

RWE Renewables UK Dogger Bank South (West) Limited

RWE Renewables UK Dogger Bank South (East) Limited

Dogger Bank South Offshore Wind Farms

Environmental Statement

Volume 7

Appendix 5-3 Engineering Drawings

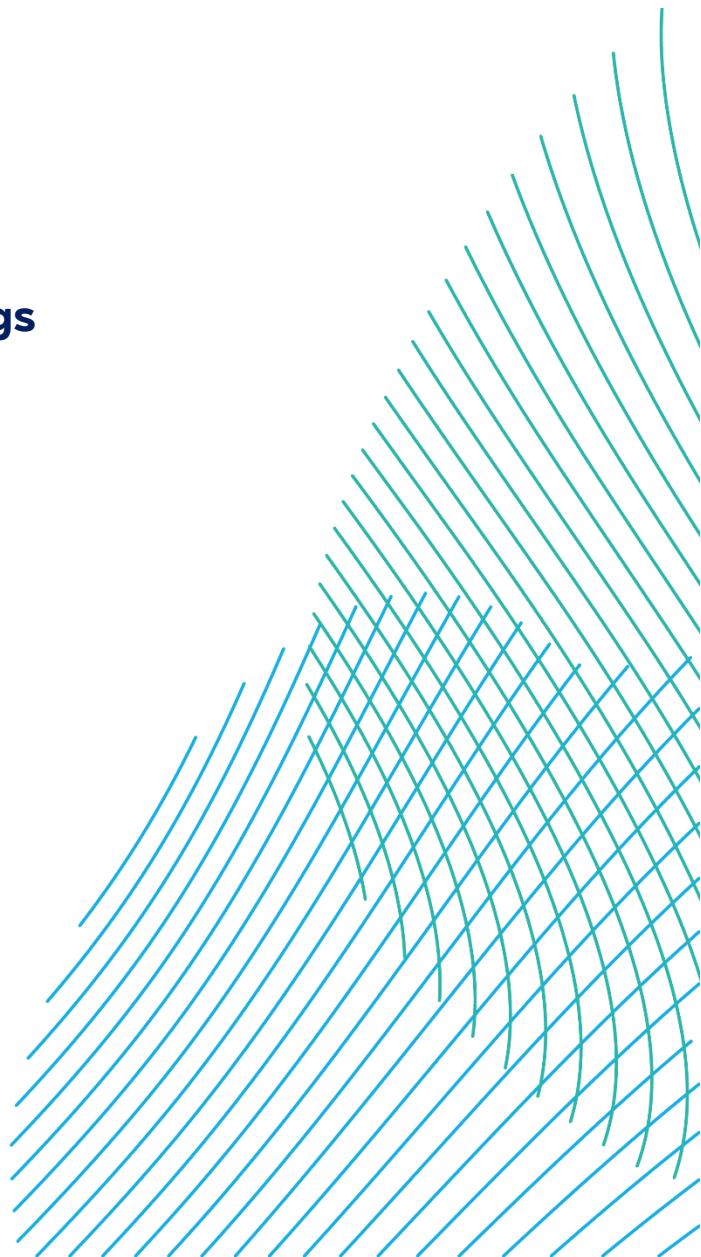
June 2024

Application Reference: 7.5.5.3

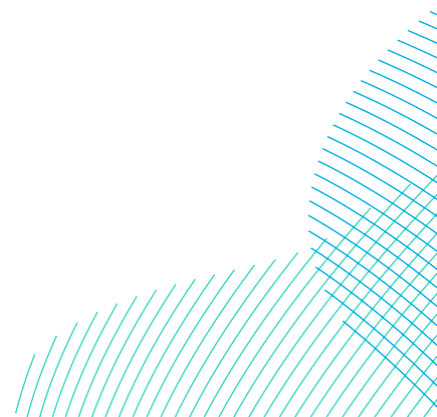
APFP Regulation: 5(2)(a)


