

**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 2)

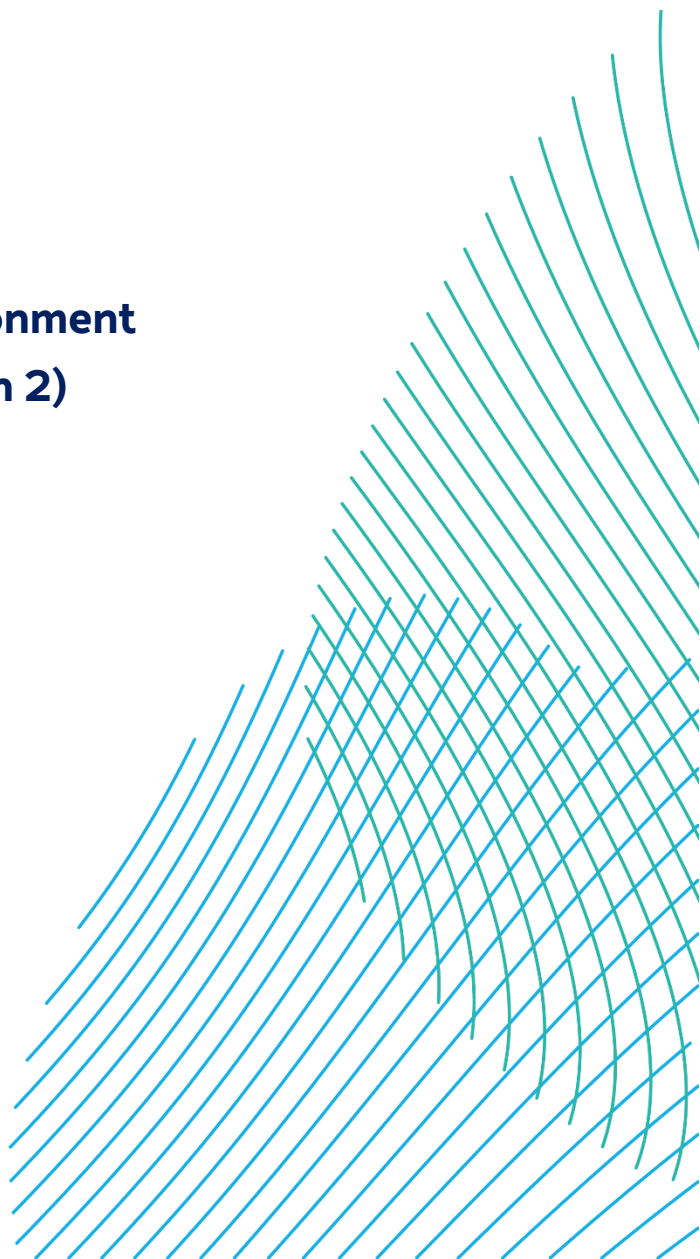
March 2025

Application Reference: 7.8.1

APFP Regulation: 5(2)(b)

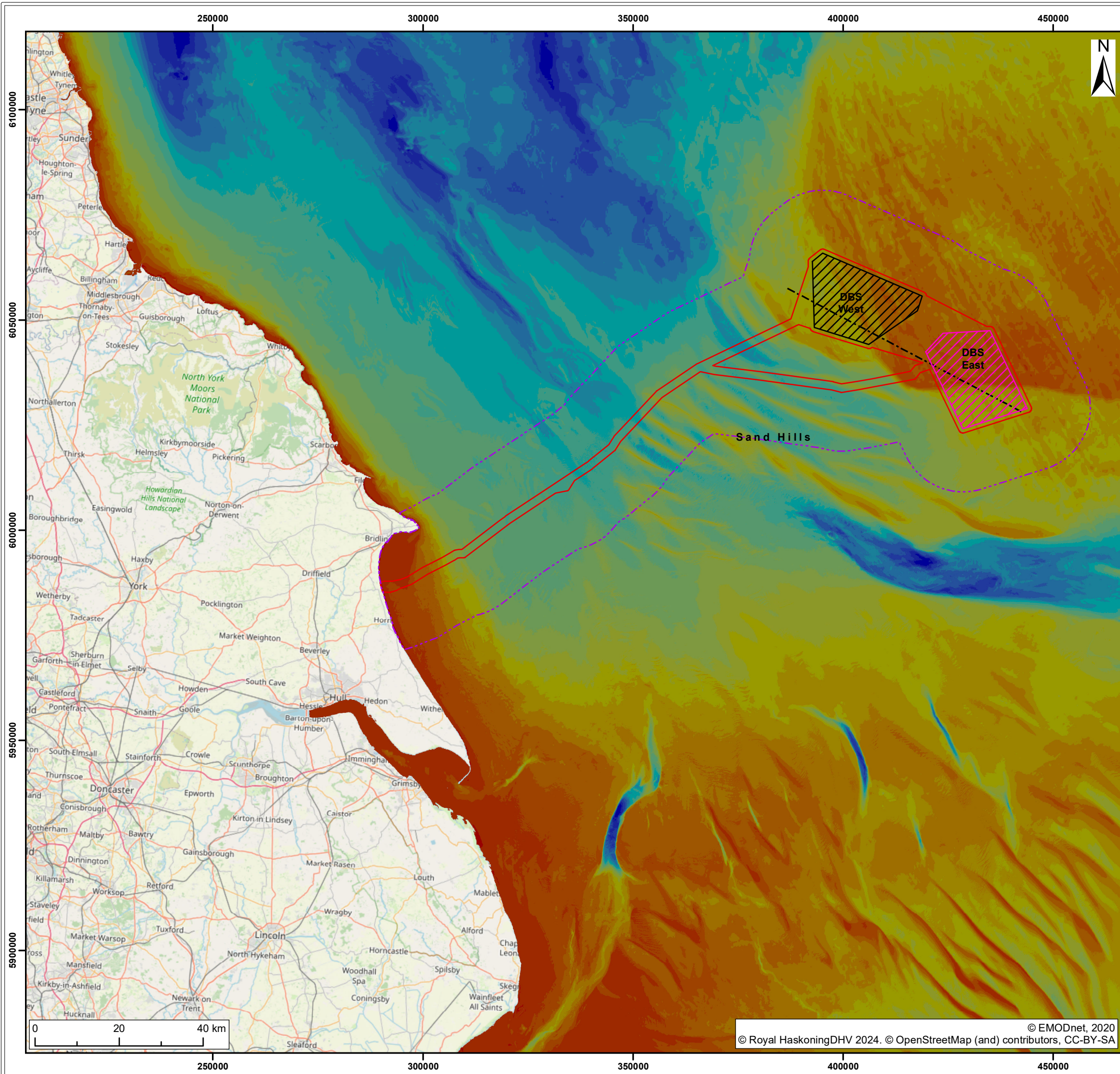
Revision: 02

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				
Document Number:	004300148-02	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

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



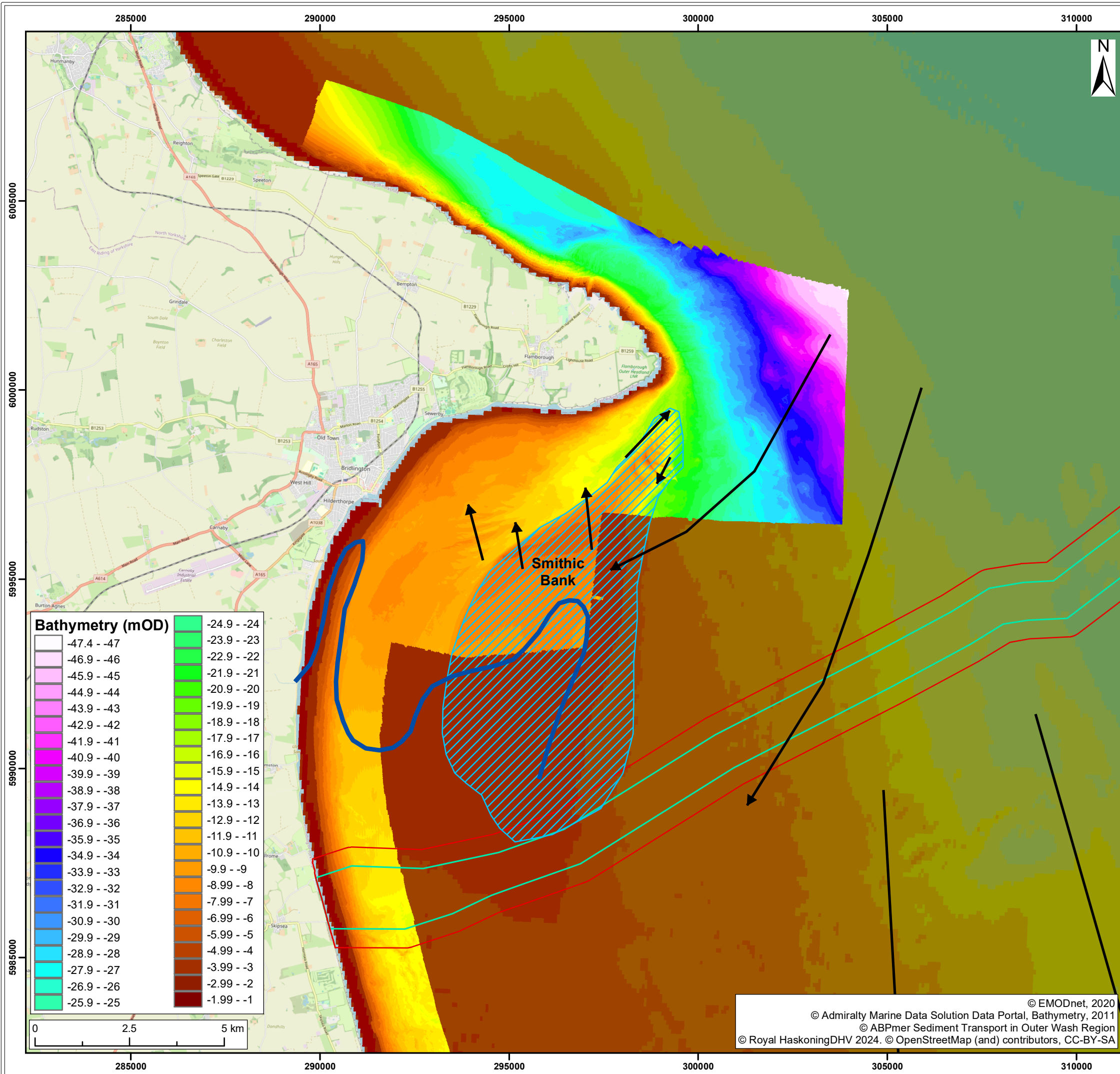
Legend:

- 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
-35 - -39.9
-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			
 Royal HaskoningDHV Enhancing Society Together 						



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

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

Title:

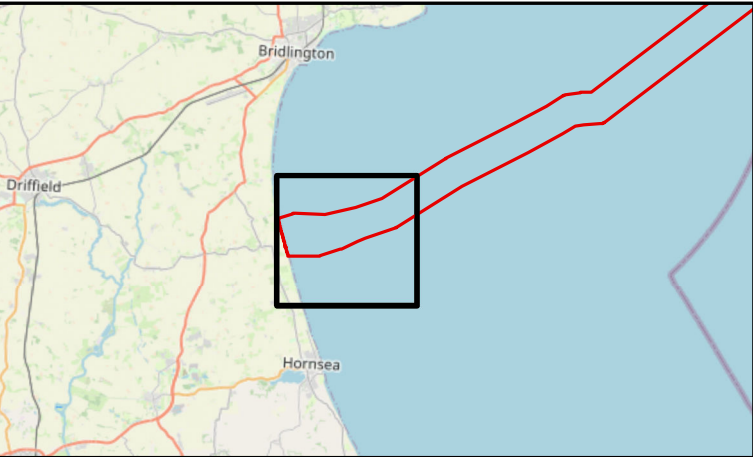
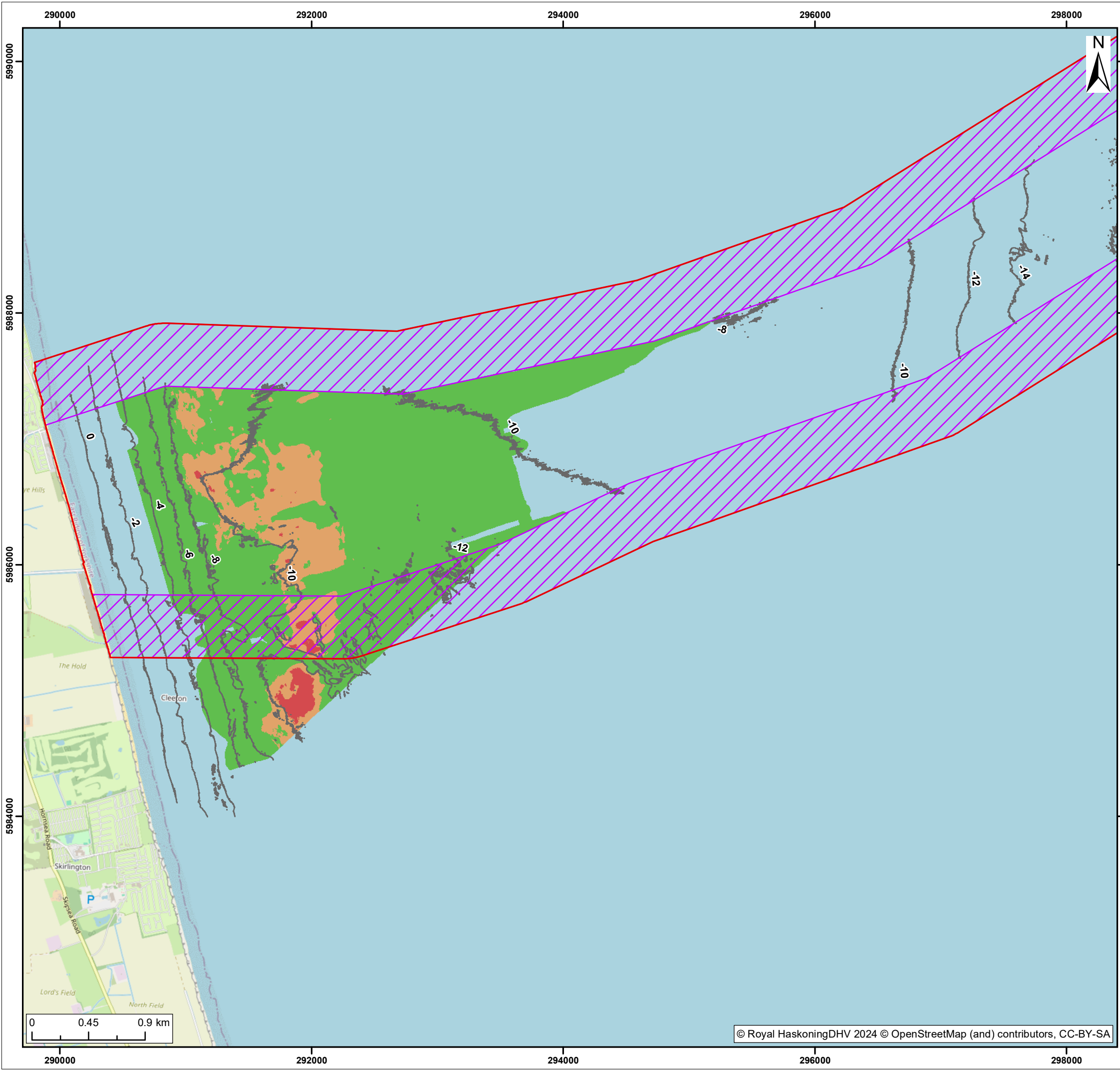
Location and Indicative sediment transport pathways across Smithic Bank derived from bedform geometry

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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Enhancing Society Together

RWE

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 © Admiralty Marine Data Solution Data Portal, Bathymetry, 2011
 © ABPmer Sediment Transport in Outer Wash Region
 © Royal HaskoningDHV 2024. © OpenStreetMap (and) contributors, CC-BY-SA



- 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:

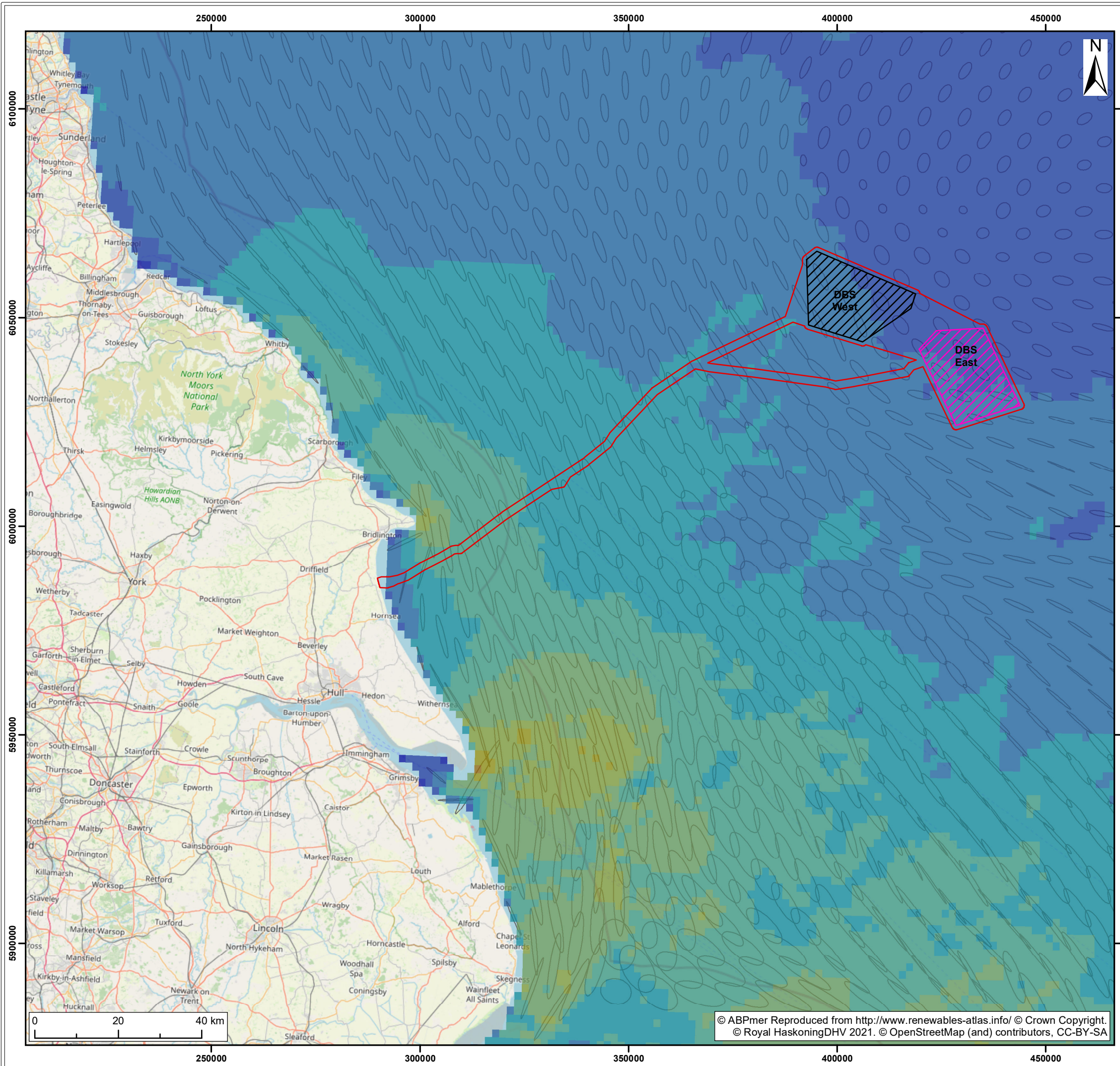
Depth of chalk below seabed in the nearshore part of the Offshore Export Cable Corridor based on interpretation of sub-bottom profiler data

