

# Outer Dowsing Offshore Wind

## Clarification Note:

## Land Take, Soil calculation and Storage Bunds

Deadline 3

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## Table of Contents

Acronyms & Definitions .....	3
Abbreviations / Acronyms .....	3
Terminology .....	3
1 Clarifications regarding Land take, Soil calculation and Storage Bunds .....	5
1.1 Introduction .....	5
1.2 Topsoil bunds .....	5
1.3 Upper subsoil bunds .....	6
1.4 Lower Subsoil bunds .....	7
1.5 Soil bunds where trenchless techniques are utilised .....	8
1.6 Justification for 80m width where trenchless techniques are utilised.....	8

## Table of Plates

Plate 1: indicative 80m working width cross section .....	5
Plate 2: 11m wide topsoil bund with a 27° angle of repose .....	6
Plate 3: 4m wide upper subsoil bund with a 27° angle of repose .....	6
Plate 4: Lower subsoil excavation in trench cross section .....	7
Plate 5: 3m wide upper subsoil bund with a 35° angle of repose .....	8

## Acronyms & Definitions

### Abbreviations / Acronyms

Abbreviation / Acronym	Description
CA1	Compulsory Acquisition Hearing 1
DCO	Development Consent Order
ECC	Export Cable Corridor
ExA	Examining Authority
ISH3	Issue Specific Hearing 3

### Terminology

Term	Definition
The Applicant	GT R4 Ltd. The Applicant making the application for a DCO. The Applicant is GT R4 Limited (a joint venture between Corio Generation (and its affiliates), Total Energies and Gulf Energy Development (GULF)), trading as Outer Dowsing Offshore Wind. The Project is being developed by Corio Generation, TotalEnergies and GULF.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP).
Haul Road	The track within the onshore ECC which the construction traffic would use to facilitate construction.
Onshore Export Cable Corridor (ECC)	The Onshore Export Cable Corridor (Onshore ECC) is the area within which, the export cables running from the landfall to the onshore substation will be situated.
Onshore Infrastructure	The combined name for all onshore infrastructure associated with the Project from landfall to grid connection.
Outer Dowsing Offshore Wind (ODOW)	The Project.
Order Limits:	The area subject to the application for development consent, The limits shown on the works plans within which the Project may be carried out.
The Planning Inspectorate	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects (NSIPs).
Pre-construction and post-construction	The phases of the Project before and after construction takes place.
The Project	Outer Dowsing Offshore Wind, an offshore wind generating station together with associated onshore and offshore infrastructure.
Trenchless technique	Trenchless technology is an underground construction method of installing, repairing and renewing underground pipes, ducts and cables using techniques which minimize or eliminate the need for excavation. Trenchless technologies involve methods of new pipe installation with minimum surface and environmental disruptions. These techniques may include Horizontal Directional Drilling (HDD), thrust boring, auger boring, and pipe ramming,

Term	Definition
	which allow ducts to be installed under an obstruction without breaking open the ground and digging a trench.

# 1 Clarifications regarding Land take, Soil calculation and Storage

## Bunds

### 1.1 Introduction

1. The Applicant submitted an updated cross-section outlining all components of the 80m corridor (based on four circuits being installed by an open cut methodology) as part of RR-067.011 in Procedural Deadline - 15.3 The Applicant's Responses to Relevant Representations (PD1-071).
2. TH Clements requested, during CA1 and ISH3, a breakdown of the soil excavation volumes and soil bund calculations to justify the width of the soil storage bunds within the 80m corridor.
3. TH Clements also requested the Applicant to confirm why the 80m corridor was required where trenchless techniques are utilised if soil storage will not be required or be limited.
4. This clarification note is provided to address the issues raised by TH Clements and the ExA during CA1 and ISH3.

### 1.2 Topsoil bunds

5. The volume of topsoil to be excavated can be calculated by taking the stripped width from Plate 1 and multiplying this by a typical topsoil depth of 450mm.

