 Approved Works

The storage yard will be constructed in advance of the overhead line construction works and will include secure storage areas, staff parking, temporary offices and welfare facilities. The yard will be used to store construction material, primarily the steel tower structures, and machinery associated with the construction of the proposed overhead line. A 2.6 m high boundary palisade fence will be constructed around the perimeter of the site. A standalone noise barrier fence will be erected along three sides of the site boundary. It is proposed to create a new gated entrance midway along the L4700 on the southern boundary of the site. The entrance will consist of a 6m wide gate opening with a concrete apron at entrance area.

Topsoil will be stripped, and a geotextile membrane will be placed on the formation to enhance soil stabilisation, prevent material migration and protect the underlying layers of soil. A 150 mm thick layer of compacted 6F2 stone will then be imported and placed, followed by a final layer of compacted UGM-A stone, also 150 mm thick, to finish the compound surface. An impermeable reinforced concrete slab (minimum 200mm thickness) will be in place at a demarcated fuelling area and waste collection area to ensure that contaminants do not percolate into the hydrogeological environment.

Section 8.6.1 of the EIS (Vol 3C) states the following: “The surface water drainage system at the construction material storage yard will take into account the recommendations of the CIRIA C468 and utilises SuDs (sustainable urban drainage) devices where appropriate. Runoff from site will be limited to greenfield runoff rates. Runoff will pass through a silt trap, oil interceptor and settlement lagoon before being discharged to the surface water.” The oil interceptor will be installed towards the centre of the site connected to proposed surface water drainage. No connection to public foul sewer or wastewater treatment plant is proposed in the Material Storage Yard. Foul wastewater will be dealt with by means of a temporary holding tank which will be emptied periodically.

The proposed Material Storage layout including all elements described above are presented on the drawings listed in Appendix 2.

## 4 Proposed External Appearance

The perimeter of the site currently consists of a mixed hedgerow and a timber and post fence. The palisade fence will be constructed inside the timber and post fence line which will fully demarcate the existing hedgerow. The existing hedgerow will provide a natural visual barrier, partially concealing the material storage yard. A typical view of a palisade fence behind a hedgerow is shown in Figure 4-1 and a typical palisade gate is shown in Figure 4-2.



**Figure 4-1 Example of palisade fence behind hedgerow**

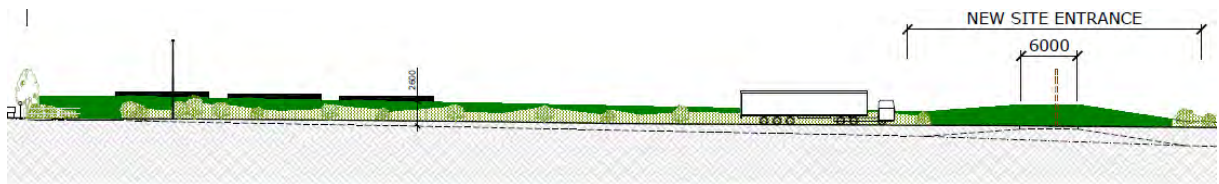
<https://www.trentwoodfencingoxfordshire.co.uk/site-assets/images/Case%20Studies/steel-palisade-honda-2.jpg>



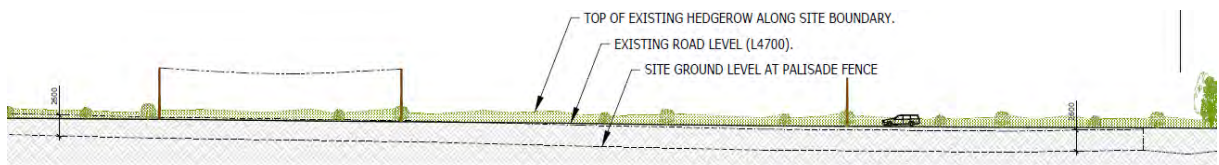
**Figure 4-2 Example of palisade fence gate**

[https://www.proctercontracts.co.uk/wp-content/uploads/2018/09/palisade\\_swing\\_gates901.jpg.webp](https://www.proctercontracts.co.uk/wp-content/uploads/2018/09/palisade_swing_gates901.jpg.webp)

Proposed Elevation Along Road L4700 as shown on drawing MWP-ZZ-ZZ-DR-C-0102 - Site Layout Plan & Details in Appendix 2, illustrates the view of the yard along its southern boundary. Extracts from this drawing are shown in Figure 4-3 and Figure 4-4. Refer to Appendix 2 for more details.



**Figure 4-3 Proposed Elevation Along Road L4700 (1 of 2)**



**Figure 4-4 Proposed Elevation along Road L4700 (2 of 2)**

## 5 Proposed Restoration of The Site

Upon completion of construction activities, the temporary construction and material storage yard will be fully decommissioned and reinstated as near as practicable to its pre-construction condition as seen in Figure 2-4. It is intended for the site to return to agricultural use upon reinstatement.

To return the site to its original condition, it is anticipated works will take place in the following order (refer to drawings PE687-D422-039-001, PE687-D422-039-002 and PE687-D422-039-003 as listed in Appendix 3 for further details of decommissioning and reinstatement works);

1. Removal of plant, equipment and materials
2. Removal of ground structures
  - Site offices (prefabs)
  - Storage containers
  - Portable toilets
  - Nut and bolt store
  - Wheel wash
3. Removal of below ground drainage and services
  - Surface and foul water drains including all manholes, benching and stone surrounds to manholes
  - Oil interceptor and foul holding tank
  - Water supply pipes
  - LV supply ducts
  - Comms ducts
  - French drains and catch pits
  - Culvert and road gullies at the site entrance
4. Removal of ground level surfaces
  - Reinforced concrete entrance apron slab
  - Stone fill layers
  - Geotextile membrane
5. Removal of palisade fencing
  - Palisade perimeter fence and noise barrier and associated foundations
  - Palisade gate at the site entrance and associated foundations
  - Silt fence and associated foundations
6. Relevelling of ground profile
  - Relevel the site using topsoil to restore the area to the original ground level
7. Reseeding of grass
  - Evenly distribute grass seed and follow immediately by light raking to ensure the cover of the topsoil covers the grass seed

**8. Reinstatement of site entrance**

- Site entrance ramp and embankment to be reinstated to original levels with concrete entrance apron removed
- Grass verge to be reinstated
- Tarmac a section of road edge, where entrance apron removed

**9. Reinstatement of hedgerows**

- Hedgerows and planting to be reinstated to match existing (horticultural survey before any hedgerow removal to take place ensuing reinstatement matches original species).

## 5.1 Timescale for Implementation

It is proposed that the Material Storage Yard restoration will commence within ca. 4 weeks of the completion of the overhead line works. An approximate programme for execution of the restoration plan is presented in Table 5-1 below.

| Week  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|----|
| Removal of remaining materials, equipment and cabins          |   |   |   |   |   |   |   |   |   |    |
| Excavation of drainage infrastructure and filling of trenches |   |   |   |   |   |   |   |   |   |    |
| Removal of hardcore   |   |   |   |   |   |   |   |   |   |    |
| Reinstatement of existing entry and removal of fence          |   |   |   |   |   |   |   |   |   |    |
| Replacing topsoil (to be imported)                            |   |   |   |   |   |   |   |   |   |    |
| Grass seeding and hedge replanting / reinforcement            |   |   |   |   |   |   |   |   |   |    |

**Table 5-1 Proposed Material Storage Yard Reinstatement Timeline**

Regardless of the timing of reinstatement works; seeding of grass will take place in late autumn or late spring following completion of topsoil replacing. Hedgerow replanting / reinforcement will take place during the middle of the first dormant season (ca. mid-November to mid-February, depending on weather) following reinstatement of the existing entry and fence removal.

## 6 Conclusion

This report has explained the background of the 400kV North – South Interconnector project and the Material Storage Yard near Carrickmacross, Co. Monaghan. The report, along with accompanying drawings and images has set out to Monaghan County Council the following:

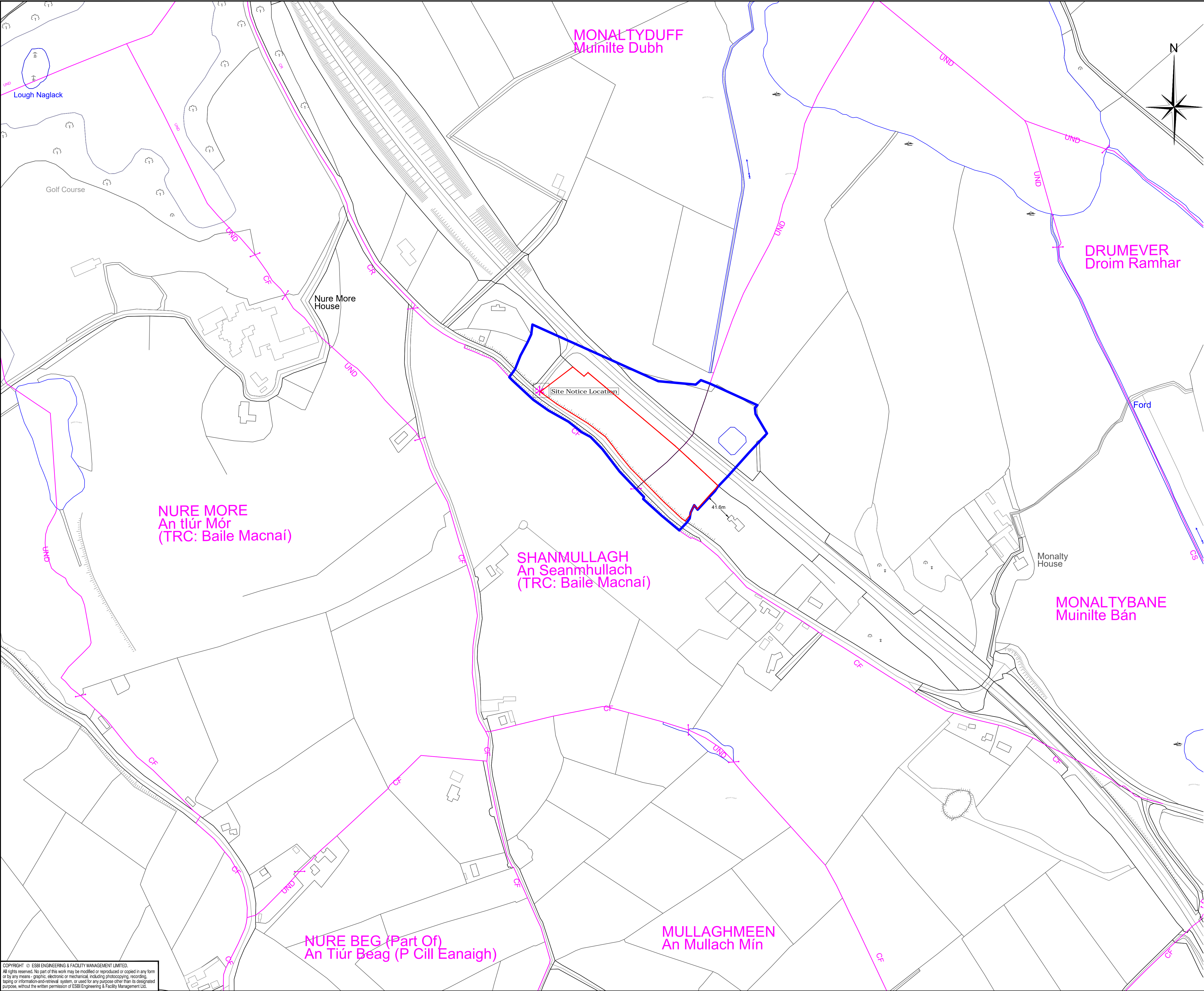
- Details of the external appearance of the construction material storage yard
- Details of the restoration of the site
- A timescale for implementation of restoration works.

It is envisaged that the information contained in this report and associated drawings is sufficient for Monaghan County Council to discharge Condition 7 of the An Bord Pleanála (ABP) order for agreement with Monaghan County Council.

## Appendix 1 – Material Storage Yard Planning Drawings

- MT-009-001 – Proposed Temporary Construction / Material Storage Yard Site Location Map
- MT-009-002 - Proposed Temporary Construction / Material Storage Yard Site Layout Drawing
- MT-009-003 - Proposed Temporary Construction / Material Storage Yard Site Boundary Palisade Fence Detail
- MT-009-004 - Proposed Temporary Construction / Material Storage Yard Palisade Gates Detail





0m50m100m150m200m

Road

Land Parcel

Building

Stream / River

Townland Boundary

Forestry

Lake

Landholding Boundary

Proposed Temporary Construction / Material Storage Yard

Marsh

Distance to Existing Dwelling

Notes:

1. Drawing not to be scaled

2. Figured dimensions only to be taken from this drawing

3. Landholding boundary obtained from Land Registry records on 9th April 2015. Application D2012LR049453D noted as pending on folio.

