

Chapter 18 Marine Physical Environment

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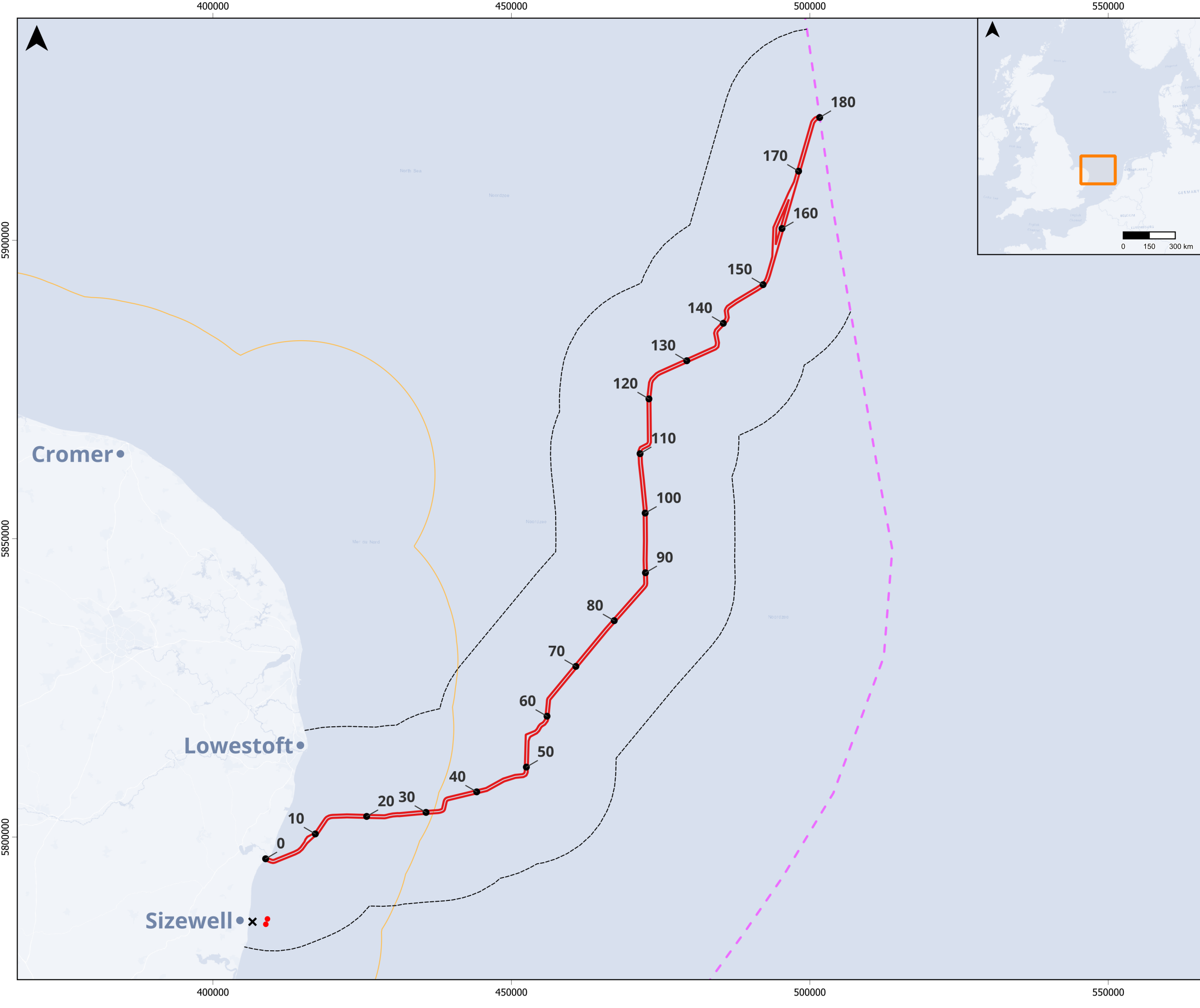
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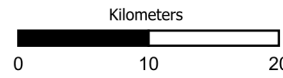
Figure 18.13 Sandwave pre-sweeping areas



Legend

- Proposed Offshore Scheme Draft Order Limits
- 15km Study Area
- 12NM Limit
- EEZ
- Sizewell B Intake
- Proposed Sizewell C Intakes

Coordinate System
WGS 84 / UTM zone 31N



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Drawing Title

Figure 18.1 Study Area

Scale at A3

1:580,000

Role

Environment

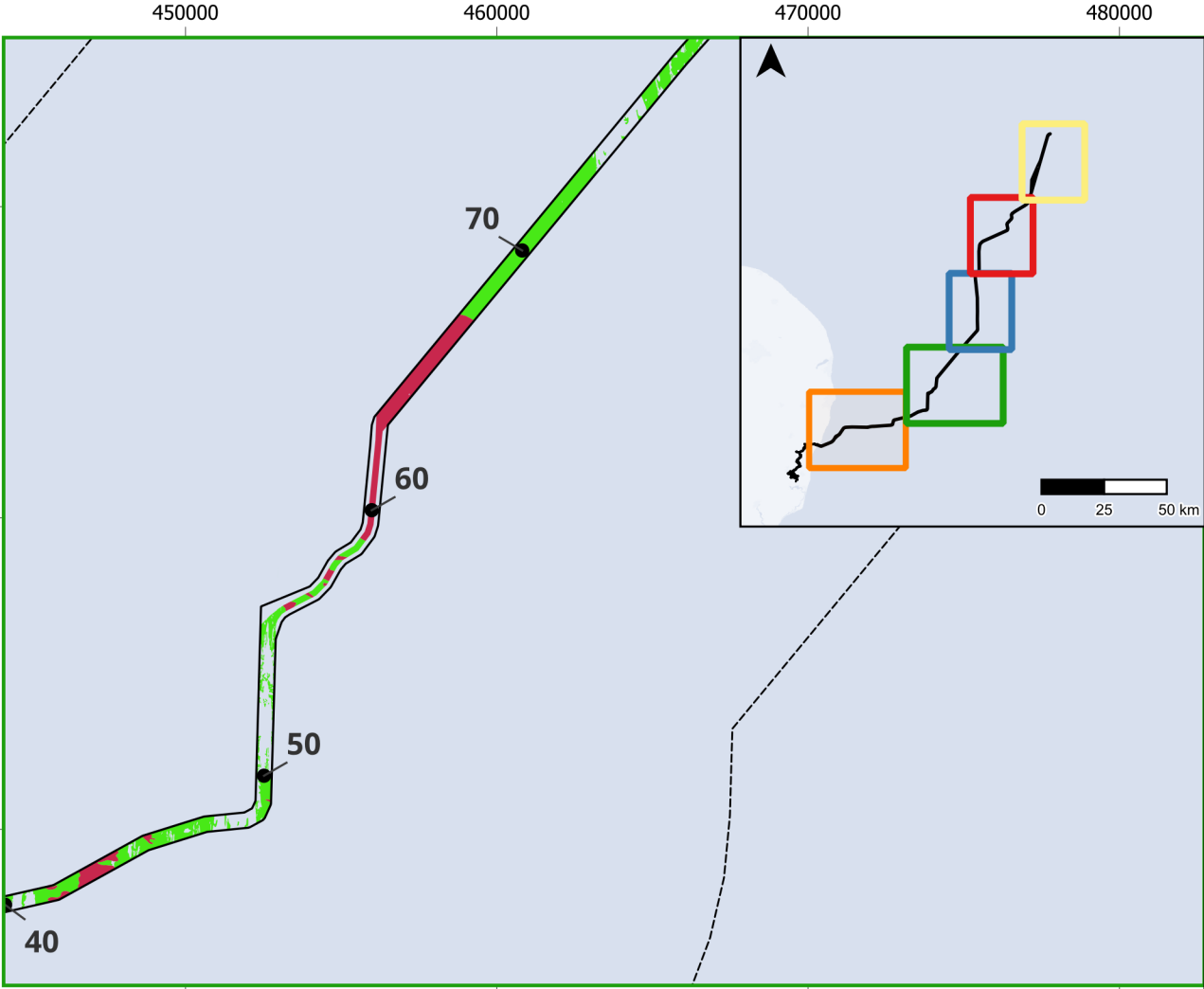
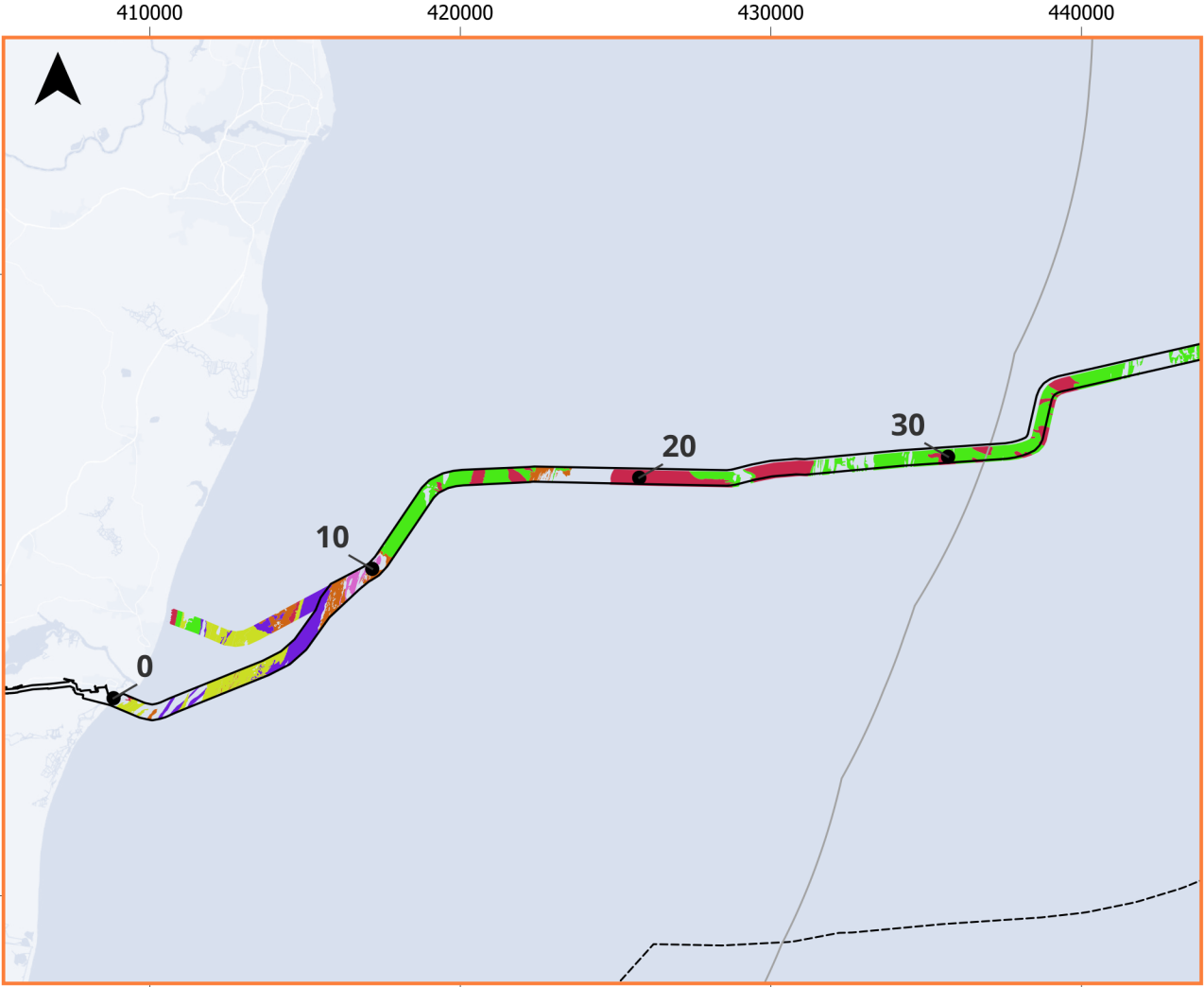
Suitability