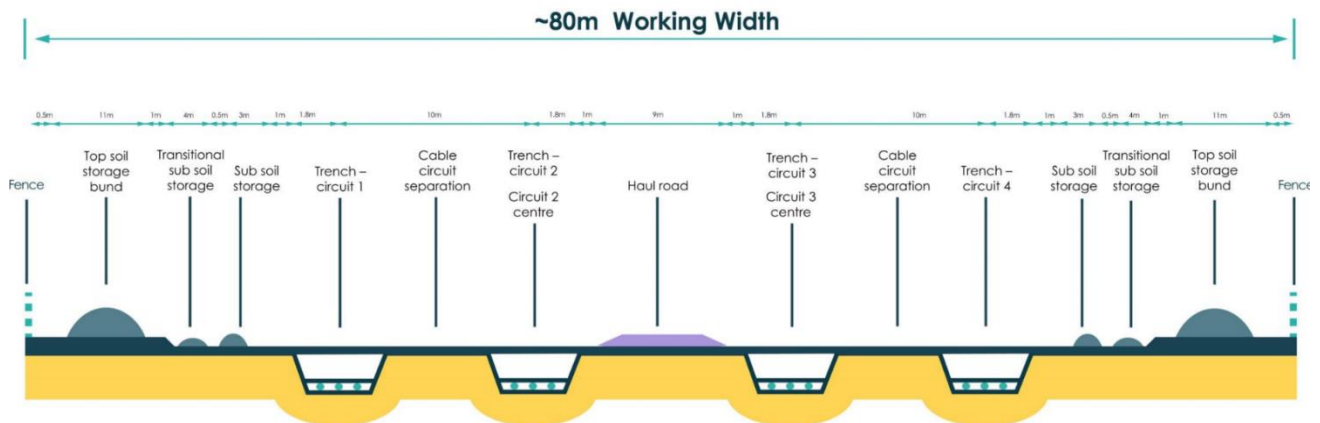


Plate 1: indicative 80m working width cross section

6. The volume of topsoil to be excavated is therefore  $55\text{m} \times 0.45\text{m} = 24.7\text{m}^3$ .
7. Applying a bulking factor of 10% gives a total excavated volume of  $27.2\text{m}^3$ .
8. Plate 2 shows the cross section of an 11m wide top soil storage bund with a  $27^\circ$  angle of repose and a maximum height of 2m.

