



Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

Environmental Statement

Volume 2

Chapter 25 - Seascape and Visual Impact Assessment

August 2022

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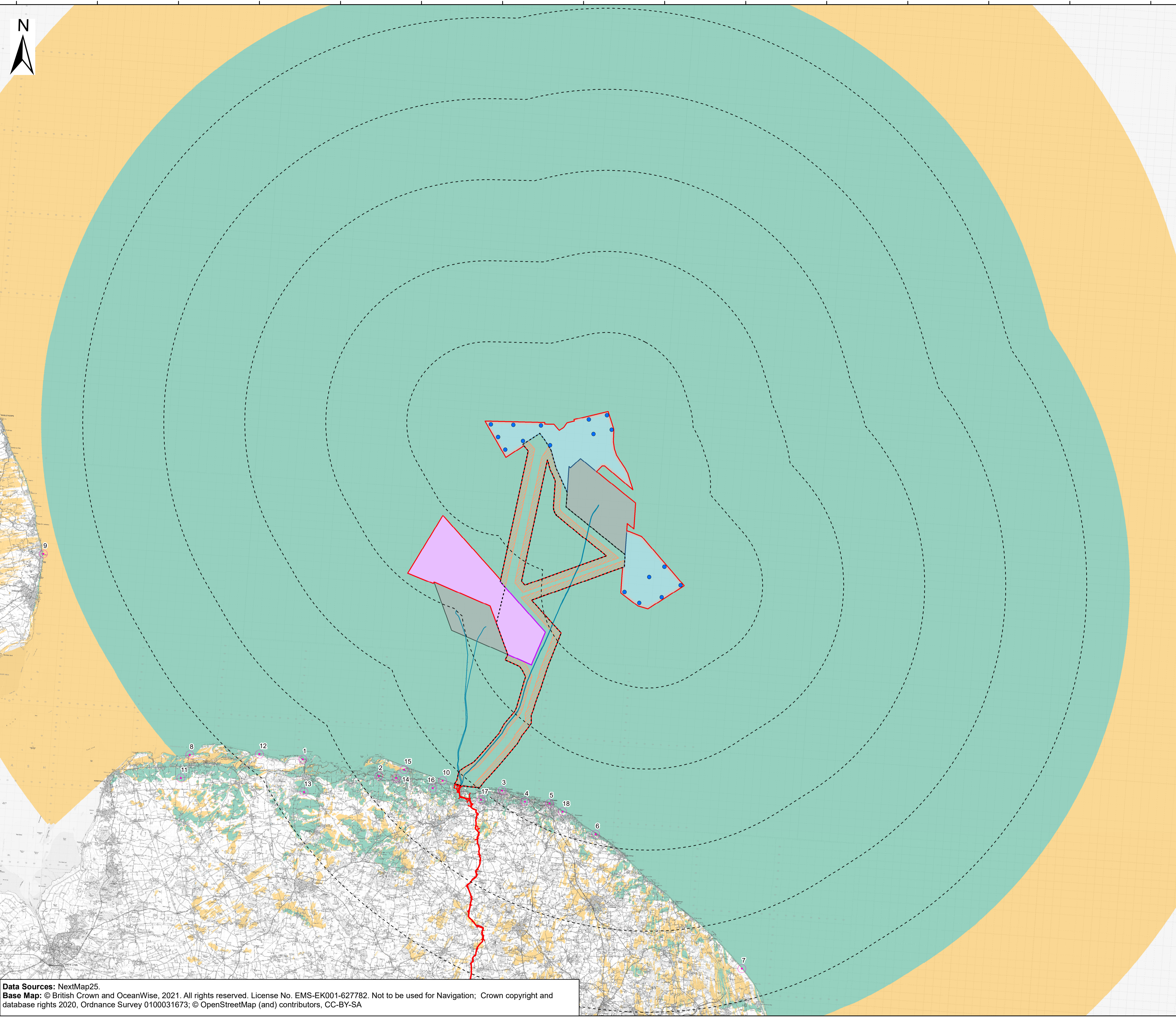
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Sheringham Shoal and Dudgeon Extension Projects

Figure 25.10
Title: Zone of Theoretical Visibility (ZTV) Study and Viewpoints Dudgeon Extension Project
Document: Environmental Statement (ES) Chapter 25 Seascape and Visual Impact Assessment
 Application Doc. no.: 6,2,25