Ordnance Survey Ireland Licence No. EN 0023715-19

Copyright Ordnance Survey Ireland Government of Ireland

OSI Sheet(s): 1766

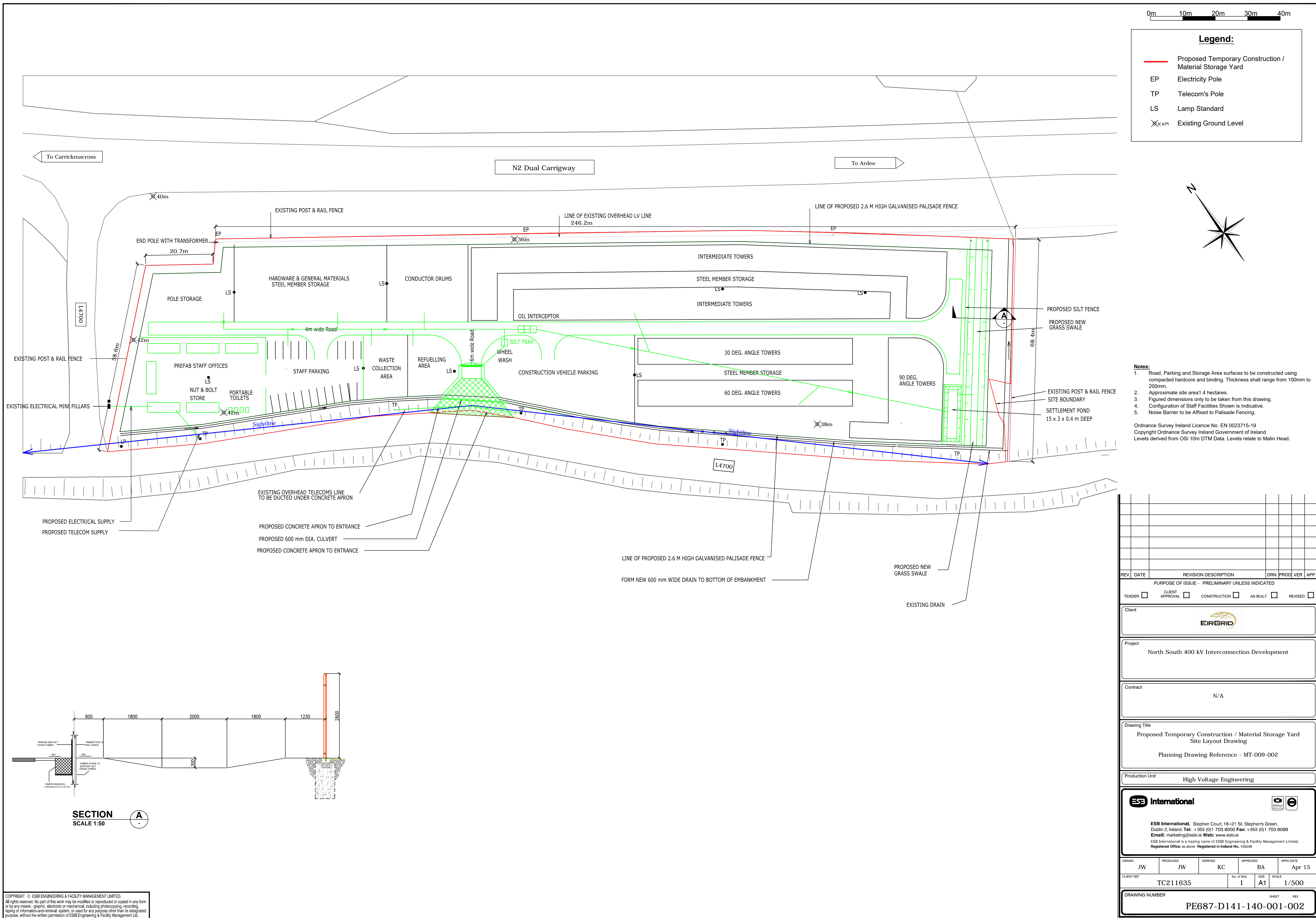
Key Plan:

| REV.   | DATE                     | REVISION DESCRIPTION  | DRN                      | PROD          | VER                      | APP      |                          |         |                          |
|--|--------------------------|---|--------------------------|---------------|--------------------------|----------|--------------------------|---------|--------------------------|
| PURPOSE OF ISSUE - PRELIMINARY UNLESS INDICATED  |                          |   |                          |               |                          |          |                          |         |                          |
| TENDER   | <input type="checkbox"/> | CLIENT APPROVAL   | <input type="checkbox"/> | CONSTRUCTION  | <input type="checkbox"/> | AS-BUILT | <input type="checkbox"/> | REVISED | <input type="checkbox"/> |
| Client   |                          |   |                          |               |                          |          |                          |         |                          |
| Project  |                          | North South 400 kV Interconnection Development                                    |                          |               |                          |          |                          |         |                          |
| Contract   |                          | N/A   |                          |               |                          |          |                          |         |                          |
| Drawing Title  |                          | Proposed Temporary Construction / Material Storage Yard Site Location Map 1:2,500 |                          |               |                          |          |                          |         |                          |
| Planning Drawing Reference   |                          | - MT-009-001  |                          |               |                          |          |                          |         |                          |
| Production Unit  |                          | High Voltage Engineering  |                          |               |                          |          |                          |         |                          |
| <div><div></div><div><div>ESB International, Stephen Court, 18-21 St. Stephen's Green, Dublin 2, Ireland. Tel: +353 (0)1 703 8000 Fax: +353 (0)1 703 8088 Email: marketing@esb.ie Web: www.esb.ie</div><div>ESB International is a trading name of ESB Engineering &amp; Facility Management Limited. Registered Office: as above Registered in Ireland No. 155249</div></div></div> |                          |   |                          |               |                          |          |                          |         |                          |
| DRAWN  | PRODUCED                 | VERIFIED  | APPROVED                 | APPROVED DATE |                          |          |                          |         |                          |
| JW   | JW                       | KC  | BA                       | Apr 15        |                          |          |                          |         |                          |
| CLIENT REF   |                          | No. of Sheets   | SIZE                     | SCALE         |                          |          |                          |         |                          |
| TC211778   |                          | 1   | A1                       | 1/2500        |                          |          |                          |         |                          |
| DRAWING NUMBER   |                          |   |                          | SHEET         | REV                      |          |                          |         |                          |
| PE687-D141-145-001-003   |                          |   |                          |               |                          |          |                          |         |                          |

COPYRIGHT © ESB ENGINEERING & FACILITY MANAGEMENT LIMITED.  
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means - graphic, electronic or mechanical, including photocopying, recording, taping or information-and-retrieval system, or used for any purposes other than its designated purpose, without the written permission of ESB Engineering & Facility Management Ltd.

BP-DRG-013-001-001





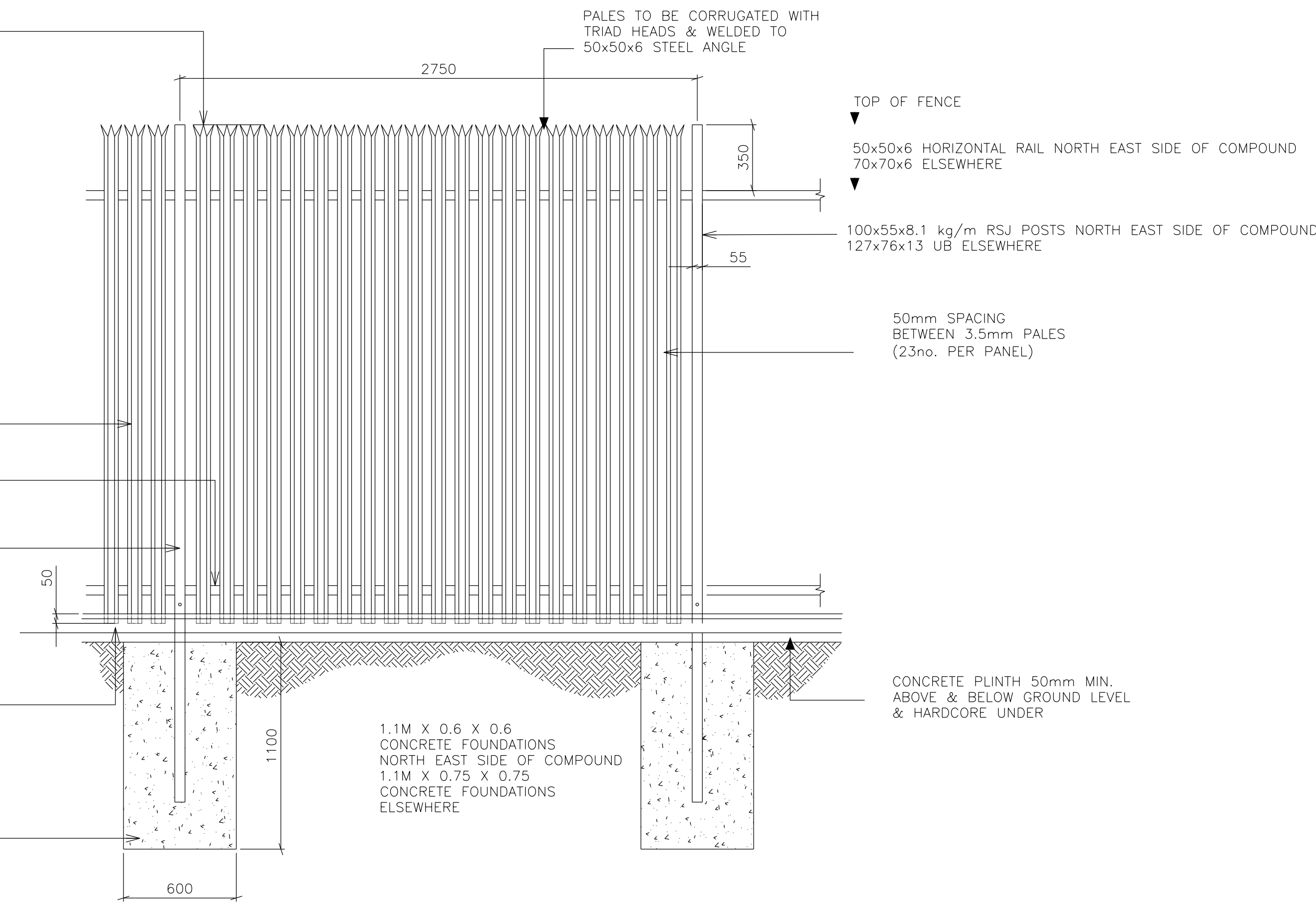
FENCE HEIGHT TO BE ADJUSTED AT GATE TO ACHIEVE MIN 2600mm FROM ROAD LEVEL

PALES TO BE 70 x 20 x 3.5mm CORRUGATED WITH TRIPLE POINTED AND SPLAYED HEADS WELDED TO 50 x 50 x 6 STEEL ANGLE WITH 23 No. PALES PER PANEL

50 x 50 x 6 ANGLE HORIZONTAL RAILS NORTH EAST SIDE OF COMPOUND 127x76x13 UB ELSEWHERE

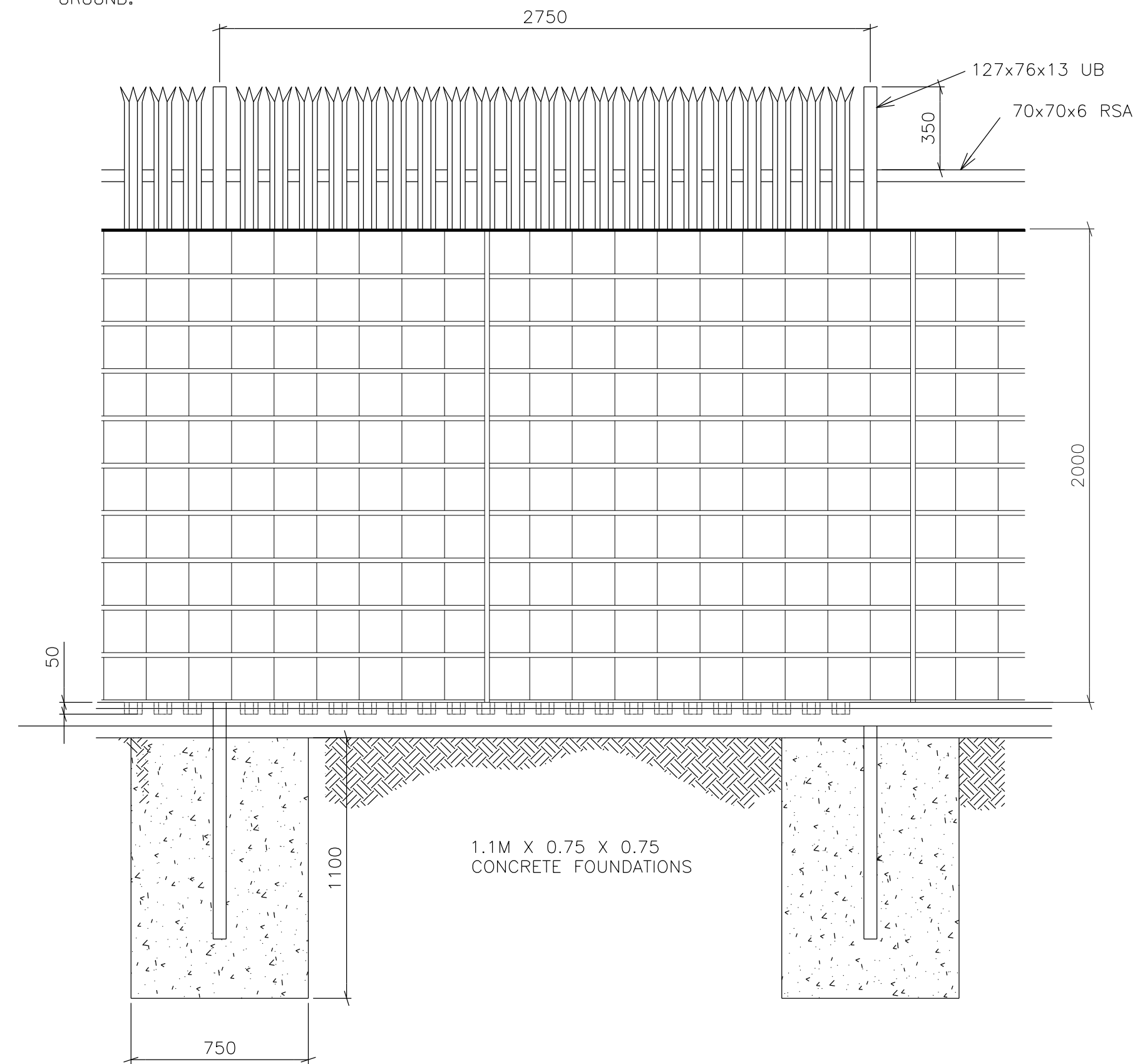
PANELS EMBEDDED 50mm IN CONCRETE PLINTH & 100mm MINIMUM CONCRETE COVER TO FRONT OF PALES

