



# NORTH FALLS

*Offshore Wind Farm*

## ENVIRONMENTAL STATEMENT

### Chapter 11 - Figures

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Volume:	3.2
APFP Regulation:	5(2)(a)
Date:	July 2024
Revision:	0

**Project Reference: EN010119**



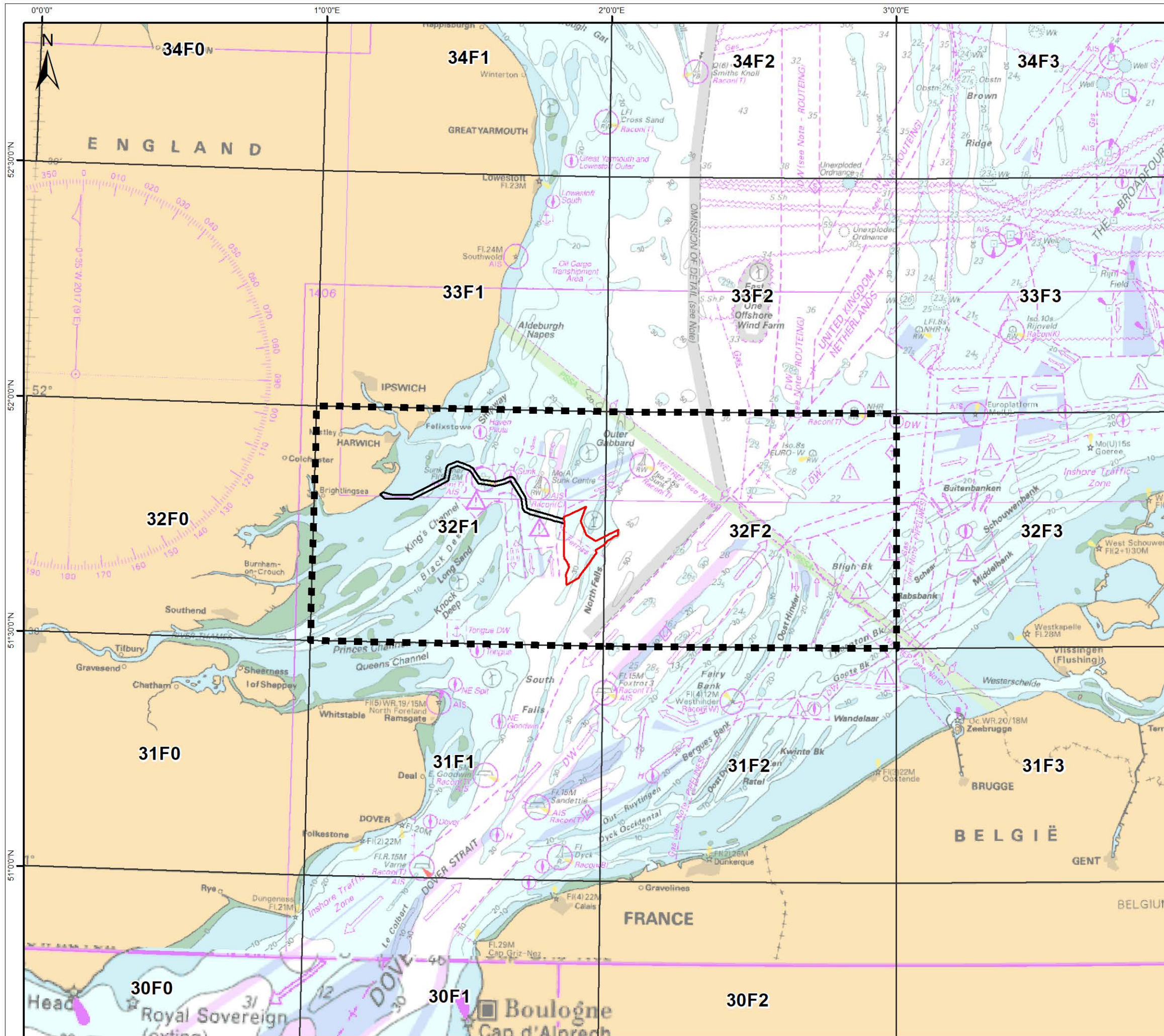
**NORTH FALLS**

*Offshore Wind Farm*

<b>Project</b>	North Falls Offshore Wind Farm
<b>Document Title</b>	Environmental Statement Chapter 11 - Figures
<b>Document Reference</b>	3.2.7
<b>APFP Regulation</b>	5(2)(a)
<b>Supplier</b>	Royal HaskoningDHV
<b>Supplier Document ID</b>	PB244-RHD-ES-OF-RP-OF-0195

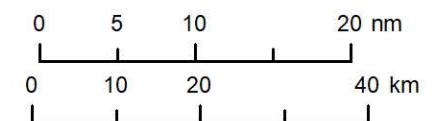
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<b>Revision</b>	<b>Date</b>	<b>Status/Reason for Issue</b>	<b>Originator</b>	<b>Checked</b>	<b>Approved</b>
0	July 2024	Submission	BMM	NFOW	NFOW



**Legend**

- North Falls Array Area
- Offshore Cable Corridor
- Study Area
- ICES Rectangles



Data Source:

Drawing Title

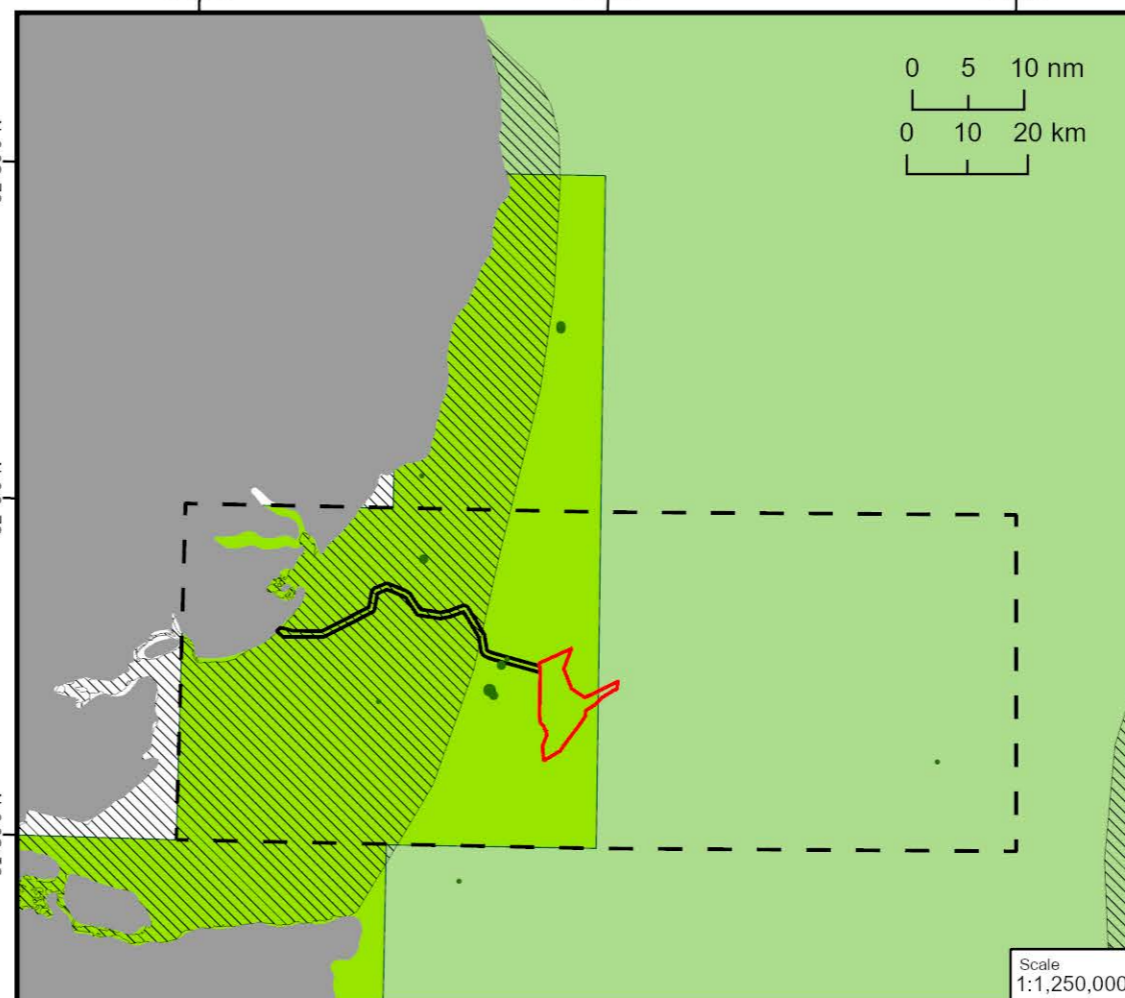
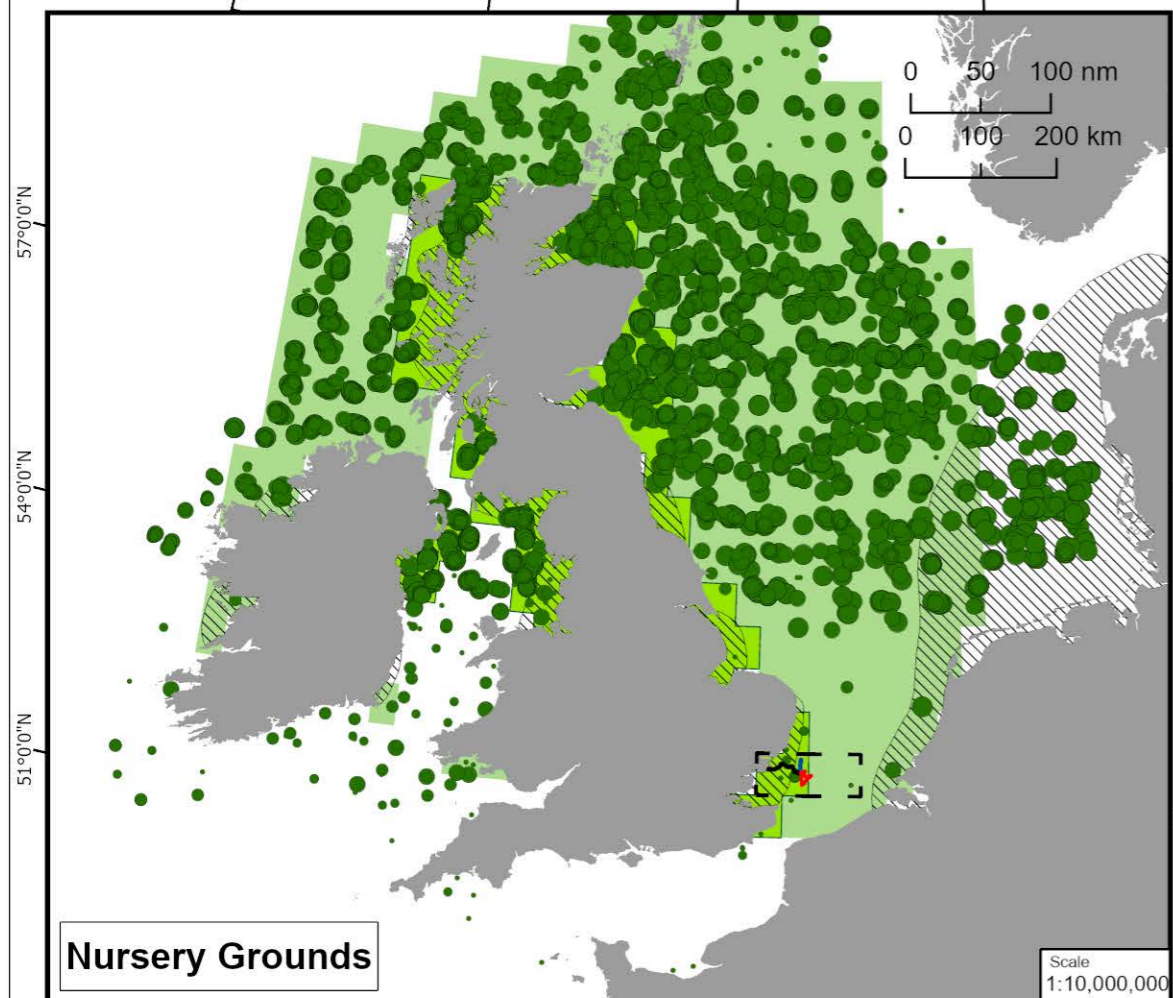
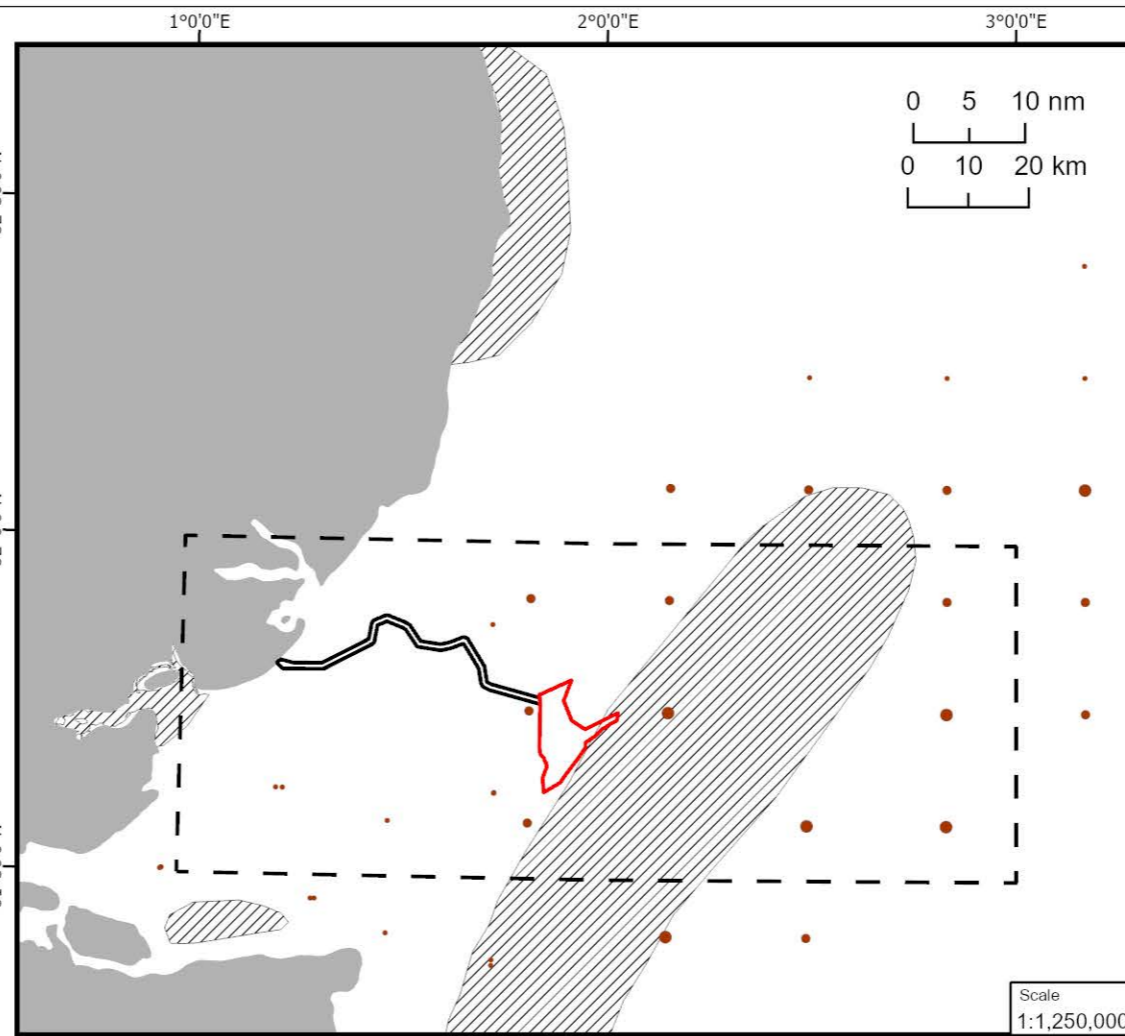
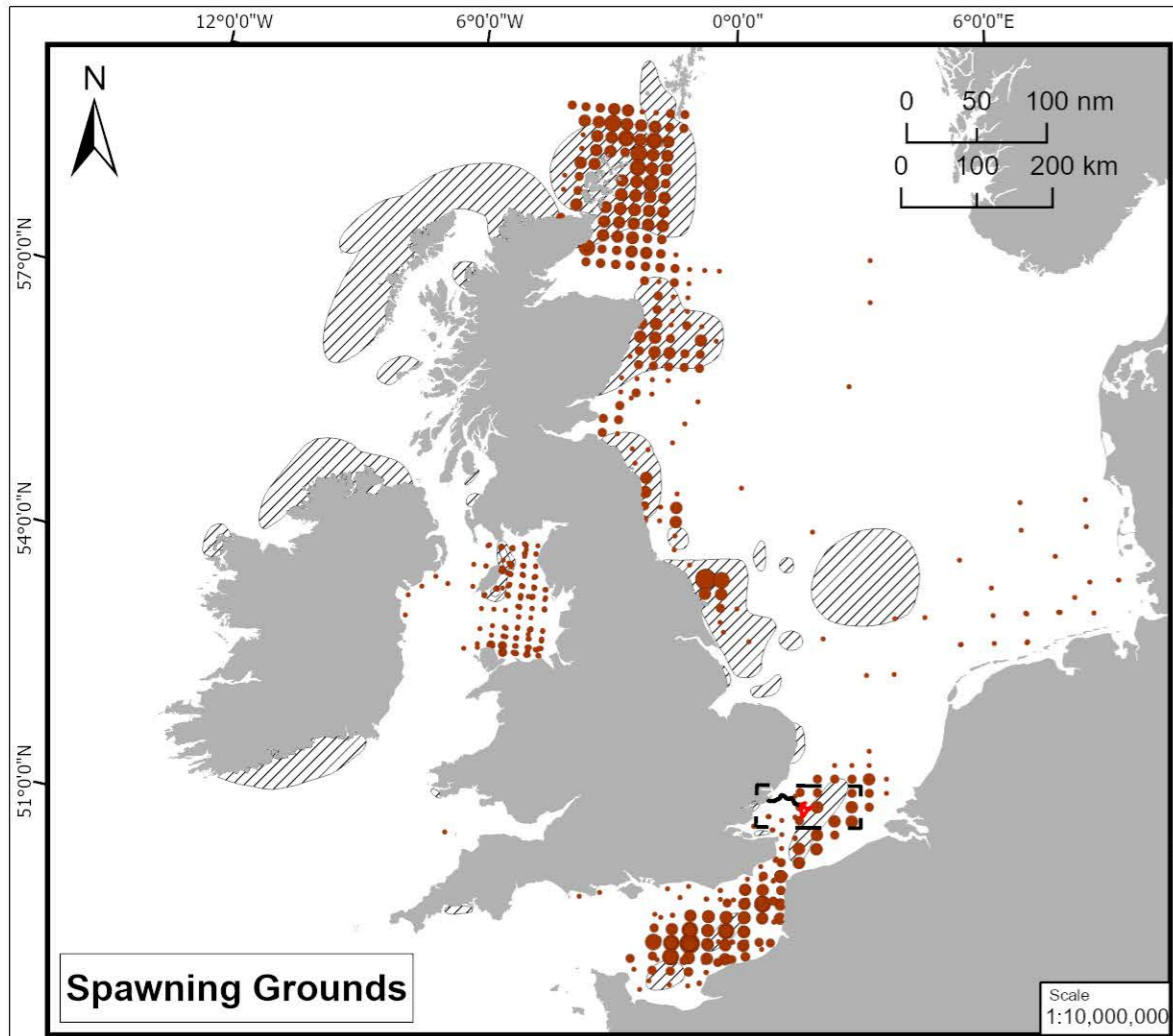
**STUDY AREA**

Rev	Date	Remarks	Drwn	Chkd
01	23/04/24	First issue	JW	-

Drawing Number	Figure Number
<b>NF-02-EIA-ES-000</b>	<b>11.1</b>

Scale	Plot Size	Datum	Projection
1:900,000	A3	WGS 1984	WGS 1984 UTM Zone 31N





- Legend**
- North Falls Array Areas
  - Export Cable Corridor
  - Study Area
  - Herring Spawning Grounds
  - Spawning Grounds <sup>1</sup>
  - Larvae (n/m<sup>2</sup>) <sup>2</sup>
  - Herring Nursery Grounds
  - Nursery Grounds <sup>1</sup>
  - High Intensity <sup>2</sup>
  - Low Intensity <sup>2</sup>
  - Nursery Grounds Maximum Juvenile Catch Rate (n/m<sup>2</sup>) <sup>2</sup>
  - >0 - 10
  - >10 - 100
  - >100 - 1,000
  - >1,000 - 10,000
  - >10,000

Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0

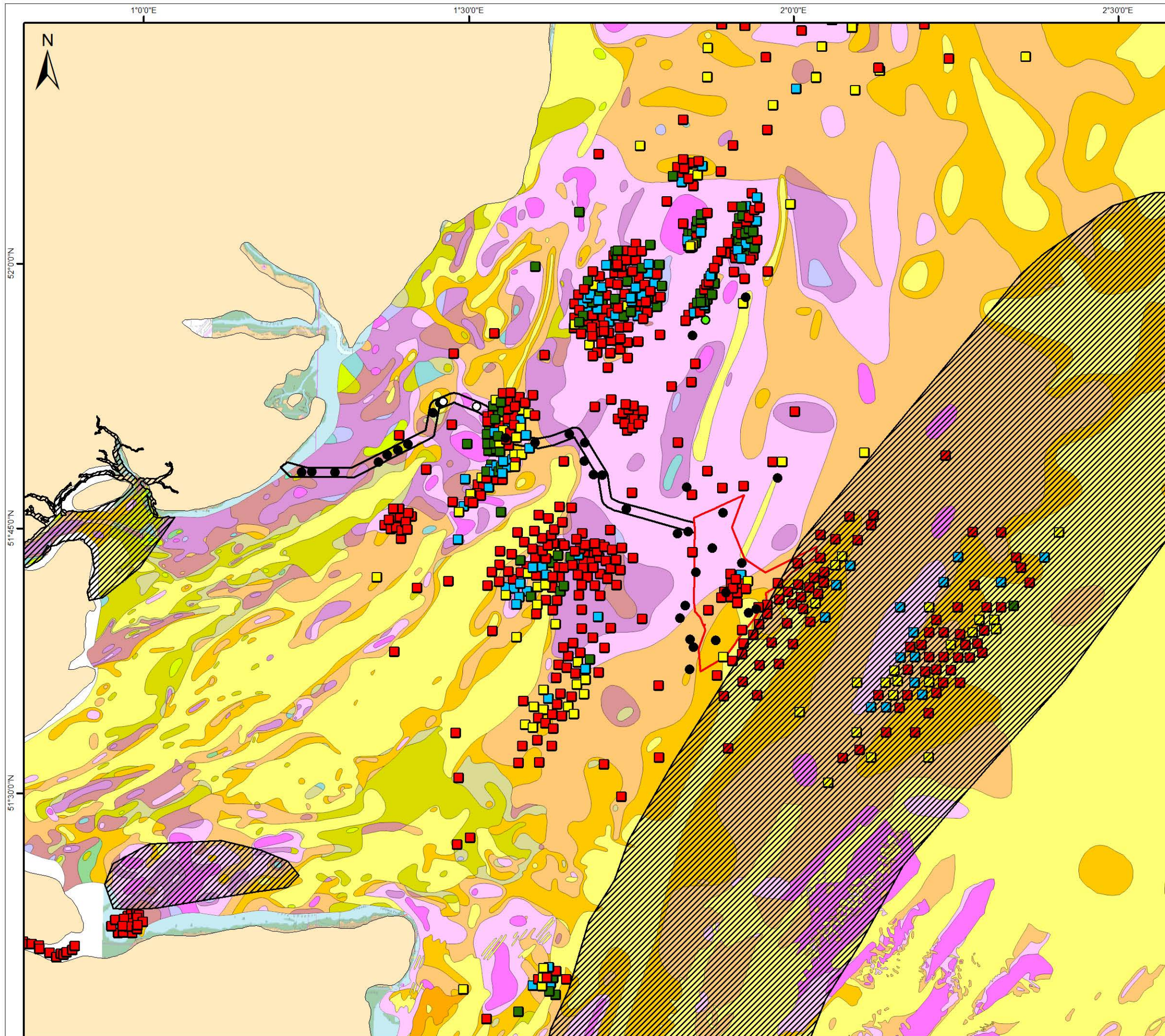
Drawing Title  
**HERRING SPAWNING AND NURSERY GROUNDS**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	

Drawing Number: **NF-05-EIA-TR-002**      Figure Number: **11.2**

Scale: Refer to map      Plot Size: A3      Datum: WGS84      Projection: UTM31N





**Legend**

- Herring Spawning Grounds<sup>1</sup>

**PSA Sediment Data (2021) - Herring Habitat Suitability<sup>2</sup>**

- Sub-prime
- Suitable
- Unsuitable

**CEFAS OneBenthic (2015-2019) Herring Habitat Suitability<sup>3</sup>**

- Prime
- Sub-Prime
- Suitable
- Unsuitable

**Sediment Type<sup>4</sup>**

- Mussel Deposit
- Gravel
- Gravelly Mud
- Gravelly Sand
- Muddy Gravel
- Mud
- Muddy Sandy Gravel
- Muddy Sand
- Slightly Gravelly Mud
- Slightly Gravelly Muddy Sand
- Slightly Gravelly Sand
- Slightly Gravelly Sandy Mud
- Sand
- Gravelly Muddy Sand
- Sandy Gravel
- Sandy Mud
- Gravel, Sand and Silt
- Diamicton
- Clay and Sand

0 1.25 2.5 5 nm  
0 2.5 5 10 km

Data Source:  
<sup>1</sup>Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup>Fugro. (2021) North Falls Array, ECR and Intertidal Benthic Ecology/Monitoring Report. December 2021.  
<sup>3</sup>OneBenthic database (2020). Contains public sector information licensed under the Open Government Licence v3.0  
<sup>4</sup>Contains British Geological Survey materials © UKRI 2023

