



MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Environmental Statement

Volume 2, Figures - Part 4 of 5



September 2024
Rev: ES Issue

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ES	For issue	AS	September 2024	IM	September 2024

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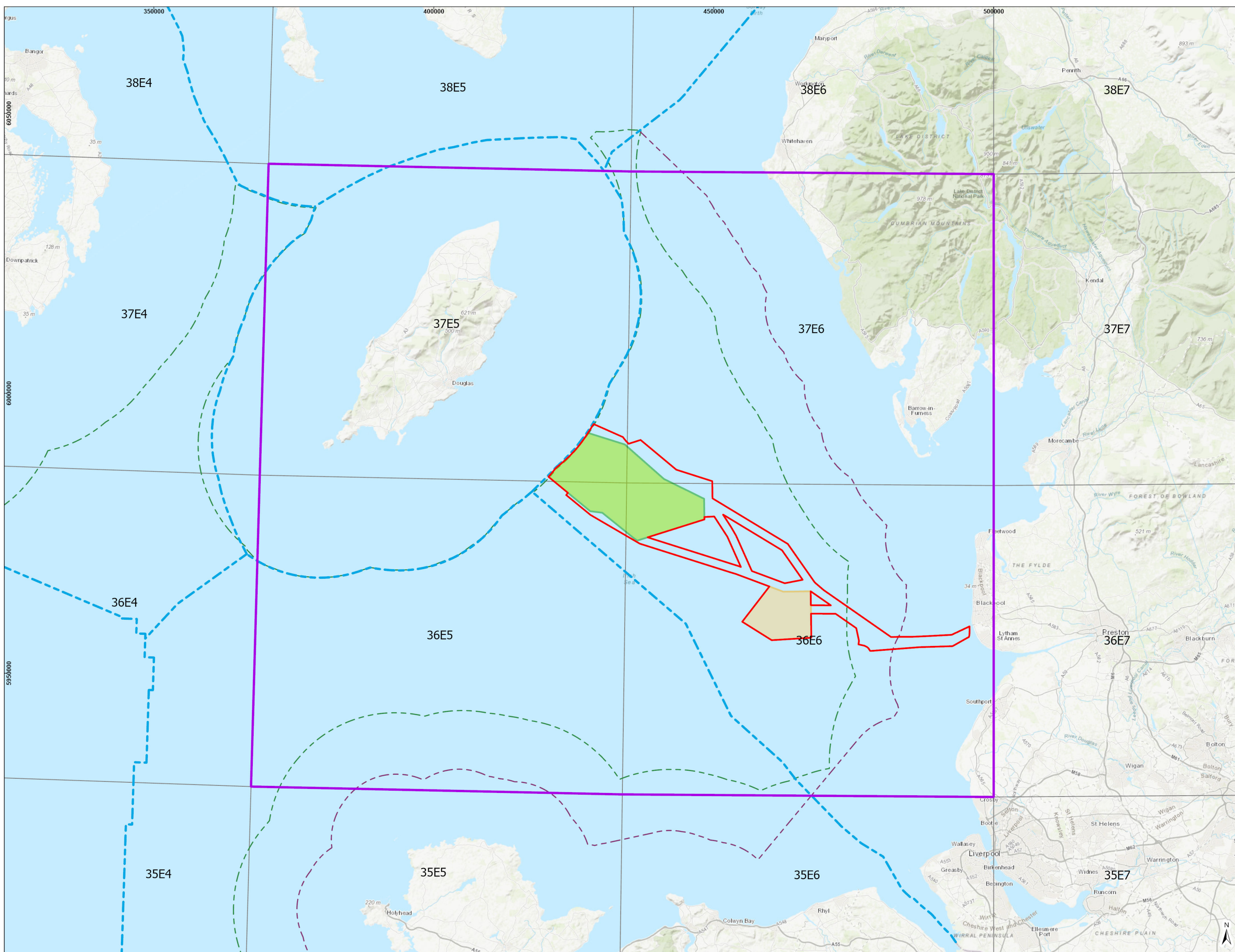
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Prepared by:

RPS

Prepared for:

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



LEGEND

- Transmission Assets
- Order Limits: Offshore
- Morecambe Offshore Windfarm: Generation Assets
- ICES Rectangles
- Morgan Offshore Wind Project: Generation Assets
- Commercial Fisheries Study Area
- 12nm Boundary
- 6nm Boundary
- Jurisdictional Boundary

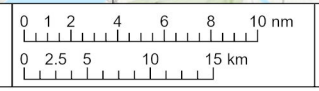


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EnBW **bp** **RPS**
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Figure - 6.1
 Drawing Number: MMTA-CF-01

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

Drawing Title:
 STUDY AREA FOR THE MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

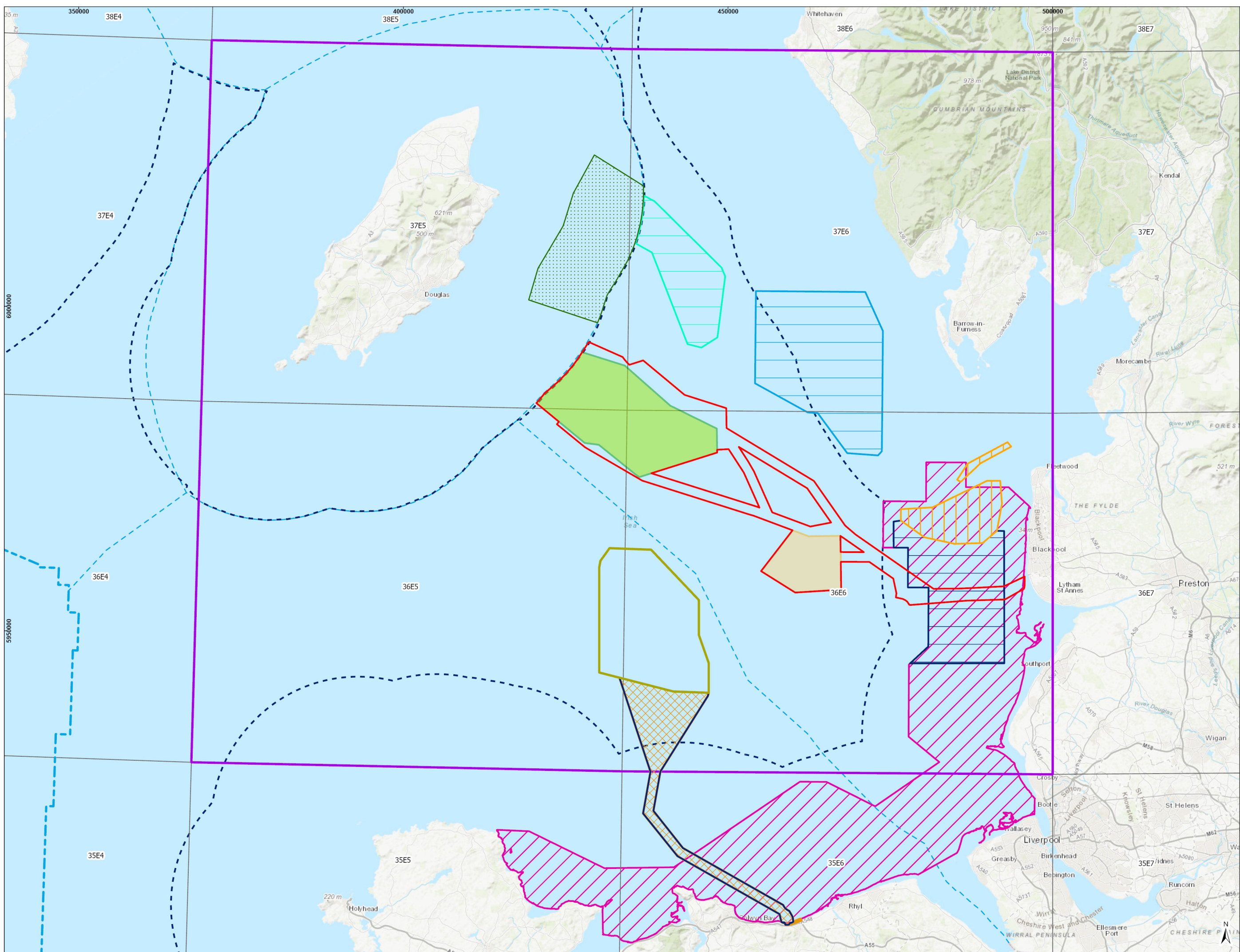


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Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

