

**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

Chapter 8 – Marine Physical Environment

Figure 8-1 to Figure 8-13 (Revision 3)

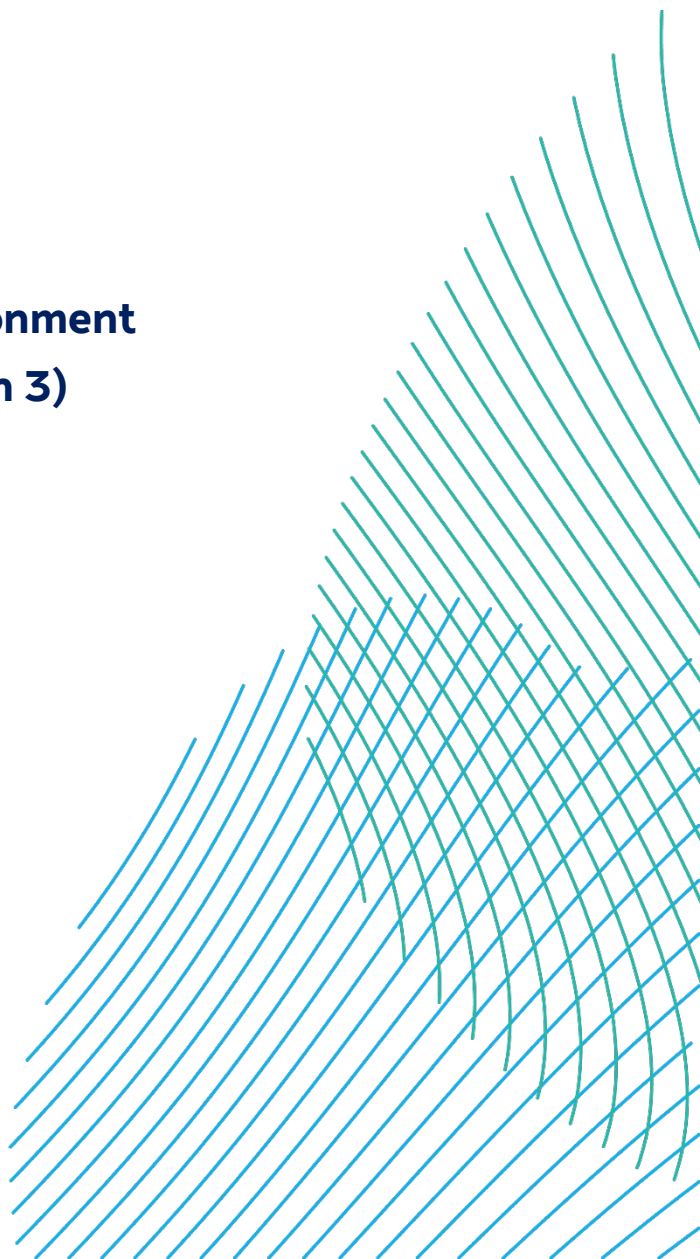
June 2025

Application Reference: 7.8.1

APFP Regulation: 5(2)(b)

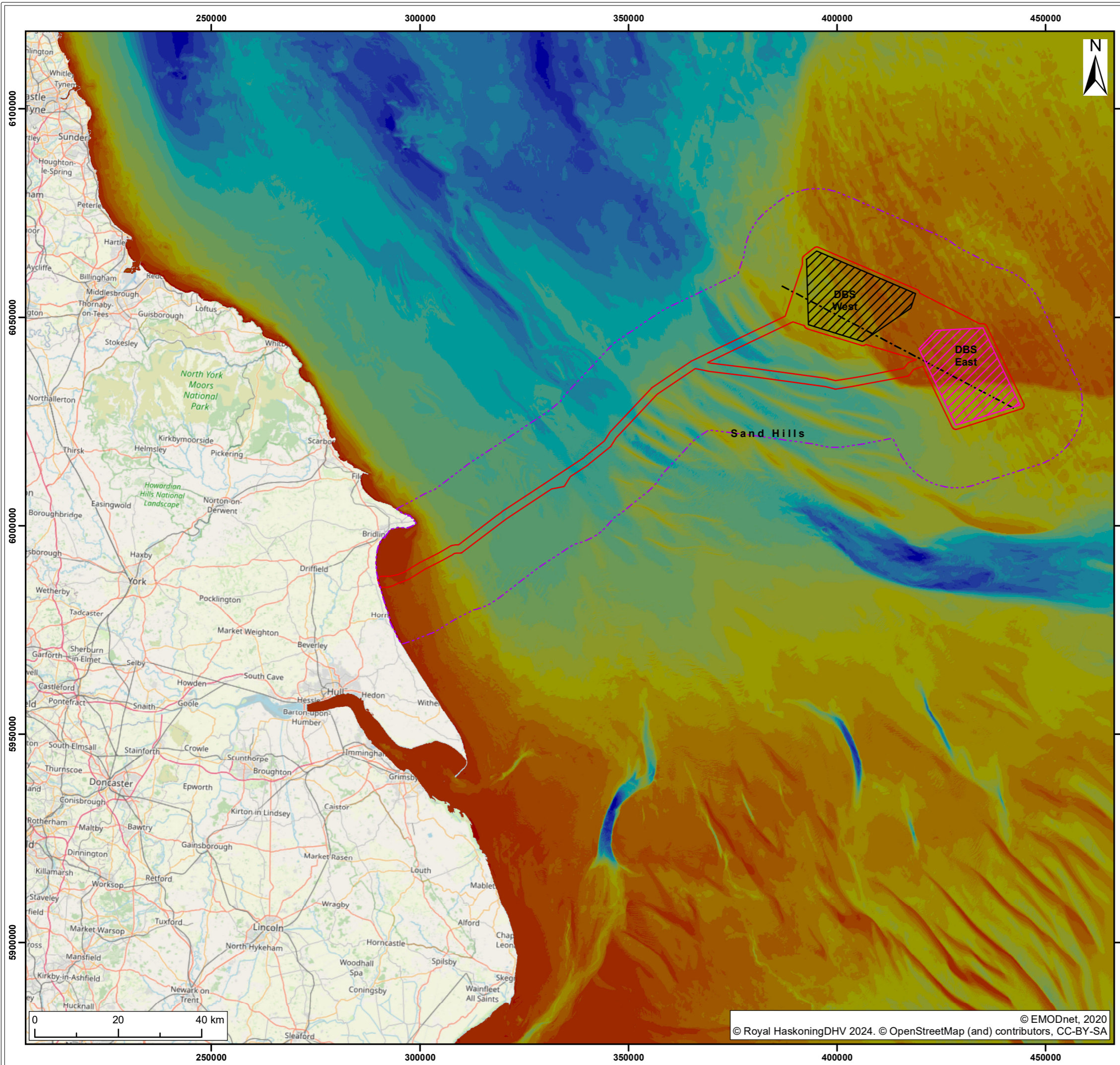
Revision: 03

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:	Environmental Statement – Chapter 8 – Figure 8-1 to Figure 8-13 (Revision 3)				
Document Number:	004300148-03	Contractor Reference Number:	PC2340-RHD-OFZZ-RP-Z-0091		
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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
02	March 2025	Submission at Deadline 3	RHDHV	RWE	RWE
03	June 2025	Submission at Deadline 7	RHDHV	RWE	RWE

Revision Change Log		
Rev No.	Figure	Description
01	N/A	Final for DCO Application
02	8-8	Figure 8-8 has been updated to include ST168, ST172 and ST178 which had been omitted in error within the Offshore Export Cable Corridor
03	Various	Chapter 8 – Marine Physical Environment Figure 8-1 to Figure 8-13 has been updated at the request of the Examining Authority within the Rule 17 [PD-018] to accurately reflect the proposed development and contains all the updated information within the figures as a result of Project Change Request 1 - Offshore & Intertidal Works [AS-141].



Legend:

- Offshore Development Area
- Offshore Development Area 14km Buffer
- DBS East array area
- DBS West array area
- Location of profile shown in Plate 8.1

Bathymetry

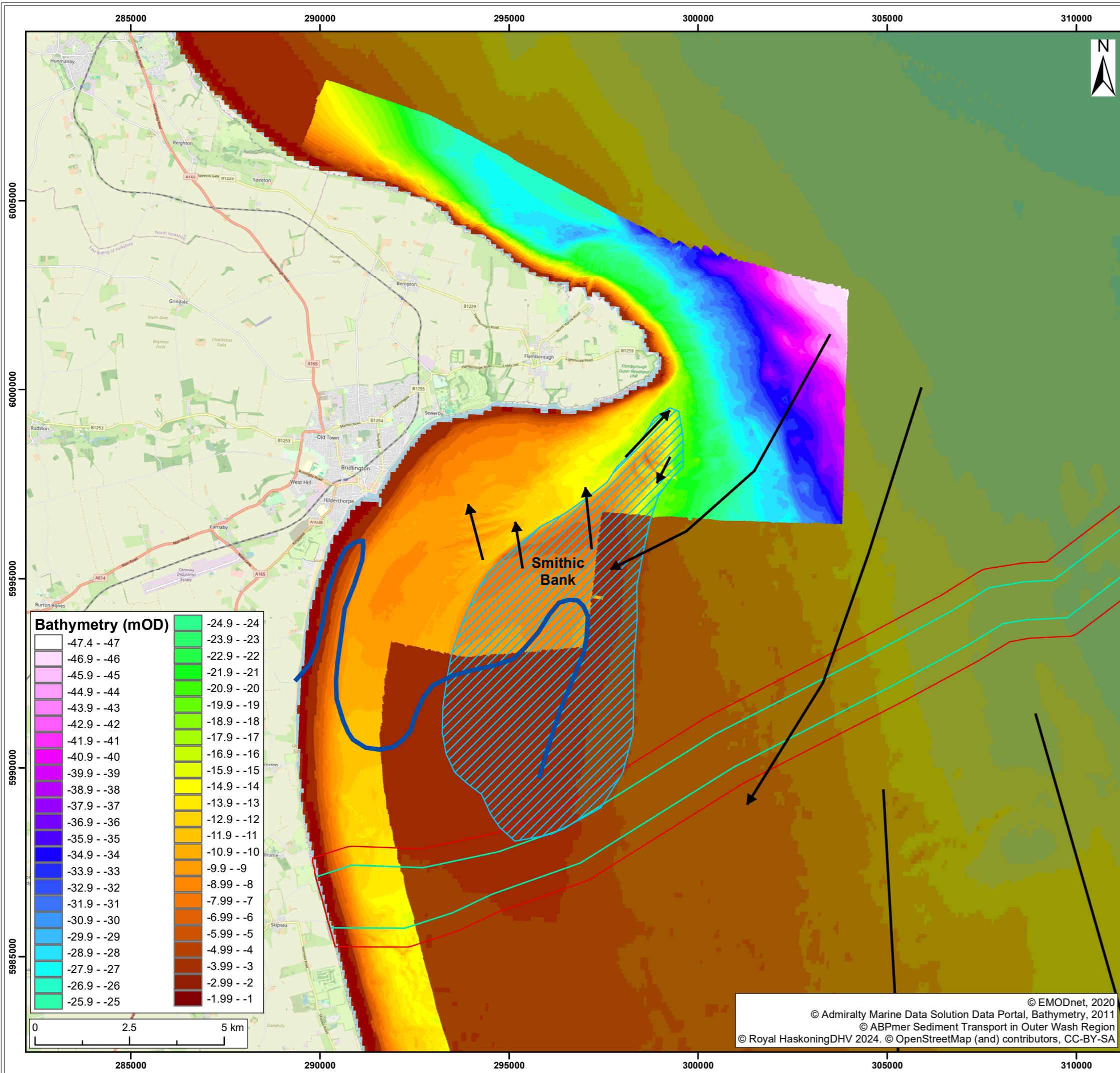
> 0
0 - -9.9
-10 - -14.9
-15 - -19.9
-20 - -24.9
-25 - -29.9
-30 - -34.9
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-40 - -44.9
-45 - -49.9
-50 - -54.9
-55 - -59.9
-60 - -64.9
-65 - -69.9
-70 - -74.9
-75 - -79.9
-80 - -84.9
-85 - -89.9
< -90