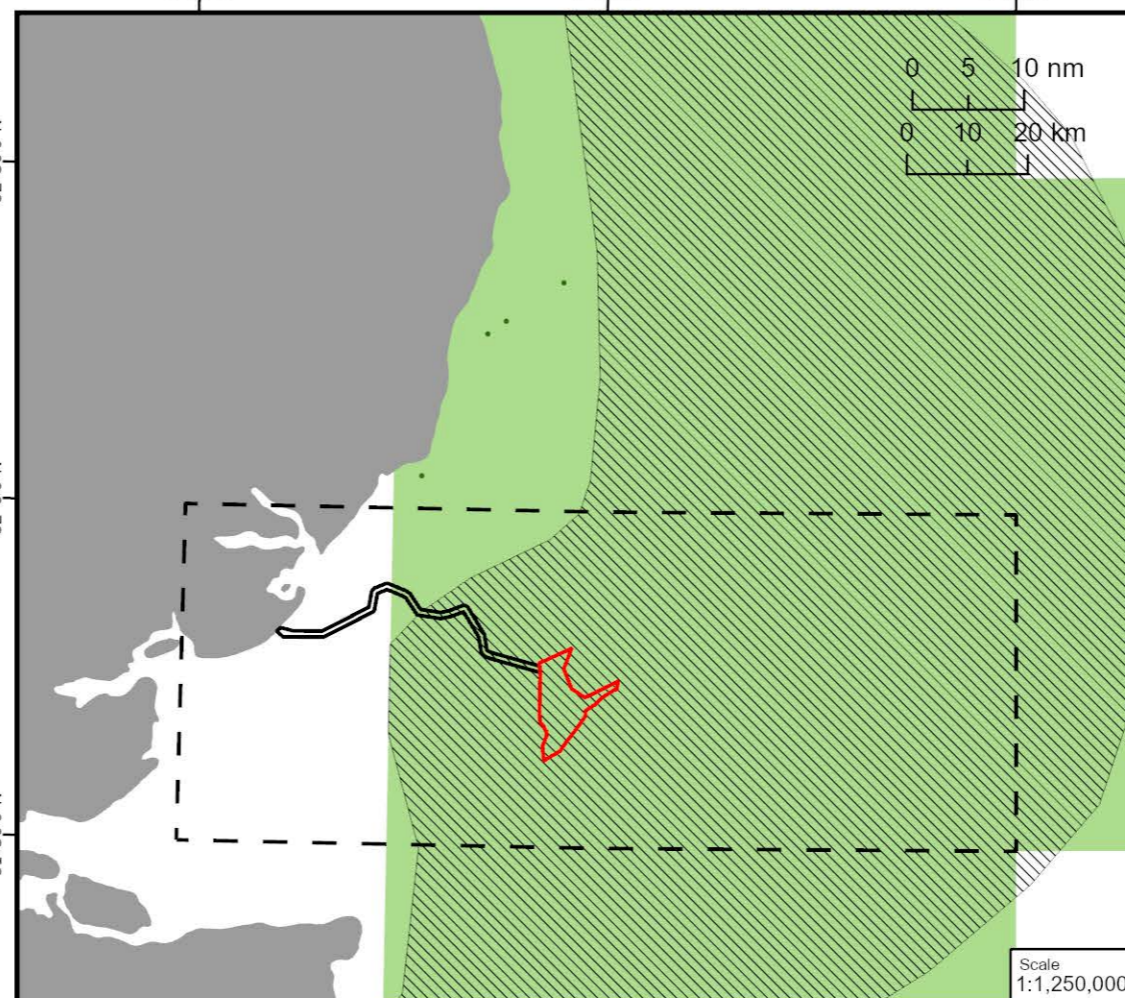
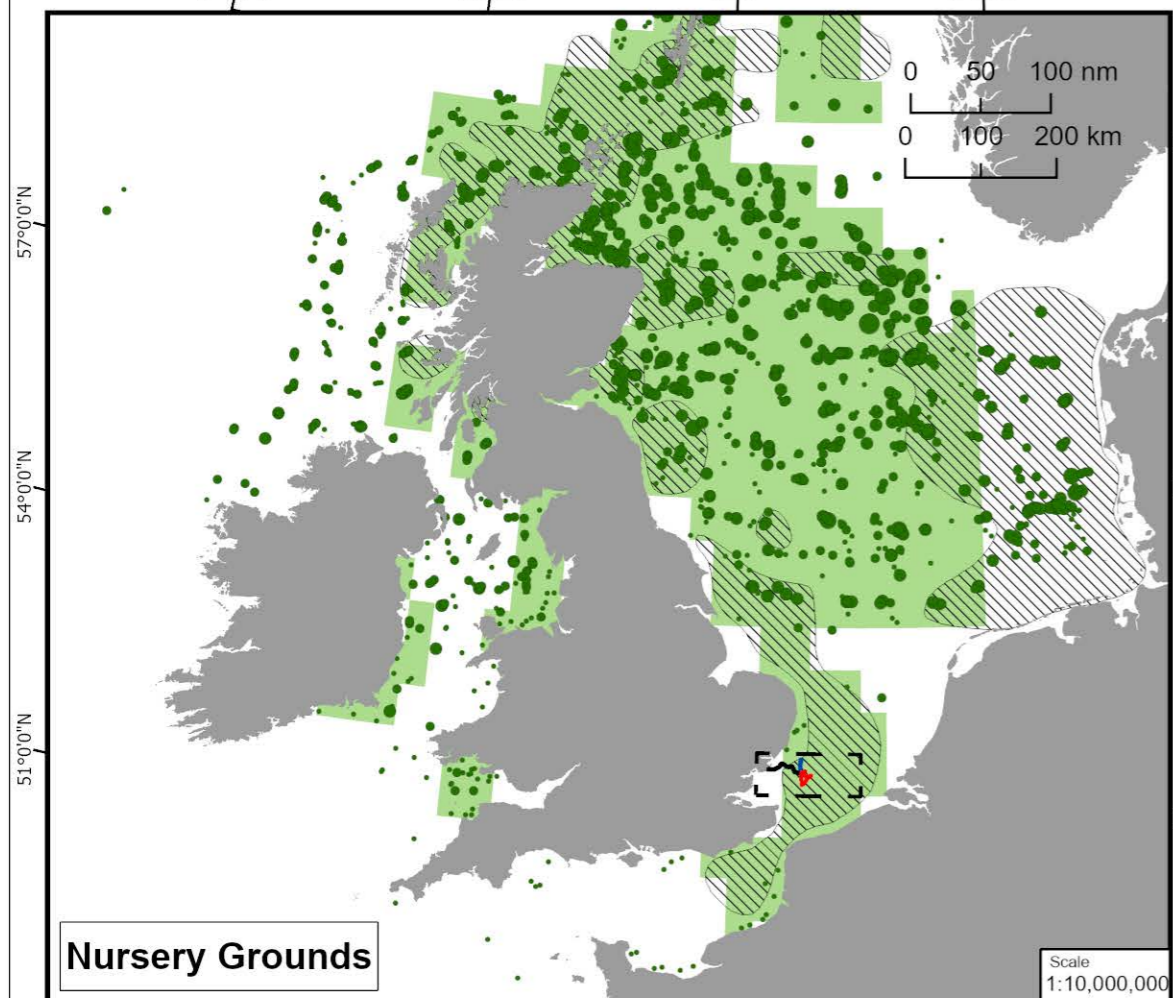
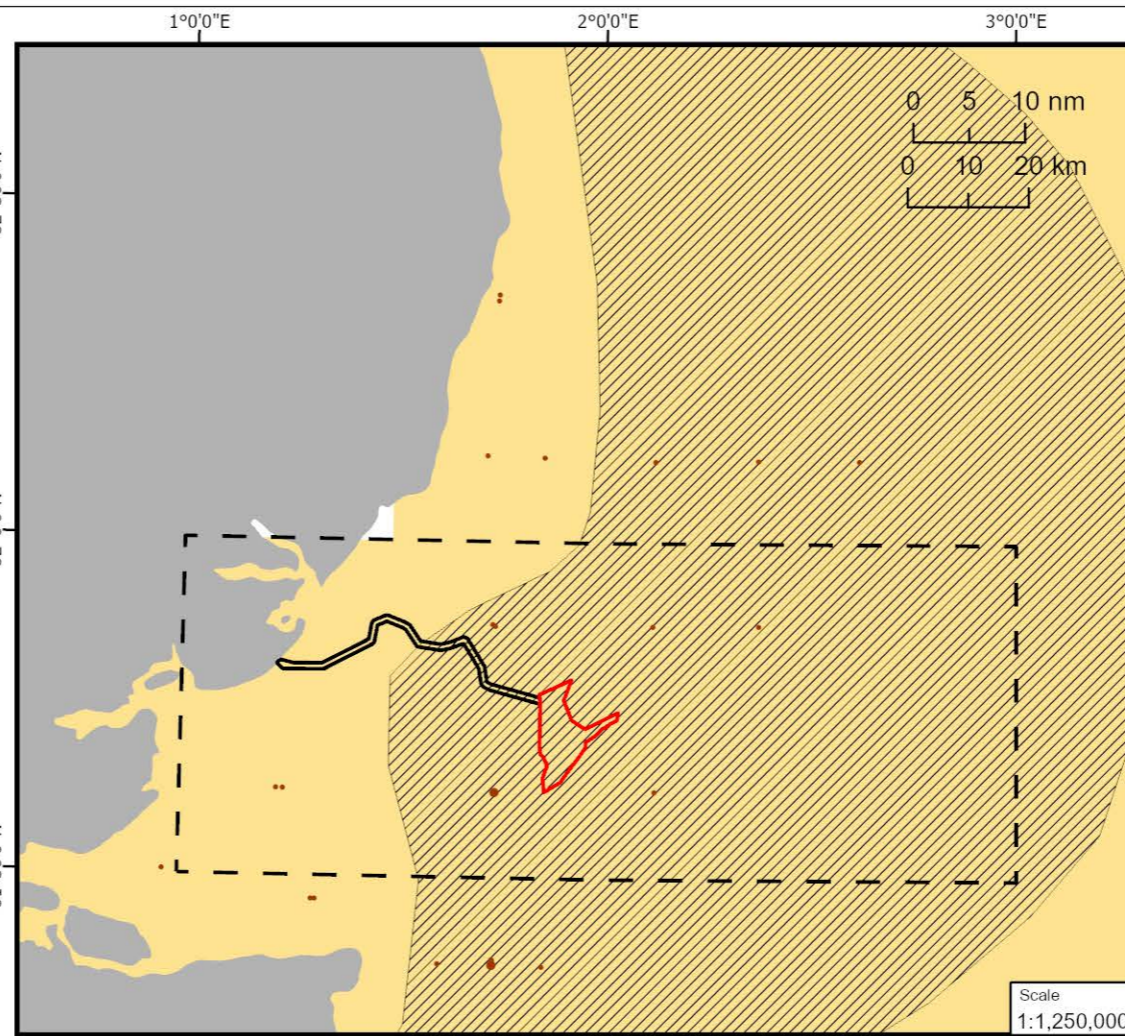
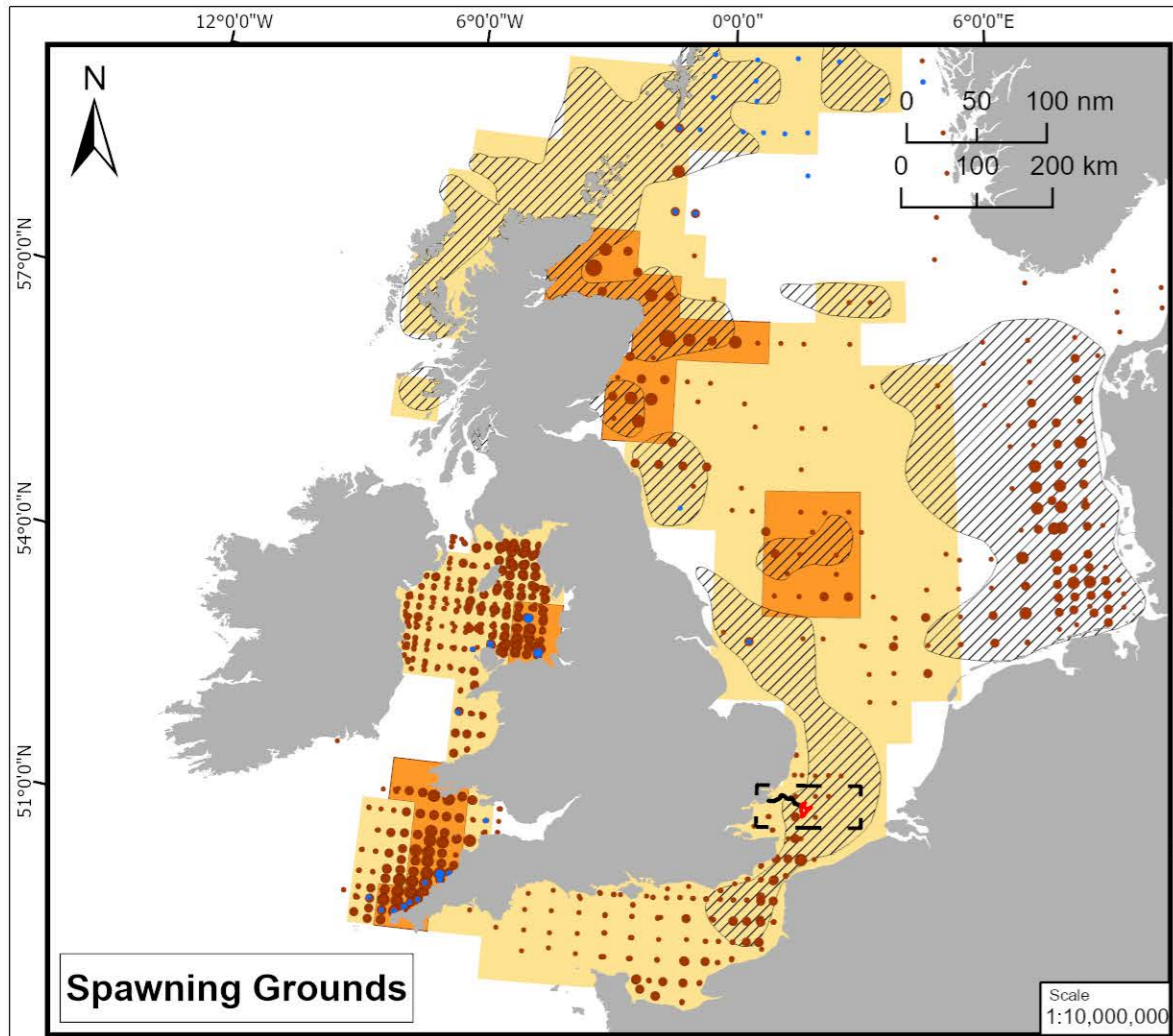
Drawing Title  
**HERRING HABITAT SUITABILITY BASED ON SEDIMENT CHARACTERISATION**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	-

Drawing Number <b>NF-05-EIA-ES-012</b>	Figure Number <b>11.3</b>
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Scale 1:400,000	Plot Size A3	Datum WGS84	Projection UTM31N
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**Legend**

- Export Cable Corridor
- North Falls Array Areas
- Study Area
- Sandeel Spawning Grounds<sup>1</sup>
  - High Intensity<sup>2</sup>
  - Low Intensity<sup>2</sup>
- Sandeel Nursery Grounds<sup>1</sup>
  - High Intensity<sup>2</sup>
  - Low Intensity<sup>2</sup>
- Eggs (n/m<sup>2</sup>)<sup>2</sup>**
  - >0 - 10
  - >10 - 100
  - >100 - 1,000
  - >1,000 - 10,000
  - >10,000
- Larvae (n/m<sup>2</sup>)<sup>2</sup>**
  - >0 - 10
  - >10 - 100
  - >100 - 1,000
  - >1,000 - 10,000
  - >10,000
- Nursery Grounds Maximum Juvenile Catch Rate (n/m<sup>2</sup>)<sup>2</sup>**
  - >0 - 10
  - >10 - 100
  - >100 - 1,000
  - >1,000 - 10,000
  - >10,000

Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0

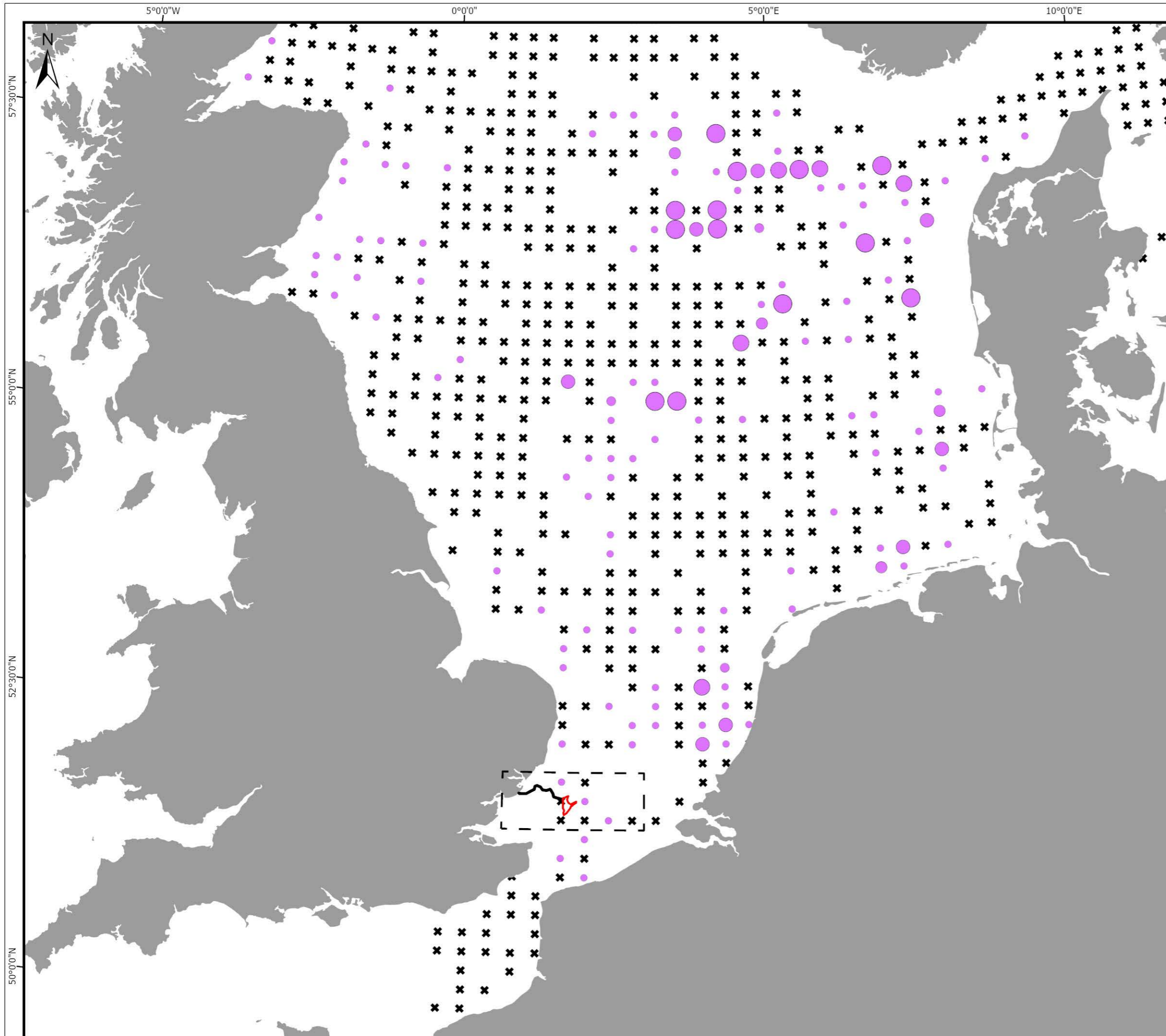
Drawing Title  
**SANDEEL SPAWNING AND NURSERY GROUNDS**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	

Drawing Number: **NF-05-EIA-TR-005**      Figure Number: **11.4**

Scale: Refer to map      Plot Size: A3      Datum: WGS84      Projection: UTM31N





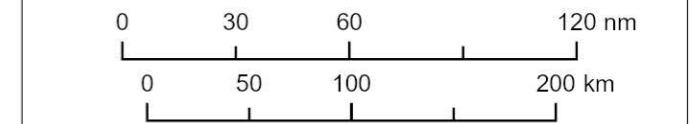
**Legend**

- North Falls Array Area
- Export Cable Corridor
- Study Area

**NS-IBTS CPUE 2017-2021 (No. individuals h<sup>-1</sup>)<sup>1</sup>**

**Lesser sandeel (*Ammodytes marinus*)**

- x 0
- >0 - 50
- >50 - 100
- >100 - 200
- >200 - 500
- >500 - 1,000
- >1,000



Data Source:  
<sup>1</sup> DATRAS 2022. Licenced under the Creative Commons Attribution 4.0 International Public License

Drawing Title

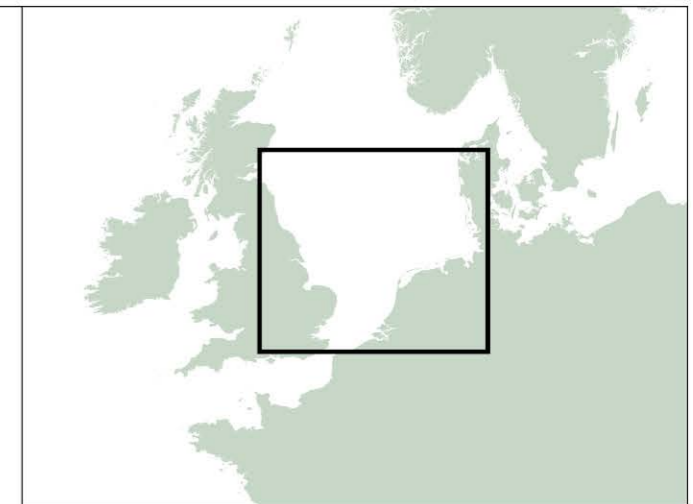
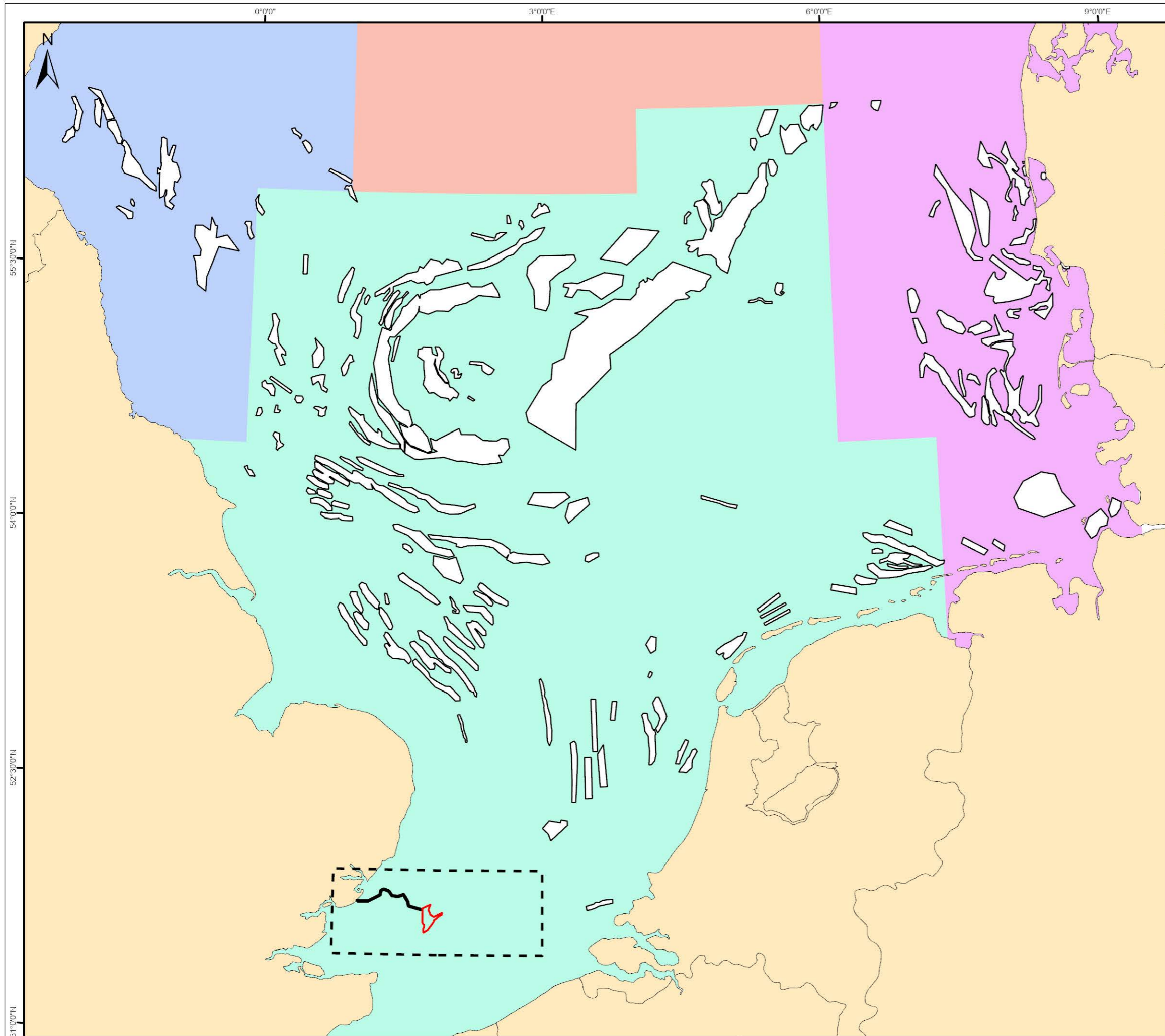
## LESSER SANDEEL CPUE NS-IBTS 2017-2021 - 5 YEARS AVERAGE

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	

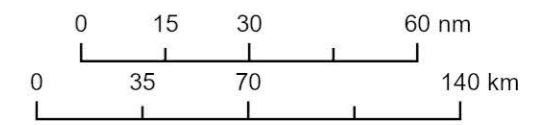
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Scale 1:3,700,000	Plot Size A3	Datum WGS84	Projection UTM31N
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- Legend**
- North Falls Array Area
  - Export Cable Corridor
  - Study Area
  - Sandeel fishing banks<sup>1</sup>
- Sandeel Assessment Areas**
- 1r
  - 2r
  - 3r
  - 4



Data Source:  
<sup>1</sup>Jensen et al. (2011). © 2010 International Council for the Exploration of the Sea.

**ICES SANDEEL ASSESSMENT AREAS IN THE NORTH SEA AND THE SANDEEL HABITAT AREAS AND LOCATIONS**

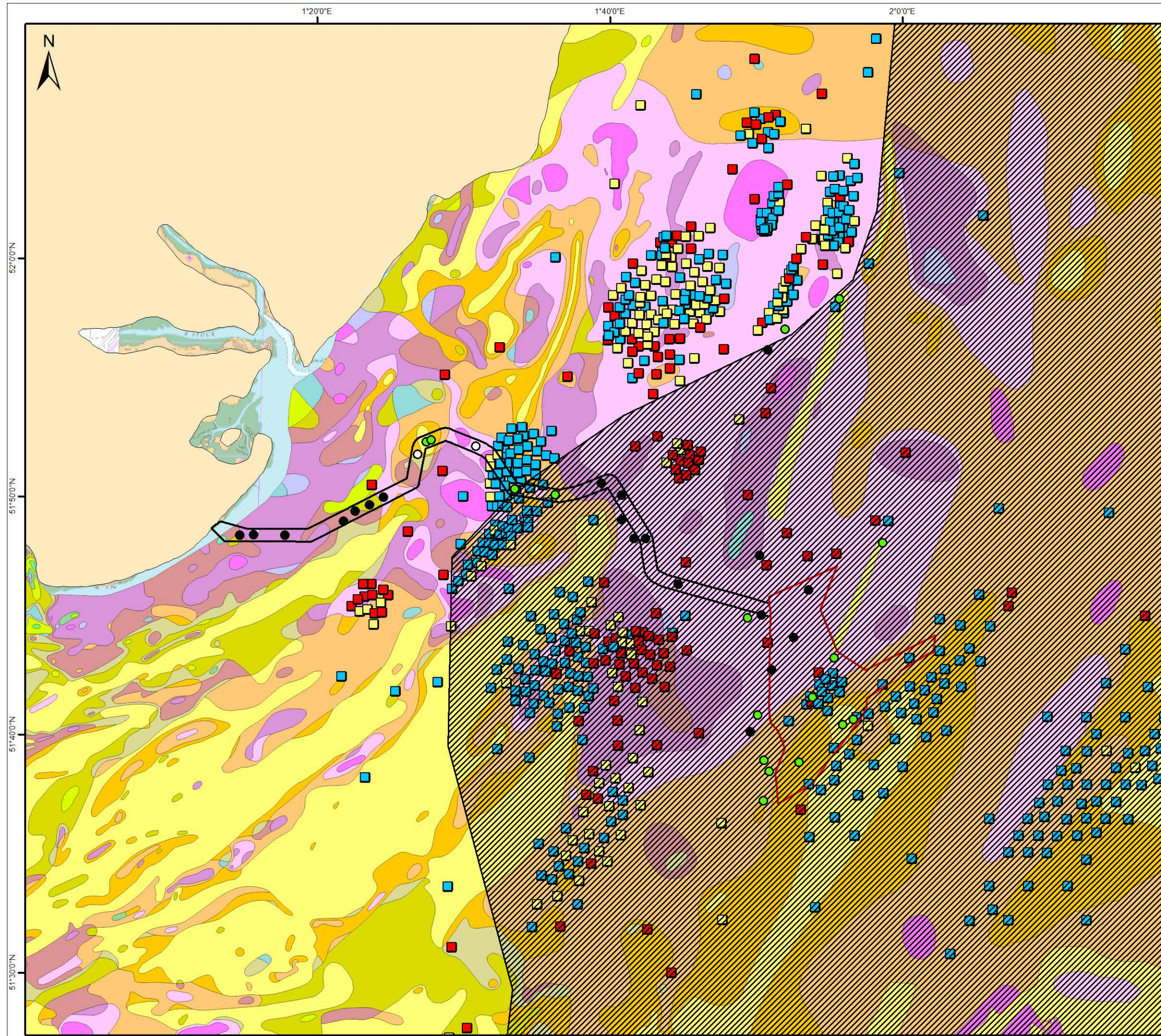
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01	24/04/24	First issue	JW	-

Drawing Number	Figure Number
<b>NF-05-EIA-ES-018</b>	<b>11.6</b>

Scale	Plot Size	Datum	Projection
1:2,500,000	A3	WGS 1984	WGS 1984 UTM Zone 31N







**Legend**

- Sandeel Spawning Grounds<sup>1</sup>
- PSA Sediment Data (2021) - Sandeel Habitat Suitability<sup>2</sup>
  - Preferred
  - Marginal
  - Unsuitable
- CEFAS OneBenthic (2015-2019) Sandeel Habitat Suitability<sup>3</sup>
  - Preferred
  - Marginal
  - Unsuitable

**Sediment Type<sup>4</sup>**

- Mussel Deposit
- Gravel
- Gravelly Mud
- Gravelly Sand
- Muddy Gravel
- Mud
- Muddy Sandy Gravel
- Muddy Sand
- Slightly Gravelly Mud
- Slightly Gravelly Muddy Sand
- Slightly Gravelly Sand
- Slightly Gravelly Sandy Mud
- Sand
- Gravelly Muddy Sand
- Sandy Gravel
- Sandy Mud
- Gravel, Sand and Silt
- Diamicton
- Clay and Sand