S2

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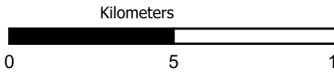




- Legend**
- KP
 - Proposed Scheme Draft
 - Order Limits
 - 15km Study Area
 - 12NM Limit
 - - - EEZ

- Seabed Features:**
- Megaripples
 - Mottled Seafloor
 - Ripples
 - Sabellaria Reef
 - Sand Waves
 - Scour

Coordinate System
WGS 84 / UTM zone 31N



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Figure 18.3 Seabed features

Scale at A3

1:230,000

Role

Environment

Suitability

S2

Project Number

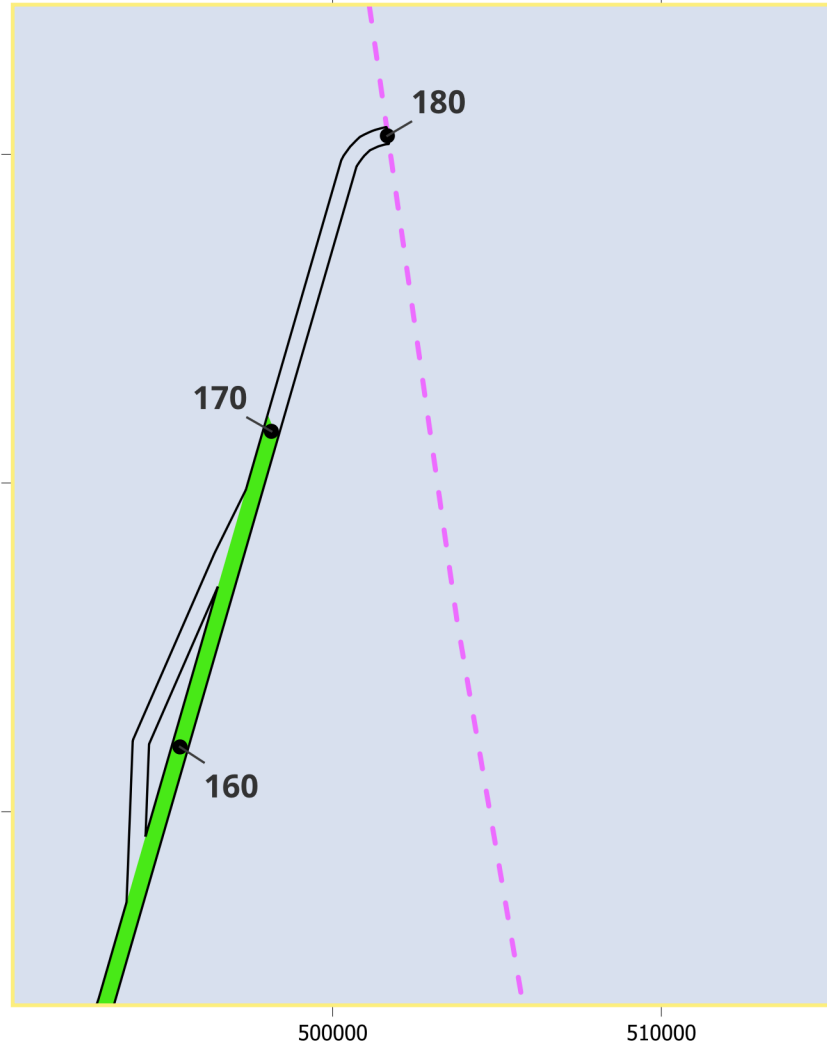
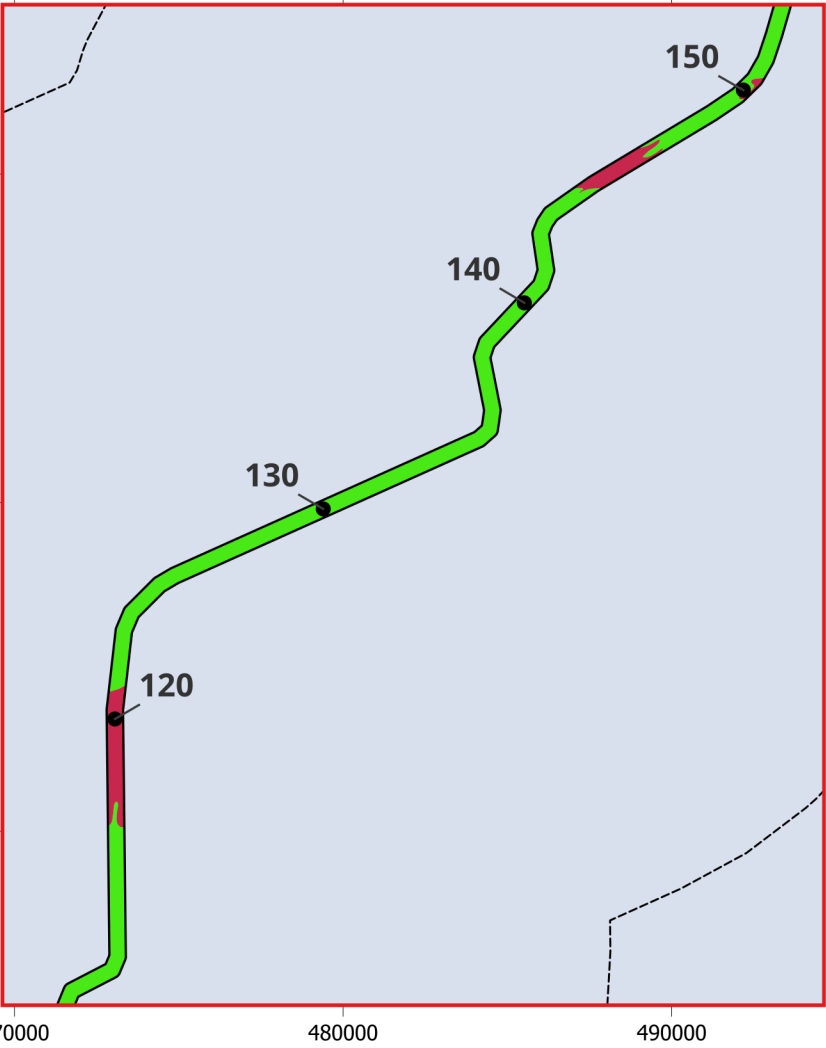
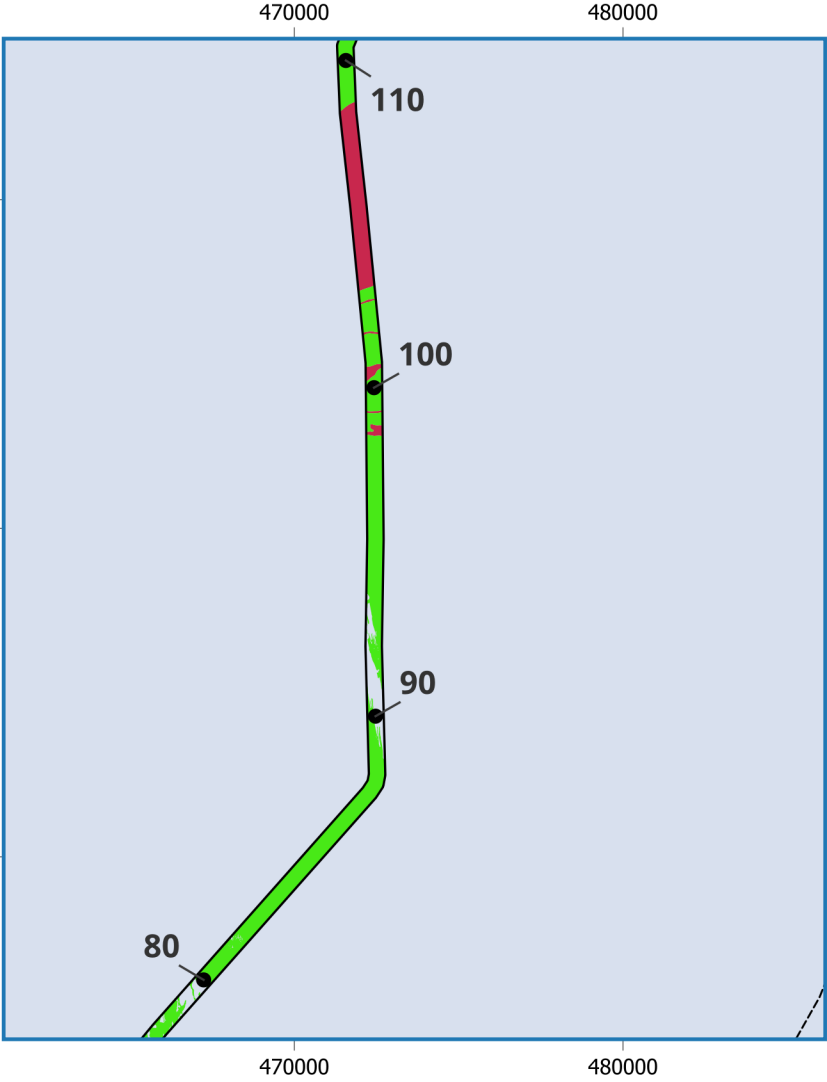
C01467

