



Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

Environmental Statement

Volume 2

Chapter 6 - Marine Geology, Oceanography and Physical Processes

August 2022

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August 2022	Final				
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Sarah Chandler, Equinor	August 2022				

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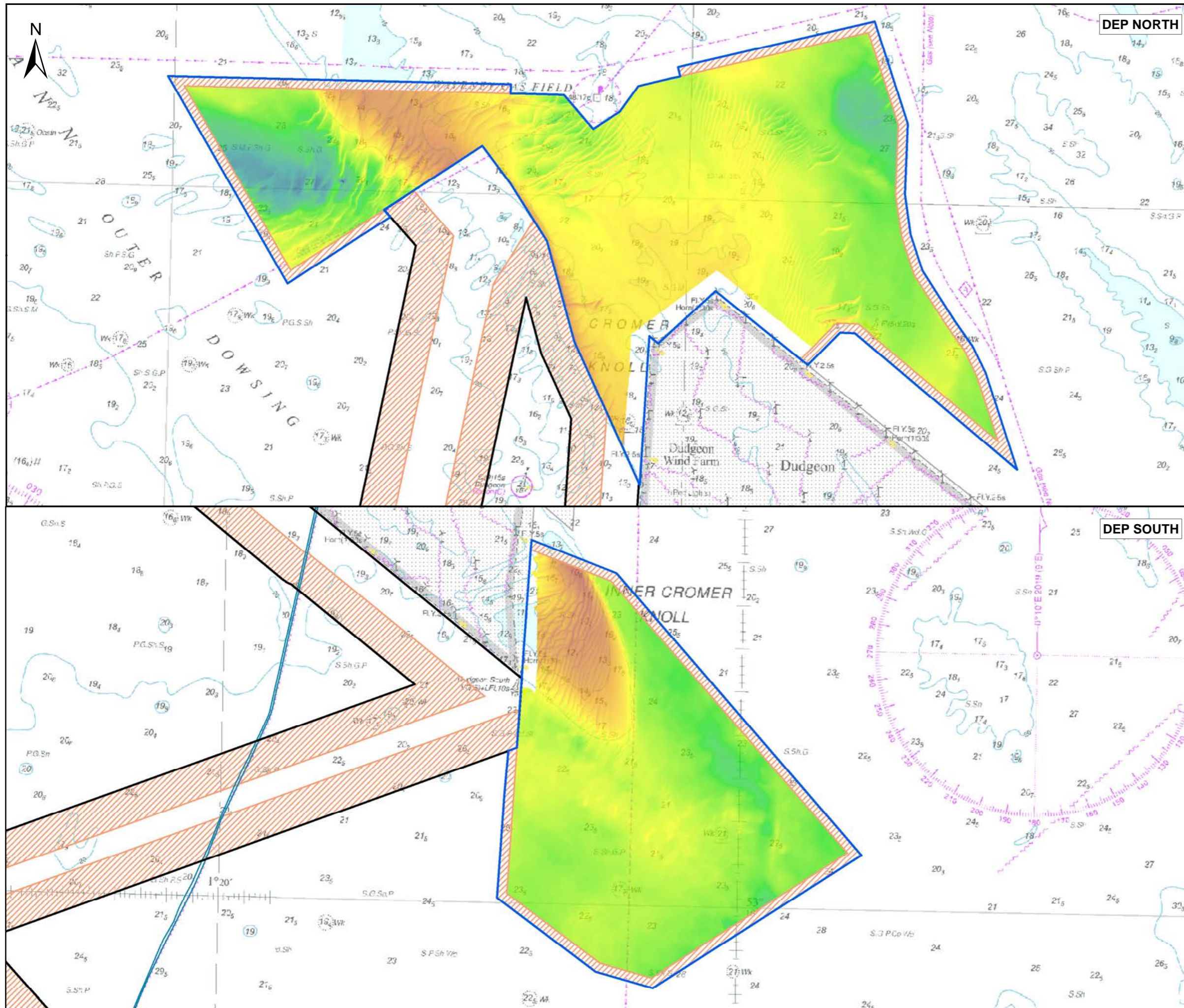
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DEP NORTH

DEP SOUTH

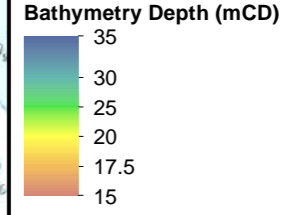
Sheringham Shoal and Dudgeon Extension Projects

Title:
 Figure 6.1 Bathymetry and Bedforms at DEP

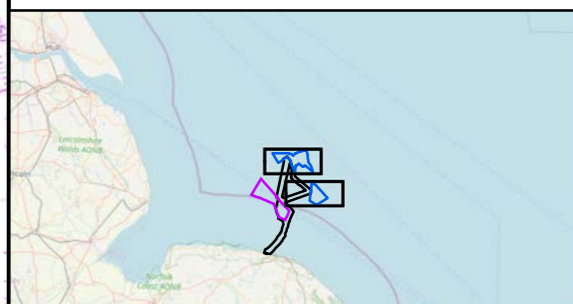
Document:
 Environmental Statement (ES)
 Chapter 6 Marine Geology, Oceanography and
 Physical Resources

Application Doc. no.: 6.2.6

- Legend:
- Dudgeon Offshore Wind Farm Extension Project Wind Farm Site
 - Sheringham Shoal Offshore Wind Farm Extension Project Wind Farm Site
 - Offshore Cable Corridors
 - Offshore Temporary Work Area
 - Existing Offshore Wind Farm Export Cable
 - Existing Offshore Wind Farm



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 Transformation WGS84: OSGB_1936_To_WGS_1984_7