1100 x 600 x 600 CONCRETE FOUNDATIONS DIMENSIONS TO OUTSIDE GROUND LEVEL GRADE C20/25 CONCRETE



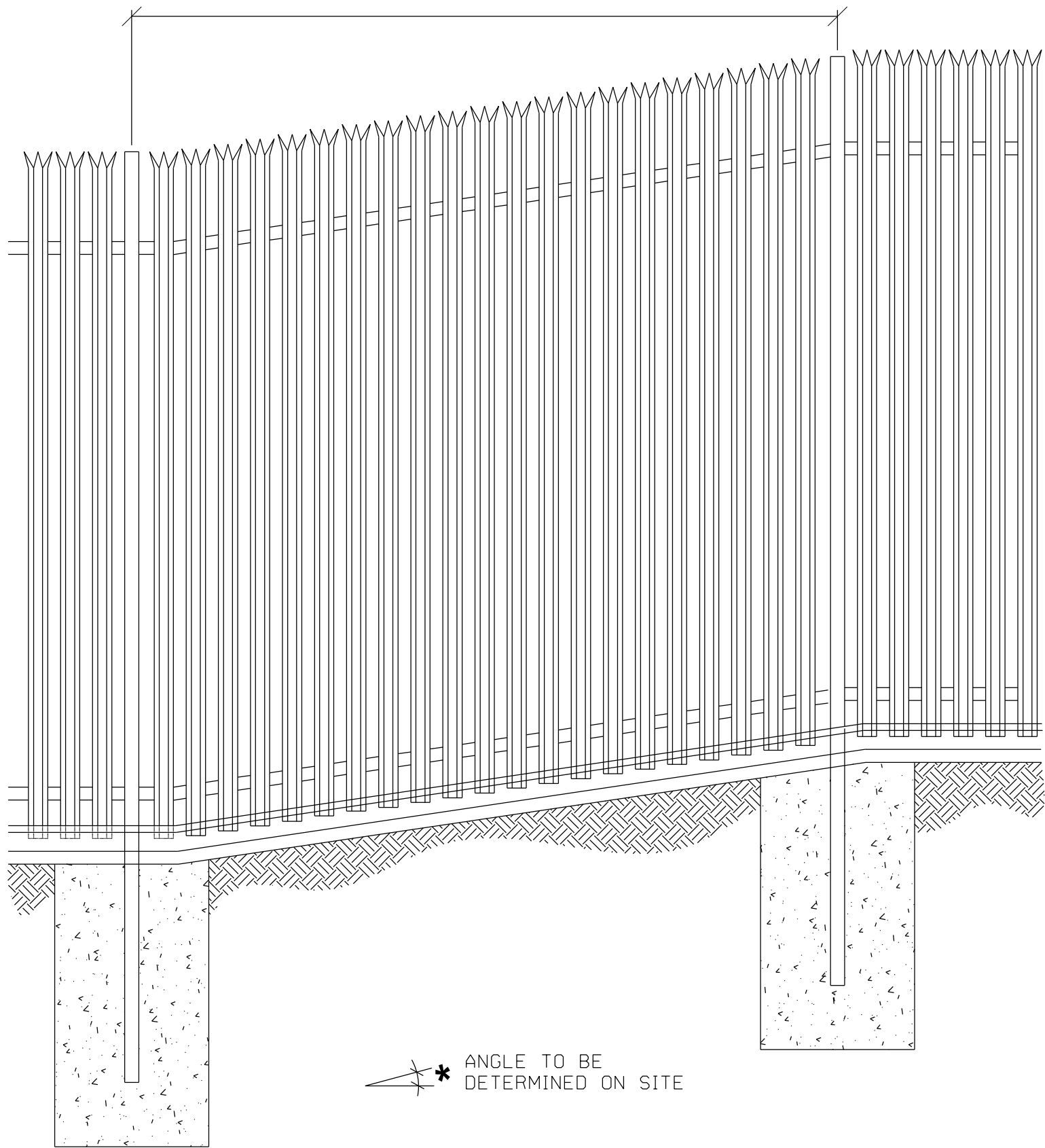
ELEVATION OF FENCE

A 2m TALL SOUND BARRIER WILL BE AFFIXED ON THE INSIDE OF THE PALISADE FENCE ON THREE SIDES OF THE MATERIAL STORAGE YARD. THE SOUND BARRIER WILL BE CONSTRUCTED OF A MATERIAL WITH A MASS OF > 7kg/m<sup>2</sup> AND HAVE NO GAPS IN THE BARRIER MATERIAL. THE SOUND BARRIER IS NOT REQUIRED ON THE BOUNDARY BETWEEN THE MATERIAL STORAGE YARD AND THE N2 NATIONAL PRIMARY ROAD. FOLLOWING THE INSTALLATION OF THE NOISE BARRIER, SOIL MOUNDS WILL BE POSITIONED AT THE FOOTING OF THE FENCE, SUFFICIENT TO CLOSE ANY GAPS BETWEEN THE SOUND BARRIER AND THE GROUND.

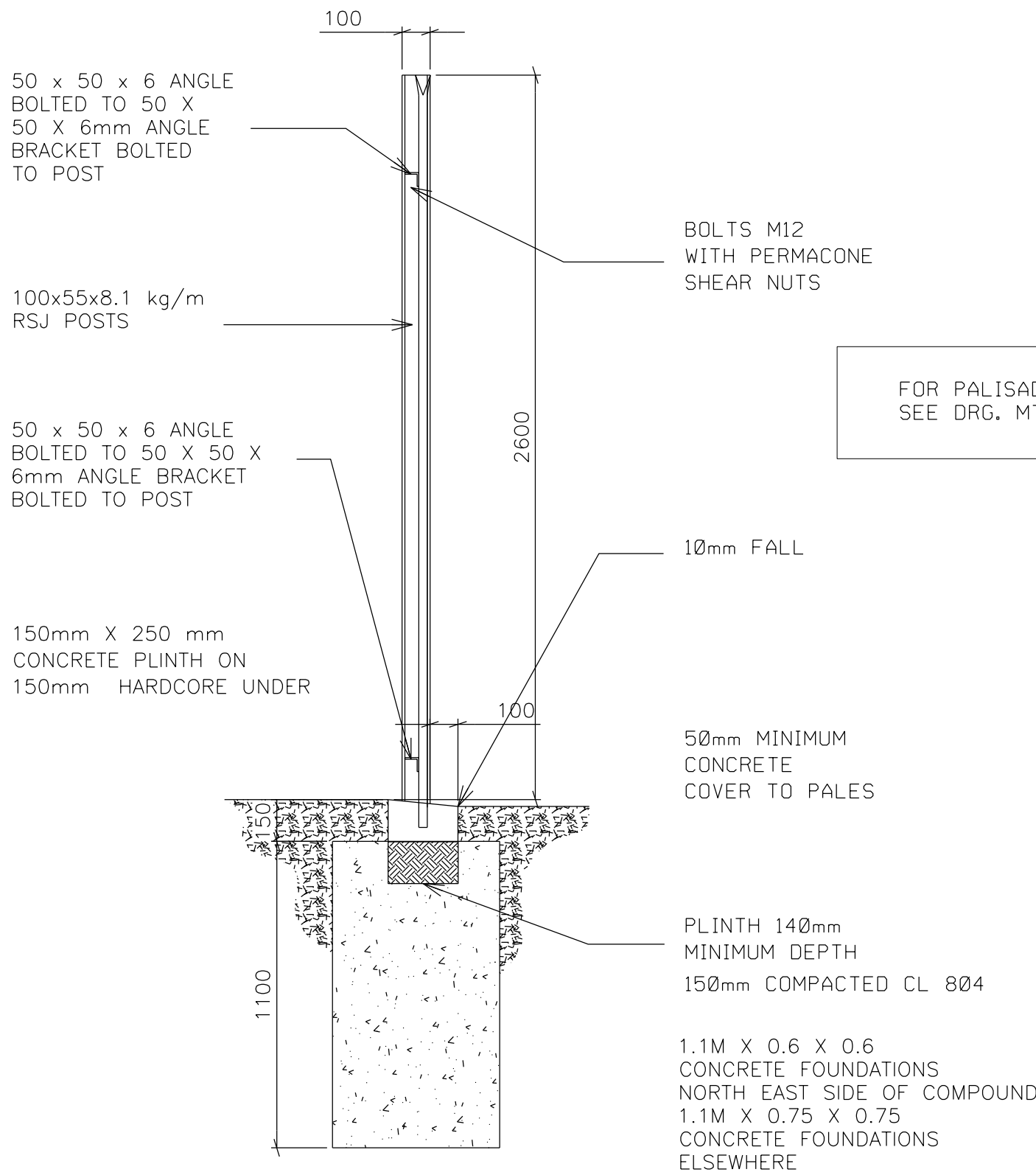


ELEVATION OF FENCE WITH NOISE BARRIER

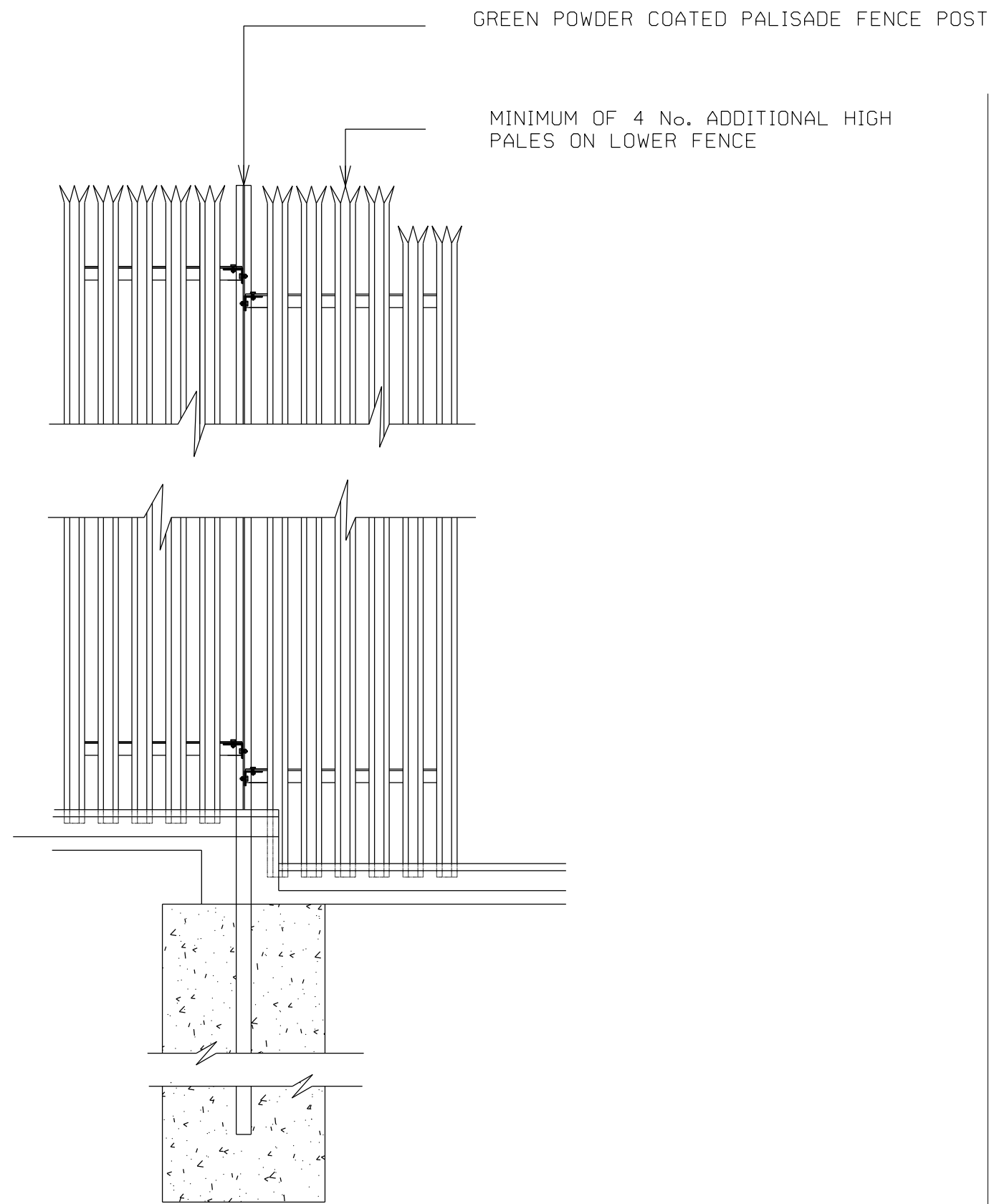
THIS SECTION OF FENCING TO BE WELDED CONSTRUCTION, FABRICATED AS PER MAIN PANELS AS NOTED



ELEVATION TO TYPICAL SLOPED SECTION OF FENCING



PALES & PLINTH DETAILS



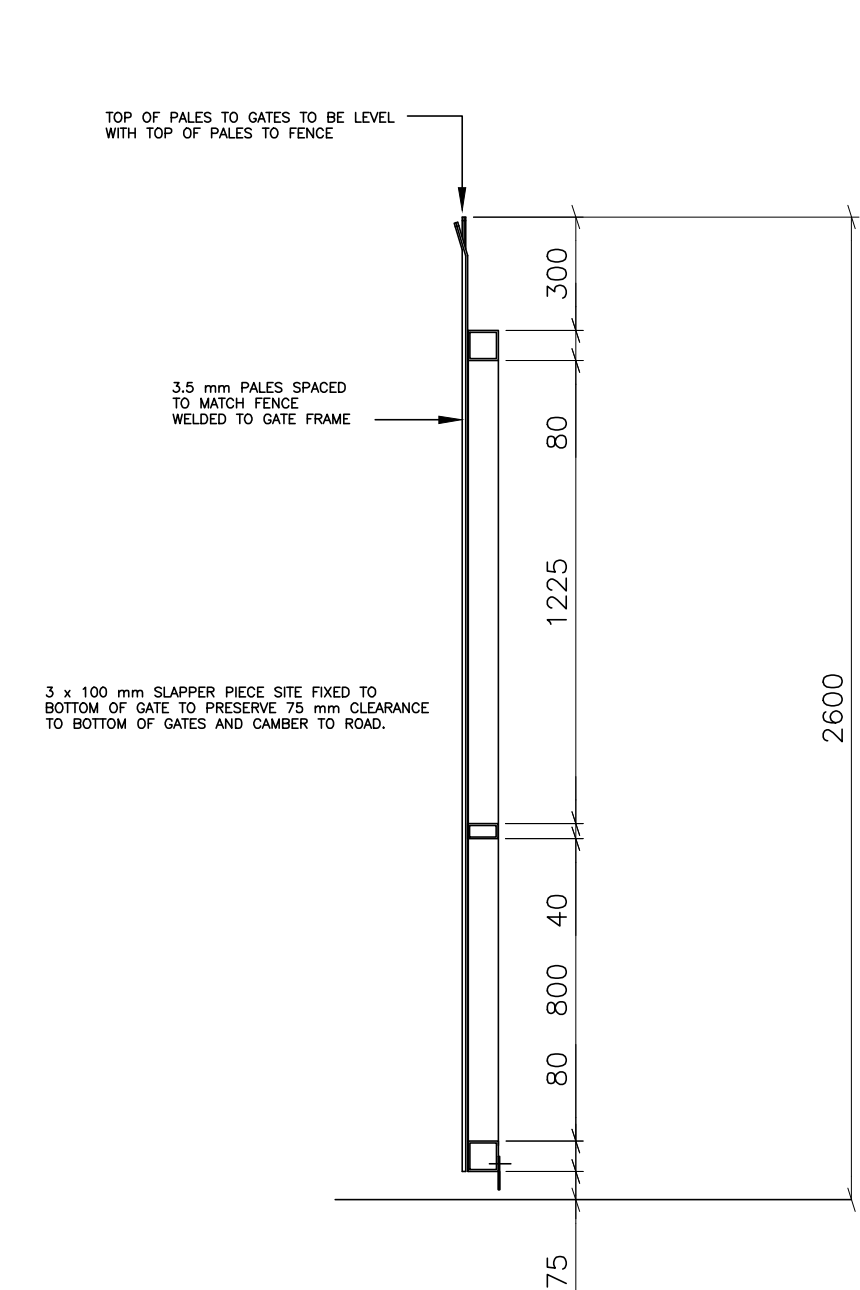
STEP(S) IN PALISADE FENCE

DEPTH OF STEP TO BE AGREED ON SITE, BUT NOT GREATER THAN 200mm  
NOTE:- ADDITIONAL HIGH PALES ON LOWER FENCE.