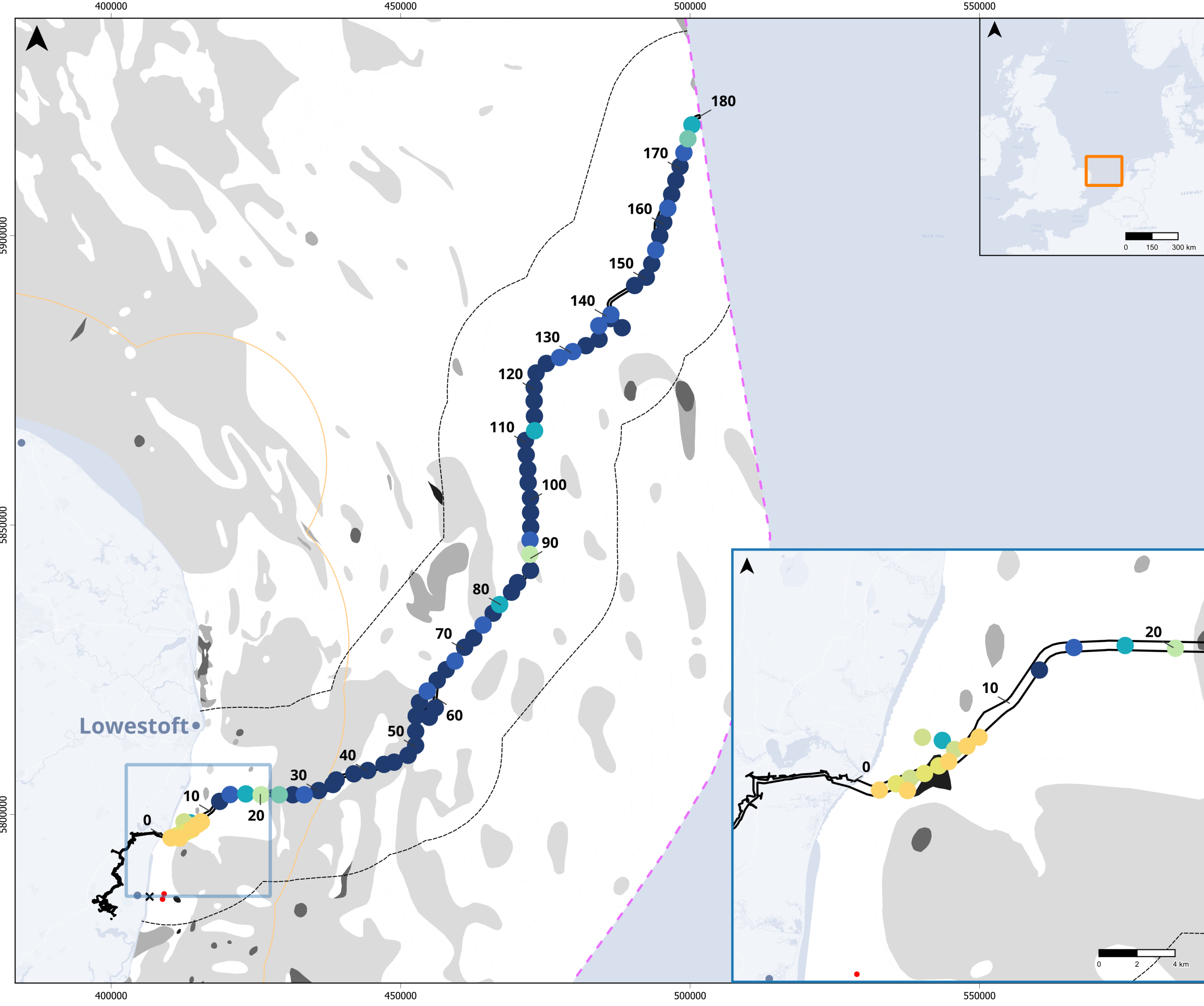
Rev

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Legend

- KP
- Proposed Scheme Draft
- Order Limits
- 15km Study Area
- 12NM Limit
- EEZ
- ✕ Sizewell B Intake
- Proposed Sizewell C Intakes

% of Fines:

- 0 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 70
- 70 - 80
- 80 - 90
- 90 - 100

Seabed Sediment:

- Sand
- Coarse-grained sediment
- Muddy sand
- Mixed sediment
- Sandy mud


Coordinate System

WGS 84 / UTM zone 31N

0 15 30 Kilometers

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Figure 18.4 Seabed sediments and percentage of fines from particle size analysis (PSA)

Scale at A3

1:600,000

Role

Environment

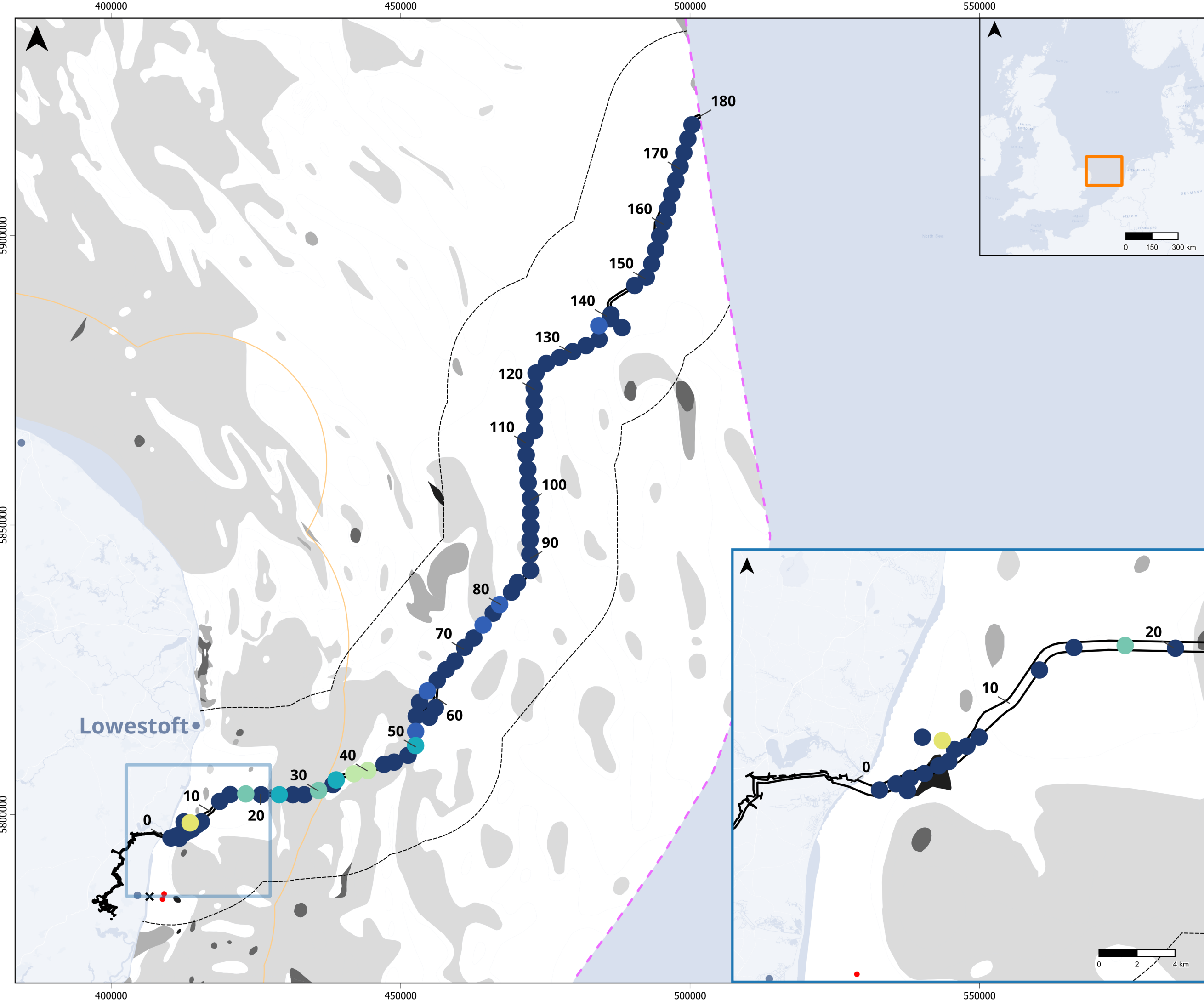
Suitability

S2

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C01467	P01

Drawing Number

LLK1-CEA-DWG-ENV-00056



Legend

- KP
- Proposed Scheme Draft
- Order Limits
- 15km Study Area
- 12NM Limit
- EEZ
- ✕ Sizewell B Intake
- Proposed Sizewell C Intakes