0 1 2 4 nm  
0 2 4 8 km

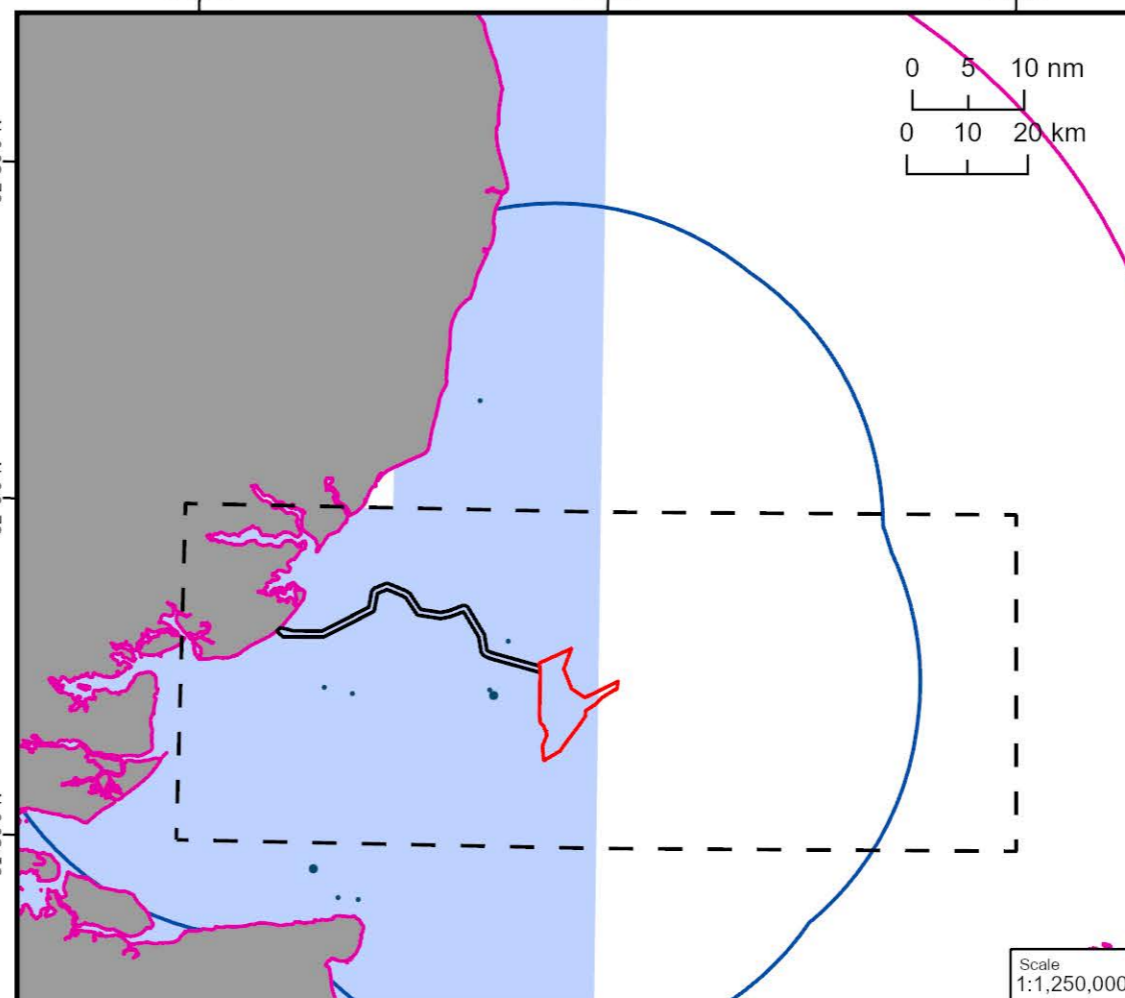
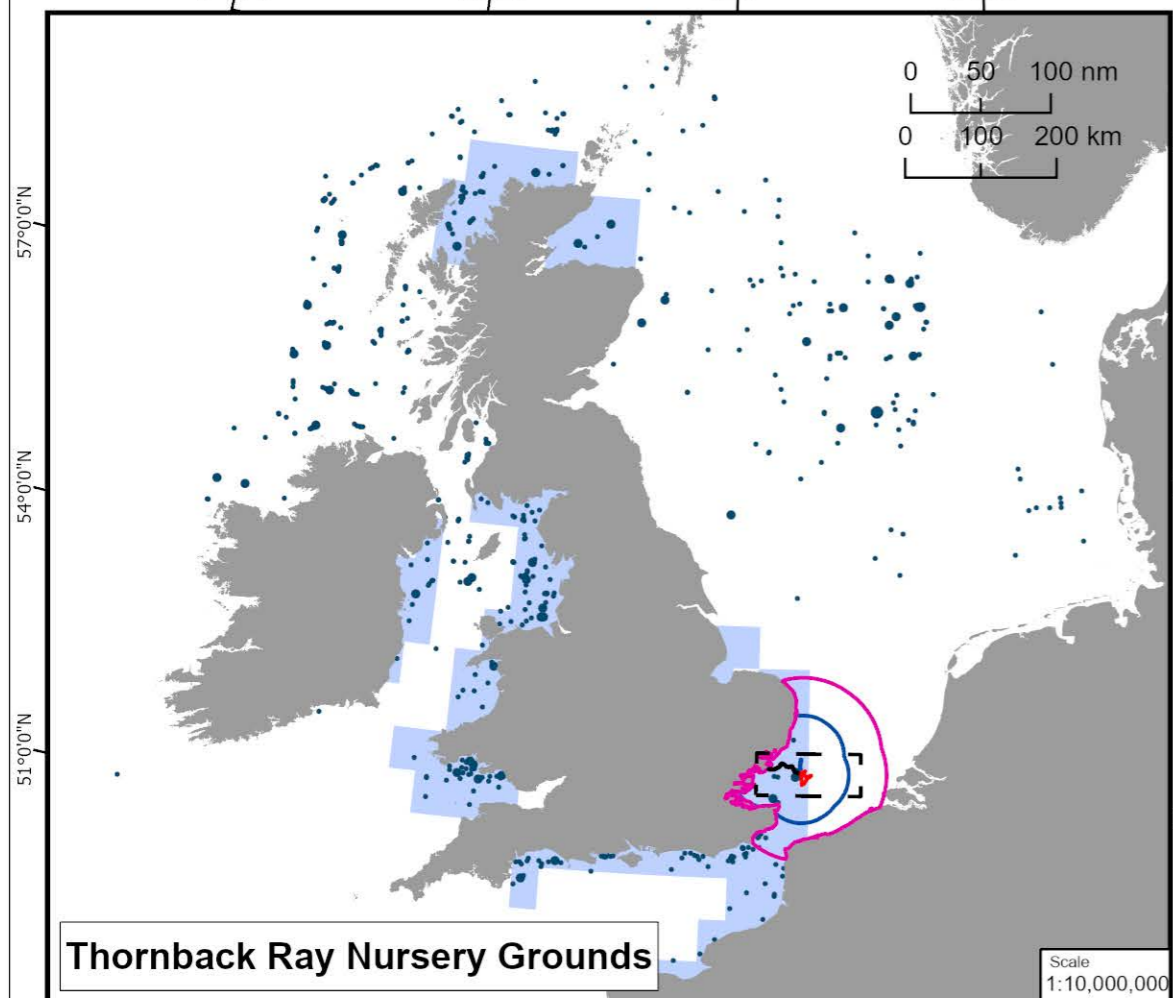
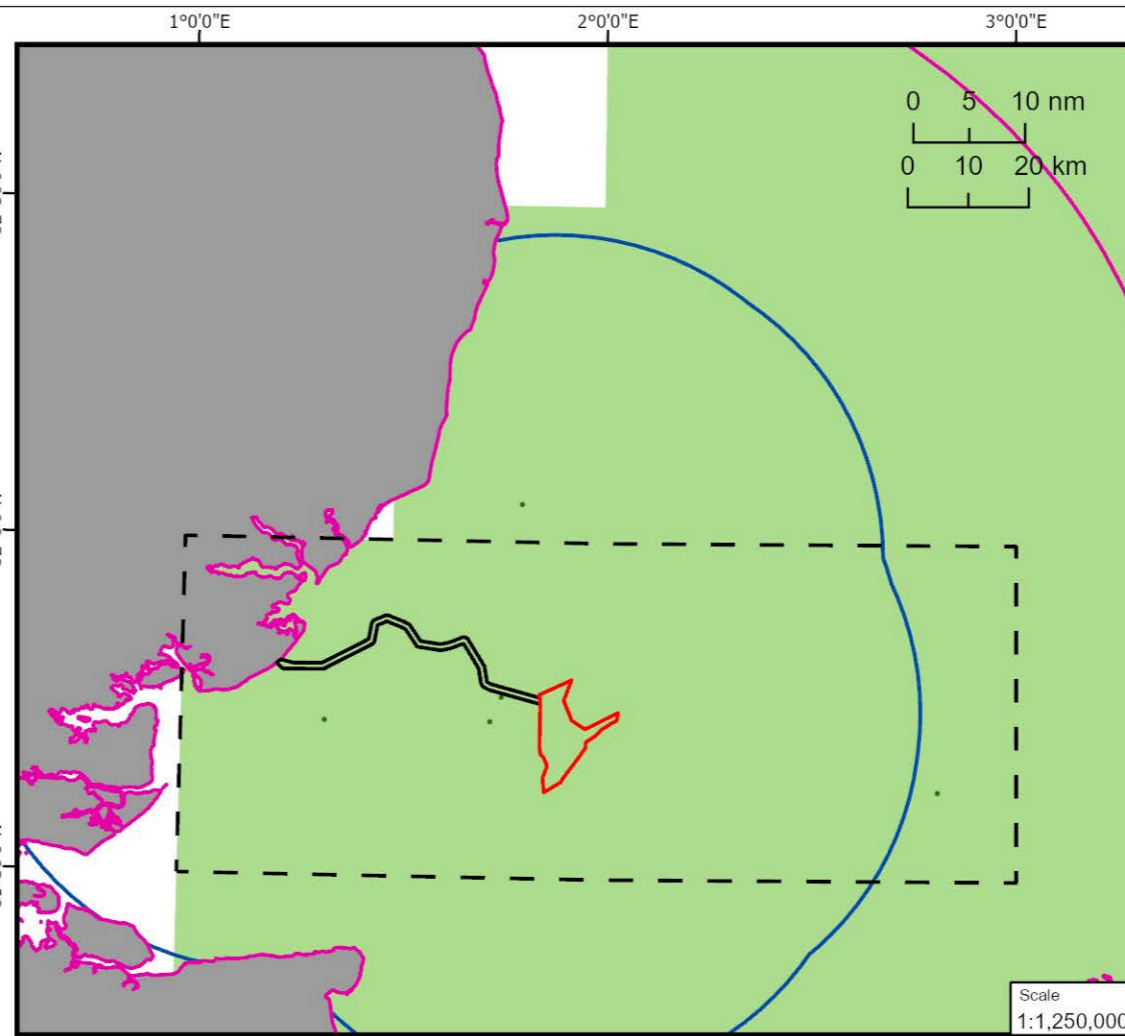
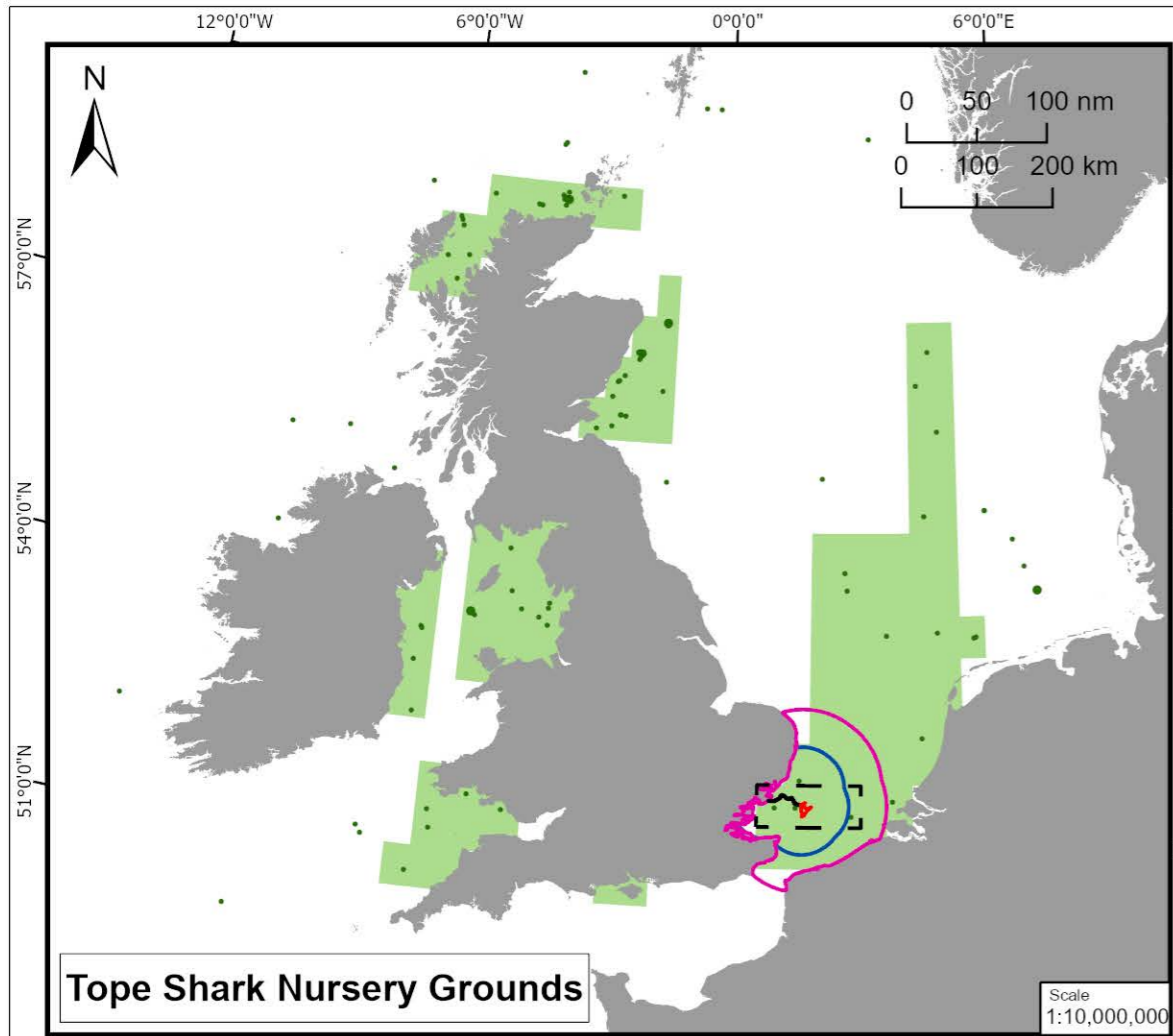
Data Source:  
<sup>1</sup>Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup>Fugro. (2021) North Falls Array, ECR and Intertidal Benthic Ecology/Monitoring Report. December 2021.  
<sup>3</sup>OneBenthic database (2020). Contains public sector information licensed under the Open Government Licence v3.0  
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Drawing Title  
**SANDEEL HABITAT SUITABILITY BASED ON SEDIMENT CHARACTERISATION**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	-

Drawing Number	Figure Number		
<b>NF-05-EIA-ES-013</b>	<b>11.7</b>		
Scale	Plot Size	Datum	Projection
1:295,000	A3	WGS84	WGS 1984 UTM Zone 31N





**Legend**

- North Falls Array Areas
- Export Cable Corridor
- Study Area
- 100km Project Buffer
- 50km Project Buffer

**Tope shark Nursery Grounds**

- High Intensity<sup>1</sup>
- Low Intensity<sup>1</sup>

**Nursery Grounds Maximum Juvenile Catch Rate (n/m<sup>2</sup>)<sup>1</sup>**

- >0 - 10
- >10 - 100
- >100 - 1,000
- >1,000 - 10,000
- >10,000

**Thornback ray Nursery Grounds**

- High Intensity<sup>1</sup>
- Low Intensity<sup>1</sup>

**Nursery Grounds Maximum Juvenile Catch Rate (n/m<sup>2</sup>)<sup>1</sup>**

- >0 - 10
- >10 - 100
- >100 - 1,000
- >1,000 - 10,000
- >10,000

Data Source:  
<sup>1</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0

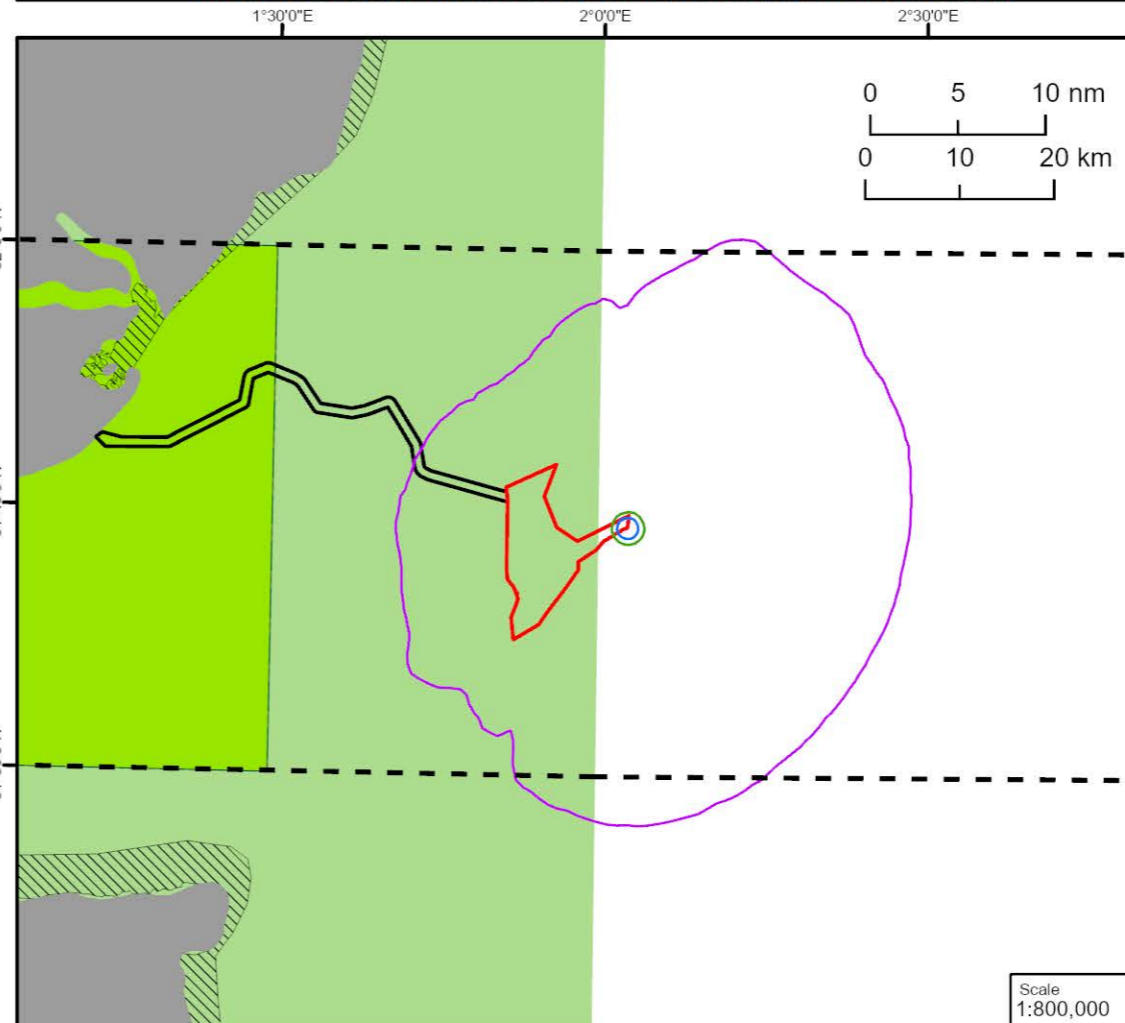
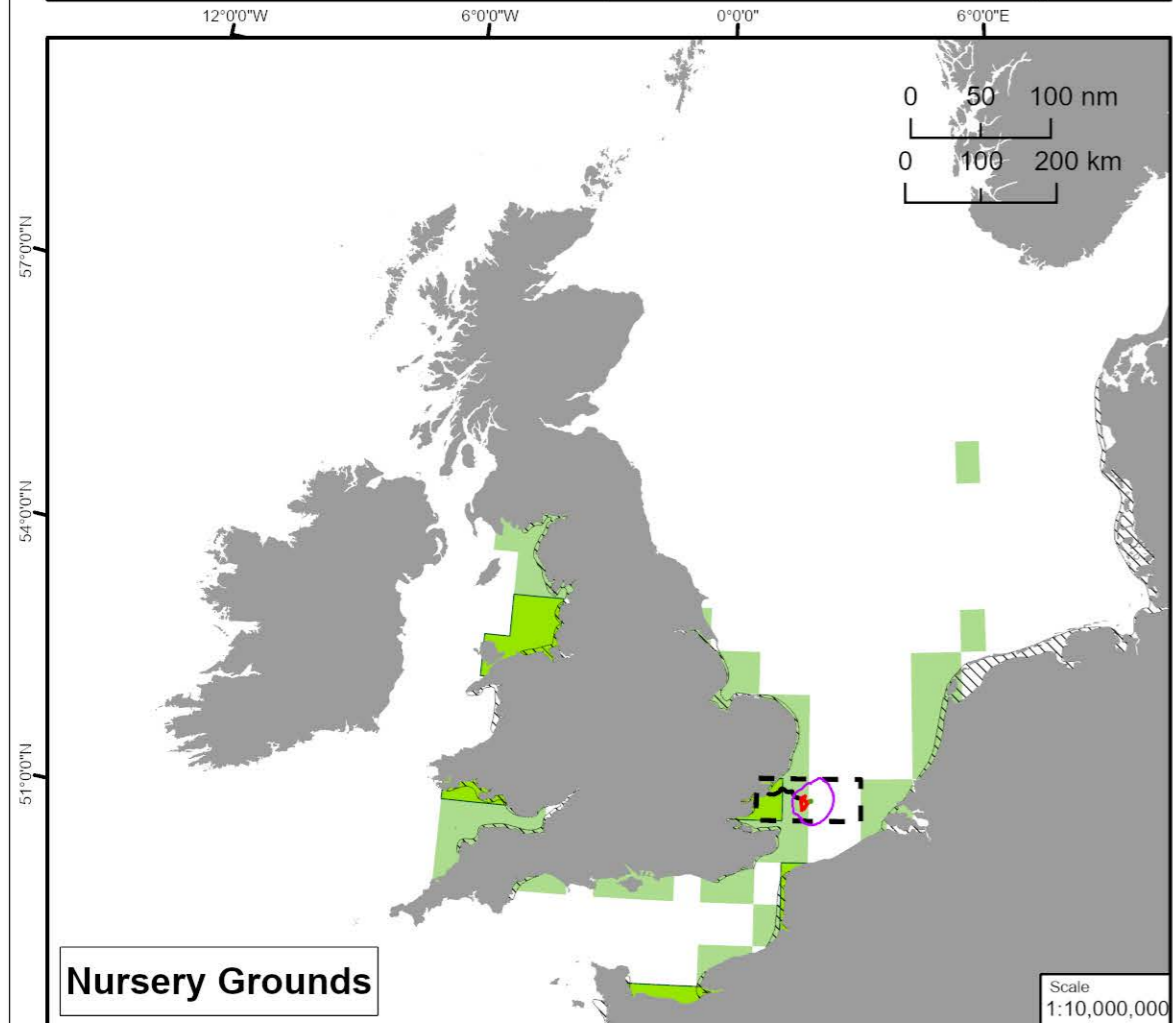
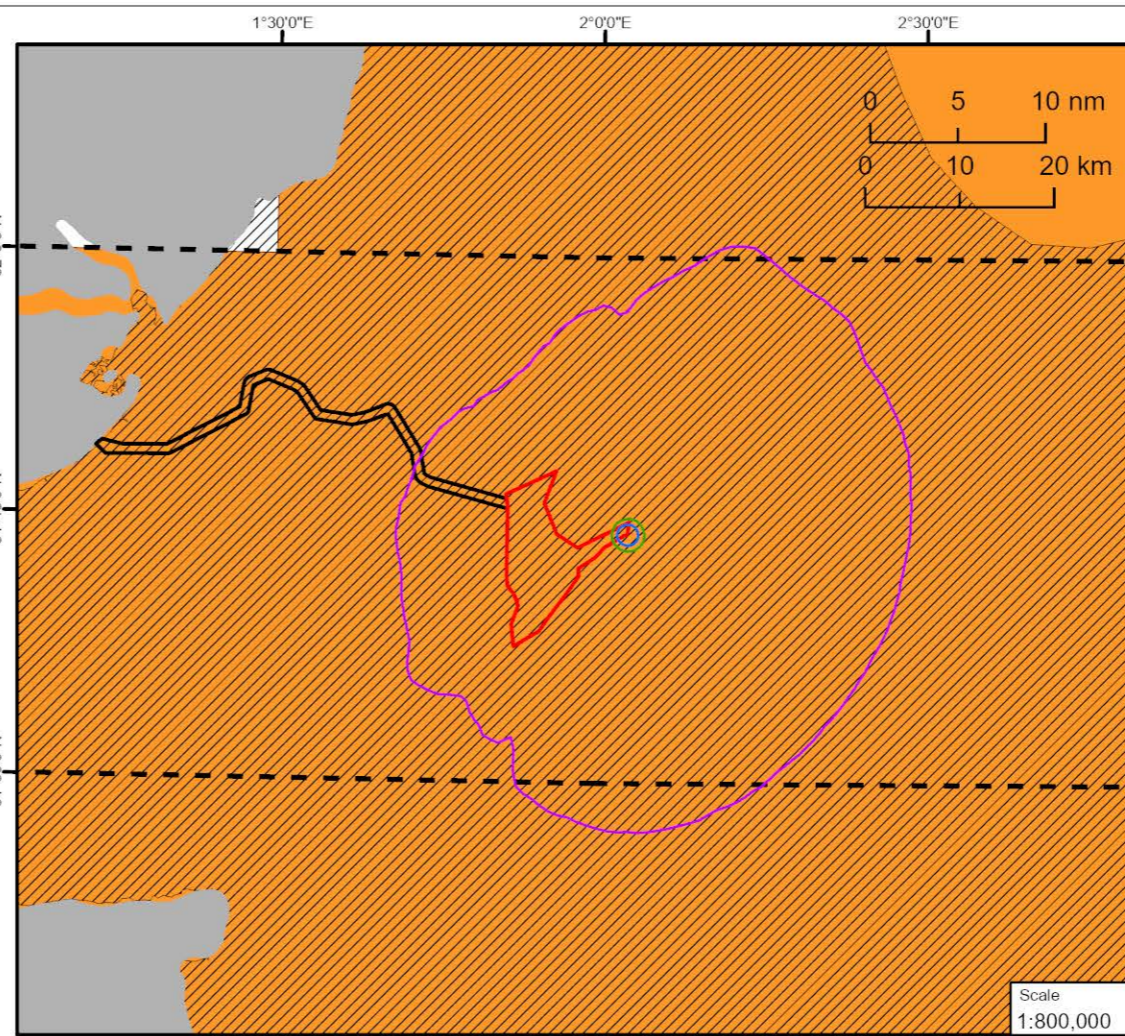
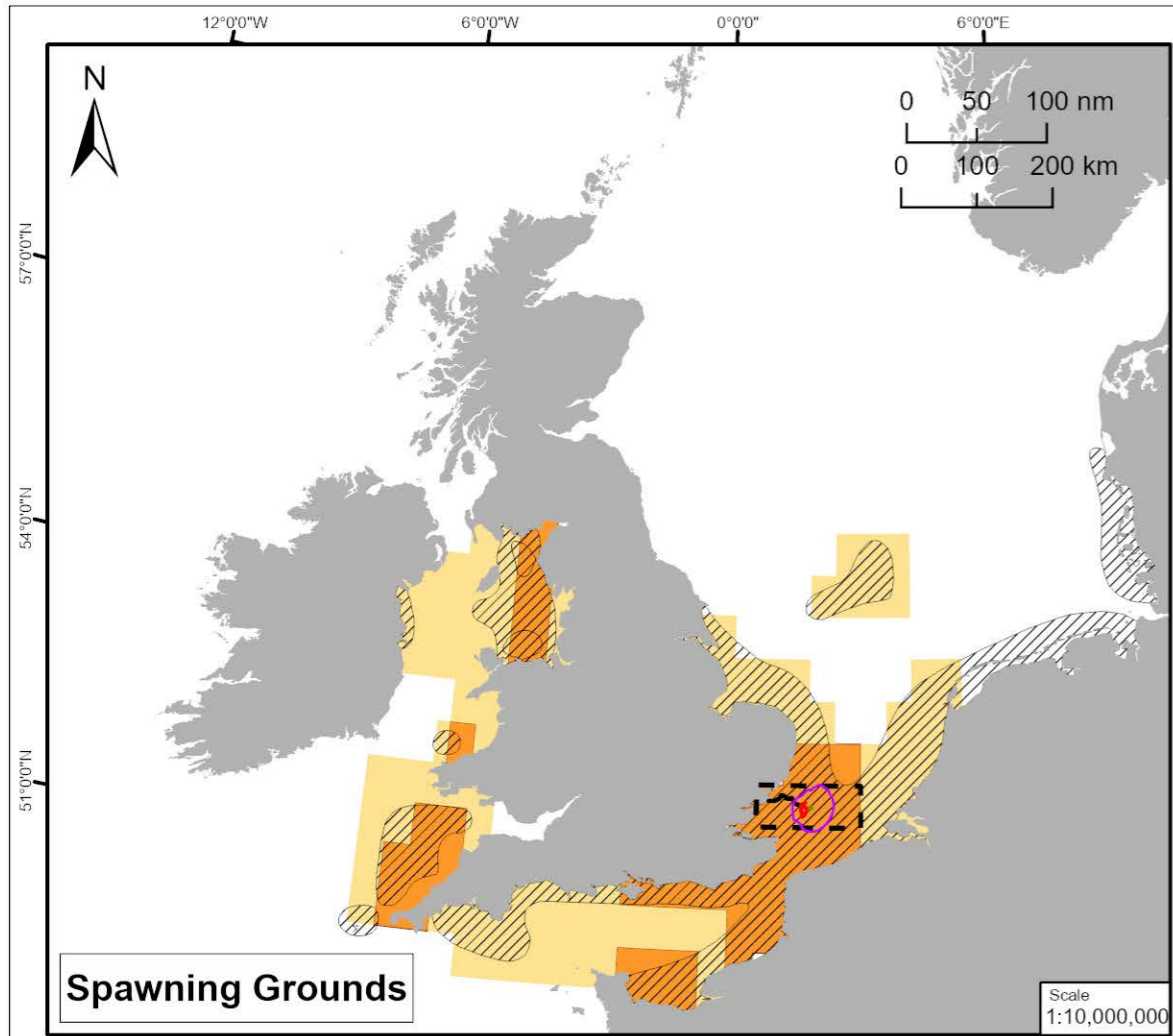
Drawing Title  
**TOPE SHARK AND THORNBACK RAY NURSERY GROUNDS**

Rev	Date	Remarks	Drwn	Chkd
00	24/04/24	First issue	JW	

Drawing Number <b>NF-05-EIA-TR-011v2</b>	Figure Number <b>11.8</b>
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Scale 1:10,000,000	Plot Size A3	Datum WGS84	Projection UTM31N
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**Legend**

- North Falls Array Areas
- Export Cable Corridor
- Study Area

**Sole Spawning Grounds**

- Spawning Grounds<sup>1</sup>
- High Intensity<sup>2</sup>
- Low Intensity<sup>2</sup>

**Sole Nursery Grounds**

- Nursery Grounds<sup>1</sup>
- High Intensity<sup>2</sup>
- Low Intensity<sup>2</sup>

**Noise Exposure Criteria**<sup>3</sup>

- Mortality and Potential Mortal Injury (219 dB)
- Recoverable Injury (216 dB)
- Temporary Threshold Shift (186 dB)

Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>3</sup> Subacoustech 2023

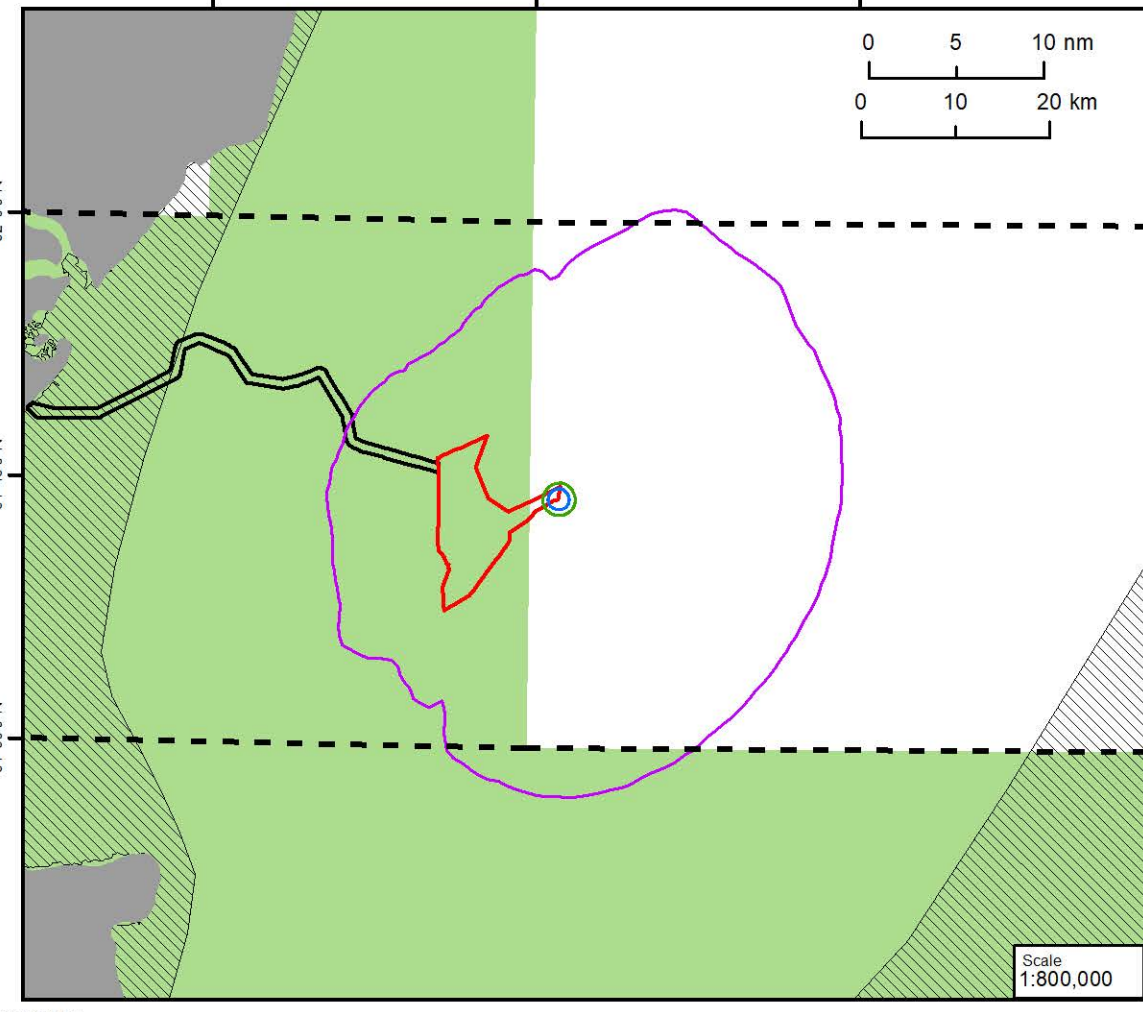
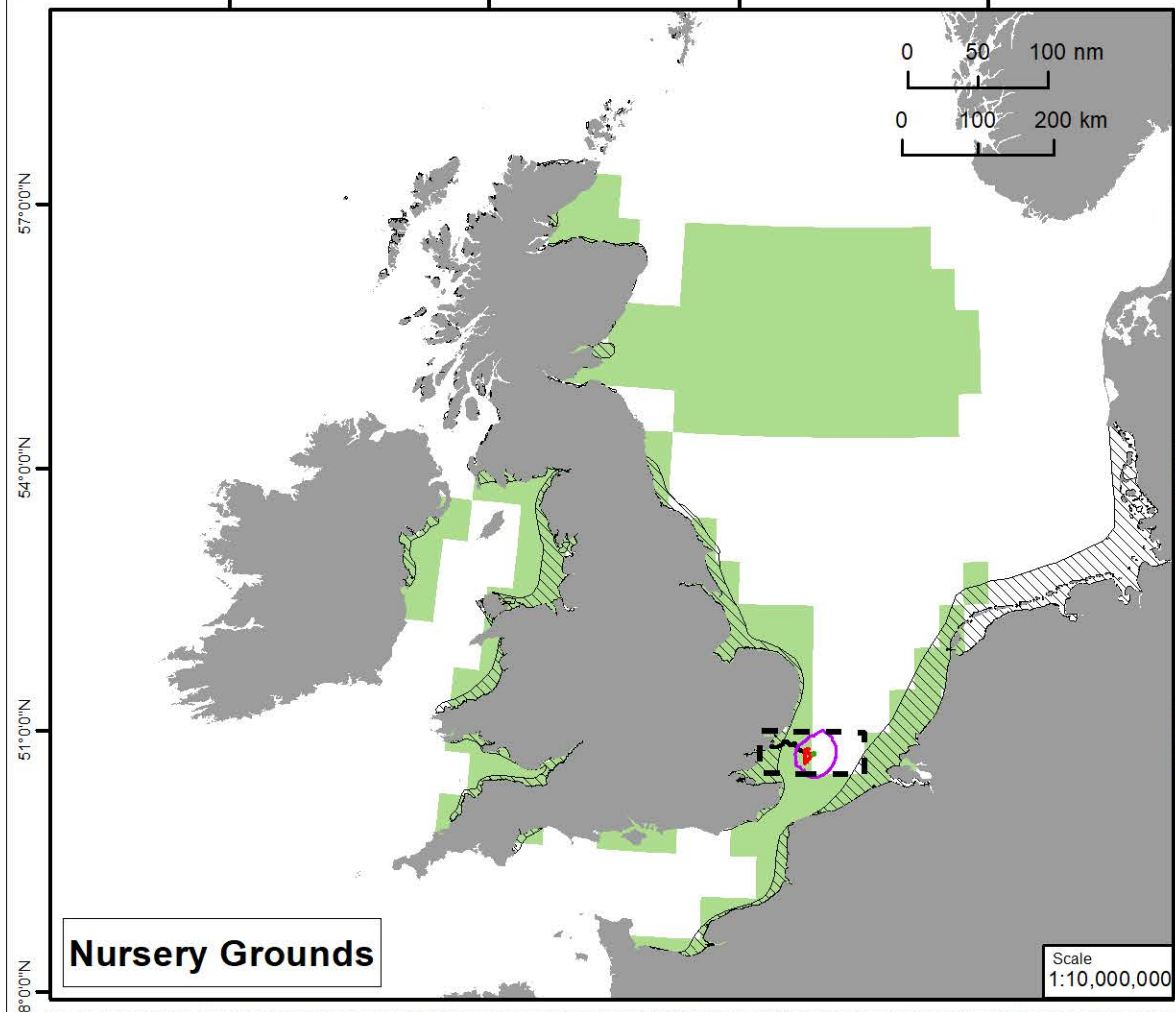
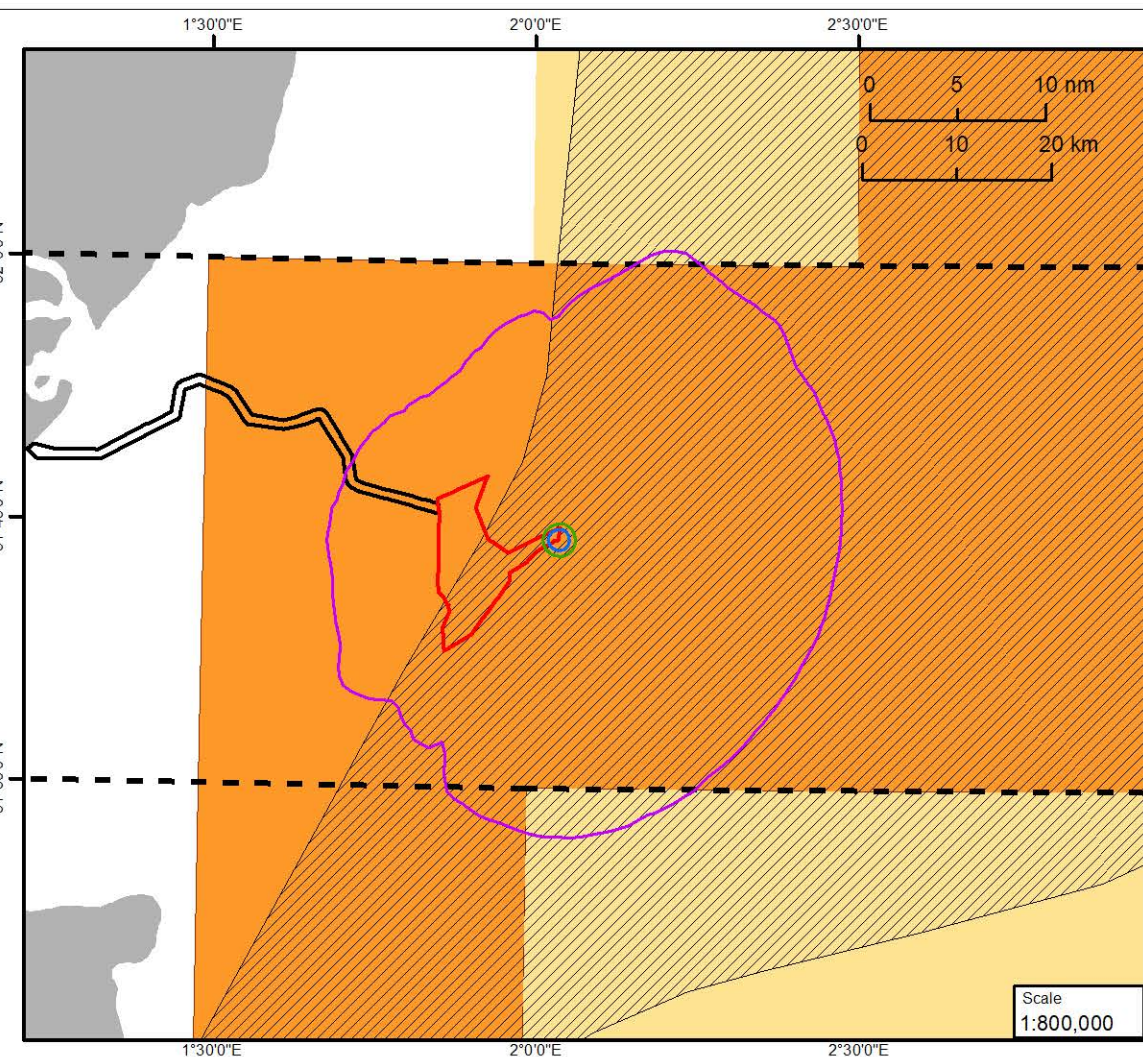
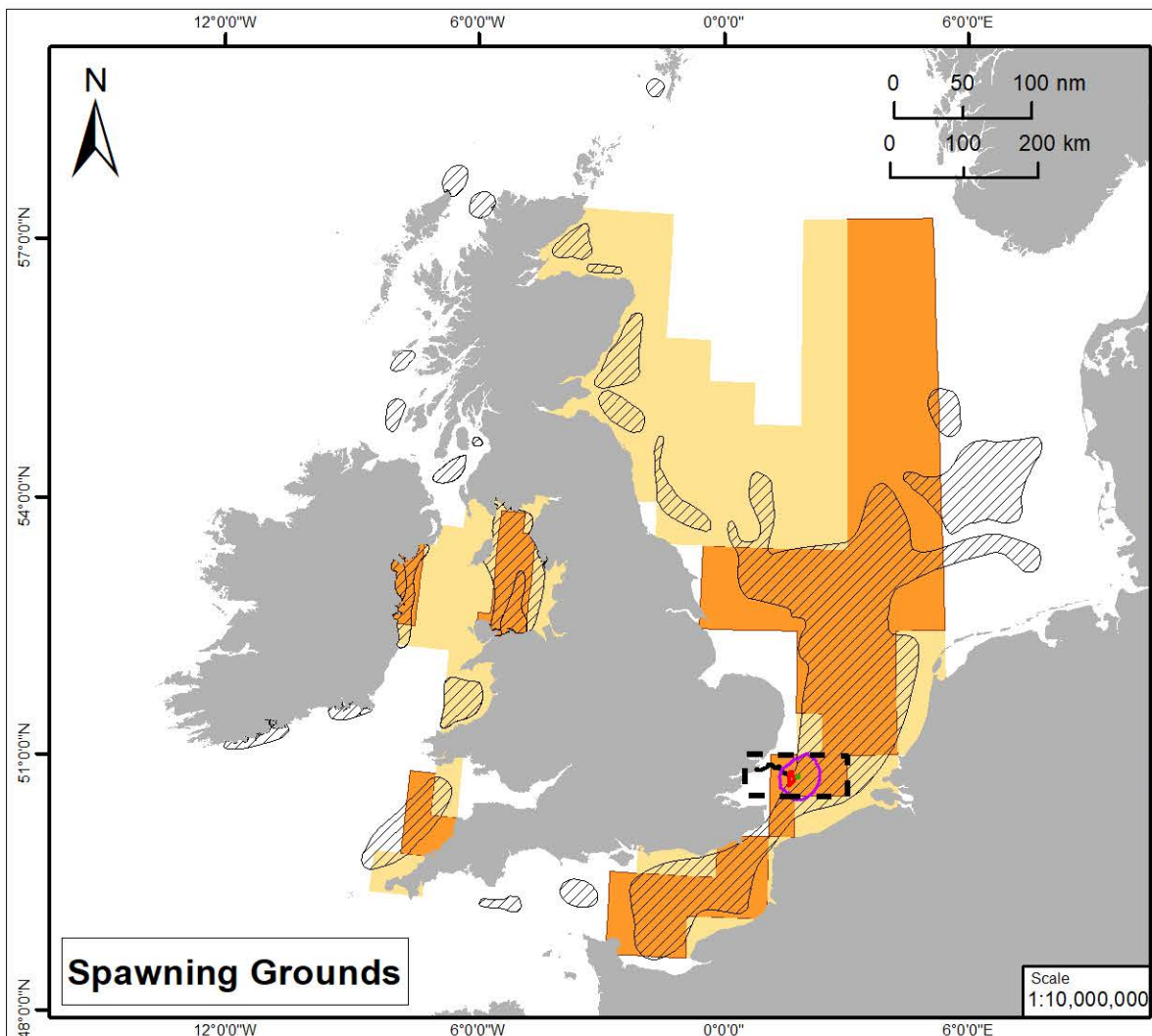
Drawing Title

## SOLE SPAWNING AND NURSERY GROUNDS NOISE EXPOSURE CONTOURS

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	-

Drawing Number: **NF-05-EIA-ES-001v2**      Figure Number: **11.9**

Scale: Refer to map      Plot Size: A3      Datum: WGS84      Projection: UTM31N



**Legend**

- North Falls Array Areas
- Export Cable Corridor
- Study Area

**Plaice Spawning Grounds**

- Spawning Grounds <sup>1</sup>
- High Intensity <sup>2</sup>
- Low Intensity <sup>2</sup>

**Plaice Nursery Grounds**

- Nursery Grounds <sup>1</sup>
- High Intensity <sup>2</sup>
- Low Intensity <sup>2</sup>

**Noise Exposure Criteria** <sup>3</sup>

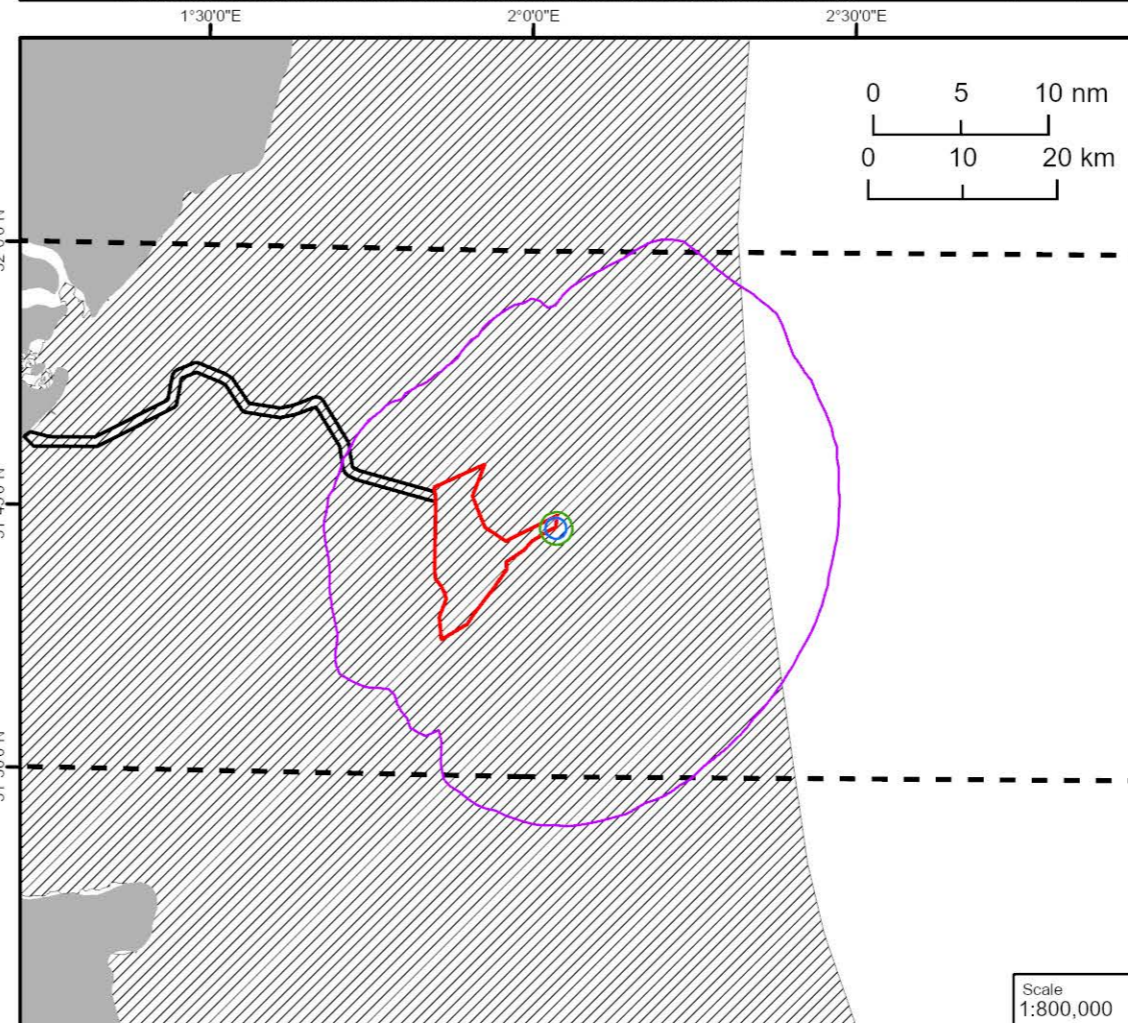
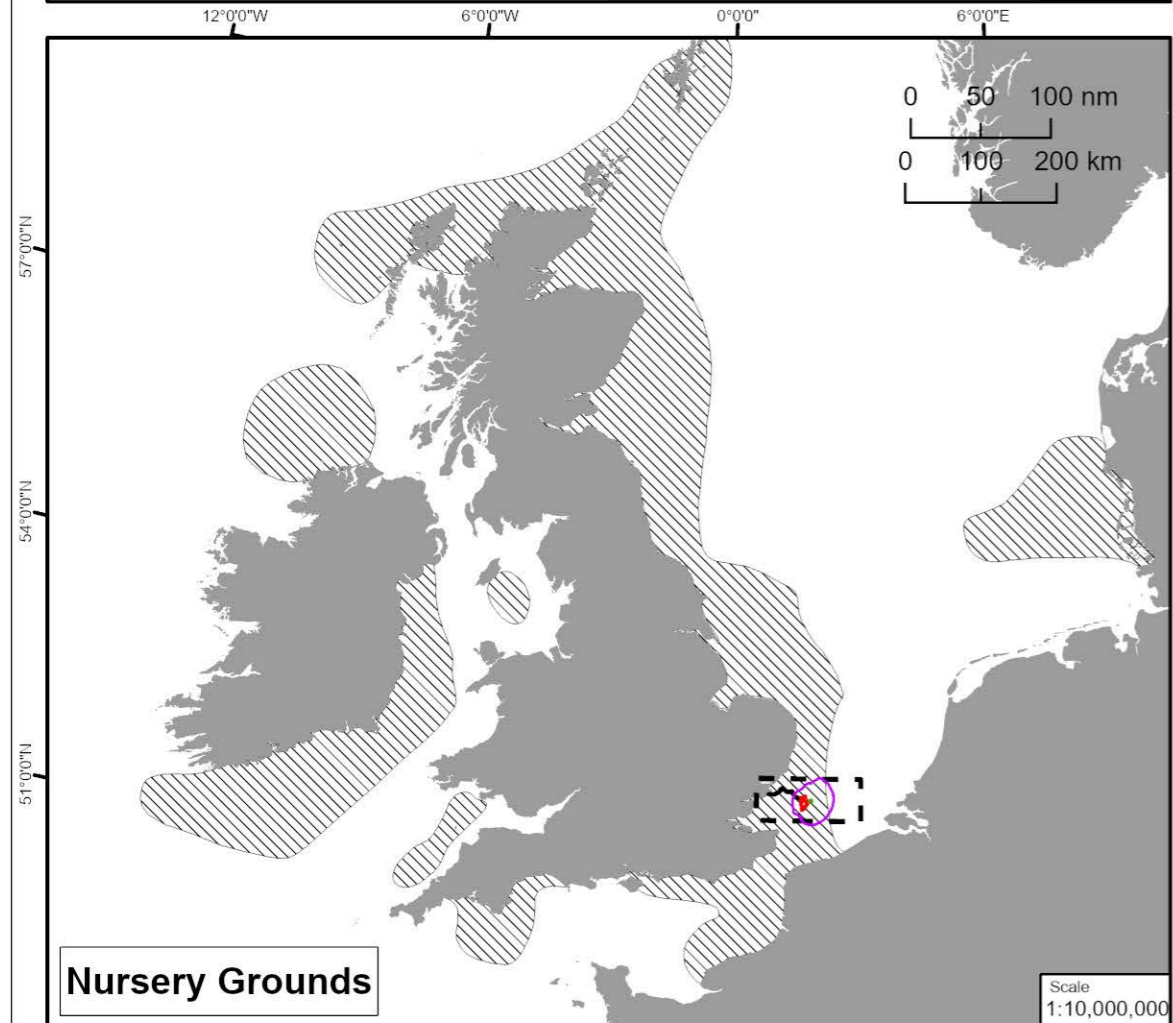
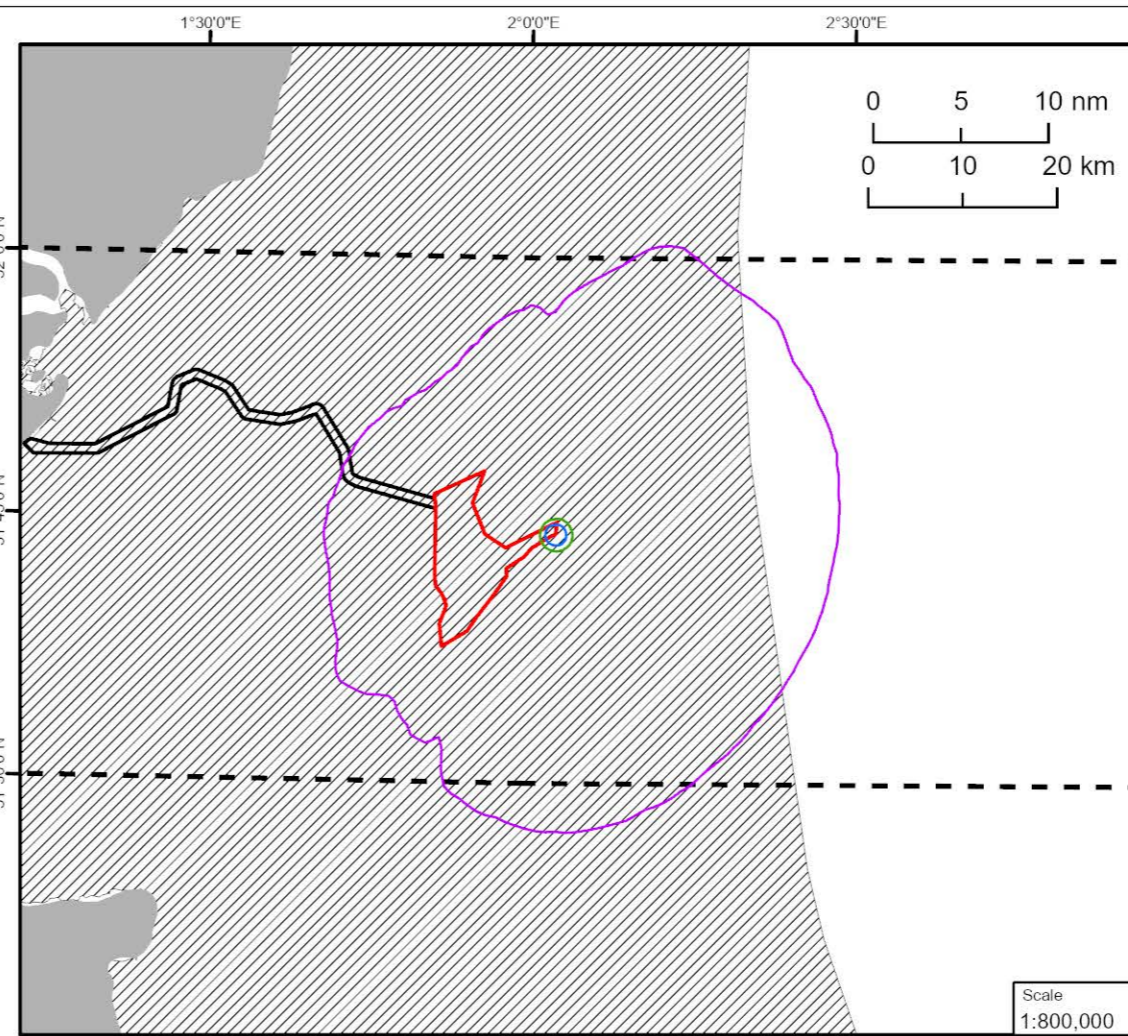
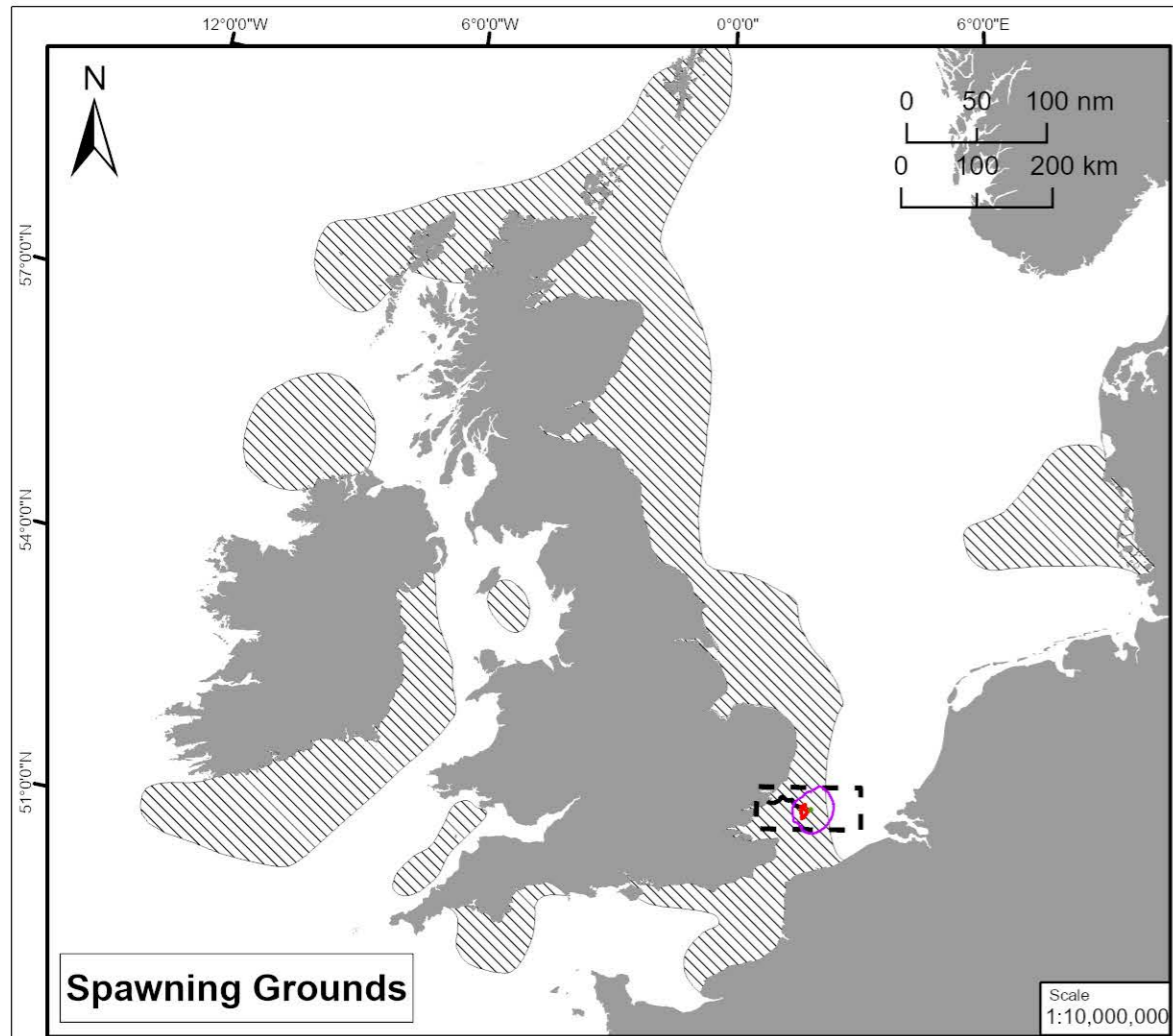
- Mortality and Potential Mortal Injury (219 dB)
- Recoverable Injury (216 dB)
- Temporary Threshold Shift (186 dB)

Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>3</sup> Subacoustech 2023

**PLAICE SPAWNING AND NURSERY GROUNDS NOISE EXPOSURE CONTOURS**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	-

Drawing Number <b>NF-05-EIA-ES-005v2</b>	Figure Number <b>Fig. 11.10</b>
Scale Refer to map	Plot Size A3
Datum WGS84	Projection UTM31N



- Legend**
- Export Cable Corridor
  - North Falls Array Area
  - Study Area
  - Lemon Sole Spawning Grounds**
  - Spawning Grounds <sup>1</sup>
  - Lemon Sole Nursery Grounds**
  - Nursery Grounds <sup>1</sup>
  - Noise Exposure Criteria <sup>2</sup>**
  - Mortality and Potential Mortal Injury (219 dB)
  - Recoverable Injury (216 dB)
  - Temporary Threshold Shift (186 dB)