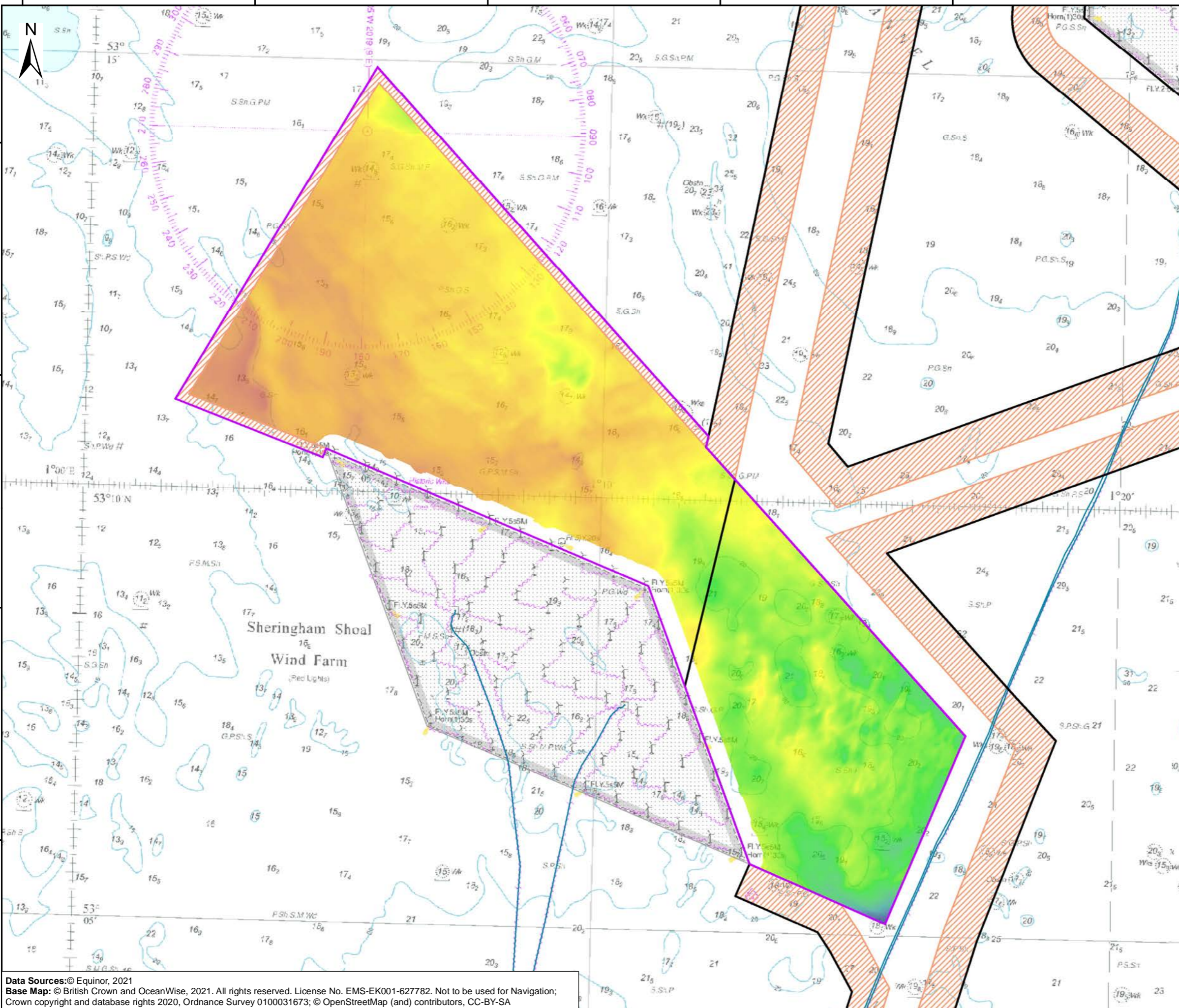
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365000 370000 375000 380000 385000



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Title:
Figure 6.2 Bathymetry and Bedforms at SEP

Document:
Environmental Statement (ES)
Chapter 6 Marine Geology, Oceanography and Physical Resources

Application Doc. no.: 6.2.6

Legend:

- Sheringham Shoal Offshore Wind Farm
- Extension Project Wind Farm Site
- Offshore Cable Corridors
- Offshore Temporary Work Area
- Existing Offshore Wind Farm Export Cable
- Existing Offshore Wind Farm

Bathymetry Depth (mCD)

- 25
- 22
- 20
- 18
- 16
- 14



Coordinate Reference System: WGS 1984 UTM Zone 31N
Transformation WGS84: OSGB_1936_To_WGS_1984_7

0 1 2 3 4 5 km
0 1 2 3 Miles

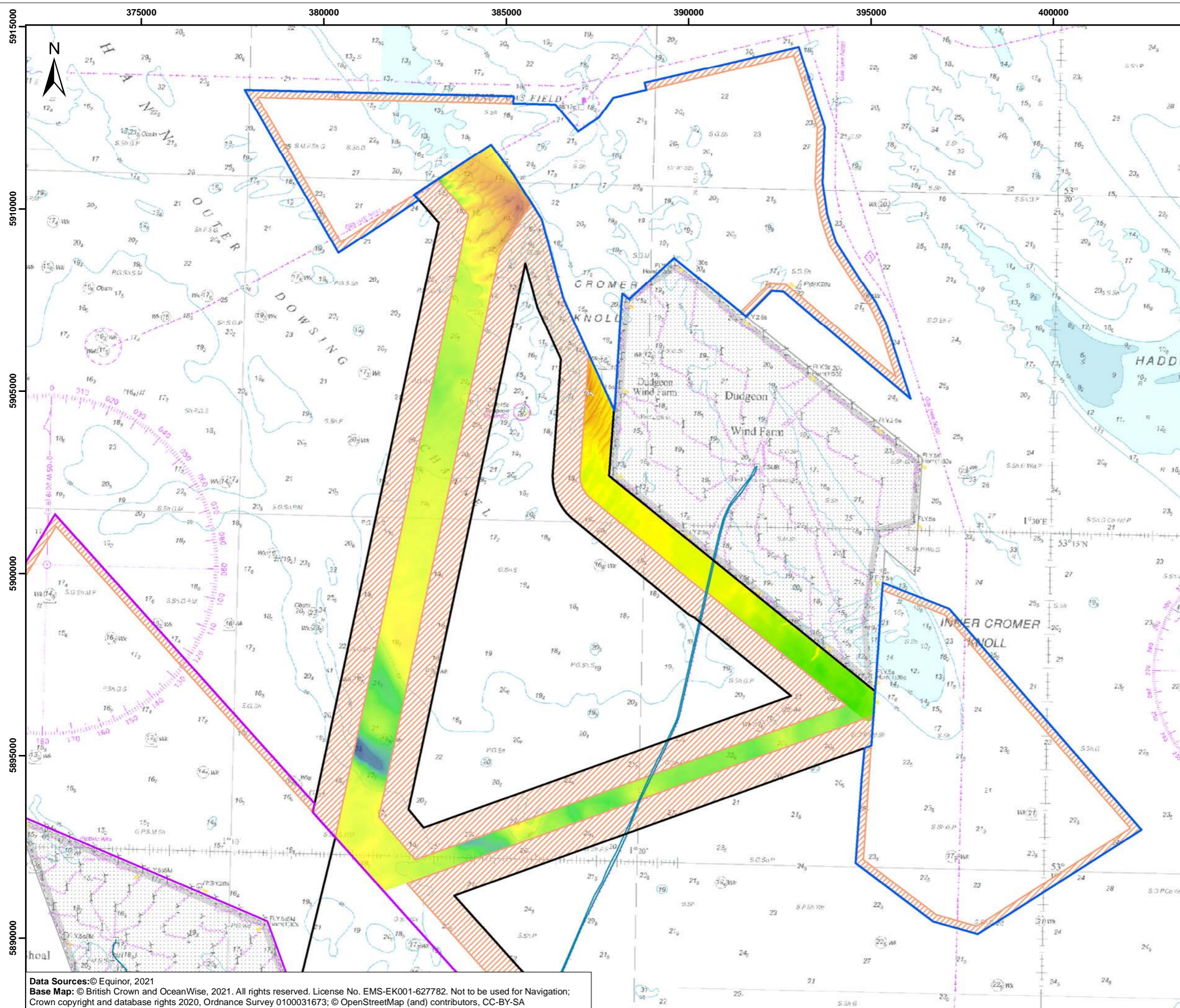
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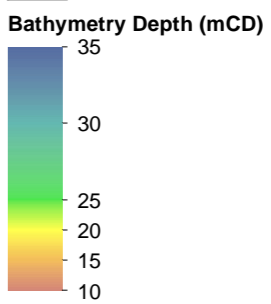
Sheringham Shoal and Dudgeon Extension Projects

Title:
Figure 6.3 Bathymetry and Bedforms at the Interlink Cable Corridor

Document:
Environmental Statement (ES)
Chapter 6 Marine Geology, Oceanography and Physical Resources