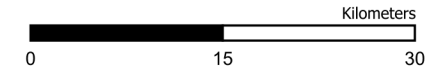
% of Gravels:

- 0 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 70
- 70 - 80
- 80 - 90
- 90 - 100

Seabed Sediment:

- Sand
- Coarse-grained sediment
- Muddy sand
- Mixed sediment
- Sandy mud

Coordinate System
WGS 84 / UTM zone 31N



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Figure 18.5 Seabed sediments and percentage of gravel from PSA

Scale at A3

1:600,000

Role

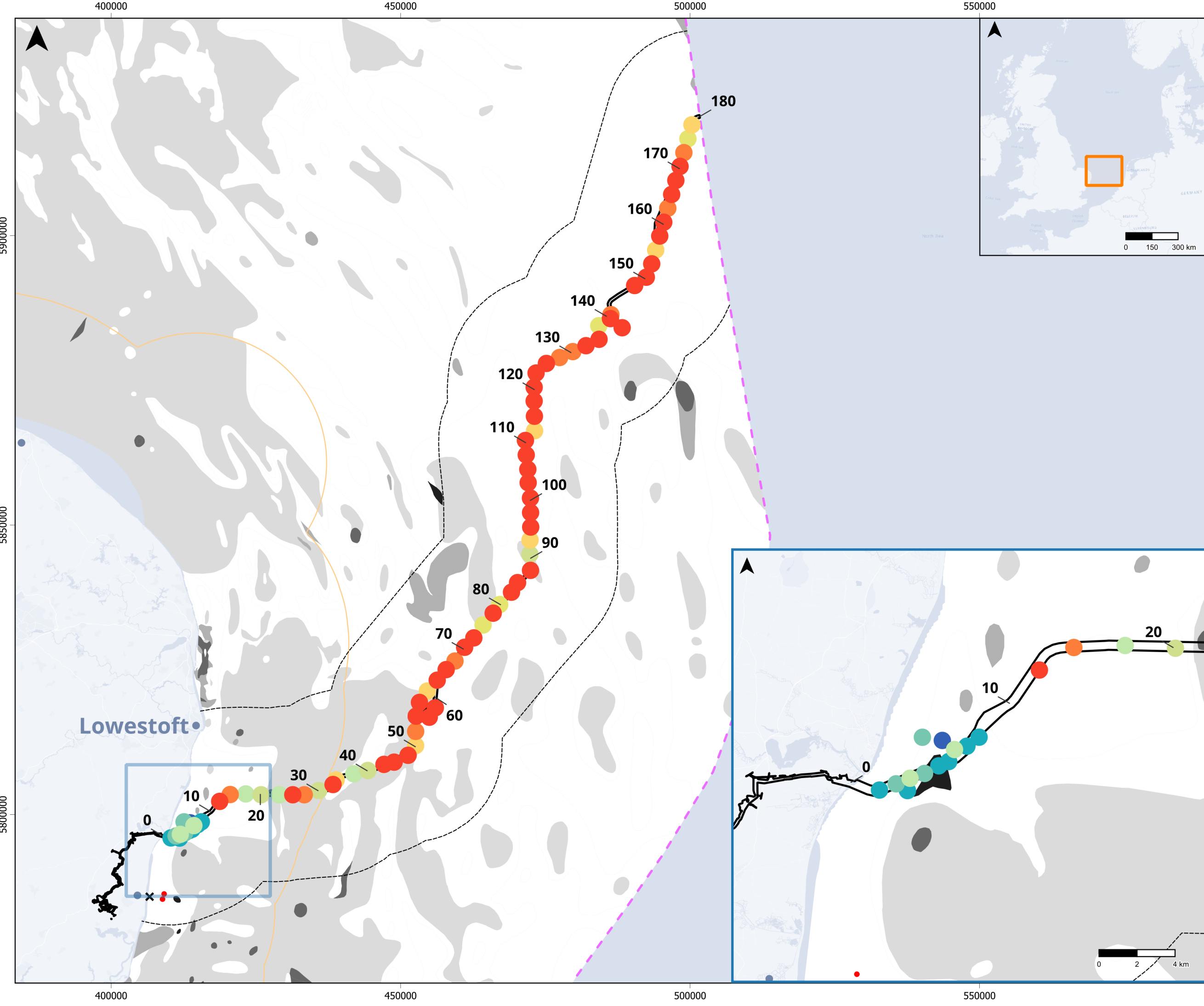
Environment

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S2

Project Number	Rev
C01467	P01

Drawing Number
LLK1-CEA-DWG-ENV-00057



- Legend**
- KP
 - Proposed Scheme Draft
 - Order Limits
 - 15km Study Area
 - 12NM Limit
 - EEZ
 - ✕ Sizewell B Intake
 - Proposed Sizewell C Intakes

- % of Sands:**
- 0 - 10
 - 10 - 20
 - 20 - 30
 - 30 - 40
 - 40 - 50
 - 50 - 60
 - 60 - 70
 - 70 - 80
 - 80 - 90
 - 90 - 100

- Seabed Sediment:**
- Sand
 - Coarse-grained sediment
 - Muddy sand
 - Mixed sediment
 - Sandy mud

Coordinate System
WGS 84 / UTM zone 31N

Kilometers
0 15 30

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Drawing Title
Figure 18.6 Seabed sediments and percentage of sand from PSA