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 World Topographic Map: Esri UK, Esri, HERE, FAO, USGS, NGA

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01	11/09/24	Final	NB	JD



- LEGEND**
- Transmission Assets
 - Order Limits: Offshore
 - Morecambe Offshore Windfarm: Generation Assets
 - Morgan Offshore Wind Project: Generation Assets
 - Mona Offshore Array Area
 - Mona Offshore Cable Corridor
 - Mona Offshore Cable Corridor & Access Areas
 - Moor Vannin OWF
 - Liverpool Bay / Bae Lerpwl SPA
 - West of Copeland MCZ
 - West of Walney MCZ
 - Fylde MCZ
 - Shell Flat and Lune Deep SAC
 - ICES Rectangles
 - Commercial Fisheries Study Area
 - Jurisdictional Boundary
 - 12NM Limit
 - Jurisdictional Boundary

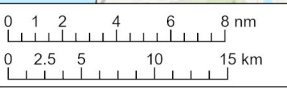


Figure - 6.2

Drawing Number:
MMTA-CF-02

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

Drawing Title:
OTHER PROJECTS, PLANS AND ACTIVITIES SCREENED INTO THE CUMULATIVE EFFECTS ASSESSMENT FOR COMMERCIAL FISHERIES

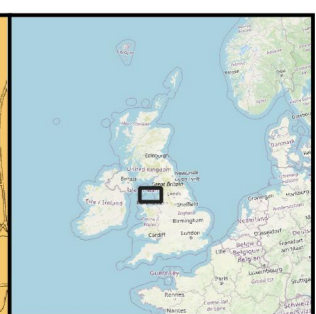
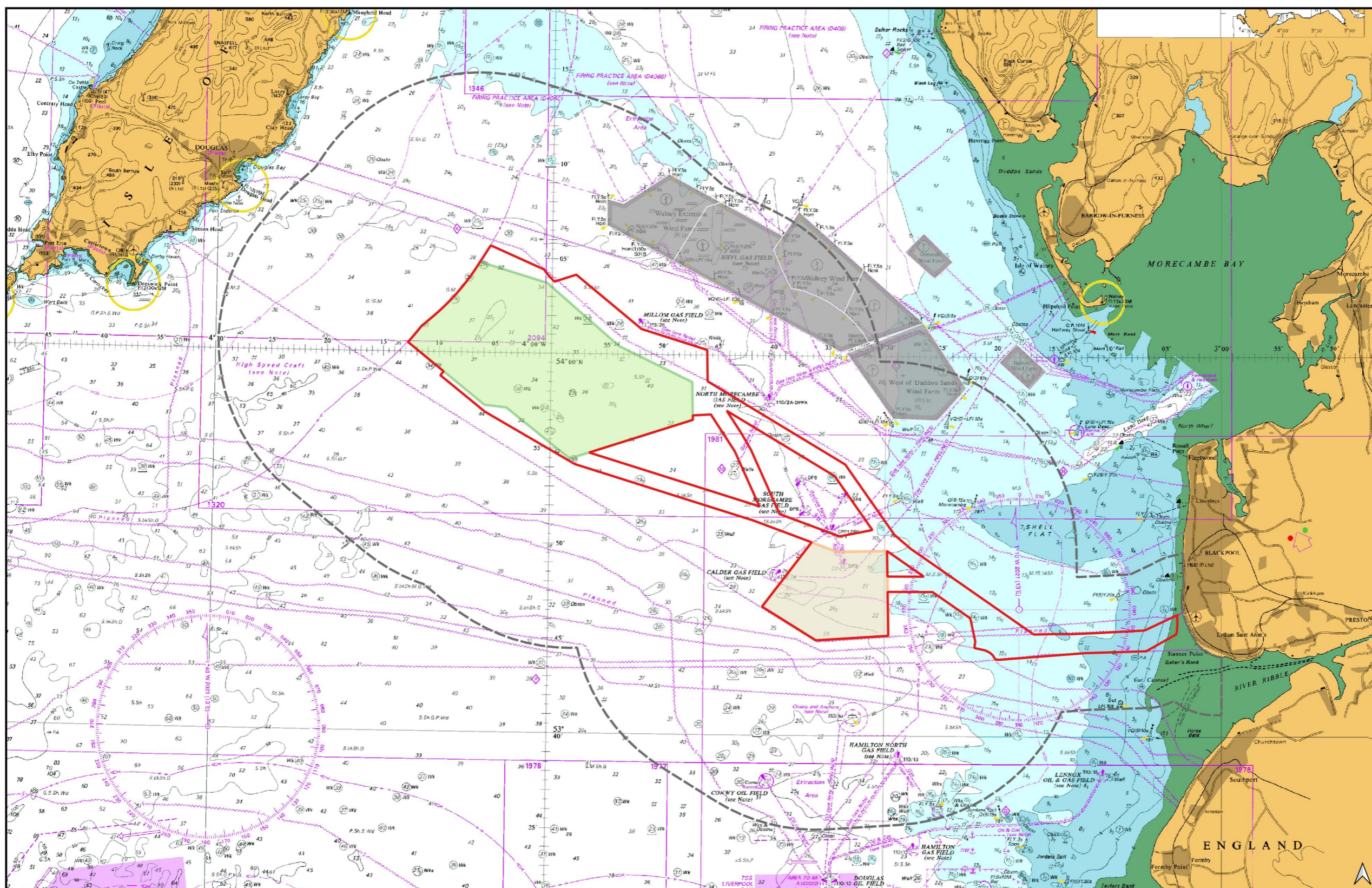


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World Topographic Map: Esri UK, Esri, HERE, FAO, USGS, NGA

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01	11/09/24	Final	NB	JD



LEGEND

- Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits - Offshore
- Morgan Offshore Wind Project: Generation Assets
- Morecambe Offshore Windfarm: Generation Assets
- Existing Offshore Windfarms
- Shipping and Navigation Study Area

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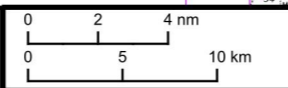
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Figure 7.1