- Legend:**
- Dudgeon Extension Project indicative turbine locations
 - Order Limits
 - 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
 - Existing Offshore Wind Farm
 - Existing Offshore Wind Farm Export Cable
 - Distance from Dudgeon Offshore Wind Farm Extension Site (10,20,30,40,50km)
 - Representative Viewpoints for Seascape and Visual Impact Assessment

Zone of Theoretical Visibility (ZTV) of Dudgeon Extension Project turbines (computer generated)

- Hub height 180m
- Tip height 330m

This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the viewshed routine in the ESRI ArcGIS Suite. The areas shown are the maximum theoretical visibility, taking into account topography, principal woodlands and settlements, which have been included in the model with the heights obtained from Nextmap 25. It should be noted that in some areas woodlands included within the ZTV may comprise active forestry, resulting in the felling and replanting of some areas modelled in the ZTV study. The ZTV study reflects this pattern at a specific point in time, as it is based on real height information. Whilst the felling cycle will alter the heights of different areas of forestry over time, altering localised visual effects, the wider pattern will remain relatively constant.

The model does not take into account any localised features such as small copses, hedgerows or individual trees and therefore still gives an exaggerated impression of the extent of visibility. The actual extent of visibility on the ground will be less than that suggested by this plan.

The ZTV includes an adjustment that allows for Earth's curvature and light refraction. Land areas are based on Nextmap 25 terrain data and has a 25m² resolution.



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

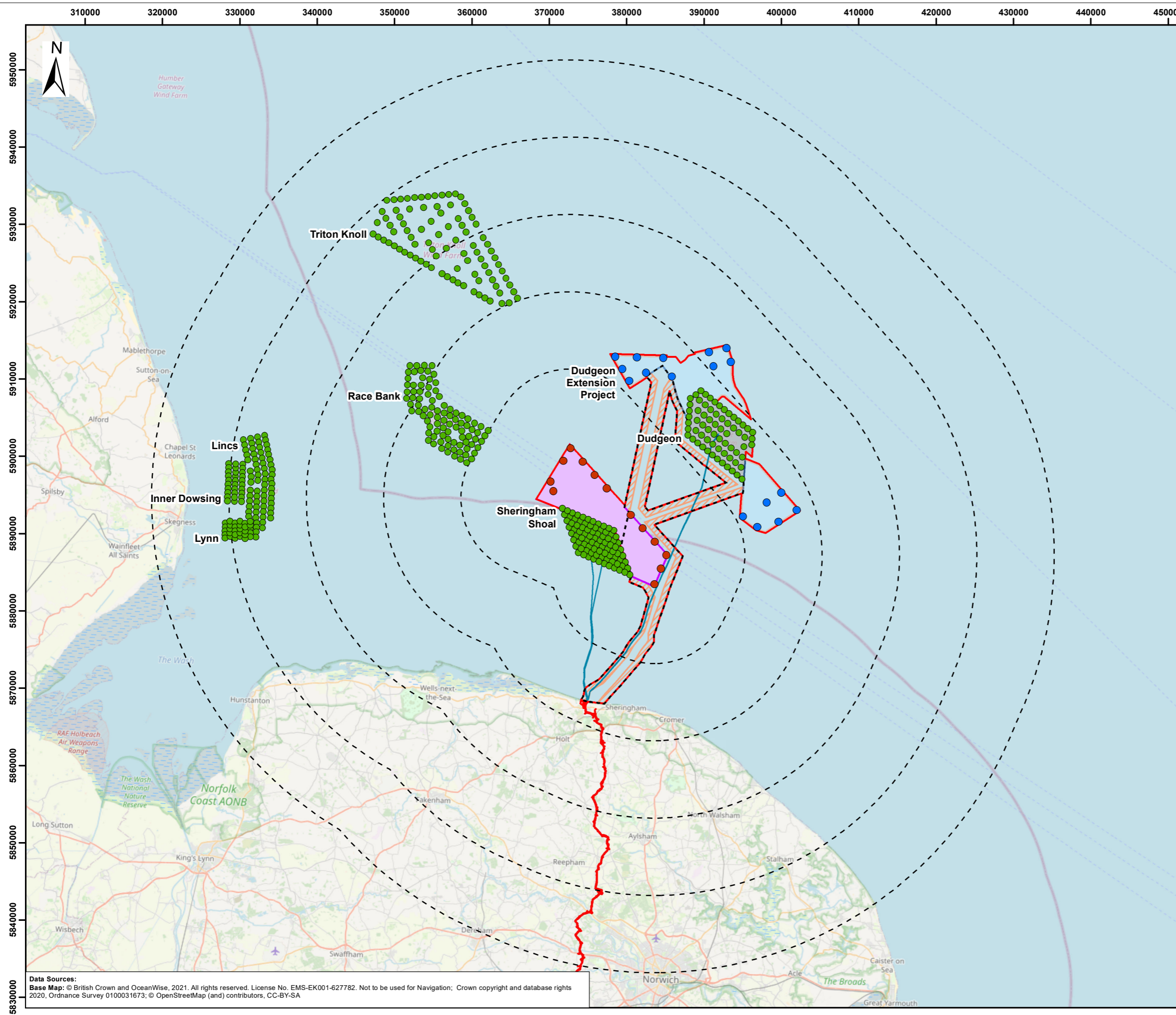
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Sheringham Shoal and Dudgeon Extension Projects