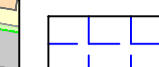



Revision: 01

Unrestricted

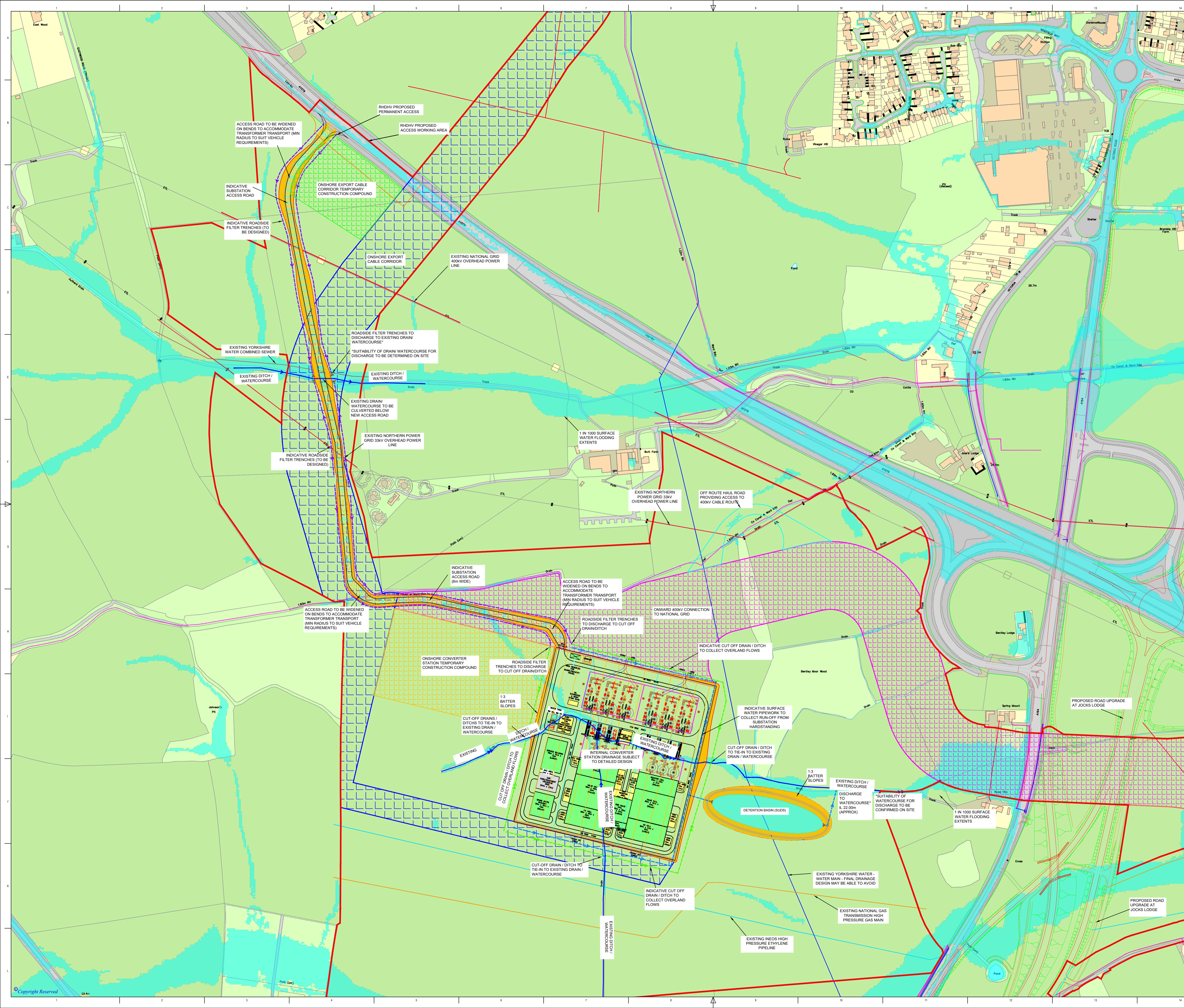


Company:	RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited	Asset:	Development		
Project:	Dogger Bank South Offshore Wind Farms	Sub Project/Package:	Consents		
Document Title or Description:	Appendix 5-3 Engineering Drawings				
Document Number:	004300145-01	Contractor Reference Number:	PC2340-RHD-OF-ZZ-AX-Z-0079		
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Rev No.	Date	Status/Reason for Issue	Author	Checked by	Approved by
01	June 2024	Final for DCO Application	RHDHV	RWE	RWE



- LEGEND**
-  ONSHORE ORDER LIMITS
 -  ONSHORE EXPORT CABLE CORRIDOR
 -  ONSHORE EXPORT CABLE CORRIDOR TEMPORARY CONSTRUCTION COMPOUND
 -  ONSHORE CONVERTER STATION TEMPORARY CONSTRUCTION COMPOUND
 -  ONWARD 400KV CONNECTION TO NATIONAL GRID

- NOTES**
1. DO NOT SCALE FROM THIS DRAWING.
 2. DRAWING IS NOT FOR CONSTRUCTION.
 3. DRAWING IS INDICATIVE ONLY AND FEATURES SHOWN MAY VARY FROM FINAL DESIGN. ACTUAL DESIGN TO BE CONFIRMED AT DETAILED DESIGN STAGE. CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH RELEVANT STANDARDS DEFINED IN DETAILED DESIGN.
 4. HVDC RBP CONVERTOR STATION ELECTRICAL LAYOUT PRESENTED PROVIDED BY MOTT MACDONALD AND IS INDICATIVE ONLY.