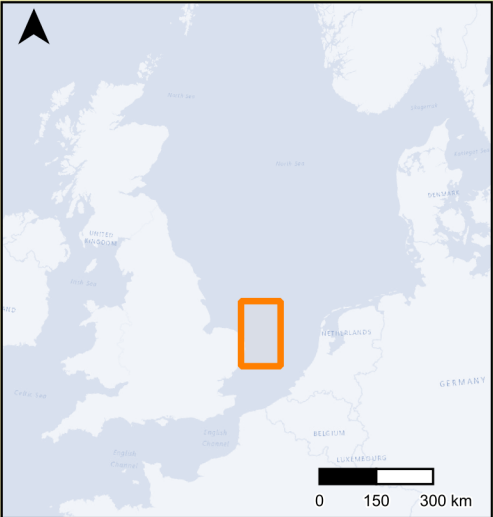
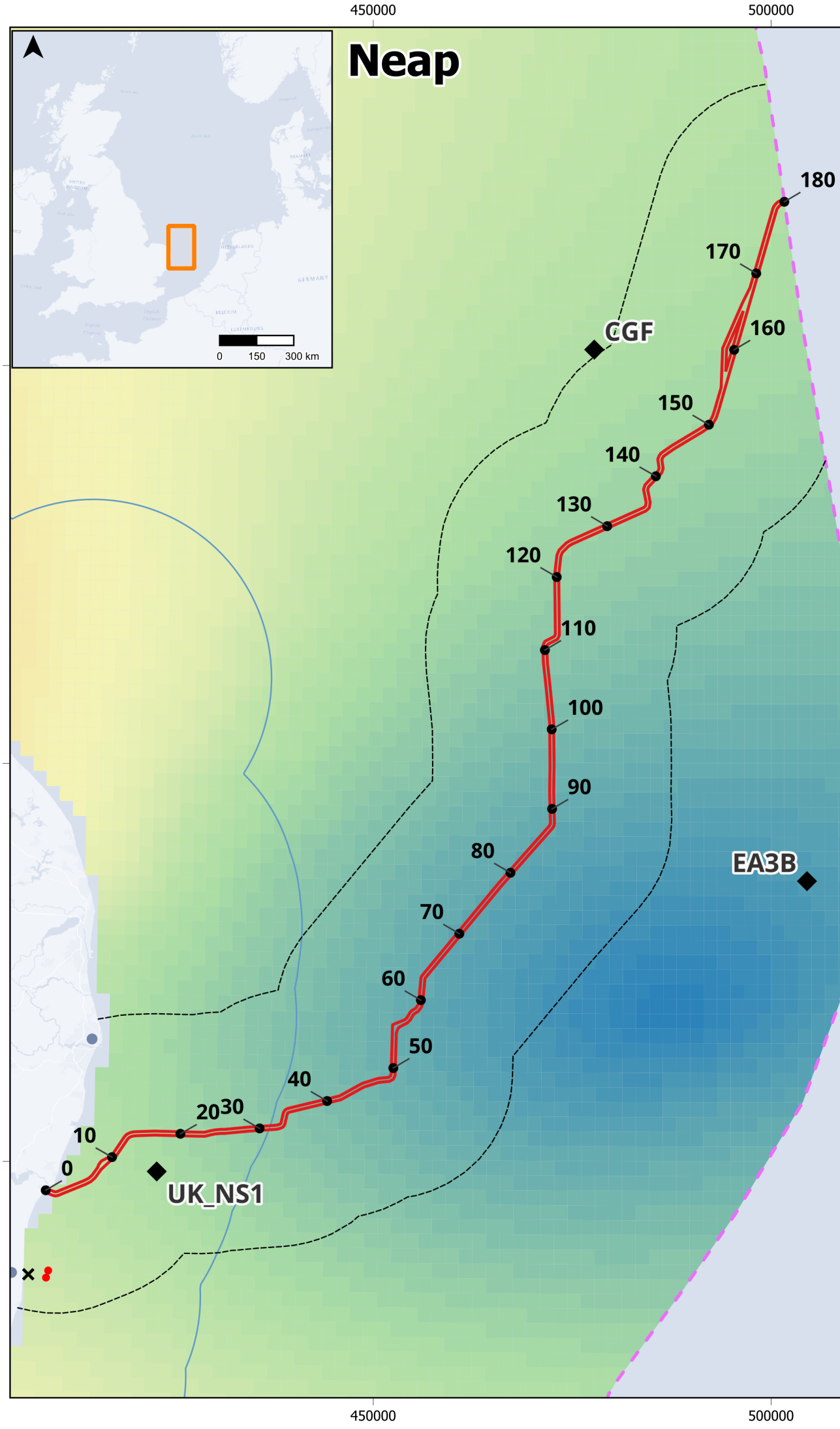
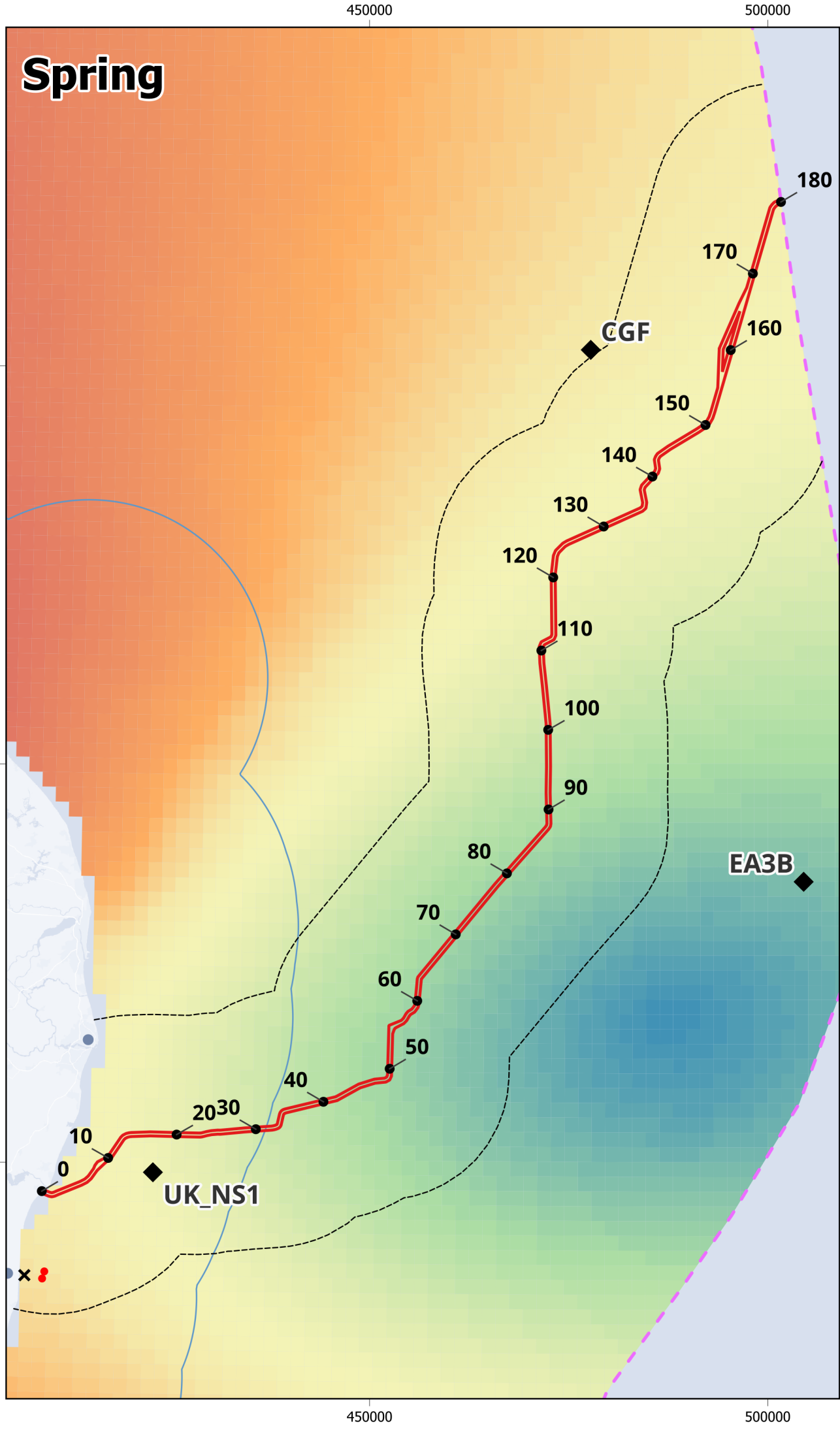
Scale at A3
1:600,000

Role
Environment
Suitability
S2

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Legend

- KP
- ▭ Proposed Offshore Scheme
- Draft Order Limits
- 15km Study Area
- 12NM Limit
- - - EEZ
- ✕ Sizewell B Intake
- Proposed Sizewell C Intakes
- ◆ Tide Gauge

Tidal Range (m) (ABPmer et al., 2008)

0
0.5
1
1.5
2
2.5
3
3.5
4

Coordinate System


WGS 84 / UTM zone 31N

Kilometers

0	10	20
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Figure 18.7 Tidal ranges for spring and neap tides

Scale at A3

1:620,000

Role

Environment

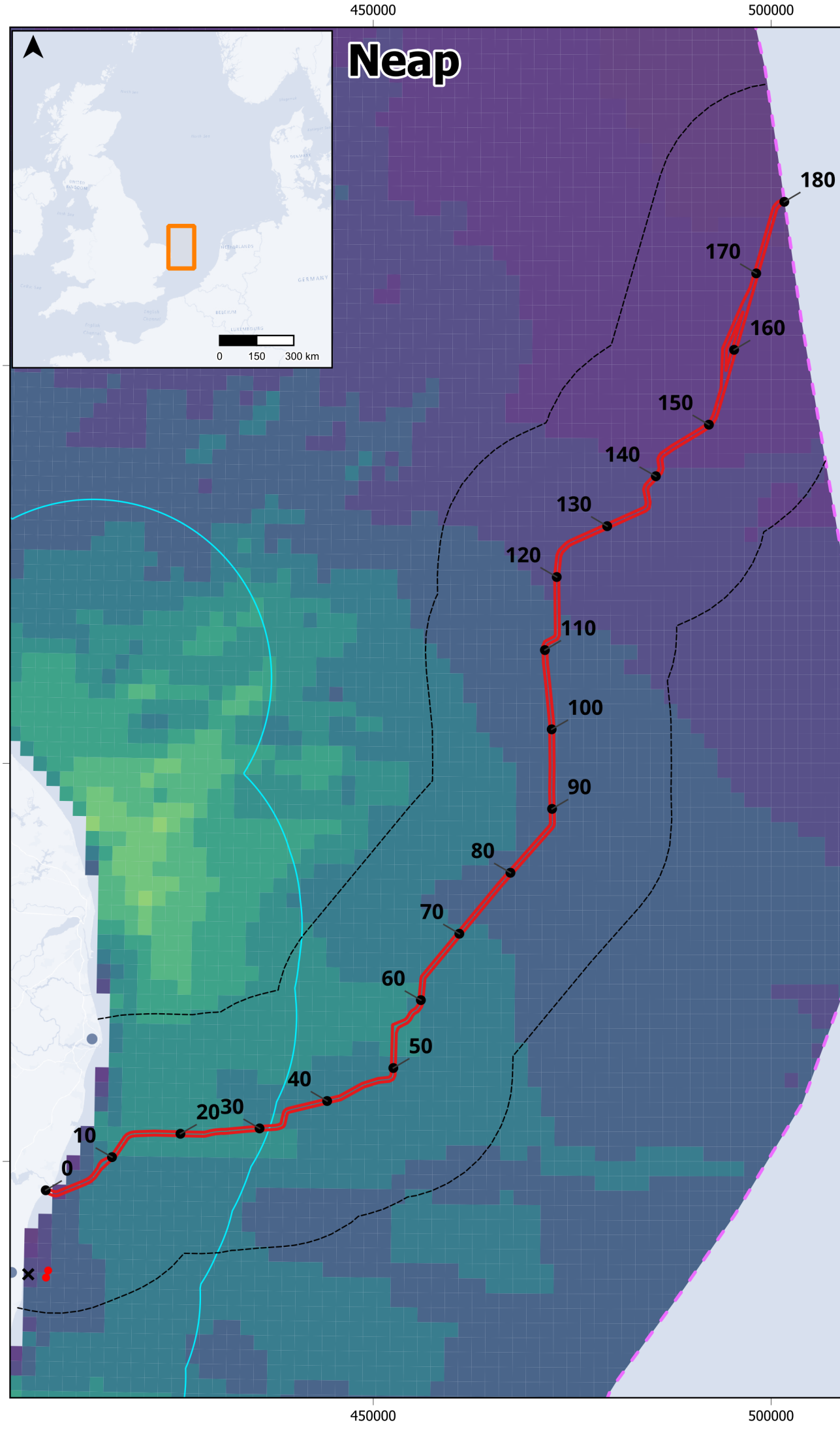
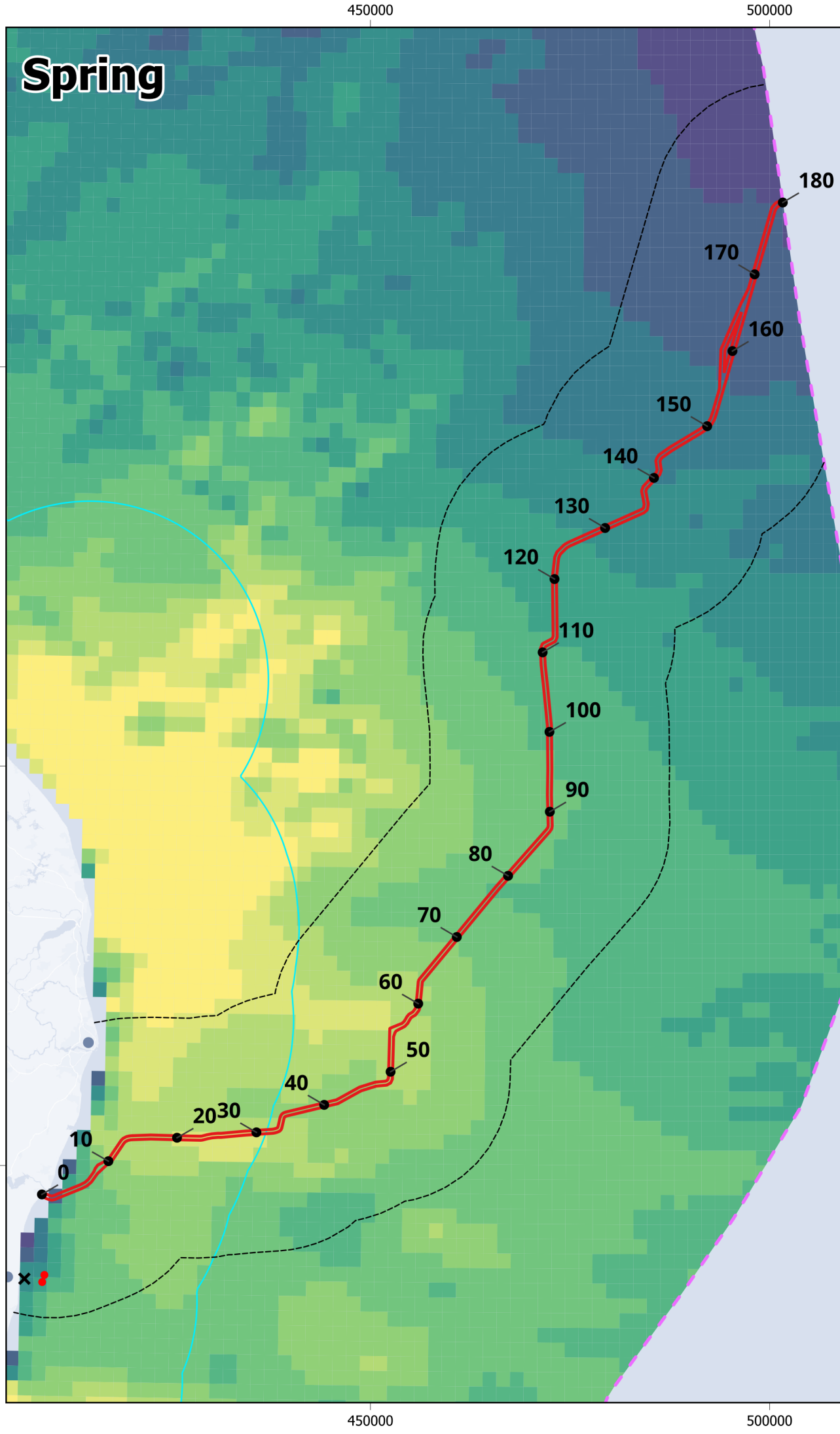
Suitability