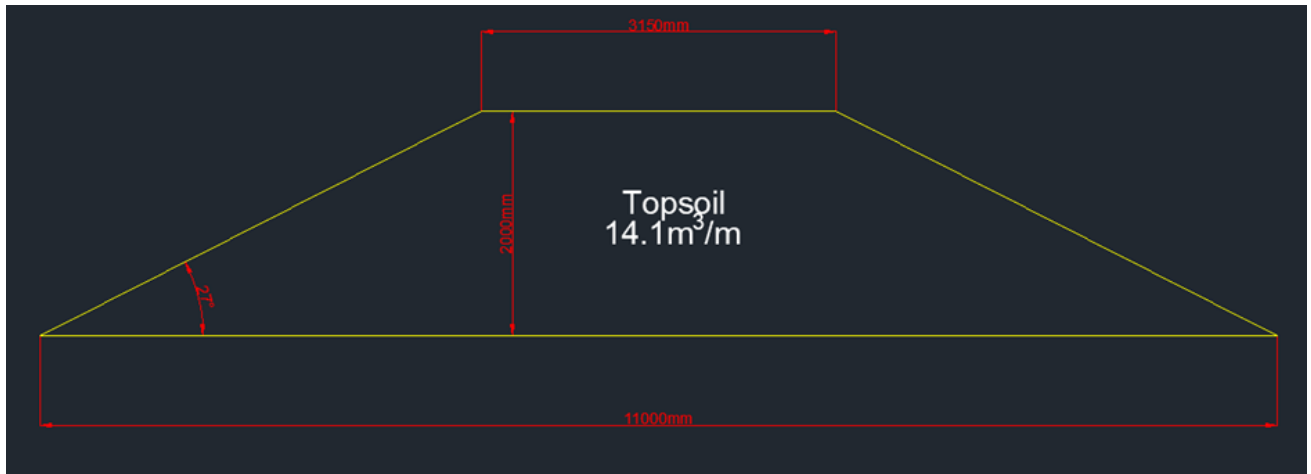


Plate 2: 11m wide topsoil bund with a 27° angle of repose

9. The volume of a single bund is  $14.1\text{m}^3$  as shown in Plate 2.
10. The Applicant has shown two topsoil bunds in the cross section in Plate 1 meaning a total of  $28.2\text{m}^3$  of topsoil storage.
11. The Applicant therefore has a 4% tolerance in the volume excavated vs volume of storage which is to allow for varying topsoil depths along the ECC where some areas may have topsoil deeper than 450mm.

### 1.3 Upper subsoil bunds

12. The volume of upper topsoil to be excavated can be calculated by taking the stripped width from plate 1 and multiplying this by a typical upper subsoil depth of 75mm.
13. The volume of the upper subsoil to be excavated is therefore  $55\text{m} \times 0.075\text{m} = 4.1\text{m}^3$ .
14. Plate 3 shows the cross section of a 4m wide upper topsoil bund with a 27° angle of repose.

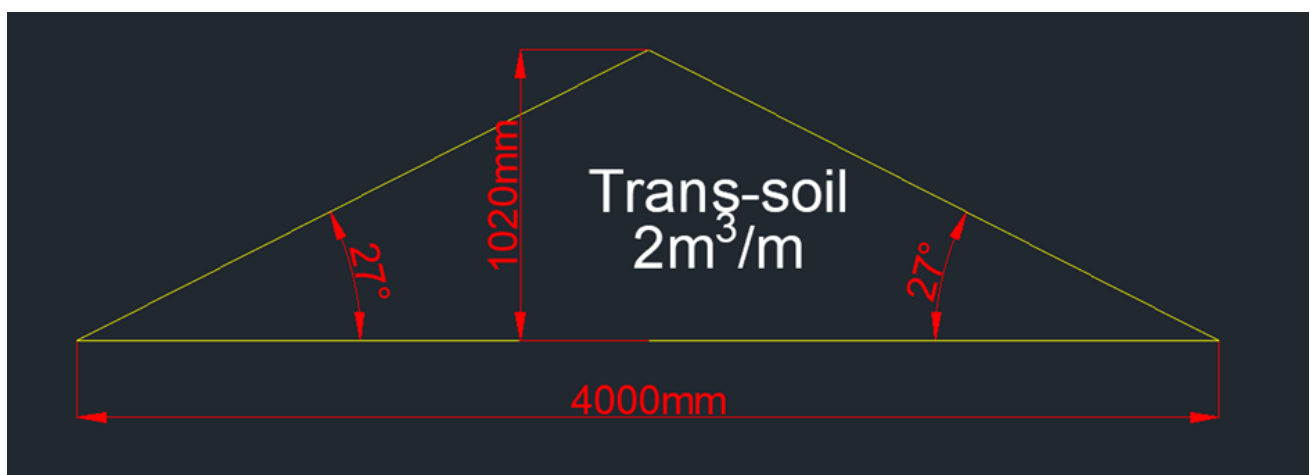


Plate 3: 4m wide upper subsoil bund with a 27° angle of repose

15. The volume of a single bund is  $2\text{m}^3$  as shown in Plate 3.
16. The Applicant has shown two upper subsoil bunds in the cross section in Plate 1 meaning a total of  $4\text{m}^3$  of topsoil storage.