Drawing Number:
NASH-MMTA-SN-001-00

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

Drawing Title:
Shipping and Navigation Study Area



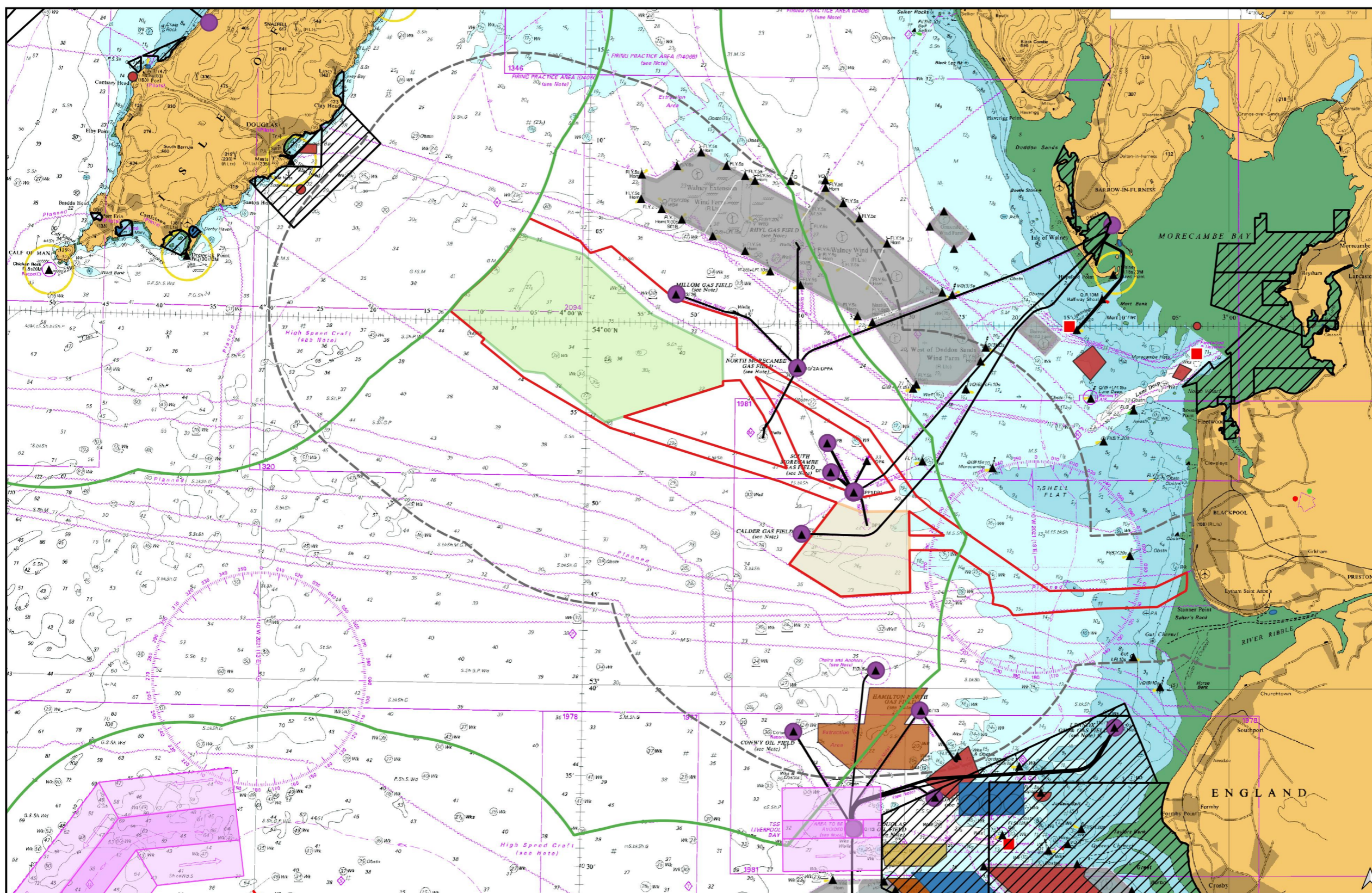
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Data Sources: Admiralty Charts 1826 & 1981;
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LEGEND

- Morgan and Morecambe Offshore Wind Farms: Transmission Assets Order Limits - Offshore
- Morgan Offshore Wind Project: Generation Assets
- Morecambe Offshore Windfarm: Generation Assets
- Existing Offshore Wind Farms
- Shipping and Navigation Study Area
- Anchorage
- ▲ AtoN
- Disposal Site
- Harbour Area
- IMO Routing Scheme
- O&G Surface Infrastructure
- Pilot Station
- O&G Pipeline
- 12nm Limit

Aggregate Areas

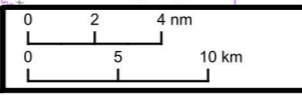
- Exploration and Option Area
- Production Agreement Area

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Figure 7.2
 Drawing Number:
 NASH-MMTA-SN-002-00

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

Drawing Title:
 Overview of Existing Marine Environment



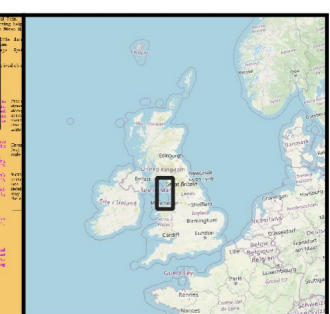
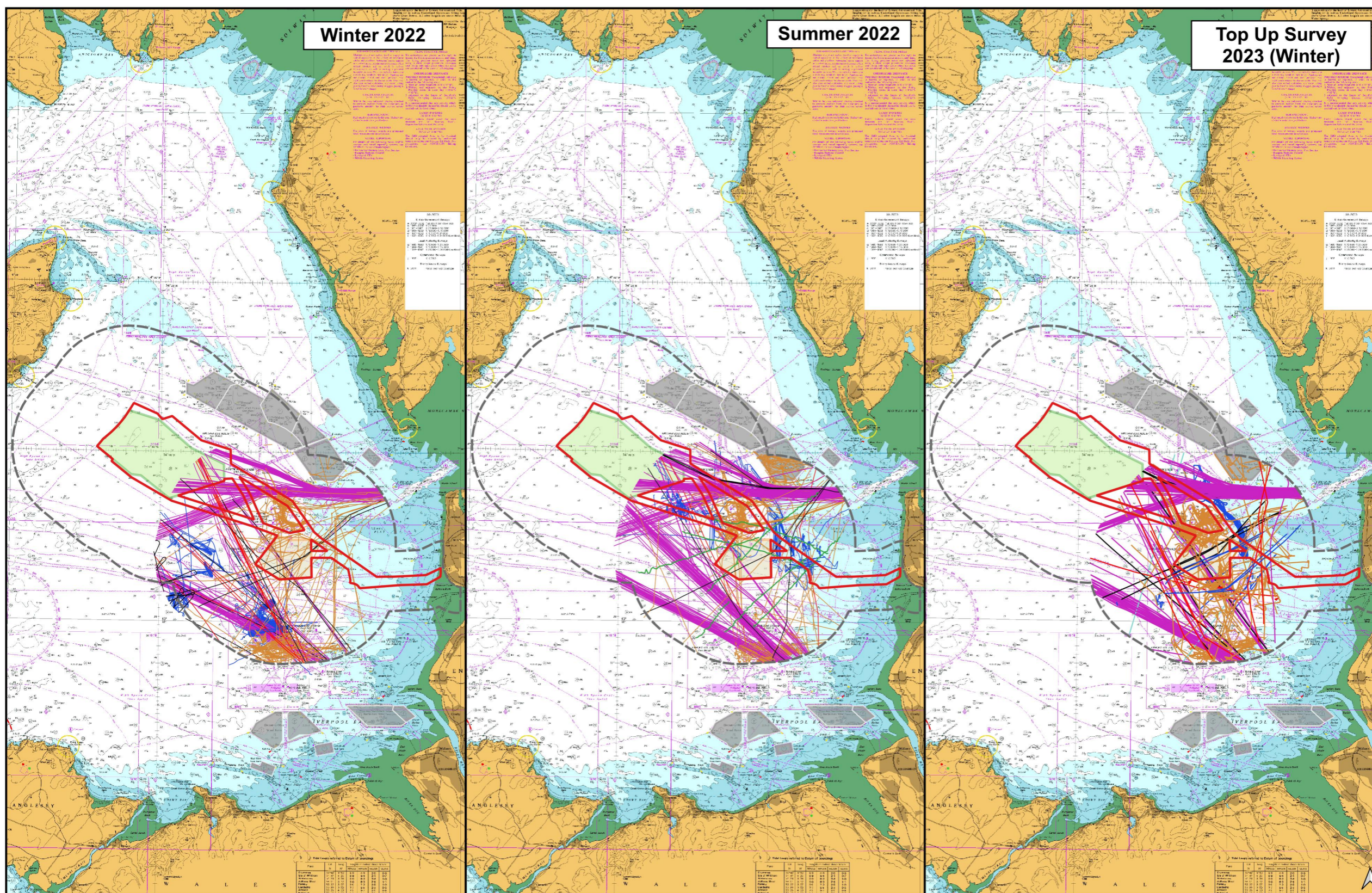
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Data Sources: Admiralty Charts 1826 & 1981; IMO Routing / Maritime Limits from UKHO; Disposal Sites from CEFAS; O&G from North Sea Transition Authority; Aggregate Areas and OWFs from The Crown Estate