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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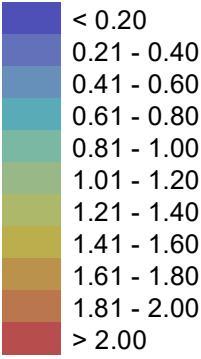




Legend:

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

Peak Flow of Mean Spring Tide (m/s)



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

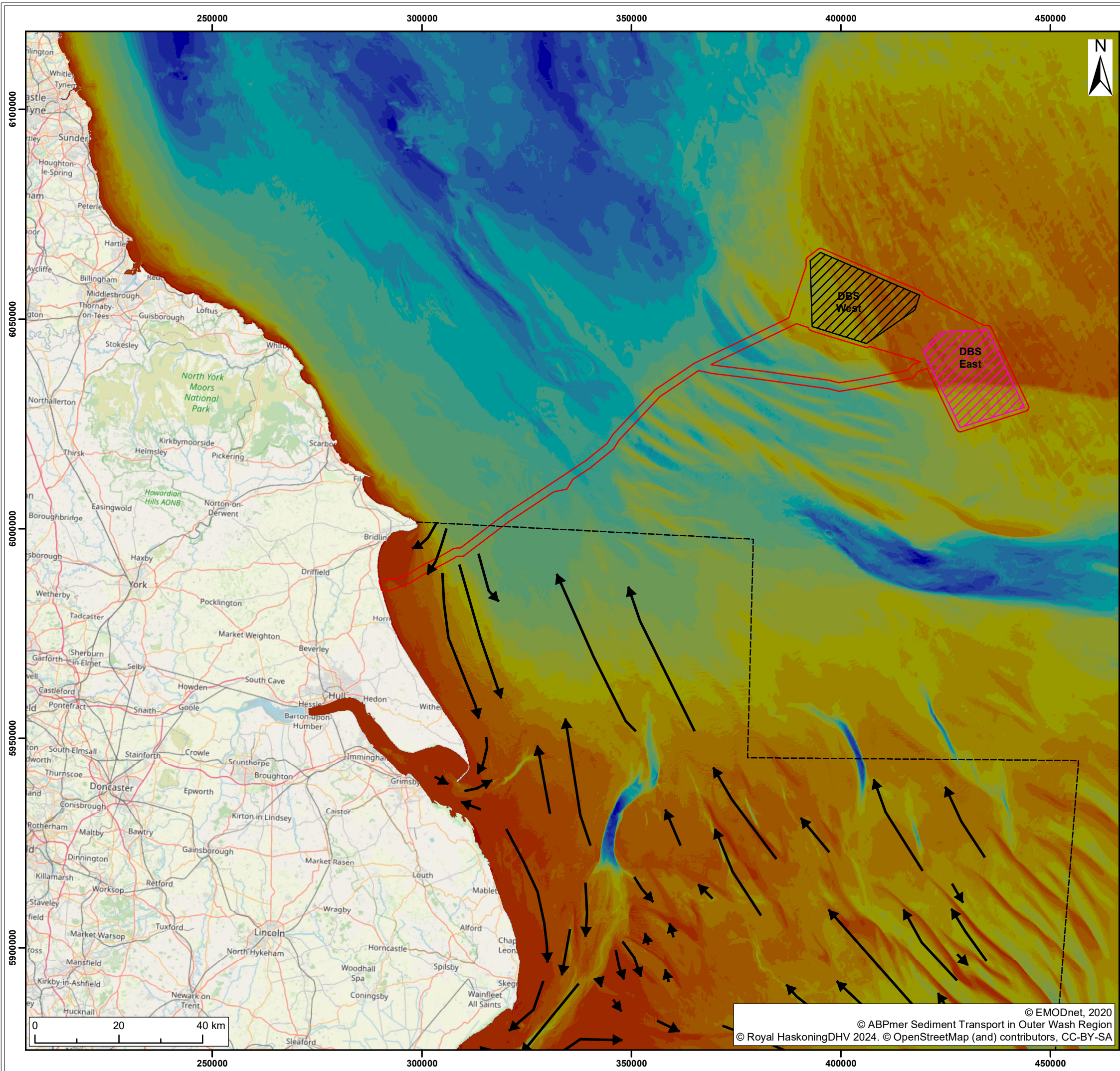
Title:
Peak flow speed on mean spring tide across the Offshore Development Area (DECC 2008) overlain by tidal excursion ellipses (ABPmer 2022).

Figure: 8-4 Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0626

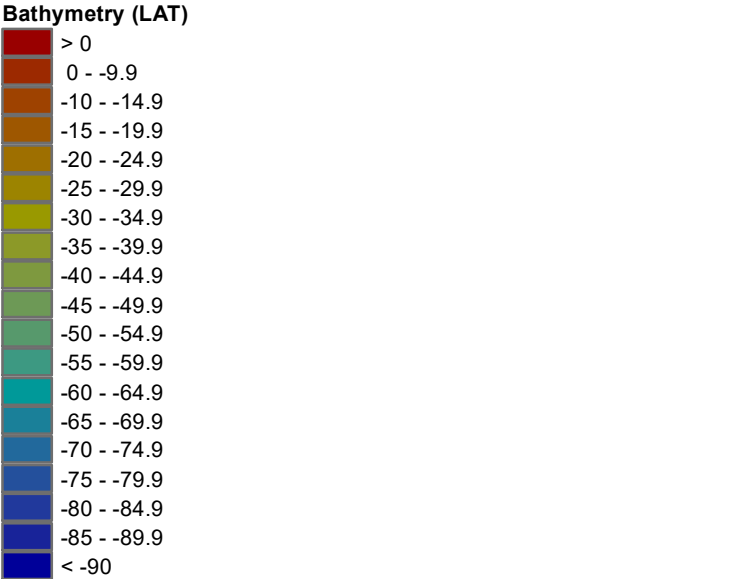
Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:900,000
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Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement
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- Legend:
- Offshore Development Area
 - DBS East array area
 - DBS West array area
- Sediment Transport Pathways**
- Bed Load
 - Extent of available data on sediment transport pathways



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

Title:

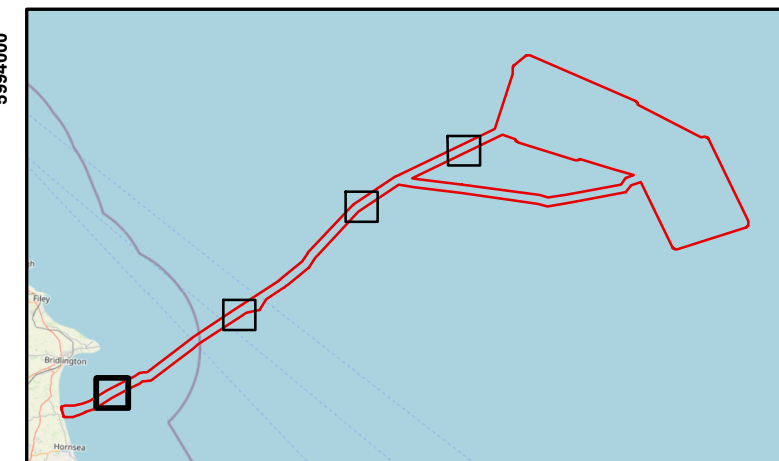
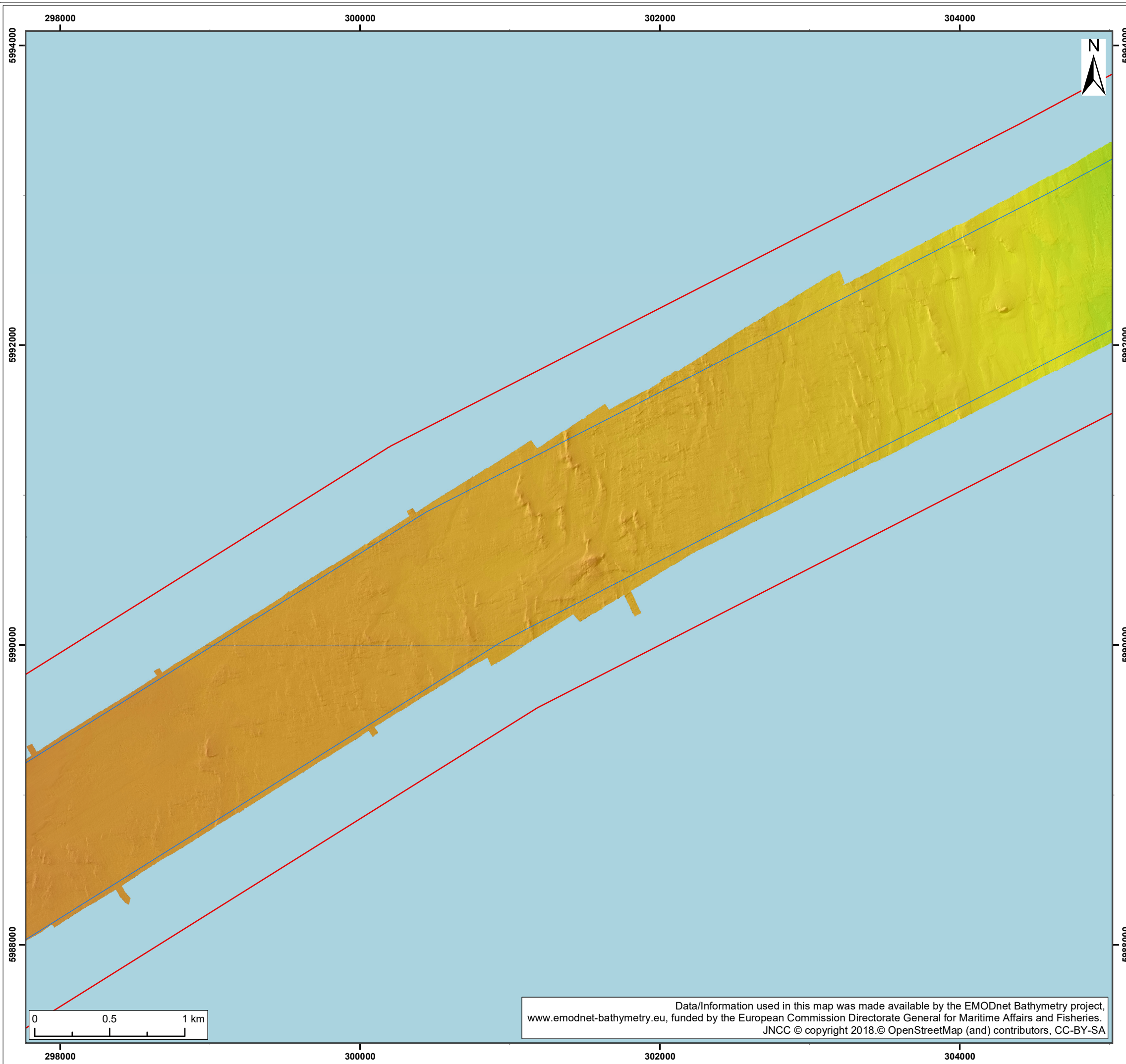
Sediment transport pathways along the offshore export cable corridor

Figure: 8-5 Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0627

Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:900,000
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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

Bathymetry (LAT)
 High : 1.94393
 Low : -69.8937

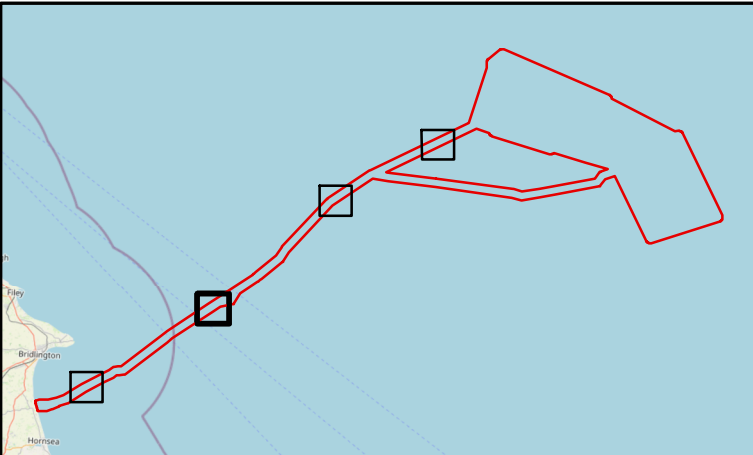
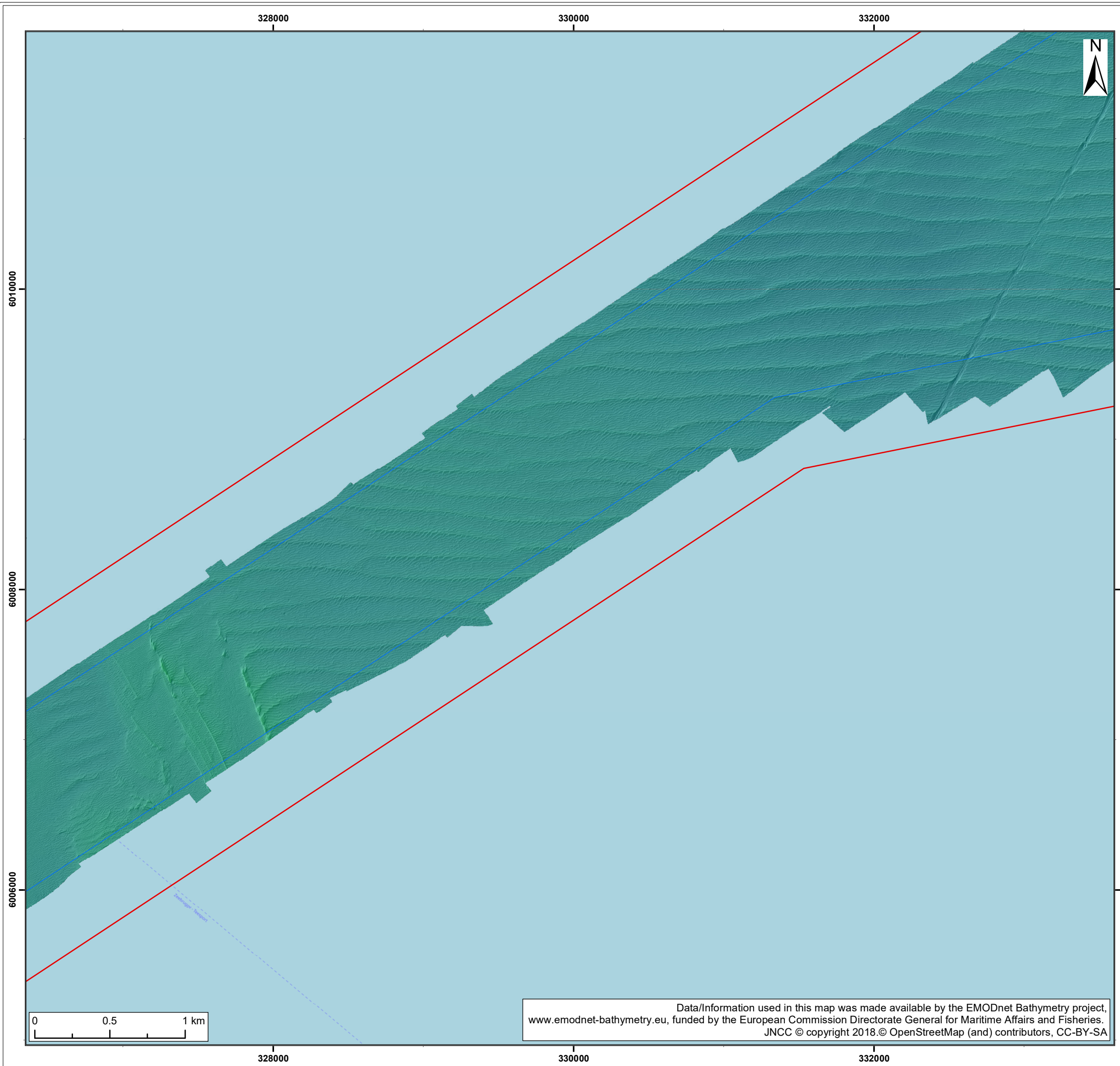
S2	P01	13/12/2023	Suitable for Information	JH	SB	MH
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

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

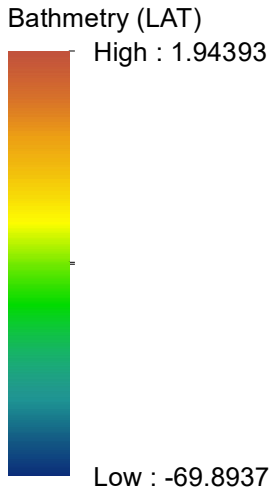
Figure: 8-6a	Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0683
Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3
Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement

