



MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Environmental Statement

Volume 3, Figures - Part 7 of 7



September 2024
Rev: ES Issue

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ES	For issue	AS	September 2024	IM	September 2024

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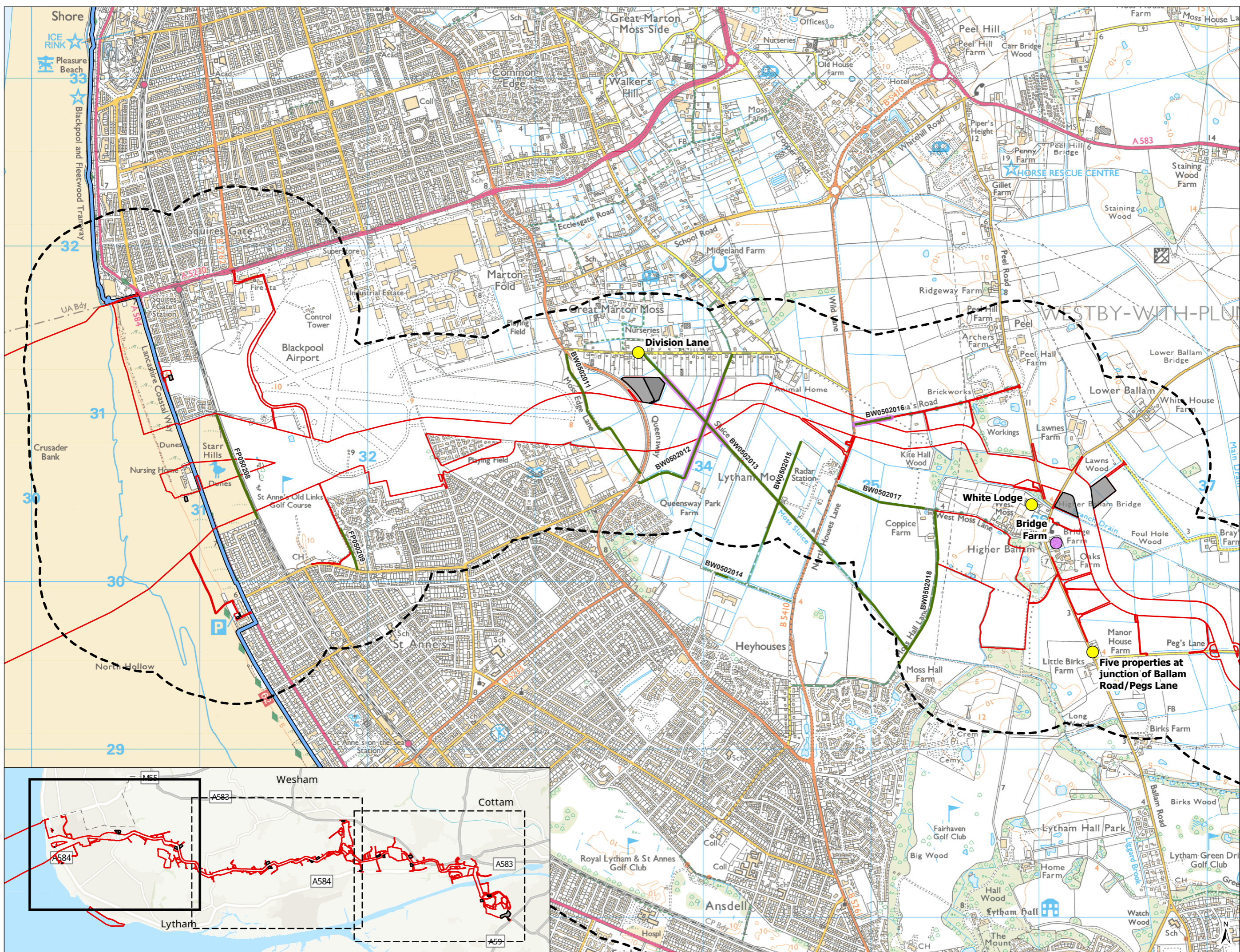
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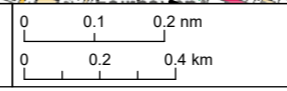
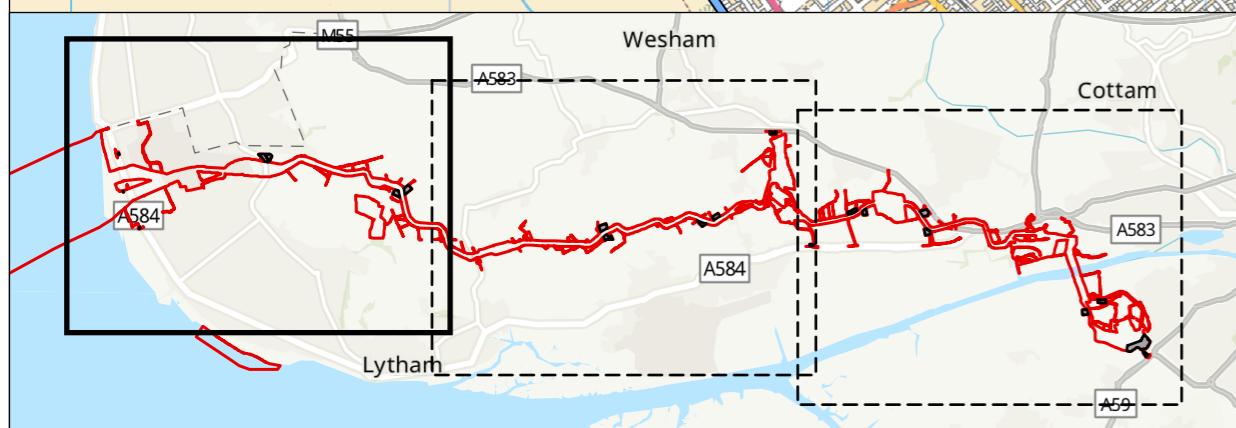
RPS

Prepared for:

**Morgan Offshore Wind Limited,
Morecambe Offshore Windfarm Ltd**



- LEGEND**
- Transmission Assets Order Limits
 - 500m buffer
 - Compounds
 - Public Right of Way (PRoW)
 - Sections of PRoW where significant visual effects are likely to be experienced
 - Residential properties where significant visual effects are likely to be experienced
 - Residential properties where visual effects are likely to be experienced
 - National Cycle Network
 - NCR62
 - NCR622
 - Sections of NCR where significant visual effects are likely to be experienced



Geodetic Information:
 Datum: OSGB 1936
 Projection: British National Grid
 Scale@379mmx231mm: 1:20,000

Data Sources: bp, rowmaps.org

Service Layer Credits: World Topographic Map: Esri UK, Esri, TomTom, Garmin, Foursquare, MET/NASA, USGS
 World Topographic Map: DoBH, OS, Esri, HERE, Garmin, USGS, NGA