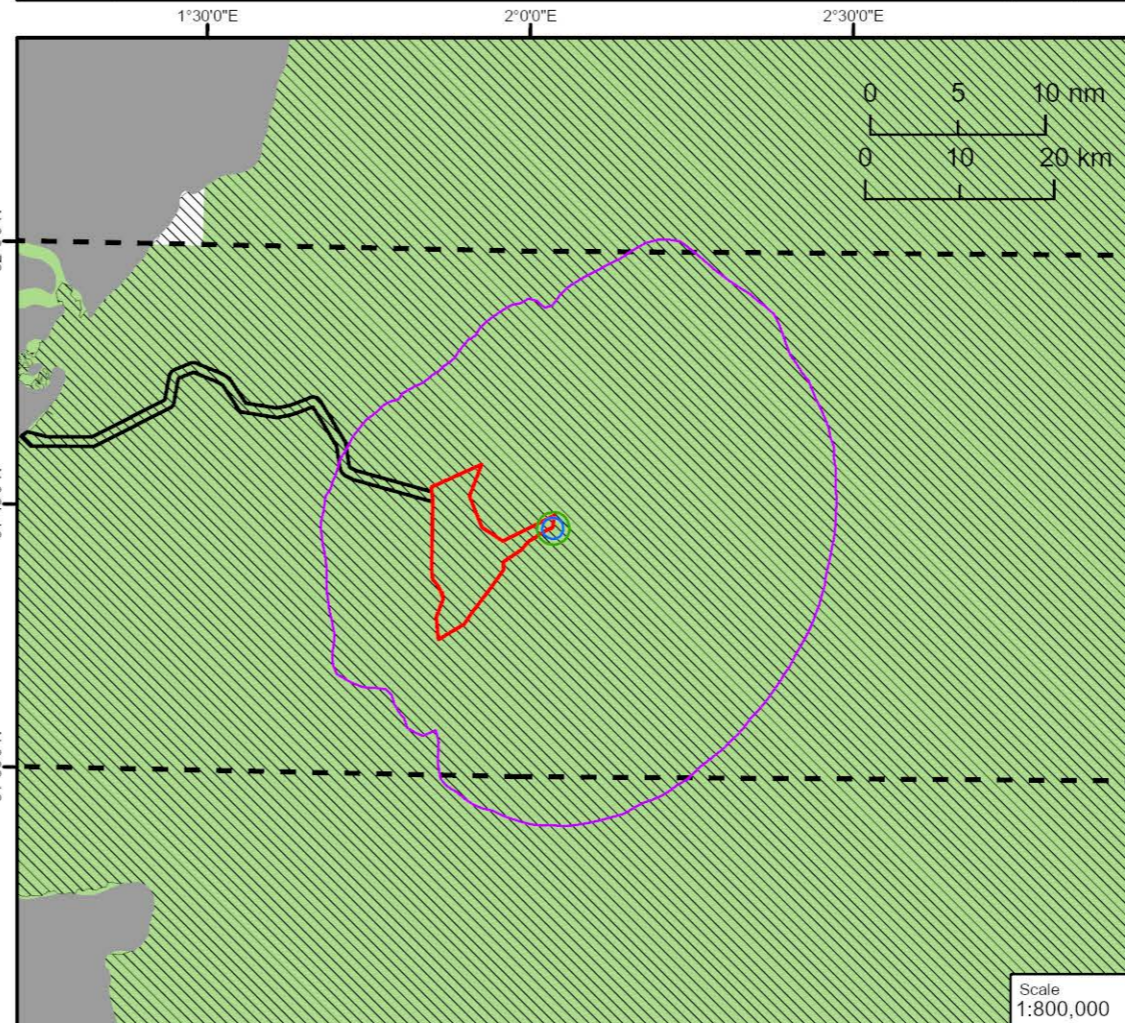
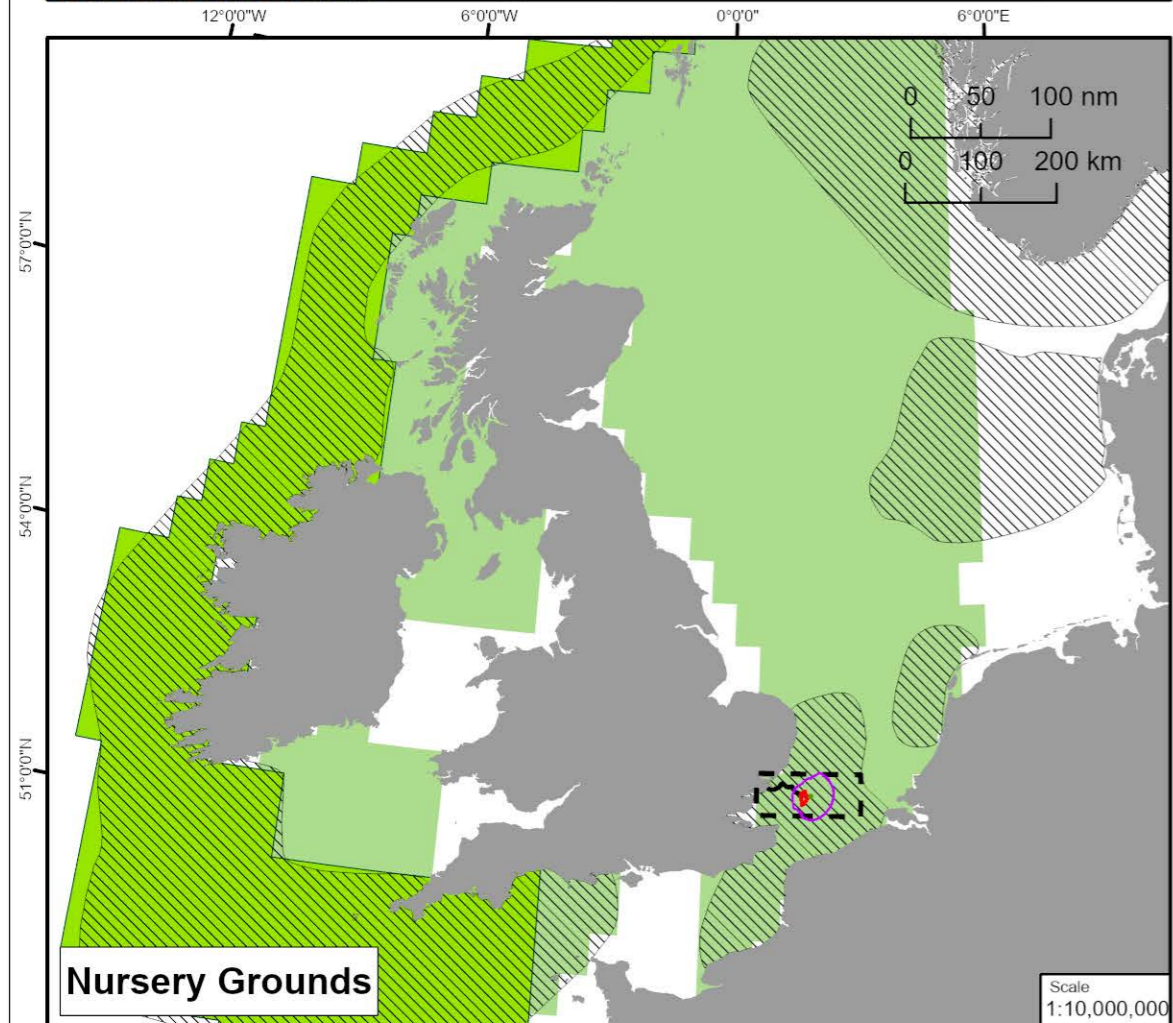
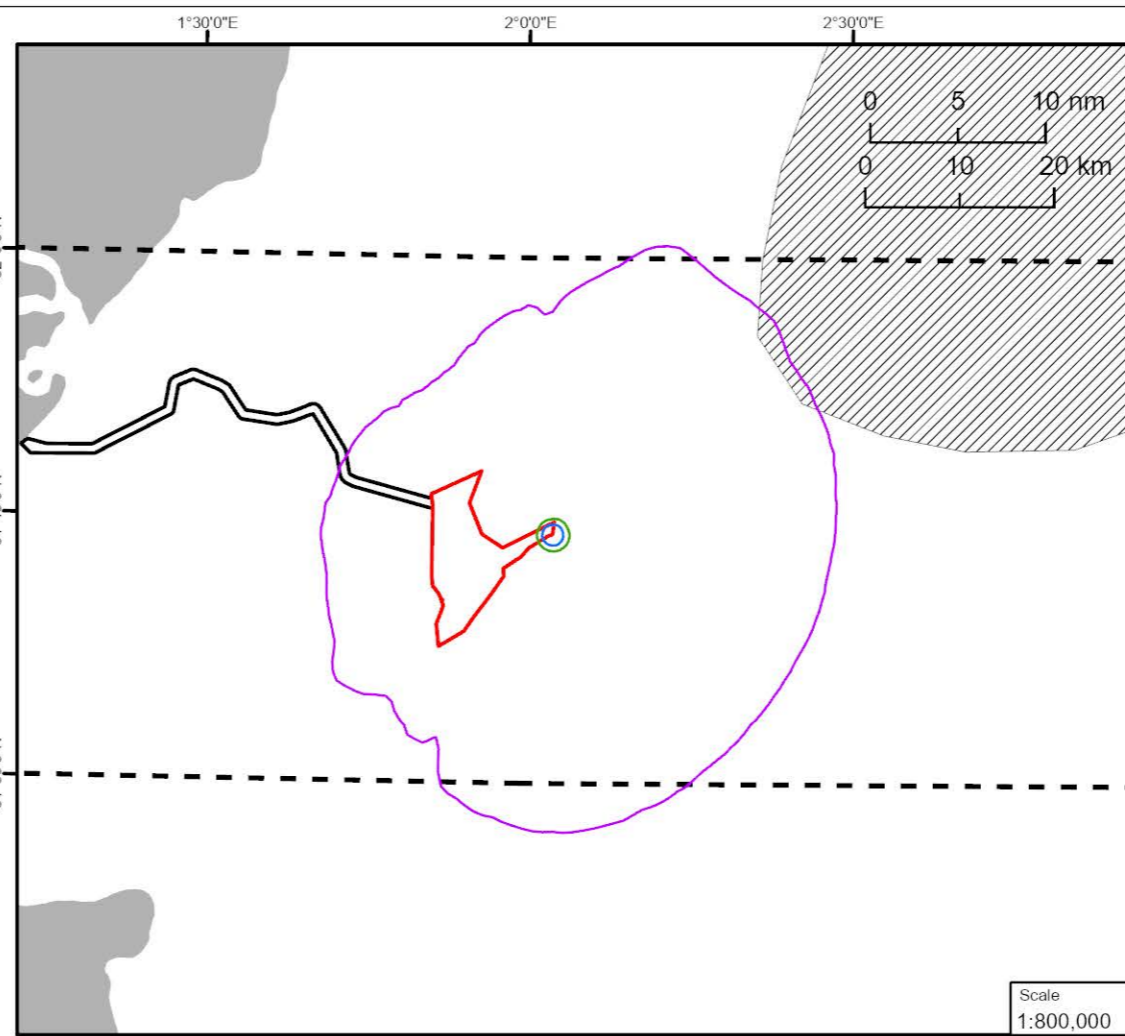
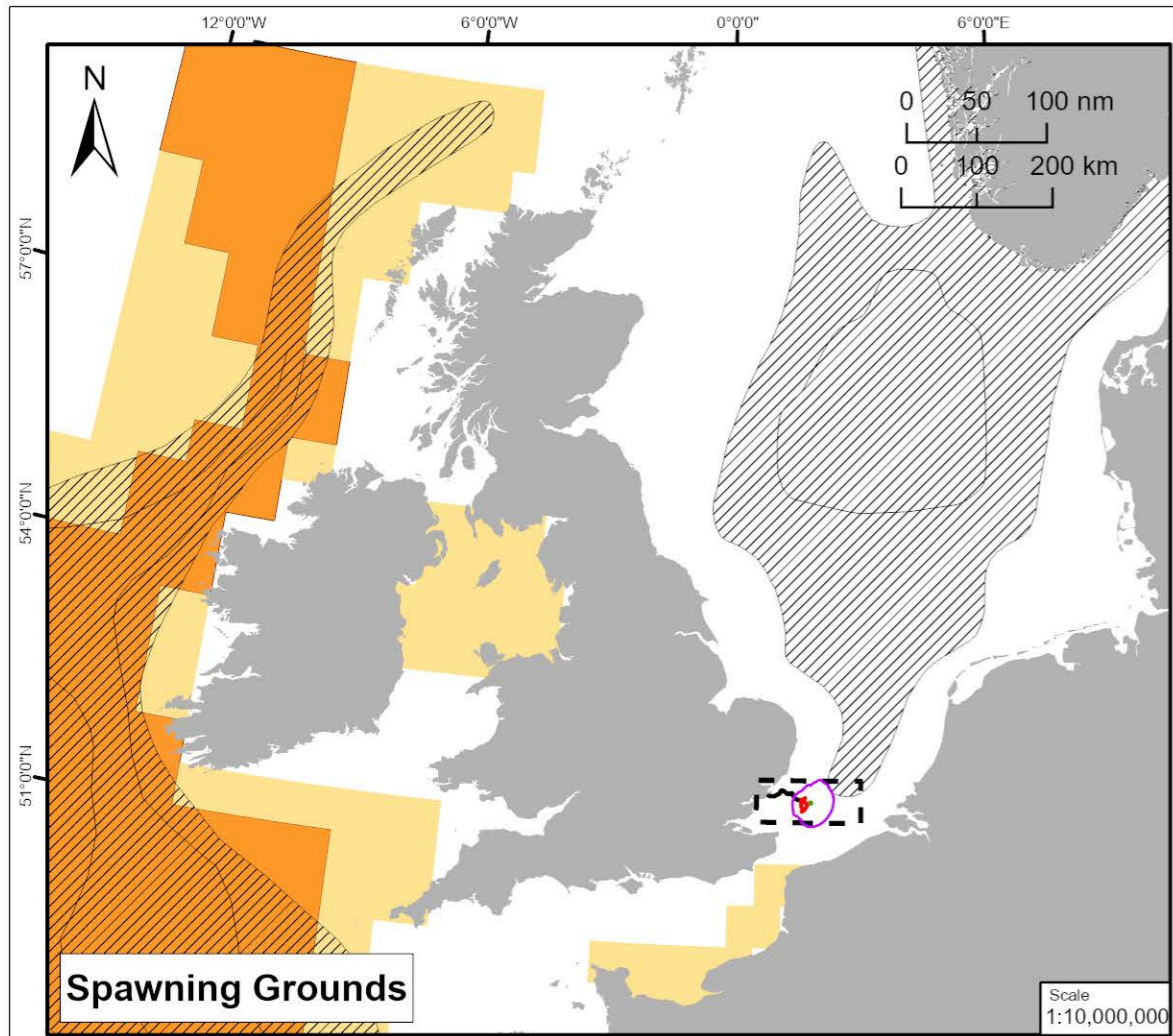
Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Subacoustech 2023. Contains public sector information licensed under the Open Government Licence v3.0

**LEMON SOLE  
 SPAWNING AND NURSERY GROUNDS  
 NOISE EXPOSURE CONTOURS**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	

Drawing Number		Figure Number	
NF-05-EIA-ES-004v2		11.11	
Scale	Plot Size	Datum	Projection
Refer to map	A3	WGS84	UTM31N





**Legend**

- North Falls Array Areas
- Export Cable Corridor
- Study Area

**Mackerel Spawning Grounds**

- Spawning Grounds <sup>1</sup>
- High Intensity <sup>2</sup>
- Low Intensity <sup>2</sup>

**Mackerel Nursery Grounds**

- Nursery Grounds <sup>1</sup>
- High Intensity <sup>2</sup>
- Low Intensity <sup>2</sup>

**Noise Exposure Criteria** <sup>3</sup>

- Mortality and Potential Mortal Injury (219 dB)
- Recoverable Injury (216 dB)
- Temporary Threshold Shift (186 dB)

Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>3</sup> Subacoustech 2023

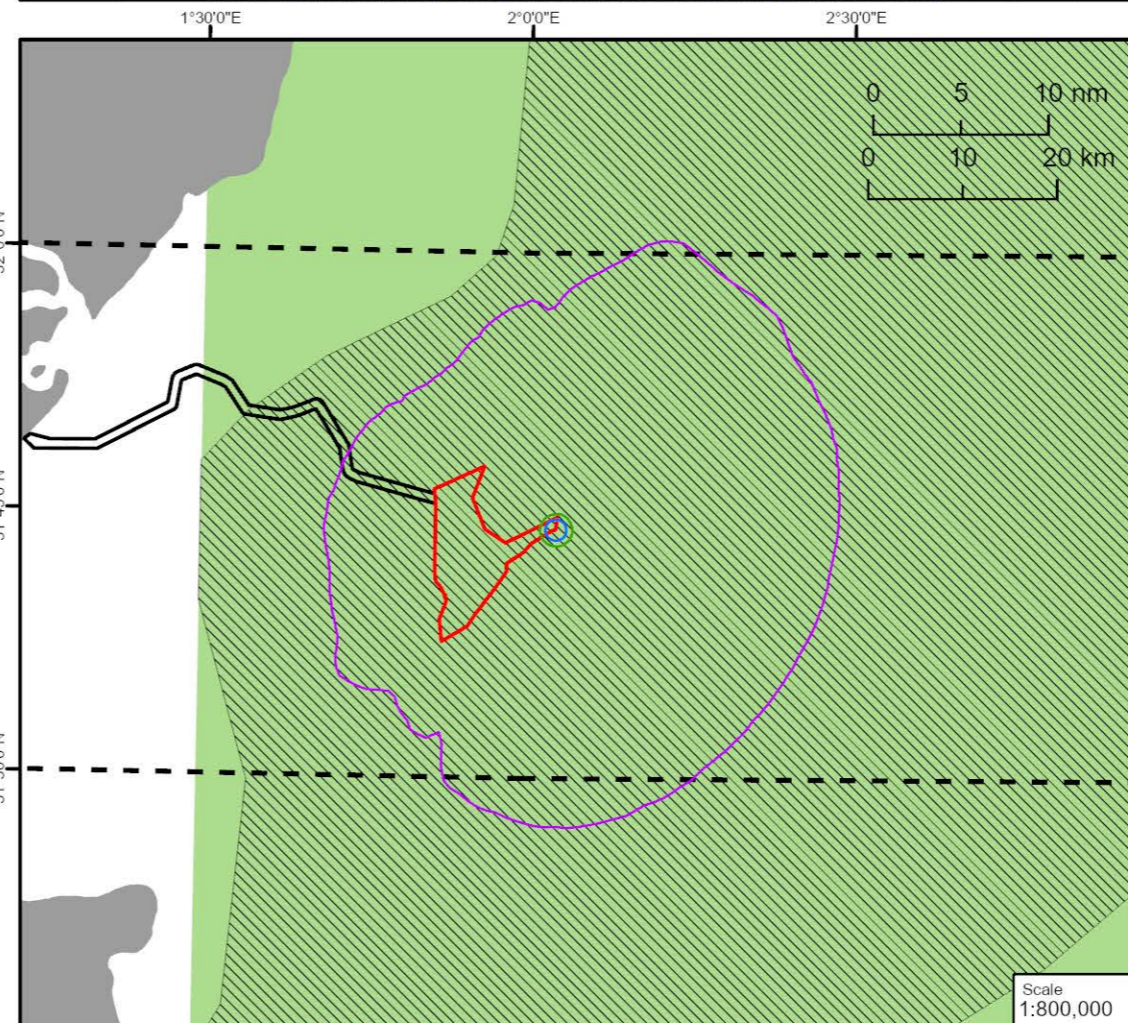
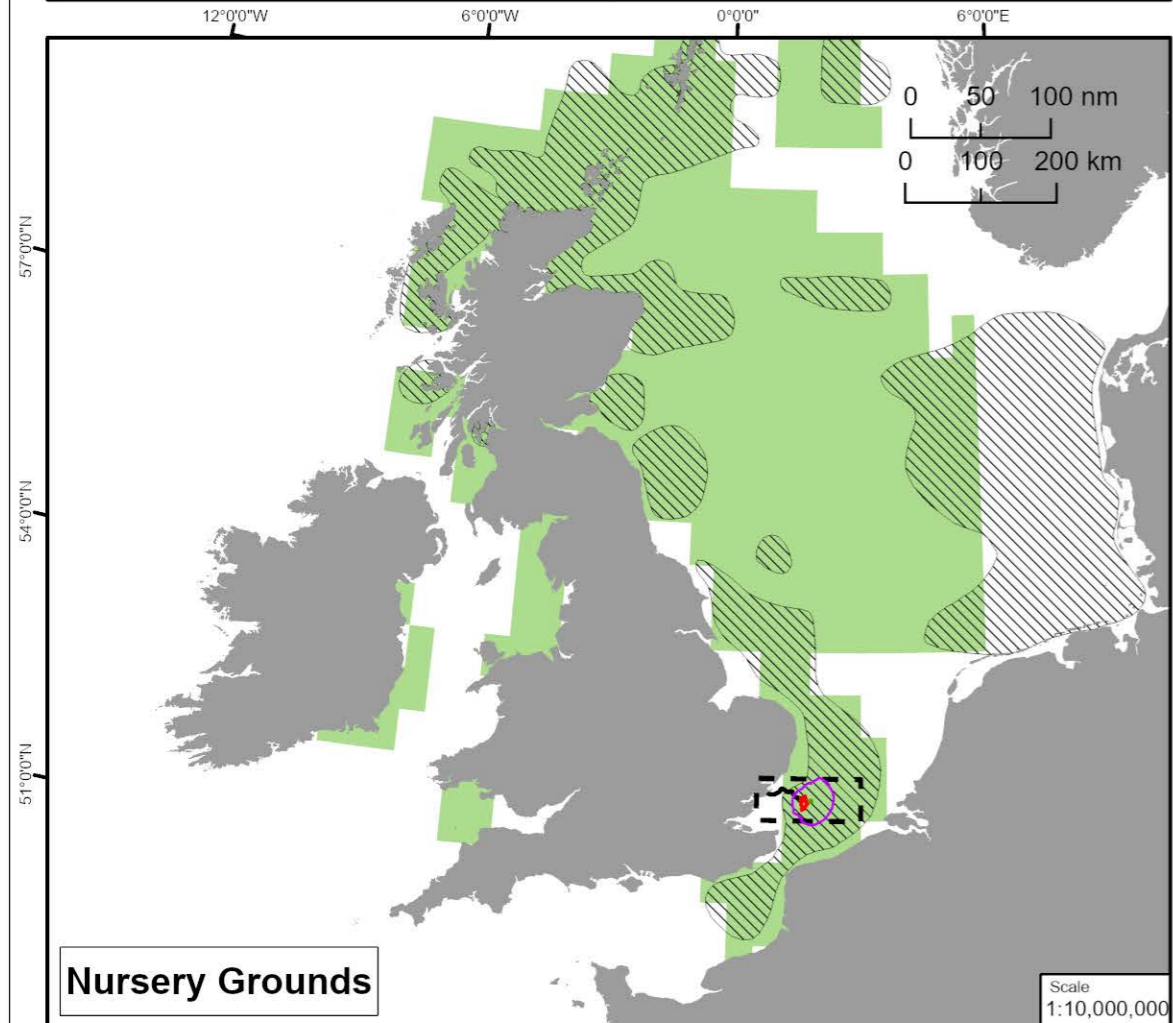
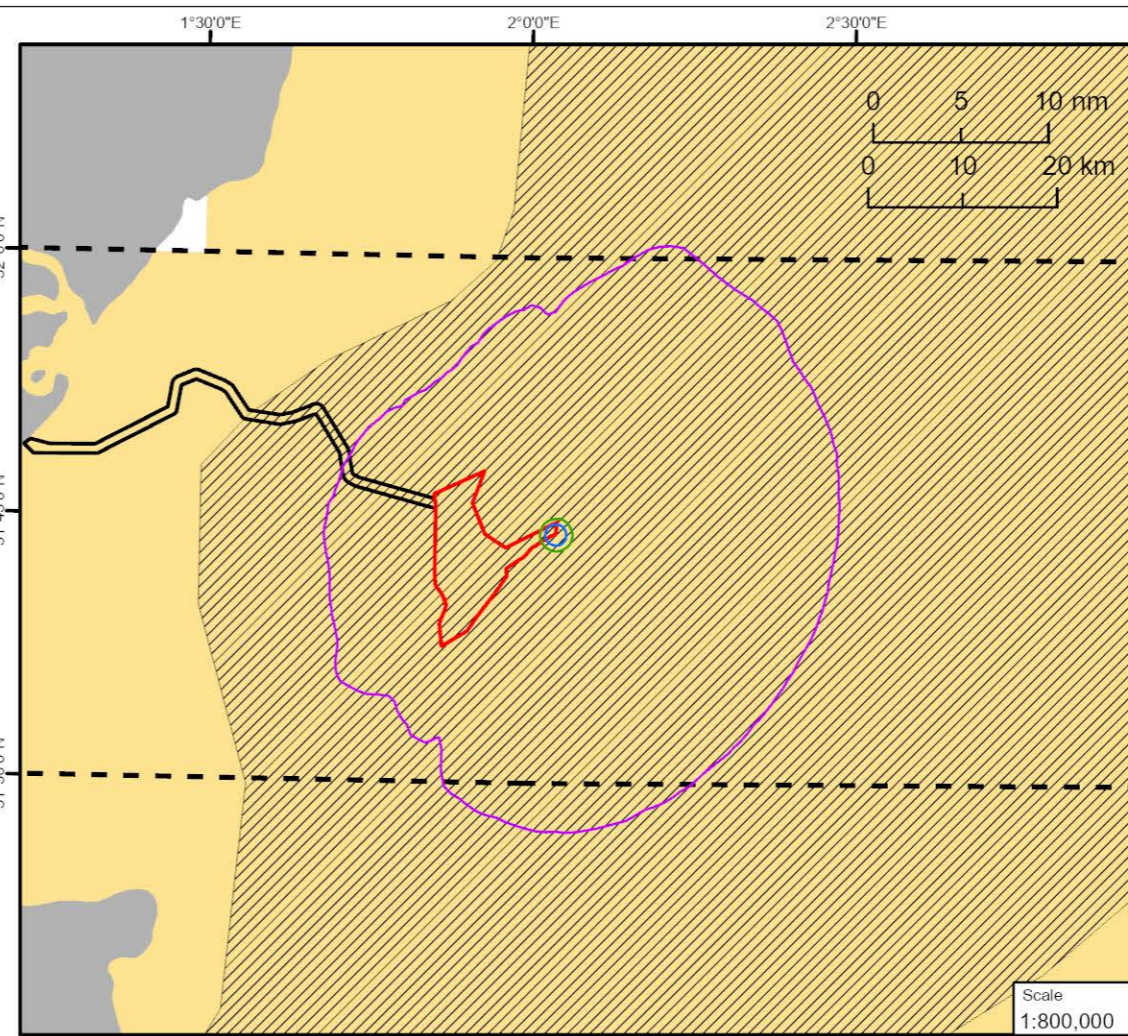
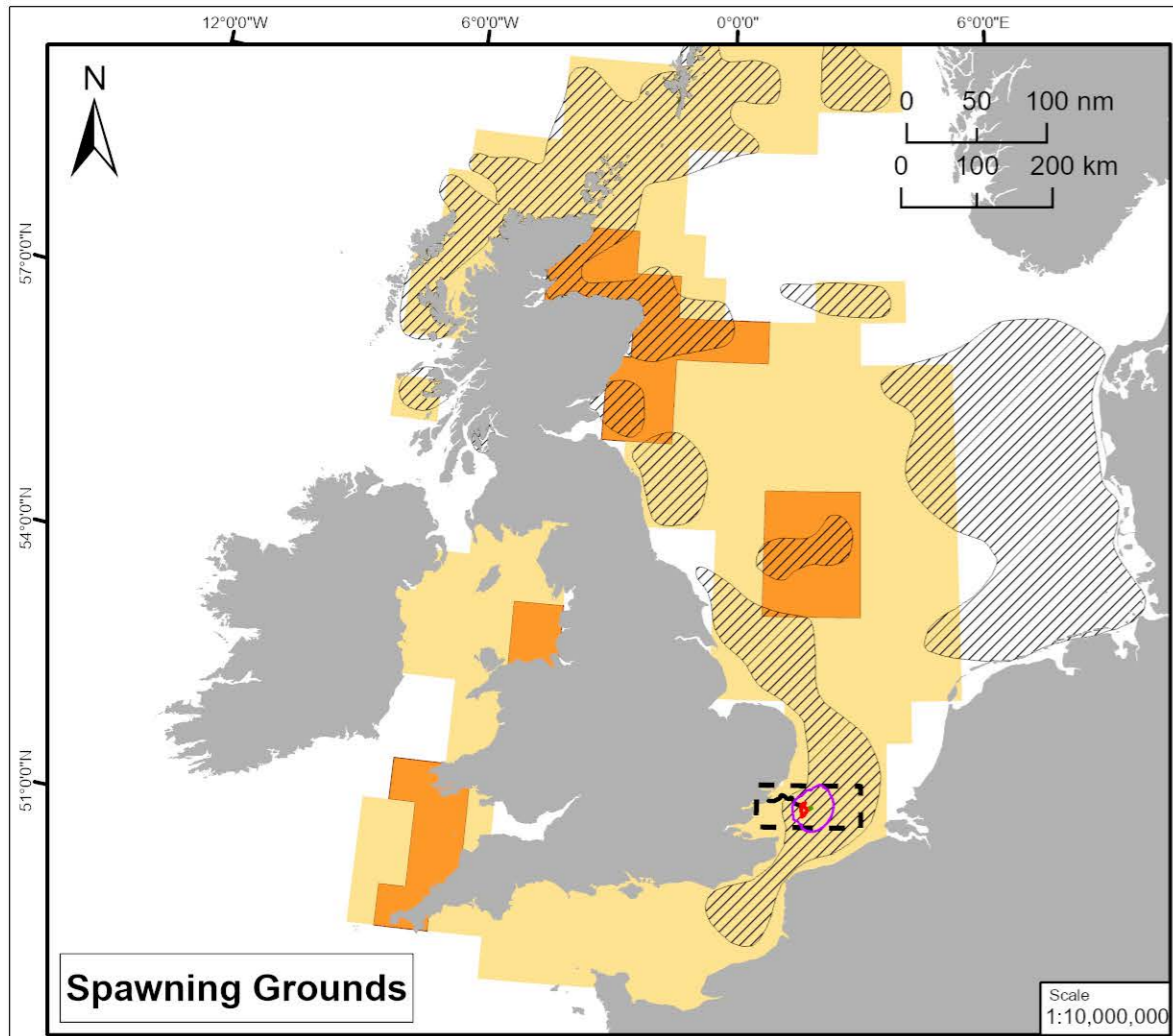
### MACKEREL SPAWNING AND NURSERY GROUNDS NOISE EXPOSURE CONTOURS

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	

Drawing Number: **NF-05-EIA-ES-009v2**      Figure Number: **Fig. 11.12**

Scale: Refer to map      Plot Size: A3      Datum: WGS84      Projection: UTM31N





**Legend**

- North Falls Array Area
- Export Cable Corridor
- Study Area

**Sandeel Spawning Grounds**<sup>1</sup>

- Spawning Grounds<sup>1</sup>
- High Intensity<sup>2</sup>
- Low Intensity<sup>2</sup>

**Sandeel Nursery Grounds**

- Nursery Grounds<sup>1</sup>
- High Intensity<sup>2</sup>
- Low Intensity<sup>2</sup>