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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

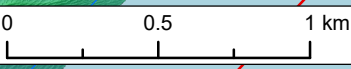
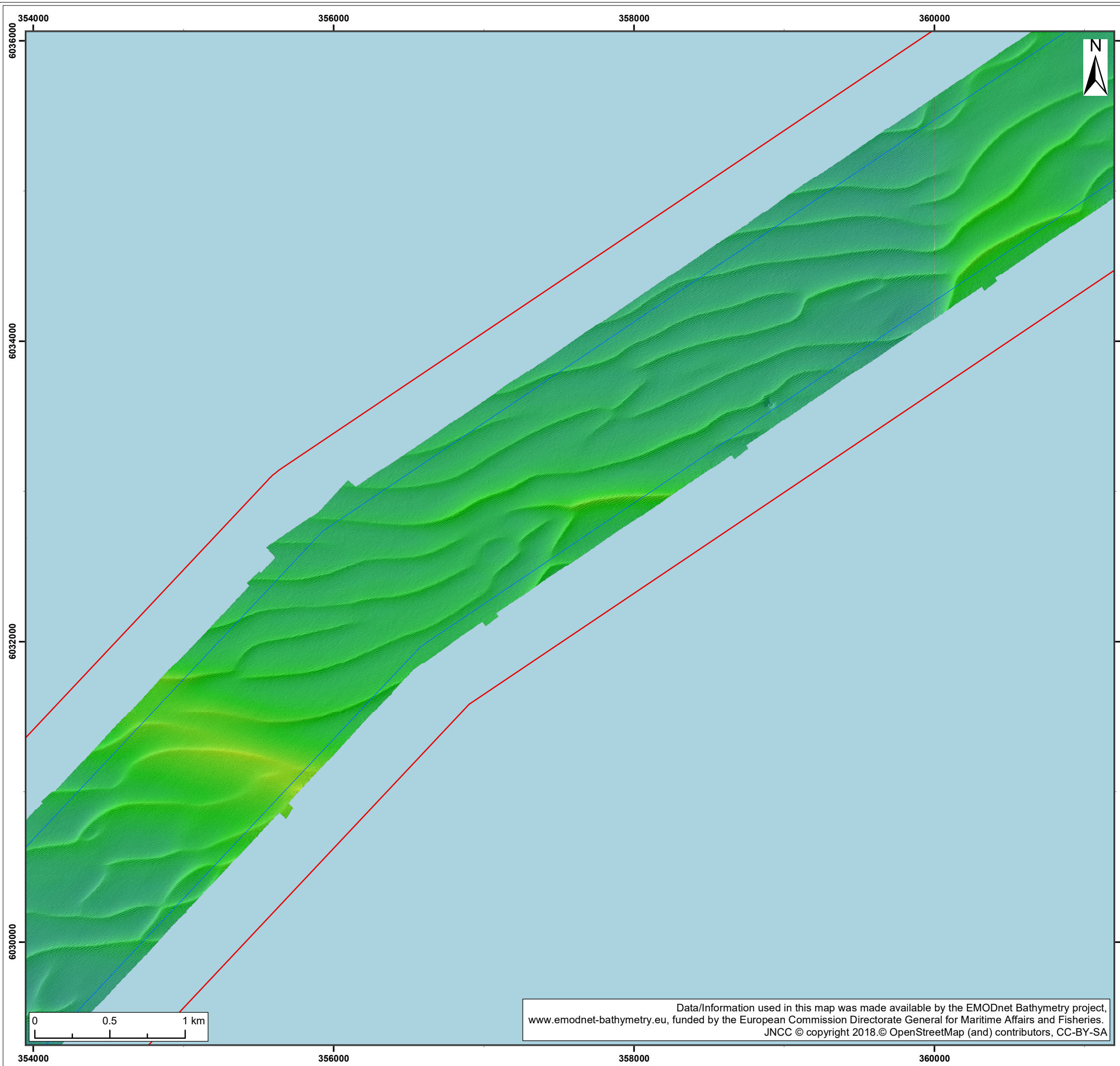
Figure: 8-6b Drawing No: PC2340-RHD-OF-ZZ-DR-Z-0683

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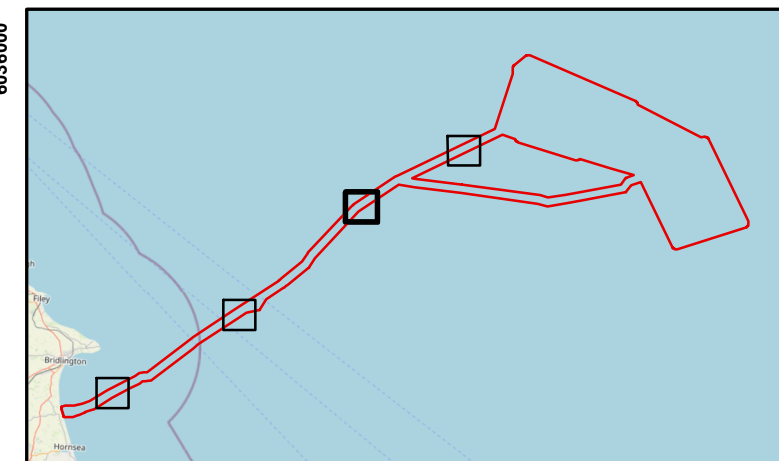
Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement
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Legend:

- 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:

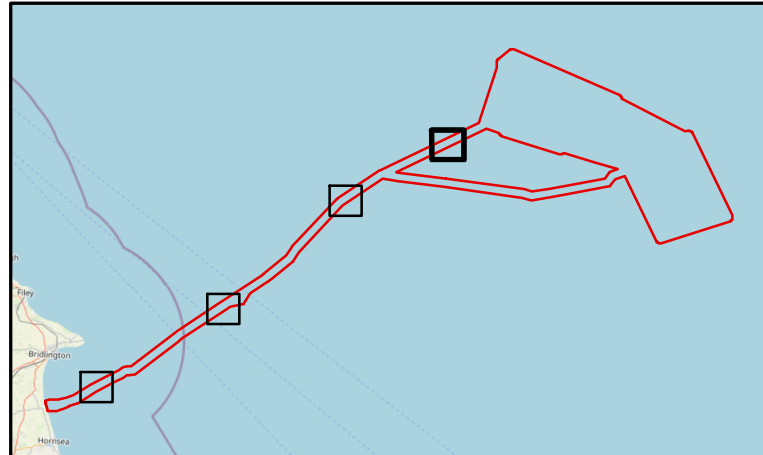
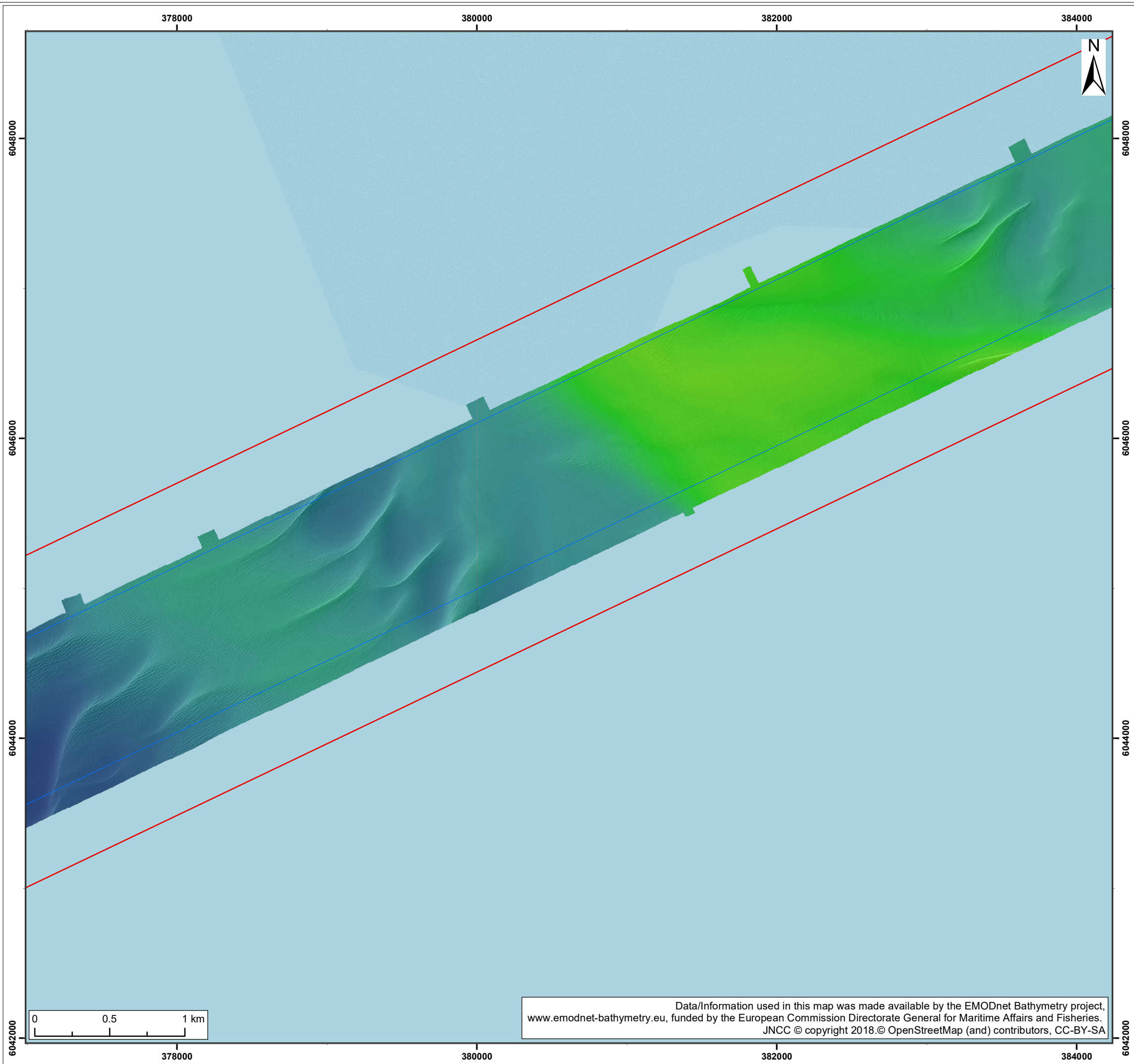
Bathymetry of the Offshore Development Area showing examples of bedforms present within the Offshore Export Cable Corridor