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LEGEND

- Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits - Offshore
- Morgan Offshore Wind Project: Generation Assets
- Morecambe Offshore Windfarm: Generation Assets
- Existing Offshore Windfarms
- Shipping and Navigation Study Area

Vessel Tracks

- Cargo
- Tanker
- Passenger
- Fishing
- Recreational
- Tug & Service

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Figure 7.3
 Drawing Number:
 NASH-MMTA-SN-039-00

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

Drawing Title:
 Morecambe Vessel Traffic Surveys

0 2 4 nm
 0 5 10 km

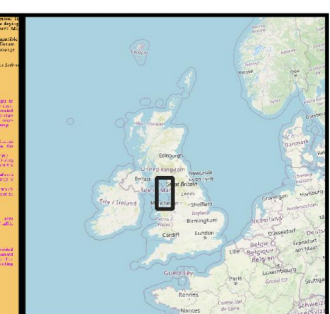
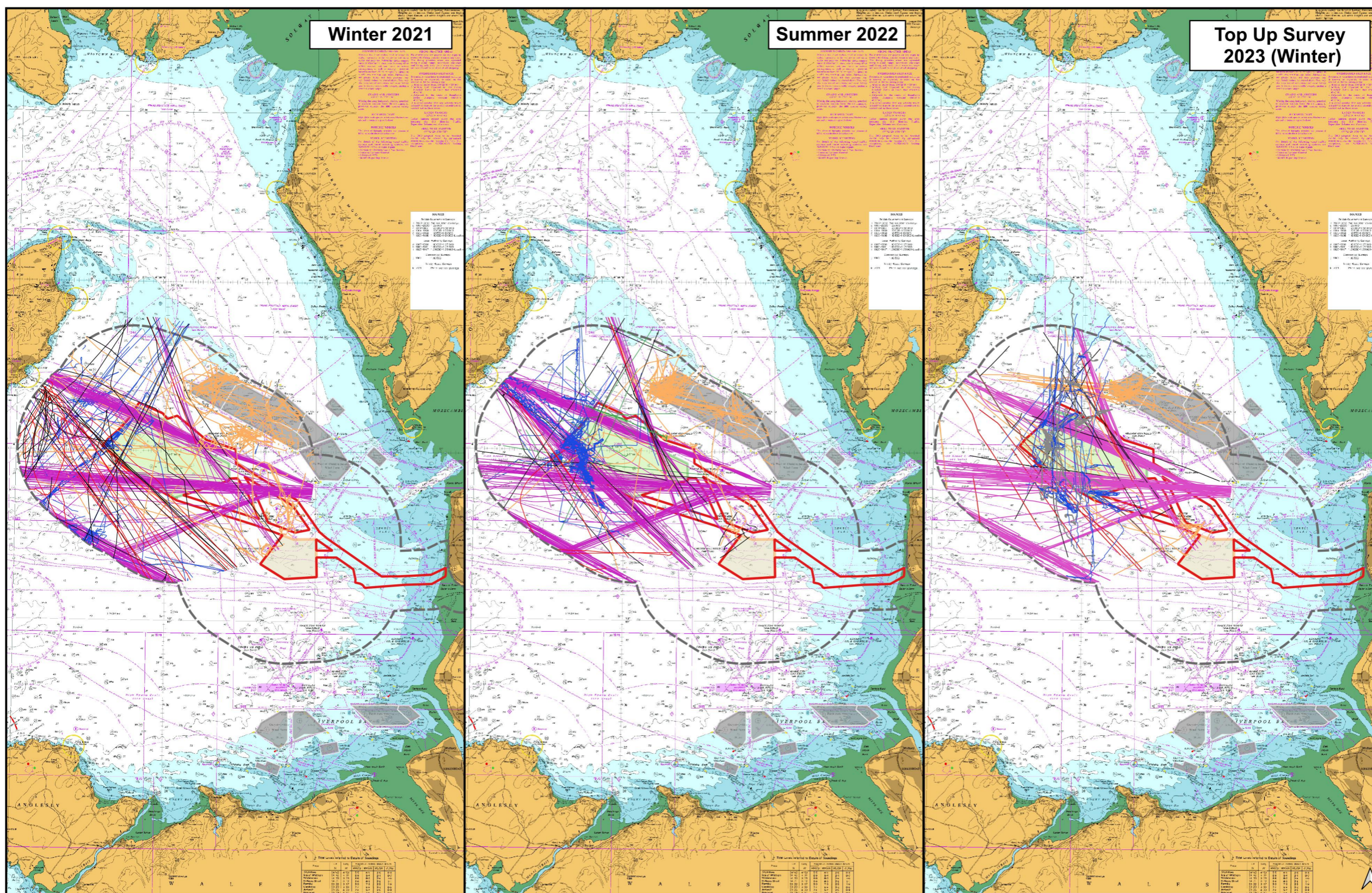
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Data Sources: Admiralty Charts 1826 & 1981;
 OWFs from The Crown Estate; NASH Maritime
 Traffic Survey Data 2022-2023

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LEGEND

- Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits - Offshore
- Morgan Offshore Wind Project: Generation Assets
- Morecambe Offshore Windfarm: Generation Assets
- Existing Offshore Windfarms
- Shipping and Navigation Study Area