Project Name:
 MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

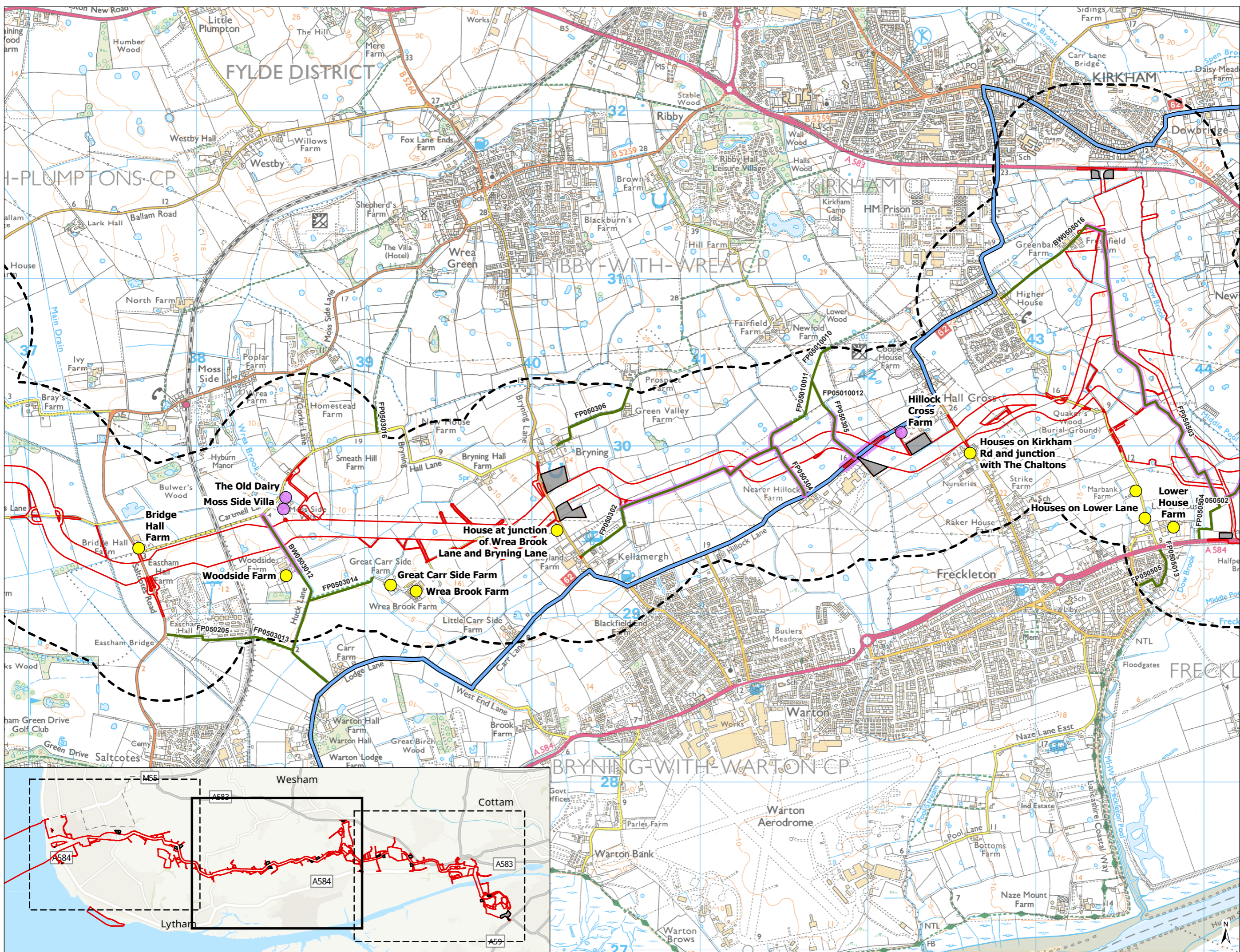
Drawing Title:
 VISUAL RECEPTORS



Figure 10.6a

Drawing Number:
 12693-0421-02

VER	DATE	DETAILS	BY	CHECK
00	24/09/24	FINAL	JM	PE



- LEGEND**
- Transmission Assets Order Limits
 - 500m buffer
 - Compounds
 - Public Right of Way (PRoW)
 - Sections of PRoW where significant visual effects are likely to be experienced
 - Residential properties where significant visual effects are likely to be experienced
 - Residential properties where significant visual effects are likely to be experienced
 - National Cycle Network
 - NCR62
 - NCR622
 - Sections of NCR where significant visual effects are likely to be experienced

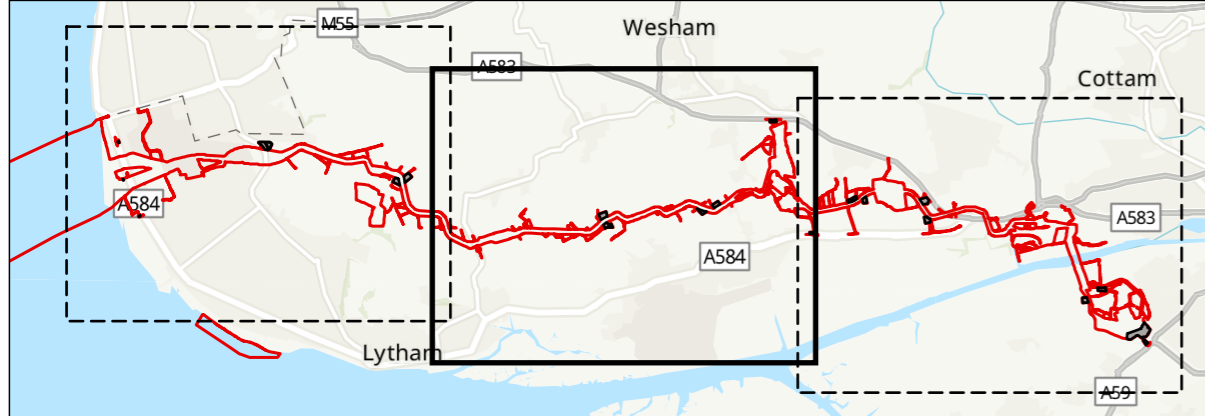
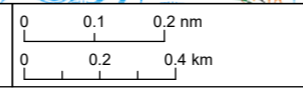


Figure 10.6b
 Drawing Number:
 12693-0421-02

Project Name:
 MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
 VISUAL RECEPTORS

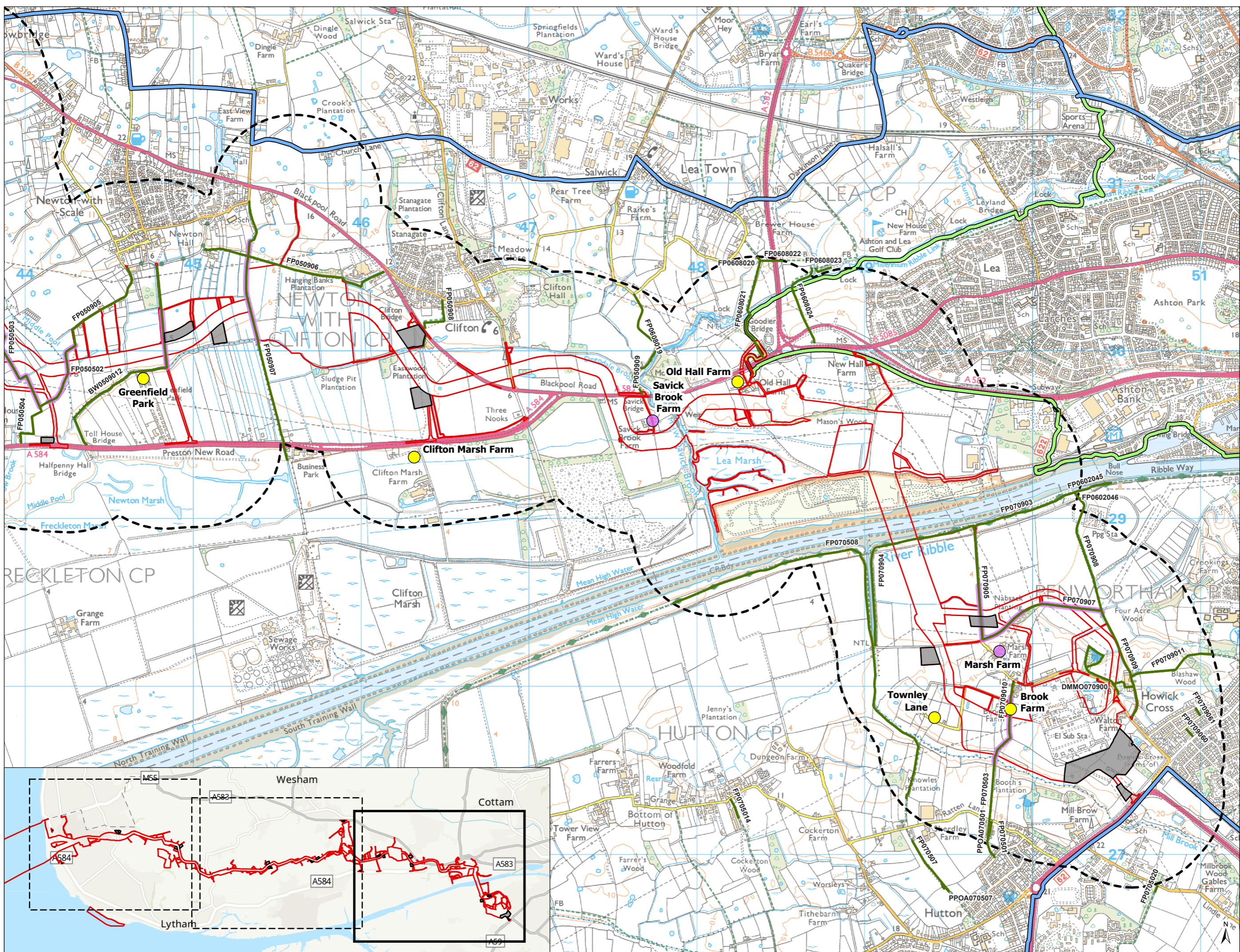


Geodetic Information:
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 Projection: British National Grid
 Scale@379mmx231mm: 1:20,000

Data Sources: bp, rowmaps.org

Service Layer Credits: World Topographic Map: Esri UK, Esri, TomTom, Garmin, Foursquare, MET/NASA, USGS
 World Topographic Map: DoBH, OS, Esri, HERE, Garmin, USGS, NGA