S2

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Legend

- KP
- ▭ Proposed Offshore Scheme
- Draft Order Limits
- 15km Study Area
- 12NM Limit
- EEZ
- ✕ Sizewell B Intake
- Proposed Sizewell C Intakes


Peak Flow (m/s) (ABPmer et al., 2008)

<0.1
0.2
0.4
0.6
0.8
1
1.2
1.4
>1.6

Coordinate System
WGS 84 / UTM zone 31N

Kilometers
0 10 20

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Figure 18.8 Peak flows for spring and
neap tides

Scale at A3
1:620,000

Role

Environment

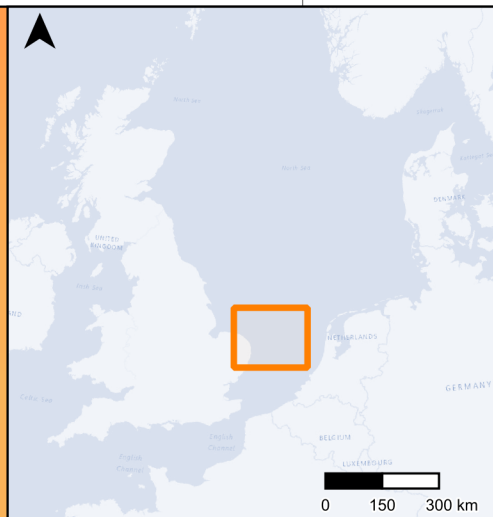
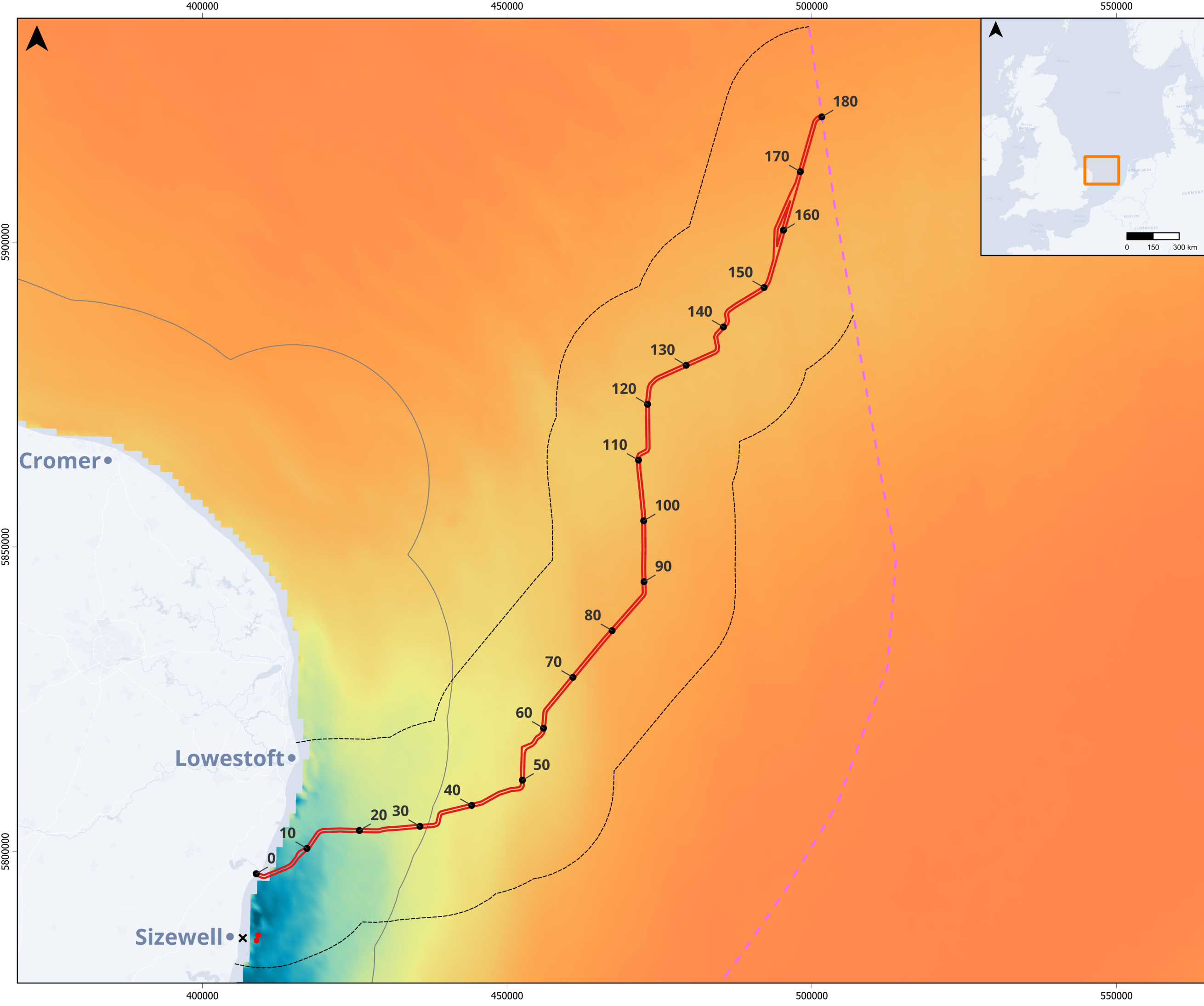
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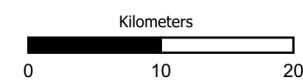
Legend

- KP
- Proposed Offshore Scheme
- Draft Order Limits
- 15km Study Area
- 12NM Limit
- - - EEZ
- ✕ Sizewell B Intake
- Proposed Sizewell C Intakes

SSC Mean Cefas 2016 (mg/l)

- ≤ 0
- 0 - 1
- 1 - 2
- 2 - 5
- 5 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60

Coordinate System
WGS 84 / UTM zone 31N



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Figure 18.9 Annual mean Suspended Sediment Concentration (SSC)