Vessel Tracks

- Cargo
- Tanker
- Passenger
- Fishing
- Recreational
- Tug and Service



Figure 7.4

Drawing Number:
NASH-MMTA-SN-036-00

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

Drawing Title:
Morgan Vessel Traffic Surveys

0 2 4 nm
0 5 10 km

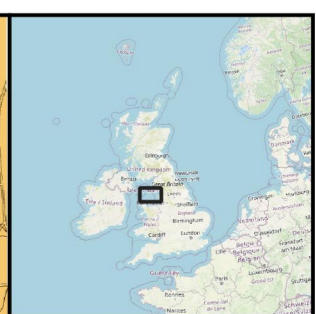
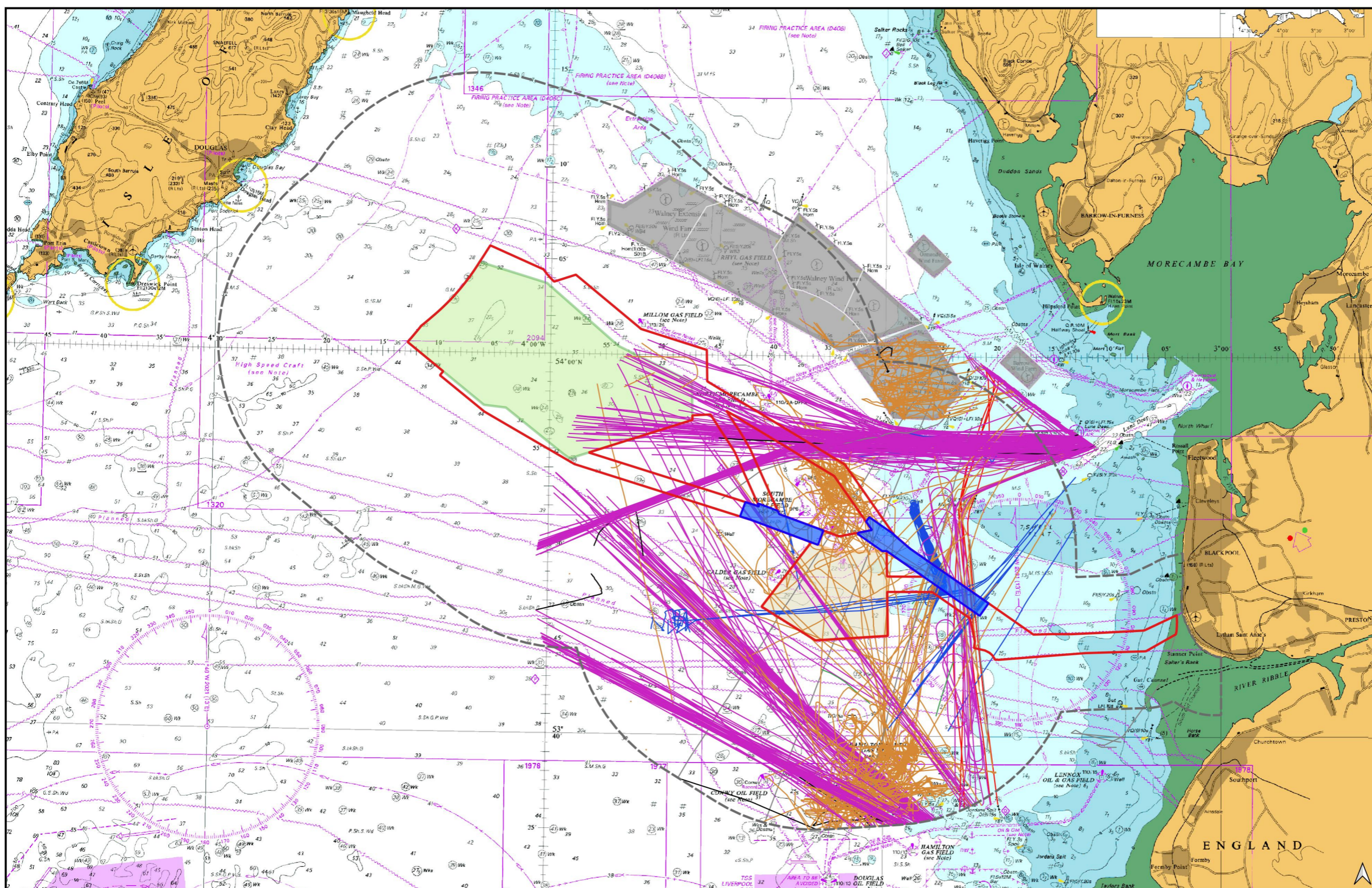
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Data Sources: Admiralty Charts 1826 & 1981; OWFs from The Crown Estate; NASH Maritime Traffic Survey Data 2022-2023

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LEGEND

- Morgan and Morecambe Offshore Windfarms
- Transmission Assets Order Limits - Offshore
- Morgan Offshore Wind Project: Generation Assets
- Morecambe Offshore Windfarm: Generation Assets
- Existing Offshore Windfarms
- Shipping and Navigation Study Area
- Morgan Offshore Wind Project Offshore Booster Station Search Areas - Subsequently Removed From Project Design

Vessel Tracks

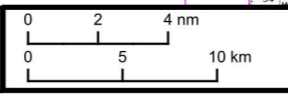
- Cargo
- Tanker
- Passenger
- Fishing
- Recreational
- Tug & Service

Figure 7.5

Drawing Number:
NASH-MMTA-SN-042-00

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

Drawing Title:
Summer 2023 Booster Station Vessel Traffic Survey



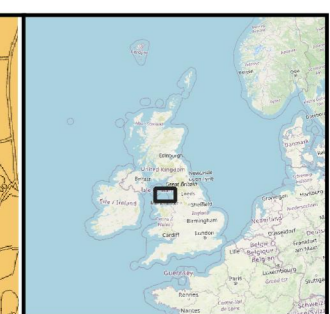
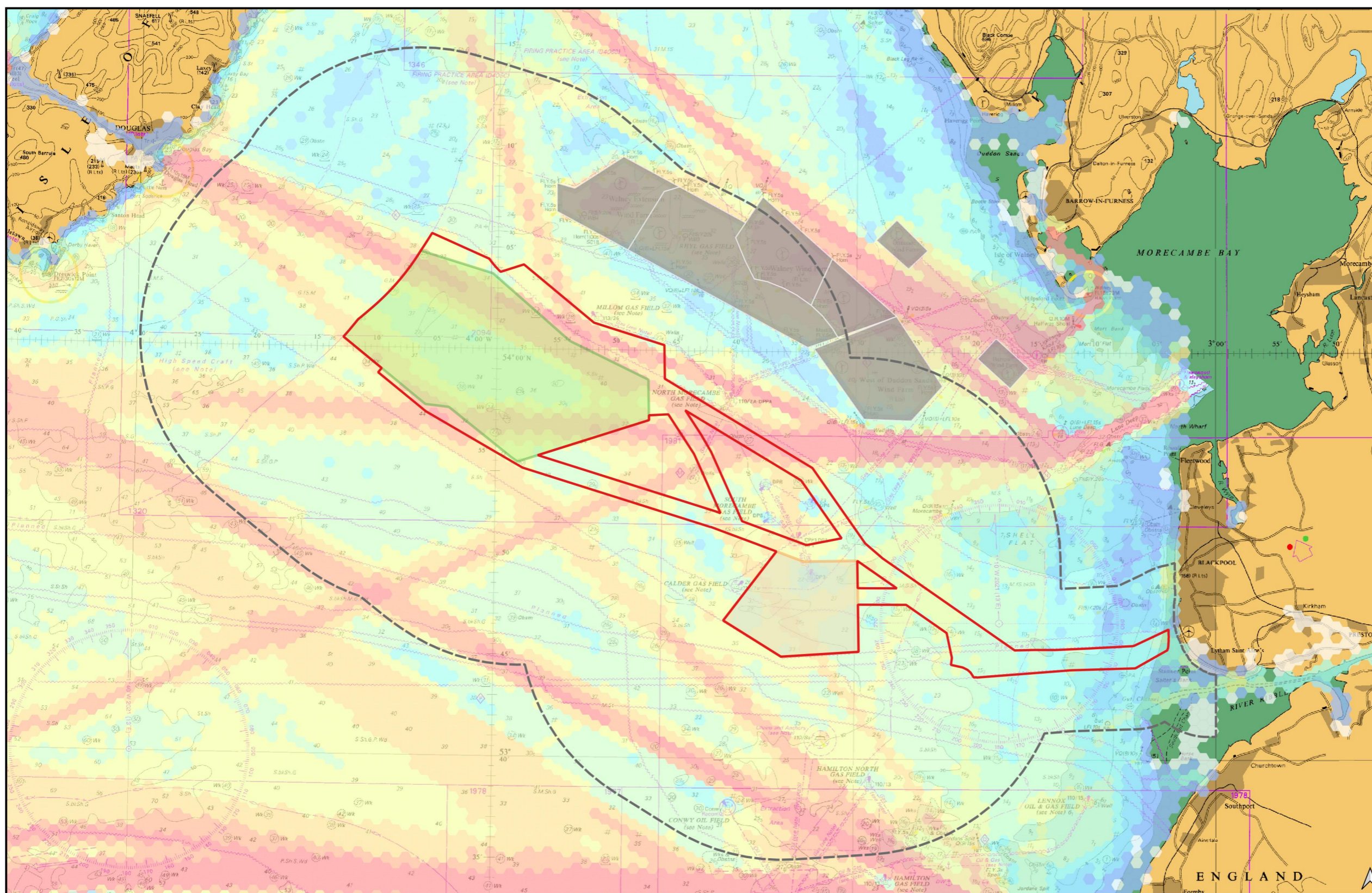
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Data Sources: Admiralty Charts 1826 & 1981; OWFs from The Crown Estate; NASH Maritime Traffic Survey Data 2022-2023