VER	DATE	DETAILS	BY	CHECK
00	24/09/24	FINAL	JM	PE



- LEGEND**
- Transmission Assets Order Limits
 - 500m buffer
 - Compounds
 - Public Right of Way (PRoW)
 - Sections of PRoW where significant visual effects are likely to be experienced
 - Residential properties where significant visual effects are likely to be experienced
 - Residential properties where significant visual effects are likely to be experienced
 - National Cycle Network
 - NCR62
 - NCR622
 - Sections of NCR where significant visual effects are likely to be experienced

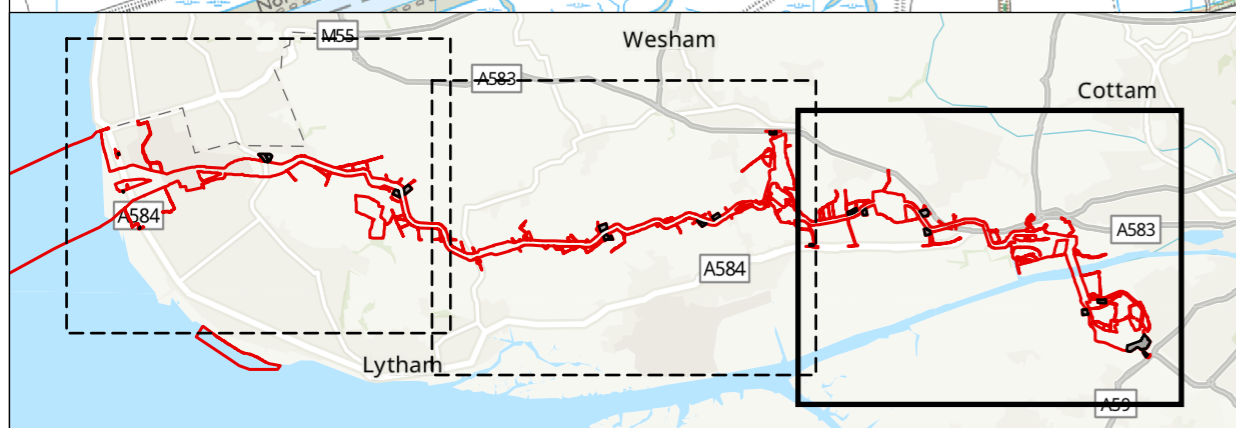
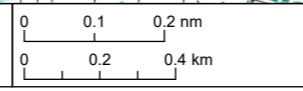


Figure 10.6c

Drawing Number:
12693-0421-02

Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
VISUAL RECEPTORS

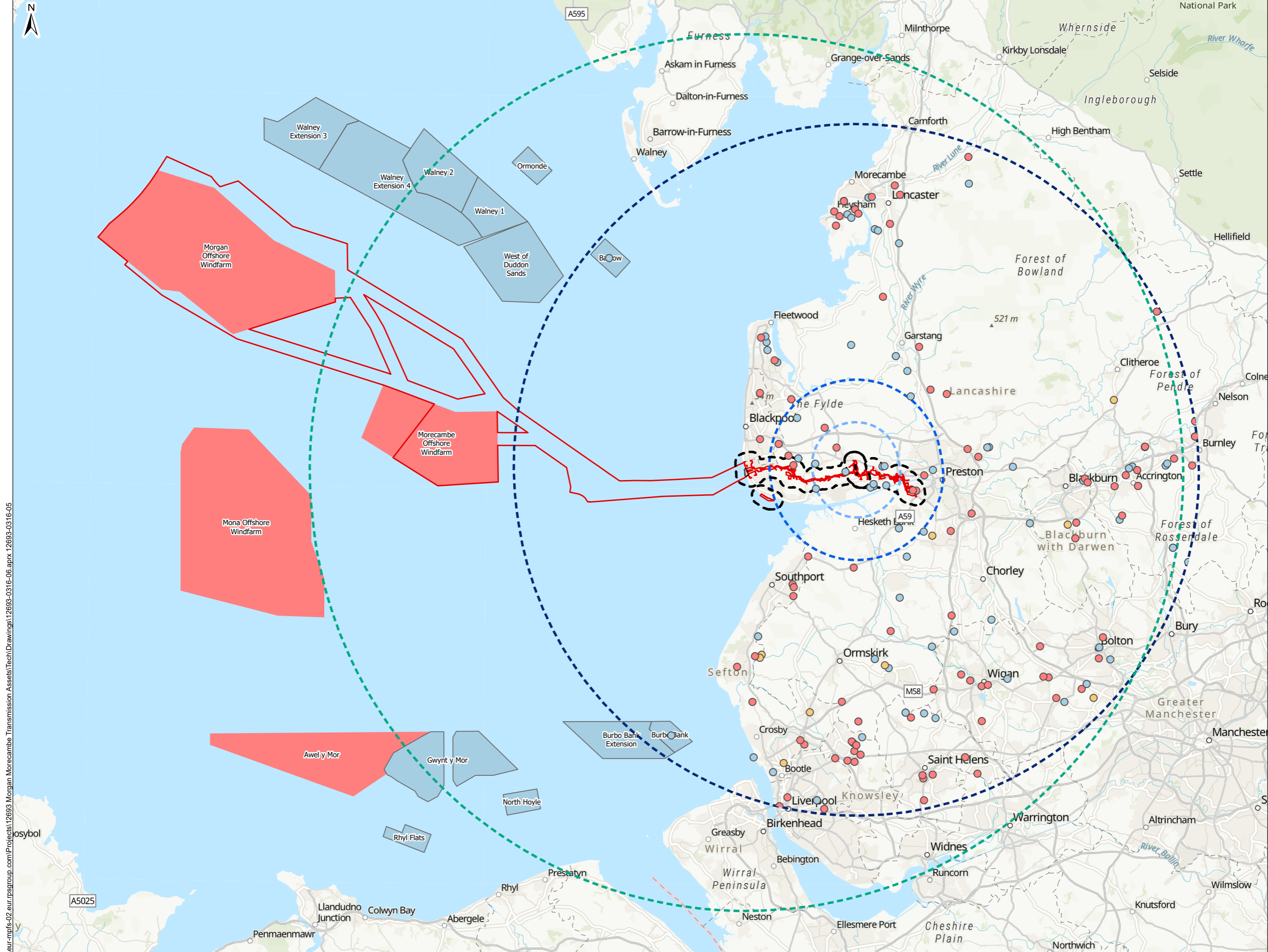


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Service Layer Credits: World Topographic Map: Esri, HERE, Garmin, FAO, USGS
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VER	DATE	DETAILS	BY	CHECK
00	24/09/24	FINAL	JM	PE

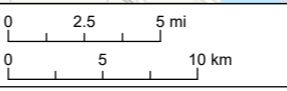


- LEGEND**
- Transmission Assets Order Limits
 - Onshore substation sites
 - 1 km buffer from Transmission Assets Onshore Order Limits
 - 5 km buffer from onshore substation sites
 - 10 km buffer from onshore substation sites
 - 40 km buffer from onshore substation sites
 - 51 km radius study area around landfall for cumulative offshore wind farms
- Offshore Cumulative Wind Farms**
- Existing/Operational
 - Proposed
- Onshore Cumulative Wind Farms**
- Existing/Operational
 - Under Construction
 - Application submitted/awaiting construction

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Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
TRANSMISSION ASSETS AND EXISTING AND PROPOSED OFFSHORE AND ONSHORE WIND PROJECTS



Geodetic Information:
Datum: ETRS 1989
Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:400,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

