

Outer Dowsing Offshore Wind

Environmental Statement

Chapter 28 Landscape and Visual Assessment

Volume 2 Figures

Part 3 of 15

Date: March 2024

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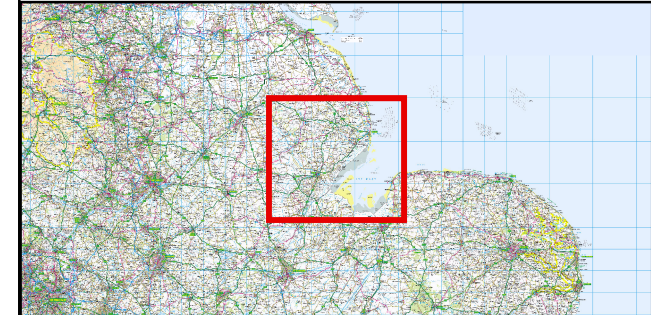
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- ### Legend
- Order Limits
 - Order Limits 1km Study Area
 - OnSS Site 5km Study Area
- #### Cumulative Development
- National Grid
 - Food Industry
 - Power
 - Residential
- 1 - West End, Hogsthorpe - Residential Development (N/084/01712/89)
 - 2 - Lower Farm - Solar Farm (S/195/02340/20)
 - 3 - Watery Lane, Butterwick - Residential Development (B/21/0196)
 - 4 - Church End Lane, Fishtoft - Residential Development (B/20/0489)
 - 5 - Church End Lane, Fishtoft - Residential Development (B/20/0488)
 - 6 - Land off Puttock Gate, Fosdyke - Residential Development (B/21/0419)
 - 7 - National Grid Substation at Weston Marsh
 - 8 - Naylor's Farm Anaerobic Digester (H17-1097-23)

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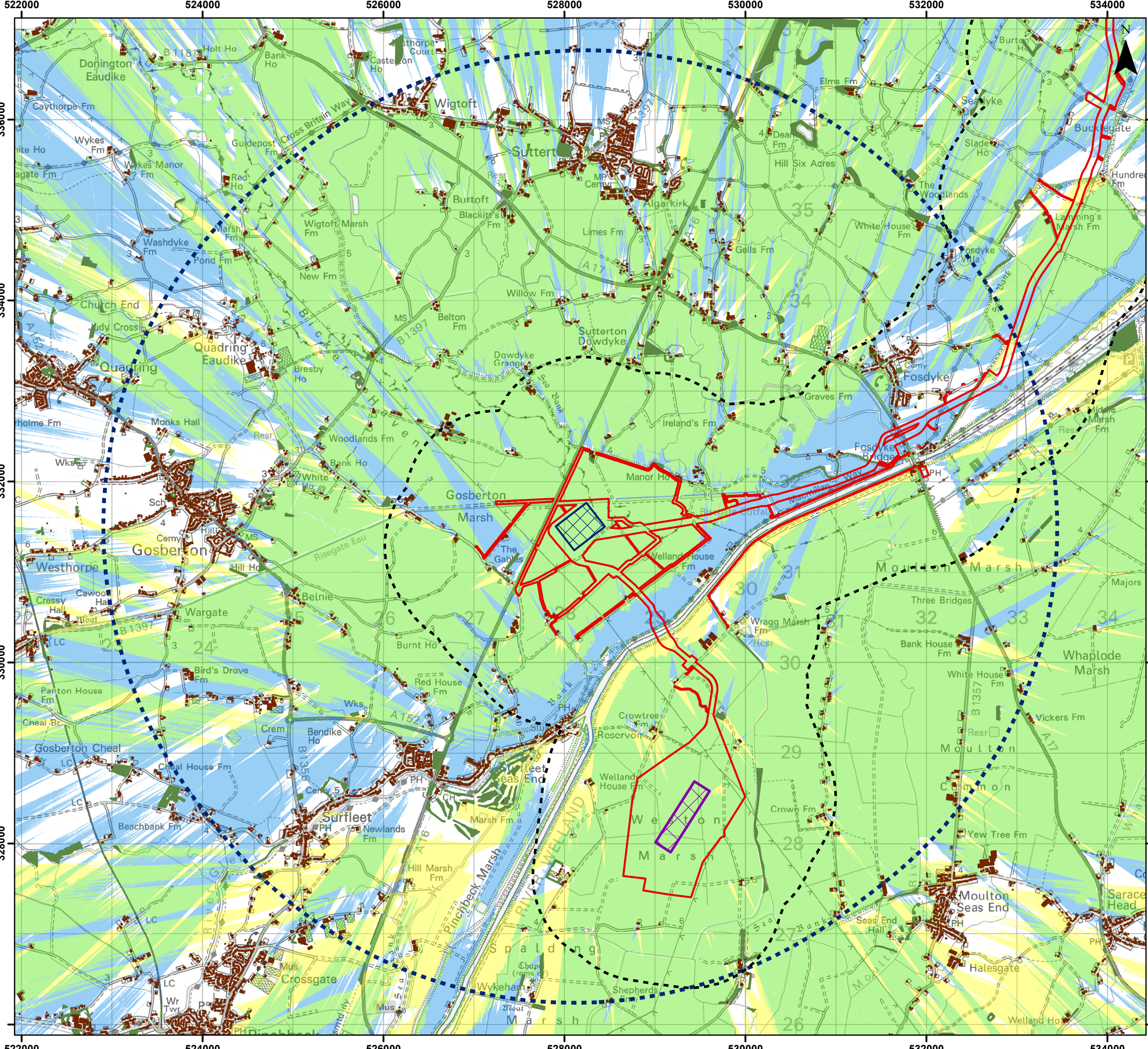
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Cumulative Developments