A1	P01	17/11/2023	Suitable for information	JH	SB	HC
A2	P02	22/03/2024	Suitable for information	JH	SB	CC
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:

Location and bathymetry of the marine physical environment study area

Figure: 8-1	Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0622	
Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:900,000
Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement	



Legend:

- Offshore Development Area
- 1km Burial Swath
- Smithic Bank (as delimited by JNCC)

Indicative Sediment Transport Pathways

- Bed Load
- Boundary between 'Flamborough Influence' and 'Holderness Cliffs Influence' (Pye et al. 2015)

Bathymetry (LAT)

> 0
0 - -9.9
-10 - -14.9
-15 - -19.9
-20 - -24.9
-25 - -29.9
-30 - -34.9
-35 - -39.9
-40 - -44.9
-45 - -49.9
-50 - -54.9

Bathymetry (mOD)

-47.4 - -47	-24.9 - -24
-46.9 - -46	-23.9 - -23
-45.9 - -45	-22.9 - -22
-44.9 - -44	-21.9 - -21
-43.9 - -43	-20.9 - -20
-42.9 - -42	-19.9 - -19
-41.9 - -41	-18.9 - -18
-40.9 - -40	-17.9 - -17
-39.9 - -39	-16.9 - -16
-38.9 - -38	-15.9 - -15
-37.9 - -37	-14.9 - -14
-36.9 - -36	-13.9 - -13
-35.9 - -35	-12.9 - -12
-34.9 - -34	-11.9 - -11
-33.9 - -33	-10.9 - -10
-32.9 - -32	-9.9 - -9
-31.9 - -31	-8.99 - -8
-30.9 - -30	-7.99 - -7
-29.9 - -29	-6.99 - -6
-28.9 - -28	-5.99 - -5
-27.9 - -27	-4.99 - -4
-26.9 - -26	-3.99 - -3
-25.9 - -25	-2.99 - -2
	-1.99 - -1

A1	P01	17/11/2023	Suitable for information	JH	SB	HC
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

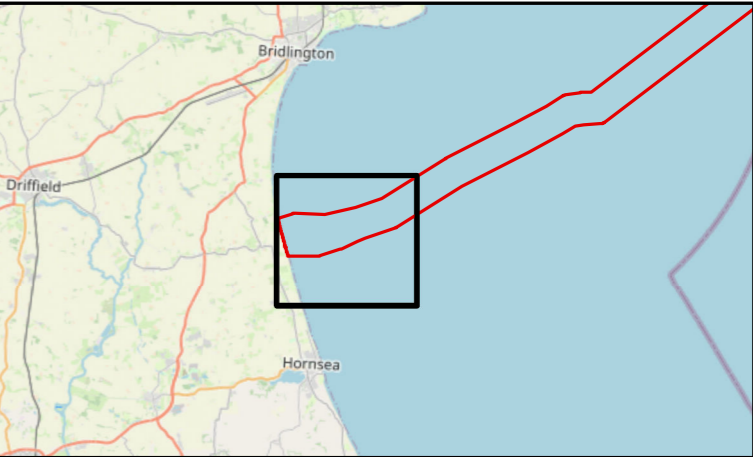
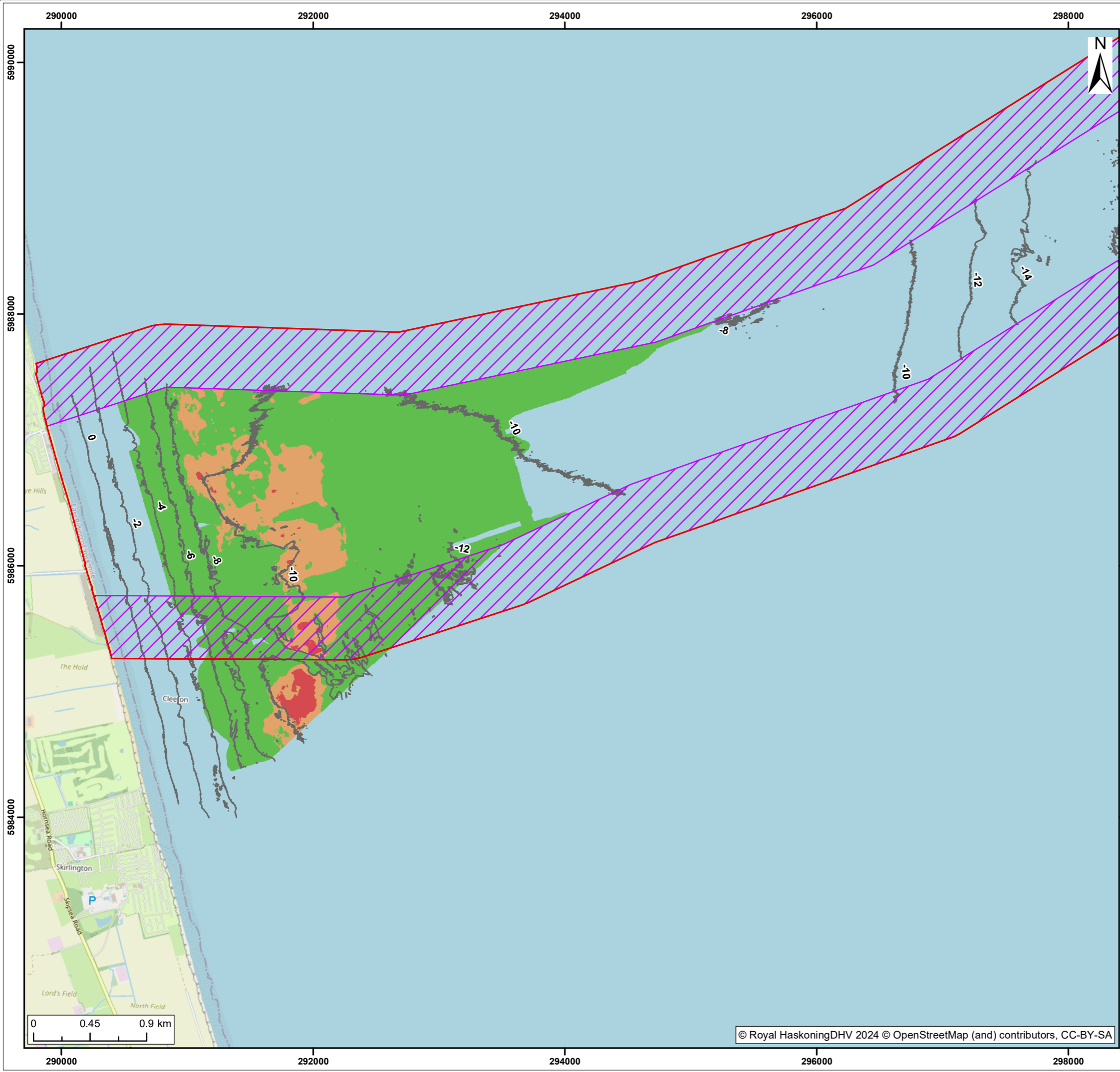
Title:

Location and Indicative sediment transport pathways across Smithic Bank derived from bedform geometry

Figure: 8-2	Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0623		
Co-ordinate system: WGS 1984 UTM Zone 31N		Page Size: A3	Scale: 1:100,000
Project: Dogger Bank South Offshore Wind Farms		Report: Environmental Statement	

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© Admiralty Marine Data Solution Data Portal, Bathymetry, 2011
© ABPmer Sediment Transport in Outer Wash Region
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- Legend:
- Offshore Development Area
 - Construction Corridor
 - Bathymetry Contours (m)
- Bedrock Depth (m bsf)**
- <= -2.0000
 - 2.0000 - -1.0000
 - >-1.0000

S2	P01	08/01/2024	Suitable for information	SB	CM	CC
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