17. The Applicant therefore has a 3% tolerance in the volume excavated vs volume of storage.

#### 1.4 Lower Subsoil bunds

18. The volume of lower subsoil to be excavated is shown on Plate 4.

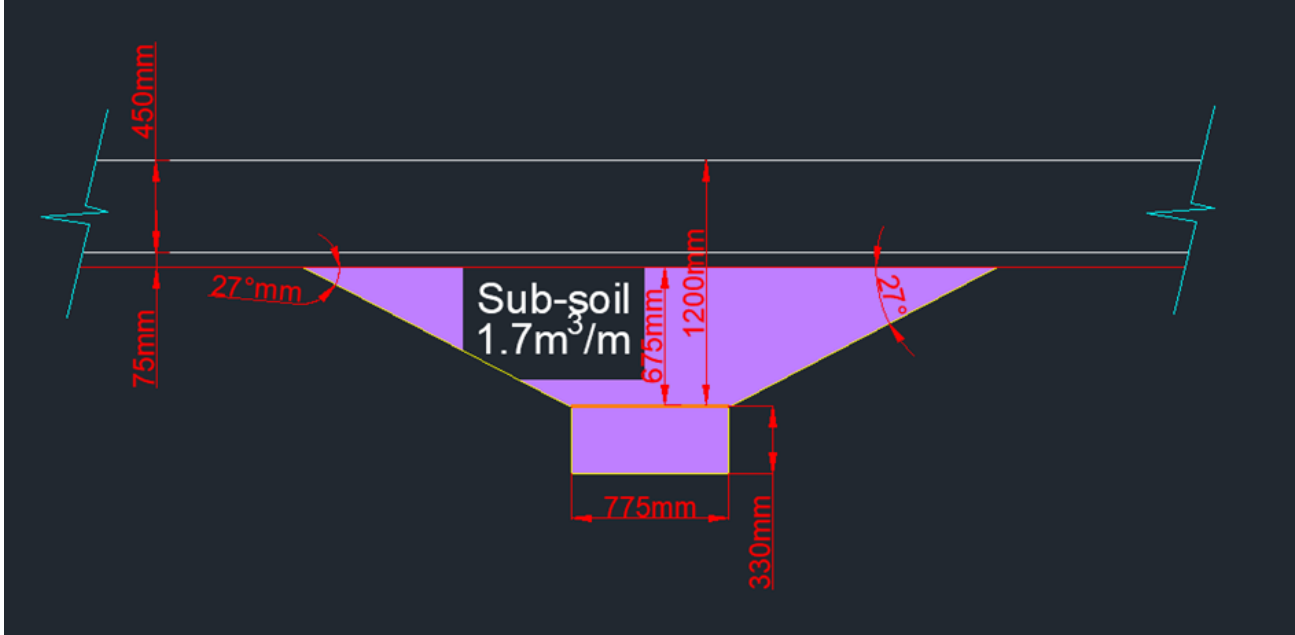
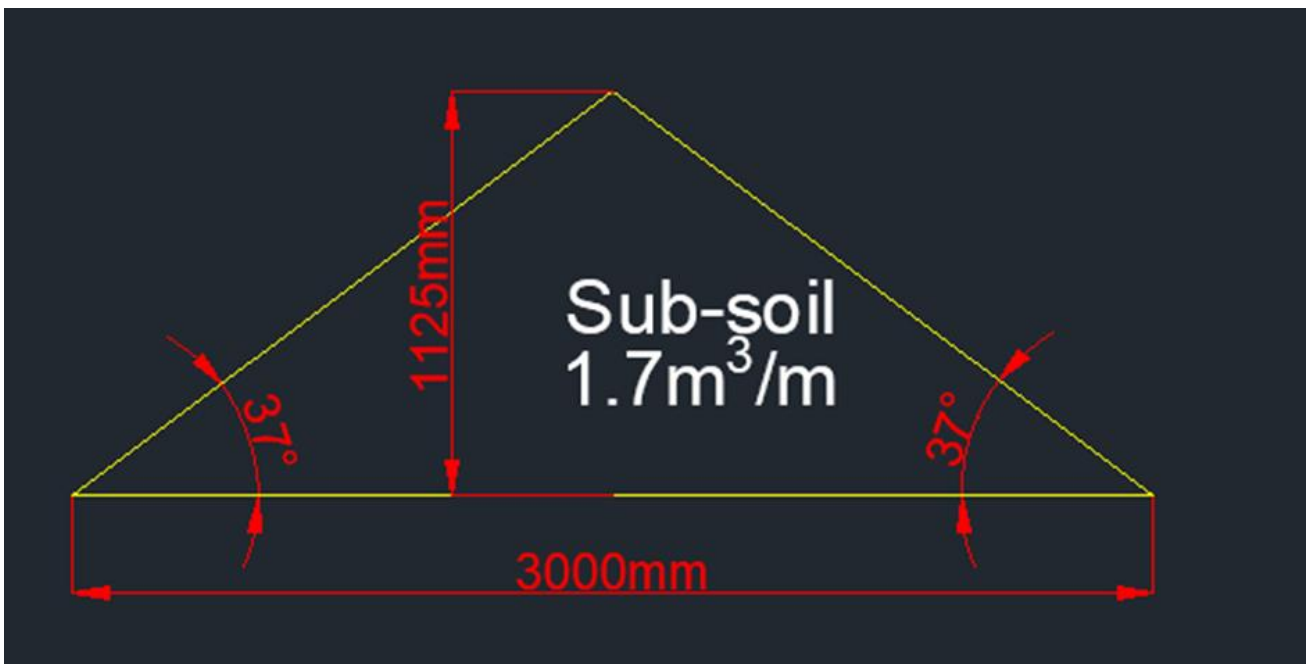