Application Doc. no.: 6.2.6

- Legend:
- Dudgeon Offshore Wind Farm Extension Project Wind Farm Site
 - Sheringham Shoal Offshore Wind Farm Extension Project Wind Farm Site
 - Offshore Cable Corridors
 - Offshore Temporary Work Area
 - Existing Offshore Wind Farm Export Cable
 - Existing Offshore Wind Farm



Coordinate Reference System: WGS 1984 UTM Zone 31N
Transformation WGS84: OSGB_1936_To_WGS_1984_7



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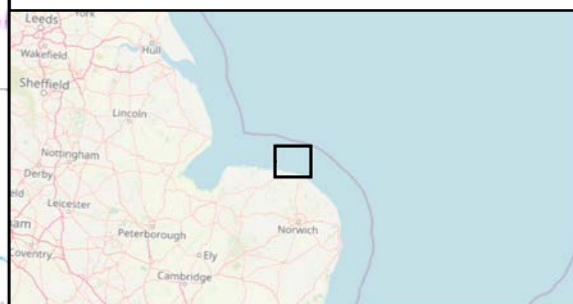
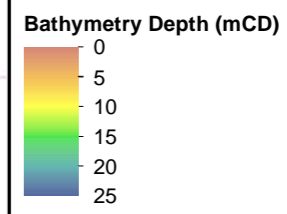
Sheringham Shoal and Dudgeon Extension Projects

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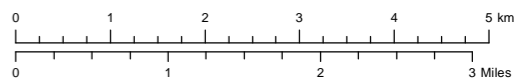
Document:
Environmental Statement (ES)
Chapter 6 Marine Geology, Oceanography and Physical Resources

Application Doc. no.: 6.2.6

- Legend:
-  Dudgeon Offshore Wind Farm Extension Project Wind Farm Site
 -  Sheringham Shoal Offshore Wind Farm Extension Project Wind Farm Site
 -  Offshore Cable Corridors
 -  Offshore Temporary Work Area
 -  Existing Offshore Wind Farm
 -  Existing Offshore Wind Farm Export Cable



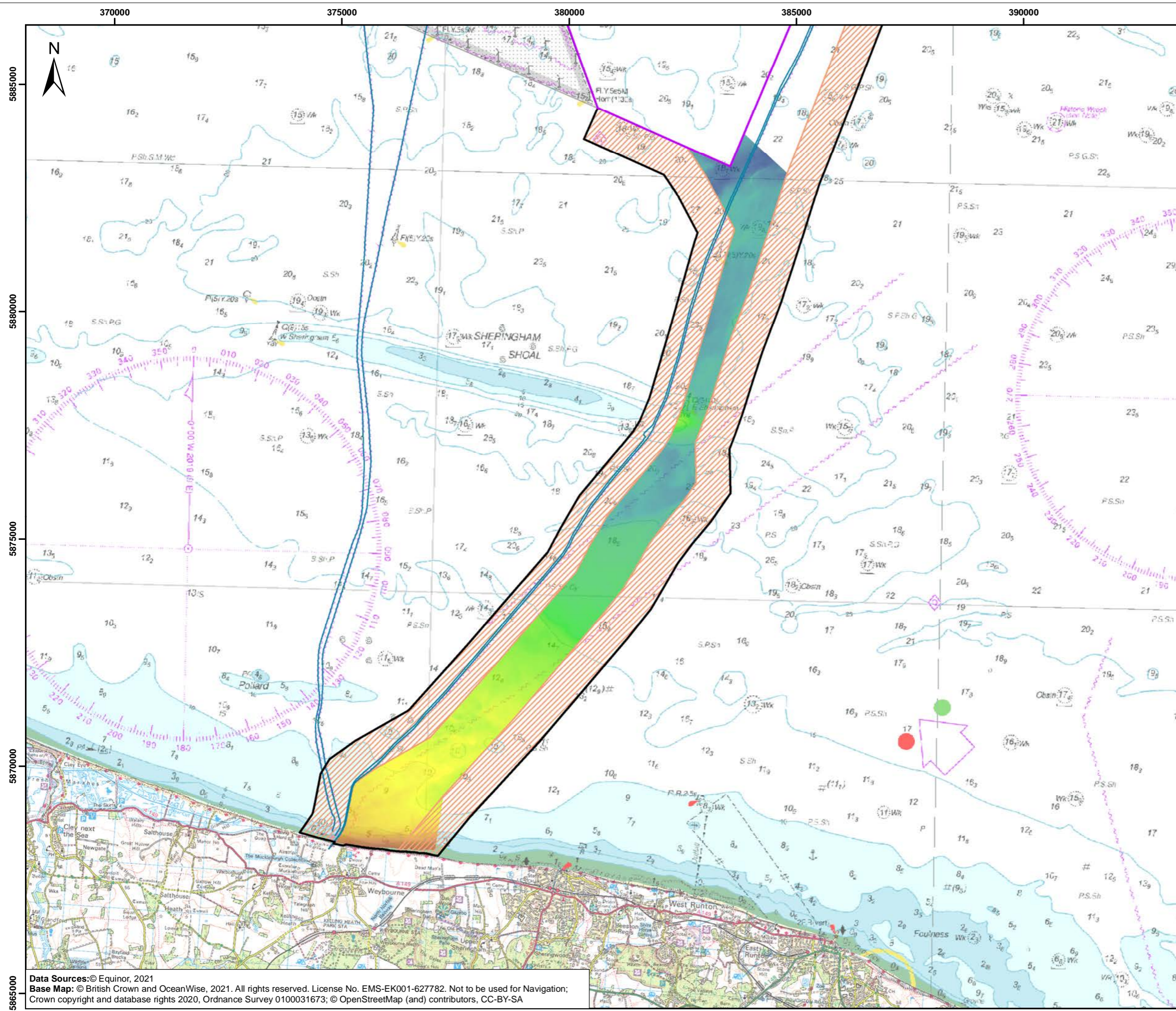
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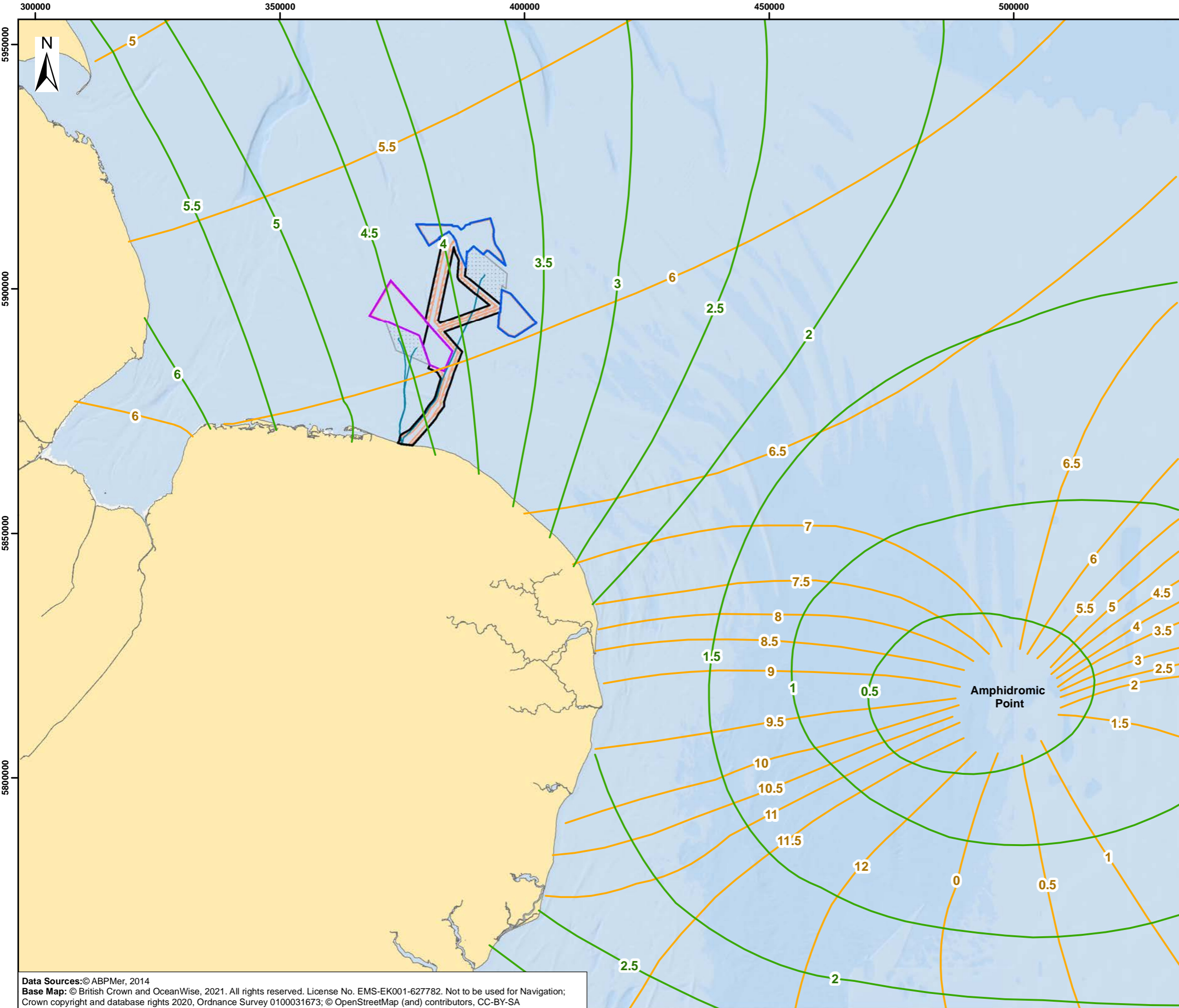
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Title:
Figure 6.5 Position of the Amphidromic Point