Title: Figure 25.11
 Operational and In Planning Wind Farms within 50km of Sheringham Shoal Extension Project

Document: Environmental Statement (ES)
 Chapter 25 Seascape and Visual Impact Assessment

Application Doc. no.: 6,2,25

- Legend:
- Sheringham Shoal Extension Project indicative turbine locations
 - Order Limits
 - Dudgeon Offshore Wind Farm Extension Project Wind Farm Site
 - Sheringham Shoal Offshore Wind Farm Extension Project Wind Farm Site
 - Offshore Cable Corridors
 - Existing Offshore Wind Farm Export Cable
 - Offshore Temporary Work
 - Existing Offshore Wind Farm
 - Distance from Sheringham Shoal Offshore
 - Wind Farm Extension Site (10,20,30,40,50km)

- Cumulative Turbines
- Operational and Consented
- Operational wind farms (individually labelled)
- Wind Farms in Planning
- Dudgeon Extension Project indicative turbine locations



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

0 10 20 km
 0 8 16 Miles

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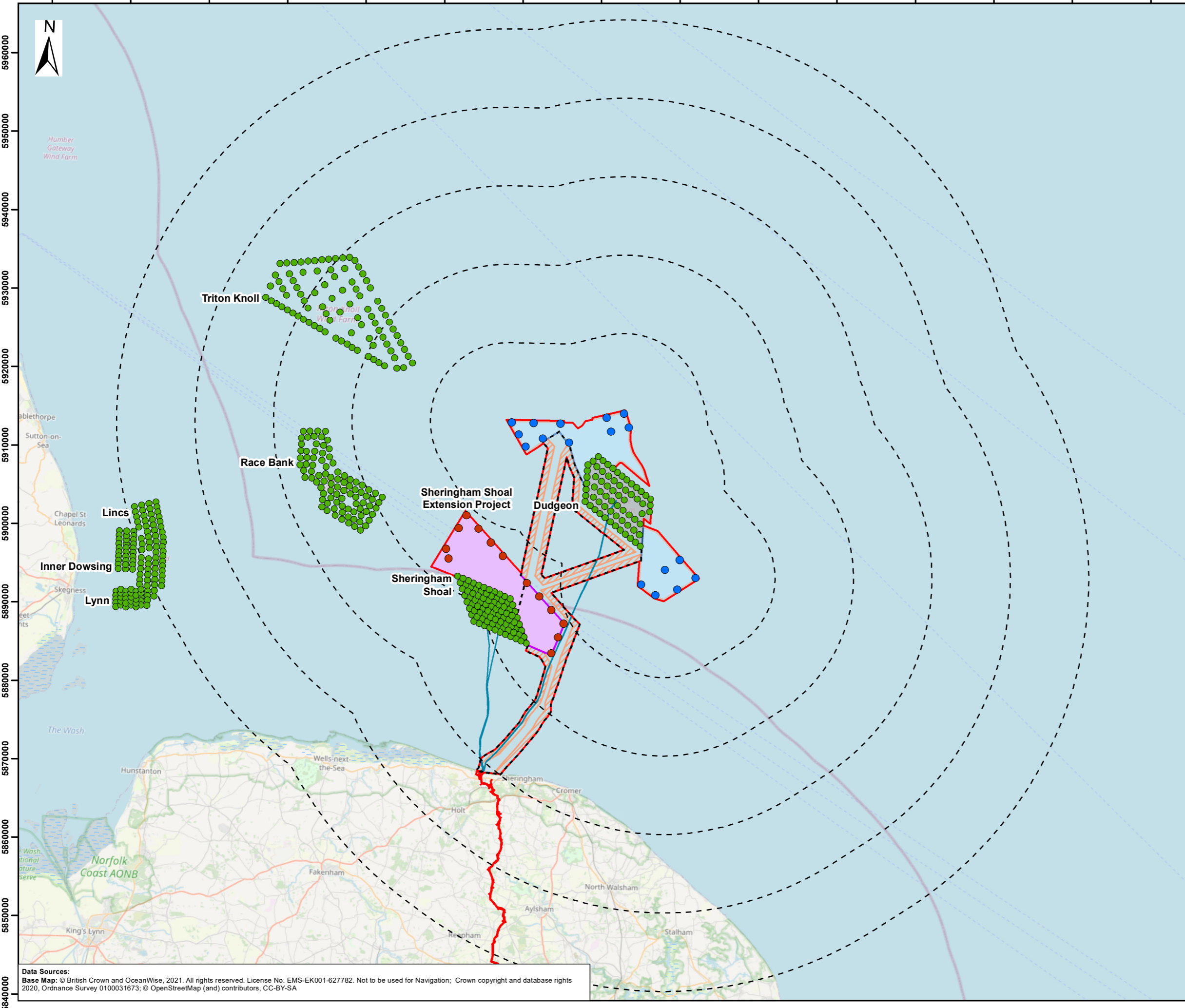
Sheringham Shoal and Dudgeon Extension Projects