**Noise Exposure Criteria**<sup>3</sup>

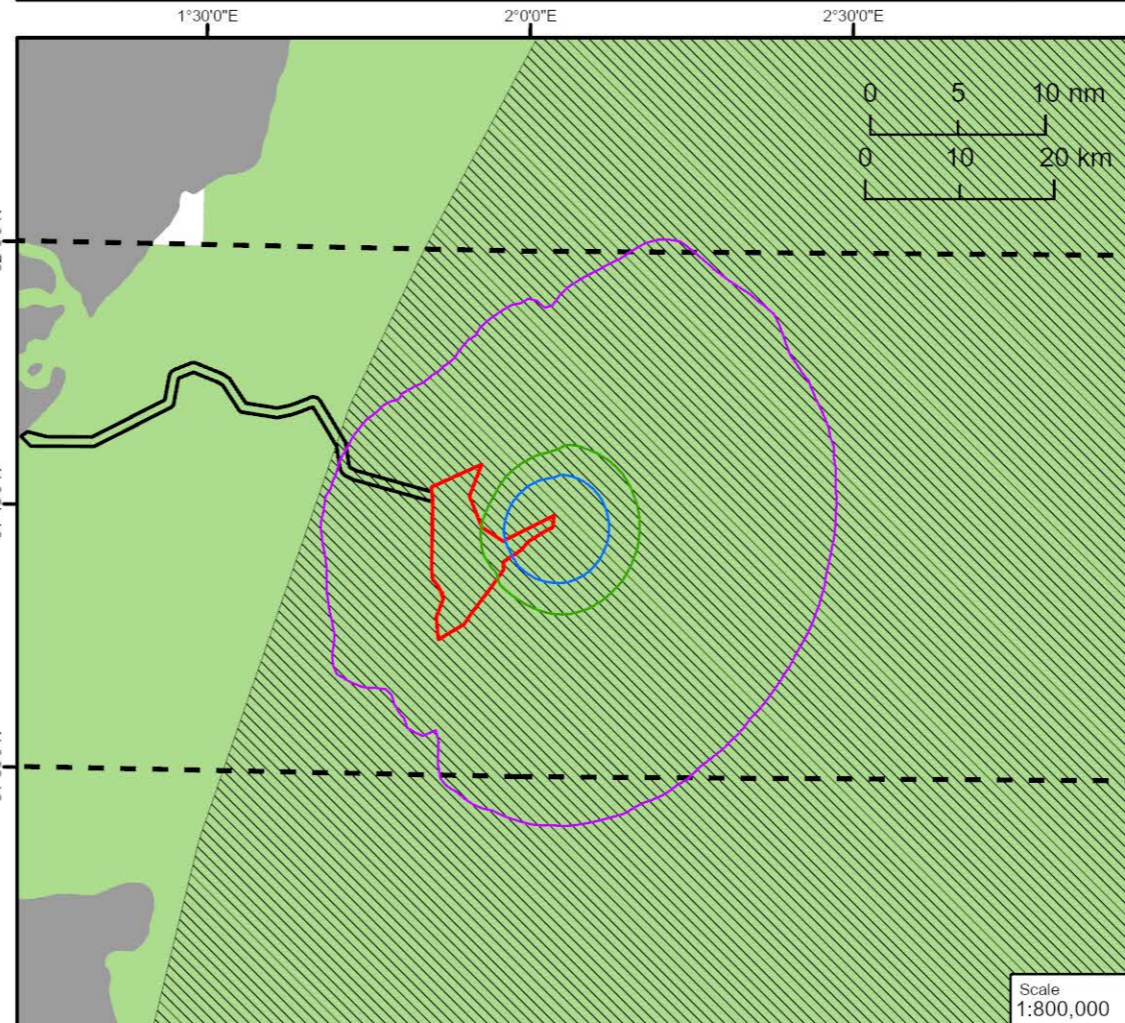
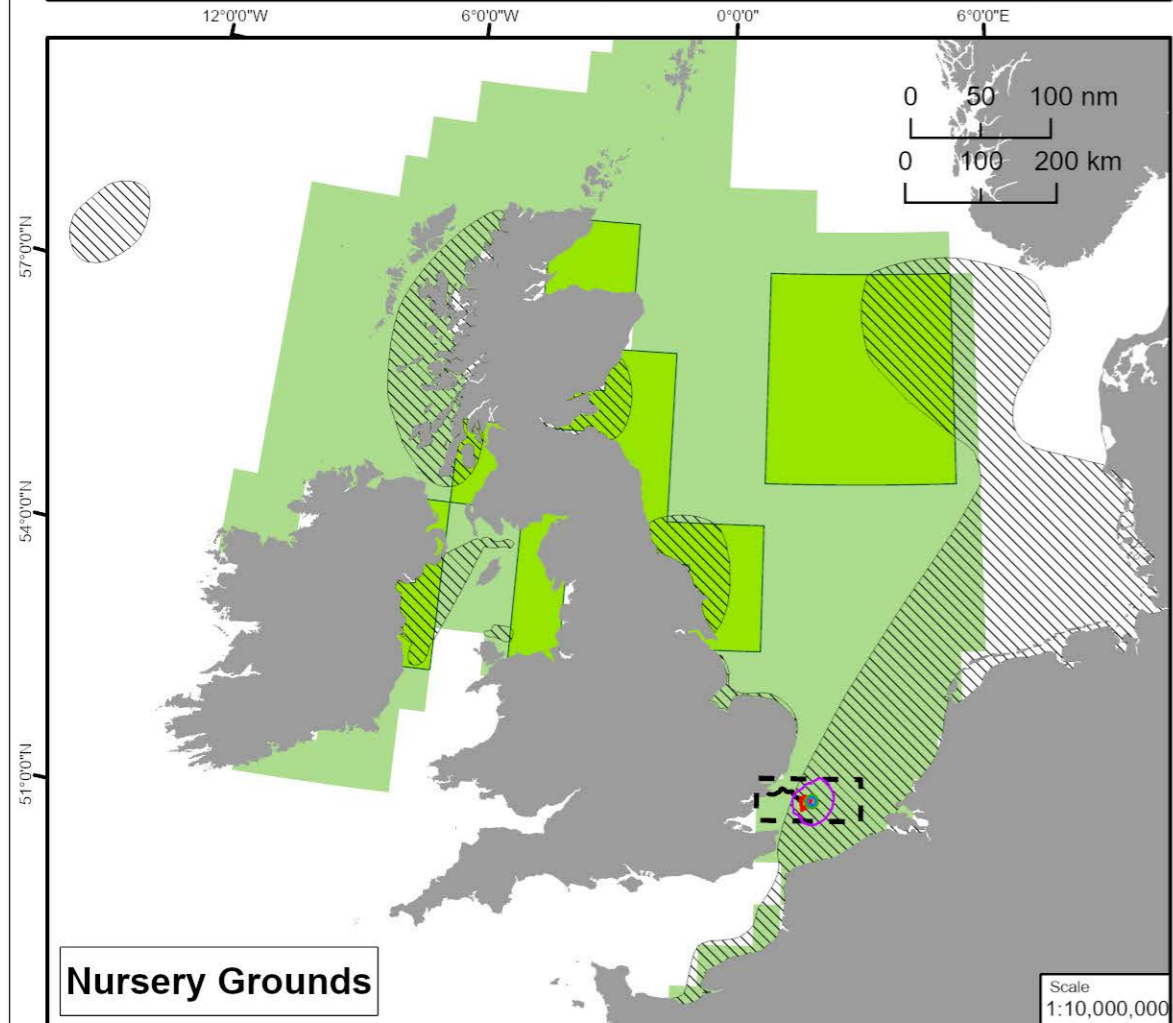
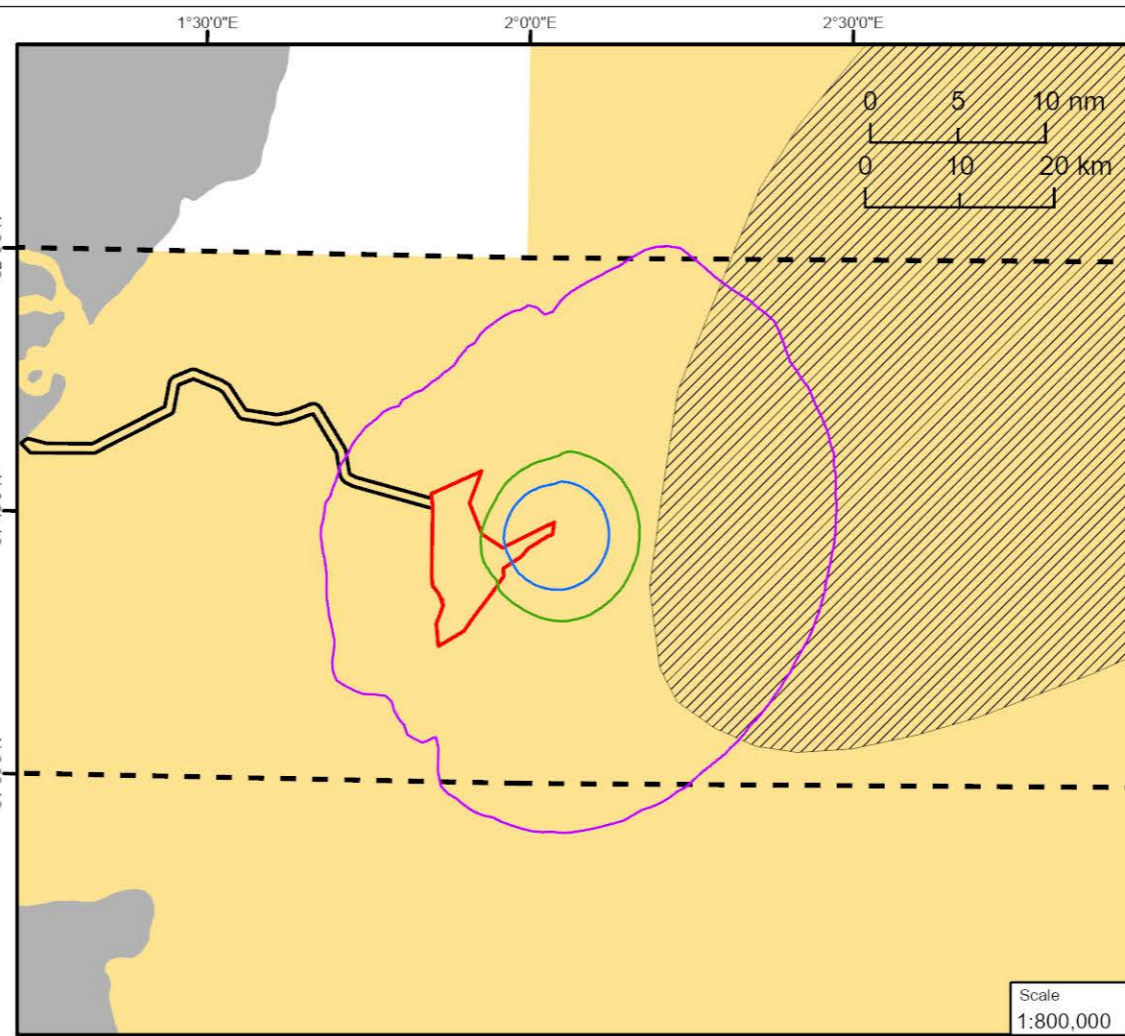
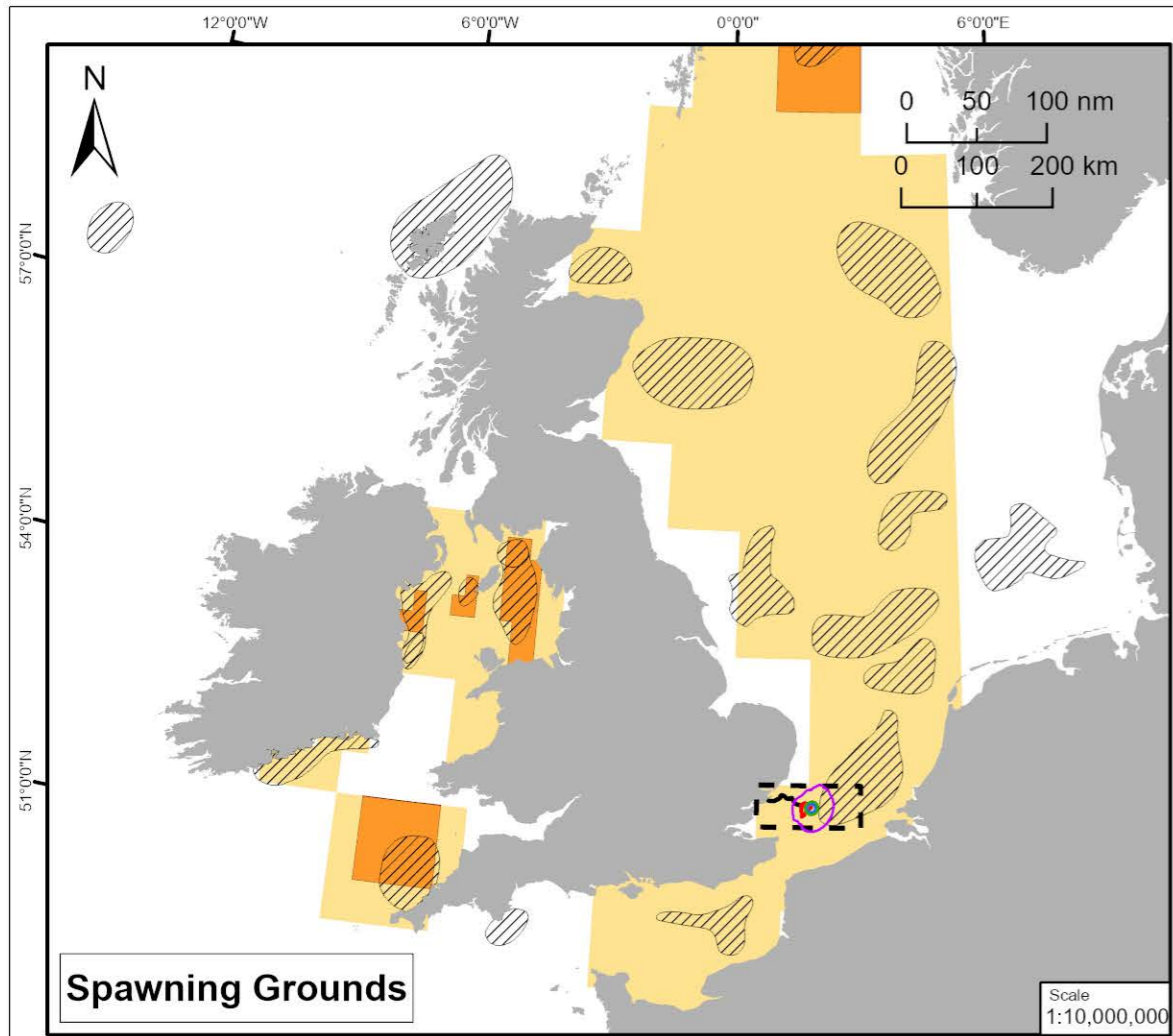
- Mortality and Potential Mortal Injury (219 dB)
- Recoverable Injury (216 dB)
- Temporary Threshold Shift (186 dB)

Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>3</sup> Subacoustech 2023

**SANDEEL SPAWNING AND NURSERY GROUNDS NOISE EXPOSURE CONTOURS**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	

Drawing Number <b>NF-05-EIA-ES-006v2</b>	Figure Number <b>11.13</b>
Scale Refer to map	Plot Size A3
Datum WGS84	Projection UTM31N



**Legend**

- North Falls Array Area
- Export Cable Corridor
- Study Area

**Cod Spawning Grounds**

- Spawning Grounds<sup>1</sup>
- High Intensity<sup>2</sup>
- Low Intensity<sup>2</sup>

**Cod Nursery Grounds**

- Nursery Grounds<sup>1</sup>
- High Intensity<sup>2</sup>
- Low Intensity<sup>2</sup>

**Noise Exposure Criteria**<sup>3</sup>

- Mortality and Potential Mortal Injury (207 dB)
- Recoverable Injury (203 dB)
- Temporary Threshold Shift (186 dB)

Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>3</sup> Subacoustech 2023

**COD  
 SPAWNING AND NURSERY GROUNDS  
 NOISE EXPOSURE CONTOURS**

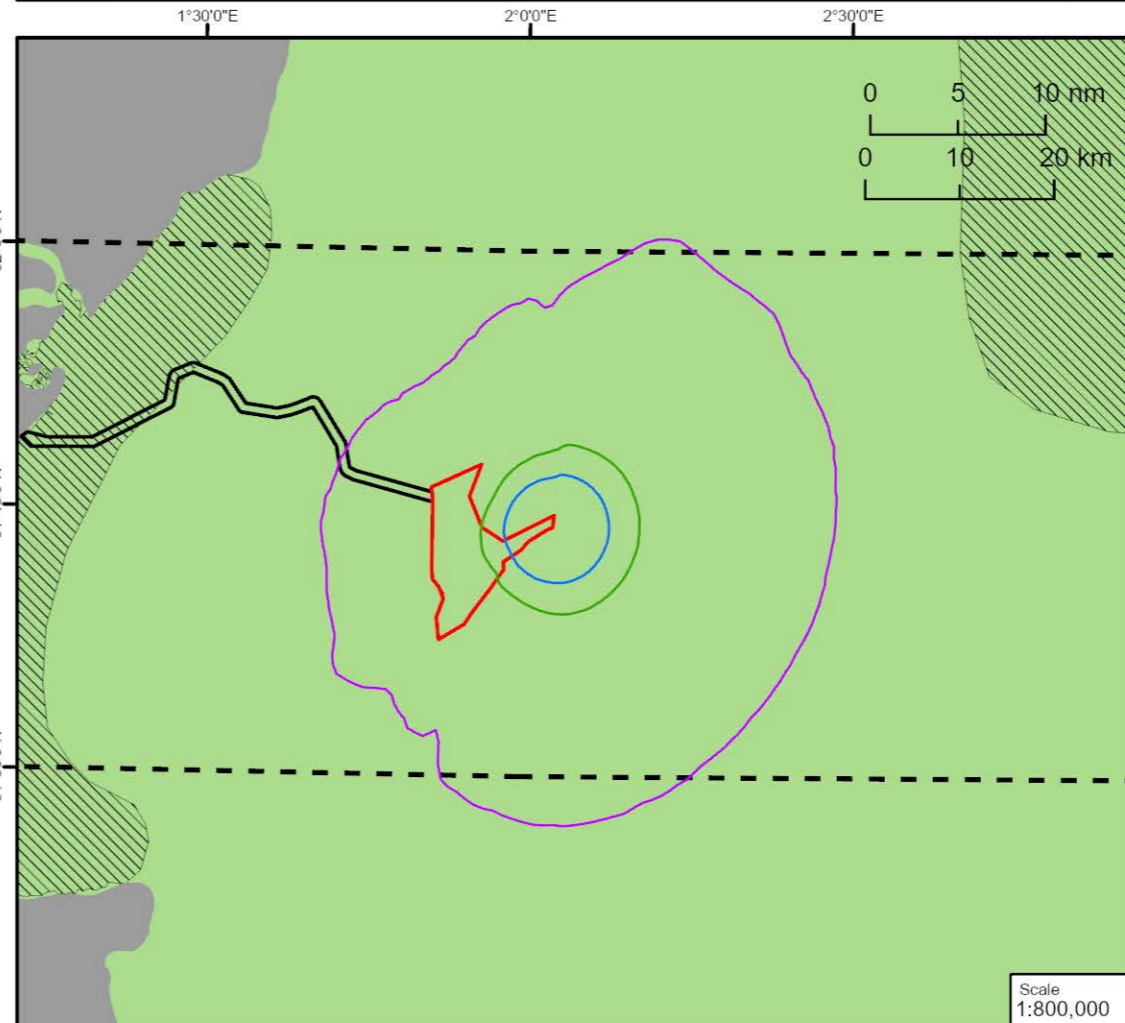
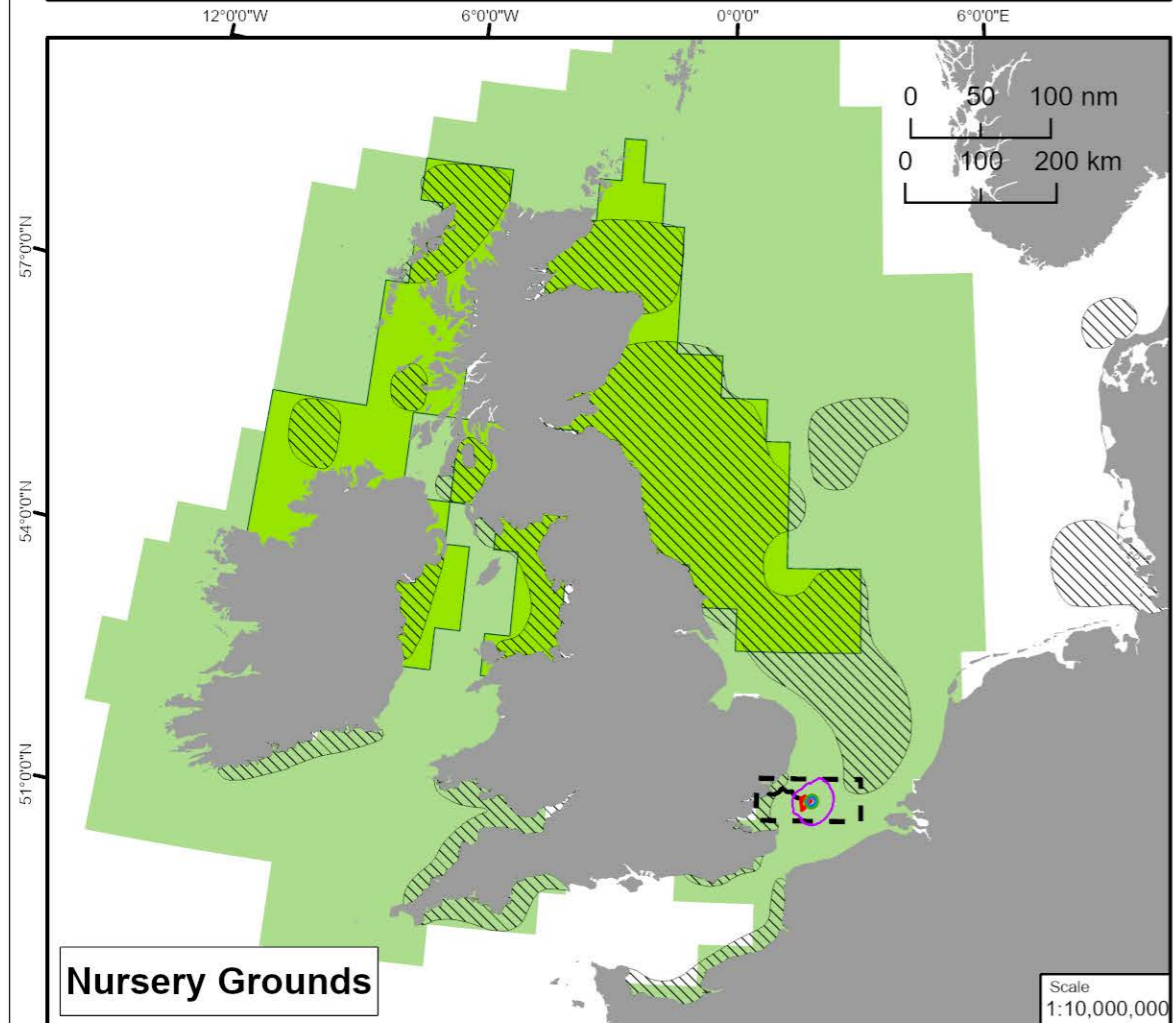
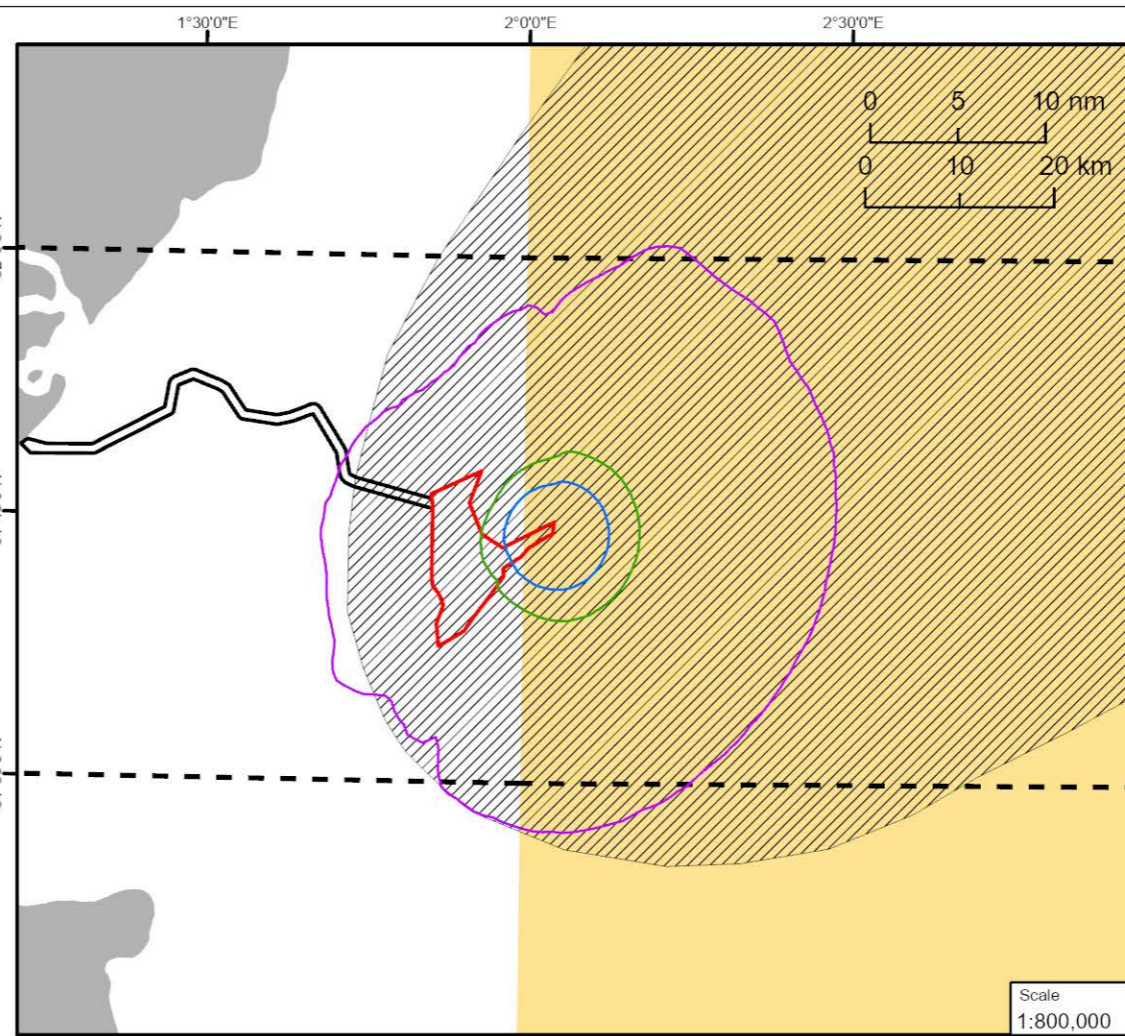
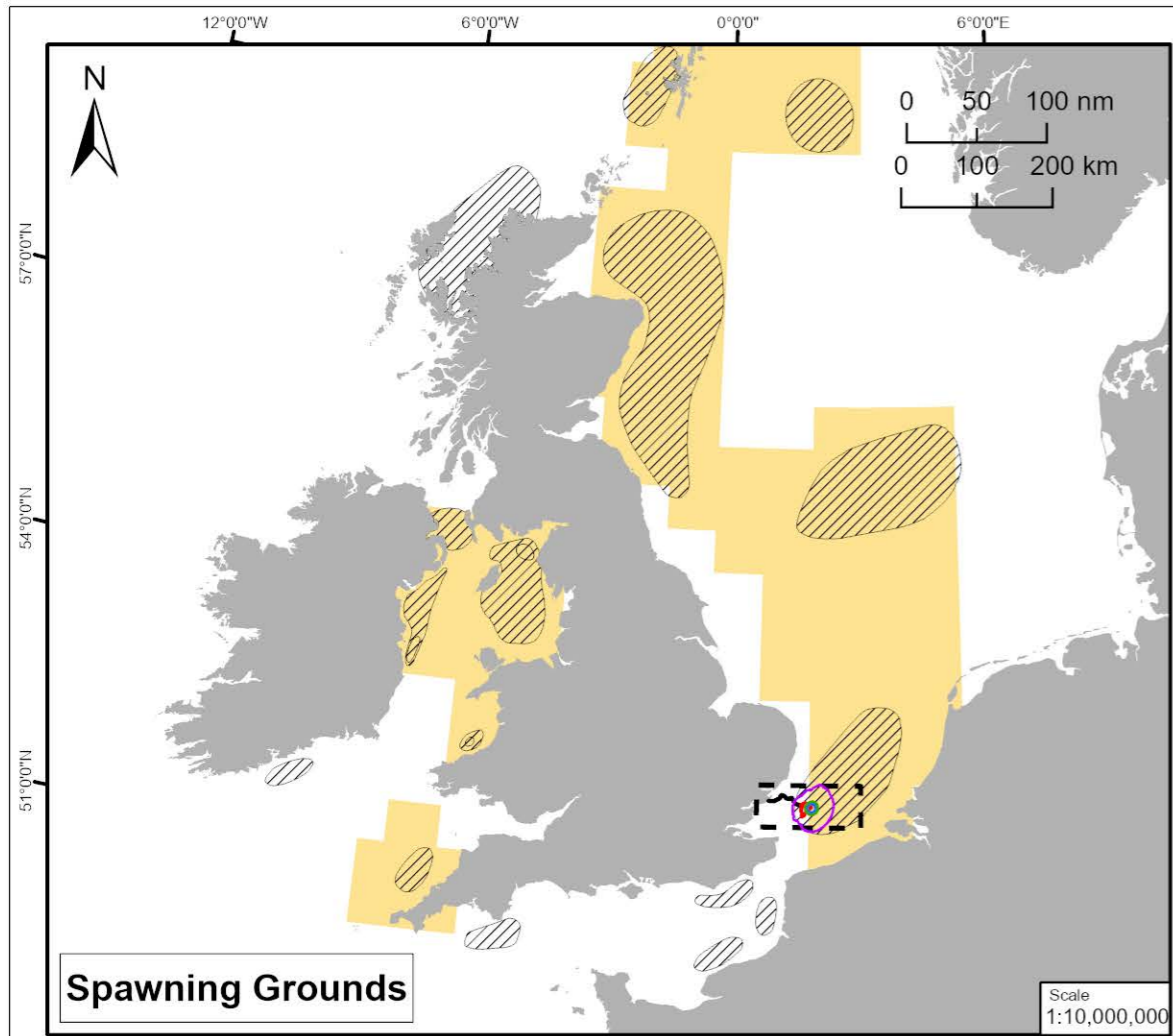
Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	

Drawing Number **NF-05-EIA-ES-010v2** Figure Number **11.14**

Scale Refer to map Plot Size A3 Datum WGS84 Projection UTM31N







**Legend**

- North Falls Array Area
- Export Cable Corridor
- Study Area

**Whiting Spawning Grounds**

- Spawning Grounds<sup>1</sup>
- High Intensity<sup>2</sup>
- Low Intensity<sup>2</sup>

**Whiting Nursery Grounds**

- Nursery Grounds<sup>1</sup>
- High Intensity<sup>2</sup>
- Low Intensity<sup>2</sup>

**Noise Exposure Criteria**<sup>3</sup>

- Mortality and Potential Mortal Injury (207 dB)
- Recoverable Injury (203 dB)
- Temporary Threshold Shift (186 dB)