Document:
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Chapter 6 Marine Geology, Oceanography and Physical Resources

Application Doc. no.: 6.2.6

- Legend:
- Dudgeon Offshore Wind Farm Extension Project Wind Farm Site
 - Sheringham Shoal Offshore Wind Farm Extension Project Wind Farm Site
 - Offshore Cable Corridors
 - Offshore Temporary Work Area
 - Existing Offshore Wind Farm
 - Existing Offshore Wind Farm Export Cable
 - Co-range contour (m)¹
 - Co-tidal contour (h) - (lines connecting points at which high tide occurs simultaneously)¹

NOTE: Co-tidal units = lunar hours (1/24 of a lunar day of 24.8 hours = about 1 hour and 2 minutes) after the moon has passed the Greenwich meridian
¹ ABPMer, 2012



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Transformation WGS84: OSGB_1936_To_WGS_1984_7

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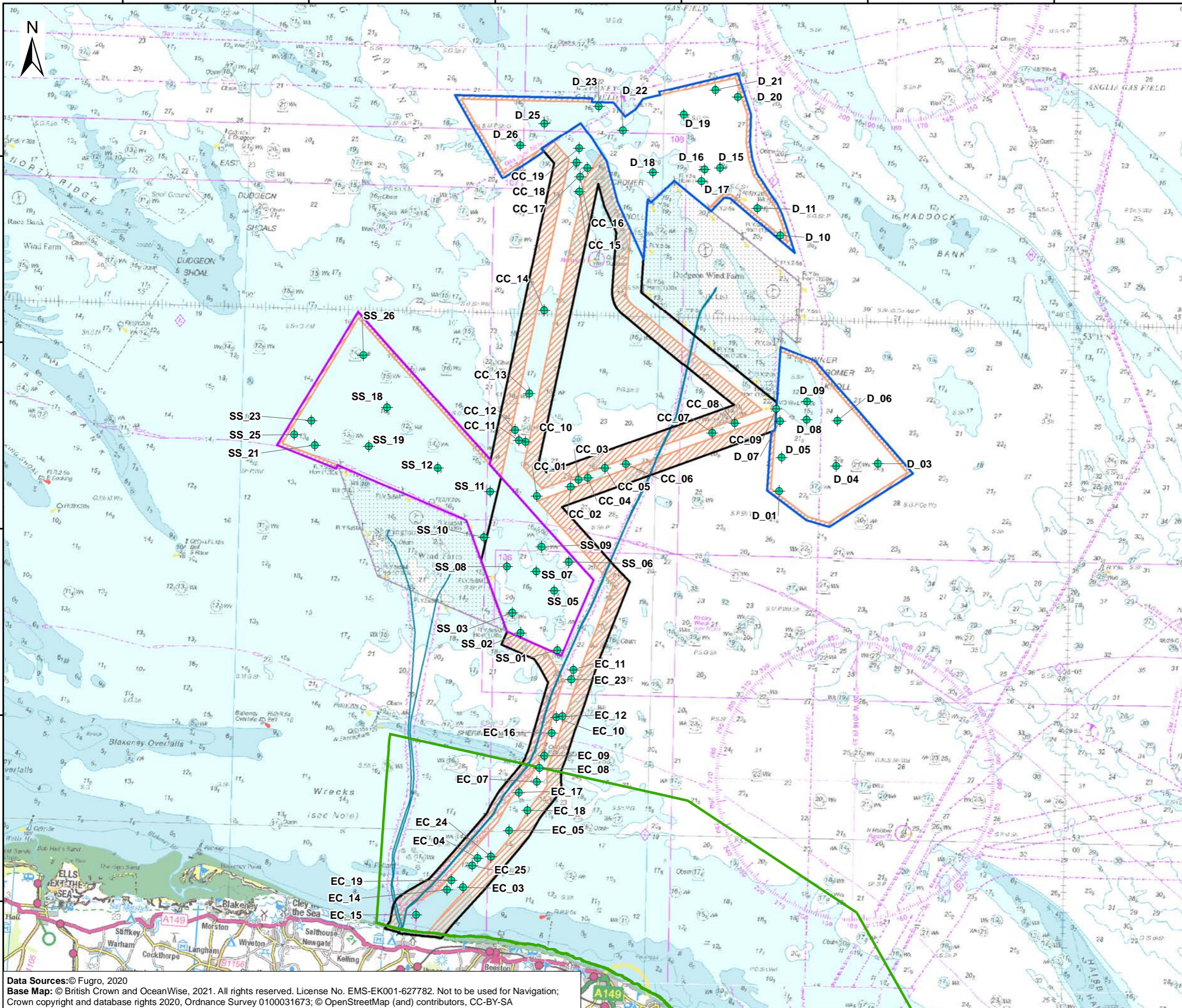
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RHDHV Doc. no.: PB8164-RHD-ZZ-OF-DR-Z-0123

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360000 370000 380000 390000 400000 410000



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Title:
Figure 6.6 Locations of Seabed Sediment Samples Collected in the DEP, SEP, Interlink Cable Corridor and Export Cable Corridor in August 2020