Title: Figure 25.12
Operational and In Planning Wind Farms within 50km of Dudgeon Extension Project

Document: Environmental Statement (ES)
Chapter 25 Seascape and Visual Impact Assessment

Application Doc. no.: 6,2,25

- Legend:
- Dudgeon Extension Project indicative turbine locations
 - Order Limits
 - 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
 - Existing Offshore Wind Farm
 - Existing Offshore Wind Farm Export Cable
 - Distance from Dudgeon Offshore Wind Farm
 - Extension Site (10,20,30,40,50km)
- Cumulative Turbines
- Operational and Consented
- Operational wind farms (individually labelled)
- Wind Farms in Planning
- Sheringham Shoal Extension Project indicative turbine locations



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

0 10 20 km
0 8 16 Miles

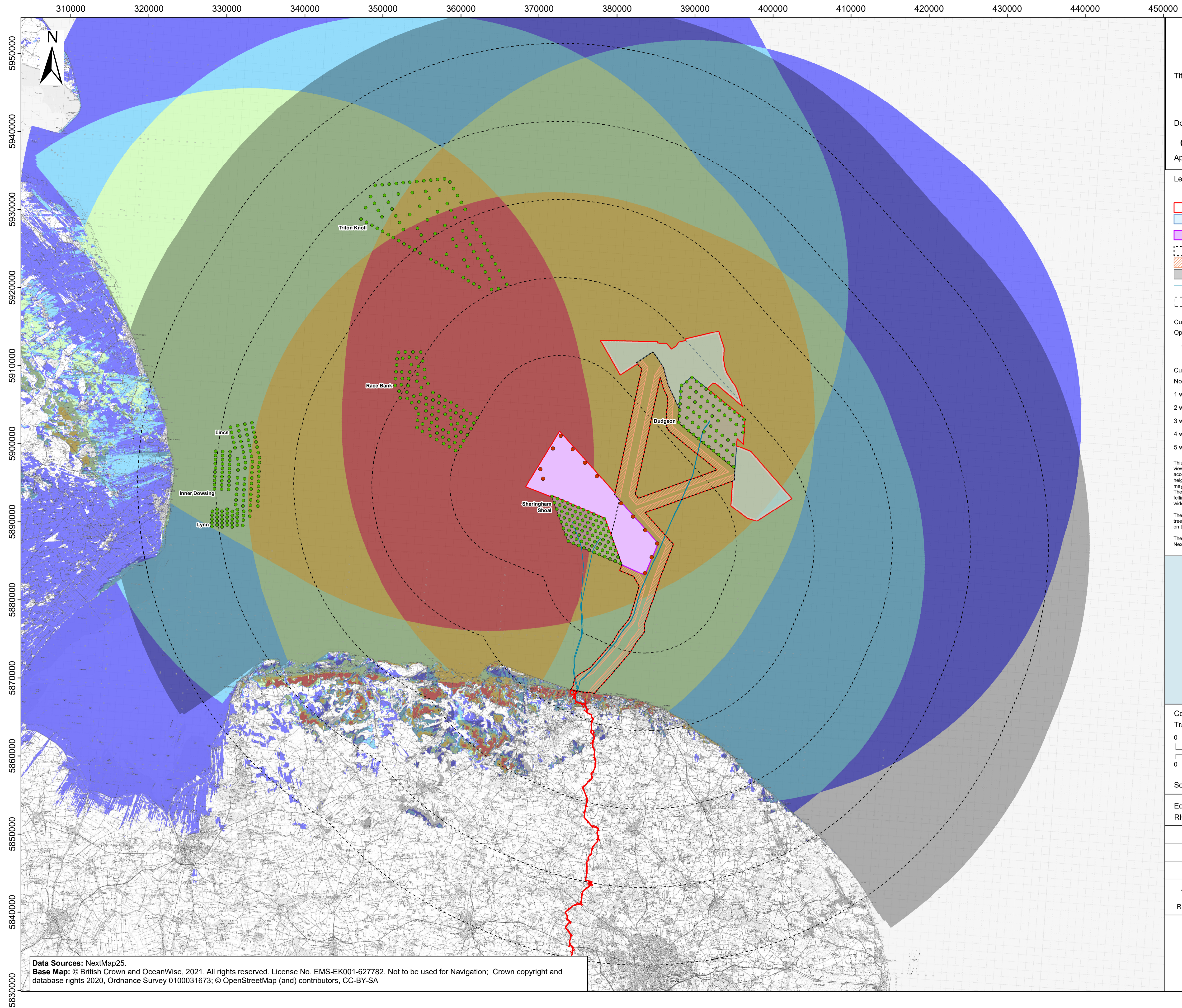
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Sheringham Shoal and Dudgeon Extension Projects

Title: Figure 25.13
ZTV Study Operational Wind Farms
Sheringham Shoal Extension Project

Document: Environmental Statement (ES)
Chapter 25 Seascape and Visual Impact Assessment
Application Doc. no.: 6,2,25

- Legend:**
- Sheringham Shoal Extension Project indicative turbine locations
 - Order Limits
 - 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
 - Existing Offshore Wind Farm
 - Existing Offshore Wind Farm Export Cable