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04	09/05/2024	FINAL FOR ENVIRONMENTAL STATEMENT	ZF	PM	AH
REV	DATE	REASON FOR ISSUE	BY	CHK	APP








PROJECT TITLE
DOGGER BANK SOUTH OFFSHORE WIND FARM

DRAWING TITLE
**SUBSTATION ZONE SINGLE HVDC OPTION
INDICATIVE SUBSTATION GENERAL
ARRANGEMENT**

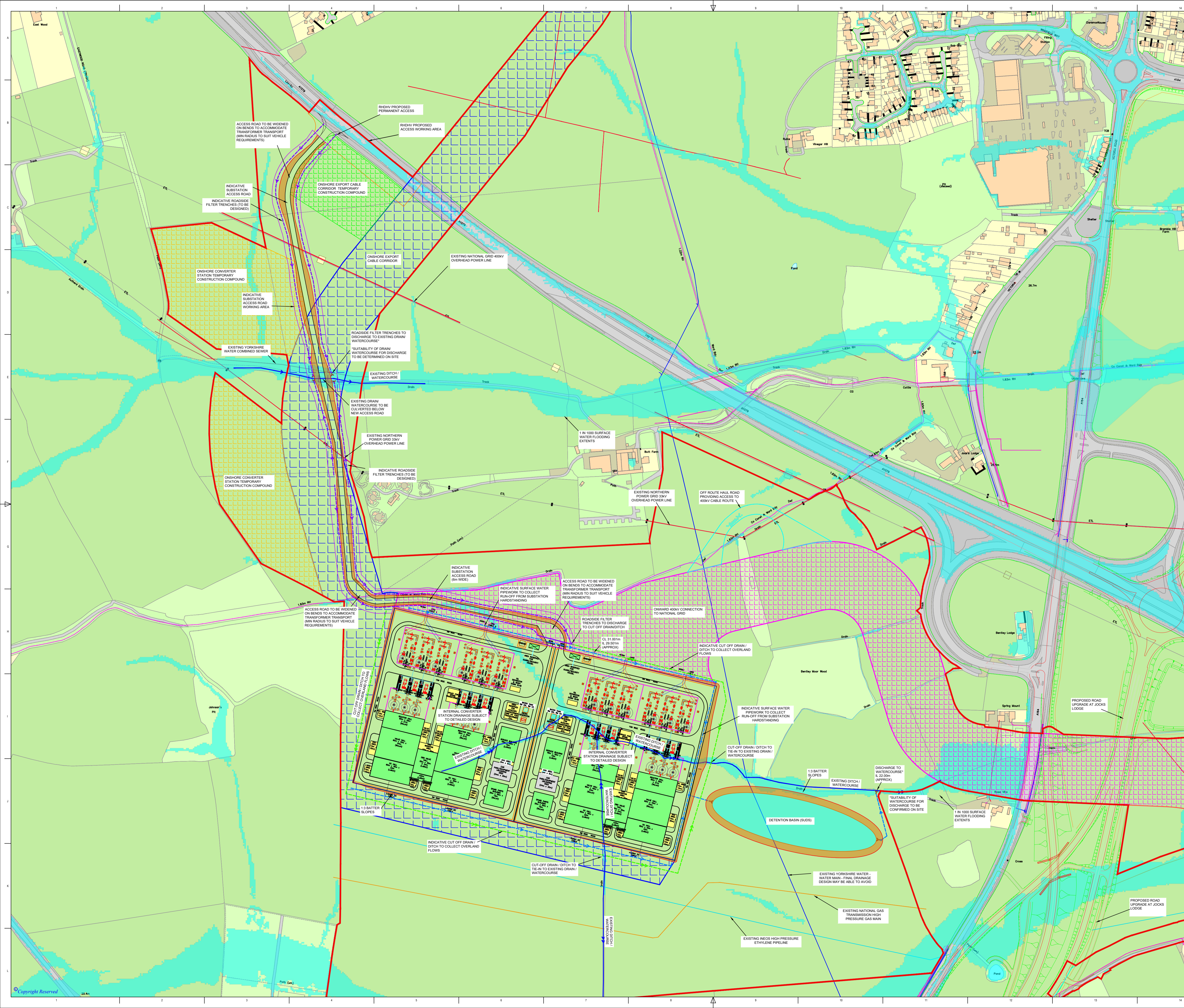
DRAWING STATUS
FINAL

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	PM	CS	PM	AH
SHEET SCALE	DATE	DATE	DATE	DATE
NTS	16/06/2023	16/06/2023	16/06/2023	16/06/2023

WA DRAWING NUMBER	REVISION
ED13554-GE-1120	04
DBS DOCUMENT NUMBER	REVISION
DBS-WAR-V2-XX-M2-C-0058-D	04
RWE ECODOC NUMBER	SHEET No
004834284-04	001 OF 001
	REVISION
	04

- LEGEND**
-  ONSHORE ORDER LIMITS
 -  ONSHORE EXPORT CABLE CORRIDOR
 -  ONSHORE EXPORT CABLE CORRIDOR TEMPORARY CONSTRUCTION COMPOUND
 -  ONSHORE CONVERTER STATION TEMPORARY CONSTRUCTION COMPOUND
 -  ONWARD 400KV CONNECTION TO NATIONAL GRID

- NOTES**
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 4. HVDC RBP CONVERTOR STATION ELECTRICAL LAYOUT PRESENTED PROVIDED BY MOIT MACDONALD AND IS INDICATIVE ONLY.