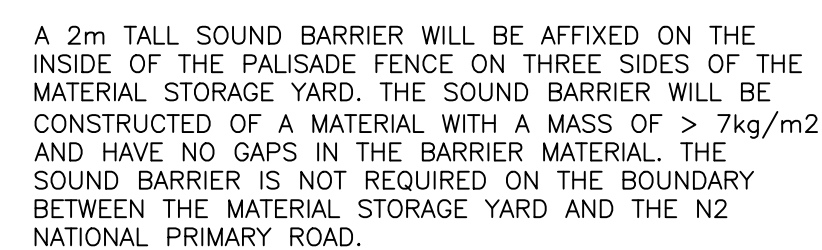


FOR PALISADE FENCE LAYOUT SEE DRG. MT-009-002

|  |                          |                      |                          |               |                          |          |                          |         |                          |
|--|--------------------------|----------------------|--------------------------|---------------|--------------------------|----------|--------------------------|---------|--------------------------|
| REV.   | DATE                     | REVISION DESCRIPTION | DRN                      | PROD          | VER                      | APP      |                          |         |                          |
| PURPOSE OF ISSUE - PRELIMINARY UNLESS INDICATED  |                          |                      |                          |               |                          |          |                          |         |                          |
| TENDER   | <input type="checkbox"/> | CLIENT APPROVAL      | <input type="checkbox"/> | CONSTRUCTION  | <input type="checkbox"/> | AS-BUILT | <input type="checkbox"/> | REVISED | <input type="checkbox"/> |
| Client   |                          |                      |                          |               |                          |          |                          |         |                          |
| Project<br>North South 400 kV Interconnection Development  |                          |                      |                          |               |                          |          |                          |         |                          |
| Contract<br>N/A  |                          |                      |                          |               |                          |          |                          |         |                          |
| Drawing Title<br>Proposed Temporary Construction / Material Storage Yard Site Boundary Palisade Fence<br>Planning Drawing Reference - MT-009-003   |                          |                      |                          |               |                          |          |                          |         |                          |
| Production Unit<br>High Voltage Engineering  |                          |                      |                          |               |                          |          |                          |         |                          |
| <div><div></div><div><b>ESB International</b>, Stephen Court, 18-21 St. Stephen's Green, Dublin 2, Ireland. Tel: +353 (0)1 703 8000 Fax: +353 (0)1 703 8088<br/>Email: marketing@esb.ie Web: www.esb.ie<br/>ESB International is a trading name of ESB Engineering &amp; Facility Management Limited.<br/>Registered Office: as above Registered in Ireland No. 155249</div></div> |                          |                      |                          |               |                          |          |                          |         |                          |
| DRAWN  | PRODUCED                 | VERIFIED             | APPROVED                 | APPRO DATE    |                          |          |                          |         |                          |
| JW   | JW                       | KC                   | BA                       | May -15       |                          |          |                          |         |                          |
| CLIENT REF<br>TC211774   |                          | No. of Sheets<br>1   | SIZE<br>A1               | SCALE<br>1/20 |                          |          |                          |         |                          |
| DRAWING NUMBER<br>PE687-D141-143-001-002   |                          |                      |                          |               |                          |          |                          |         |                          |
| SHEET<br>1/20  |                          |                      |                          |               |                          |          |                          |         |                          |



## SECTION A-A



NOTE:—  
DIMENSIONS ARE IN MILLIMETRES  
UNLESS OTHERWISE STATED

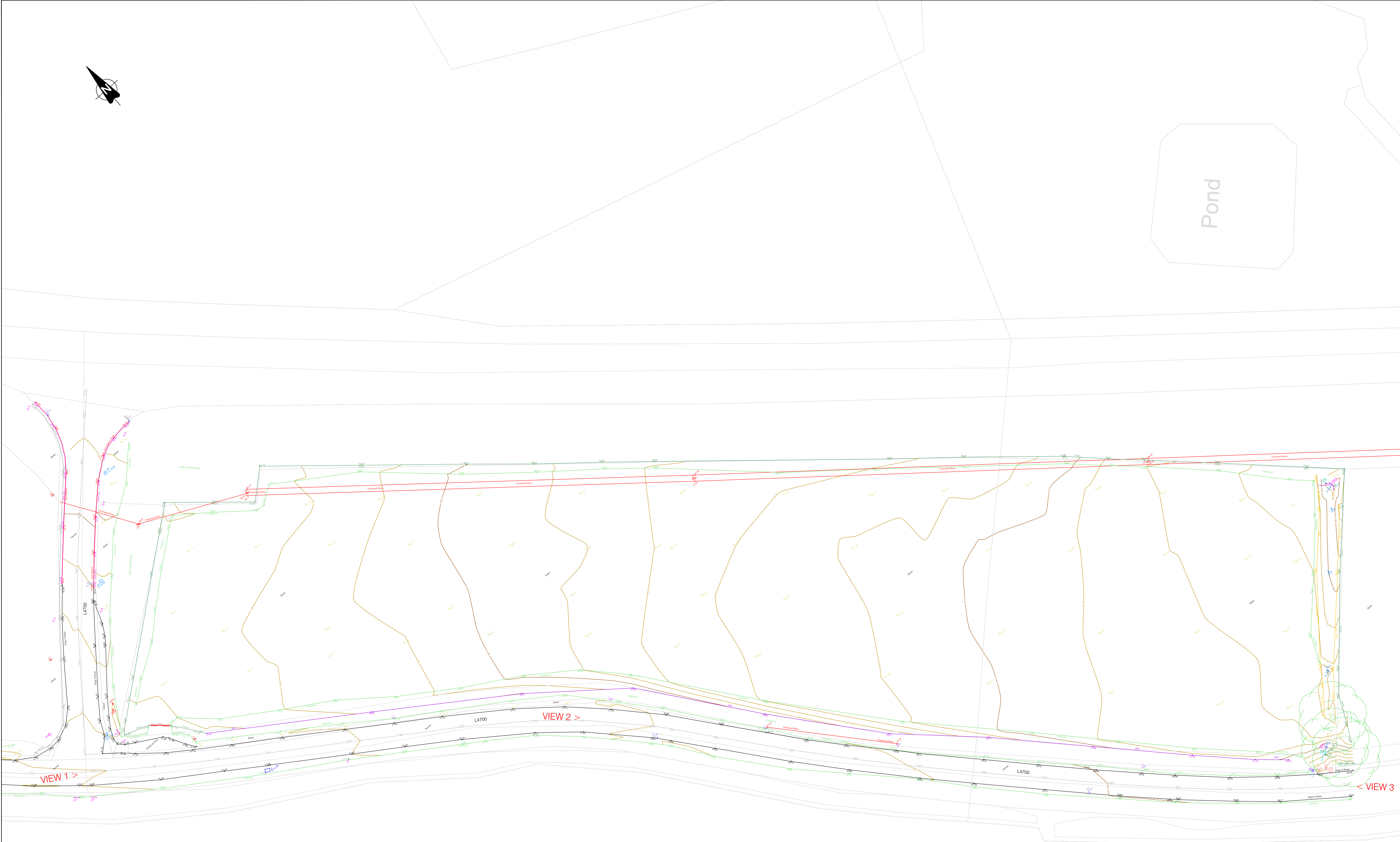
[illegible]



## Appendix 2 – Material Storage Yard Construction Drawings

- 24051-MWP-ZZ-ZZ-DR-C-0100 - Proposed Temporary Construction / Material Storage Yard Topographical Survey July 2023
- 24051-MWP-ZZ-ZZ-DR-C-0101 - Proposed Temporary Construction / Material Storage Yard Site Location Map
- 24051-MWP-ZZ-ZZ-DR-C-0102 - Proposed Temporary Construction / Material Storage Yard Site Layout Plan & Details
- 24051-MWP-ZZ-ZZ-DR-C-0103 - Proposed Temporary Construction / Material Storage Yard Entrance - Concrete Apron GA
- 24051-MWP-ZZ-ZZ-DR-C-0104 - Proposed Temporary Construction / Material Storage Yard Entrance - Autotrack Swept Path
- 24051-MWP-ZZ-ZZ-DR-C-0110 - Proposed Temporary Construction / Material Storage Yard Palisade Fence Details
- 24051-MWP-ZZ-ZZ-DR-C-0111 - Proposed Temporary Construction / Material Storage Yard Palisade Gate Details
- 24051-MWP-ZZ-ZZ-DR-C-0112 - Proposed Temporary Construction / Material Storage Yard Typical Site Details





LEGEND

- Surface Change
- Concrete
- Road Edge
- Overhead Cables
- Kerb Top
- Kerb Bottom
- Gully
- Hedge / Vegetation / Tree Line
- Fence
- White Road Marking
- Slope Top
- Slope Bottom
- Ditch
- Wall
- Barrier
- Pipe
- OSI Background
- Minor Contour
- Major Contour
- Sluice Valve
- Road Sign
- Lamp Post
- Marker Post
- Telegraph Pole
- Electricity Pole
- Crown Level
- Invert Level
- Spot Height
- Stay
- Inspection Chamber
- Hydrant
- Manhole
- Gully
- ESB Box
- Tree

Notes:

- All levels in meters above ordnance datum Malin Head
- Coordinates are given in Irish Transverse Mercator coordinate system
- Topographical survey undertaken on week commencing 24/07/2023
- Background mapping taken from OSI



VIEW 1



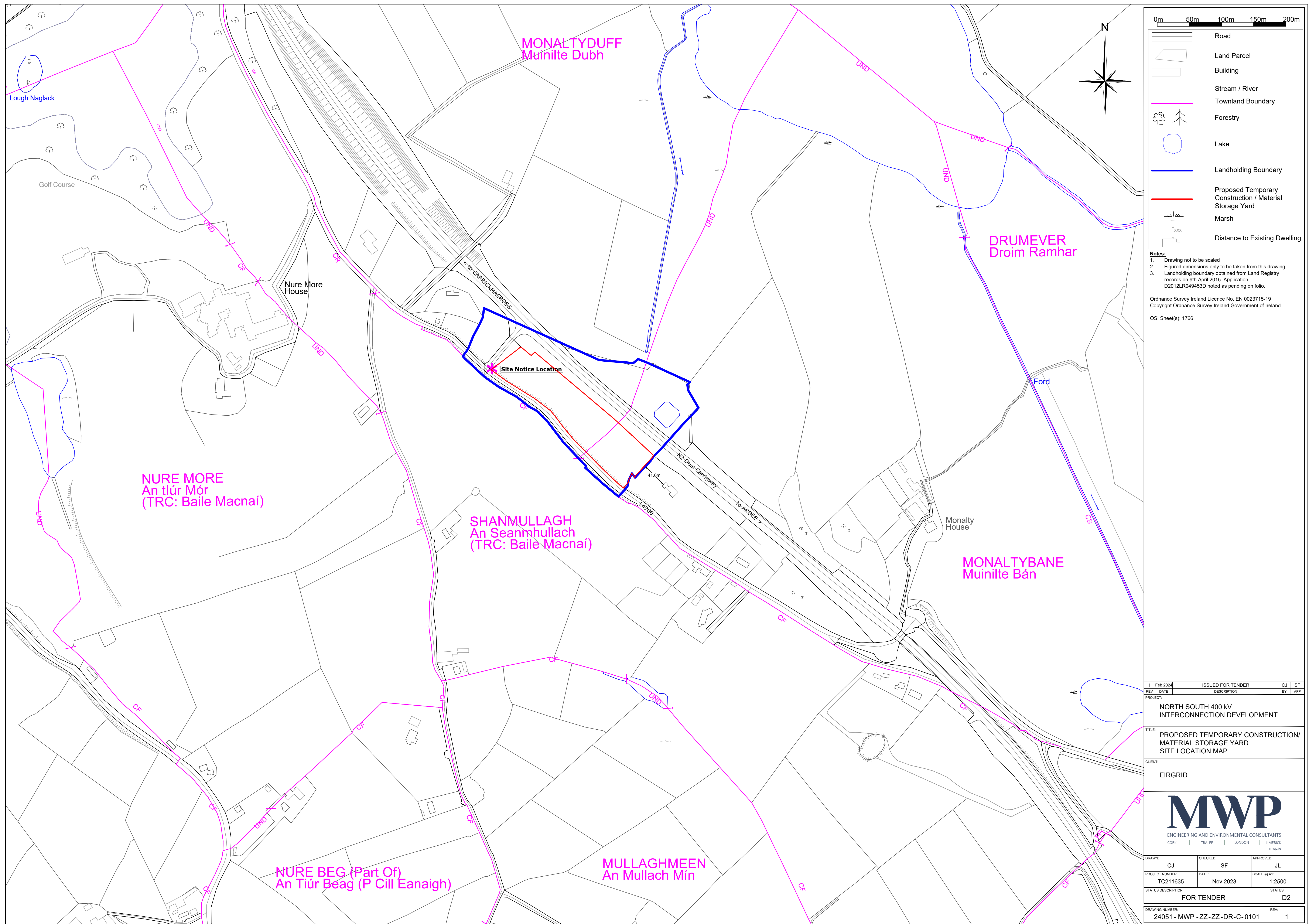
VIEW 2 (AT PROPOSED ENTRANCE)