Figure 28.13

Date: 09/02/2024
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Document Path: \\GIS\1st\GIS Projects\1\Projects\05356 - G&B\Consultants Ltd\00012 GTR4 Outer Dowsing Tech\GIS\Scenes\Wk\2023 09 Environmental Statement\Landscapes\On Shore\05356_00012_061_9_4 Cumulative Developments.mxd



Legend

- OnSS Site
- Indicative NGSS location for the purposes of CEA
- Order Limits
- Order Limits 1km Study Area
- OnSS Site 5km Study Area
- Building
- Woodland

Cumulative ZTV*

- OnSS Theoretical Visibility
- NGSS Theoretical Visibility
- Combined Theoretical Visibility

ZTV has been generated based on the dimensions of the AIS substation footprint combined with the maximum height of the GIS substation to ensure theoretical visibility represents the maximum dimensions.

*This ZTV shows the comparative screen zone of theoretical visibility between the proposed onshore substation and National Grid substation. The visibility is represented by a perimeter of points with 10m (onshore substation) and 20m (NGSS) spacing arranged around the upper perimeter of the maximum substation 3D envelope. The ZTV does not indicate the decrease in scale that occurs with increased distance from the onshore substation.

NGSS Height:	12.5m	Observer height:	2m
Substation Height:	20.9m	Surface features:	Included
DSM:	EA LIDAR DSM 2m	Earth curvature:	Included
DSM resolution:	2m		

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Coordinate System: British National Grid