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02	09/05/2024	FINAL FOR ENVIRONMENTAL STATEMENT	ZF	PM	AH
REV	DATE	REASON FOR ISSUE	BY	CHK	APP



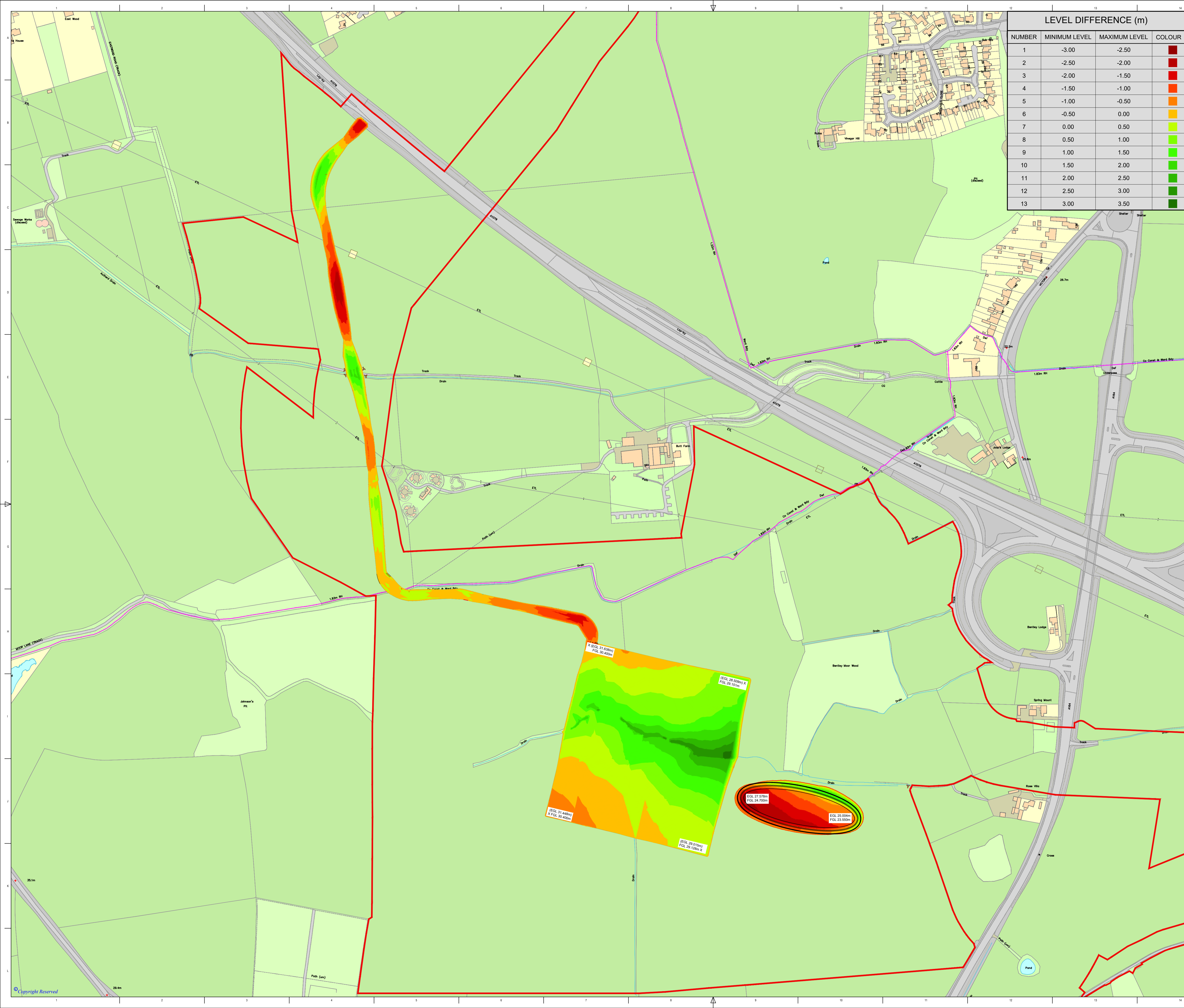
PROJECT TITLE
DOGGER BANK SOUTH OFFSHORE WIND FARM

DRAWING TITLE
SUBSTATION ZONE CO-LOCATED HVDC OPTION INDICATIVE SUBSTATION GENERAL ARRANGEMENT

DRAWING STATUS
FINAL

SHEET SIZE A1	DESIGNED PM	DRAWN CS	CHECKED PM	APPROVED AH
SHEET SCALE NTS	DATE 29/09/2023	DATE 29/09/2023	DATE 29/09/2023	DATE 29/09/2023

WA DRAWING NUMBER ED13554-GE-1122	REVISION 02
DBS DOCUMENT NUMBER DBS-WAR-V2-XX-M2-C-0061-B	REVISION 02
RWE ECODOC NUMBER 004939622-02	SHEET No 001 OF 001
	REVISION 02



LEVEL DIFFERENCE (m)			
NUMBER	MINIMUM LEVEL	MAXIMUM LEVEL	COLOUR
1	-3.00	-2.50	Dark Red
2	-2.50	-2.00	Red
3	-2.00	-1.50	Dark Orange
4	-1.50	-1.00	Orange
5	-1.00	-0.50	Light Orange
6	-0.50	0.00	Yellow-Orange
7	0.00	0.50	Yellow
8	0.50	1.00	Light Green
9	1.00	1.50	Green
10	1.50	2.00	Light Green
11	2.00	2.50	Green
12	2.50	3.00	Dark Green
13	3.00	3.50	Dark Green