Plate 4: Lower subsoil excavation in trench cross section

19. The volume of lower subsoil to be excavated is  $1.7\text{m}^3$  per circuit.

20. There are four circuits so a total of  $6.8\text{m}^3$  of lower subsoil to be excavated.

21. Plate 5 shows the cross section of a 3m wide upper topsoil bund with a  $35^\circ$  angle of repose.





#### Plate 5: 3m wide Lower subsoil bund with a 37° angle of repose

22. A 37° angle of repose has been used as the soil bunds will be in situ for a shorter time period and it is deemed that over a short period of time the bunds will be stable with a 37° angle of repose. The lower subsoil will likely be reinstated immediately upon completion of the duct installation work on the same working day.
23. The volume of a single bund is 1.7m<sup>3</sup> as shown in Plate 5.
24. The Applicant has shown two subsoil storage bunds in the cross section in Plate 1 however there will be two additional lower subsoil bunds. One placed between circuits 1 and 2 and another between circuits 3 and 4. The four lower subsoil bunds provides a total of 6.8m<sup>3</sup>.
25. The Applicant therefore has a 0% tolerance in the volume excavated vs volume of storage.

### **1.5 Soil bunds where trenchless techniques are utilised**

26. The Applicant can confirm that where trenchless techniques are utilised there will a reduction in the scale of excavations and therefore the requirement for soils bunds.
27. In areas of trenchless techniques there will likely only be topsoil and upper subsoil stripping and bunding activities associated with the installation of the haul road.

### **1.6 Justification for 80m width where trenchless techniques are utilised**

28. The Applicant outlined in RR-067.012 in Procedural Deadline - 15.3 The Applicant's Responses to Relevant Representations (PD1-071) the justification for a 60m wide permanent easement .
29. The Applicant outlined in Q1 CA 1.2 in 19.2 The Applicant's Responses to The ExA's First Written Questions (ExQ1) (REP2-051) the Applicant's justification for this 60m width to be located anywhere with the 80m order limit width.
30. The Applicant's position is therefore that full justification has been provided however should the ExA have any further questions the Applicant would be happy to provide further information.