Scale at A3
1:570,000

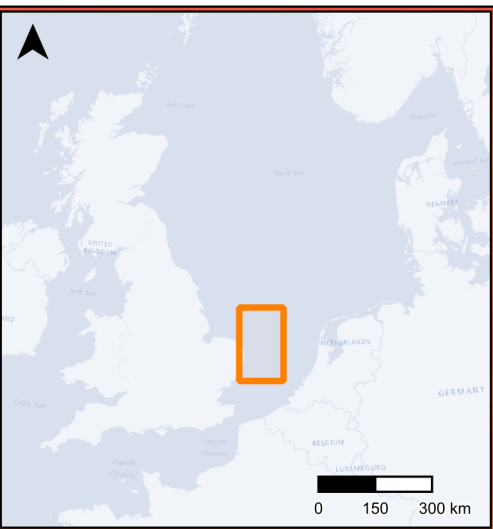
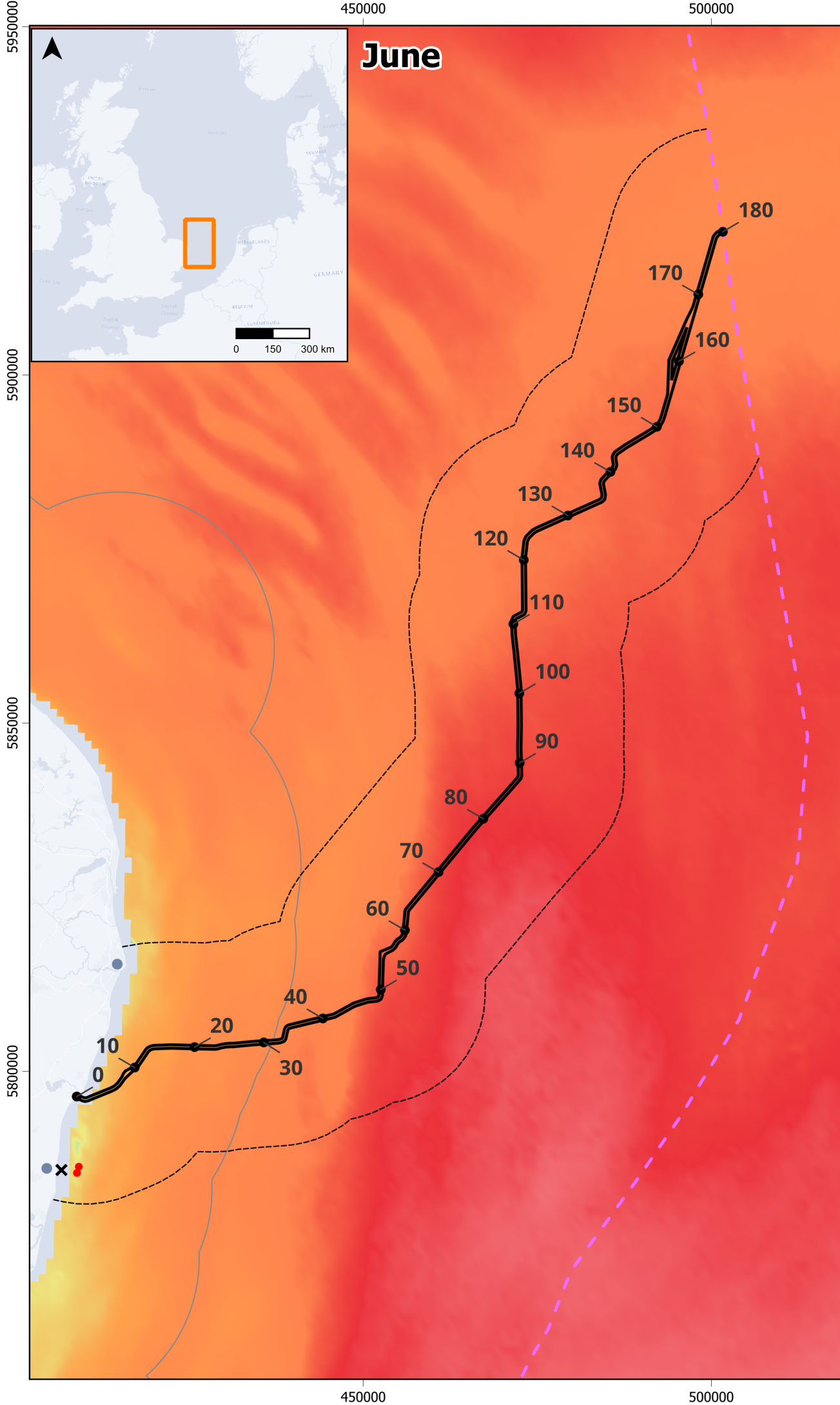
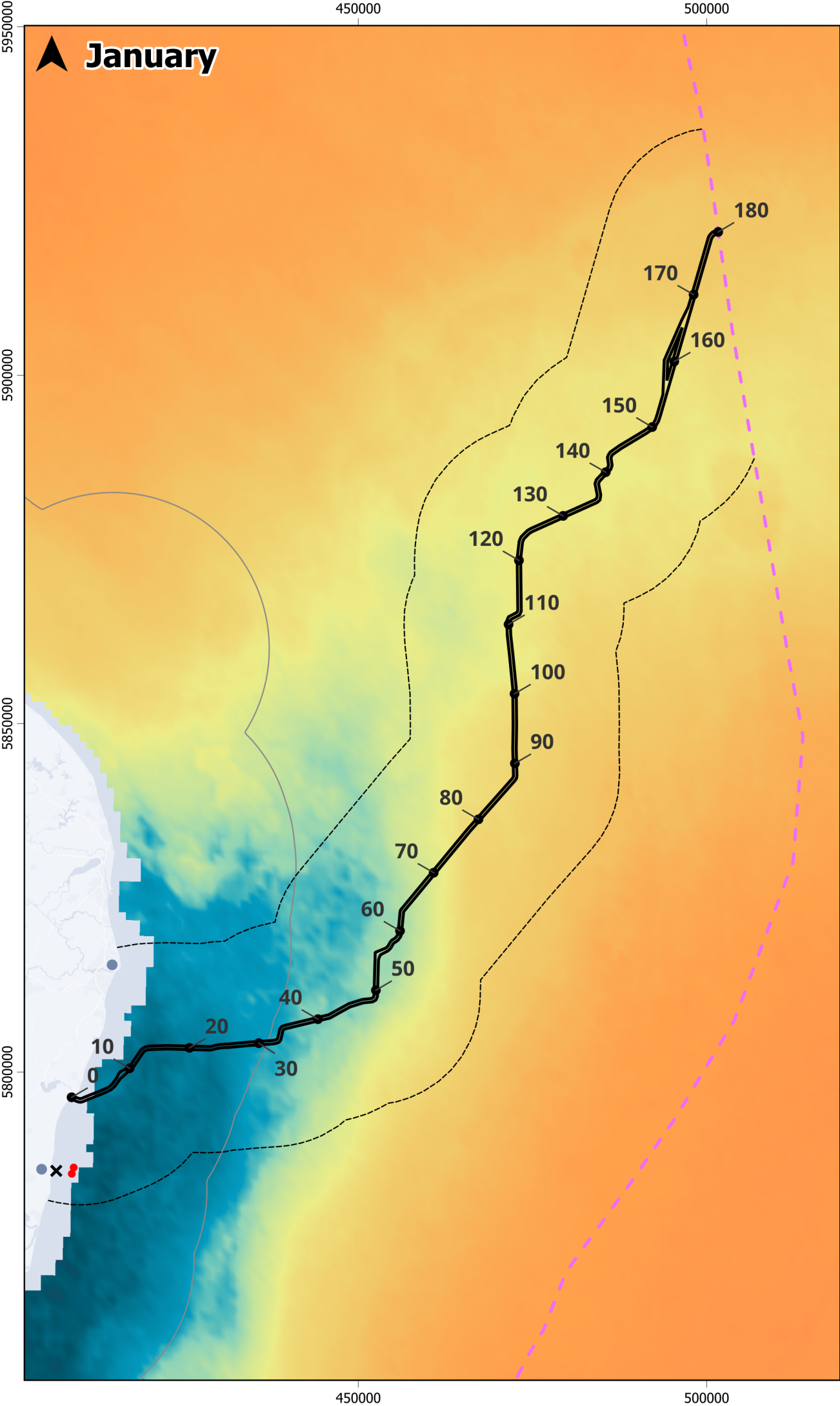
Role
Environment

Suitability
S2

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Legend

- KP
- Proposed Offshore Scheme
- Draft Order Limits
- 15km Study Area
- 12NM Limit
- EEZ
- ✕ Sizewell B Intake
- Proposed Sizewell C Intakes

SSC Monthly Mean Cefas 2016 (mg/l)


<= 0
0 - 1
1 - 2
2 - 5
5 - 10
10 - 20
20 - 30
30 - 40
40 - 50
50 - 60
60 - 70
70 - 80
80 - 90
90 - 100
100 <

Coordinate System
WGS 84 / UTM zone 31N

Kilometers
0 10 20

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Drawing Title

Figure 18.10 Seasonal mean SSC – Winter (January) and Summer (June)

Scale at A3
1:700,000

Role

Environment

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S2

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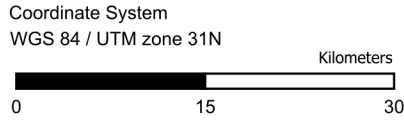
- KP
- Proposed Offshore Scheme
- Draft Order Limits
- 15km Study Area
- 12NM Limit
- EEZ
- ✕ Sizewell B Intake
- Proposed Sizewell C Intakes

Cefas Action Level (ppm):

- Below AL1
- AL1: 20
- AL2: 100

NOAA Effect Range, OSPAR (ppm):

- Below ER
- ERL: 8.2
- ERM: 70



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Figure 18.11 Arsenic contamination from sediment samples