DO NOT SCALE FROM THIS DRAWING

LEGEND
 ONSHORE ORDER LIMITS

- NOTES**
- DO NOT SCALE FROM THIS DRAWING.
 - DRAWING IS NOT FOR CONSTRUCTION.
 - DRAWING IS INDICATIVE ONLY AND FEATURES SHOWN MAY VARY FROM FINAL DESIGN. ACTUAL DESIGN TO BE CONFIRMED AT DETAILED DESIGN STAGE. CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH RELEVANT STANDARDS DEFINED IN DETAILED DESIGN.
 - SEE FIGURE APPENDIX 5-3 SUBSTATION ZONE SINGLE HVDC OPTION INDICATIVE SUBSTATION GENERAL ARRANGEMENT FOR LOCATIONS OF TEMPORARY CONSTRUCTION COMPOUNDS, CONSTRUCTION HAUL ROADS, PERMANENT ACCESS ROADS AND ONSHORE CABLE ROUTE ALIGNMENTS.
 - KEY OF ABBREVIATIONS
 EGL - EXISTING GROUND LEVEL
 FGL - FINAL GROUND LEVEL
 - RECORDED LOCATION OF UTILITIES OMITTED FOR CLARITY
 - INDICATIVE TOPSOIL VOLUMES GENERATED
 SINGLE HVDC FOOTPRINT - 19,325m³
 SUDS BASIN - 2,934m³
 HAUL ROAD - 2,547m³
 TOTAL - 24,806m³

EARTHWORKS VOLUME CALCULATIONS (SUB-SOIL)			
FEATURE	VOLUME OF CUT (m ³)	VOLUME OF FILL (m ³)	VOLUME OF SURPLUS MATERIAL (m ³)
HVDC FOOTPRINT	3853.28	44663.50	-40810.23 (FILL)
SUDS BASIN	12879.67	1225.74	+11653.93 (CUT)
ACCESS ROAD	9238.83	3295.06	+5943.77 (CUT)
TOTAL	25971.78	49184.30	-23212.52 (FILL)

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06	09/05/2024	FINAL FOR ENVIRONMENTAL STATEMENT	ZF	PM	AH
REV	DATE	REASON FOR ISSUE	BY	CHK	APP