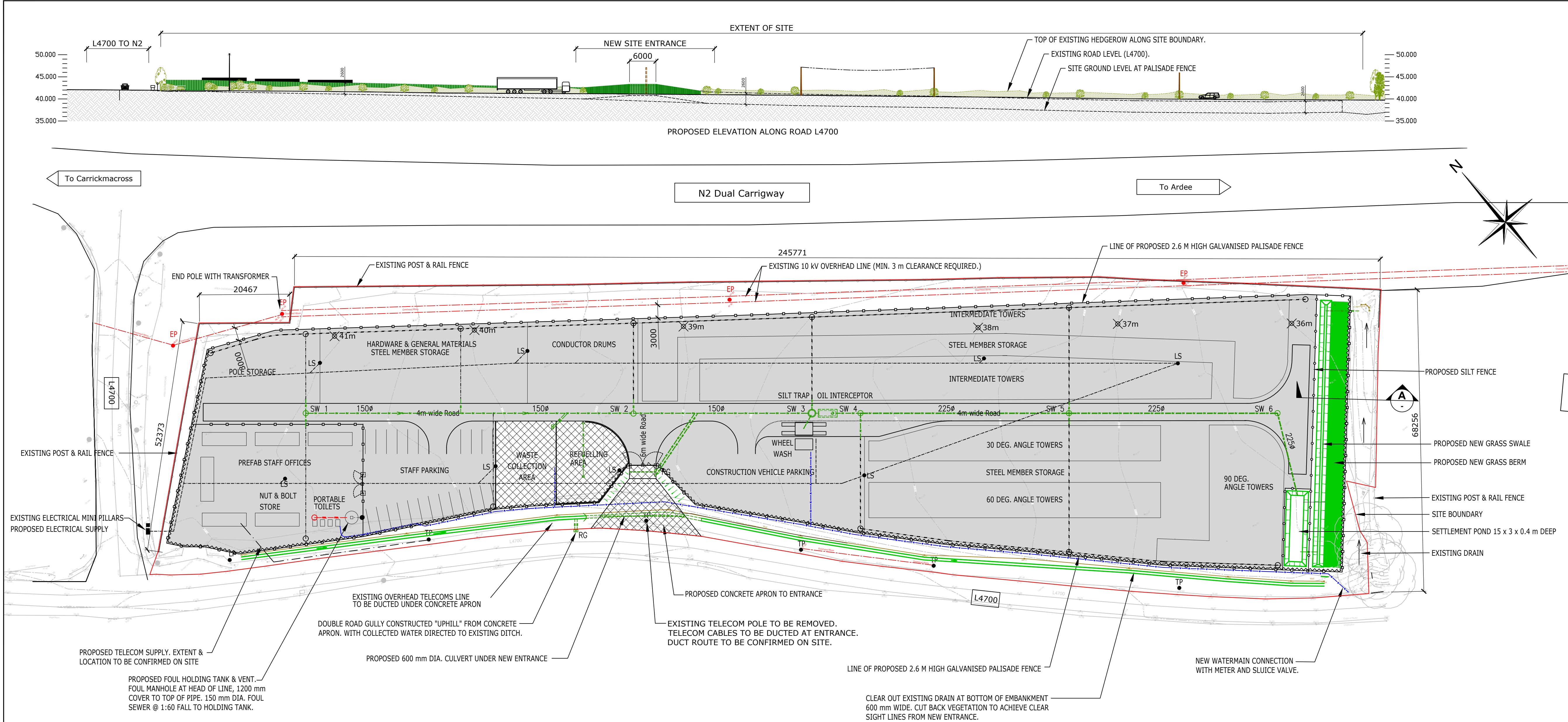
VIEW 3

|  |                |                   |            |     |
|--|----------------|-------------------|------------|-----|
| 1  | 24/07/2023     | ISSUED FOR TENDER | CJ         | SF  |
| REV  | DATE           | DESCRIPTION       | BY         | APP |
| PROJECT: NORTH SOUTH 400 kV INTERCONNECTION DEVELOPMENT  |                |                   |            |     |
| TITLE: PROPOSED TEMPORARY CONSTRUCTION/ MATERIAL STORAGE YARD TOPOGRAPHICAL SURVEY JULY 2023   |                |                   |            |     |
| CLIENT: ESB NETWORKS   |                |                   |            |     |
| MWP<br>ENGINEERING AND ENVIRONMENTAL CONSULTANTS<br>CORK   TRALEE   LONDON   LIMERICK   DUBLIN |                |                   |            |     |
| DRAWN: CJ  | CHECKED: SF    | APPROVED: JL      |            |     |
| PROJECT NUMBER: YC229635   | DATE: Nov 2023 | SCALE @ A1: 1:300 |            |     |
| STATUS DESCRIPTION: FOR TENDER   |                |                   | STATUS: D2 |     |
| DRAWING NUMBER: 24051 - MWP - ZZ - ZZ - DR - C - 0100  |                |                   | REV: 1     |     |









0m 10m 20m 30m 40m

**Legend:**

- Proposed Temporary Construction / Material Storage Yard
- EP Electricity Pole
- TP Telecom's Pole
- LS Lamp Standard
- Existing Ground Level

- Notes:**
- Road, Parking and Storage Area surfaces to be constructed using compacted stone, refer to details.
  - Approximate site area 1.4 hectares.
  - Figured dimensions only to be taken from this drawing.
  - Configuration of Staff Facilities Shown is Indicative.
  - Noise Barrier to be stand alone fence unless otherwise agreed with the Engineer at construction stage.

Ordnance Survey Ireland Licence No. EN 0023715-19  
Copyright Ordnance Survey Ireland Government of Ireland  
Levels derived from OSI 10m DTM Data. Levels relate to Malin Head.

**SITE STRIP & STONE FILL:**

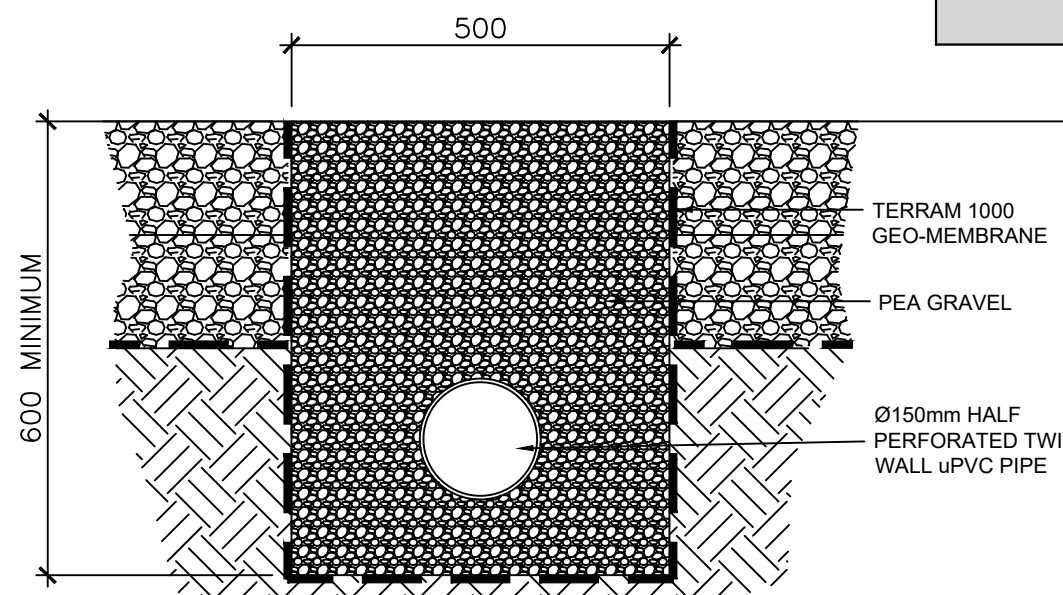
- STRIP OFF 300 mm OF EXISTING TOPSOIL AND GROUND.
- FORMATION TO BE TESTED WITH PLATE BEARING TESTS. (MIN. 5% GBR REQUIRED).
- SOFT SPOTS TO BE EXCAVATED OUT AND FILLED WITH COMPACTED 6F2 MATERIAL.
- GEOTEXTILE TERRAM 1000 PLACED ON FORMATION.
- 150 mm OF COMPACTED 6F2 STONE ON
- 150 mm OF COMPACTED UGM-A STONE.

SITE LEVELS TO BE REINSTATED SIMILAR TO EXISTING LEVELS. ~1/35 FALL NW TO SE.

STRIPPED MATERIAL TO BE STOCKPILED ON SITE FOR SUBSEQUENT RE-INSTANTMENT FOLLOWING DEMOBILISATION FROM SITE.

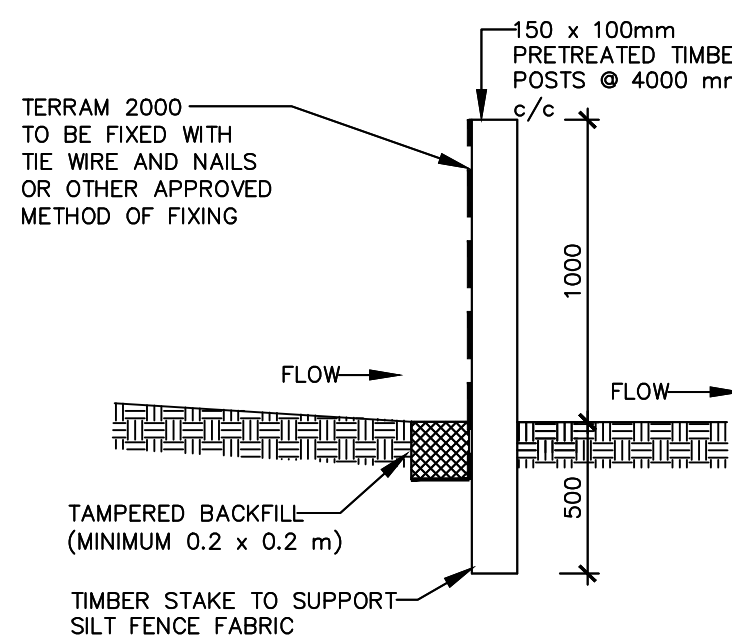
**LEGEND:**

- PROPOSED SURFACE WATER DRAIN (TWIN-WALL PIPES)
- PROPOSED FOUL DRAIN
- WATER SUPPLY PIPE 50 mm Ø DPE.
- LV SUPPLY DUCTS FOR YARD LIGHTING 125 mm Ø
- COMMS DUCT 100 mm Ø
- FRENCH DRAIN 150 mm Ø PERFORATED PIPE. CP - CATCH PIT
- 2.0 m HIGH TIMBER ACOUSTIC FENCE.
- NEW PALISADE PERIMETER FENCE. (WITH SOUND BARRIER ON EAST, WEST & SOUTH BOUNDARIES)
- NEW SILT FENCE.
- NEW RC APRON SLAB AREAS (721 m²)
- NEW STONED SITE AREAS (12,000 m²)

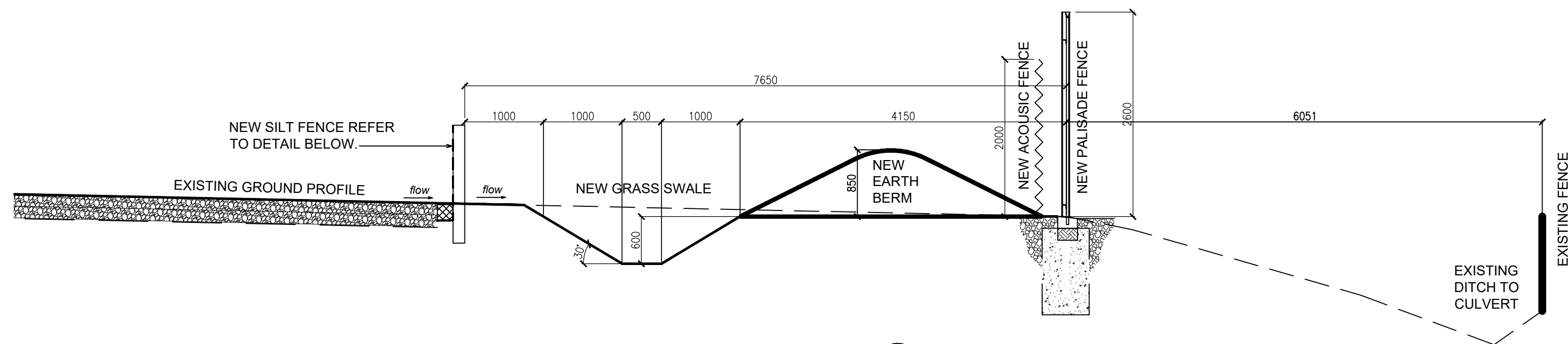


**TYPICAL FRENCH DRAIN DETAIL**  
SCALE 1:10

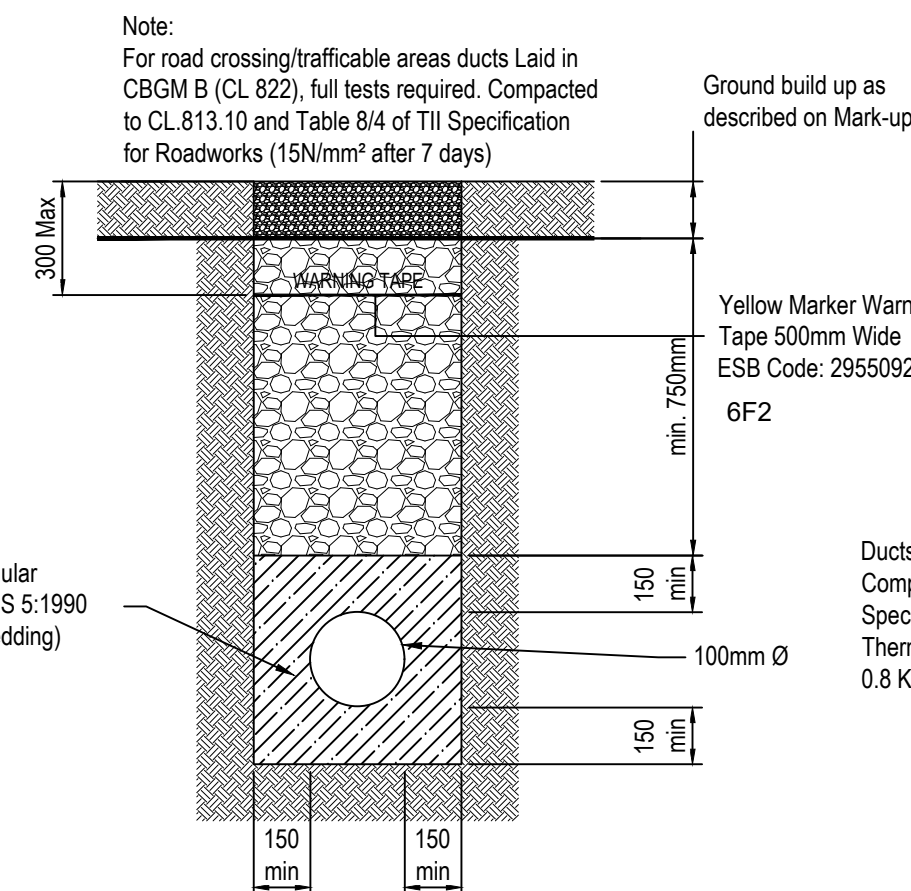
| SW MANHOLES |        |        |
|-------------|--------|--------|
| No.         | CL     | IL     |
| SW 1        | 41.000 | 39.650 |
| SW 2        | 39.350 | 38.000 |
| SW 3        | 38.250 | 36.900 |
| SW 4        | 38.100 | 36.750 |
| SW 5        | 37.250 | 35.900 |
| SW 6        | 36.300 | 34.950 |