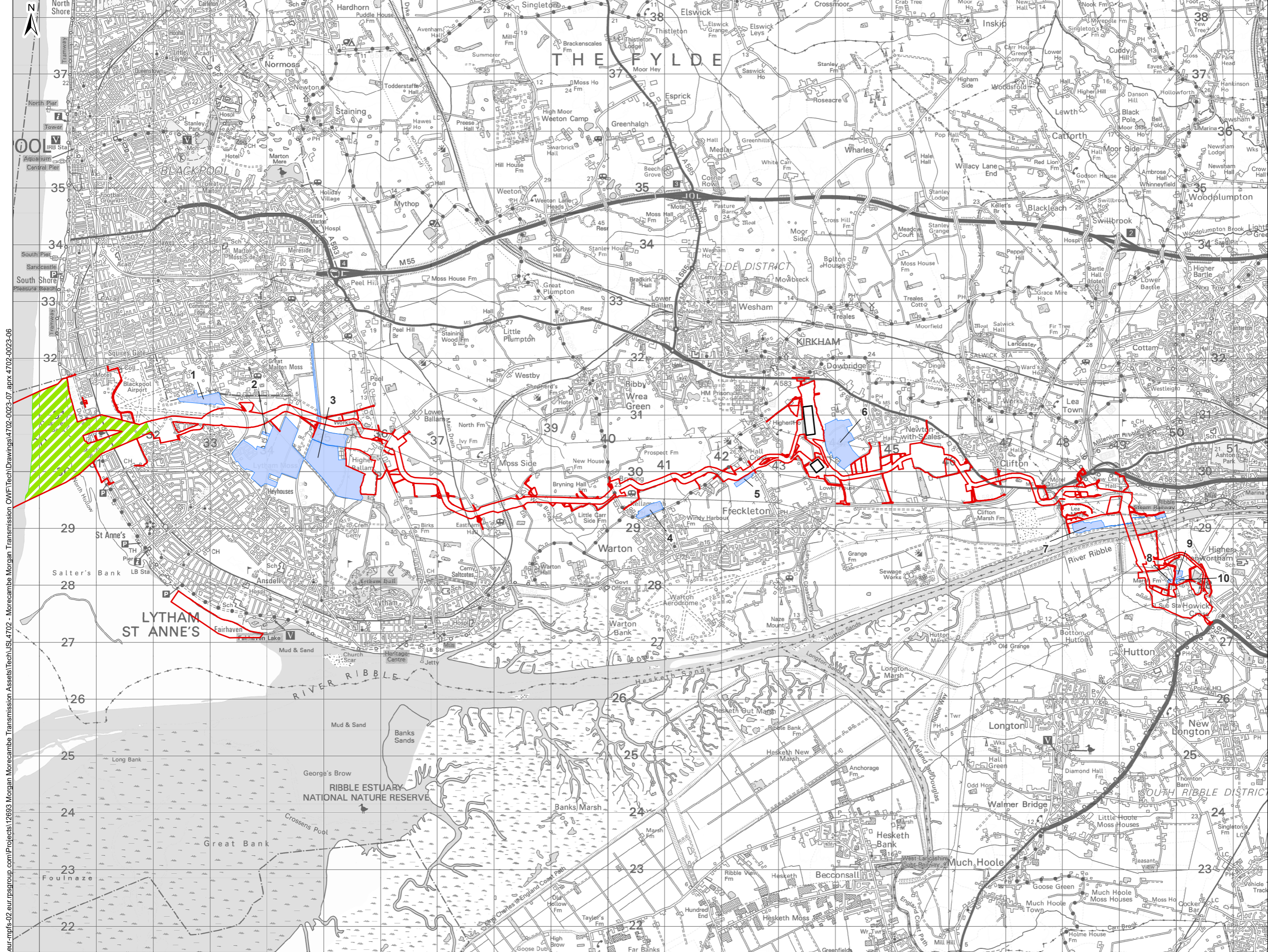
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Service layer credits: Esri UK, Esri, TomTom, Garmin, FourSquare, FAO, METI/NASA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS



Figure 10.7

Drawing Number:
12693-0316-06

VER	DATE	DETAILS	BY	CHECK
06	24/09/24	FINAL	AC	PE

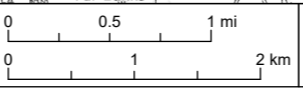


- LEGEND**
- Transmission Assets Order Limits
 - Onshore substation sites
 - Landfall and intertidal areas
- Project/plan application reference numbers considered within the CEA (Refer to Table 10.22 of Volume 3, Chapter 10: Landscape and visual resources of the ES)**
- 1 - 20/0114
 - 2 - 22/0261
 - 3 - 22/0845
 - 4 - 19/0461
 - 5 - 10/0552
 - 6 - 22/0204
 - 7 - 06/2023/0245
 - 8 - 07/2018/3907/ SCE
 - 9 - 07/2021/00252/ FUL
 - 10 - 07/2022/00021/ FUL

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Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
ONSHORE ELEMENTS OF THE TRANSMISSION ASSETS AND PROPOSED ONSHORE CEA DEVELOPMENTS



Geodetic Information:
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Projection: British National Grid
Scale@379mmx231mm: 1:60,000

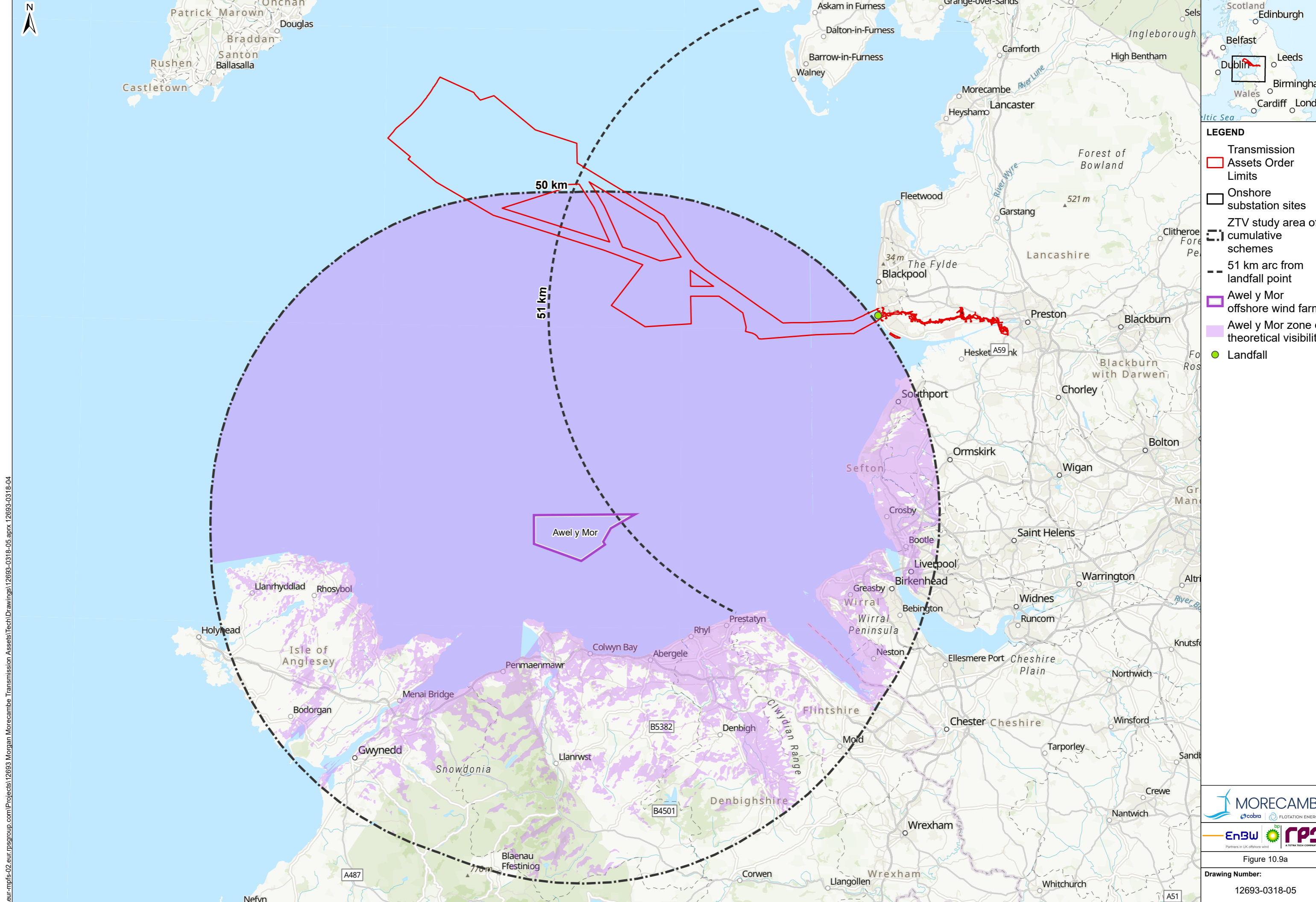
Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

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Figure 10.8
Drawing Number:
4702-0023-07

VER	DATE	DETAILS	BY	CHECK
07	24/09/24	FINAL	AC	PE



LEGEND

- Transmission Assets Order Limits
- Onshore substation sites
- ZTV study area of cumulative schemes
- 51 km arc from landfall point
- Awel y Mor offshore wind farm
- Awel y Mor zone of theoretical visibility
- Landfall

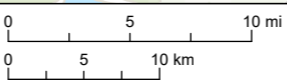
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Figure 10.9a