 - Distance from Sheringham Shoal Offshore Wind Farm Extension Site (10,20,30,40,50km)

- Cumulative Turbines**
- Operational wind farms (individually labelled)
- Dudgeon
 - Race Bank
 - Sheringham Shoal
 - Triton Knoll
 - Lynn
 - Inner Dowsing
 - Lincs

Cumulative Visibility to Hub Height

No wind farms visible	plus Sheringham Shoal Extension Project
1 wind farm visible	
2 wind farms visible	
3 wind farms visible	
4 wind farms visible	
5 wind farms visible	

Note:
For the purpose of this ZTV the following schemes have been grouped: Inner Dowsing, Lincs, Lynn

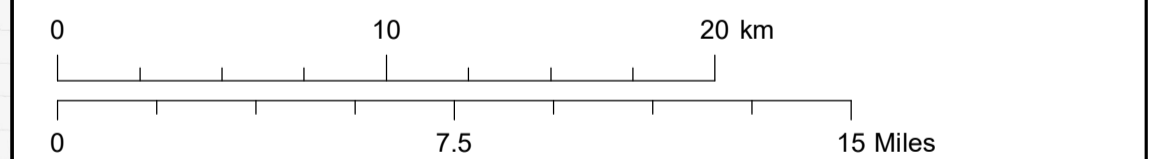
This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the viewshed routine in the ESRI ArcGIS Suite. The areas shown are the maximum theoretical visibility, taking into account topography, principal woodlands and settlements, which have been included in the model with the heights obtained from Nextmap 25. It should be noted that in some areas woodlands included within the ZTV may comprise active forestry, resulting in the felling and replanting of some areas modelled in the ZTV study. The ZTV study reflects this pattern at a specific point in time, as it is based on real height information. Whilst the felling cycle will alter the heights of different areas of forestry over time, altering localised visual effects, the wider pattern will remain relatively constant.