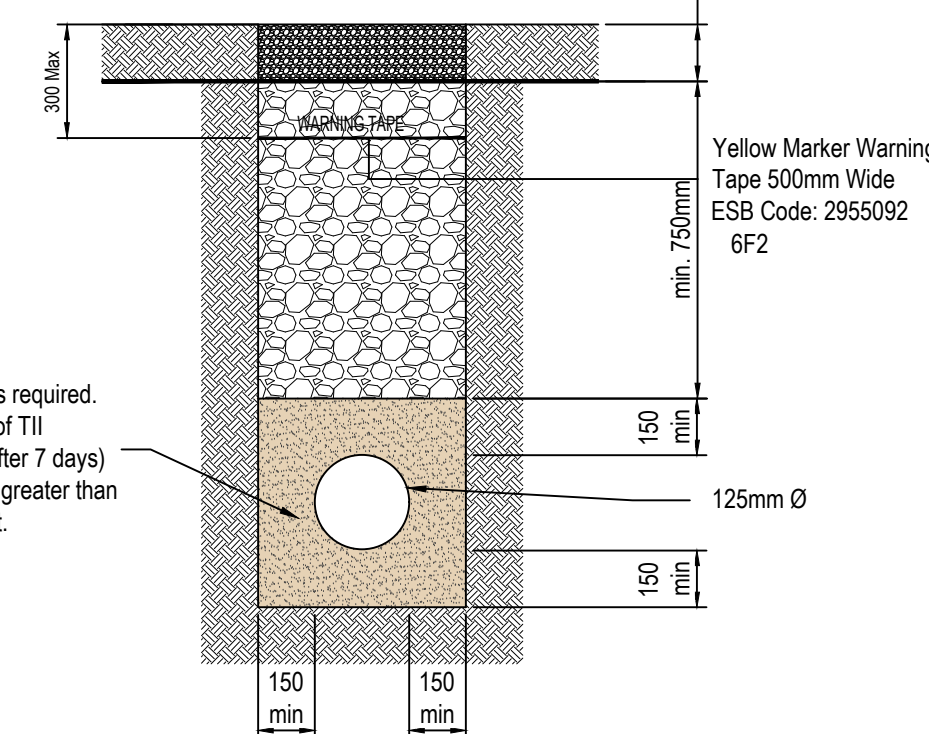
**TYPICAL SILT FENCE DETAIL**  
SCALE 1:25



**SECTION A**  
SCALE 1:50



Typical Trench Detail For Comms Ducting



Typical Trench Detail For LV Elec Ducting

|     |          |                   |    |     |
|-----|----------|-------------------|----|-----|
| 1   | Feb 2024 | ISSUED FOR TENDER | CJ | SF  |
| REV | DATE     | DESCRIPTION       | BY | APP |

PROJECT: NORTH SOUTH 400 kV INTERCONNECTION DEVELOPMENT

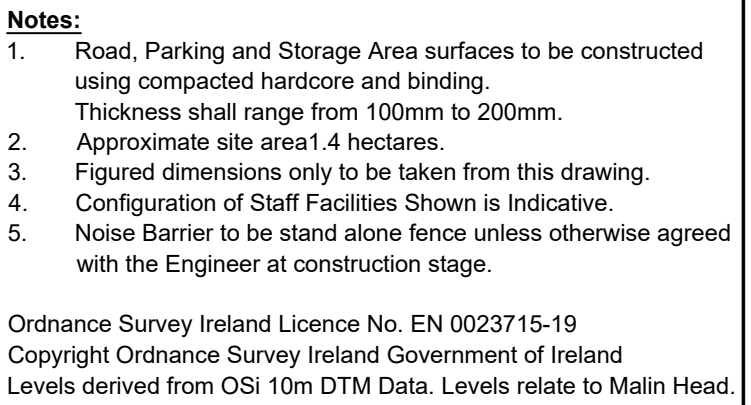
TITLE: PROPOSED TEMPORARY CONSTRUCTION/ MATERIAL STORAGE YARD SITE LAYOUT PLAN & DETAILS

CLIENT: EIRGRID

**MWP**  
ENGINEERING AND ENVIRONMENTAL CONSULTANTS  
CORK | TRALEE | LONDON | LIMERICK  
mwp.ie

|   |                |                   |
|---|----------------|-------------------|
| DRAWN: CJ   | CHECKED: SF    | APPROVED: JL      |
| PROJECT NUMBER: TC211635                              | DATE: Nov.2023 | SCALE @ A1: 1:500 |
| STATUS DESCRIPTION: FOR TENDER                        |                | STATUS: D2        |
| DRAWING NUMBER: 24051 - MWP - ZZ - ZZ - DR - C - 0102 |                | REV: 1            |



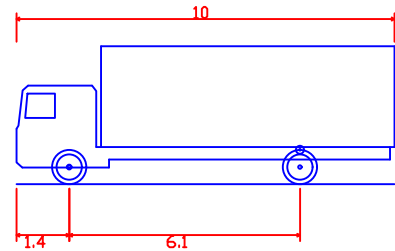
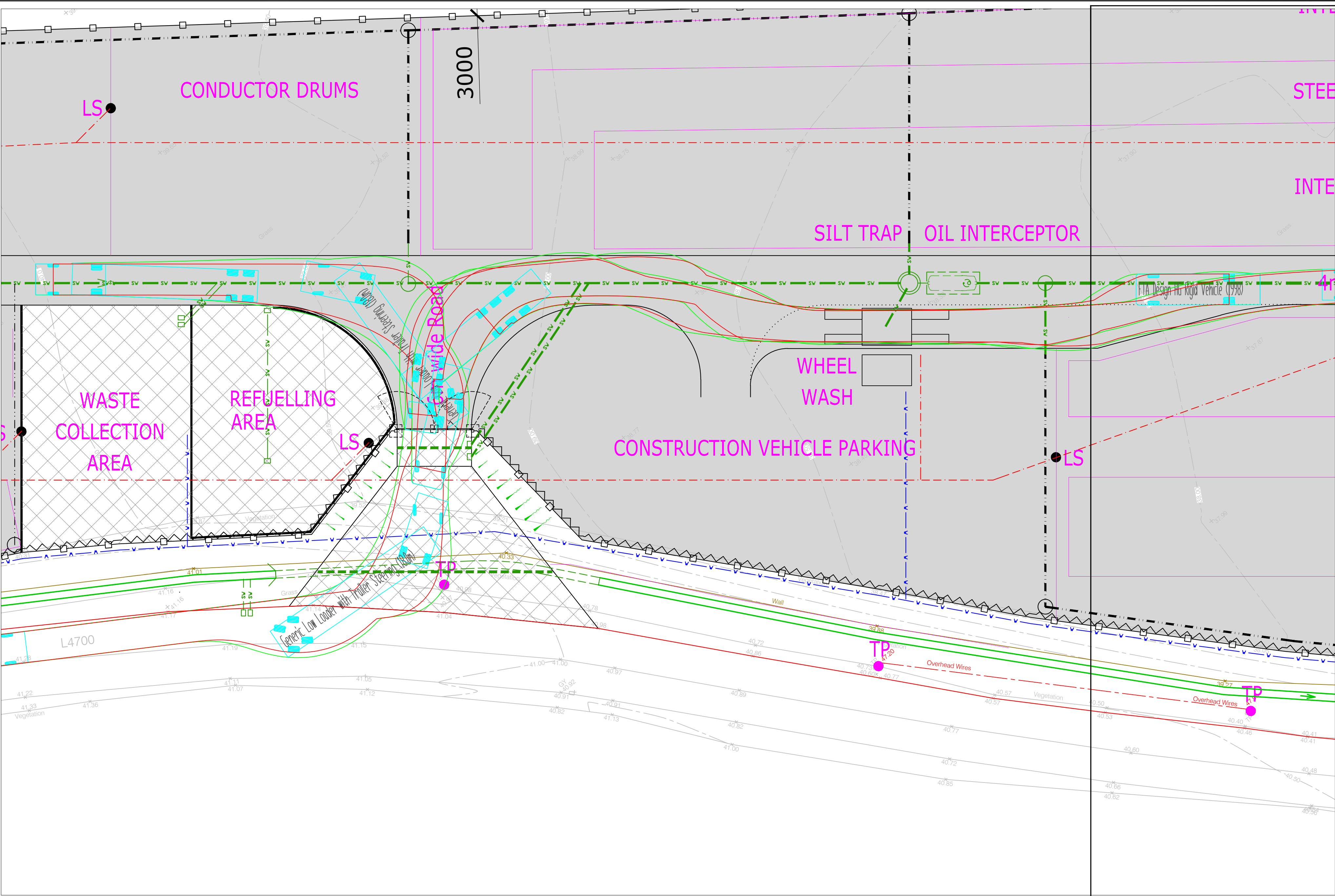
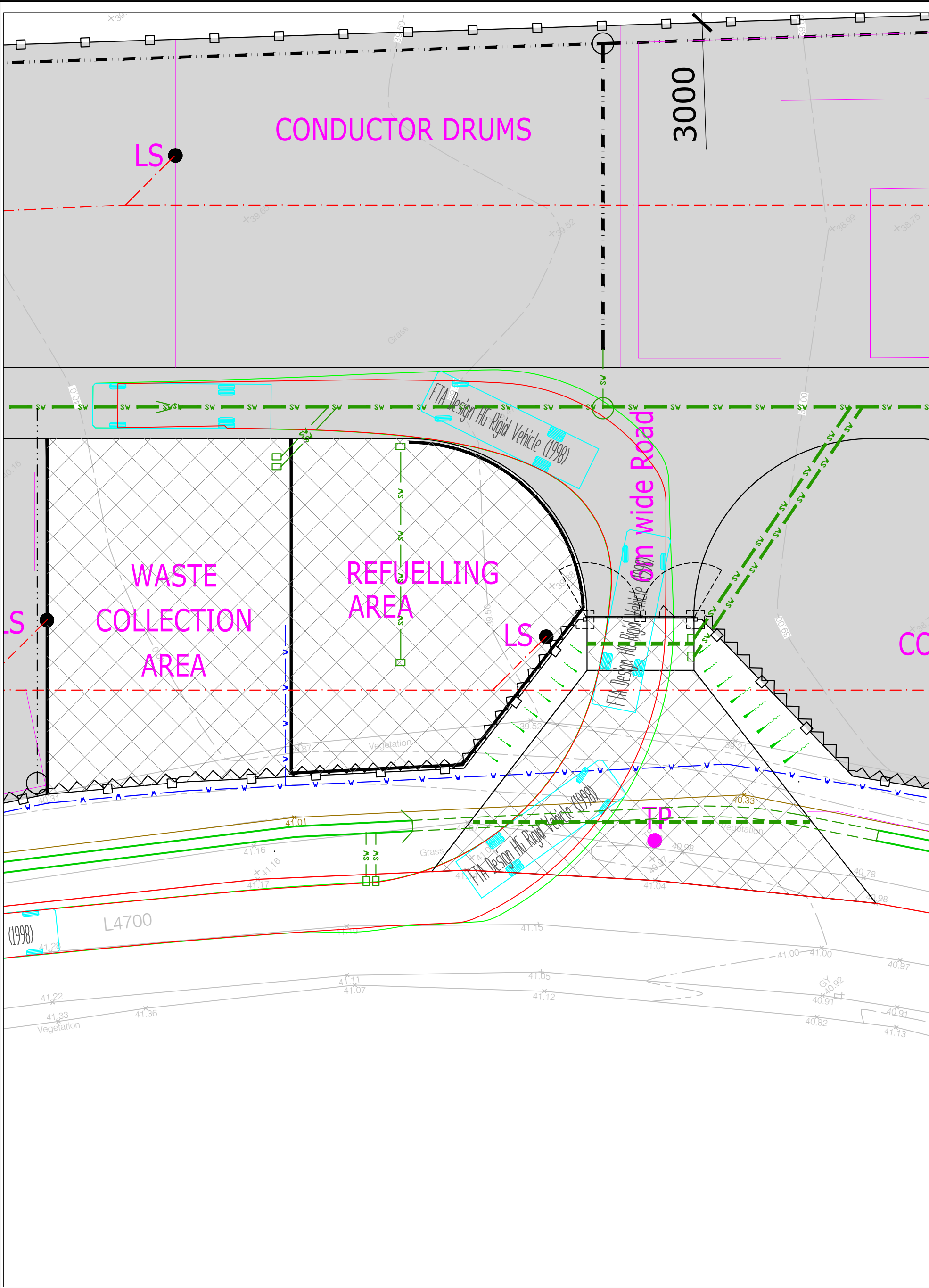


|  |           |
|--|-----------|
| DRAWING NUMBER:<br>24051 - MWP - ZZ-ZZ-DR-C-0103 | REV:<br>1 |
|--|-----------|

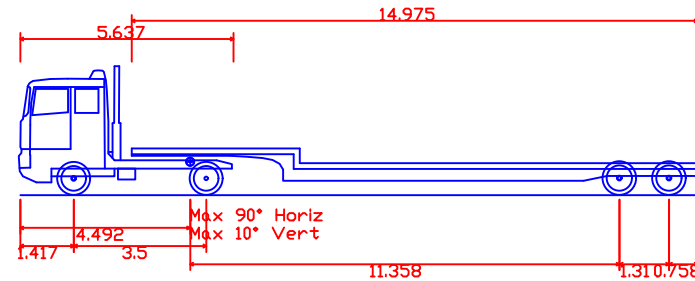
Joint Detail @ Junction of Existing Public Road and Concrete Access Road

**SECTION** B  
**SCALE 1:25**

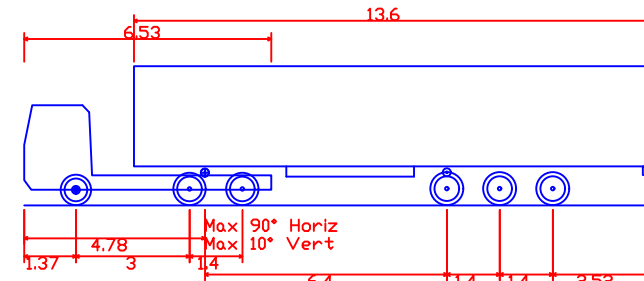




FTA Design HG Rigid Vehicle (1998)  
Overall Length 10.000m  
Overall Width 2.540m  
Overall Body Height 3.645m  
Min Body Ground Clearance 0.440m  
Track Width 2.470m  
Lock-to-lock time 3.00s  
Curb to Curb Turning Radius 11.000m



Generic Low Loader with Trailer Steering (18.0m)  
Overall Length 17.918m  
Overall Width 2.540m  
Overall Body Height 3.409m  
Min Body Ground Clearance 0.335m  
Max Track Width 6.350m  
Lock-to-lock time 6.00s  
Curb to Curb Turning Radius 6.350m



Max Legal Length (UK) Articulated Vehicle (16.5m)  
Overall Length 16.500m  
Overall Width 2.540m  
Overall Body Height 3.681m  
Min Body Ground Clearance 0.411m  
Max Track Width 2.500m  
Lock-to-lock time 6.00s  
Curb to Curb Turning Radius 6.530m