Drawing Number:
12693-0318-05

Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
TRANSMISSION ASSETS AND OFFSHORE WINDFARM CUMULATIVE ZTVS

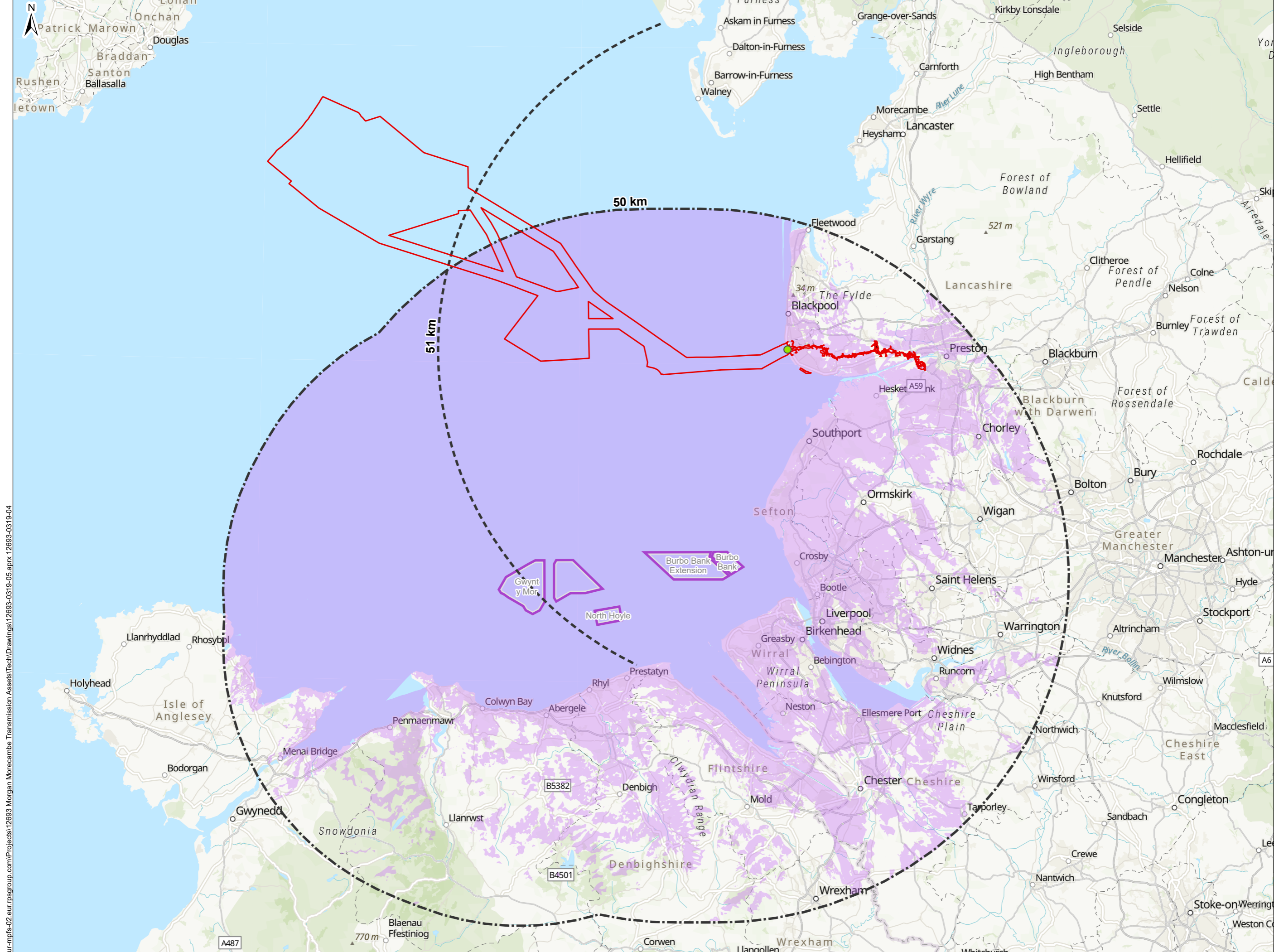


Geodetic Information:
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Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:500,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

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VER	DATE	DETAILS	BY	CHECK
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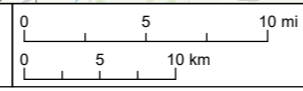


- LEGEND**
- Transmission Assets Order Limits
 - Onshore substation sites
 - 51 km arc from landfall point
 - 50 km buffer around North Wales offshore wind farms
 - Wales offshore wind farms
 - North Wales offshore wind farms
 - North Wales offshore wind farms zone of theoretical visibility
 - Landfall

Path: L1 P:\eur-mpfs-02.eur.rpsgroup.com\Projects\12693 Morgan Morecambe Transmission Assets\Tech\Drawings\12693-0319-05.aprx. 12693-0319-04

Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
TRANSMISSION ASSETS AND OFFSHORE WINDFARM CUMULATIVE ZTVS



Geodetic Information:
Datum: ETRS 1989
Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:500,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

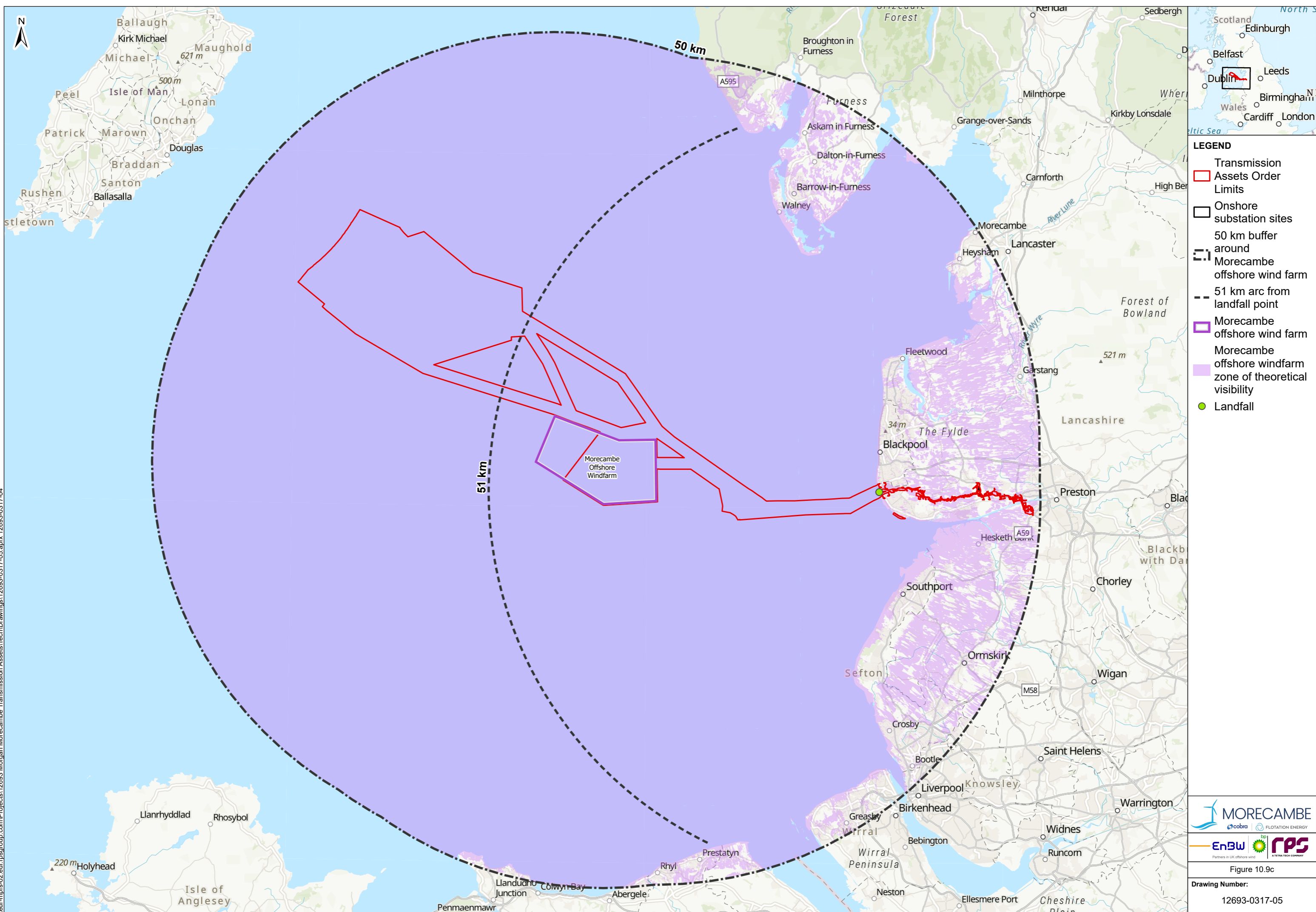
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Figure 10.9b

Drawing Number:
12693-0319-05

VER	DATE	DETAILS	BY	CHECK
05	24/09/24	FINAL	AC	PE



LEGEND

- Transmission Assets Order Limits
- Onshore substation sites
- 50 km buffer around Morecambe offshore wind farm
- 51 km arc from landfall point
- Morecambe offshore wind farm
- Morecambe offshore windfarm zone of theoretical visibility
- Landfall