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LEGEND

- Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits - Offshore
- Morgan Offshore Wind Project: Generation Assets
- Morecambe Offshore Windfarm: Generation Assets
- Existing Offshore Windfarms
- Shipping and Navigation Study Area

Transits / Year

- <math>< 1</math>
- 1 - 10
- 10 - 20
- 20 - 40
- 40 - 80
- 80 - 160
- 160 - 320
- 320 - 640
- > 640

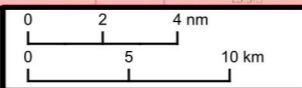


Figure 7.6

Drawing Number:
NASH-MMTA-SN-012-00

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

Drawing Title:
Vessel Traffic Density (2022)



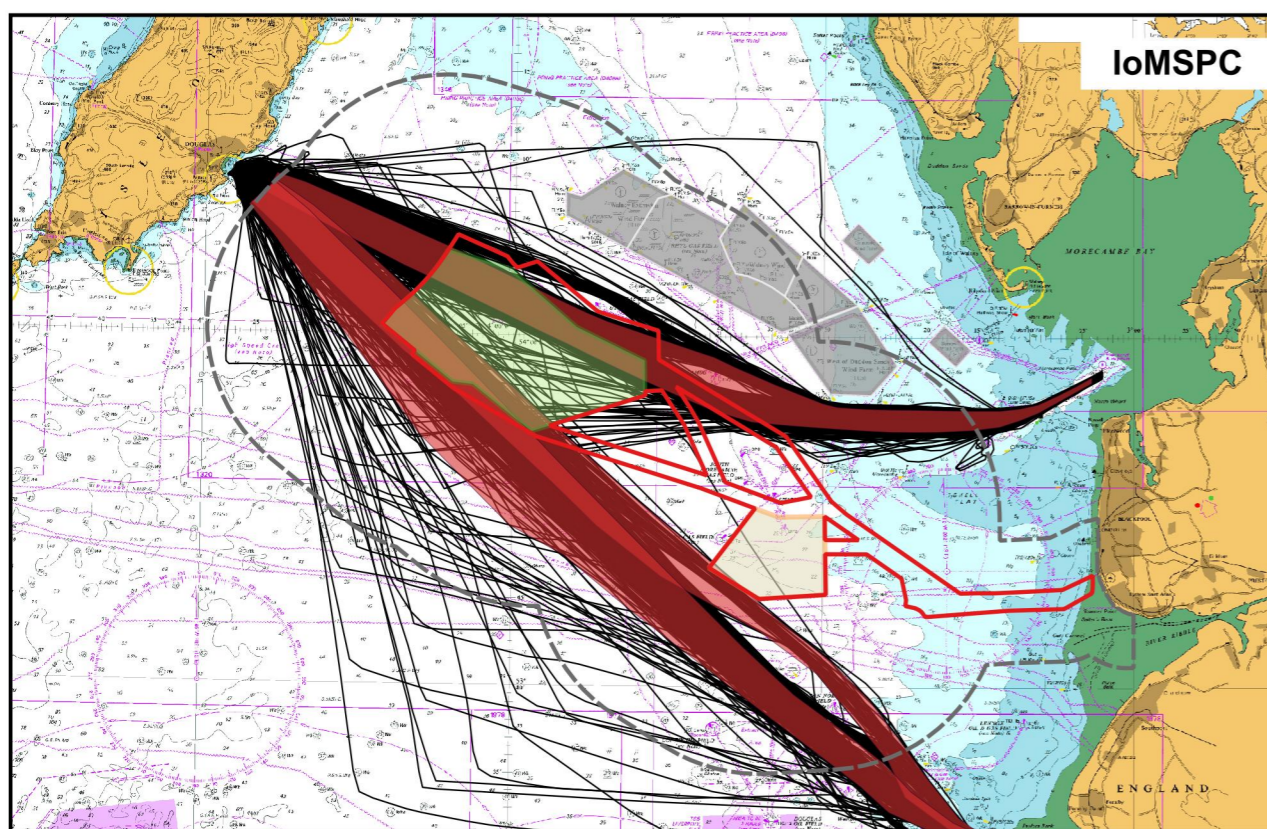
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Data Sources: Admiralty Charts 1826 & 1981; OWFs from The Crown Estate; Marine Traffic 2022 AIS Data