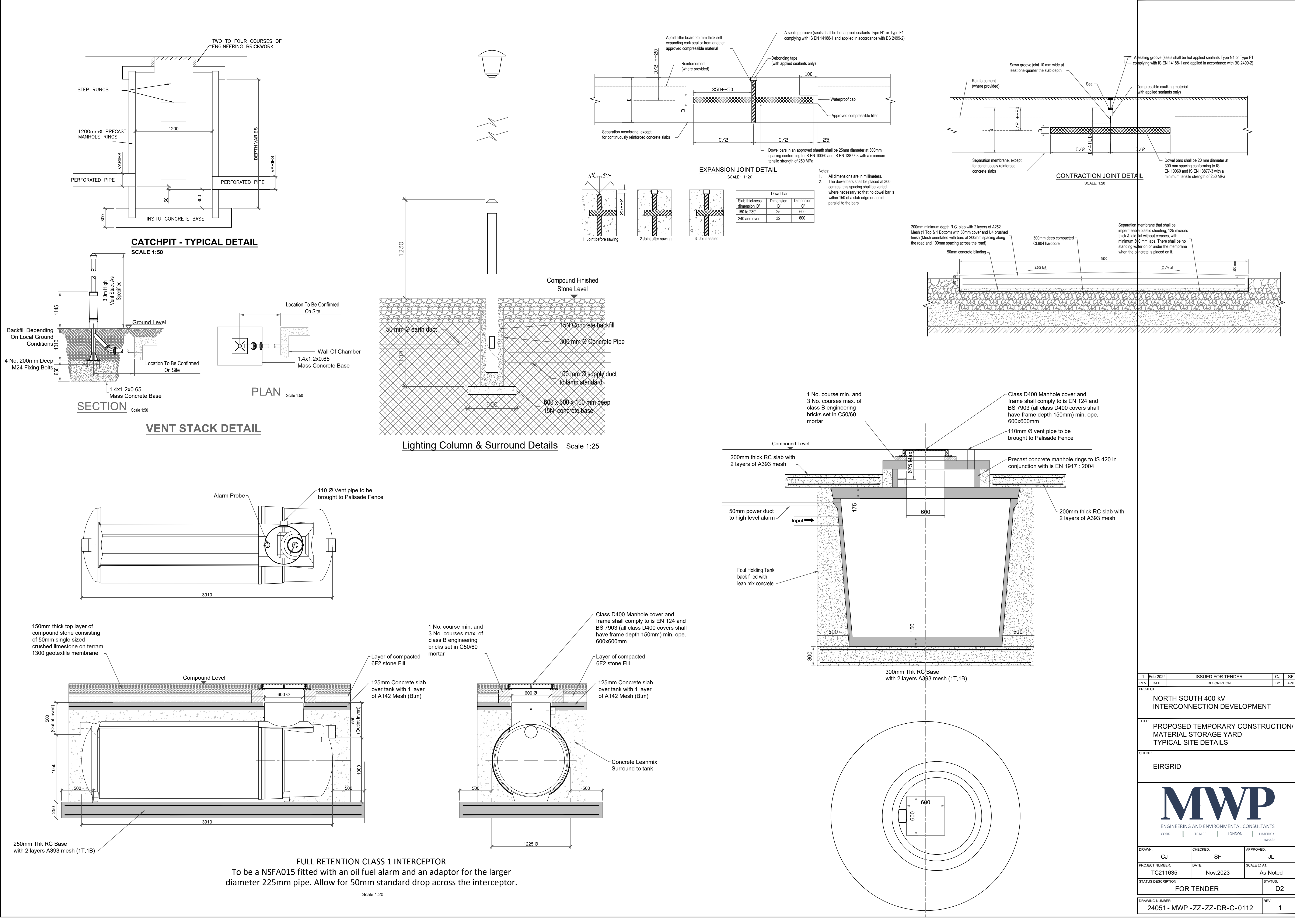
|  |  |          |  |                   |  |          |  |             |  |       |  |
|--|--|----------|--|-------------------|--|----------|--|-------------|--|-------|--|
| 1  |  | Feb 2024 |  | ISSUED FOR TENDER |  | CJ       |  | SF          |  |       |  |
| REV  |  | DATE     |  | DESCRIPTION       |  | BY       |  | APP         |  |       |  |
| PROJECT:   |  |          |  |                   |  |          |  |             |  |       |  |
| NORTH SOUTH 400 kV<br>INTERCONNECTION DEVELOPMENT  |  |          |  |                   |  |          |  |             |  |       |  |
| TITLE:   |  |          |  |                   |  |          |  |             |  |       |  |
| PROPOSED TEMPORARY CONSTRUCTION/<br>MATERIAL STORAGE YARD<br>ENTRANCE - AUTOTRACK SWEEP PATH                                       |  |          |  |                   |  |          |  |             |  |       |  |
| CLIENT:  |  |          |  |                   |  |          |  |             |  |       |  |
| EIRGRID  |  |          |  |                   |  |          |  |             |  |       |  |
| <div>MWP</div> <div>ENGINEERING AND ENVIRONMENTAL CONSULTANTS</div> <div>CORK   TRALEE   LONDON   LIMERICK</div> <div>mwp.ie</div> |  |          |  |                   |  |          |  |             |  |       |  |
| DRAWN:   |  | CJ       |  | CHECKED:          |  | SF       |  | APPROVED:   |  | JL    |  |
| PROJECT NUMBER:  |  | TC211635 |  | DATE:             |  | Nov.2023 |  | SCALE @ A1: |  | 1:200 |  |
| STATUS DESCRIPTION   |  |          |  |                   |  |          |  | STATUS:     |  |       |  |
| FOR TENDER   |  |          |  |                   |  |          |  | D2          |  |       |  |
| DRAWING NUMBER:  |  |          |  |                   |  |          |  | REV:        |  |       |  |
| 24051 - MWP - ZZ-ZZ-DR-C-0104  |  |          |  |                   |  |          |  | 1           |  |       |  |









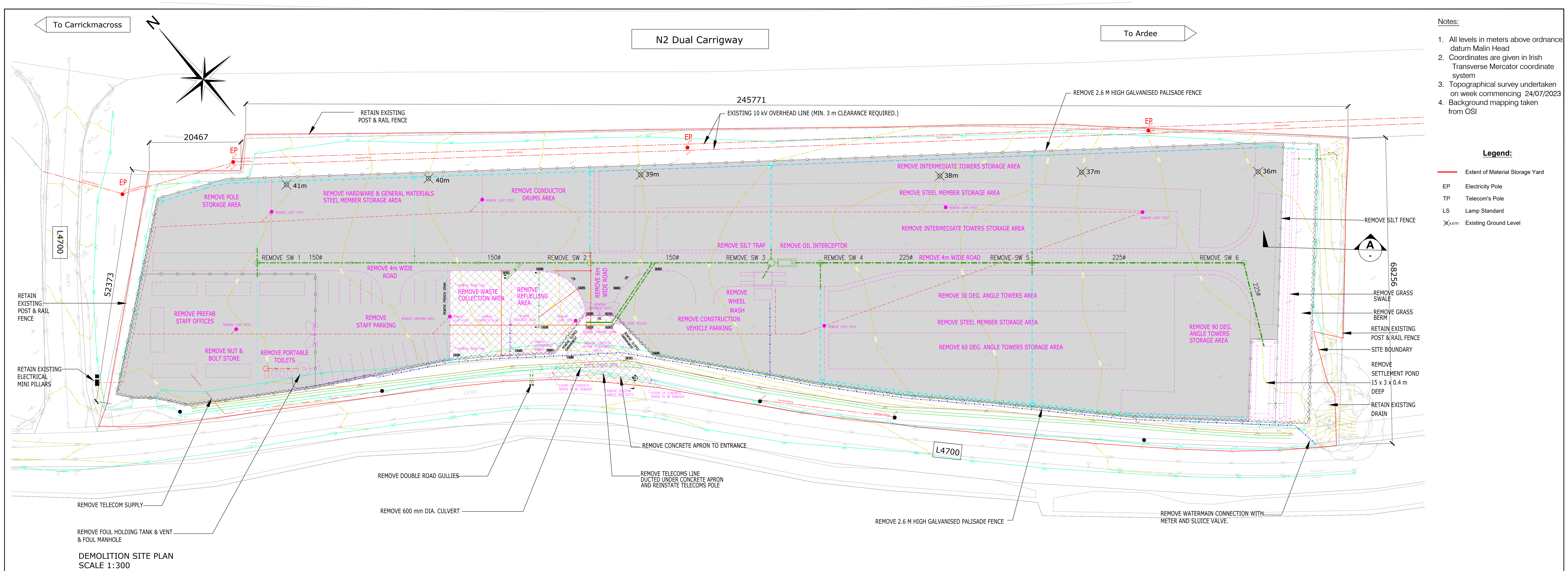


|   |          |                   |          |             |
|---|----------|-------------------|----------|-------------|
| 1   | Feb 2024 | ISSUED FOR TENDER | CJ       | SF          |
| REV   | DATE     | DESCRIPTION       | BY       | APP         |
| PROJECT:  |          |                   |          |             |
| NORTH SOUTH 400 kV<br>INTERCONNECTION DEVELOPMENT   |          |                   |          |             |
| TITLE:  |          |                   |          |             |
| PROPOSED TEMPORARY CONSTRUCTION/<br>MATERIAL STORAGE YARD<br>TYPICAL SITE DETAILS               |          |                   |          |             |
| CLIENT:   |          |                   |          |             |
| EIRGRID   |          |                   |          |             |
| MWP<br>ENGINEERING AND ENVIRONMENTAL CONSULTANTS<br>CORK   TRALEE   LONDON   LIMERICK<br>mwp.ie |          |                   |          |             |
| DRAWN:  | CJ       | CHECKED:          | SF       | APPROVED:   |
| PROJECT NUMBER:   | TC211635 | DATE:             | Nov.2023 | SCALE @ A1: |
| STATUS DESCRIPTION  |          |                   |          | STATUS:     |
| FOR TENDER  |          |                   |          | D2          |
| DRAWING NUMBER:   |          |                   |          | REV:        |
| 24051- MWP - ZZ-ZZ-DR-C-0112  |          |                   |          | 1           |

## Appendix 3 – Material Storage Yard Demolition, Reinstatement and Reinstatement Details Drawings

- PE687-D422-039-001 – Proposed Temporary Construction Material Storage Yard Demolition Works
- PE687-D422-039-002 - Proposed Temporary Construction Material Storage Yard Reinstatement Works
- PE687-D422-039-003 - Proposed Temporary Construction Material Storage Yard Reinstatement Details

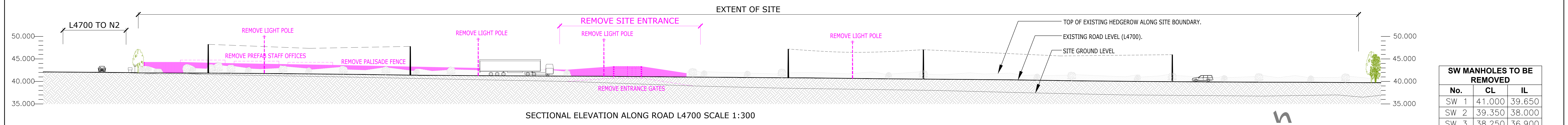




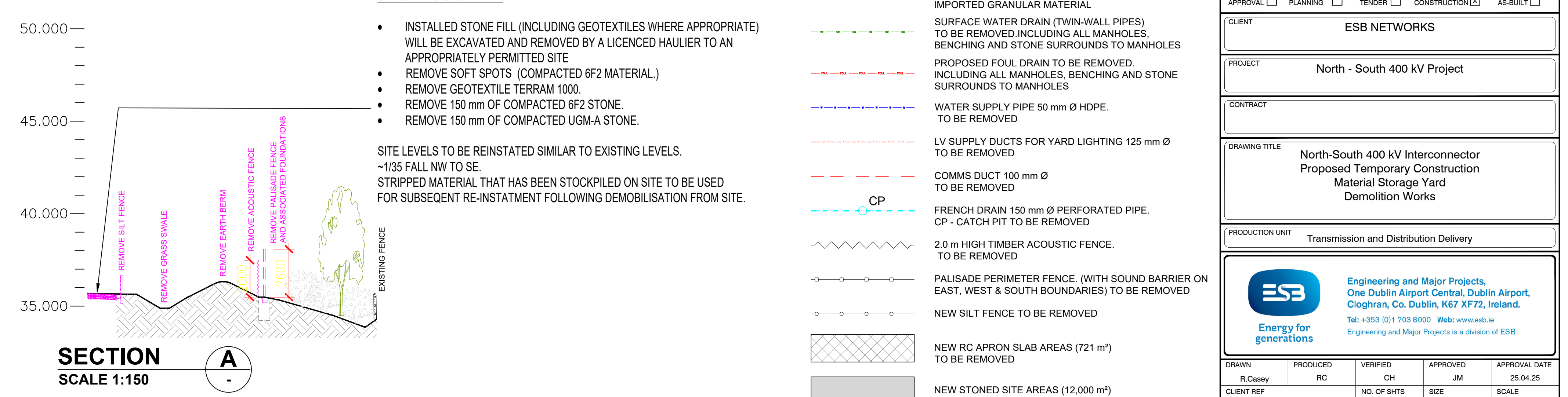
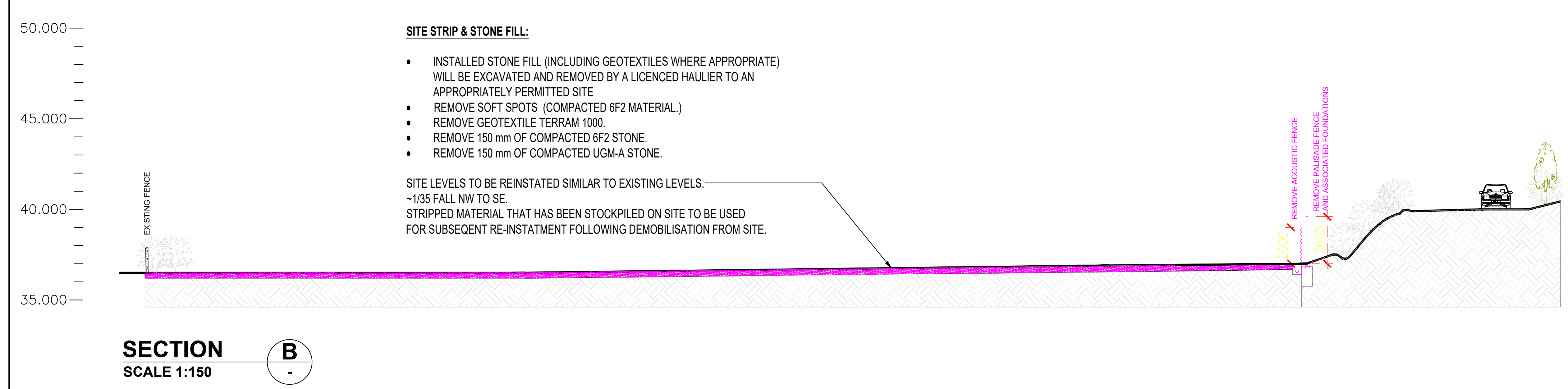
- Notes:
- All levels in meters above ordnance datum Malin Head
  - Coordinates are given in Irish Transverse Mercator coordinate system
  - Topographical survey undertaken on week commencing 24/07/2023
  - Background mapping taken from OSI

Legend:

- Extent of Material Storage Yard
- EP Electricity Pole
- TP Telecom's Pole
- LS Lamp Standard
- X<sub>xxm</sub> Existing Ground Level



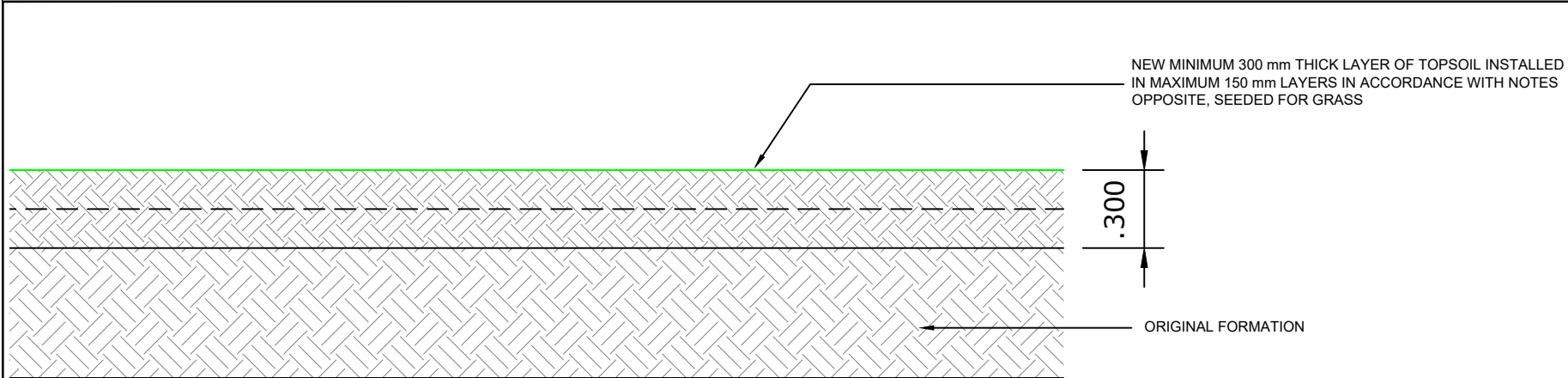
| SW MANHOLES TO BE REMOVED |        |        |  |
|---------------------------|--------|--------|--|
| No.                       | CL     | IL     |  |
| SW 1                      | 41.000 | 39.650 |  |
| SW 2                      | 39.350 | 38.000 |  |
| SW 3                      | 38.250 | 36.900 |  |
| SW 4                      | 38.100 | 36.750 |  |
| SW 5                      | 37.250 | 35.900 |  |
| SW 6                      | 36.300 | 34.950 |  |



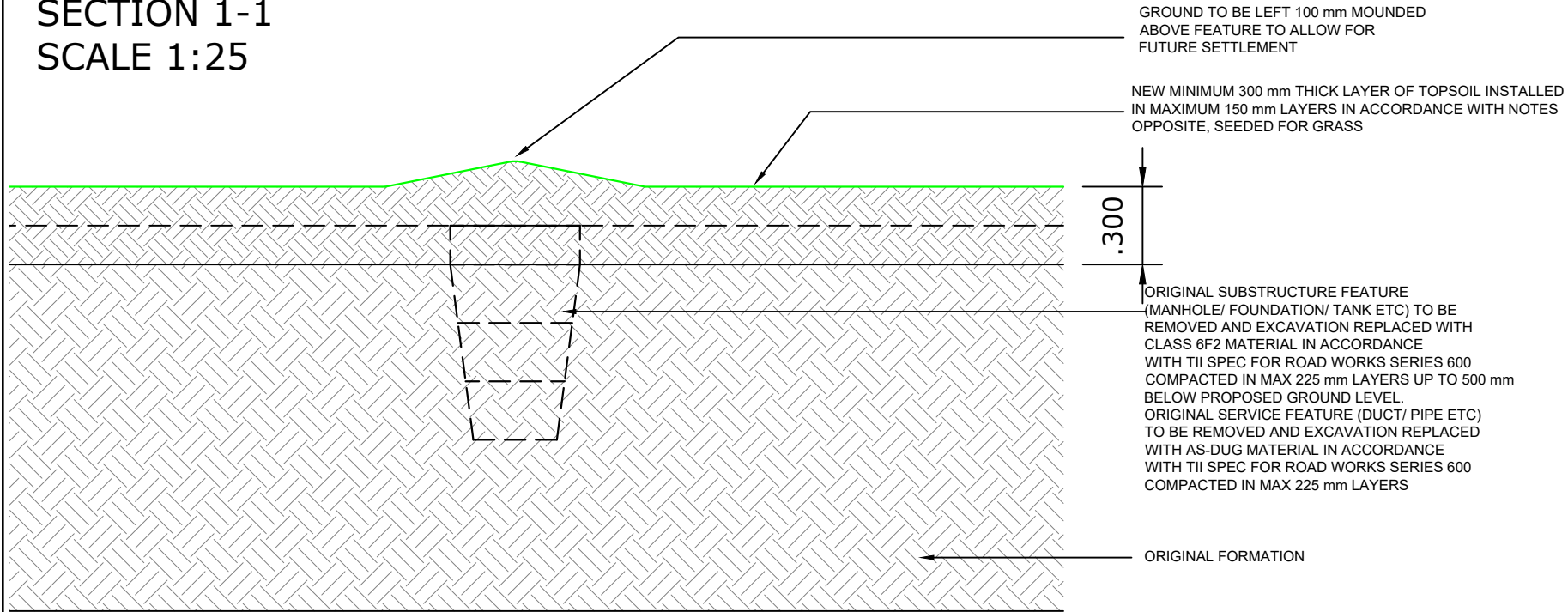




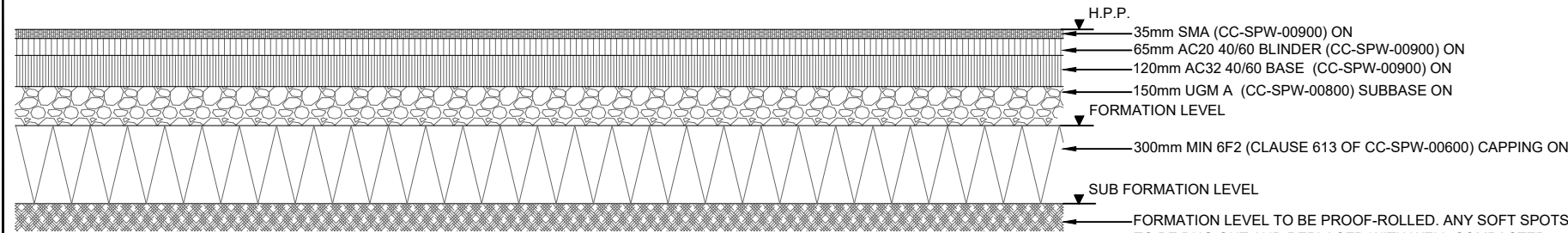




SECTION 1-1  
SCALE 1:25



SECTION 2-2  
SCALE 1:25



FULLY FLEXIBLE PAVEMENT (SUB-FORMATION ≥ 5%)  
SCALE 1:25

**NOTES:**  
**TOPSOILING AND GRASS SEEDING:**  
TOPSOILING AND TURFING SHALL BE CARRIED OUT USING CLASS 5 MATERIAL COMPLYING WITH TABLE 6/1 OF THE TII 'SPECIFICATION FOR ROAD WORKS SERIES 600 – EARTHWORKS (CC-SPW-00600)

**THE AREAS TO BE GRASSED SHALL RECEIVE THE FOLLOWING TREATMENT:**  
**TREATMENT:** TOPSOILED, FERTILISED AND SEEDED. FERTILISER AND SEED MAY BE APPLIED BY HYDRAULIC MULCH. CUTTING SLOPES WHICH ARE TO RECEIVE TOPSOIL SHALL BE BENCHED WHERE REQUIRED TO RETAIN TOPSOIL AND BE HARROWED TO A DEPTH OF 50 mm. SUCH HARROWING SHALL BE CARRIED OUT IMMEDIATELY PRIOR TO TOPSOILING, DIAGONALLY, AT AN ANGLE BETWEEN 5° TO 45° TO THE LINE OF THE TOE, MEASURED ON THE PLANE OF THE SLOPE.

**TOPSOILS SHALL:**  
BE DEPOSITED AND AGREED TO THE THICKNESS DESCRIBED ON THE DRAWING BUT NOT EXCEEDING 150 mm, WHICH THICKNESS SHALL BE REDUCED WHERE NECESSARY TO ALLOW FOR ANY SUBSEQUENT TURFING REQUIRED OR PERMITTED BY THE ENGINEER.  
HAVE STONES AND OTHER DEBRIS REMOVED AND DISPOSED OFF SITE WHICH:  
HAVE DIMENSIONS GREATER THAN 100 mm EQUIVALENT DIAMETER,  
HAVE DIMENSIONS GREATER THAN 50 mm EQUIVALENT DIAMETER WHICH LIE WITHIN 50 mm OF THE SURFACE.  
NOT HAVE STONES OR OTHER DEBRIS PROTRUDING ABOVE THE SURFACE BY MORE THAN 30 mm IMMEDIATELY PRIOR TO SOWING OF SEED INCLUDING THAT APPLIED BY HYDRAULIC MULCH.

**THE SLOPE SHALL HAVE:**  
ITS UPPER 50 mm THICKNESS REDUCED TO A FINE TILL BY USE OF A CHAIN HARROW OR OTHER PLANT PRODUCING A SIMILAR FINE TILL.  
FERTILISER COMPLYING WITH THIS CLAUSE SHALL BE EVENLY DISTRIBUTED AND RAKED IN, AT A RATE OF LESS THAN 75 G/M2. IF HYDRAULIC MULCH SEEDING IS USED SUCH FERTILISER MAY BE INCORPORATED IN THE MULCH AND NO RAKING IN IS NECESSARY.

**SEEDING SHALL:**  
EMPLOY A MIXTURE OF GRASS SEED, APPROVED BY THE ENGINEER, INCLUDING THAT INCORPORATED IN A HYDRAULIC MULCH, WHICH SHALL BE TESTED IN A MIXTURE AND CERTIFICATES OF GERMINATION AND PURITY SHALL BE PROVIDED BEFORE SOWING, TOGETHER WITH THE NAMES OF THE VARIETIES USED IN THE MIXTURE. UNLESS OTHERWISE PROPOSED THE PROPORTIONS SHOULD BE AS FOLLOWS:

|                             | kg   | %  |
|-----------------------------|------|----|
| Perennial Rye Grass         | 12.5 | 25 |
| Strong Creeping Red Fescue  | 10.0 | 20 |
| Hard Fescue                 | 15.0 | 30 |
| Smooth-stalked Meadow Grass | 5.0  | 10 |
| Highland Browntop Bent      | 5.0  | 10 |
| Huia White Clover           | 2.5  | 5  |

BE CARRIED OUT BY EVENLY DISTRIBUTING SUCH SEED AT A RATE OF NOT LESS THAN 20 G/M² FOR SIDE SLOPES OF BOTH EMBANKMENTS AND CUTTINGS AND NOT LESS THAN 10 G/M² ELSEWHERE.  
BE IMMEDIATELY FOLLOWED BY LIGHTLY RAKING, BY USE OF A CHAIN HARROW OR OTHER SUITABLE PLANT. THE SURFACE OF THE TOPSOIL TO COVER THE SEEDS, EXCEPT THAT NO RAKING IS REQUIRED FOLLOWING HYDRAULIC MULCH SEEDING.  
A SELECTIVE HERBICIDE, APPROVED BY THE ENGINEER, ESPECIALLY FORMULATED FOR THE ERADICATION OF DOCKS, THISTLES, RAGWORT AND OTHER PERNICIOUS AGRICULTURAL WEEDS SHALL BE APPLIED BY SPOT TREATMENT SPRAY TO SUCH PLANTS INDIVIDUALLY. THE USE OF A SPRAY BOOM WILL NOT BE PERMITTED. FERTILISER SHALL CONSIST OF A COMPOUND CONTAINING NOT LESS THAN 10% NITROGEN, 15% PHOSPHORIC ACID AND 10% POTASH.  
SAMPLES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ITS USE IN THE WORKS.

**HEDGEROWS:**  
HEDGEROW & PLANTING TO BE REINSTATED. CONTRACTOR TO UNDERTAKE A HORTICULTURAL SURVEY OF THE EXISTING HEDGEROW PRIOR TO DEMOLITION AND REINSTATE HEDGING SPECIES TO MATCH ORIGINAL

|   |          |                         |     |      |     |     |  |  |  |
|---|----------|-------------------------|-----|------|-----|-----|--|--|--|
| 0   | 25/04/25 | ISSUED FOR CONSTRUCTION |     |      |     |     |  |  |  |
| Rev   | Date     | Revision description    | Drn | Prod | Ver | App |  |  |  |
| Purpose of issue - Preliminary unless indicated   |          |                         |     |      |     |     |  |  |  |
| Client Approval <input type="checkbox"/> Planning <input type="checkbox"/> Tender <input type="checkbox"/> Construction <input checked="" type="checkbox"/> As-Built <input type="checkbox"/> |          |                         |     |      |     |     |  |  |  |



Engineering and Major Projects,  
One Dublin Airport Central,  
Dublin Airport, Cloghran,  
Co. Dublin, K67 XF72, Ireland.  
**Tel:** 353 1 703 8000 **Web:** www.esb.ie  
Engineering and Major Projects is a  
division of ESB.

|                 |                                     |
|-----------------|-------------------------------------|
| <b>Client</b>   | <b>ESB NETWORKS</b>                 |
| <b>Project</b>  | <b>North - South 400 kV Project</b> |
| <b>Contract</b> |                                     |

|                        |  |
|------------------------|--|
| <b>Drawing title</b>   | <b>North-South 400 kV Interconnector<br/>Proposed Temporary Construction<br/>Material Storage Yard<br/>Reinstatement Details</b> |
| <b>Production unit</b> | <b>Transmission and Distribution Delivery</b>  |

|   |          |               |          |               |
|---|----------|---------------|----------|---------------|
| COPYRIGHT © ESB<br>ALL RIGHTS RESERVED. NO PART OF THIS WORK MAY BE MODIFIED, REPRODUCED OR COPIED IN ANY FORM OR BY ANY MEANS<br>GRAPHIC, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, TAPING OR USED FOR ANY PURPOSE<br>OTHER THAN ITS DESIGNATED PURPOSE, WITHOUT THE WRITTEN PERMISSION OF ESB. |          |               |          |               |
| Drawn   | Produced | Verified      | Approved | Approval date |
| R.Casey   | RC       | CH            | JM       | 25.04.25      |
| Client ref.   |          | No. of sheets | Size     | Scale         |
| TC233655  |          | 1             | A3       | 1:25          |
| Drawing number  |          |               |          | SHEET REV     |
| PE687-D422-039-003-000  |          |               |          |               |