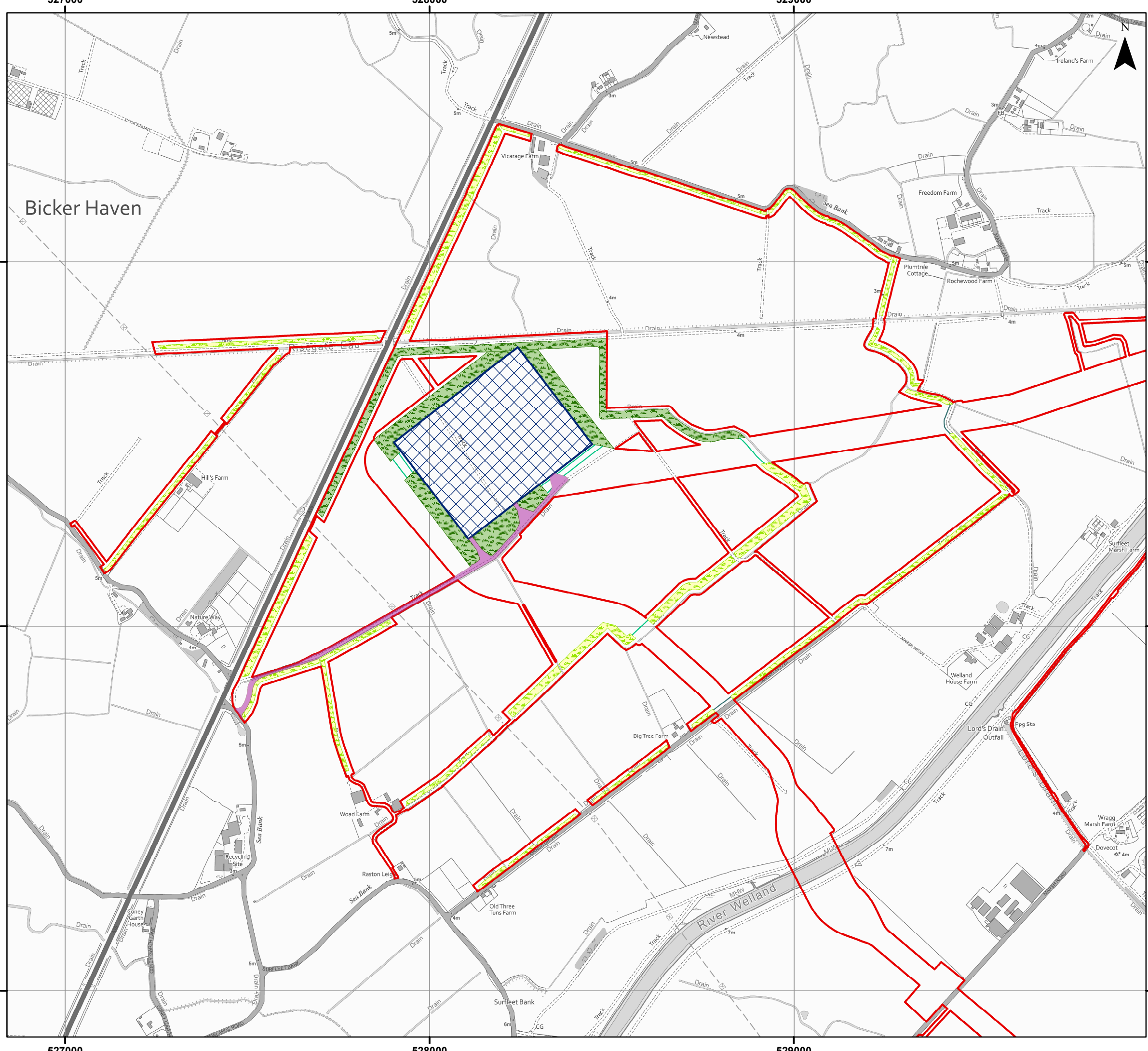
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Cumulative Screened ZTV with NGSS (Existing Screening)








Figure 28.14

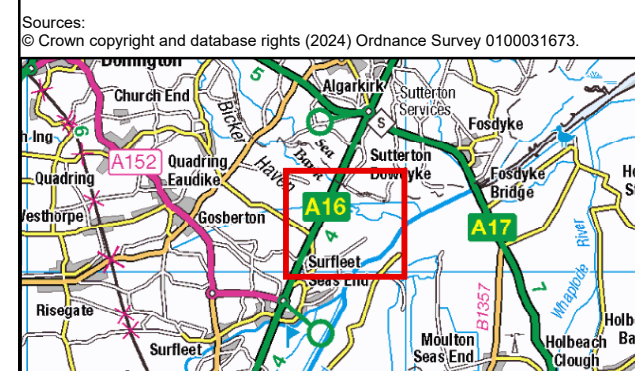
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Legend

-  OnSS Site
-  Order Limits
-  Maximum Extent of On-site Mitigation Planting
-  Maximum Extent of On-site Hedgerow
-  Maximum Extent of Off-site Mitigation Planting
-  Maximum Extent of Off-site Hedgerow
-  Permanent Access Track



Coordinate System: British National Grid
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OnSS Indicative Layout and Mitigation Planting