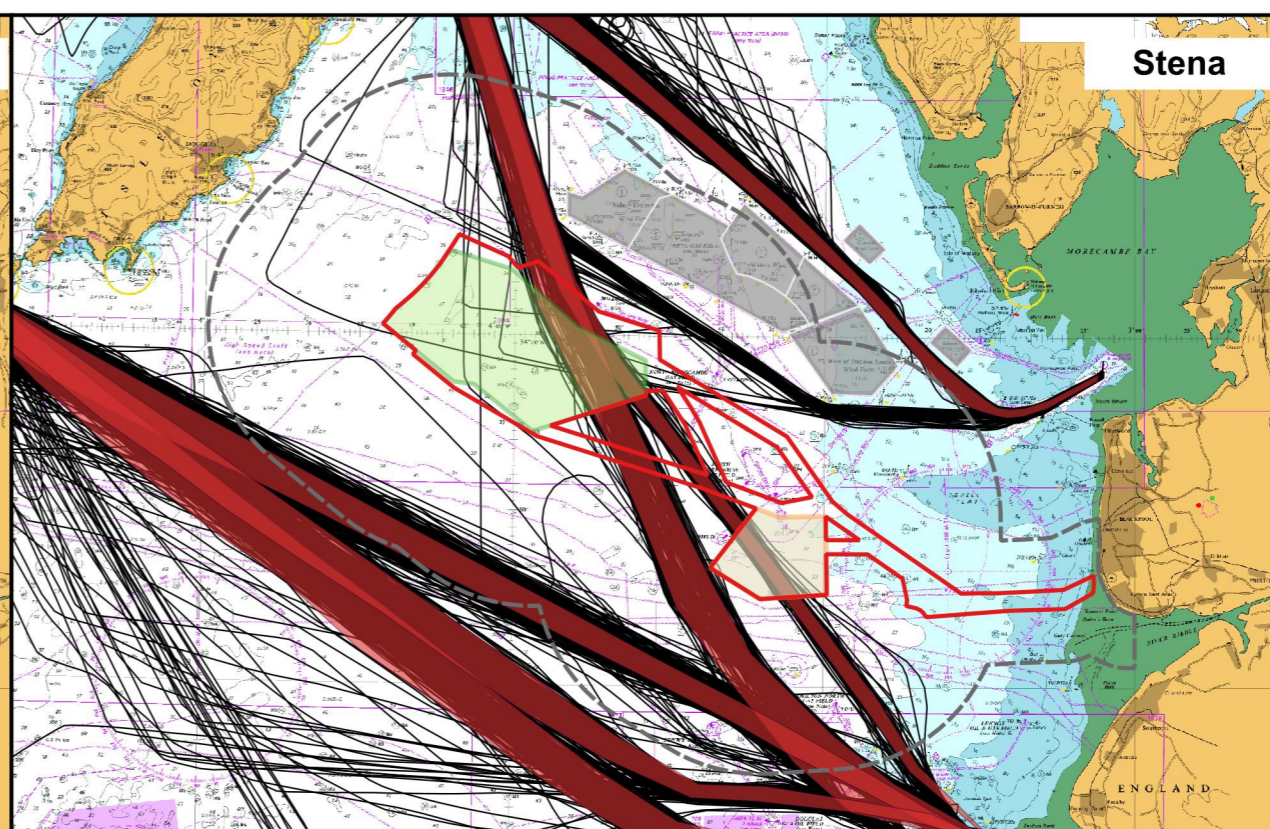
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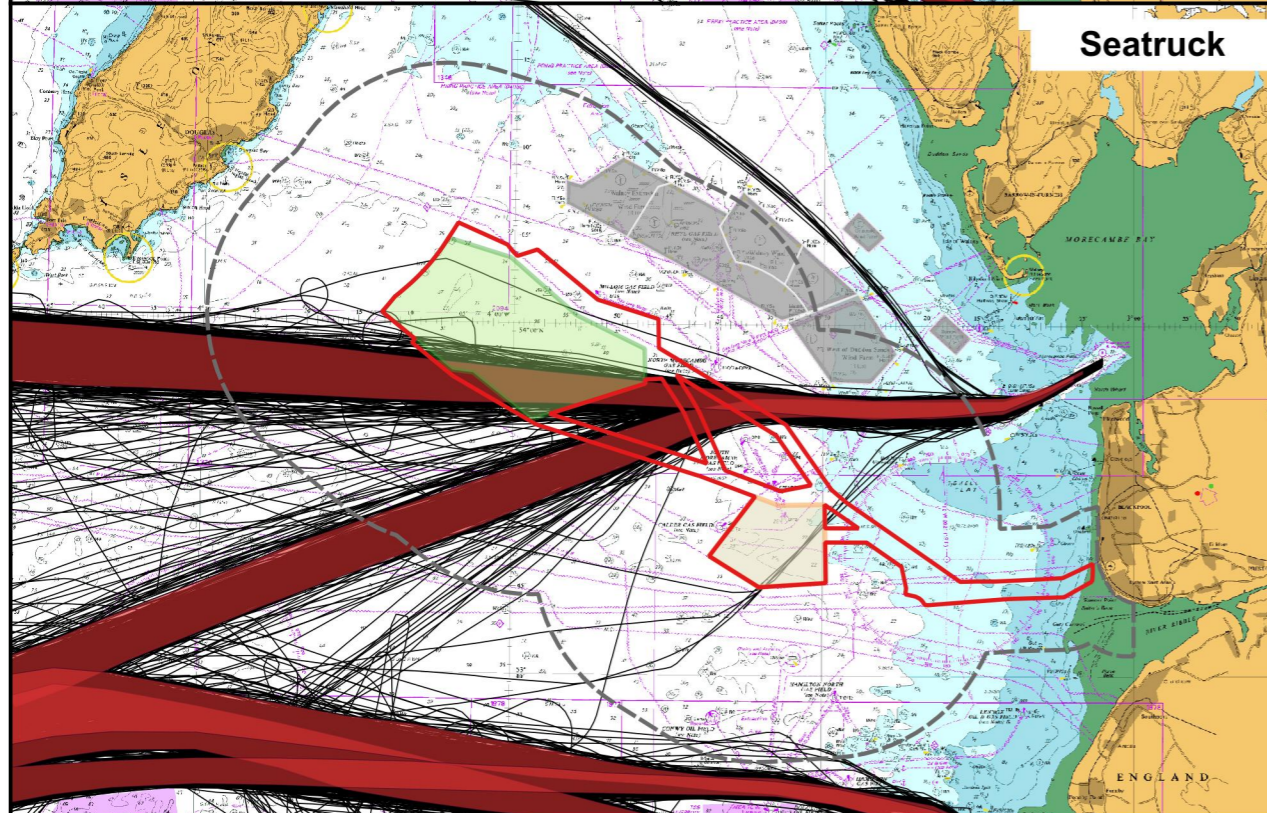
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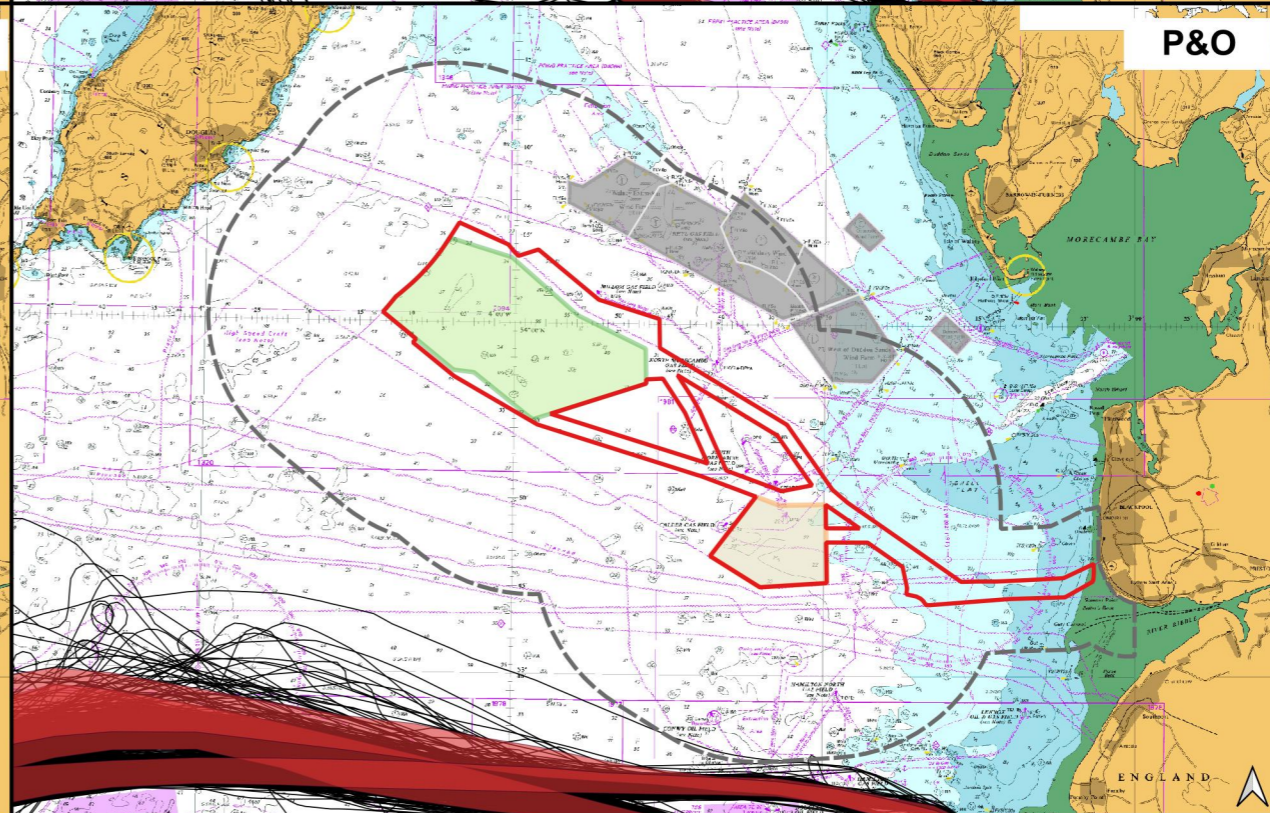
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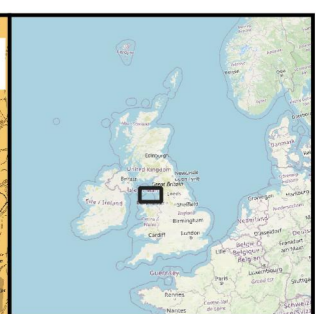
Stena