The model does not take into account any localised features such as small copses, hedgerows or individual trees and therefore still gives an exaggerated impression of the extent of visibility. The actual extent of visibility on the ground will be less than that suggested by this plan.

The ZTV includes an adjustment that allows for Earth's curvature and light refraction. Land areas are based on Nextmap 25 terrain data and has a 25m resolution.



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

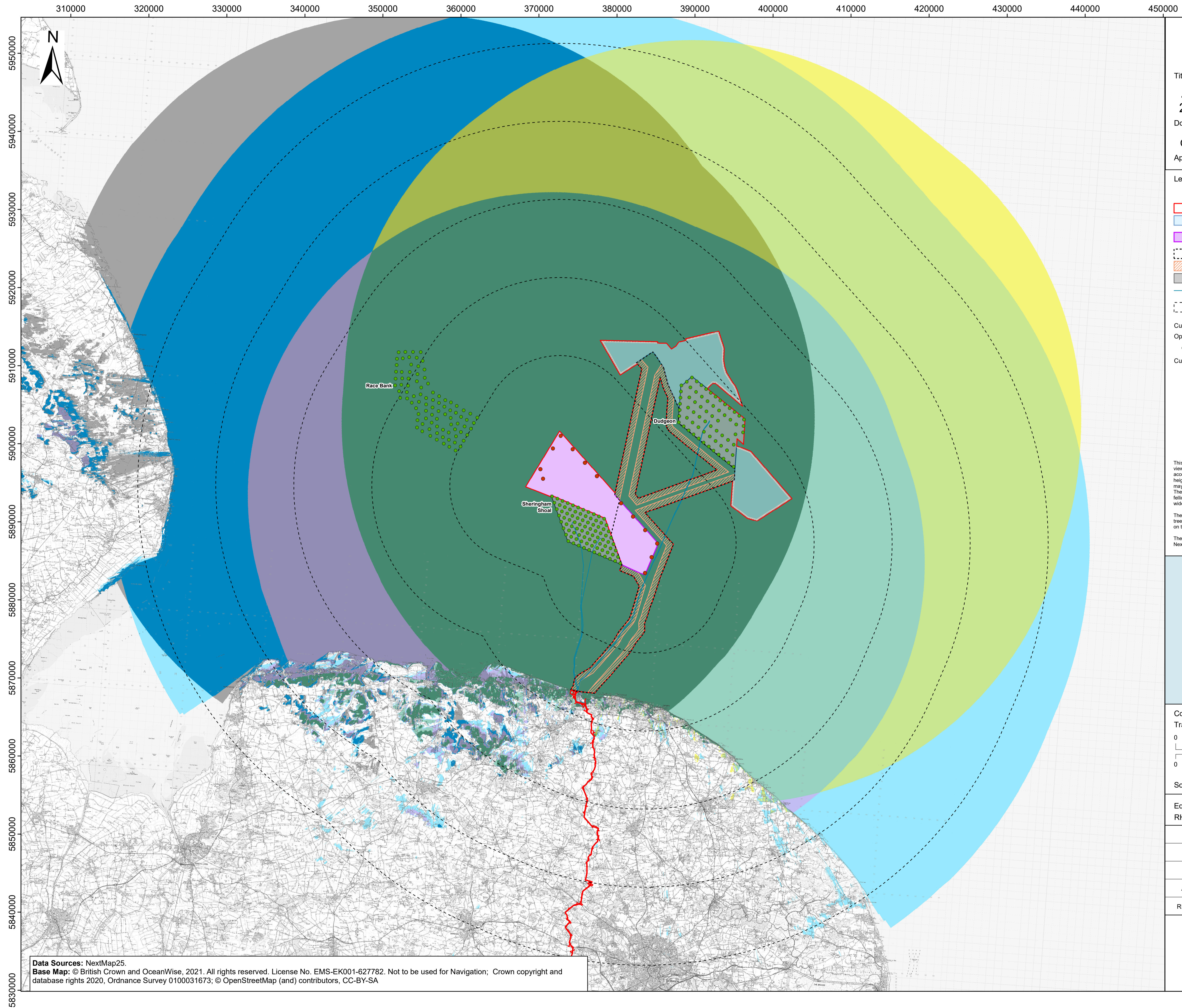


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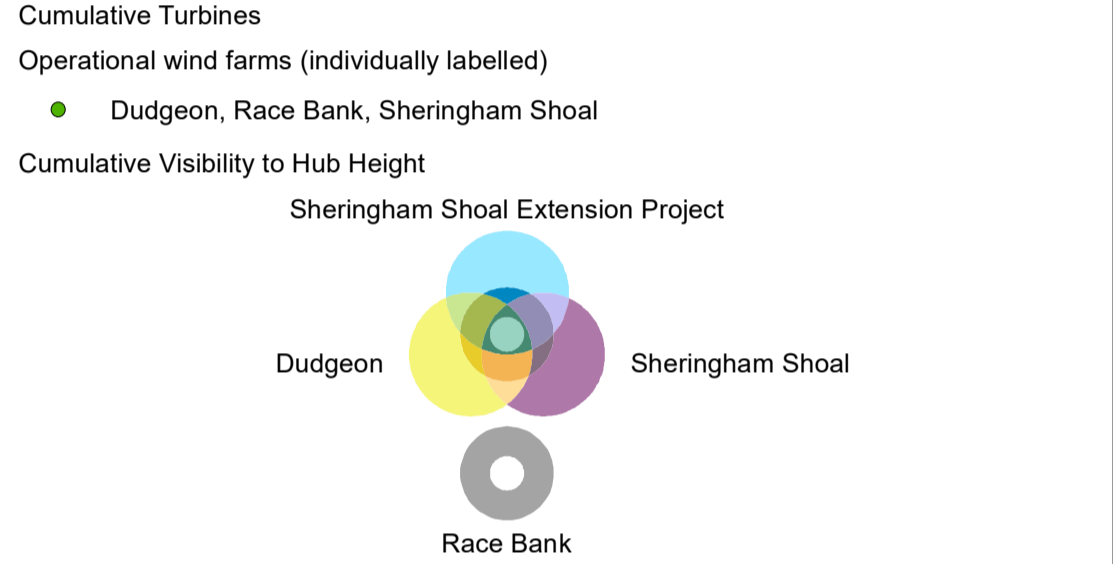


Sheringham Shoal and Dudgeon Extension Projects

Title: **Figure 25.14**
ZTV Study Operational Wind Farms within 20km Sheringham Shoal Extension Project

Document: **Environmental Statement (ES)**
Chapter 25 Seascape and Visual Impact Assessment
 Application Doc. no.: 6,2,25

- Legend:**
- Sheringham Shoal Extension Project indicative turbine locations
 - Order Limits
 - 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
 - Distance from Sheringham Shoal Offshore Wind Farm Extension Site (10,20,30,40,50km)



This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the viewshed routine in the ESRI ArcGIS Suite. The areas shown are the maximum theoretical visibility, taking into account topography, principal woodlands and settlements, which have been included in the model with the heights obtained from Nextmap 25. It should be noted that in some areas woodlands included within the ZTV may comprise active forestry, resulting in the felling and replanting of some areas modelled in the ZTV study. The ZTV study reflects this pattern at a specific point in time, as it is based on real height information. Whilst the felling cycle will alter the heights of different areas of forestry over time, altering localised visual effects, the wider pattern will remain relatively constant.