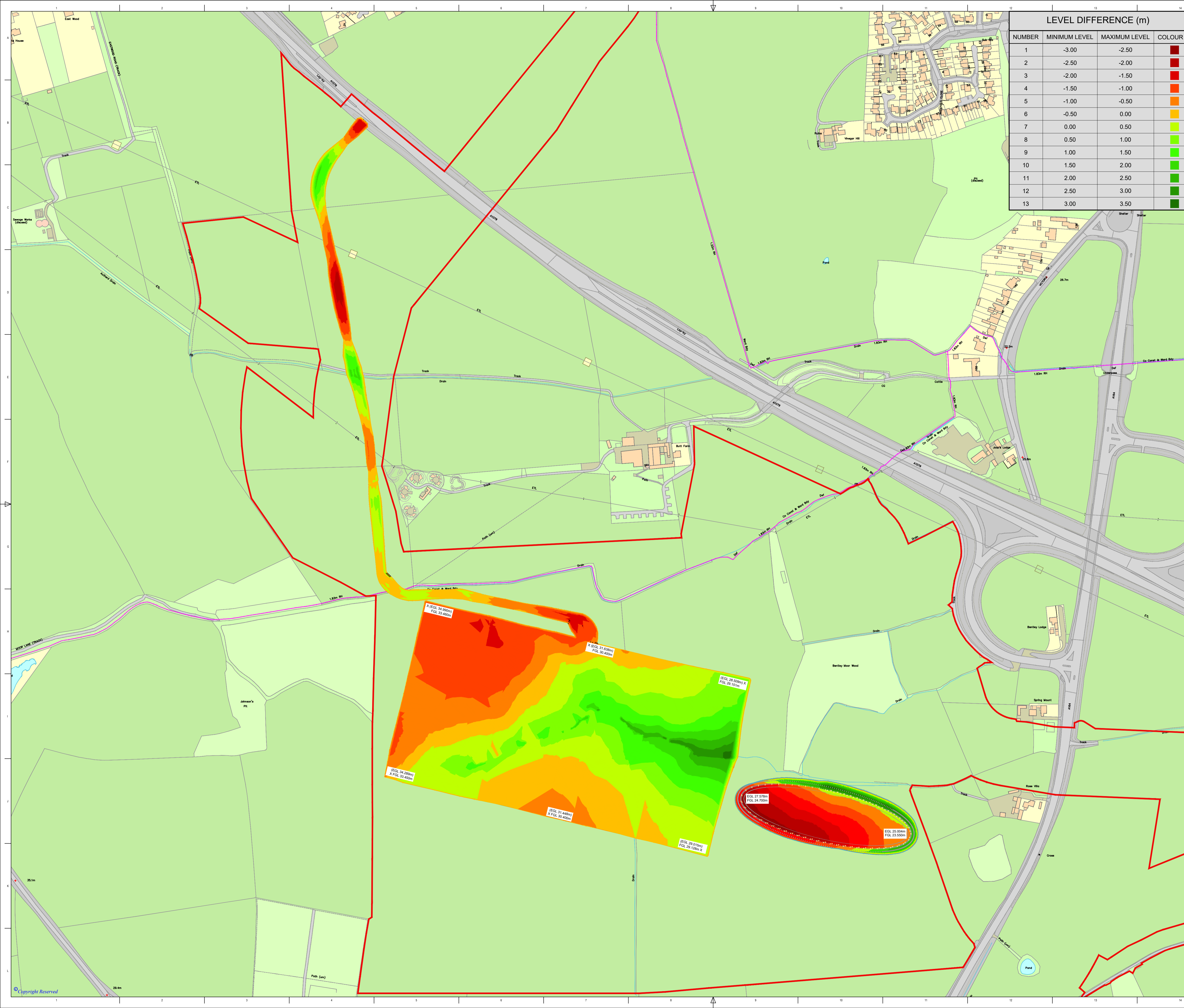
PROJECT TITLE
DOGGER BANK SOUTH OFFSHORE WIND FARM

DRAWING TITLE
**SUBSTATION ZONE SINGLE HVDC
 INDICATIVE SUBSTATION
 FORMATION CUT / FILL**

DRAWING STATUS
FINAL

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	CS	CS	PM	AH
SHEET SCALE	DATE	DATE	DATE	DATE
1:2500	02/11/2022	02/11/2022	02/11/2022	02/11/2022

WA DRAWING NUMBER ED13554-GE-1113	REVISION 06
DBS DOCUMENT NUMBER DBS-WAR-V2-XX-M2-C-0038-F	REVISION 06
RWE ECODOC NUMBER 004582054-06	SHEET No 001 OF 001
	REVISION 06



LEVEL DIFFERENCE (m)			
NUMBER	MINIMUM LEVEL	MAXIMUM LEVEL	COLOUR
1	-3.00	-2.50	Dark Red
2	-2.50	-2.00	Red
3	-2.00	-1.50	Dark Orange
4	-1.50	-1.00	Orange
5	-1.00	-0.50	Light Orange
6	-0.50	0.00	Yellow-Orange
7	0.00	0.50	Yellow
8	0.50	1.00	Light Green
9	1.00	1.50	Green
10	1.50	2.00	Light Green
11	2.00	2.50	Green
12	2.50	3.00	Dark Green
13	3.00	3.50	Very Dark Green

DO NOT SCALE FROM THIS DRAWING

LEGEND
 ONSHORE ORDER LIMITS

- NOTES**
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 - SEE FIGURE APPENDIX 5-3 SUBSTATION ZONE CO-LOCATED HVDC OPTION INDICATIVE SUBSTATION GENERAL ARRANGEMENT FOR LOCATIONS OF TEMPORARY CONSTRUCTION COMPOUNDS, CONSTRUCTION HAUL ROADS, PERMANENT ACCESS ROADS AND ONSHORE CABLE ROUTE ALIGNMENTS.
 - KEY OF ABBREVIATIONS
 EGL - EXISTING GROUND LEVEL
 FGL - FINAL GROUND LEVEL
 - RECORDED LOCATION OF UTILITIES OMITTED FOR CLARITY
 - INDICATIVE TOPSOIL VOLUMES GENERATED
 TWO HVDC FOOTPRINTS - 38,650m³
 SUDS BASIN - 4,831m³
 HAUL ROAD - 2,547m³
 TOTAL - 46,028m³

EARTHWORKS VOLUME CALCULATIONS (SUB-SOIL)			
FEATURE	VOLUME OF CUT (m ³)	VOLUME OF FILL (m ³)	VOLUME OF SURPLUS MATERIAL (m ³)
WESTERN HVDC FOOTPRINT	39316.81	7014.86	+32301.95 (CUT)
EASTERN HVDC FOOTPRINT	3785.56	44597.04	-40811.49 (FILL)
SUDS BASIN	20088.34	445.31	+15643.02 (CUT)
ACCESS ROAD	9746.55	3295.06	+6451.49 (CUT)
TOTAL	72937.26	59352.27	+13584.99(CUT)