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

Co-ordinate system: WGS 1984 UTM Zone 31N	Page Size: A3	Scale: 1:25,000
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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

Bathmetry (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

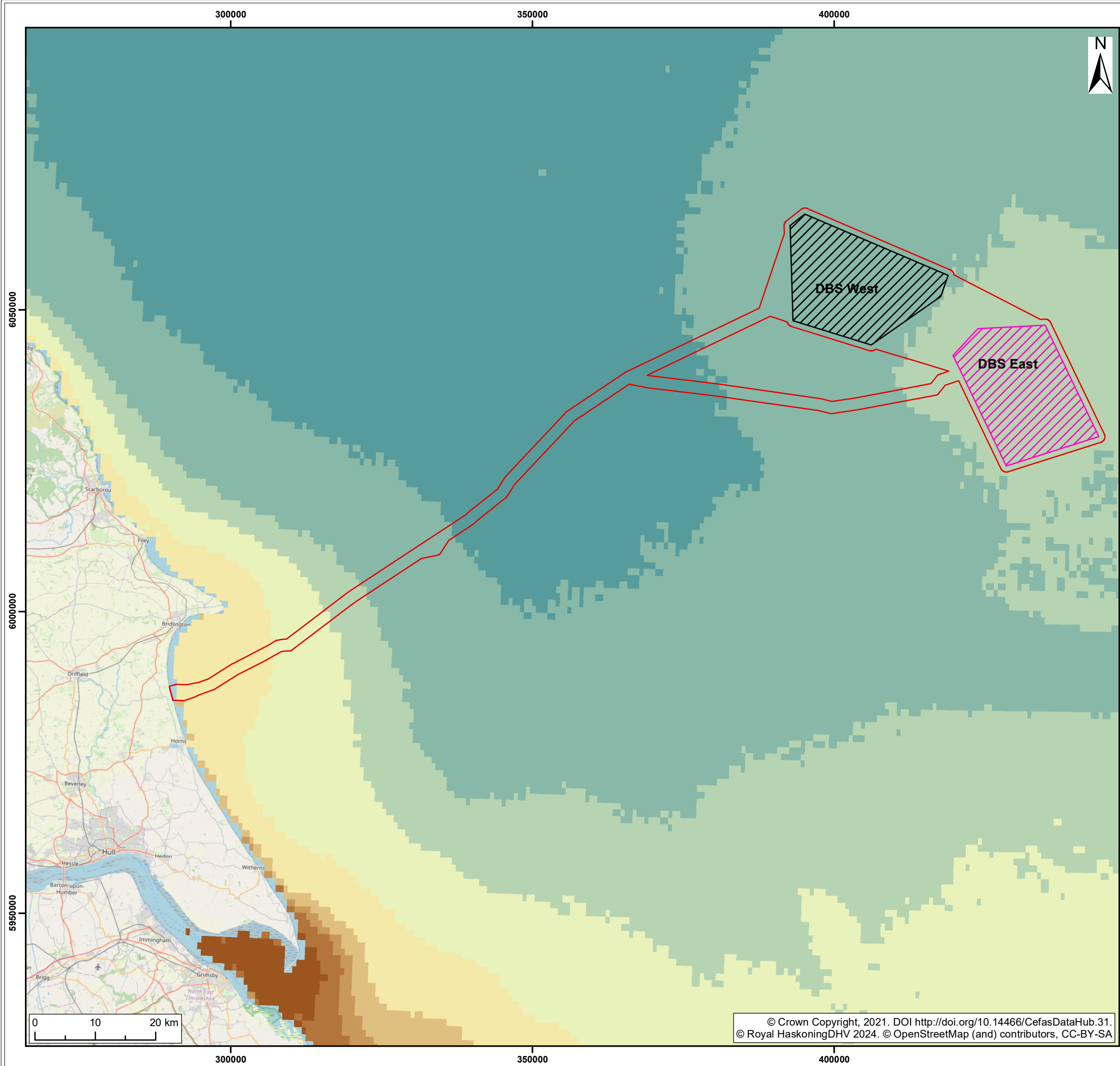
Title:
Bathymetry of the Offshore Development Area showing examples of bedforms present within the Offshore Export Cable Corridor

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

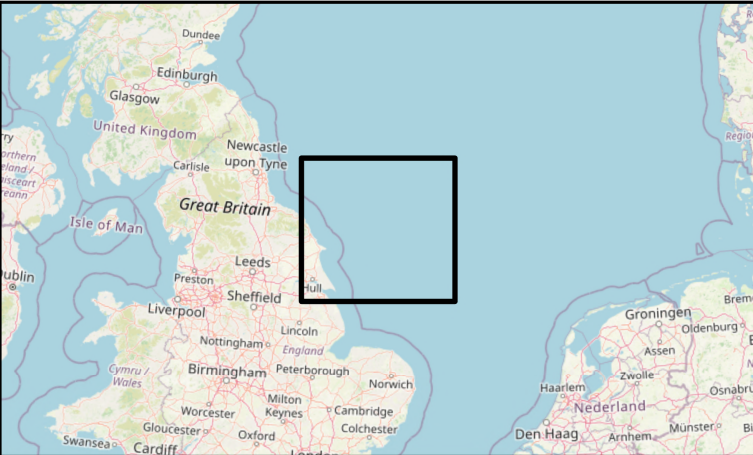
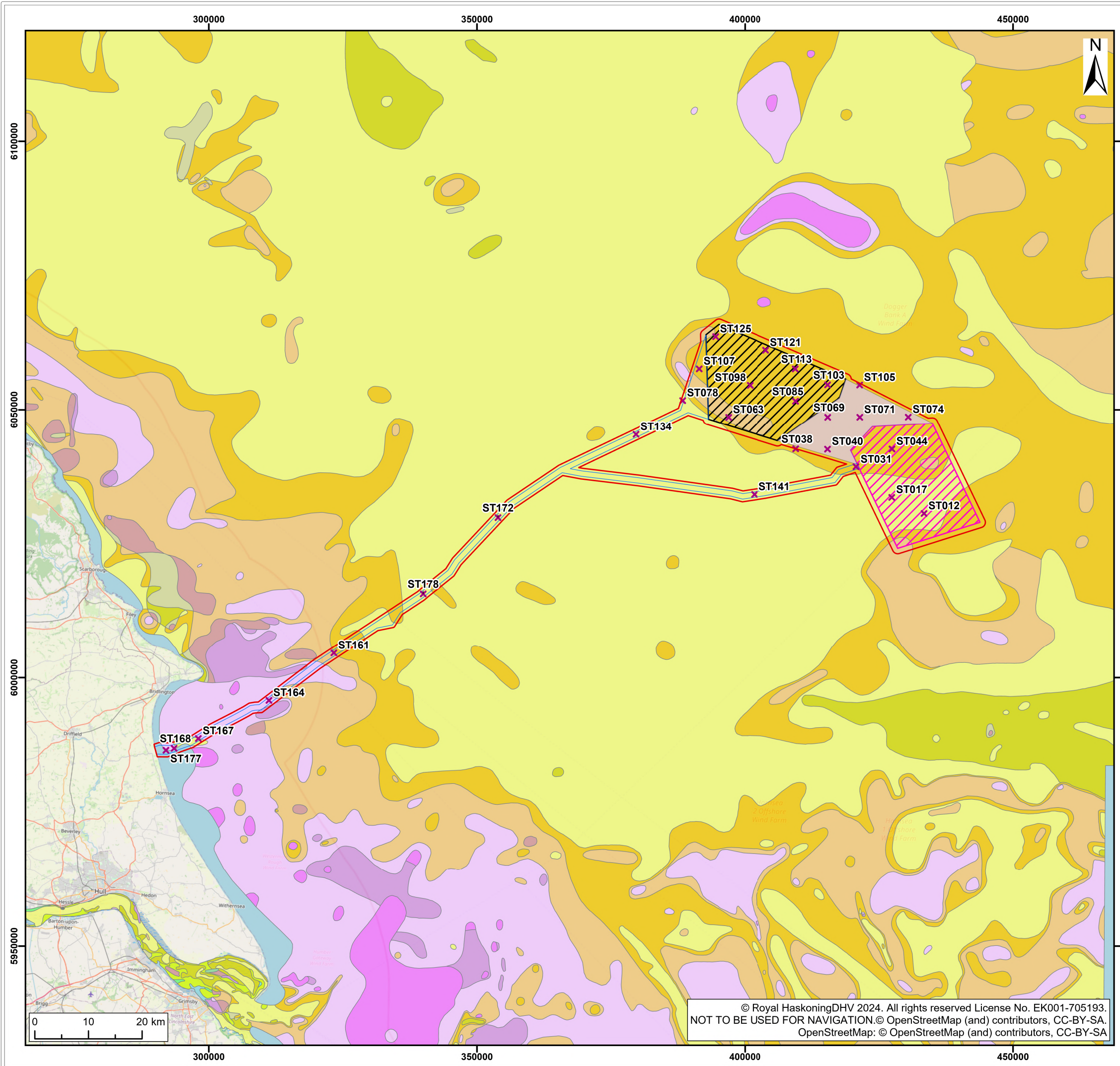
Title:
Variations in Suspended Particulate Matter (1998-2015)
across the Offshore Development Area