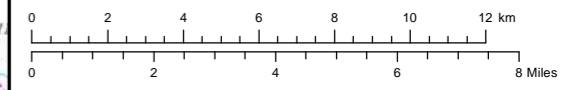
Document:
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Chapter 6 Marine Geology, Oceanography and Physical Resources

Application Doc. no.: 6.2.6

- Legend:
- Dudgeon Offshore Wind Farm Extension Project Wind Farm Site
 - Sheringham Shoal Offshore Wind Farm Extension Project Wind Farm Site
 - Offshore Cable Corridors
 - Offshore Temporary Work Area
 - Existing Offshore Wind Farm
 - Existing Offshore Wind Farm Export Cable
 - ◆ Benthic Sample Station (August, 2020)
 - Cromer Shoal Chalk Beds
 - Marine Conservation Zone (MCZ)



Coordinate Reference System: WGS 1984 UTM Zone 31N
Transformation WGS84: OSGB_1936_To_WGS_1984_7



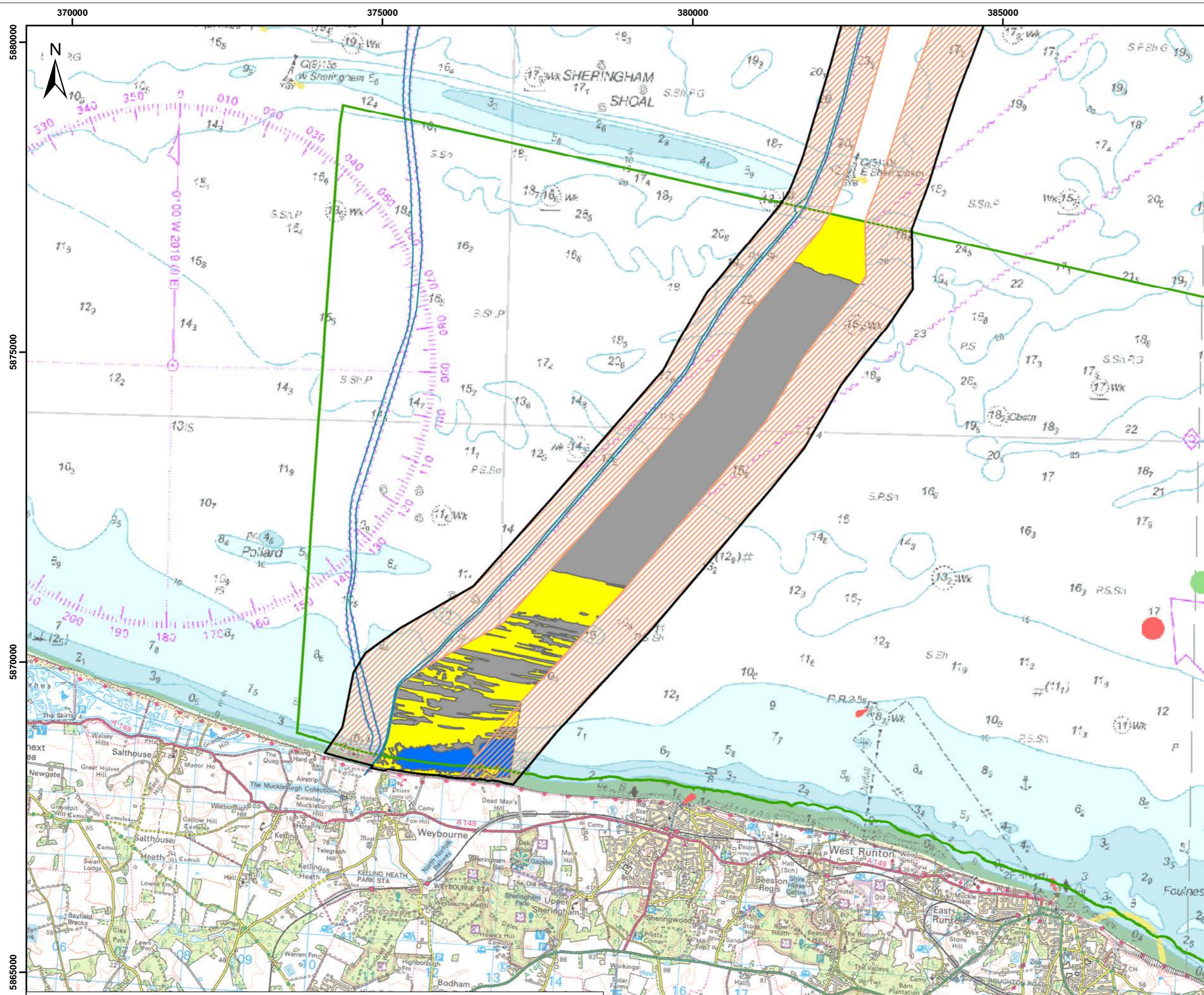
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Title:
Figure 6.7 Seabed Sediment Type along the SEPand DEP Weybourne Option in the MCZ

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Environmental Statement (ES)
Chapter 6 Marine Geology, Oceanography and Physical Resources

Application Doc. no.: 6.2.6

- Legend:
- Offshore Cable Corridors
 - Offshore Temporary Work Area
 - Existing Offshore Wind Farm Export Cable
 - Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ)
- Primary Sediment**
- Gravelly Sand / Gravel
 - Holocene Sand
 - Clay
 - Outcropping Chalk



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Transformation WGS84: OSGB_1936_To_WGS_1984_7

Scale: 1:60,000 Scale at size: A3

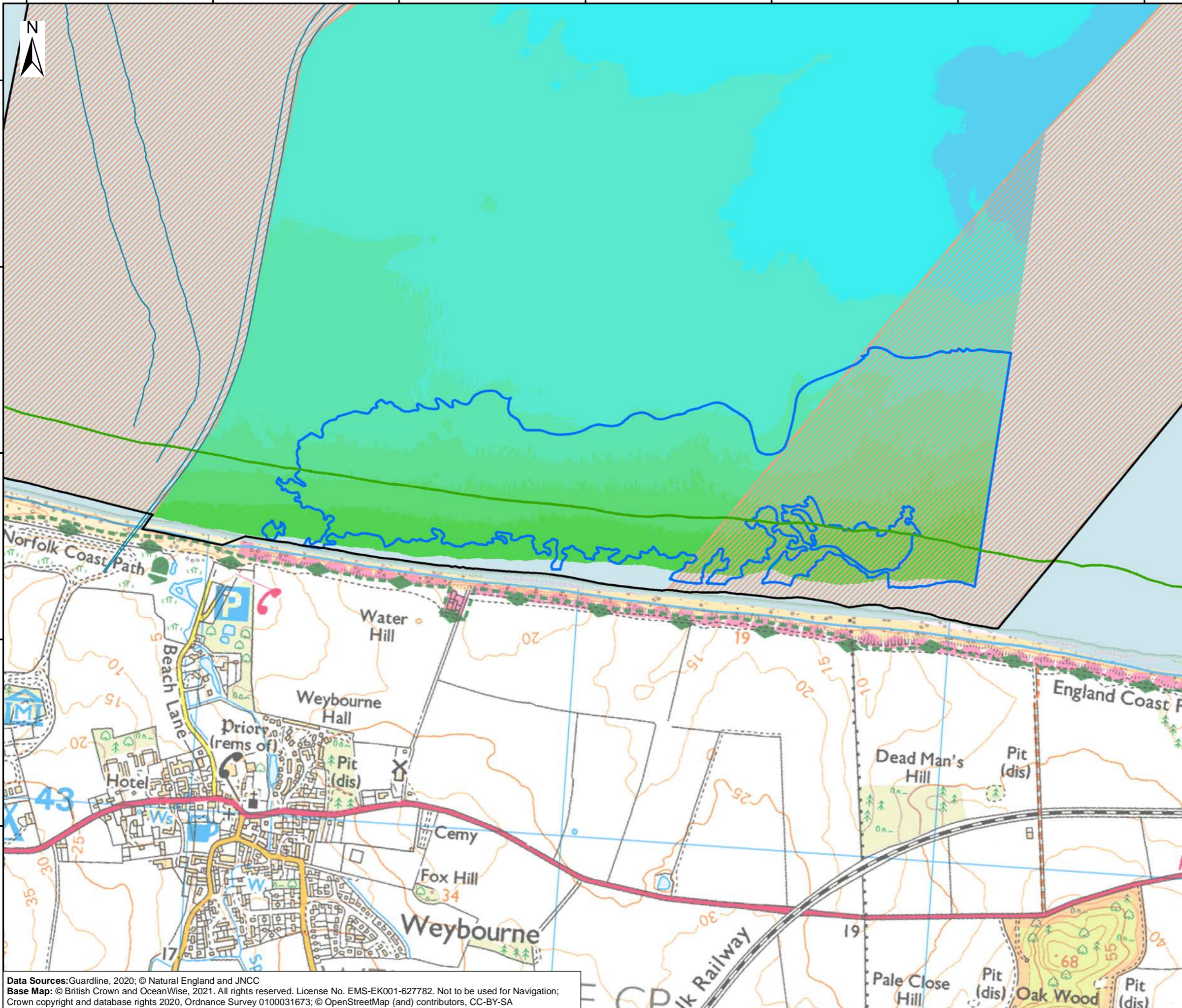
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374500 375000 375500 376000 376500 377000 377500