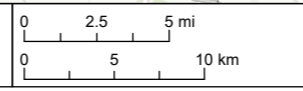
MORECAMBE
 cobra FLOTATION ENERGY
 EnBW bp rps
 Partners in UK offshore wind A TRYTECH COMPANY

Figure 10.9c
 Drawing Number:
 12693-0317-05

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Project Name:
 MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
 TRANSMISSION ASSETS AND OFFSHORE WINDFARM CUMULATIVE ZTVS

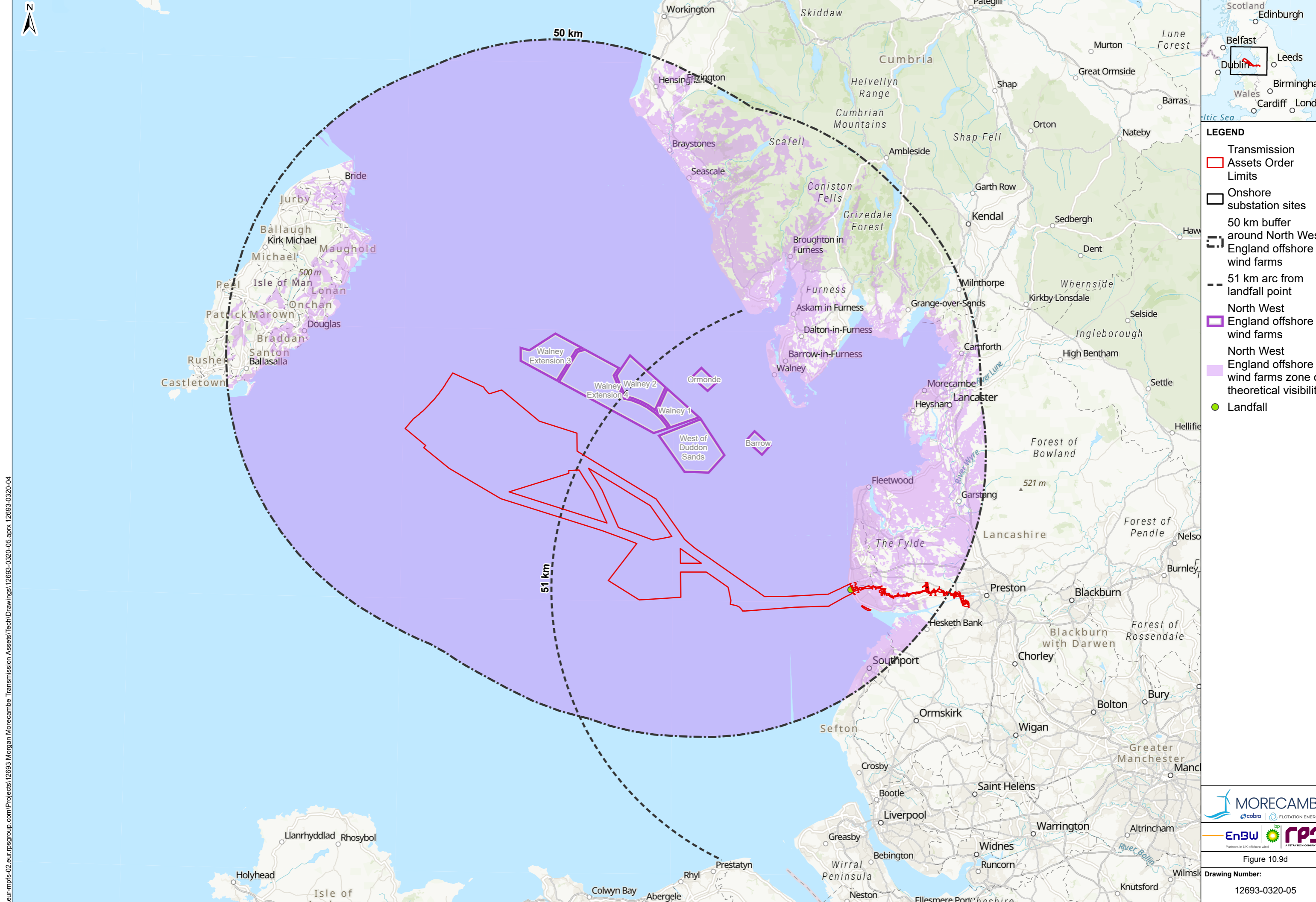


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 Projection: ETRS 1989 UTM Zone 30N
 Scale@379mmx231mm: 1:420,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

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VER	DATE	DETAILS	BY	CHECK
05	24/09/24	FINAL	AC	PE



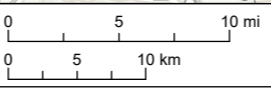
LEGEND

- ▬ Transmission Assets Order Limits
- Onshore substation sites
- 50 km buffer around North West England offshore wind farms
- 51 km arc from landfall point
- North West England offshore wind farms
- North West England offshore wind farms zone of theoretical visibility
- Landfall

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Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
TRANSMISSION ASSETS AND OFFSHORE WINDFARM CUMULATIVE ZTVS



Geodetic Information:
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Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

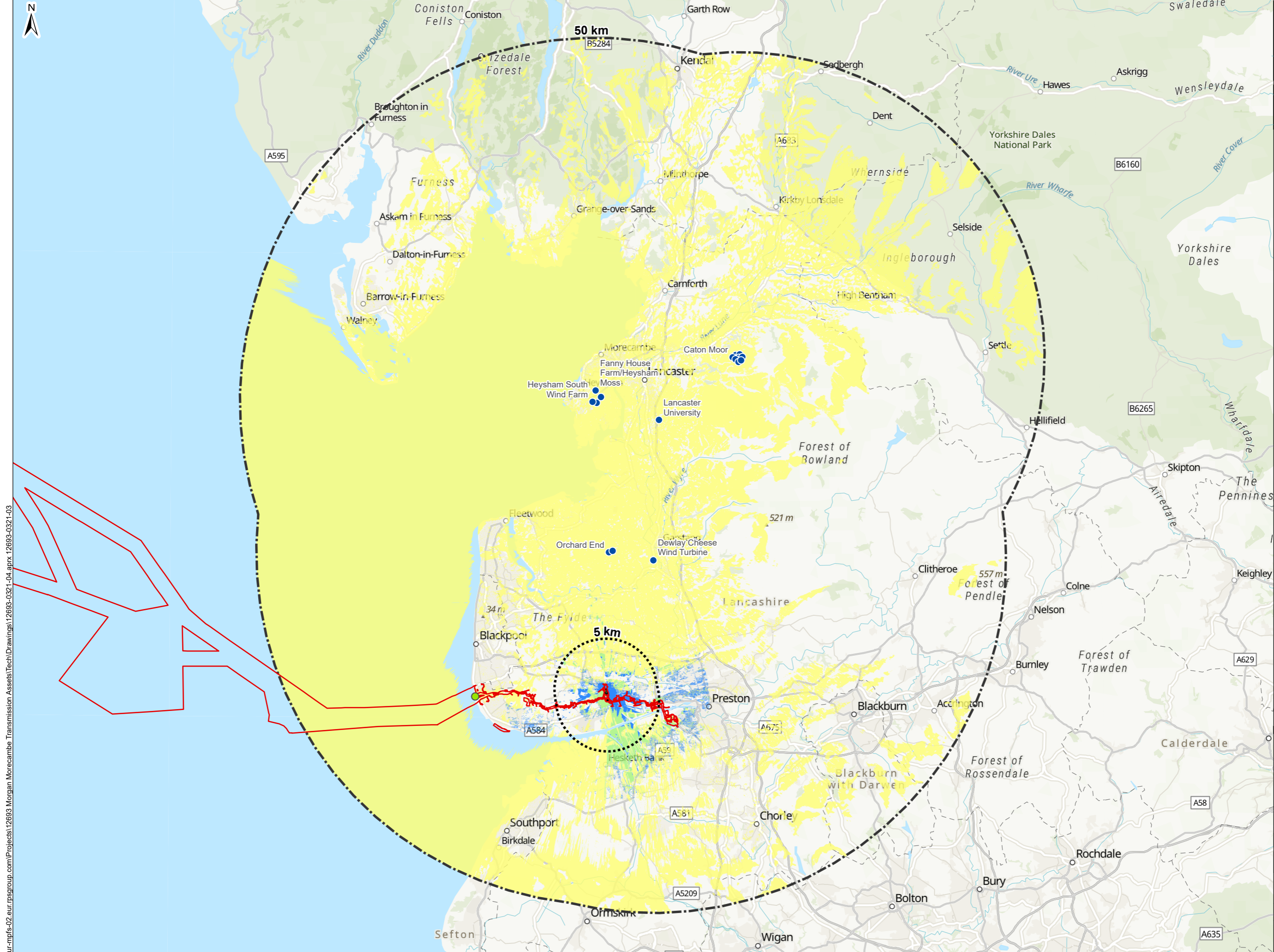
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Figure 10.9d