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REV	DATE	REASON FOR ISSUE	BY	CHK	APP
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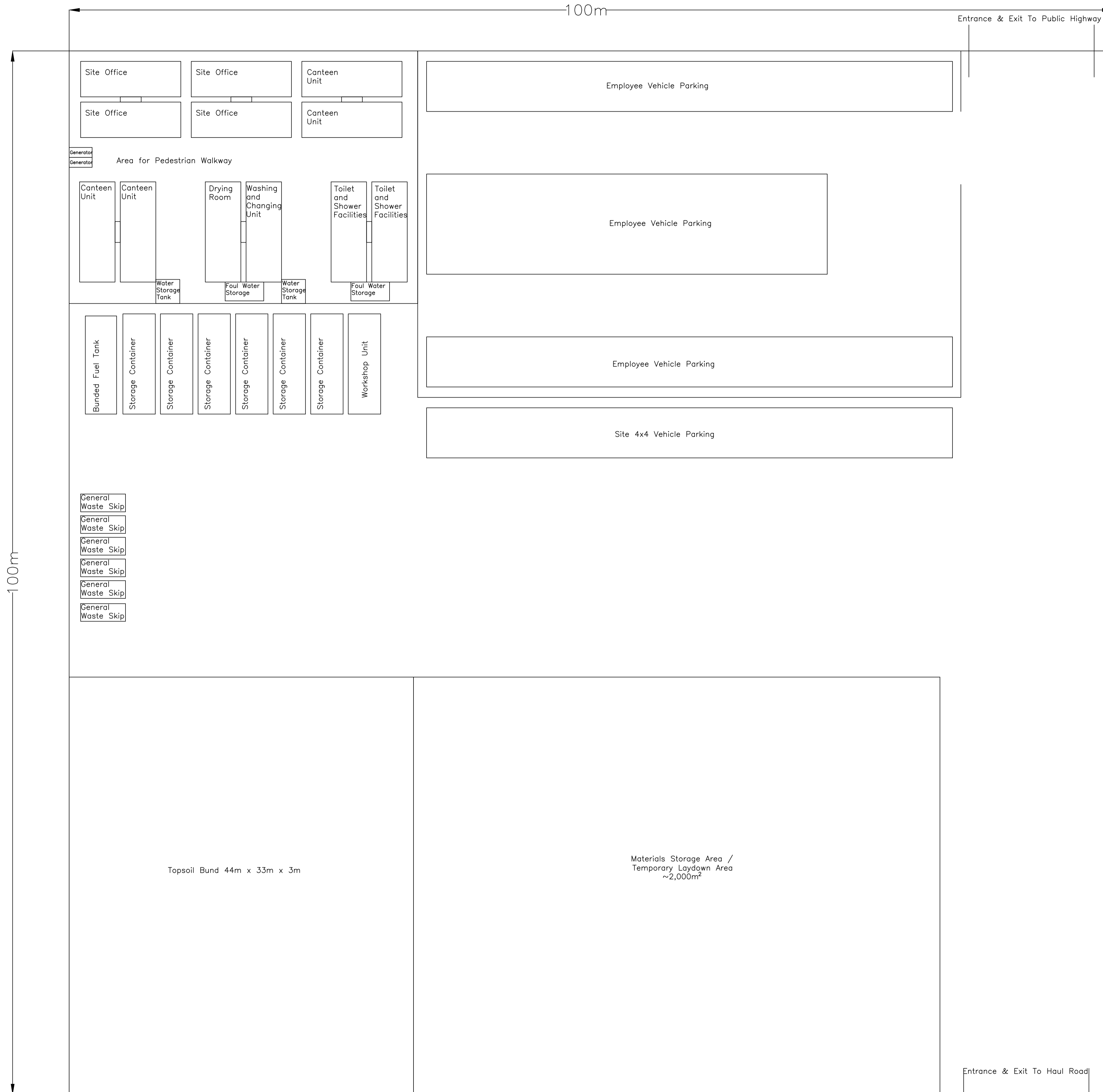
PROJECT TITLE
DOGGER BANK SOUTH OFFSHORE WIND FARM

DRAWING TITLE
**SUBSTATION ZONE TWO HVDC OPTION
 INDICATIVE SUBSTATION
 FORMATION CUT / FILL**

DRAWING STATUS
FINAL

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SHEET SCALE	DATE	DATE	DATE	DATE
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WA DRAWING NUMBER ED13554-GE-1101	REVISION 05
DBS DOCUMENT NUMBER DBS-WAR-V2-XX-M2-C-0024-E	REVISION 05
RWE ECODOC NUMBER 004582050-04	SHEET No 001 OF 001
	REVISION 04



NOTES

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3. ALL LEVELS ARE IN METRES UNLESS STATED OTHERWISE.
4. DRAWING IS NOT FOR CONSTRUCTION.
5. LAYOUT OF TEMPORARY CONSTRUCTION COMPOUND AND NUMBERS OF OFFICE / WELFARE UNITS IS INDICATIVE ONLY. ACTUAL TCC DETAIL TO BE CONFIRMED AT DETAILED DESIGN STAGE AND BASED ON LAND AVAILABILITY AT EACH TCC LOCATION.