Scale at A3

1:600,000

Role

Environment

Suitability
33

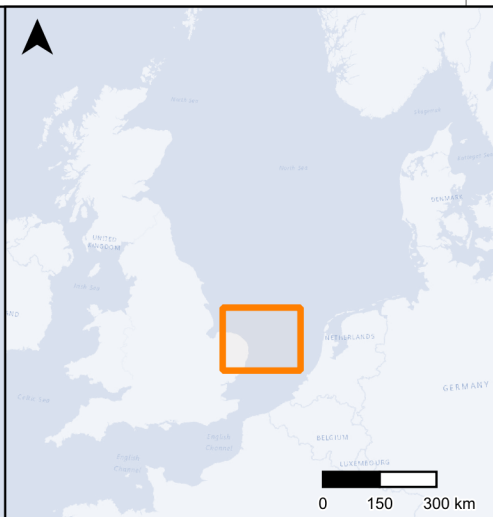
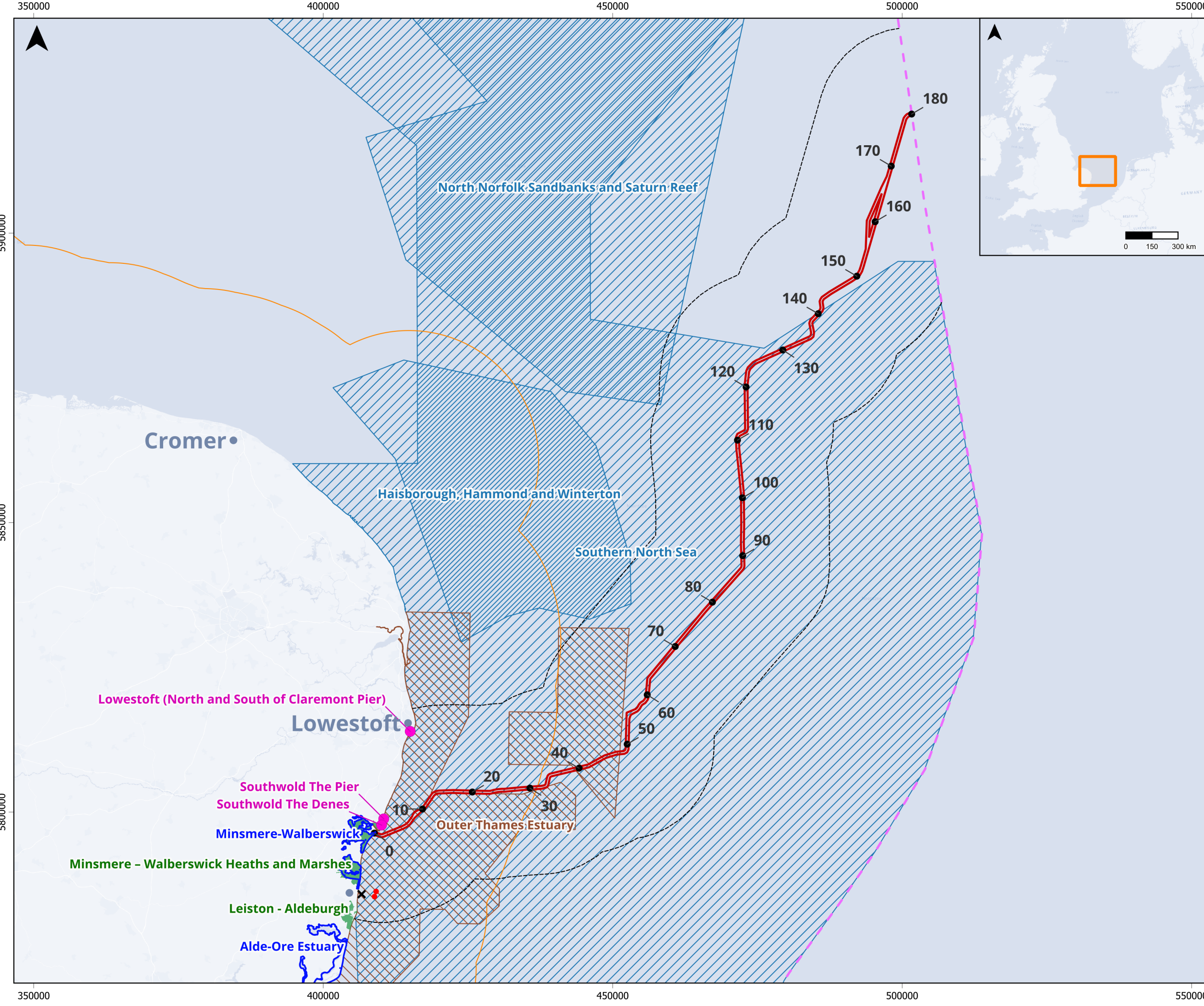
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Drawing Number

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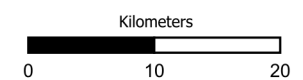
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Legend

- KP
- ▭ Proposed Offshore Scheme
- Draft Order Limits
- 15km Study Area
- 12NM Limit
- - - EEZ
- ✕ Sizewell B Intake
- Proposed Sizewell C Intakes
- Designated Bathing Waters
- ▨ Special Area of Conservation
- ▨ Special Protection Area
- ▭ Ramsar Site
- Sites of Special Scientific Interest

Coordinate System
WGS 84 / UTM zone 31N



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Drawing Title

Figure 18.12 Designated sites in the study area and surrounding area

Scale at A3

1:600,000

Role

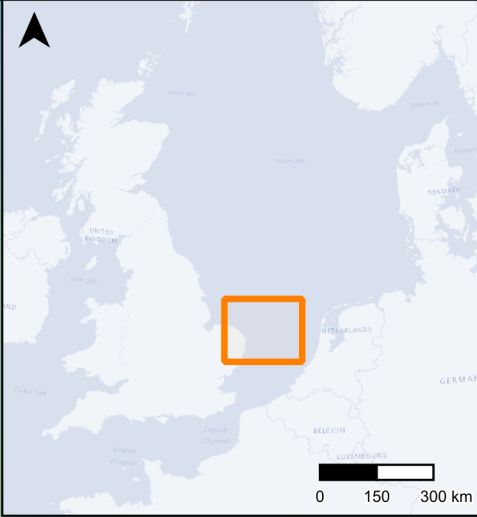
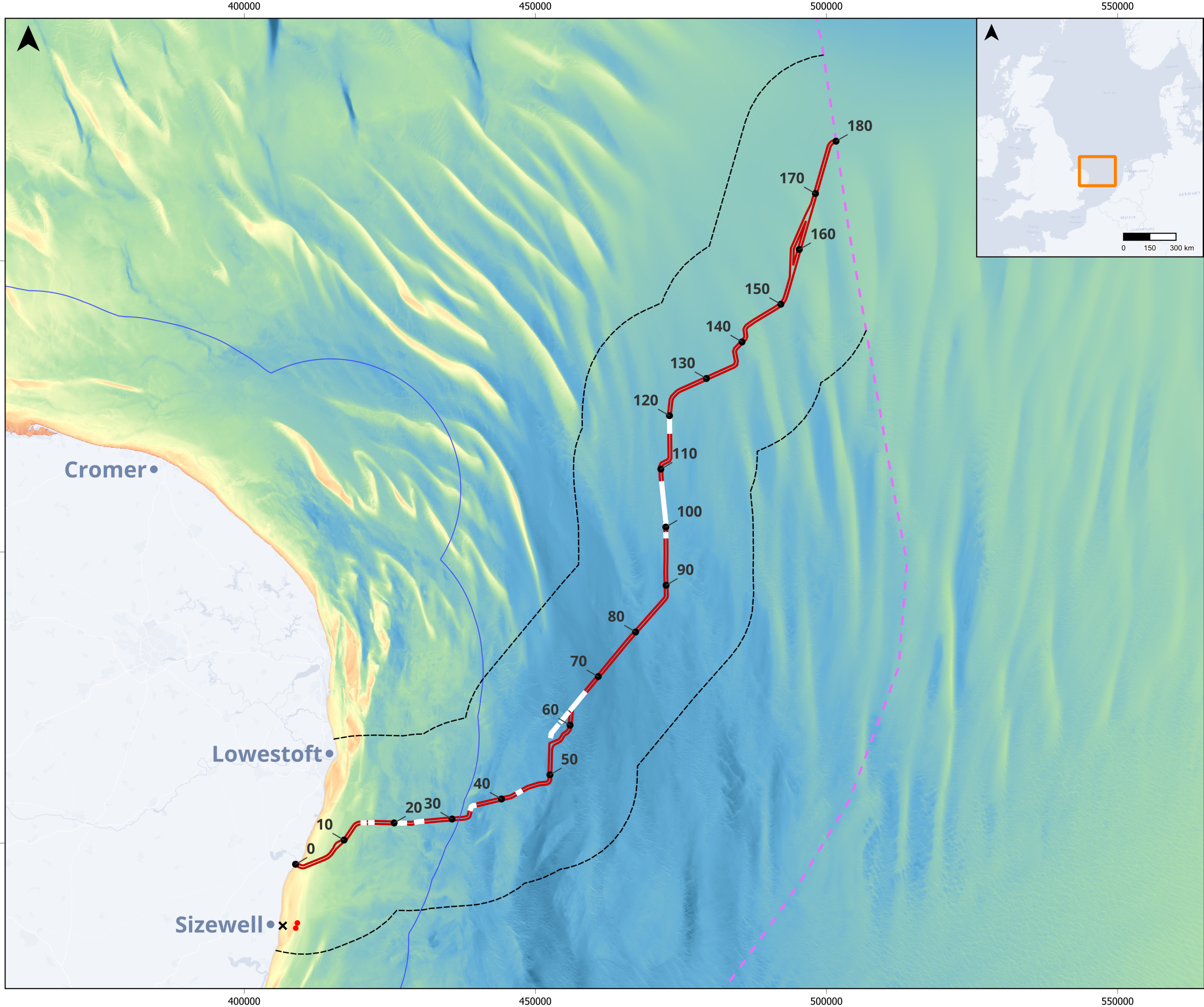
Environment

Suitability

S2

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Legend

- KP
- ▭ Proposed Offshore Scheme
- Draft Order Limits
- 15km Study Area
- 12NM Limit
- EEZ
- ✕ Sizewell B Intake
- Proposed Sizewell C Intakes
- ▭ Sandwave pre-sweeping area

EMODNet Bathymetry (2024)

Depth (mLAT)

- > -15
- 25
- 35
- 45
- 60
- < -80

Coordinate System
WGS 84 / UTM zone 31N

Kilometers

0 10 20

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Project Name

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Drawing Title

Figure 18.13 Sandwave pre-sweeping areas

Scale at A3

1:600,000

Role

Environment

Suitability

S2

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Drawing Number

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