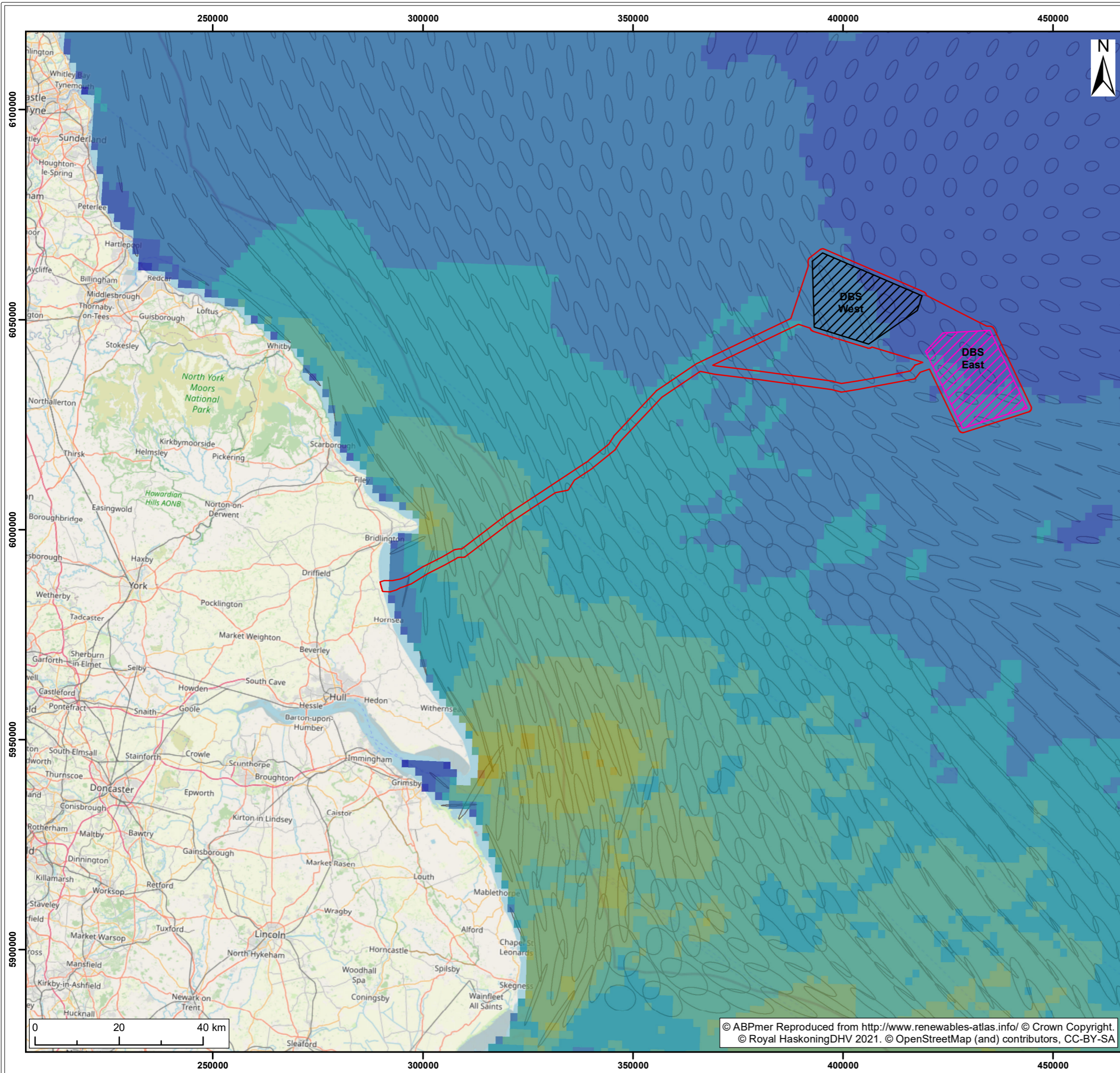
Title:
Depth of chalk below seabed in the nearshore part of the Offshore Export Cable Corridor based on interpretation of sub-bottom profiler data

Figure: 8-3 Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0689

Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:30,000
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Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement
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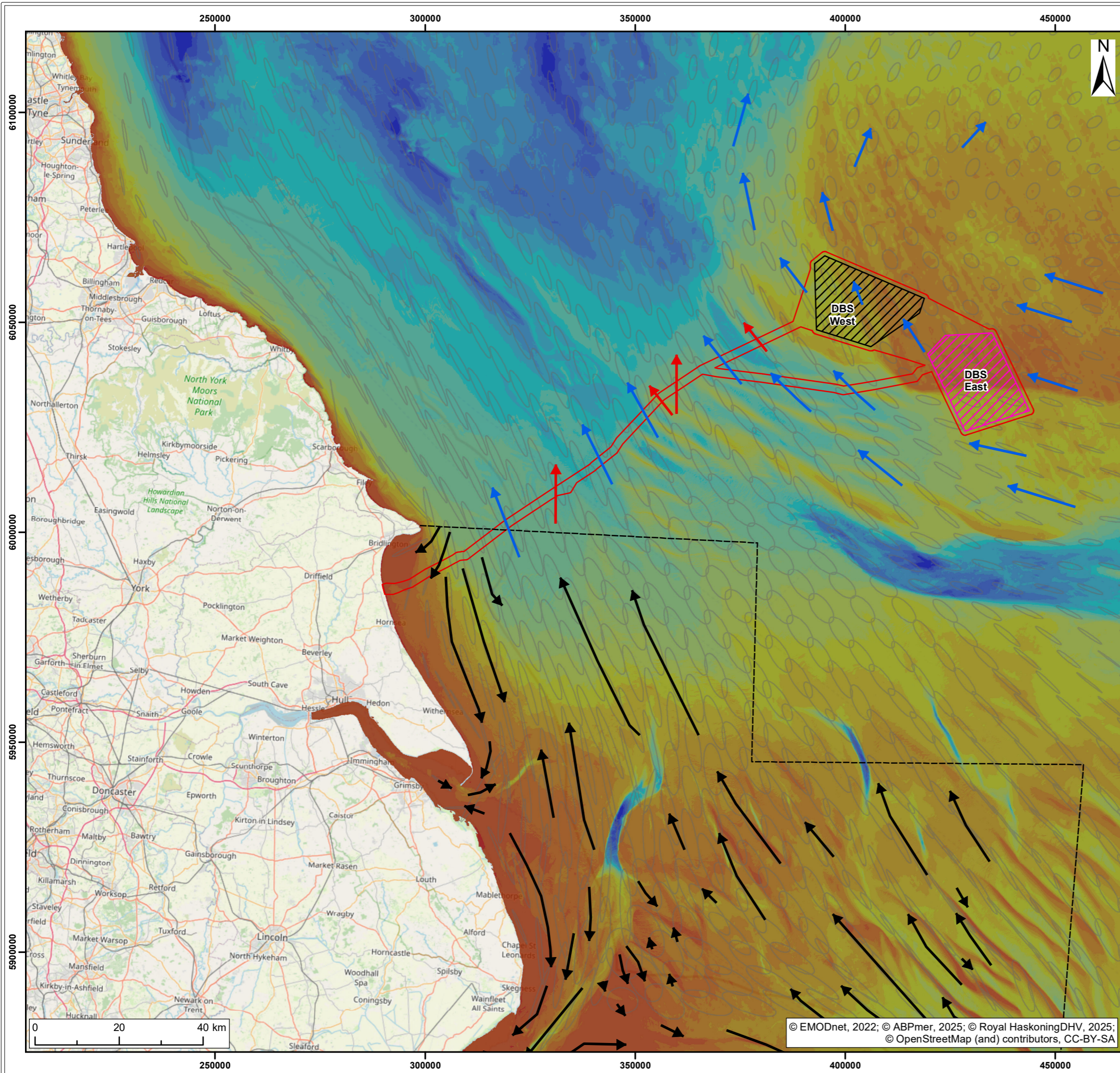
Legend:

- Offshore Development Area
- DBS East array area
- DBS West array area
- Spring Tidal Ellipses

Peak Flow of Mean Spring Tide (m/s)

< 0.20
0.21 - 0.40
0.41 - 0.60
0.61 - 0.80
0.81 - 1.00
1.01 - 1.20
1.21 - 1.40
1.41 - 1.60
1.61 - 1.80
1.81 - 2.00
> 2.00

00



Legend:

- Offshore Development Area
- DBS East array area
- DBS West array area
- Spring Tidal Ellipse
- Extent of available data on sediment transport pathways

Sediment Transport Pathways

- Sediment transport direction inferred from bedforms
- Sediment transport pathways (Kenyon & Cooper, 2015)
- Transport direction inferred from residual tidal currents

Bathymetry (LAT)

> 0	-30 - -34.9	-60 - -64.9
0 - -9.9	-35 - -39.9	-65 - -69.9
-10 - -14.9	-40 - -44.9	-70 - -74.9
-15 - -19.9	-45 - -49.9	-75 - -79.9
-20 - -24.9	-50 - -54.9	-80 - -84.9
-25 - -29.9	-55 - -59.9	-85 - -89.9
		< -90

S3	P02	16/05/2025	Suitable for review & comment	SM	CM	CC
S2	P01	17/11/2023	Suitable for information	JH	SB	HC
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:

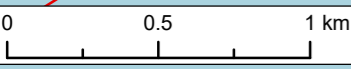
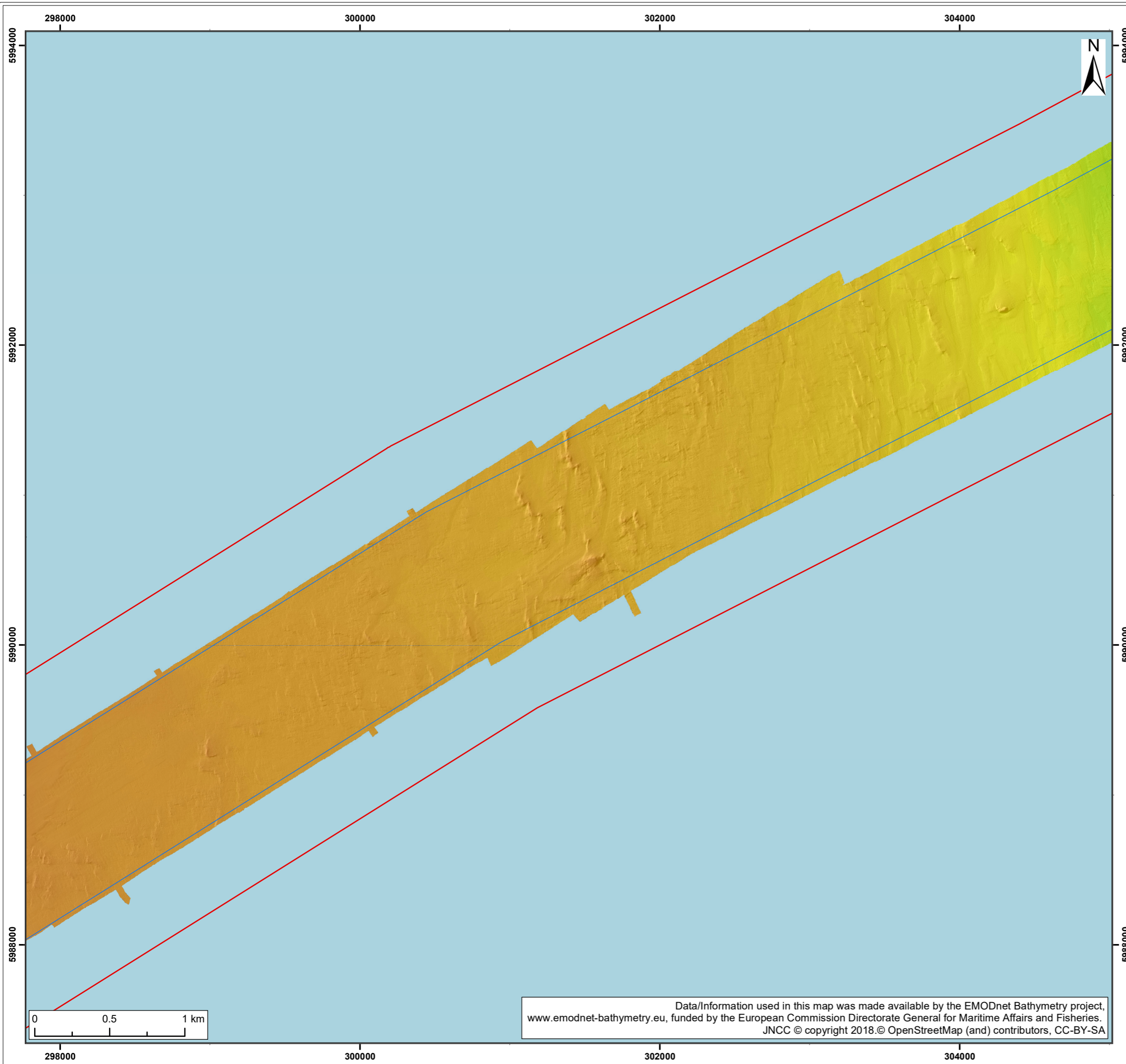
Sediment transport pathways along the offshore export cable corridor