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Title:
Figure 6.8 Bathymetry of the Outcropping Chalk in the Nearshore Zone of the SEP and DEP Weybourne Option in the MCZ

Document:
Environmental Statement (ES)
Chapter 6 Marine Geology, Oceanography and Physical Resources

Application Doc. no.: 6.2.6

- Legend:
- Offshore Cable Corridors
 - Offshore Temporary Work Area
 - Existing Offshore Wind Farm Export Cable
 - Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ)

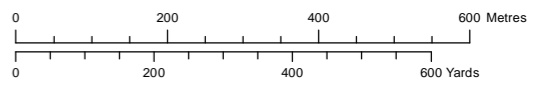
Primary Sediment

- Outcropping Chalk

- Bathymetry (Depth m LAT)**
- 14 - -12
 - 12 - -10
 - 10 - -8
 - 8 - -6
 - 6 - -4
 - 4 - -2
 - 2 - 0



Coordinate Reference System: WGS 1984 UTM Zone 31N
Transformation WGS84: OSGB_1936_To_WGS_1984_7



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Title: Figure 6.9 Seabed Sediment Sample Locations of Cefas (2014) across the MCZ

Document: Environmental Statement (ES)
Chapter 6 Marine Geology, Oceanography and Physical Resources

Application Doc. no.: 6.2.6

- Legend:
- Sheringham Shoal Offshore Wind Farm
 - Extension Project Wind Farm Site
 - Offshore Cable Corridors
 - Offshore Temporary Work Area
 - Existing Offshore Wind Farm
 - Existing Offshore Wind Farm Export Cable
 - Cromer Shoal Chalk Beds
 - Marine Conservation Zone (MCZ)
- Sea Bed Sediment Type (CSCB)**
- ▲ Coarse Sediment
 - ▲ Sand
 - ▲ Mud
 - ▲ Mixed Sediment