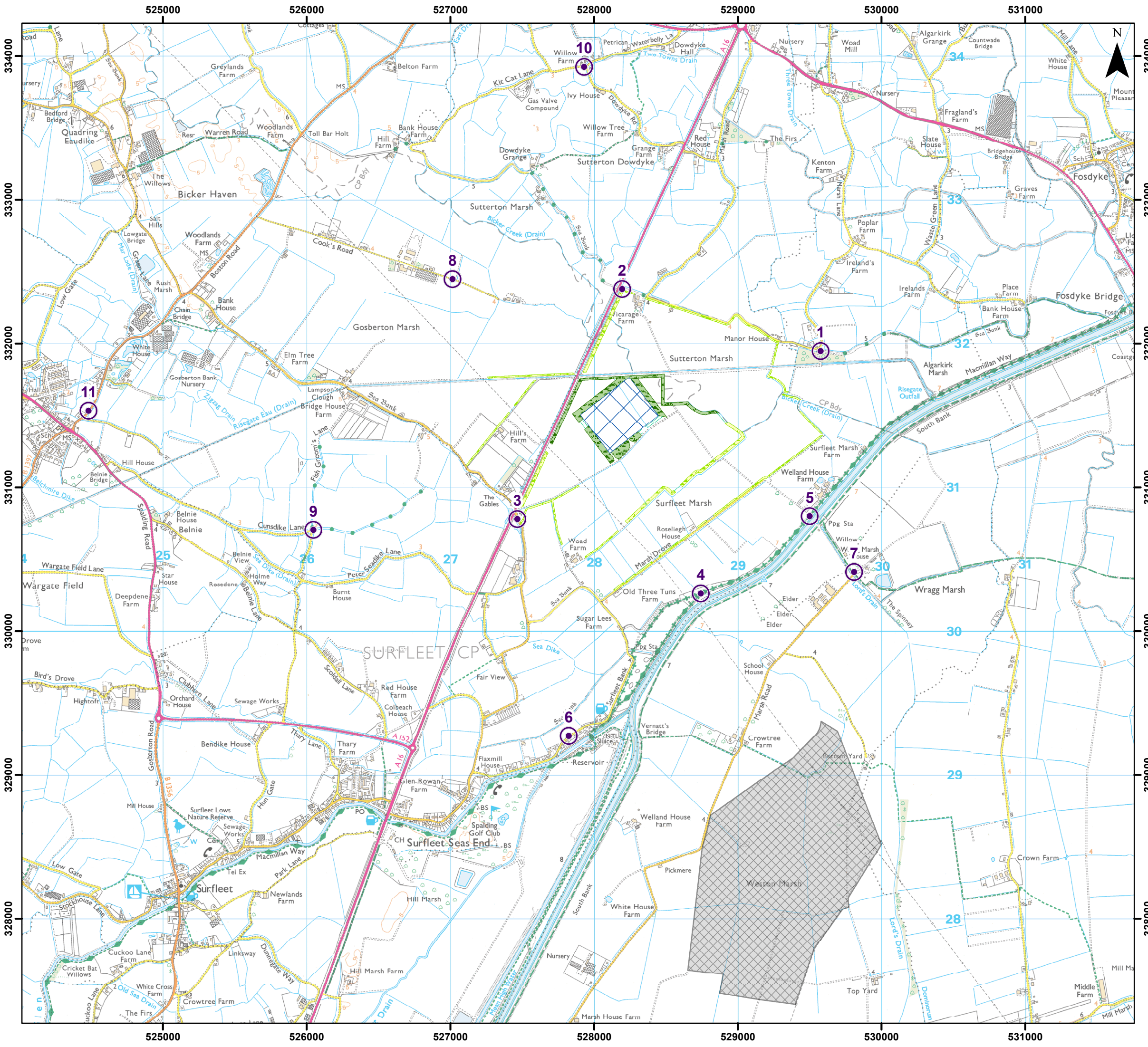
Figure 28.15










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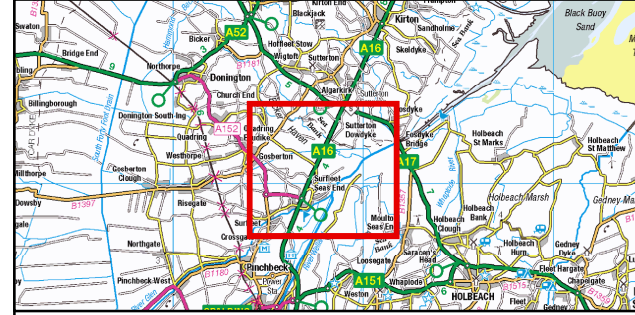
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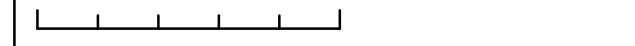
- ### Legend
-  OnSS Site (AIS)
 -  NGSS Connection
 -  Maximum Extent of On-site Mitigation Planting
 -  Maximum Extent of On-site Hedgerow
 -  Maximum Extent of Off-Site Mitigation Planting Under Consideration
 -  Maximum Extent of Off-Site Hedgerow Under Consideration
 -  Representative Viewpoint

- 1 - Marsh Lane Manor House
- 2 - A16 near Marsh Lane junction
- 3 - A16 near Gosberton Bank junction
- 4 - Macmillan Way near Ship Inn
- 5 - Macmillan Way near Welland House Farm
- 6 - Reservoir Road, Surfleet Seas End
- 7 - Wragg Marsh, Marsh Road
- 8 - Cook's Road, Gosberton Marsh
- 9 - Cunsdike Lane, Gosberton Marsh
- 10 - Willow Farm, Sutterton Dowdyke
- 11 - Gosberton