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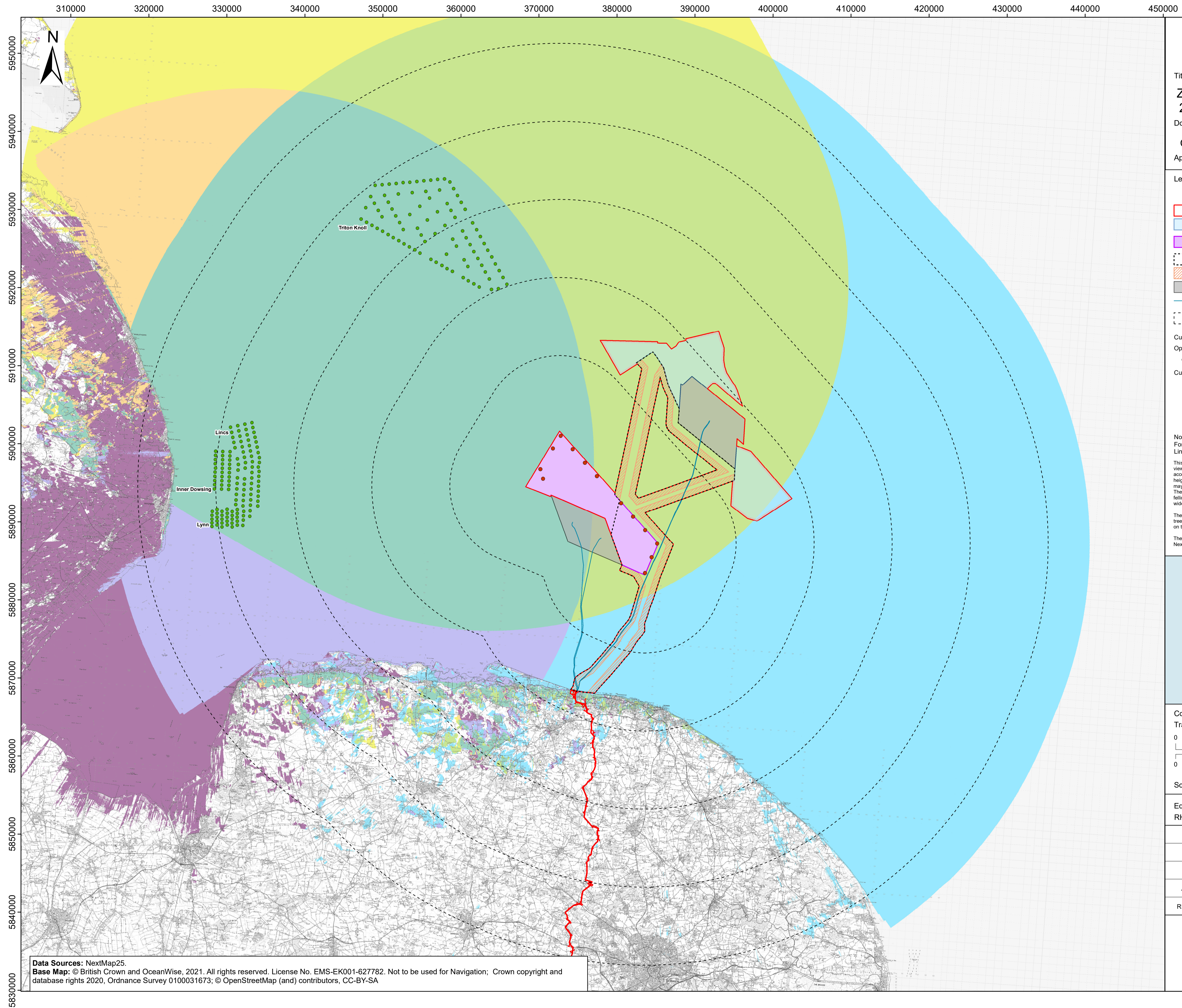
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Sheringham Shoal and Dudgeon Extension Projects

Title: **Figure 25.15**
ZTV Study Operational Wind Farms beyond 20km Sheringham Shoal Extension Project

Document: **Environmental Statement (ES)**
Chapter 25 Seascape and Visual Impact Assessment
 Application Doc. no.: 6,2,25

- Legend:**
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 - Order Limits
 - 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
 - Distance from Sheringham Shoal Offshore Wind Farm Extension Site (10,20,30,40,50km)



Note:
 For the purpose of this ZTV the following schemes have been grouped: Inner Dowsing, Lincs, Lynn

This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the viewshed routine in the ESRI ArcGIS Suite. The areas shown are the maximum theoretical visibility, taking into account topography, principal woodlands and settlements, which have been included in the model with the heights obtained from Nextmap 25. It should be noted that in some areas woodlands included within the ZTV may comprise active forestry, resulting in the felling and replanting of some areas modelled in the ZTV study. The ZTV study reflects this pattern at a specific point in time, as it is based on real height information. Whilst the felling cycle will alter the heights of different areas of forestry over time, altering localised visual effects, the wider pattern will remain relatively constant.

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