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

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





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:

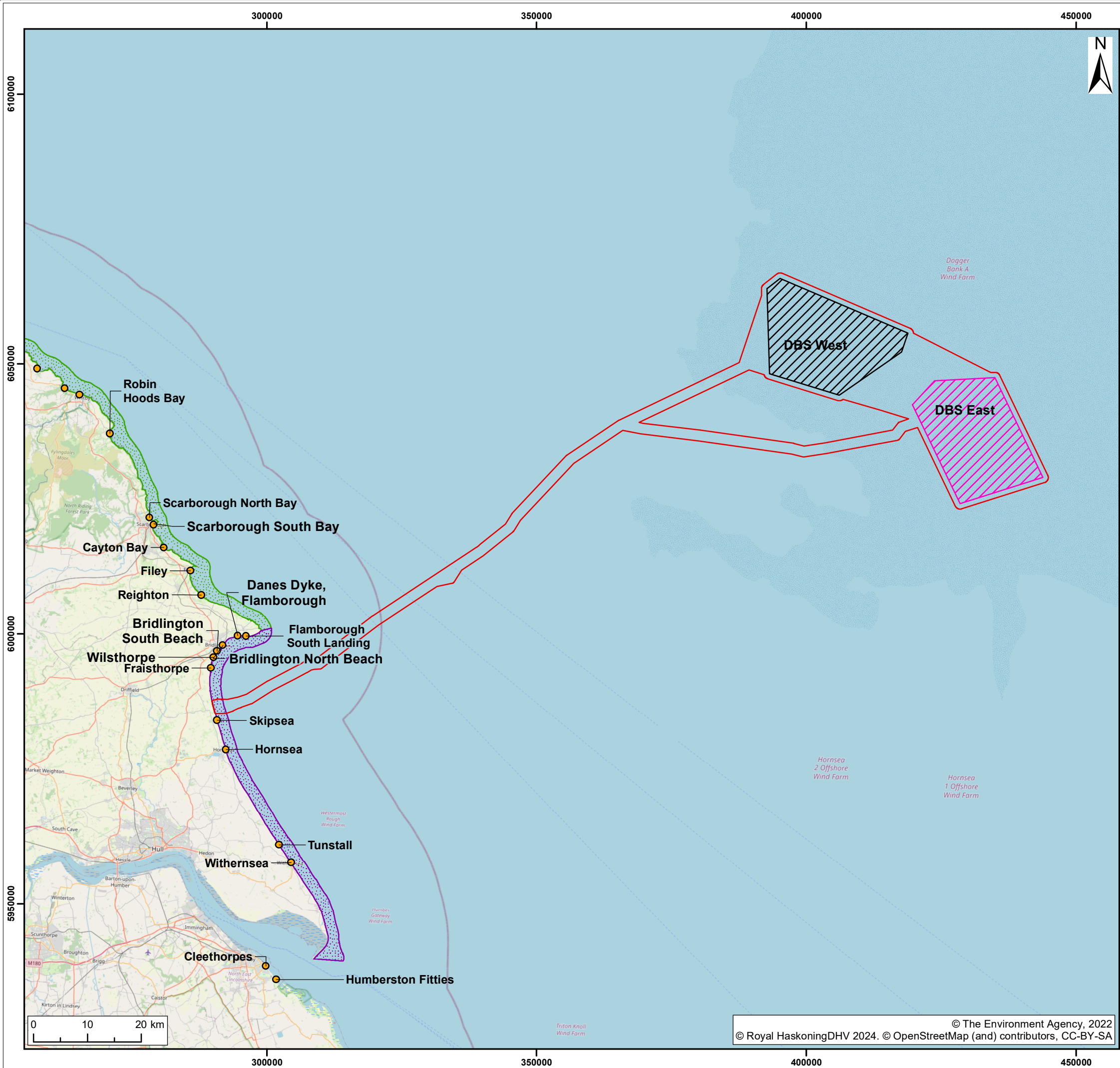
Sample site locations against offshore study area

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:

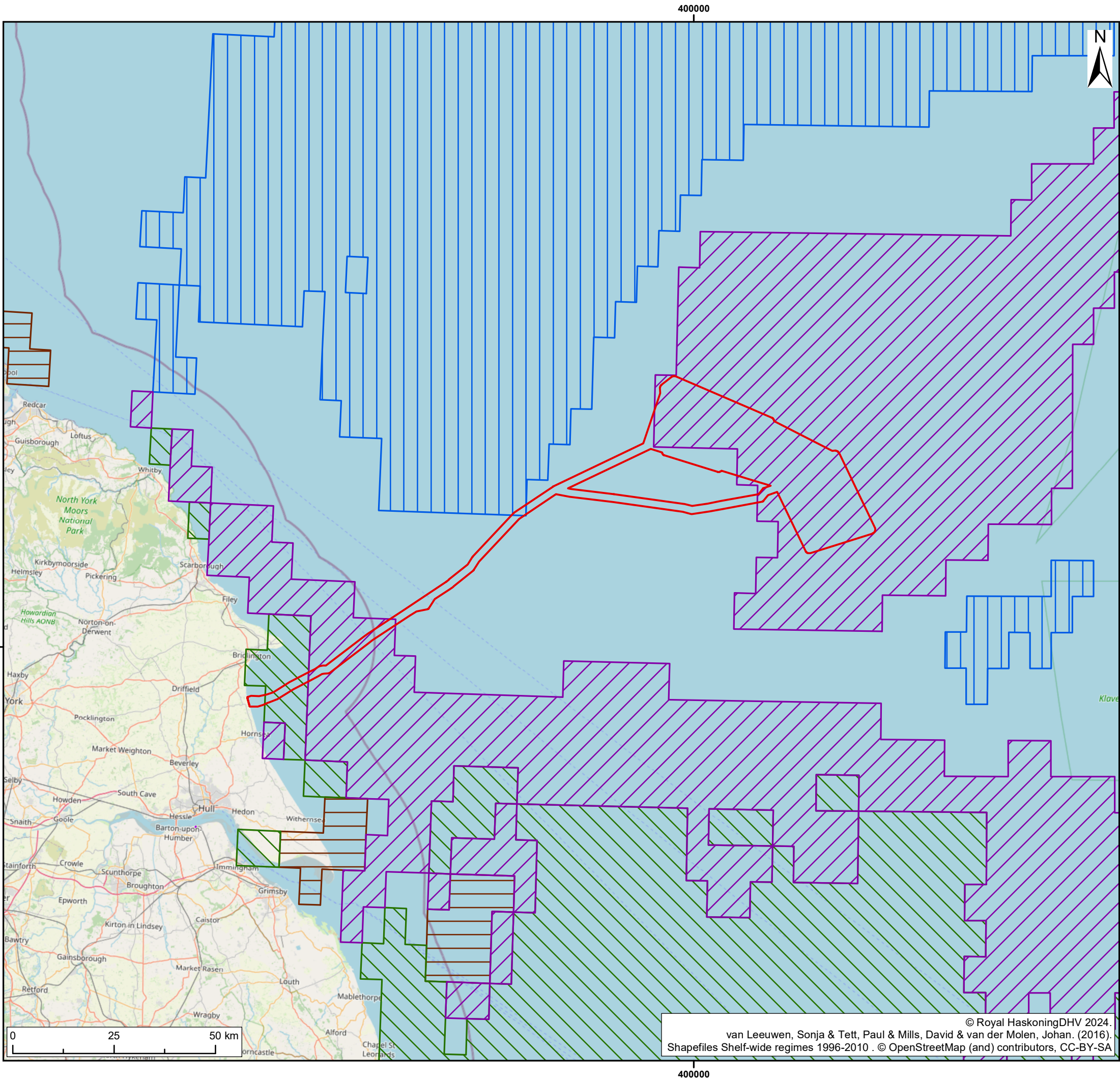
WFD water bodies and bathing waters against Offshore Study Area

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:

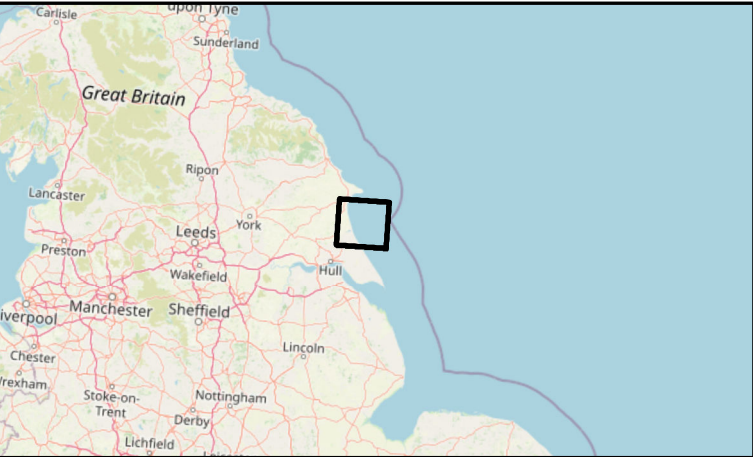
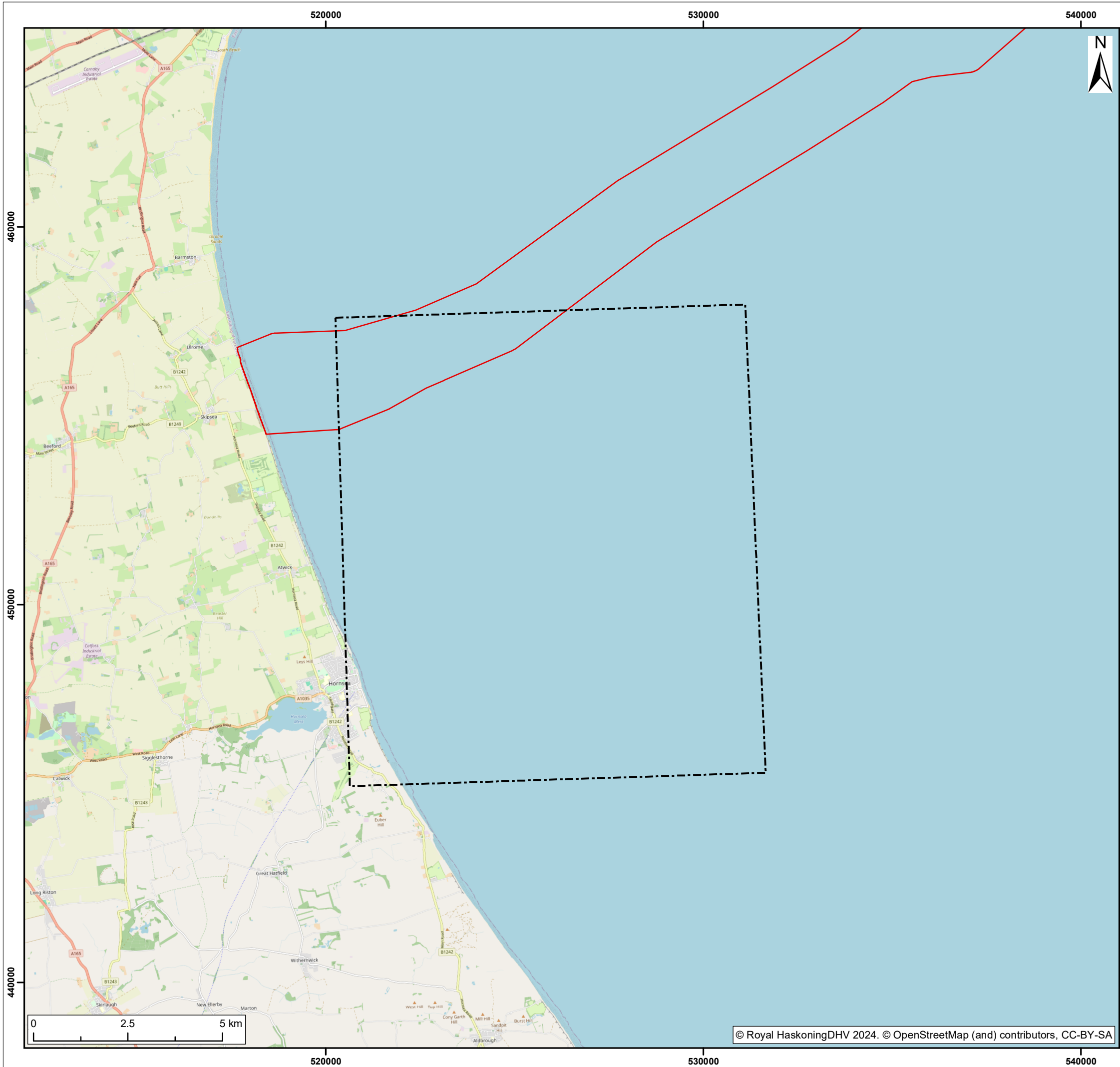
Holderness coast and location of ERYC beach monitoring profiles

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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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



- 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:

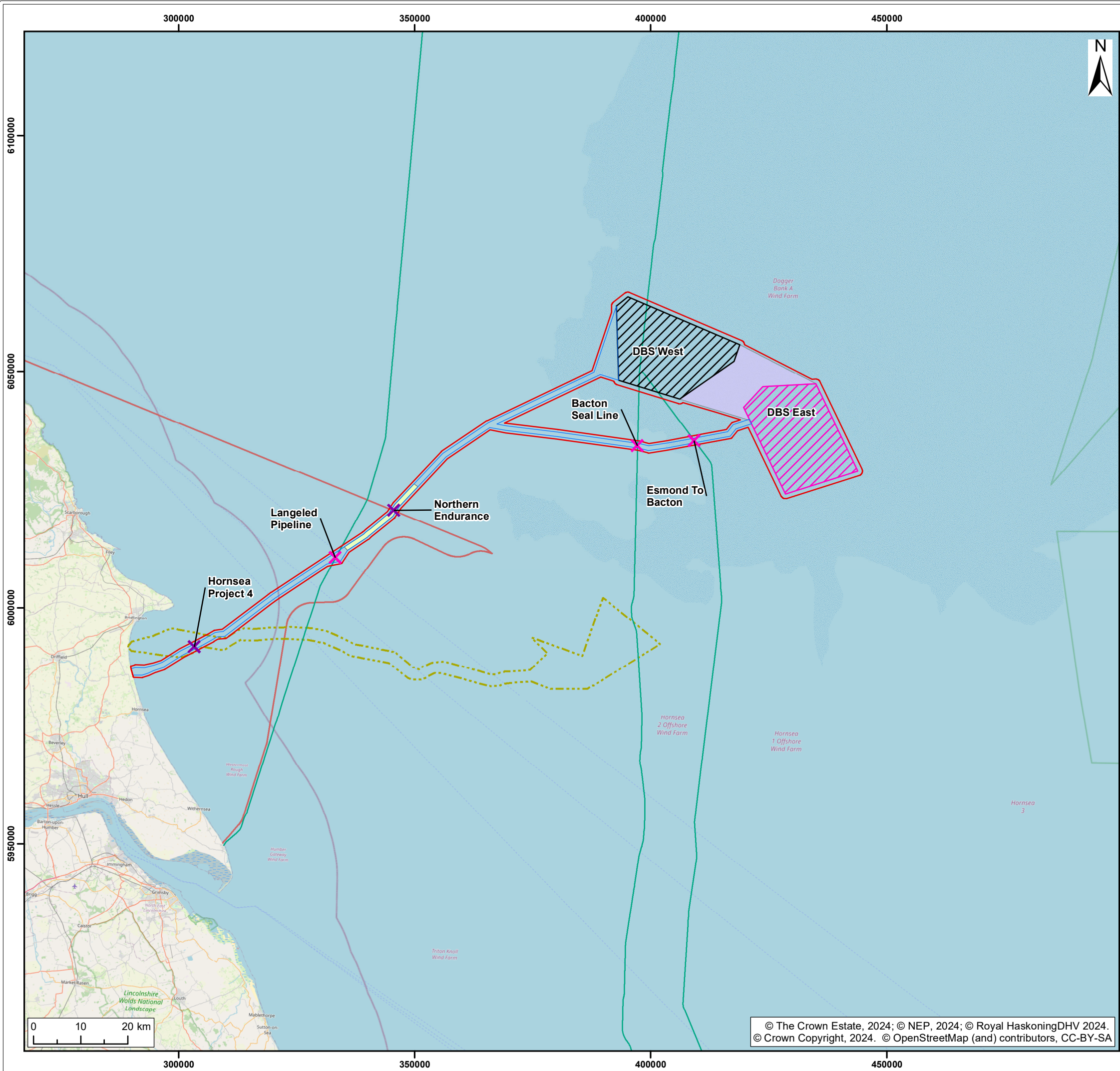
UKCP18 model grid used to derive sea-level rise projections for the landfall location (source UKCP18)

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
- Export Cable Platform Search Area
- DBS East Array Area
- DBS West Array Area
- Inter-platform Cable Corridor

Export Cable Route

- Hornsea Project 4
- Northern Endurance Proposed Route

Pipeline

- Active

Export Cable Corridor Crossing

- Cable
- Pipeline

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	