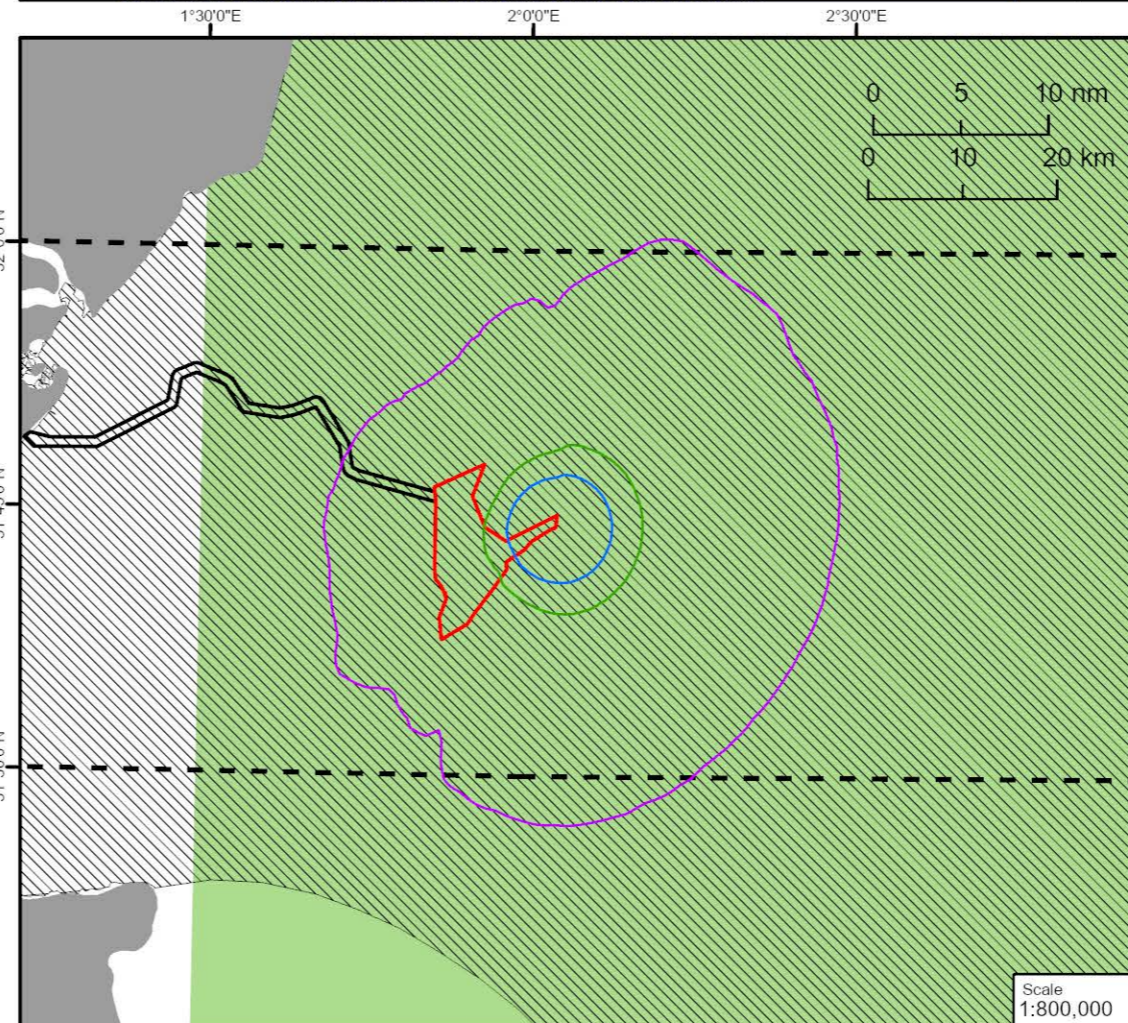
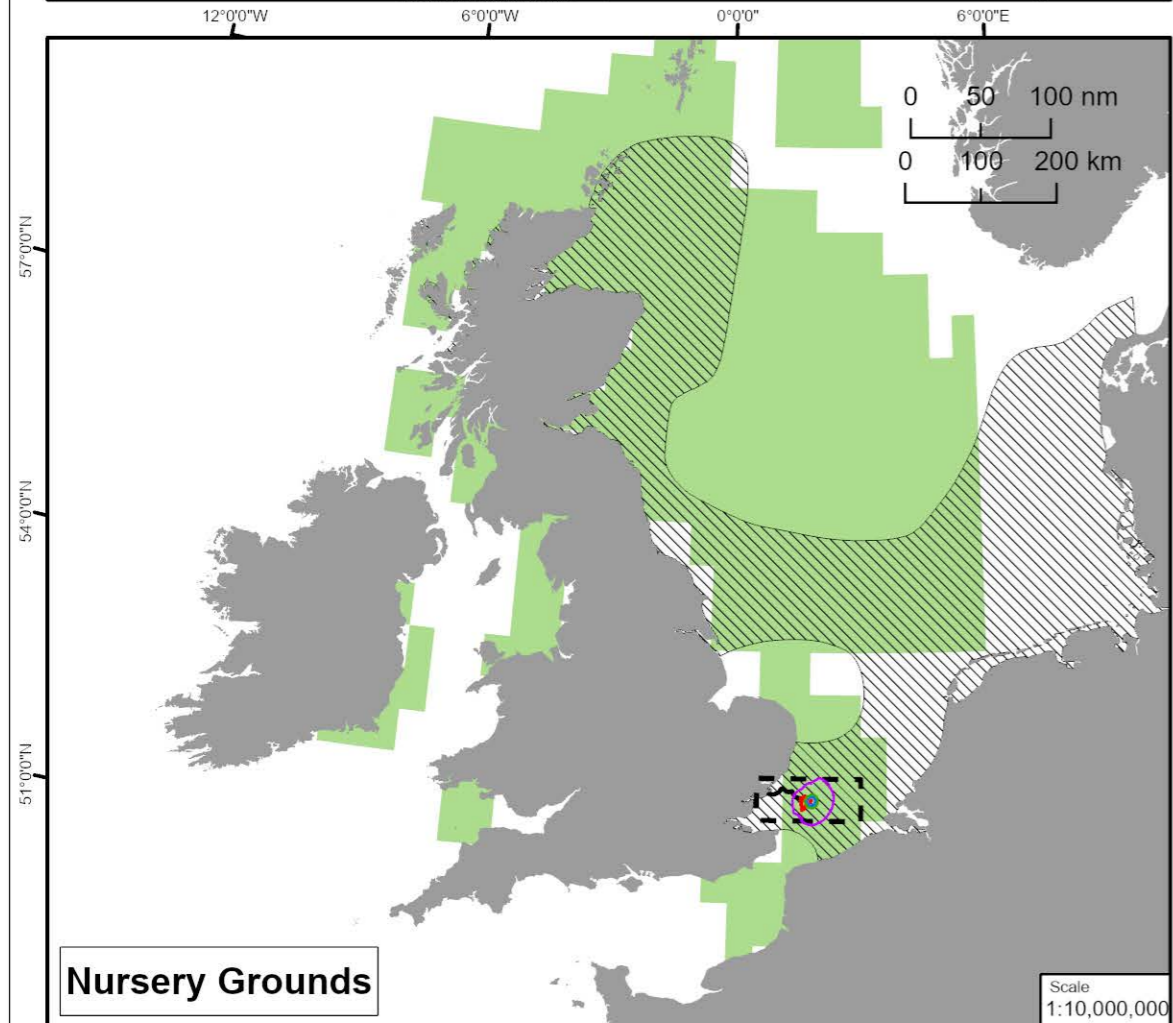
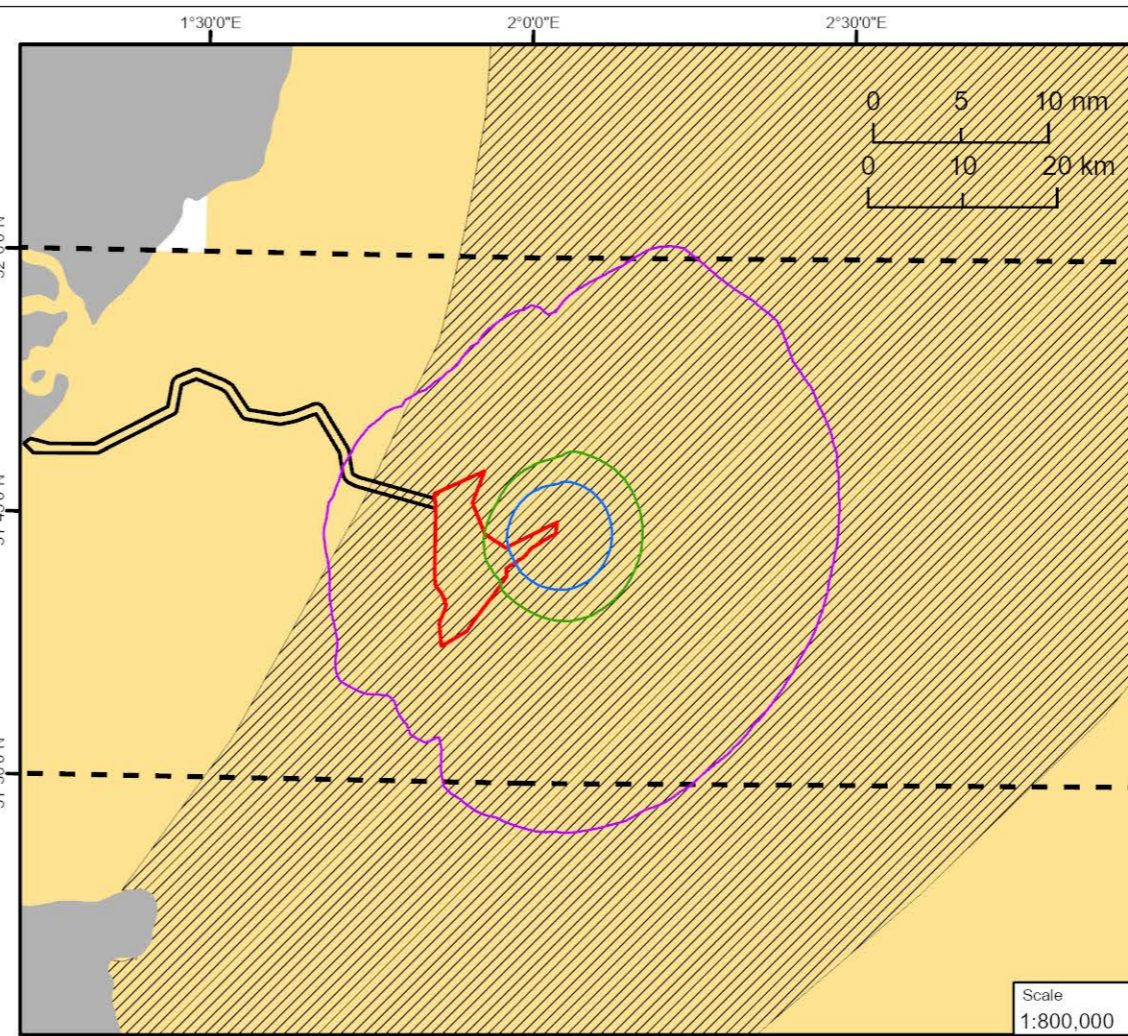
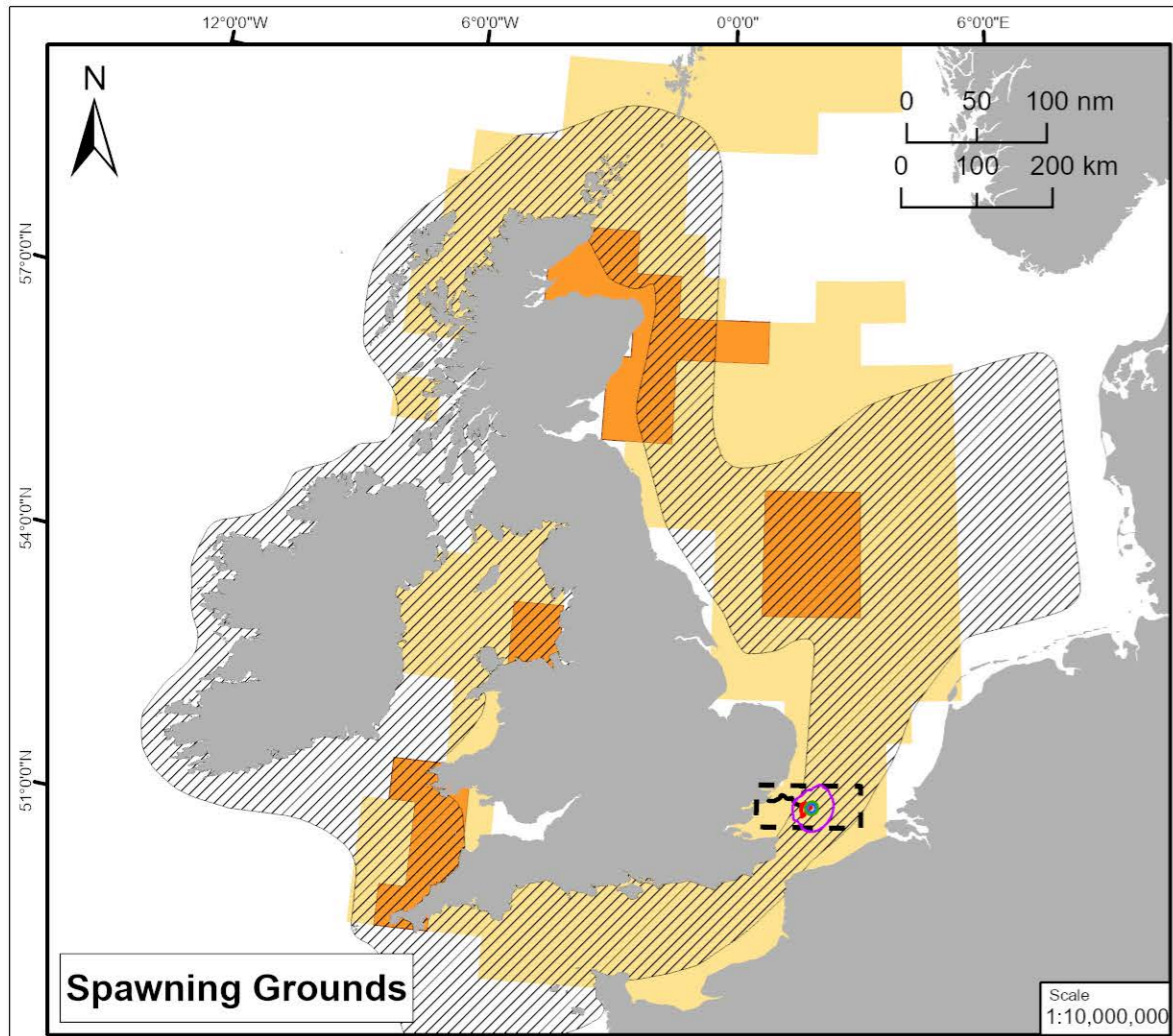
Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>3</sup> Subacoustech 2023

**WHITING  
 SPAWNING AND NURSERY GROUNDS  
 NOISE EXPOSURE CONTOURS**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	

Drawing Number: **NF-05-EIA-ES-008v2**      Figure Number: **11.15**

Scale: Refer to map      Plot Size: A3      Datum: WGS84      Projection: UTM31N



**Legend**

- North Falls Array Area
- Export Cable Corridor

**Sprat Spawning Grounds**

- Spawning Grounds<sup>1</sup>
- High Intensity<sup>2</sup>
- Low Intensity<sup>2</sup>

**Sprat Nursery Grounds**

- Nursery Grounds<sup>1</sup>
- High Intensity<sup>2</sup>
- Low Intensity<sup>2</sup>

**Noise Exposure Criteria**<sup>3</sup>



- Mortality and Potential Mortal Injury (207 dB)
- Recoverable Injury (203 dB)
- Temporary Threshold Shift (186 dB)

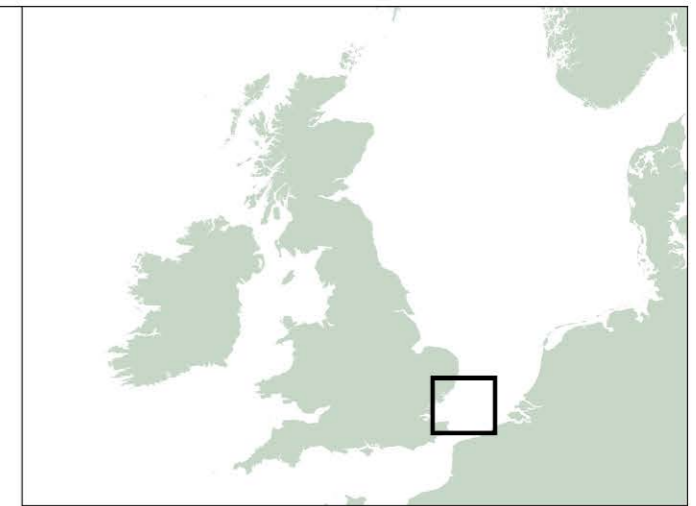
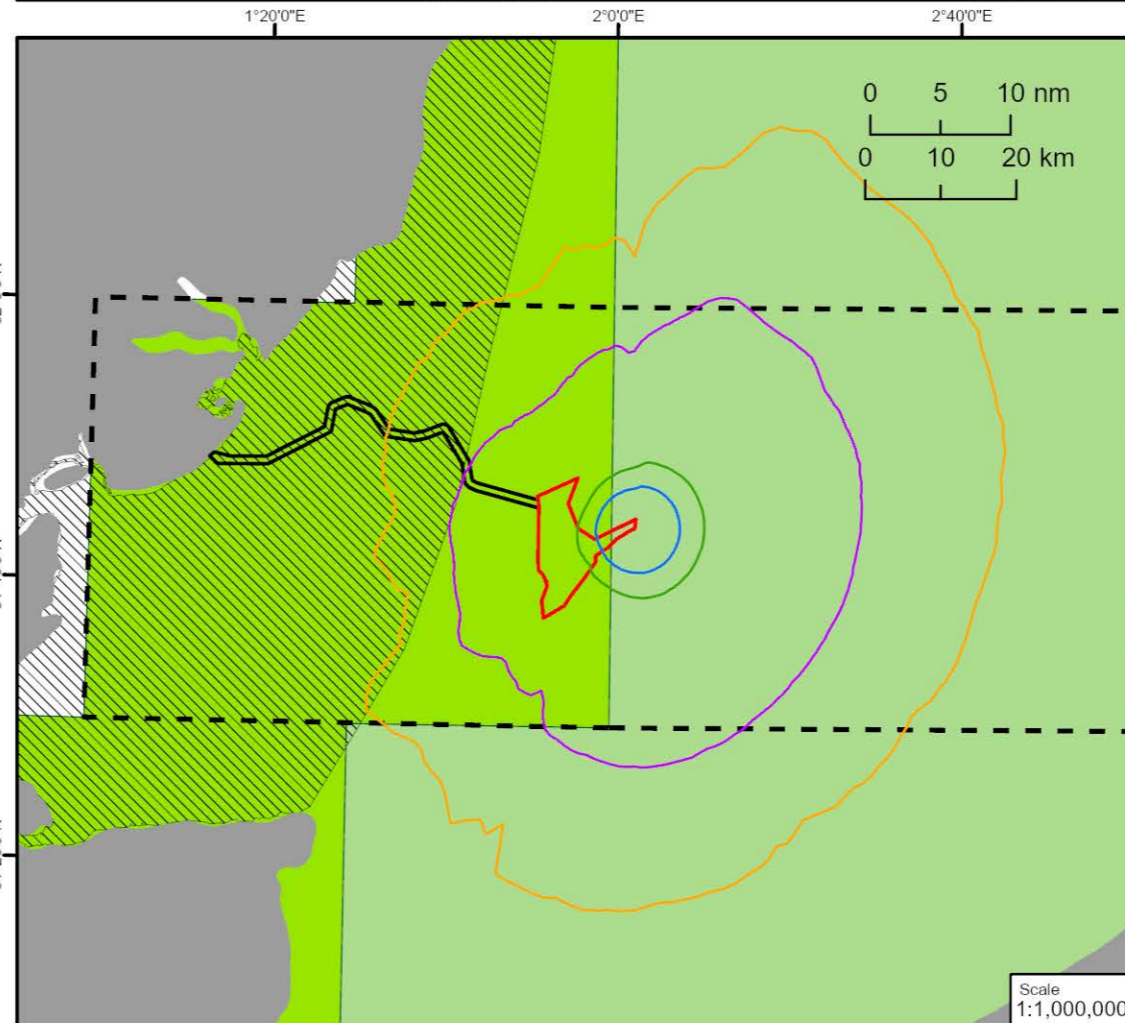
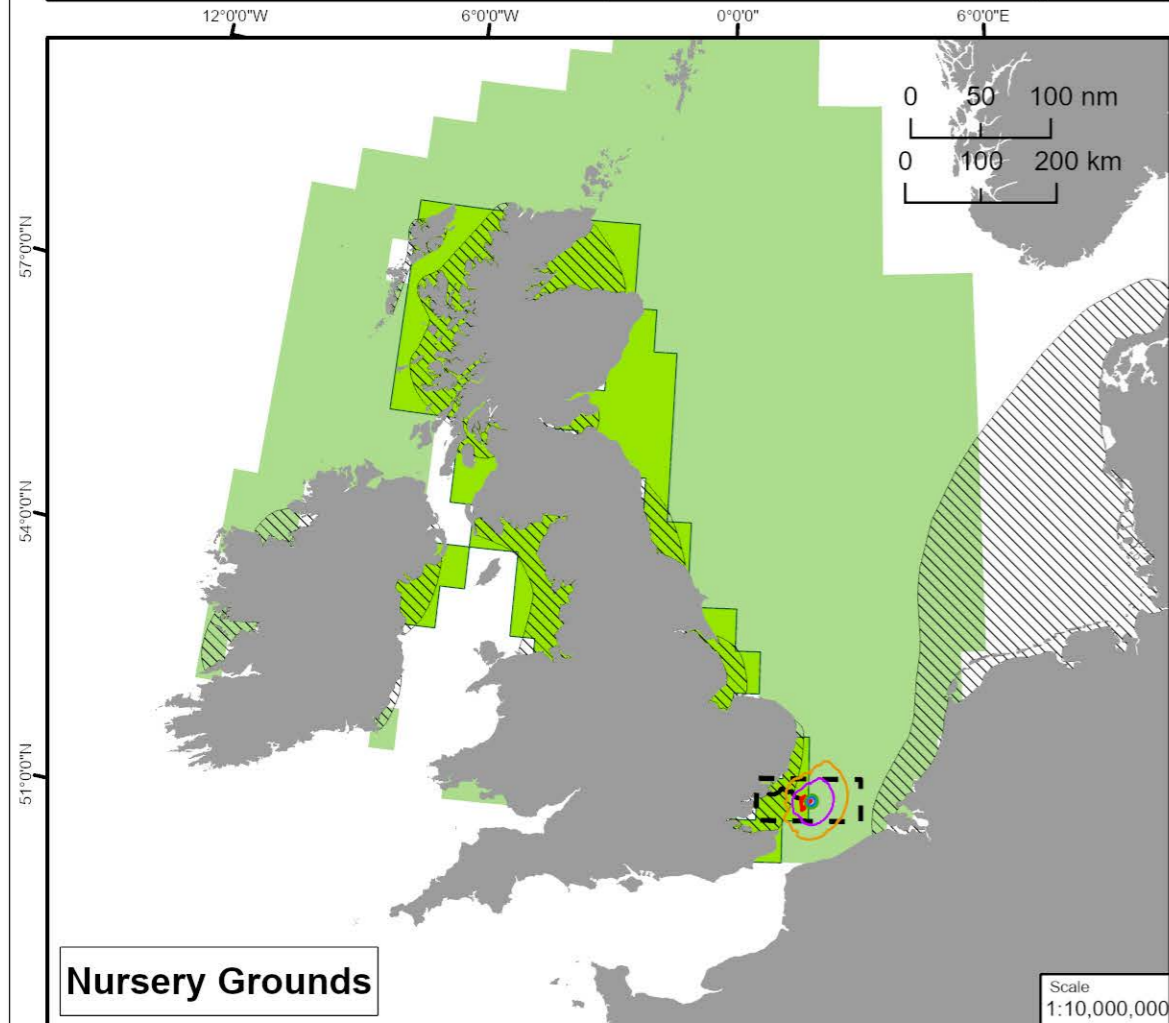
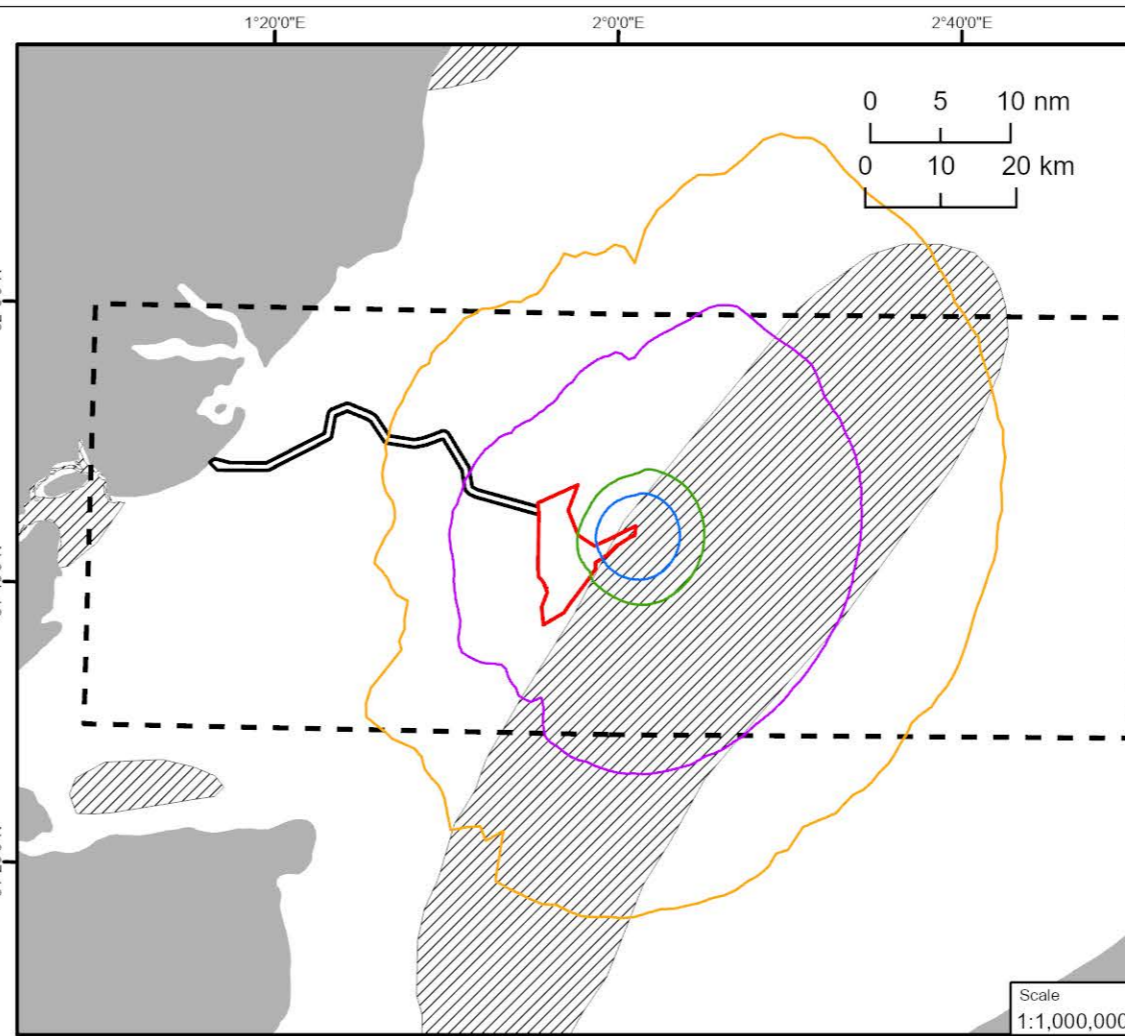
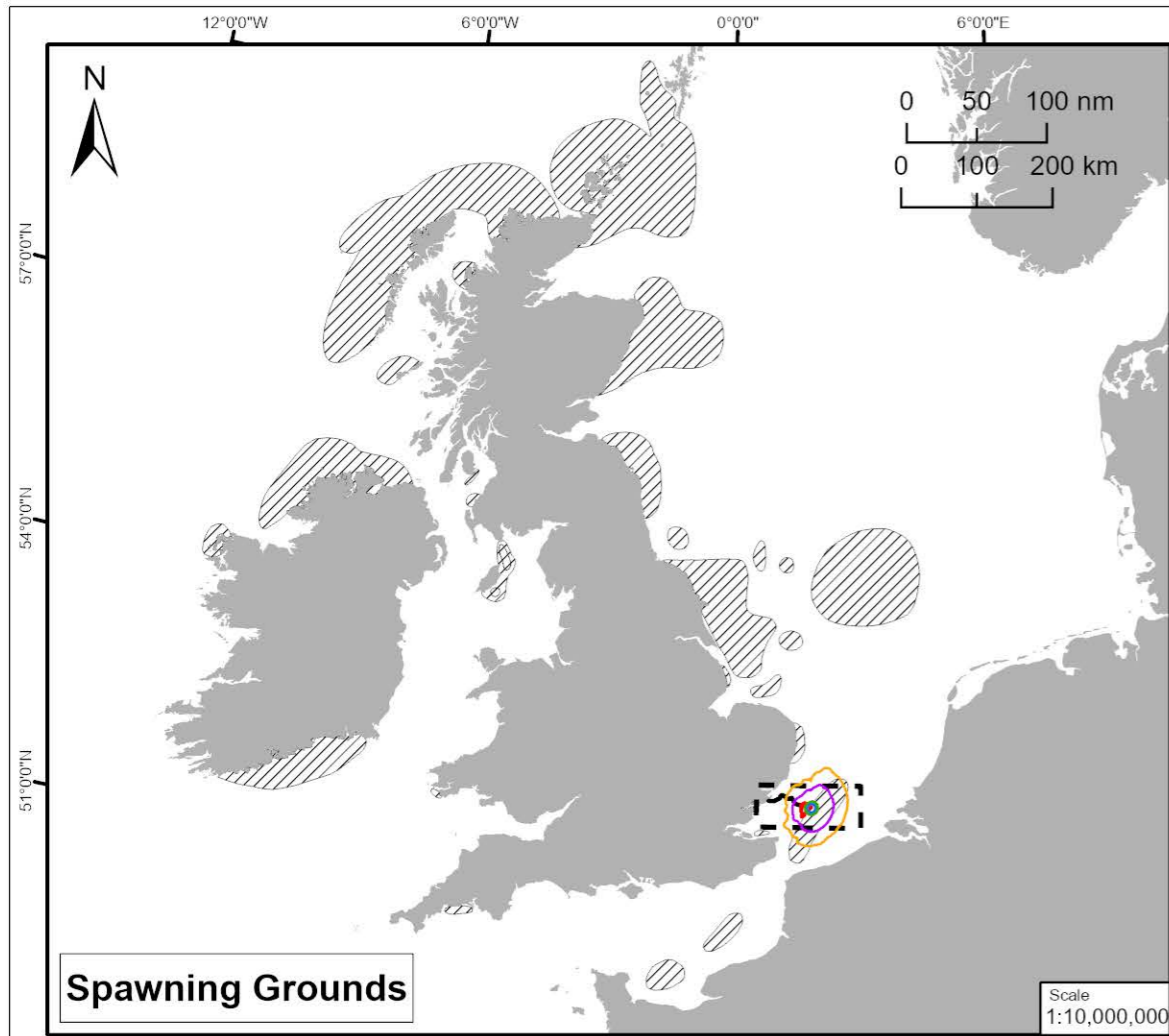
Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>3</sup> Subacoustech 2023

**SPRAT  
 SPAWNING AND NURSERY GROUNDS  
 NOISE EXPOSURE CONTOURS**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	-

Drawing Number <b>NF-05-EIA-ES-007v2</b>		Figure Number <b>11.16</b>	
Scale Refer to map	Plot Size A3	Datum WGS84	Projection UTM31N