03	09/05/2024	FINAL FOR ENVIRONMENTAL STATEMENT	PM	AH	AH
REV	DATE	REASON FOR ISSUE	BY	CHK	APP



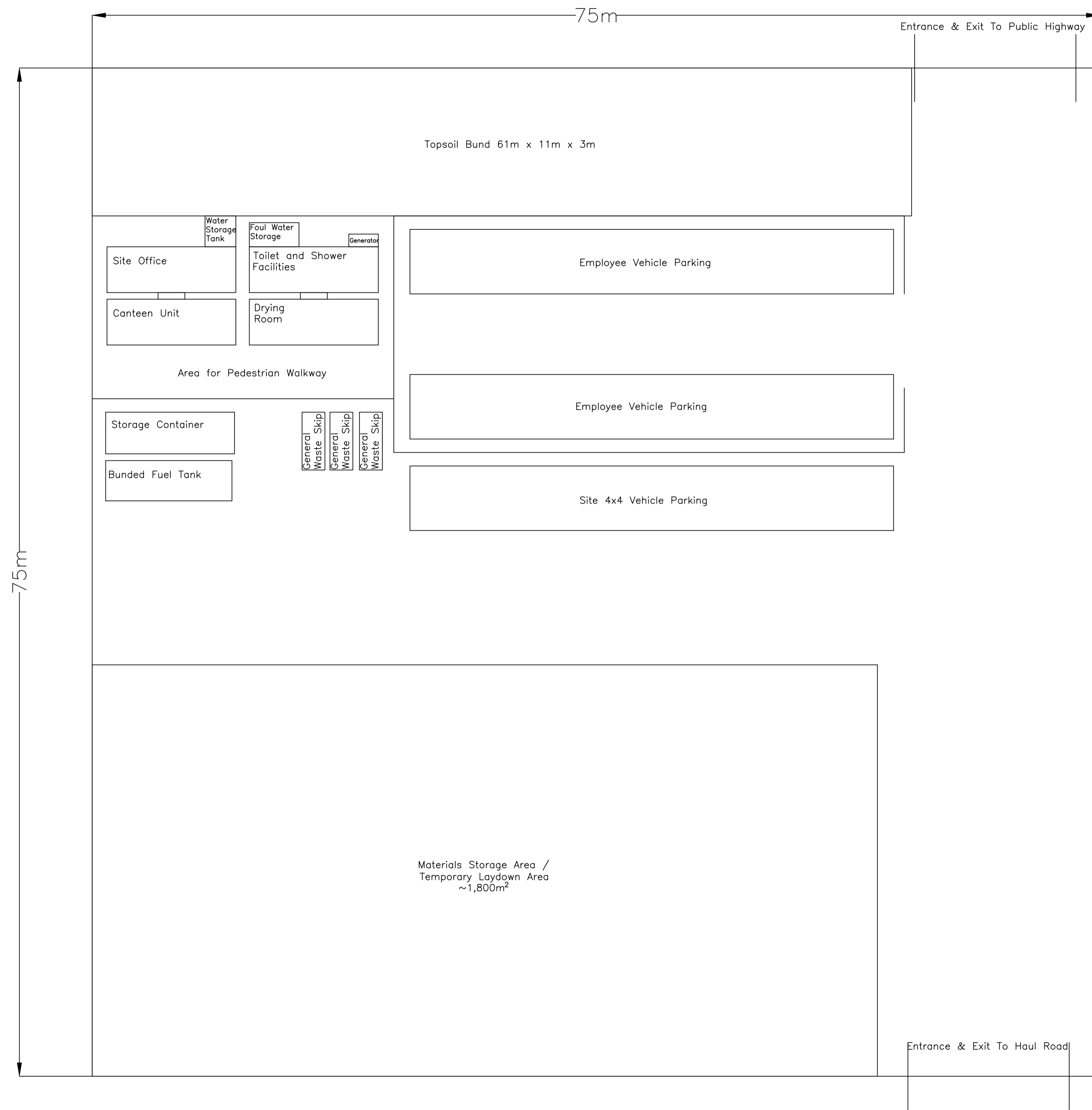
PROJECT TITLE
DOGGER BANK SOUTH OFFSHORE WIND FARM

DRAWING TITLE
TYPICAL MAIN TEMPORARY CONSTRUCTION COMPOUND LAYOUT

DRAWING STATUS
FINAL

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	PM	PM	AH	AH
SHEET SCALE	DATE	DATE	DATE	DATE
NTS	19/05/2022	19/05/2022	19/05/2022	19/05/2022

WA DRAWING NUMBER	REVISION	
ED13554-GE-1019	03	
DBS DOCUMENT NUMBER	REVISION	
DBS-WAR-V2-XX-M2-C-0004-C	03	
RWE ECODOC NUMBER	SHEET No	REVISION
004437671-03	001 OF 001	03



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 - ALL LEVELS ARE IN METRES UNLESS STATED OTHERWISE.
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03	09/05/2024	FINAL FOR ENVIRONMENTAL STATEMENT	PM	AH	AH
REV	DATE	REASON FOR ISSUE	BY	CHK	APP



PROJECT TITLE
DOGGER BANK SOUTH OFFSHORE WIND FARM

DRAWING TITLE
TYPICAL SATELLITE TEMPORARY CONSTRUCTION COMPOUND LAYOUT

DRAWING STATUS
FINAL

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A1	PM	PM	AH	AH
SHEET SCALE	DATE	DATE	DATE	DATE
NTS	19/05/2022	19/05/2022	19/05/2022	19/05/2022

WA DRAWING NUMBER	REVISION	
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DBS DOCUMENT NUMBER	REVISION	
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