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Viewpoint Location Plan

Figure 28.16



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Outer Dowsing Offshore Wind

Onshore Substation Visualisations (Computer Generated Indicative Model)

Date: March 2024



Visualisation Methodology

Introduction

The viewpoint assessment is illustrated by a range of visualisations, including photographs and photomontages, which have been produced in accordance with Landscape Institute (2019) Technical Guidance Note (TGN) 06/19 Visual Representation of Development Proposals.

The photographs used to produce the photomontages have been taken using Canon EOS 5D and 6D Digital SLR cameras, with a fixed lens and a full-frame (35 mm negative size) CMOS sensor. The photographs are taken on a tripod with a pano-head at a height of approximately 1.5m above ground. To create the baseline panorama, the frames are individually cylindrically projected and then digitally joined to create a planar projected panorama with a 53.5-degree field of view. Tonal alterations are made using Adobe software to create an even range of tones across the photographs once joined.

A photomontage is a visualisation which superimposes, in this instance, a computer generated model of an indicative substation, upon a photograph or series of photographs. Photomontage is a widespread and popular visualisation technique, which allows changes in views and visual amenity to be illustrated and assessed, within known views of the 'real' landscape. Computer generated models of the Air Insulated (AIS) Onshore Substation (OnSS) and Gas Insulated Switchgear (GIS) OnSS options have been illustrated in the viewpoint visualisations in order to aid the viewer's understanding of the potential form and density of the Project.

The Maximum Design Envelope (MDE) is represented by a white dashed line on each photomontage for each viewpoint. The MDE represents a maximum height and geographical extent of both the AIS and GIS options for the OnSS. While the final design of the OnSS will not be confirmed until the detailed design phases the elements of the proposals (buildings, electrical infrastructure etc.) may move around within the MDE, however they would not exceed the height or geographical extent shown. This ensures that the landscape and visual impact assessment (LVIA) is based on the 'Rochdale Envelope' approach, as supported by The Planning Inspectorate Advice Note Nine (The Planning Inspectorate, 2018).

Photographs and photomontages have been prepared for 11 viewpoints and the visualisation figures prepared for each viewpoint are outlined in Table 1

Table 1 Viewpoint Visualisations Figure References

VP	Receptor	Existing View	MDE & Indicative AIS OnSS Model		MDE & Indicative GIS OnSS Model		Cumulative Assessment	
			Without Mitigation Planting	With Mitigation Planting (15 years growth)	Without Mitigation Planting	With Mitigation Planting (15 years growth)	NGSS Existing View	NGSS With Mitigation Planting (15 years growth)
			The Maximum Design Envelope (MDE) is represented in the visualisations as a white dashed line.				The 'Connection Area' ¹ is represented by a blue dashed line and the MDE assumptions ² are represented by a grey block.	
1	Marsh Lane near Manor House	28-17a	28-17b	28-17c	28-17d	28-17e		
2	A16 near Marsh Lane junction	28-18a	28-18b	28-18c	28-18d	28-18e		
3	A16 near Gosberton Bank Junction	28-19a	28-19b	28-19c	28-19d	28-19e		
4	Macmillan Way near Ship Inn	28-20a	28-20b	28-20c	28-20d	28-20e	28-20f	28-20g
5	Macmillan Way near Welland House Farm	28-21a	28-21b	28-21c	28-21d	28-21e	28-21f	28-21g
6	Reservoir Road, Surfleet Seas end	28-22a	28-22b	28-22c	28-22d	28-22e		
7	Wragg Marsh, Marsh Road	28-23a	28-23b	28-23c	28-23d	28-23e		
8	Cook's Road, Gosberton Marsh	28-24a	28-24b	28-24c	28-24d	28-24e		
9	Cunsdike Lane, Gosberton Marsh	28-25a	28-25b	28-25c	28-25d	28-25e		
10	Willow Farm, Sutterton Dowdyke	28-26a	28-26b	28-26c	28-26d	28-26e		
11	Gosberton	28-27a	28-27b	28-27c	28-27d	28-27e		

¹ The Connection Area is an indicative Search Area for the NGSS.

² The size or location of the National Grid substation (NGSS) is not yet known and therefore the design envelope shown is based on typical assumptions.