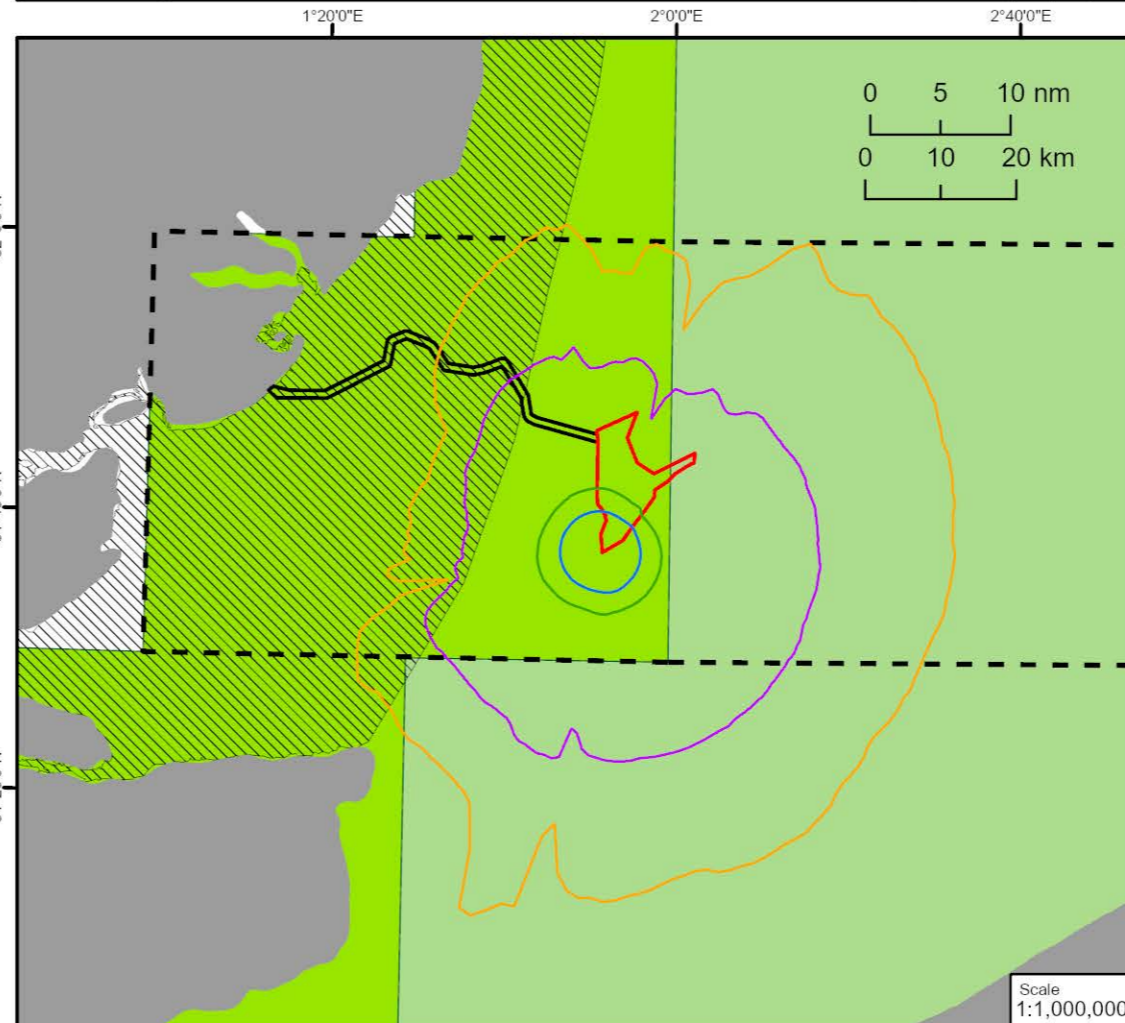
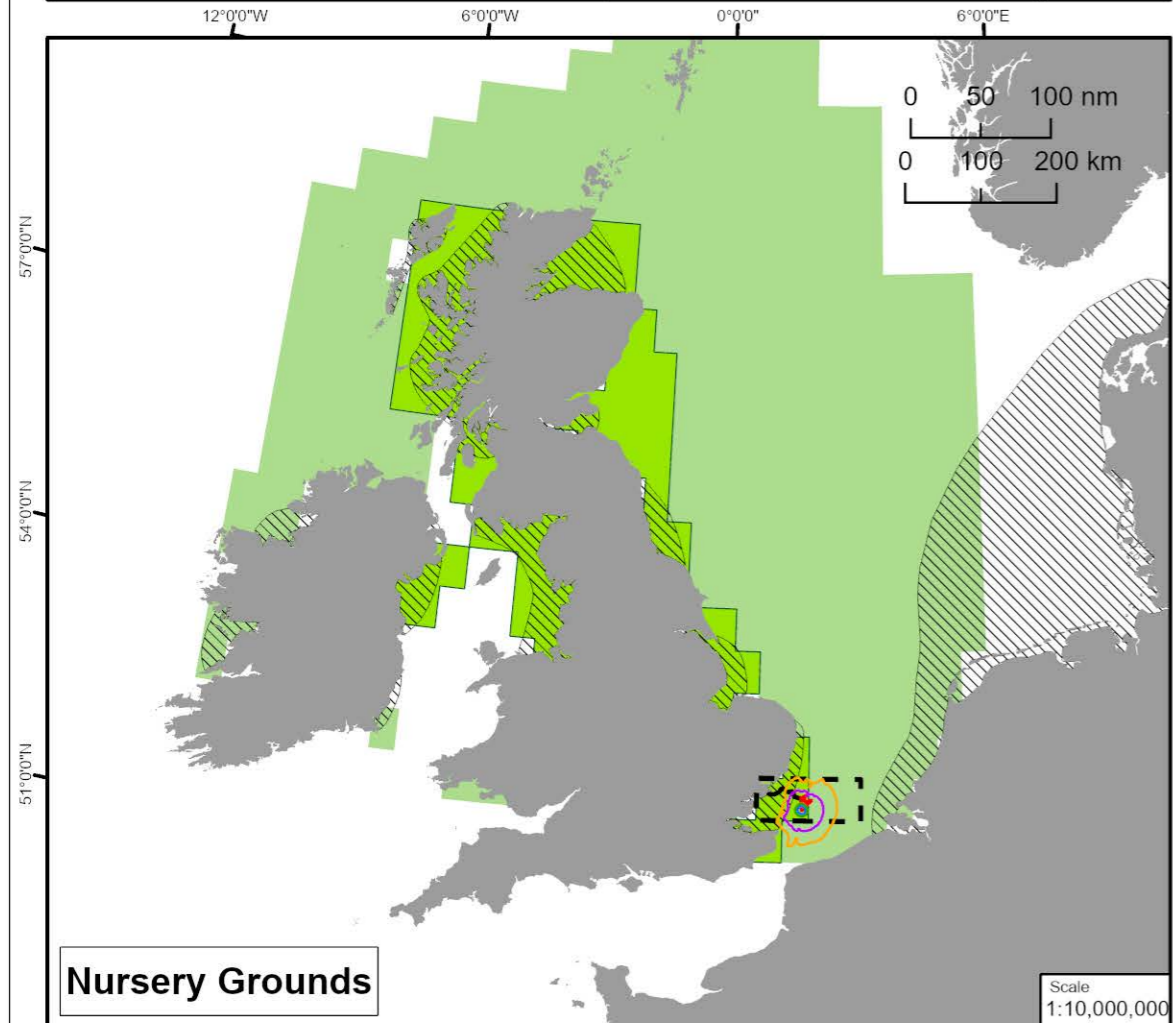
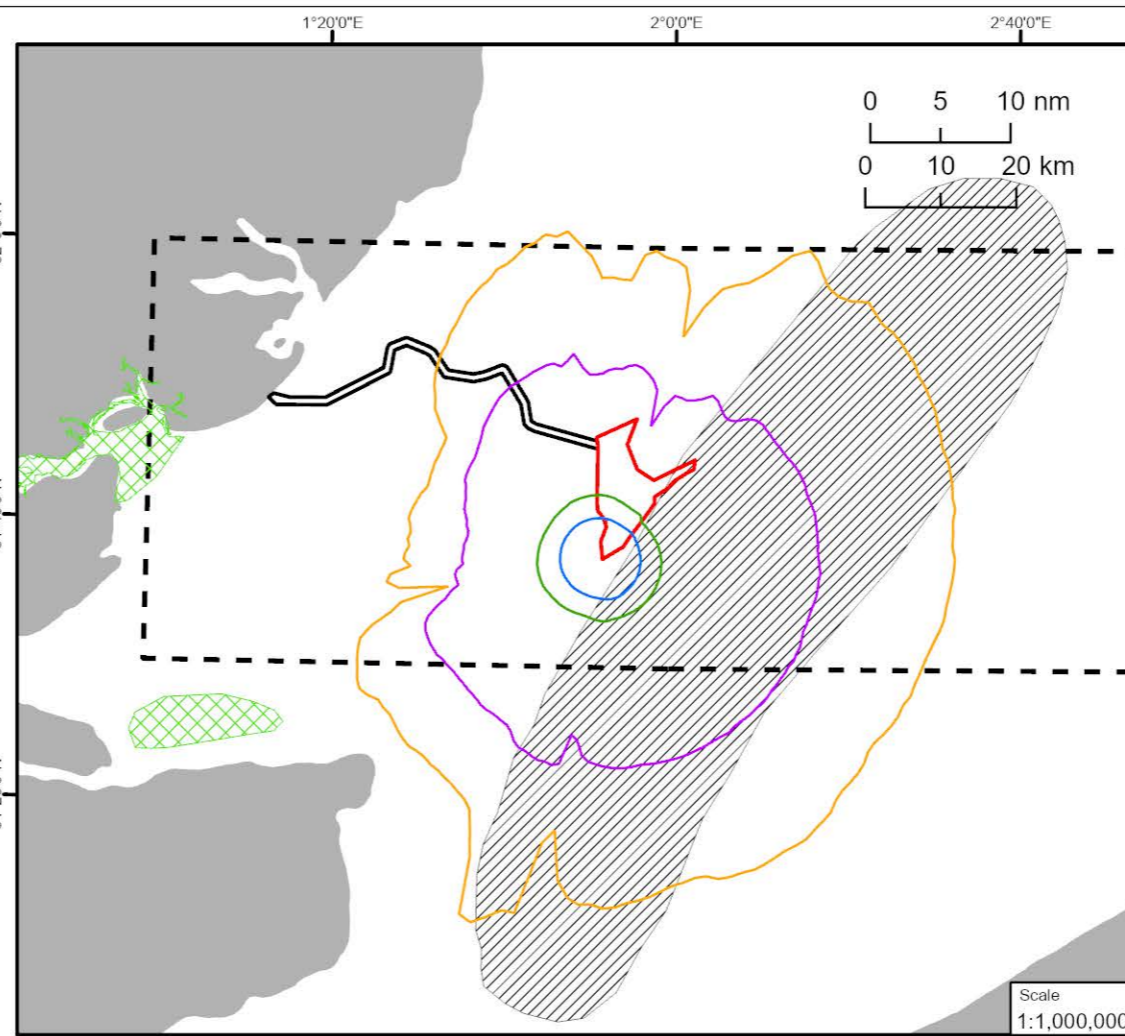
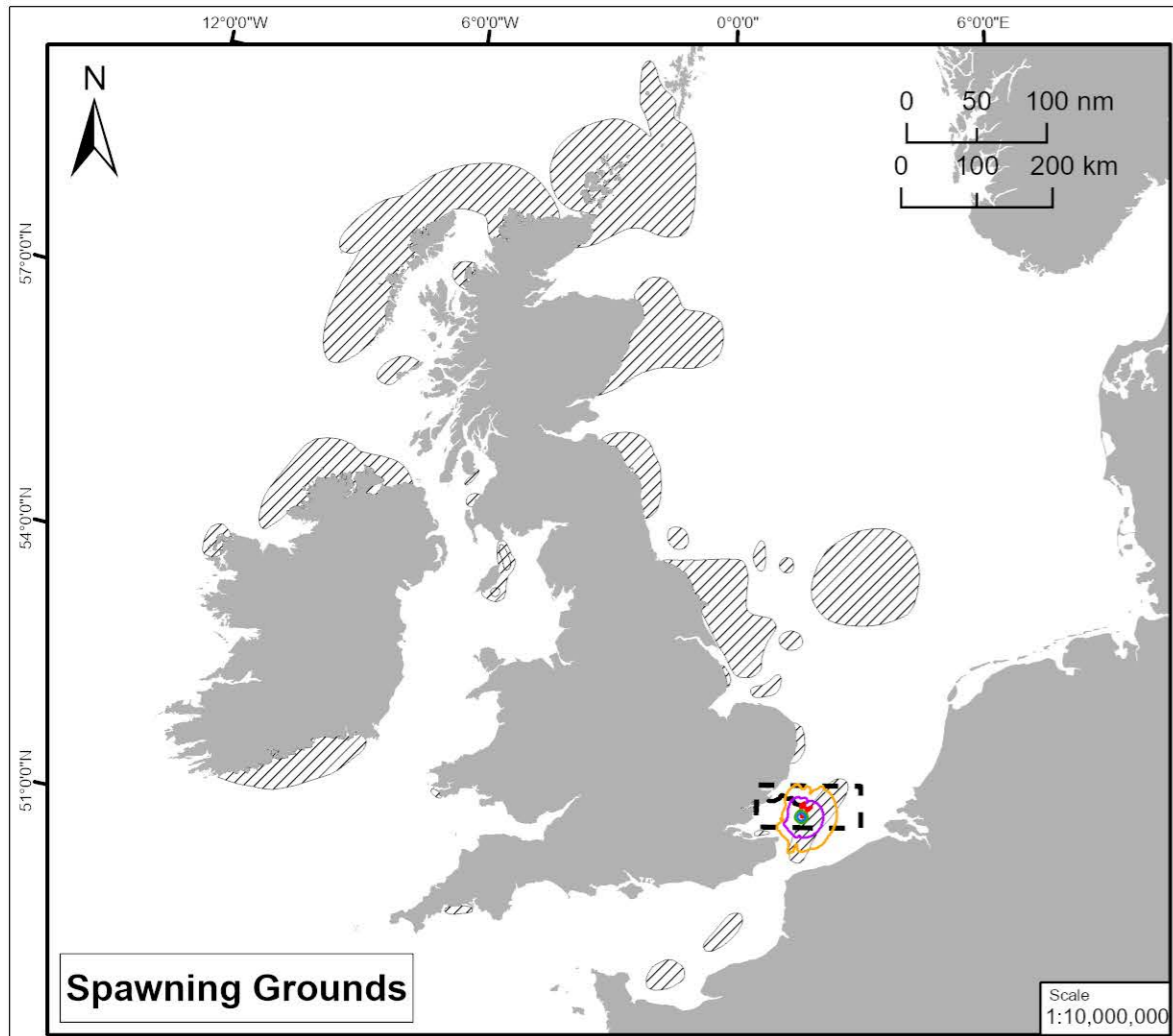
- Legend**
- North Falls Array Area
  - Export Cable Corridor
  - Study Area
- Herring Spawning Grounds**
- Spawning Grounds <sup>1</sup>
- Herring Nursery Grounds**
- Nursery Grounds <sup>1</sup>
  - High Intensity <sup>2</sup>
  - Low Intensity <sup>2</sup>
- Noise Exposure Criteria** <sup>3</sup>
- Mortality and Potential Mortal Injury (207 dB)
  - Recoverable Injury (203 dB)
  - Temporary Threshold Shift (186 dB)
  - Single Strike Sound Exposure (135 dB)

Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>3</sup> Subacoustech 2023

**DOWN'S HERRING  
 SPAWNING AND NURSERY GROUNDS  
 NOISE EXPOSURE CONTOURS**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	-

Drawing Number <b>NF-05-EIA-ES-002v3</b>	Figure Number <b>11.17</b>		
Scale Refer to map	Plot Size A3	Datum WGS84	Projection UTM31N



- Legend**
- North Falls Array Area
  - Export Cable Corridor
  - Study Area
- Herring Spawning Grounds**
- Spawning Grounds <sup>1</sup>
  - Blackwater/Thames Estuary Herring
- Herring Nursery Grounds**
- Nursery Grounds <sup>1</sup>
  - High Intensity <sup>2</sup>
  - Low Intensity <sup>2</sup>
- Noise Exposure Criteria** <sup>3</sup>
- Mortality and Potential Mortal Injury (207 dB)
  - Recoverable Injury (203 dB)
  - Temporary Threshold Shift (186 dB)
  - Single Strike Sound Exposure (135 dB)

Data Source:  
<sup>1</sup> Coull et al. 1998. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>3</sup> Subacoustech 2023

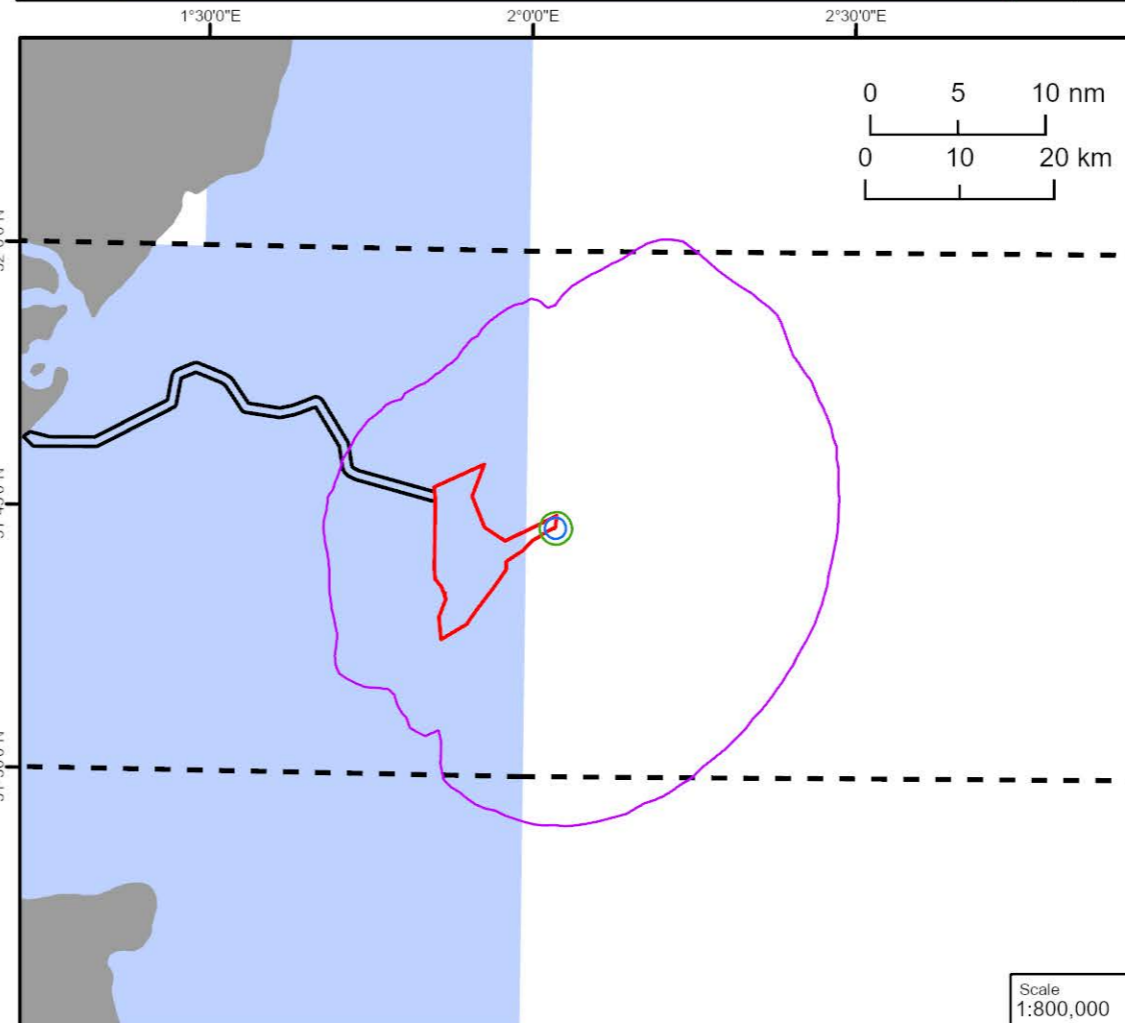
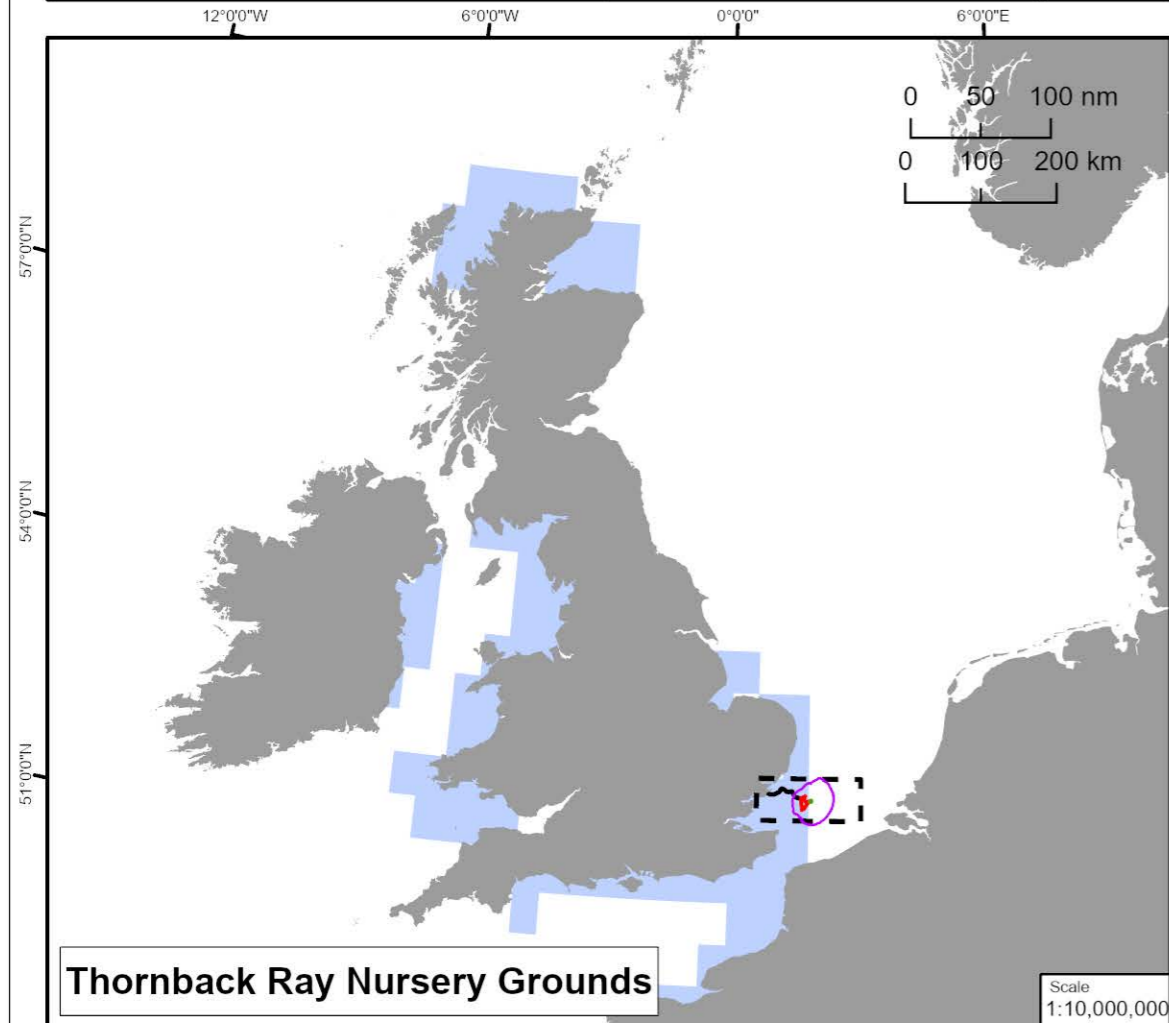
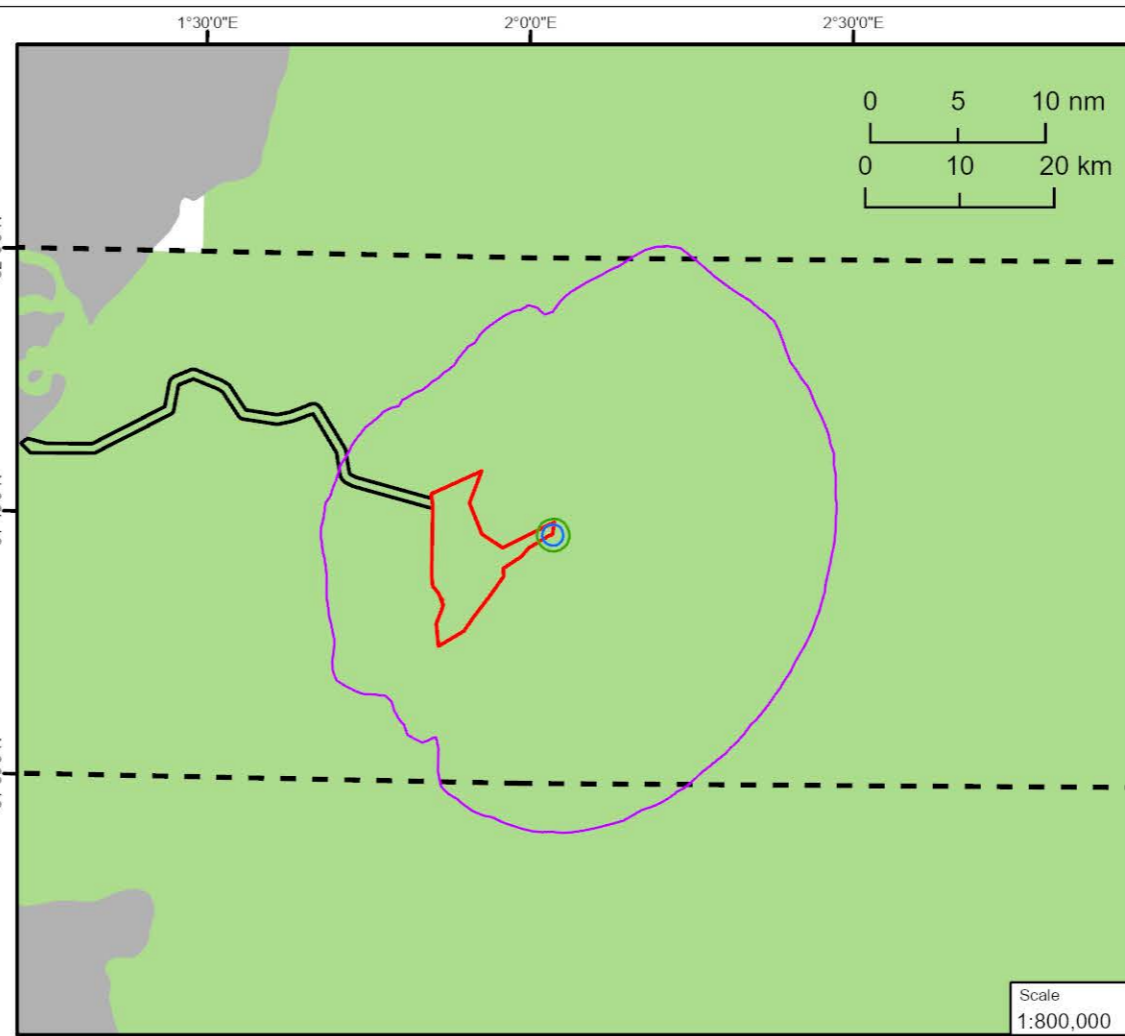
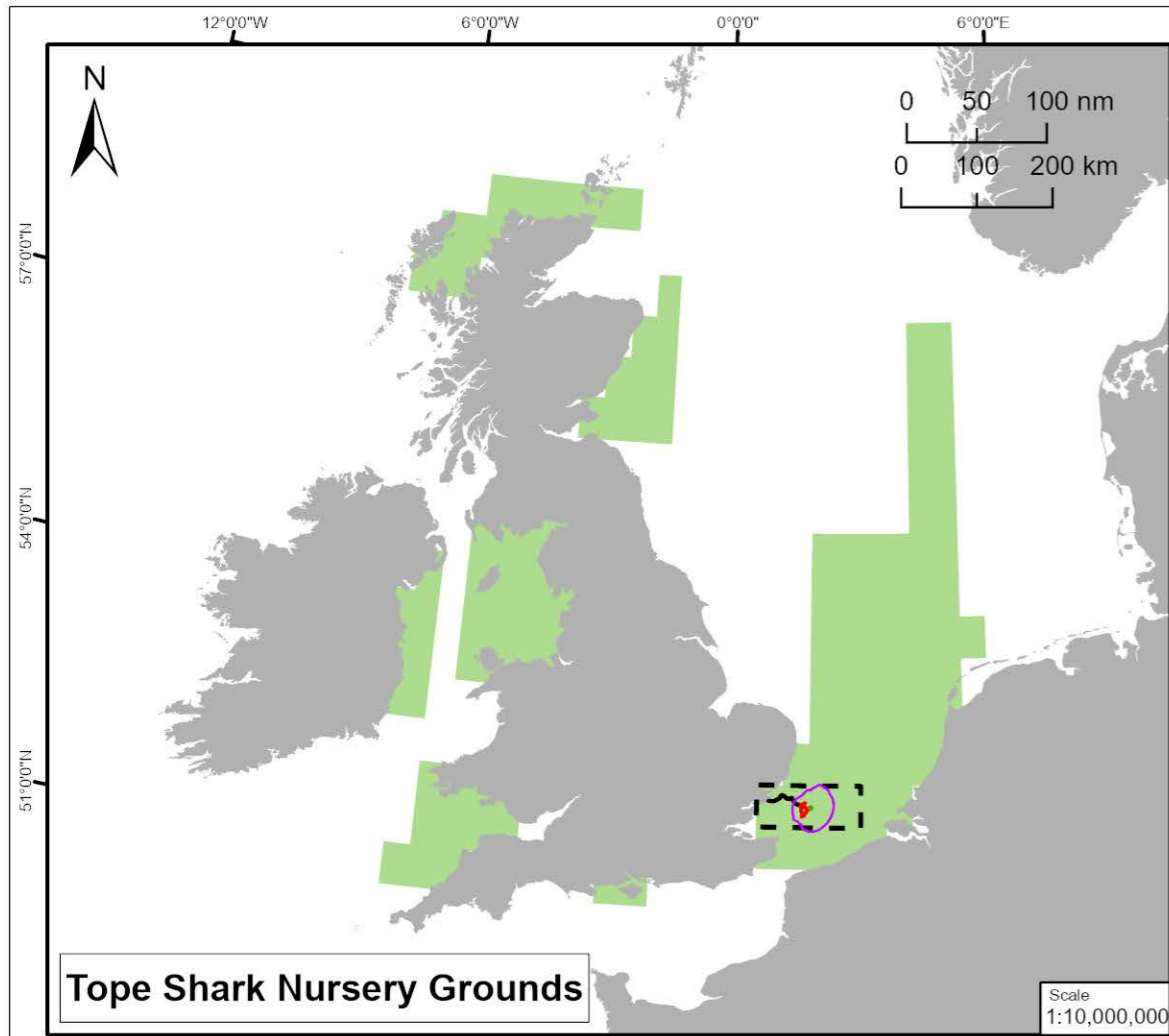
Drawing Title  
**BLACKWATER HERRING  
 SPAWNING AND NURSERY GROUNDS  
 NOISE EXPOSURE CONTOURS**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	-

Drawing Number: **NF-05-EIA-ES-003v3**      Figure Number: **11.18**

Scale: Refer to map      Plot Size: A3      Datum: WGS84      Projection: UTM31N





- Legend**
- North Falls Array Area
  - Export Cable Corridor
  - Study Area
- Topo Shark Nursery Grounds**
- High Intensity <sup>1</sup>
  - Low Intensity <sup>1</sup>
- Thornback Ray Nursery Grounds**
- High Intensity <sup>1</sup>
  - Low Intensity <sup>1</sup>
- Noise Exposure Criteria** <sup>2</sup>
- Mortality and Potential Mortal Injury (219 dB)
  - Recoverable Injury (216 dB)
  - Temporary Threshold Shift (186 dB)

Data Source:  
<sup>1</sup> Ellis et al. 2010. Contains public sector information licensed under the Open Government Licence v3.0  
<sup>2</sup> Subacoustech 2023

**TOPE SHARK AND THORNBACK RAY NURSERY GROUNDS NOISE EXPOSURE CONTOURS**

Rev	Date	Remarks	Drwn	Chkd
01	24/04/24	First issue	JW	-

Drawing Number	Figure Number
<b>NF-05-EIA-ES-011v2</b>	<b>11.19</b>

Scale	Plot Size	Datum	Projection
Refer to map	A3	WGS84	UTM31N





**NORTH FALLS**

*Offshore Wind Farm*



## **HARNESSING THE POWER OF NORTH SEA WIND**

*North Falls Offshore Wind Farm Limited*

*A joint venture company owned equally by SSE Renewables and RWE.*

*To contact please email [contact@northfallsoffshore.com](mailto:contact@northfallsoffshore.com)*

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