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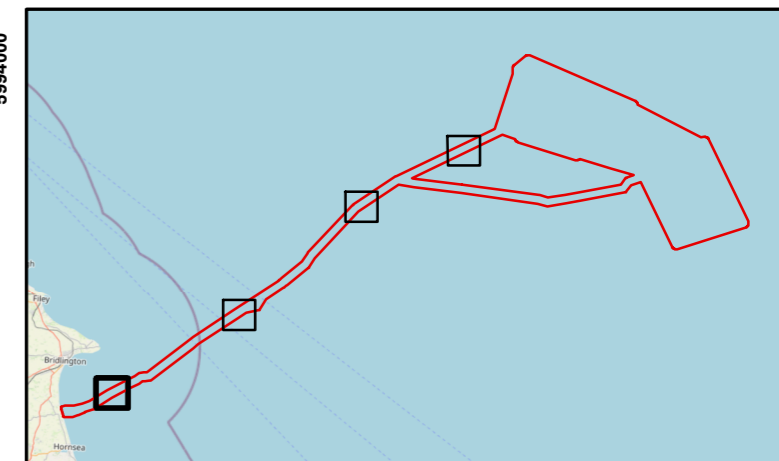
Figure: 8-5	Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0619		
Co-ordinate system: WGS 1984 UTM Zone 31N		Page Size: A3	Scale: 1:900,000
Project: Dogger Bank South Offshore Wind Farms		Report: Environmental Statement	

Royal HaskoningDHV
Enhancing Society Together

RWE



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Legend:

- Offshore Development Area
- Offshore Export Cable Corridor

Bathymetry (LAT)
 High : 1.94393
 Low : -69.8937

S2	P01	13/12/2023	Suitable for Information	JH	SB	MH
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

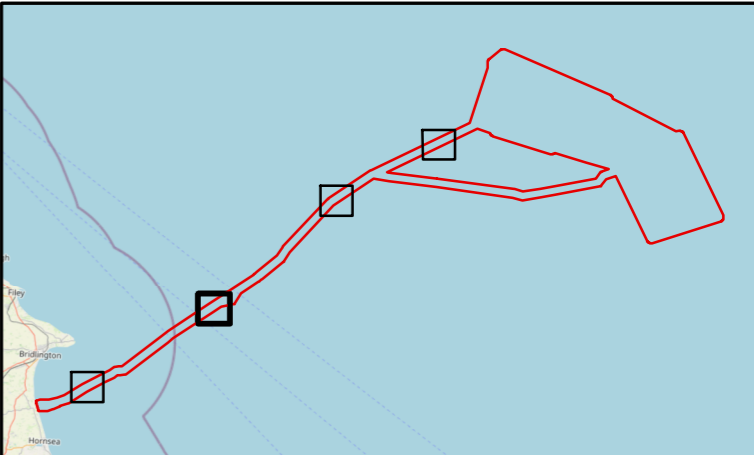
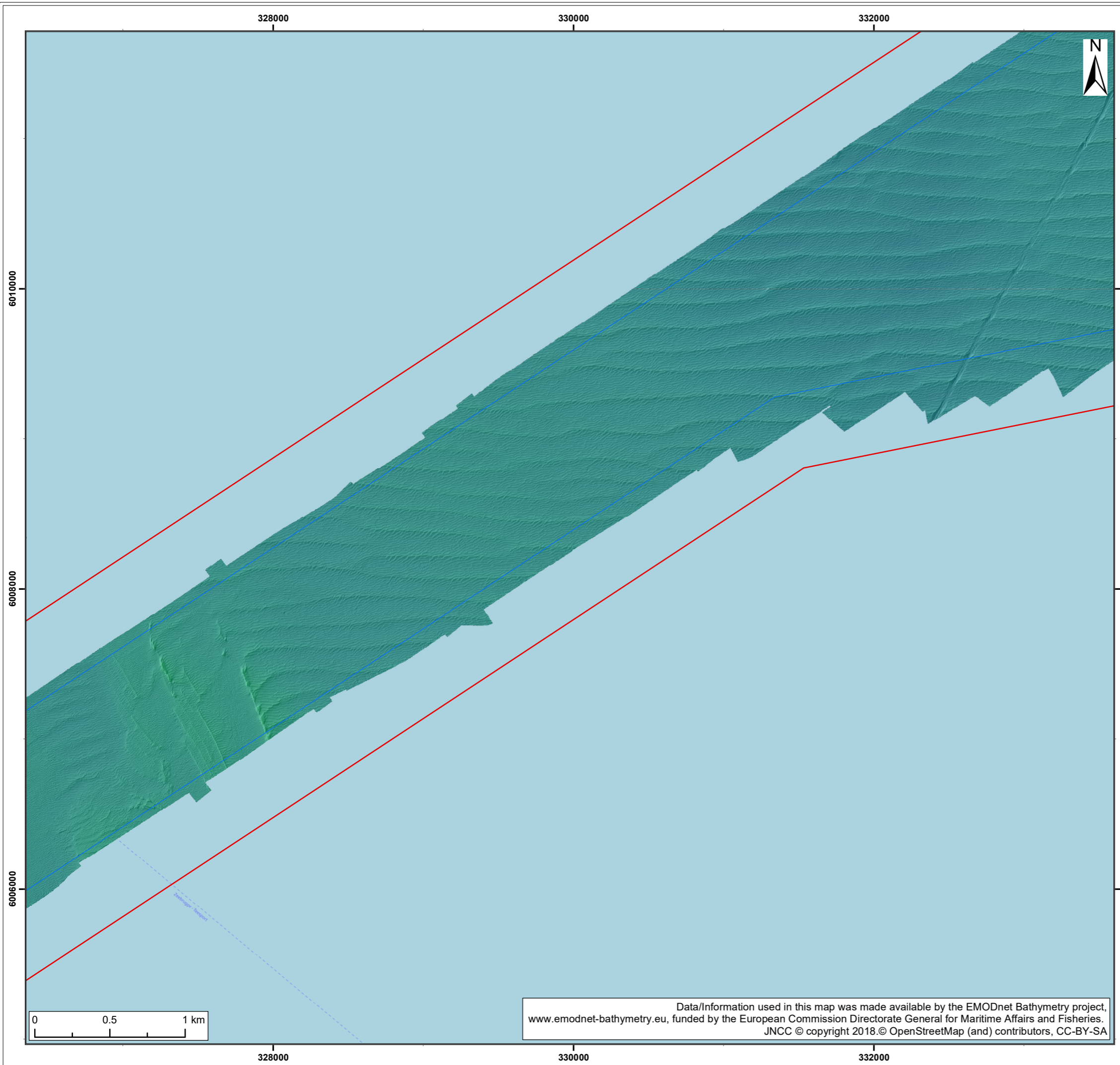
Title:
 Bathymetry of the Offshore Development Area showing examples of bedforms present within the Offshore Export Cable Corridor

Figure: 8-6a Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0683

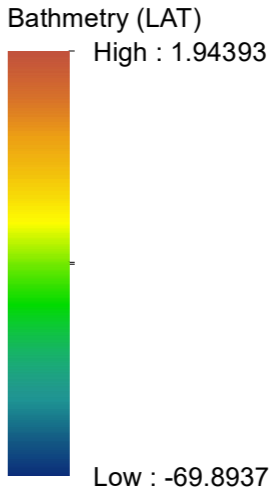
Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:25,000
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Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement
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- Legend:
- Offshore Development Area
 - Offshore Export Cable Corridor



S2	P01	13/12/2023	Suitable for Information	JH	SB	MH
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:

Bathymetry of the Offshore Development Area showing examples of bedforms present within the Offshore Export Cable Corridor

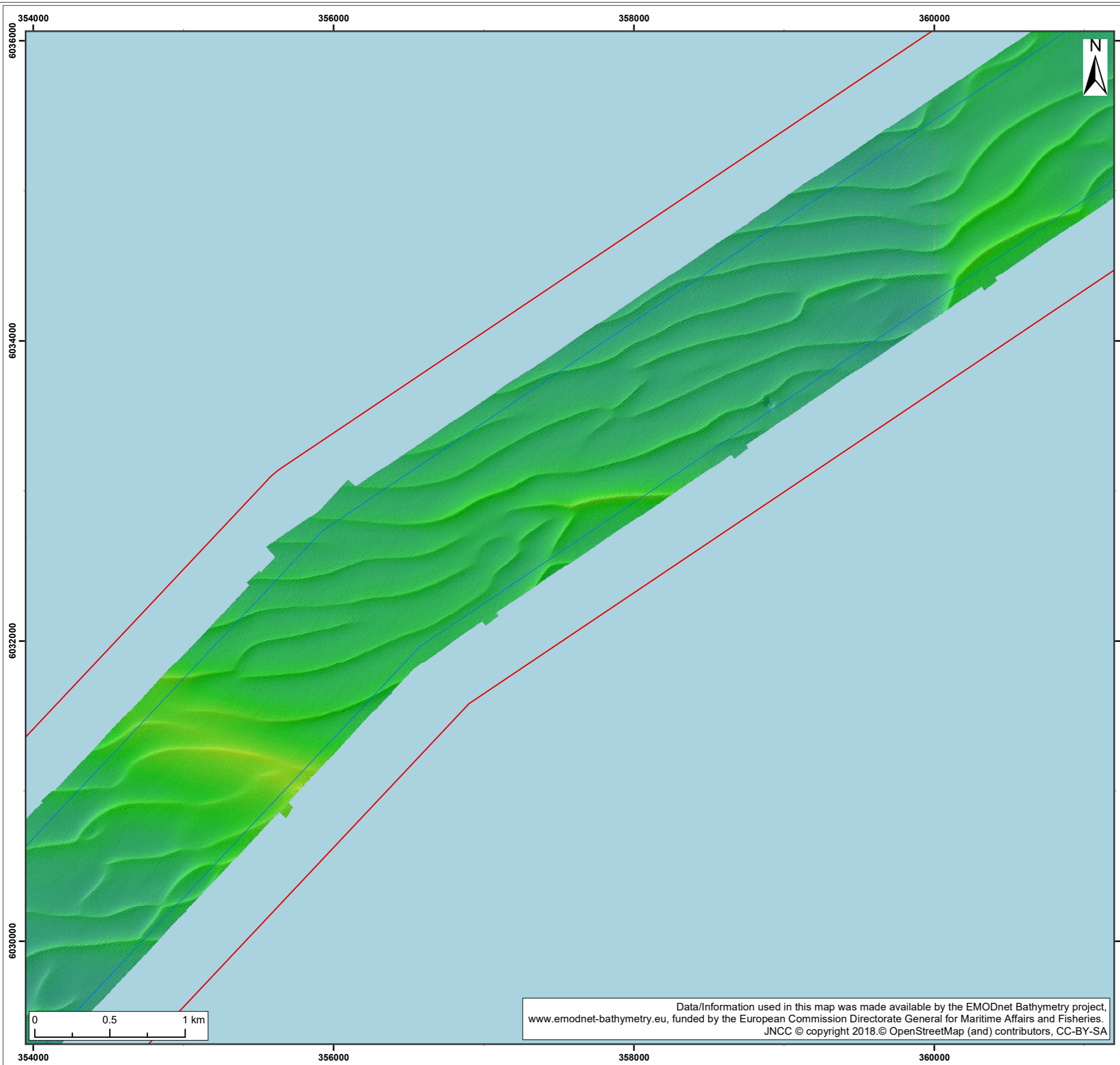
Figure: 8-6b Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0683

Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:25,000
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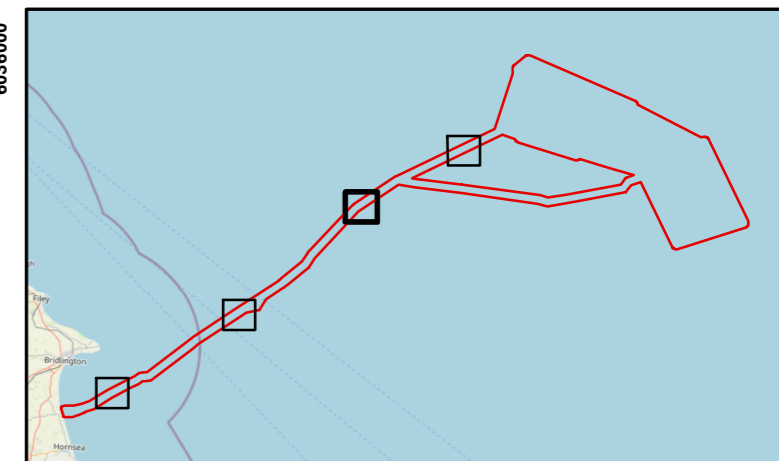
Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement
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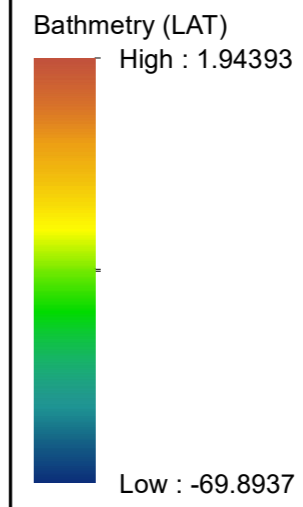
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- Legend:
- Offshore Development Area
 - Offshore Export Cable Corridor



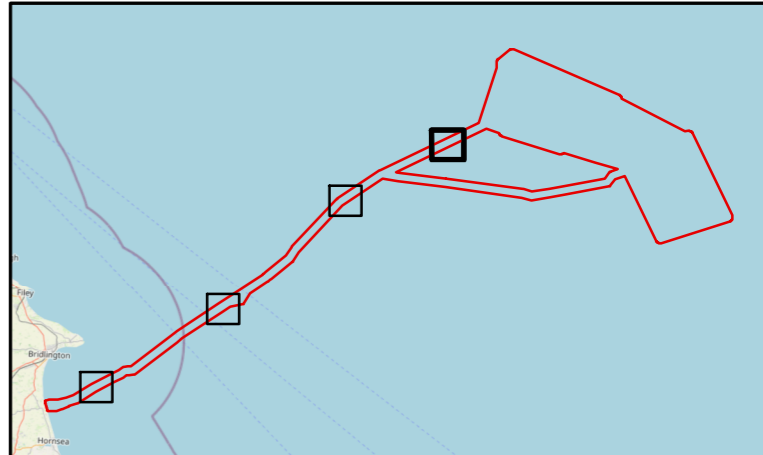
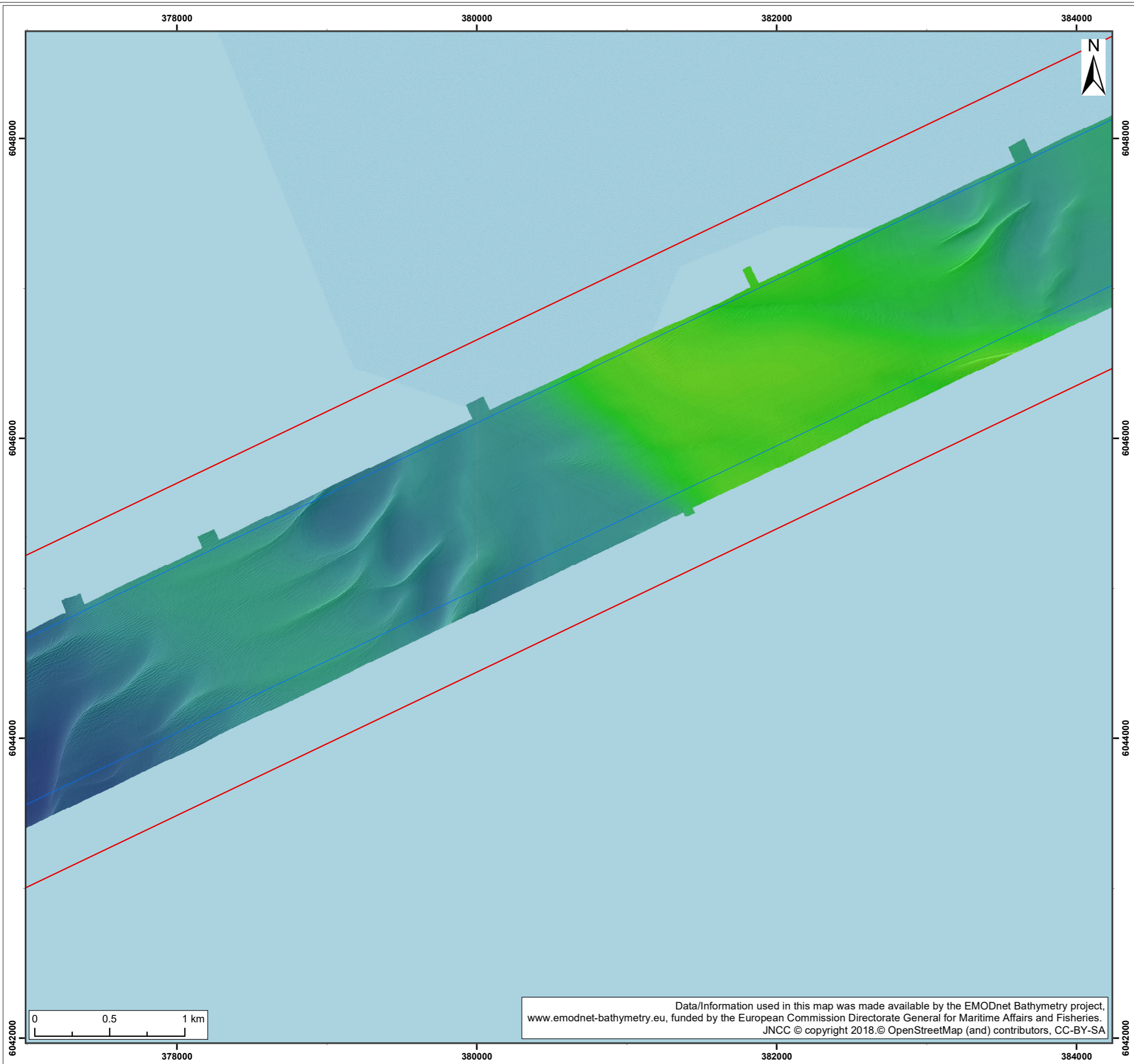
S2	P01	13/12/2023	Suitable for Information	JH	SB	MH
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:

Bathymetry of the Offshore Development Area showing examples of bedforms present within the Offshore Export Cable Corridor

Figure: 8-6c		Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0683	
Co-ordinate system: WGS 1984 UTM Zone 31N		Page Size: A3	Scale: 1:25,000
Project: Dogger Bank South Offshore Wind Farms		Report: Environmental Statement	





Legend:

- Offshore Development Area
- Offshore Export Cable Corridor

Bathymetry (LAT)

High : 1.94393

Low : -69.8937

S2	P01	13/12/2023	Suitable for Information	JH	SB	MH
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:

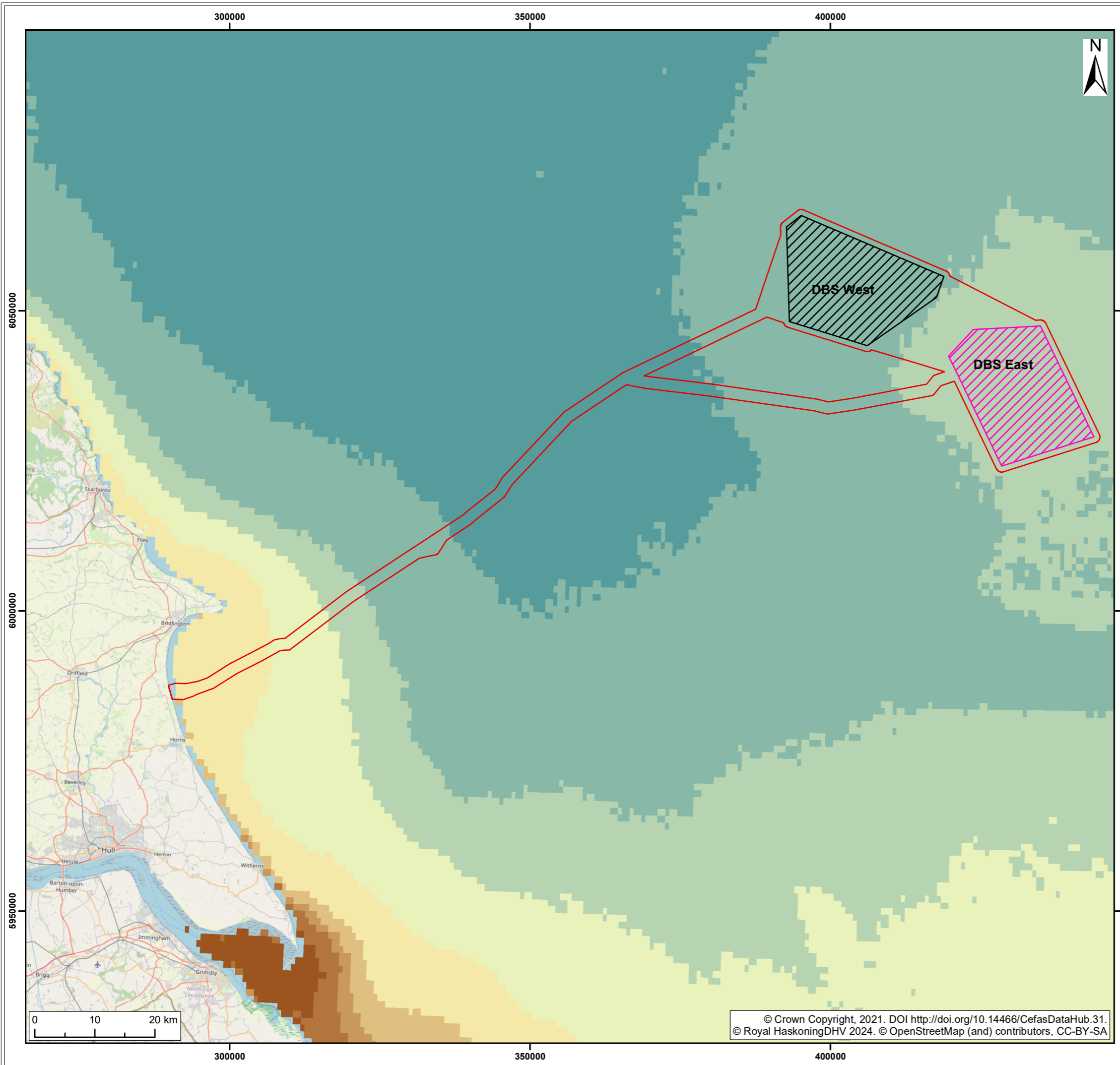
Bathymetry of the Offshore Development Area showing examples of bedforms present within the Offshore Export Cable Corridor

Figure: 8-6d Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0683

Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:25,000
Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement	

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Legend:

- Offshore Development Area
- DBS East array area
- DBS West array area

SPM 1998-2015 (mg/l)

- 1
- 2
- 3
- 5
- 10
- 15
- 20
- 30
- >30

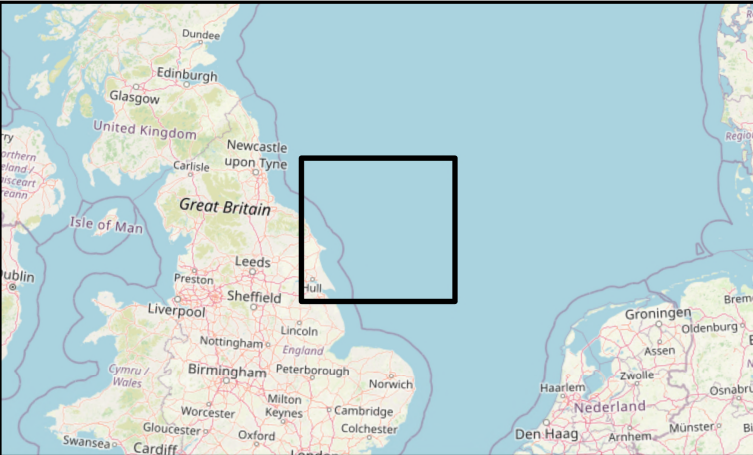
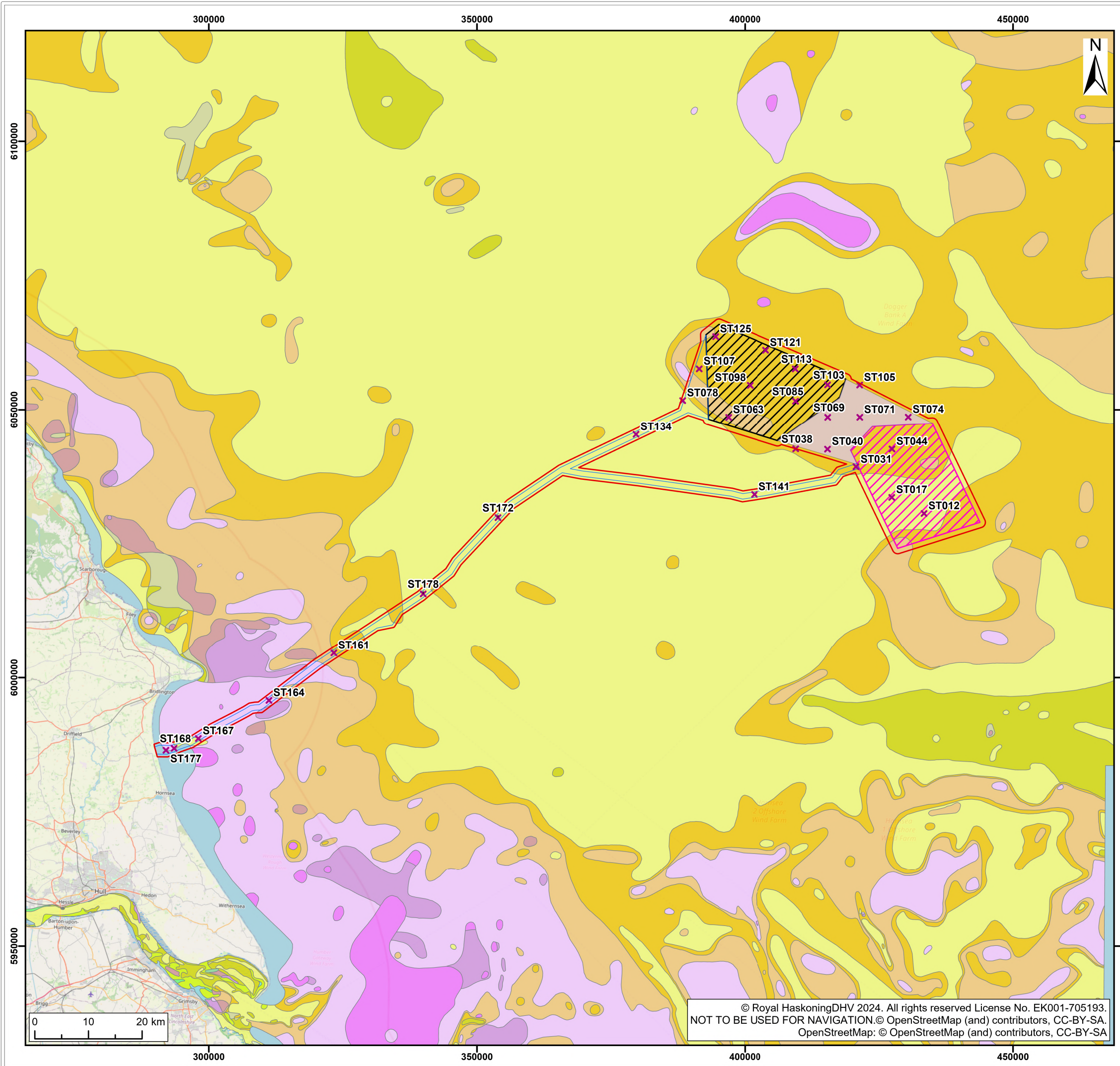
A1	P01	17/11/2023	Suitable for information	JH	SB	HC
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Variations in Suspended Particulate Matter (1998-2015)
across the Offshore Development Area

Figure: 8-7 Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0628

Co-ordinate system: WGS 1984 UTM Zone 31N Page Size: A3 Scale: 1:625,000

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Legend:

- Offshore Development Area
- Offshore Export Cable Corridor
- Inter-platform Cable Corridor
- DBS East Array Area
- DBS West Array Area
- Sediment Contamination Sample Location
- GRAVEL
- GRAVEL, MUDDY, SANDY
- GRAVELLY MUD
- GRAVELLY MUDDY SAND
- GRAVELLY SAND
- MUD
- MUDDY GRAVEL
- MUDDY SAND
- SAND
- SANDY GRAVEL
- SANDY MUD
- SLIGHTLY GRAVELLY MUD
- SLIGHTLY GRAVELLY MUDDY SAND
- SLIGHTLY GRAVELLY SAND
- SLIGHTLY GRAVELLY SANDY MUD
- UNDIFFERENTIATED BEDROCK

S2	P02	07/03/2025	Suitable for information	JH	SM	CC
S2	P01	03/04/2024	Suitable for information	JH	SB	CC
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:

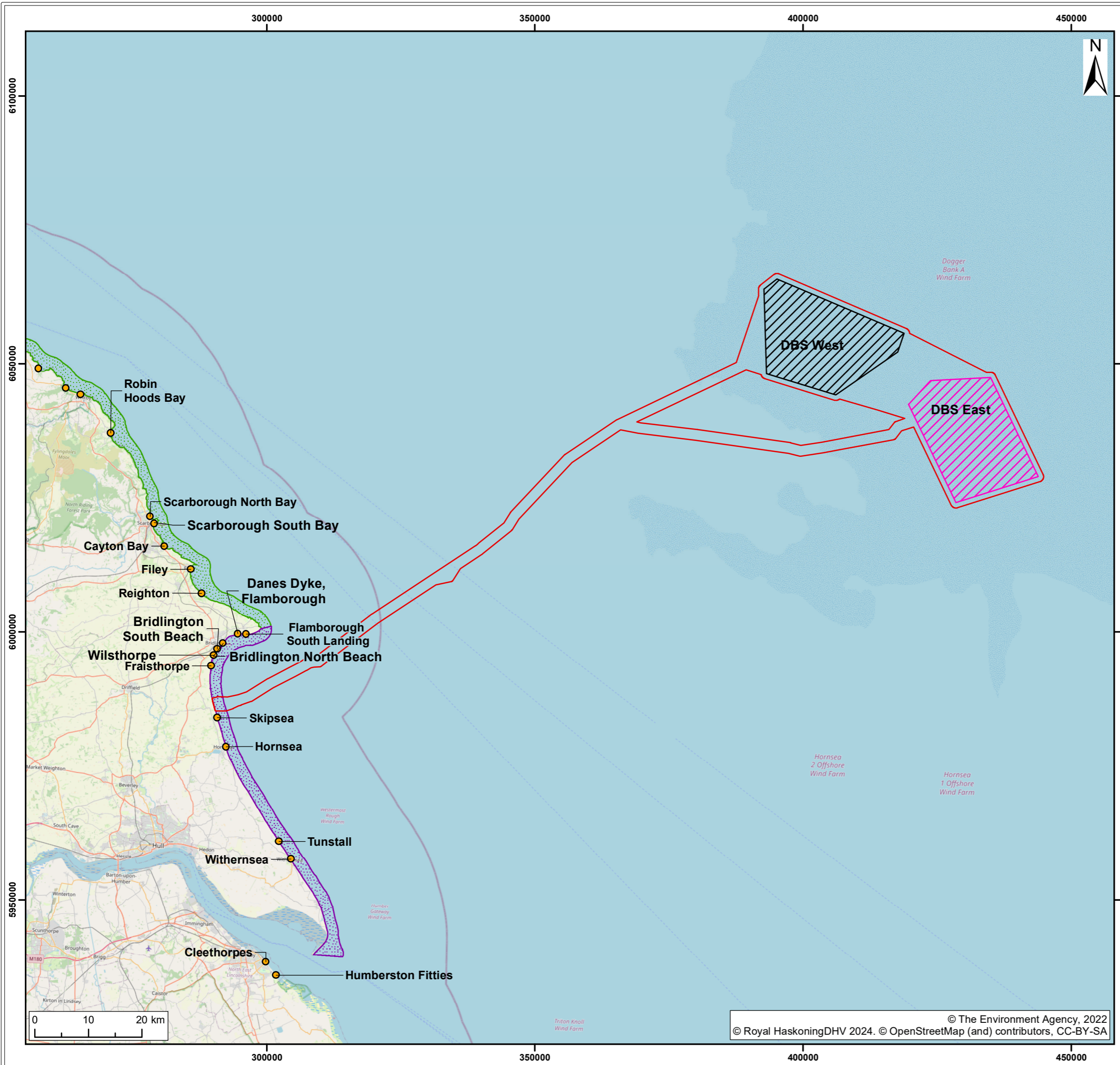
Sample site locations against offshore study area

Figure: 8-8 Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0621

Co-ordinate system: WGS 1984 UTM Zone 31N Page Size: A3 Scale: 1:700,000

Project: Dogger Bank South Offshore Wind Farms Report: Environmental Statement





- Legend:
- Offshore Development Area
 - DBS East array area
 - DBS West array area
- WFD Transitional & Coastal Water Bodies**
- Yorkshire North
 - Yorkshire South
- Protected Areas**
- Designated Bathing Waters

A1	P02	17/11/2023	Suitable for information	JH	SB	HC
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:

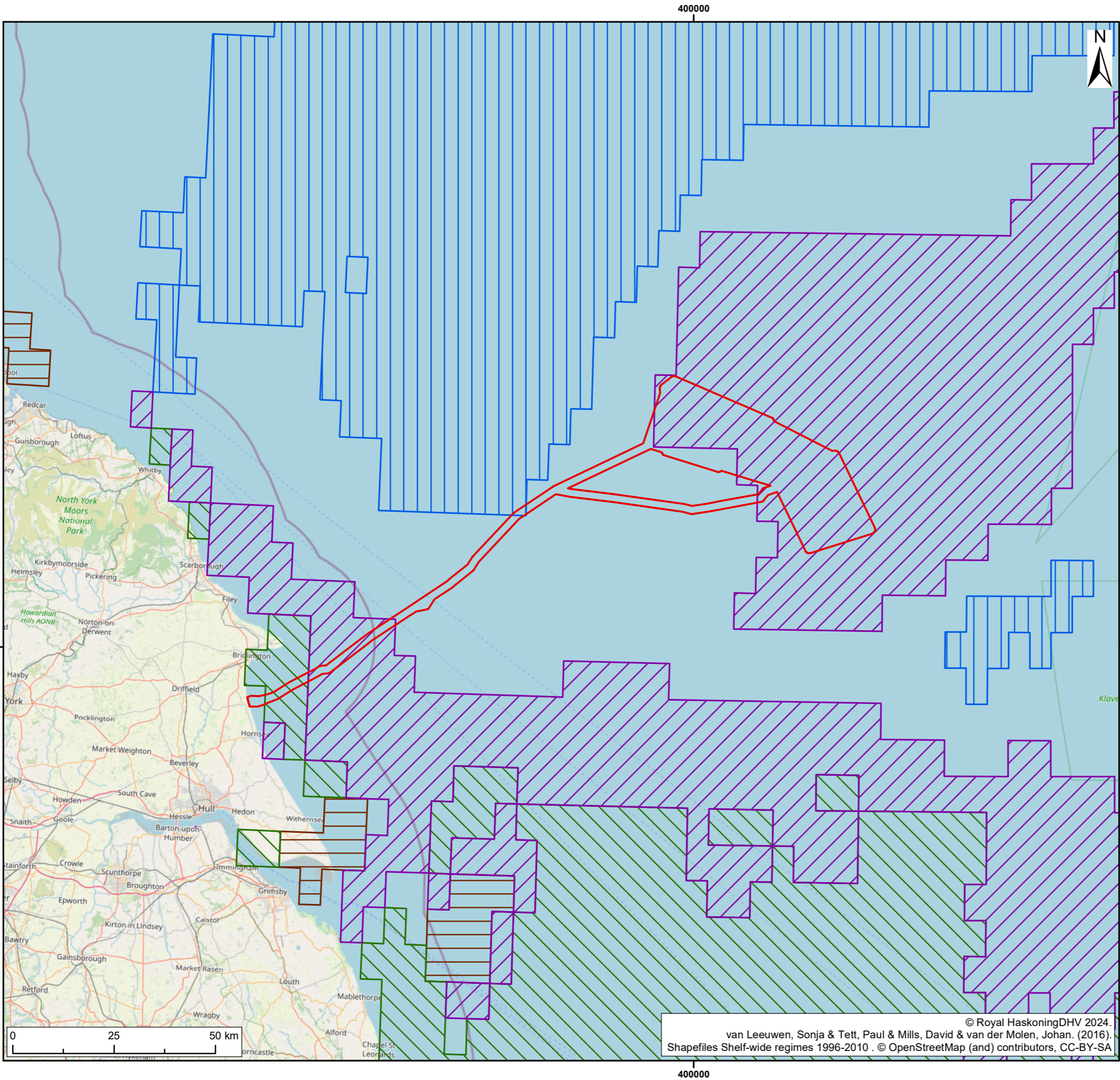
WFD water bodies and bathing waters against Offshore Study Area

Figure: 8-9 Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0630

Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:700,000
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Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement
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- Legend:
- Offshore Development Area
 - Intermittently Stratified
 - Seasonally Stratified
 - Permanently Mixed
 - ROFI

S2	P01	15/11/2023	Suitable for Information	JH	SB	CC
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

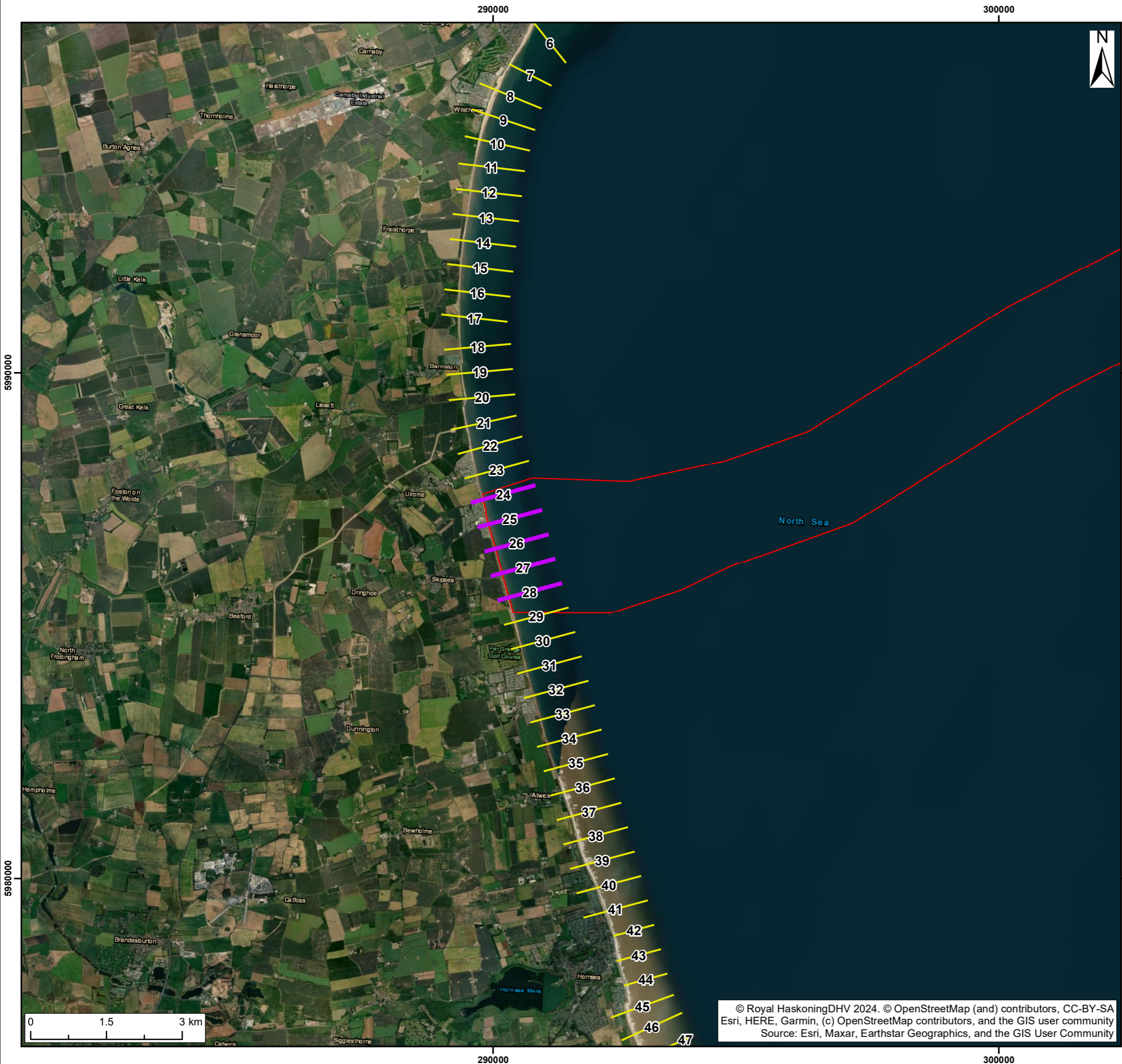
Title:
Modelled annual regions based on density stratification in the North Sea from 1958 to 2008 (van Leeuwen et al., 2015). Transparent areas indicate areas where the dominant density regime categories occur less than 50% of the time.