Drawing Number:
12693-0320-05

VER	DATE	DETAILS	BY	CHECK
04	24/09/24	FINAL	AC	PE



- LEGEND**
- Transmission Assets Order Limits
 - Onshore substation sites
 - 50 km buffer around onshore turbines
 - 5 km buffer around onshore substation sites
 - Preston and Lancashire onshore turbine locations
 - Landfall
 - Morgan and Morecambe onshore substations theoretically visible
 - Cumulative scheme theoretically visible
 - Both cumulative scheme and morgan and morecambe onshore substations theoretically visible



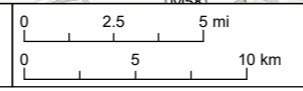
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Drawing Number:
12693-0321-04

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Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
TRANSMISSION ASSETS AND ONSHORE WINDFARM CUMULATIVE ZTVS

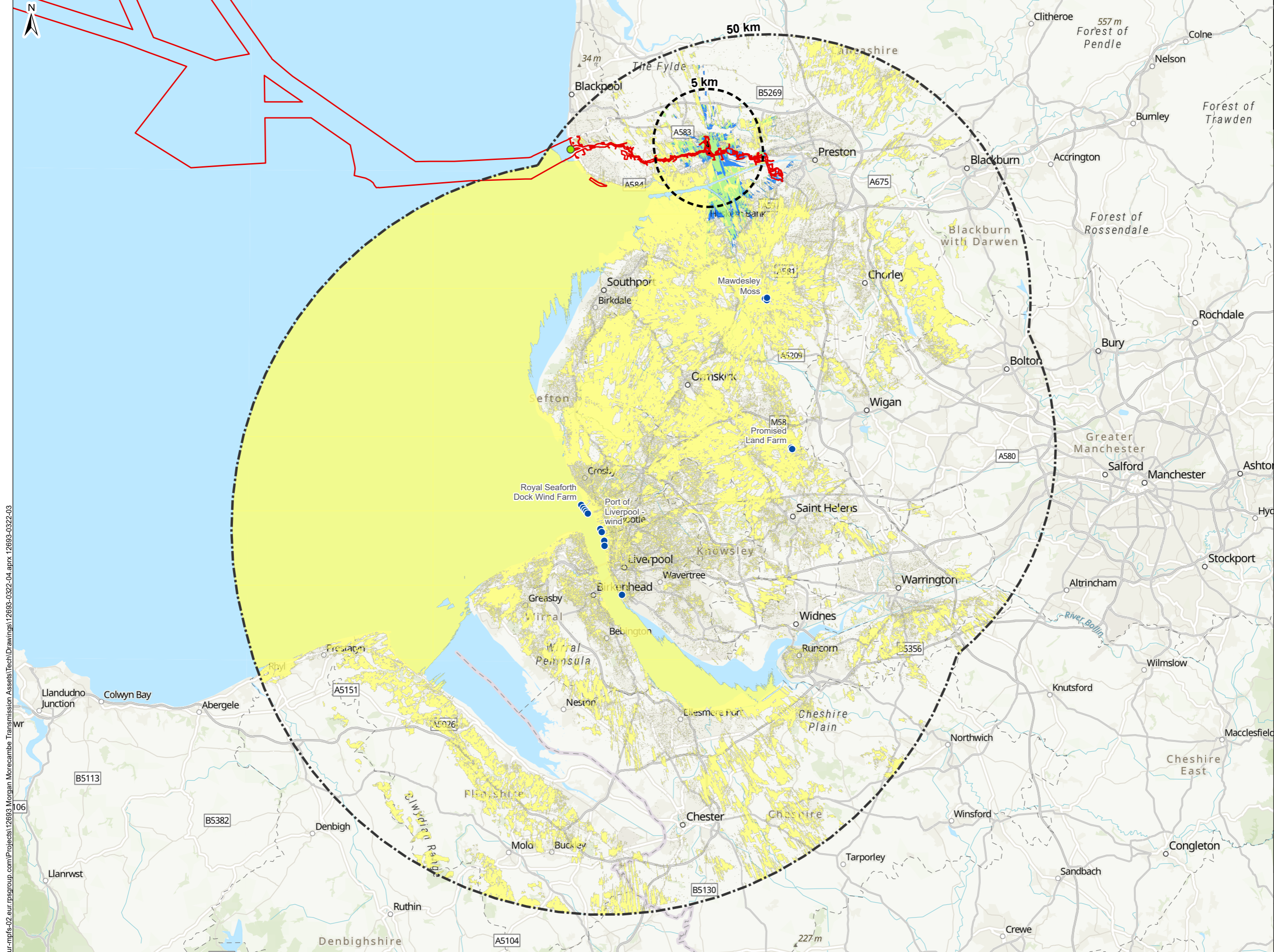


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Projection: ETRS 1989 UTM Zone 30N
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Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

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VER	DATE	DETAILS	BY	CHECK
04	24/09/24	FINAL	AC	PE



- LEGEND**
- Transmission Assets Order Limits
 - Onshore substation sites
 - 5 km buffer around onshore substation sites
 - 50 km buffer around onshore turbines
 - Preston and Liverpool onshore turbine locations
 - Landfall
 - Morgan and Morecambe onshore substations theoretically visible
 - Cumulative scheme theoretically visible
 - Both cumulative scheme and Morgan and Morecambe onshore substations theoretically visible

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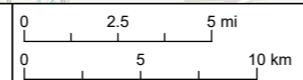


Figure 10.11

Drawing Number:
12693-0322-04

Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
OFFSHORE CEA DEVELOPMENTS AND TRANSMISSION ASSETS CUMULATIVE WIRELINES

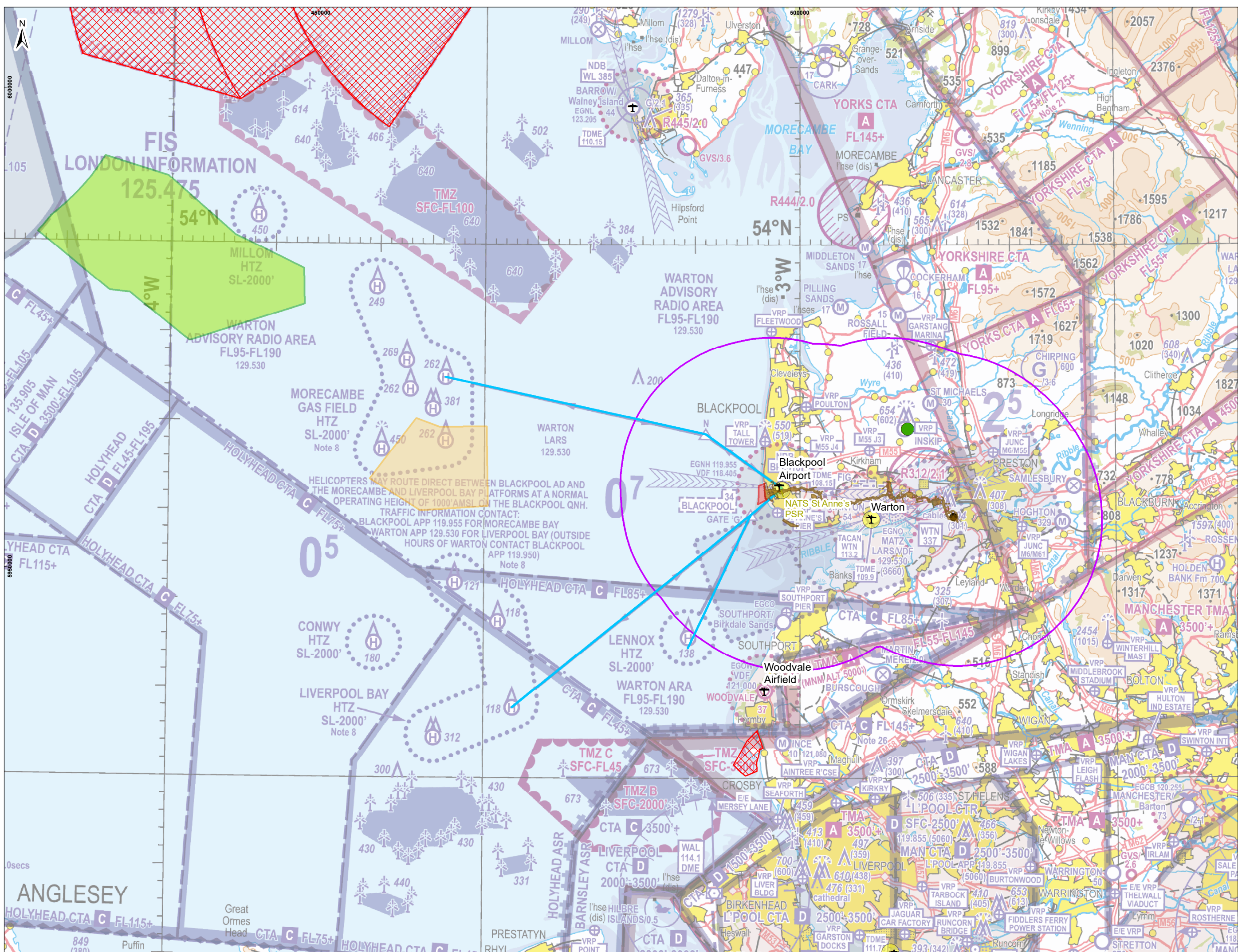


Geodetic Information:
Datum: ETRS 1989
Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:325,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