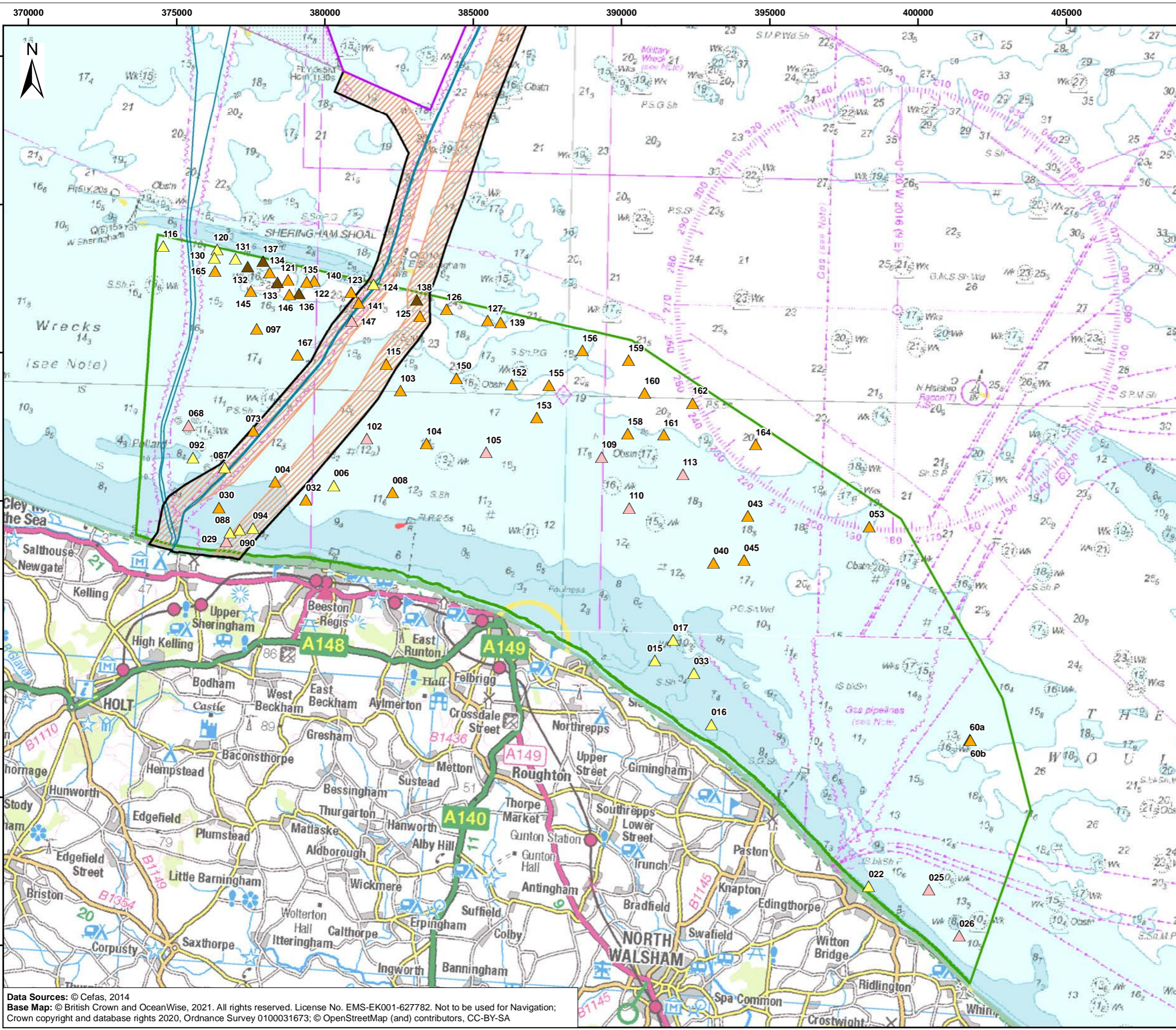


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360000

380000

400000

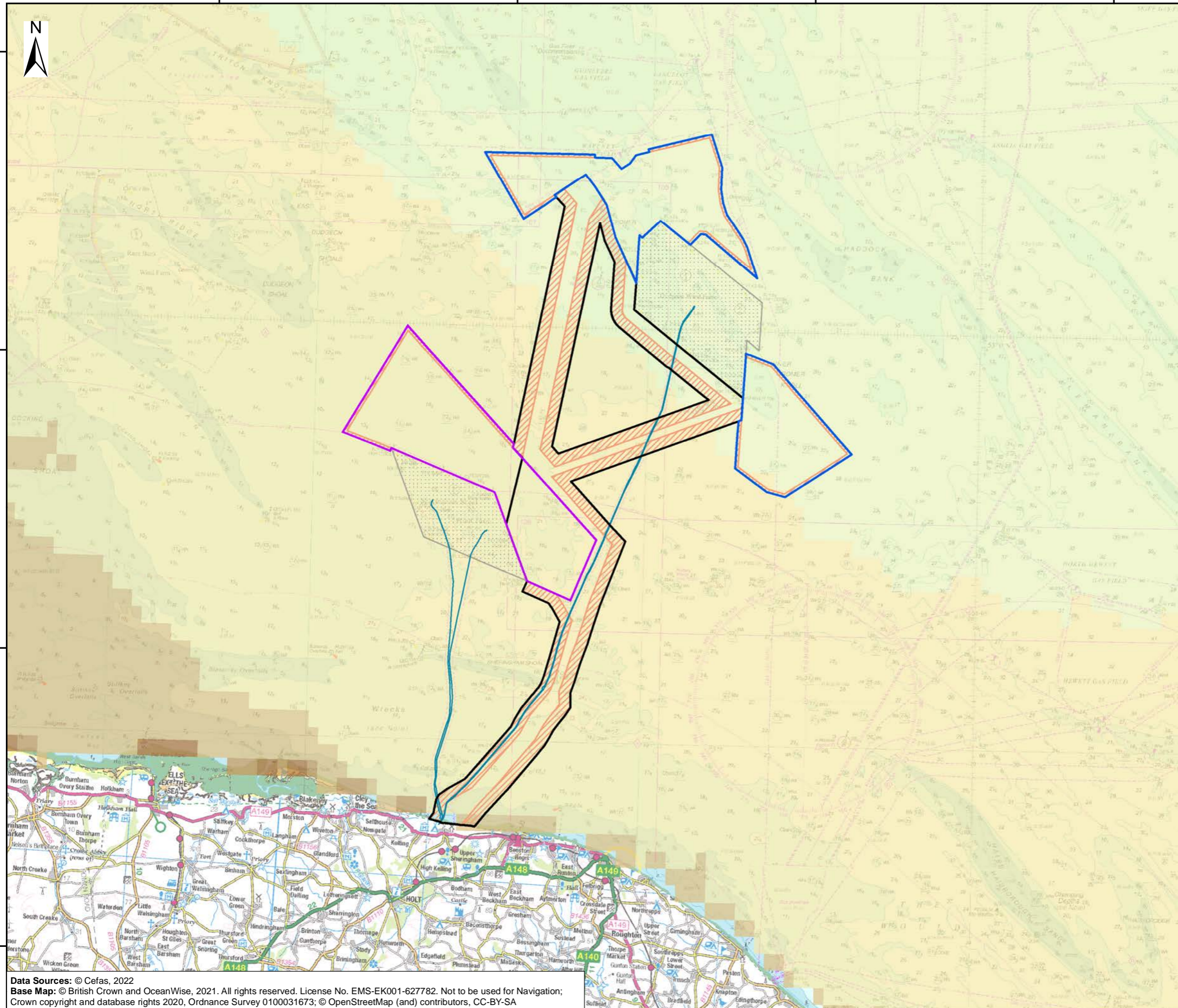
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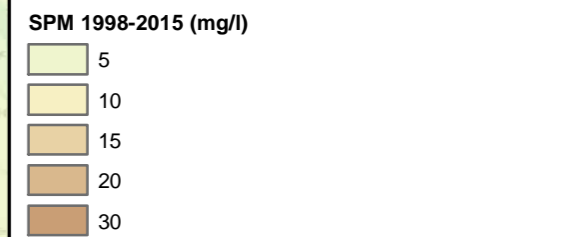
Sheringham Shoal and Dudgeon Extension Projects

Title:
Figure 6.10 Average Suspended Particulate Matter (SPM) 1998-2015

Document:
Environmental Statement (ES)
Chapter 6 Marine Geology, Oceanography and Physical Resources

Application Doc. no.: 6.26

- Legend:
- Dudgeon Offshore Wind Farm Extension Project Wind Farm Site
 - Sheringham Shoal Offshore Wind Farm Extension Project Wind Farm Site
 - Offshore Cable Corridors
 - Offshore Temporary Work Area
 - Existing Offshore Wind Farm
 - Existing Offshore Wind Farm Export Cable



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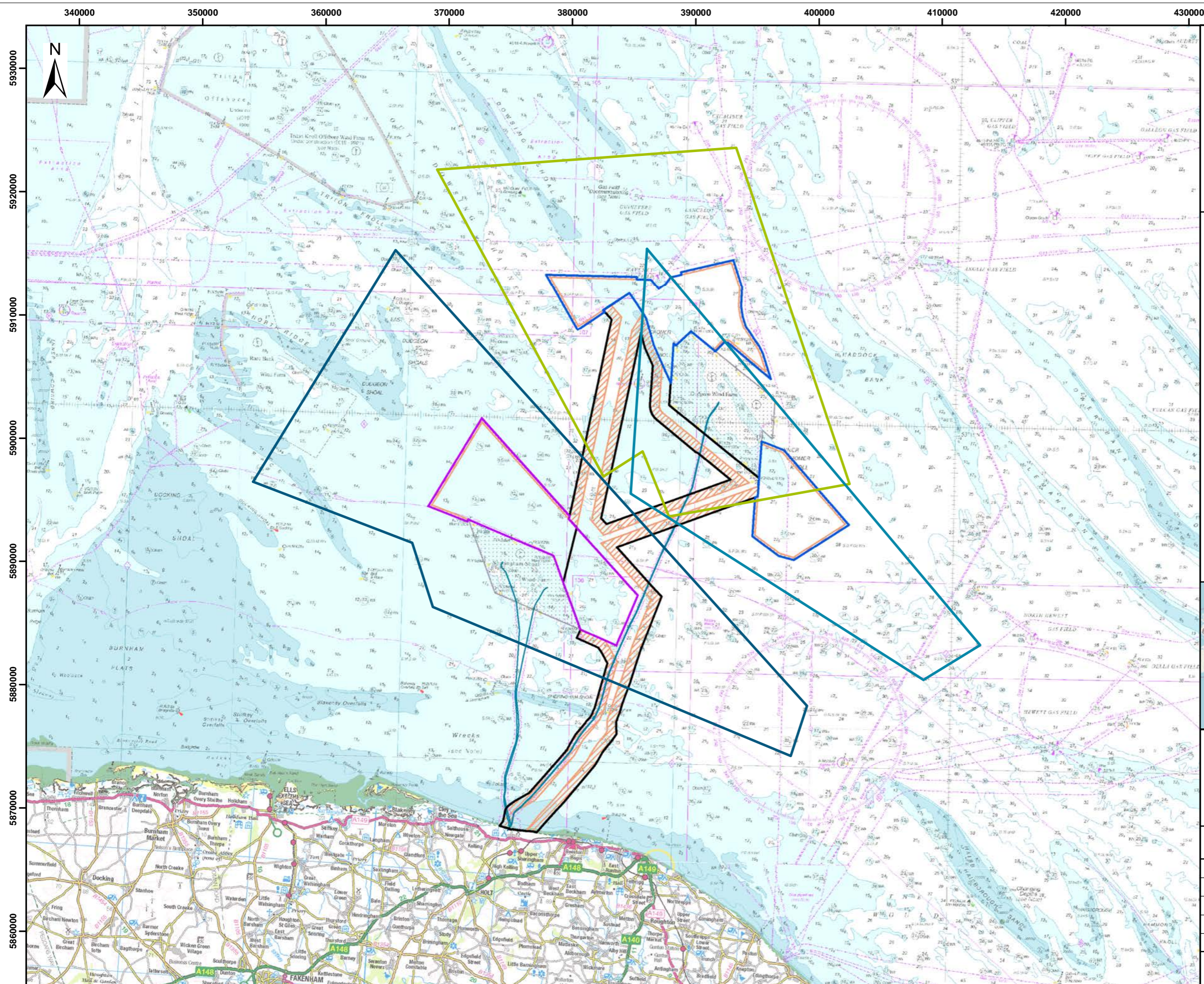
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Title:
Figure 6.11 Zone of Potential Influence on the Tidal Regime