Figure: 8-10 Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0622

Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:950,000
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Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement
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Legend:

Offshore Development Area

ERYC Beach Profiles

Area of Interest

Other

A1	P01	17/11/2023	Suitable for information	JH	SB	HC
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:

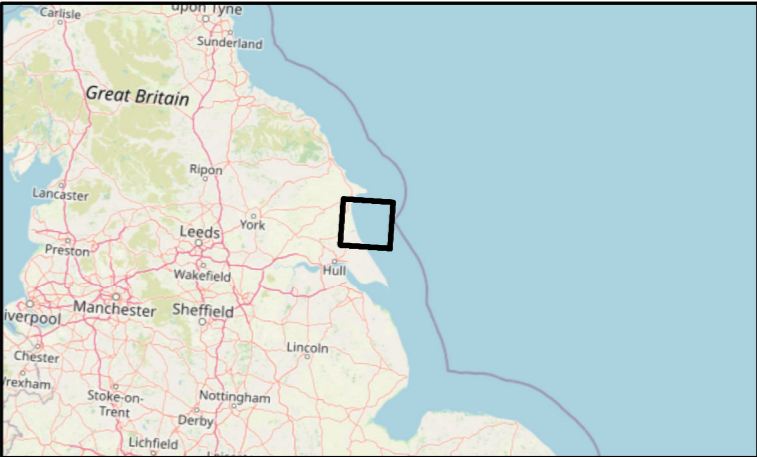
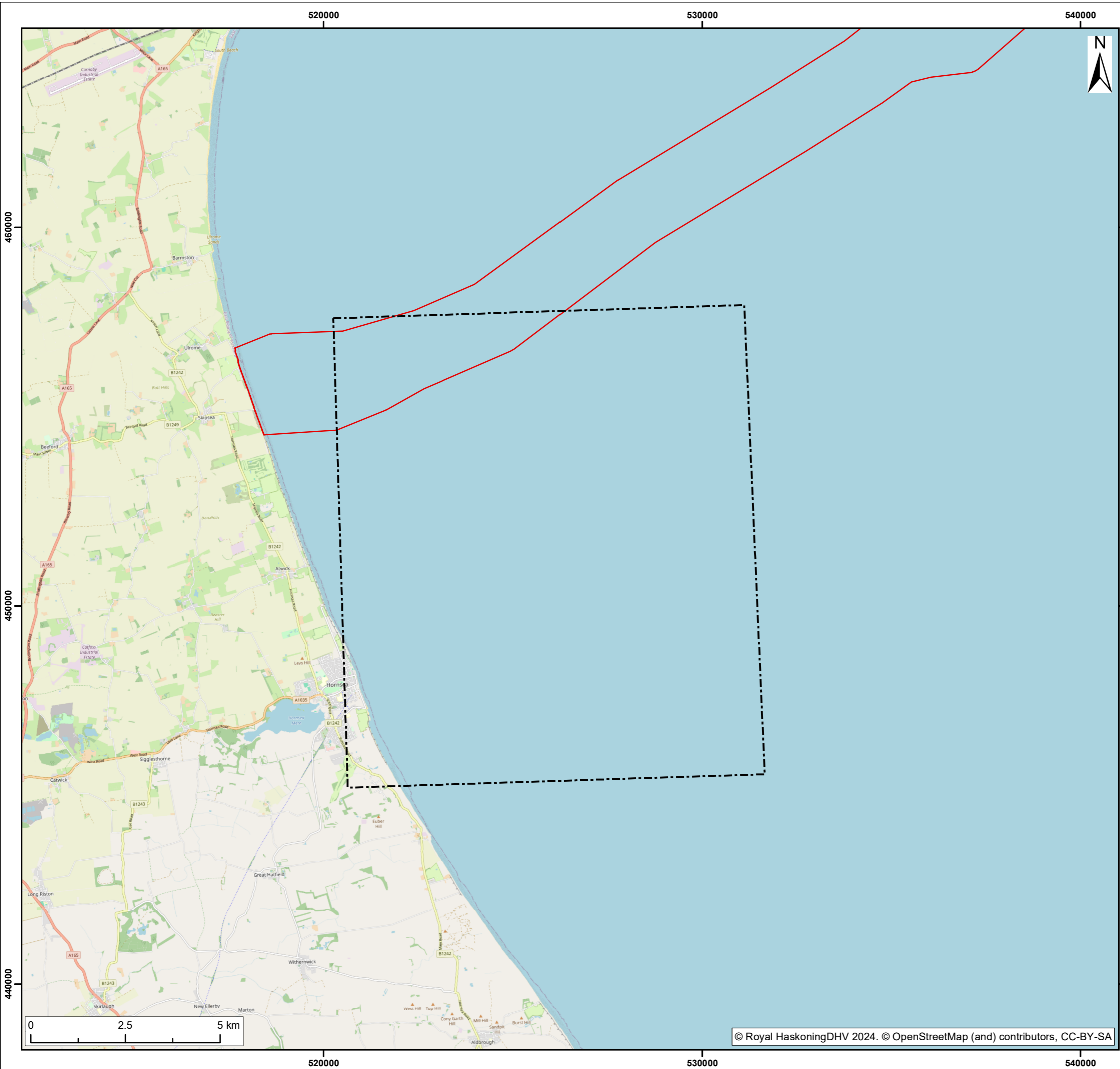
Holderness coast and location of ERYC beach monitoring profiles

Figure: 8-11 Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0631

Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:75,000
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Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement
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- Legend:
- Offshore Development Area
 - UKCP18 model grid

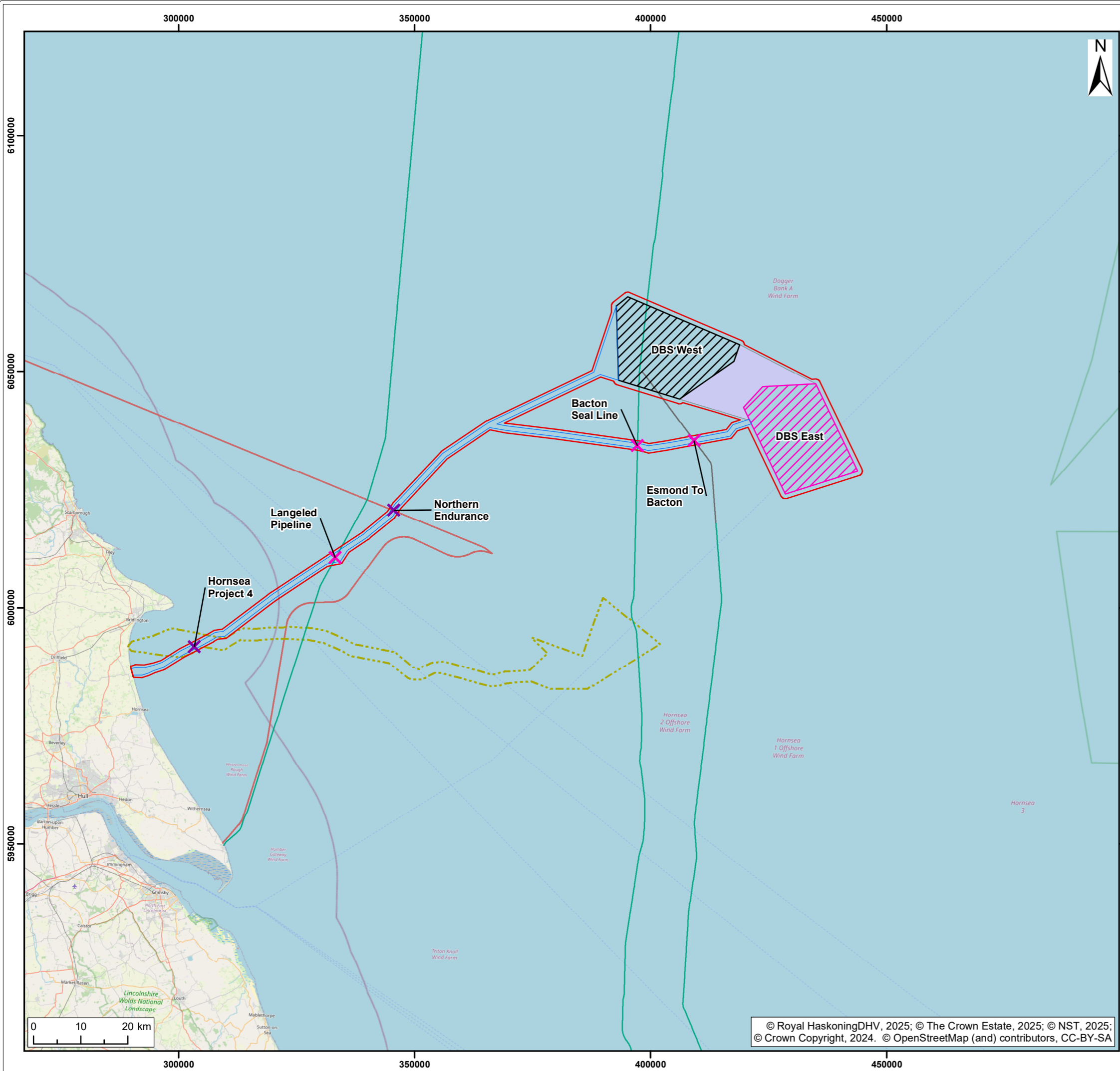
A1	P01	17/11/2023	Suitable for information	JH	SB	HC
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
UKCP18 model grid used to derive sea-level rise projections for the landfall location (source UKCP18)

Figure: 8-12 Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0632

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:100,000
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Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement
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Legend:

- Offshore Development Area
- Offshore Export Cable Corridor
- DBS East Array Area
- DBS West Array Area
- Inter-platform Cable Corridor
- Northern Endurance Proposed Route

Export Cable Route

- Hornsea Project 4

Pipeline

- Active
- Not in use

Export Cable Corridor Crossing

- Cable
- Pipeline

S3	P02	19/06/2025	Suitable for review & comment	SM	CC	RF
S2	P01	02/04/2024	Suitable for information	JH	CC	SB
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Subsea Cable / Pipeline Crossing Locations
Along the Offshore Export Cable Corridor

Figure: 8-13 Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0718

Co-ordinate system: WGS 1984 UTM Zone 31N Page Size: A3 Scale: 1:800,000

Project: Dogger Bank South Offshore Wind Farms Report: Environmental Statement