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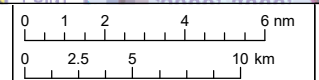
VER	DATE	DETAILS	BY	CHECK
04	24/09/24	FINAL	AC	PE



- LEGEND**
- Morgan and Morecambe Offshore Windfarms: Intertidal Infrastructure Area
 - Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits - Onshore
 - Morgan Offshore Wind Project: Generation Assets
 - Morecambe Offshore Windfarm: Generation Assets
 - Aviation and radar study area for the transmission assets
 - ✈ Airfield
 - National Grid Shared Point of Connection
 - Primary Surveillance Radar Sites
 - DSCA InSkip
 - Helicopter Main Route
 - ▨ Military PEXA Firing Danger Area

Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
AVIATION FEATURES IN THE VICINITY OF THE AVIATION AND RADAR STUDY AREA FOR THE TRANSMISSION ASSETS



Geodetic Information:
Datum: ETRS 1989
Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:350,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org, VFR Chart-Northern England, Ed 46 (2024) copyright NATS (Services)Ltd/ALL RIGHTS RESERVED. Contains OS data © Crown copyright [and database right] (2024).

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Figure 11.1

Drawing Number:
RPSE-ES-AVI-001-03

VER	DATE	DETAILS	BY	CHECK
00	16/07/24	Initial Issue	NG	AT
03	25/09/24	Final	MJ	ET



- LEGEND**
- Morgan and Morecambe Offshore Windfarms
 - Transmission Assets
 - Order Limits – Onshore
 - Aviation and radar study area for the transmission assets
 - Airfield
 - National Grid Shared Point of Connection
 - Primary Surveillance Radar Sites
 - DSCA InSkip
 - Military PEXA Firing Danger Area



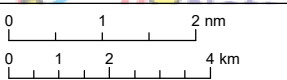
Figure 11.2

Drawing Number: RPSE-ES-AVI-003-01

VER	DATE	DETAILS	BY	CHECK
00	03/09/24	Initial Issue	MJ	KH
01	25/09/24	Final	MJ	ET

Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

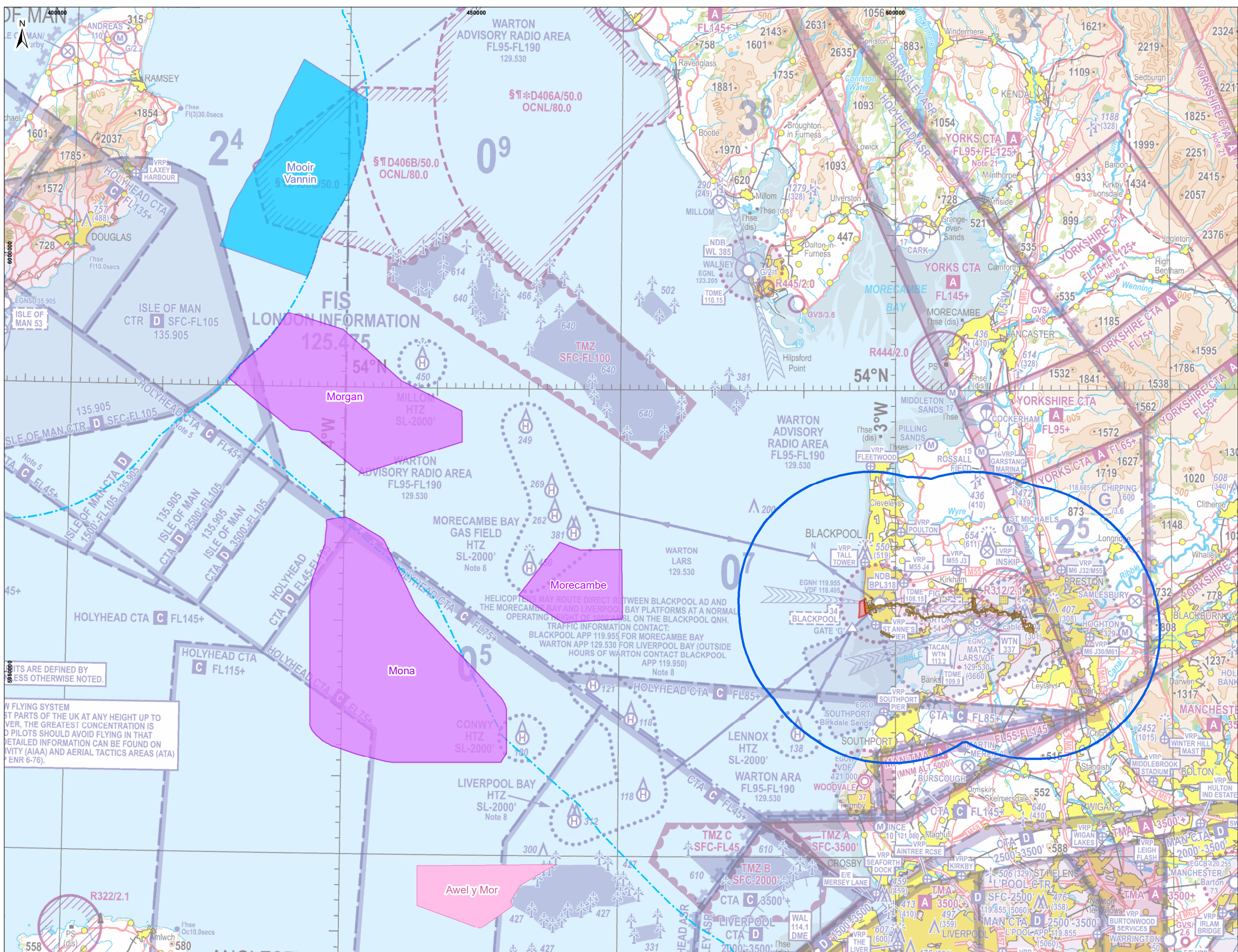
Drawing Title:
TRANSMISSION ASSETS ONSHORE INFRASTRUCTURE IN RELATION TO BLACKPOOL AIRPORT



Geodetic Information:
Datum: ETRS 1989
Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:150,000

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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



- LEGEND**
- Morgan and Morecambe Offshore Windfarms: Intertidal Infrastructure Area
 - Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits - Onshore
 - Cumulative Study Area
 - Morgan Offshore Wind Project: Generation Assets
 - Morecambe Offshore Windfarm: Generation Assets
- Tier 1**
- Wind Farm
- Tier 2**
- Wind Farm
- Tier 3**
- Wind Farm
- Jurisdictional Boundary

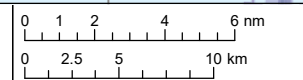
POINTS ARE DEFINED BY LESS OTHERWISE NOTED.

FLYING SYSTEM PARTS OF THE UK AT ANY HEIGHT UP TO EVER, THE GREATEST CONCENTRATION IS D PILOTS SHOULD AVOID FLYING IN THAT DETAILED INFORMATION CAN BE FOUND ON IVITY (AIAA) AND AERIAL TACTICS AREAS (ATA) ENR 6-76).

HELICOPTERS MAY ROUTE DIRECT BETWEEN BLACKPOOL AD AND THE MORECAMBE BAY AND LIVERPOOL BAY PLATFORMS AT A NORMAL OPERATING HEIGHT OF 1000' ASL ON THE BLACKPOOL QNH. TRAFFIC INFORMATION CONTACT: BLACKPOOL APP 119.955 FOR MORECAMBE BAY WARTON APP 129.530 FOR LIVERPOOL BAY (OUTSIDE HOURS OF WARTON CONTACT BLACKPOOL APP 119.950) Note 8

Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
CUMULATIVE AVIATION AND RADAR STUDY AREA



Geodetic Information:
Datum: ETRS 1989
Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:400,000

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Figure 11.3

Drawing Number:
RPSE-ES-AVI-002-05

VER	DATE	DETAILS	BY	CHECK
00	16/07/24	Initial Issue	NG	AT
05	25/09/24	Final	MJ	ET