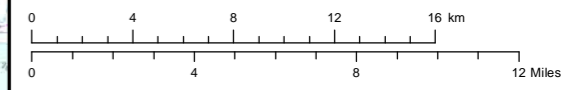
Document:
Environmental Statement (ES)
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Application Doc. no.: 6.2.6

- Legend:
- Dudgeon Offshore Wind Farm Extension Project Wind Farm Site
 - Sheringham Shoal Offshore Wind Farm Extension Project Wind Farm Site
 - Offshore Cable Corridors
 - Offshore Temporary Work Area
 - Existing Offshore Wind Farm
 - Existing Offshore Wind Farm Export Cable
- Predicted Zone of Influence for Tides**
- DEP North
 - DEP South
 - SEP



Coordinate Reference System: WGS 1984 UTM Zone 31N
Transformation WGS84: OSGB_1936_To_WGS_1984_7



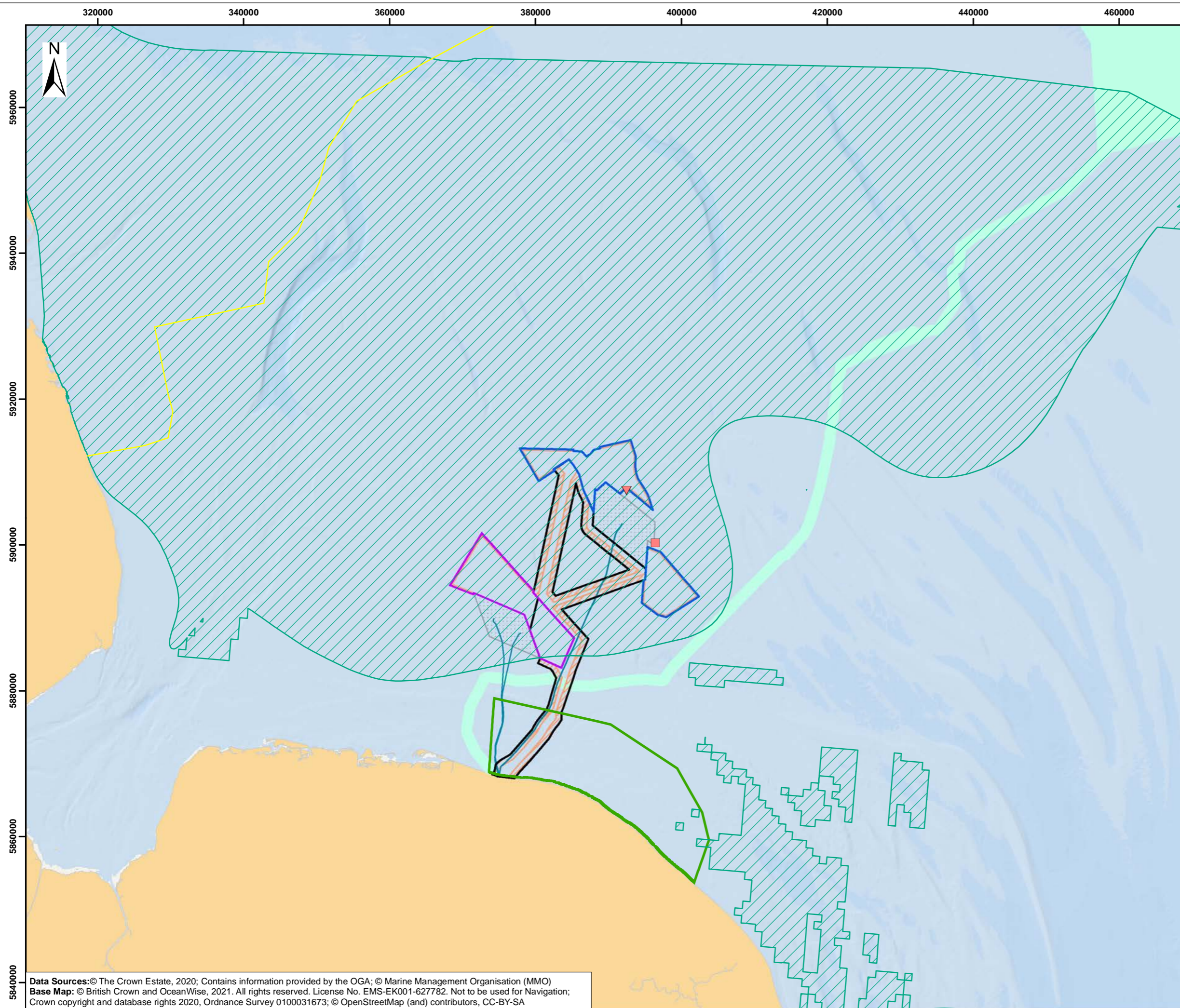
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Title:
Figure 6.12 Other Projects and Activities Included in Cumulative Impact Screening

Document:
 Environmental Statement (ES)
 Chapter 6 Marine Geology, Oceanography and Physical Resources

Application Doc. no.: 6.2.6

- Legend:
- Dudgeon Offshore Wind Farm Extension Project Wind Farm Site
 - Sheringham Shoal Offshore Wind Farm Extension Project Wind Farm Site
 - Offshore Cable Corridors
 - Offshore Temporary Work Area
 - Existing Offshore Wind Farm
 - Existing Offshore Wind Farm Export Cable
 - Blythe Platform
 - Elgood Wellhead
 - Viking Link Interconnector Cable
 - High Potential Aggregate Resource (AGG3)
 - Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ)
 - Hornsea Three Offshore Wind Farm Cable Corridor



Coordinate Reference System: WGS 1984 UTM Zone 31N
 Transformation WGS84: OSGB_1936_To_WGS_1984_7

0 4 8 12 16 20 24 km
 0 4 8 12 16 20 Miles

Scale: 1:500,000 Scale at size: A3

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