Seatruck



P&O



- LEGEND**
- Morgan and Morecambe Offshore Windfarms Transmission Assets Order Limits
 - Morgan Offshore Wind Project: Generation Assets
 - Morecambe Offshore Windfarm: Generation Assets
 - Existing Offshore Windfarms
 - Shipping and Navigation Study Area
 - 90th Percentile Corridors
 - Ferry Vessel Track



Figure 7.7

Drawing Number:
NASH-MMTA-SN-021-00

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

Drawing Title:
90th Percentile and Non-Typical Ferry Routes (2022)



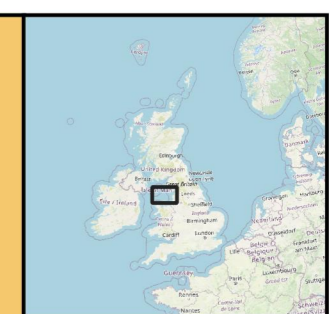
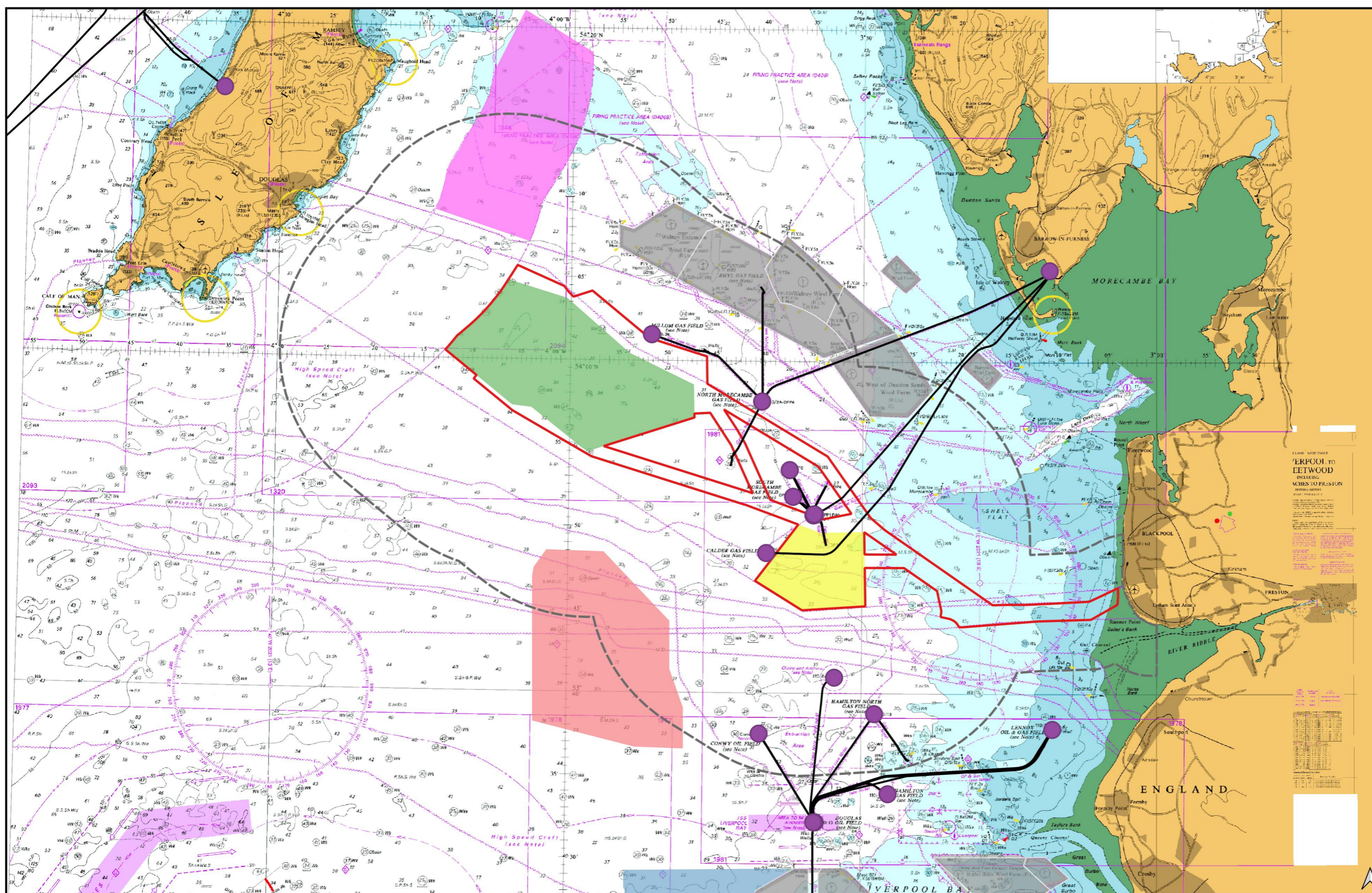
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Data Sources: Admiralty Charts 1826 & 1981; OWFs from The Crown Estate; MarineTraffic 2022 AIS Data

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LEGEND

- Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits - Offshore
- Morgan Offshore Wind Project: Generation Assets
- Morecambe Offshore Windfarm: Generation Assets
- Existing Offshore Windfarms
- Shipping and Navigation Study Area

Oil & Gas

- Pipeline
- Surface Infrastructure

Tier 1 Windfarm Projects

- Awel y Mor
- Mona Array Area

Tier 2 Windfarm Projects

- Moor Vannin Offshore Wind Farm

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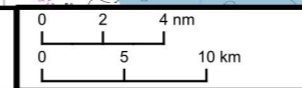
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Figure 7.8

Drawing Number:
 NASH-MMTA-SN-034-00

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

Drawing Title:
 Tier 1 and Tier 2 Windfarms



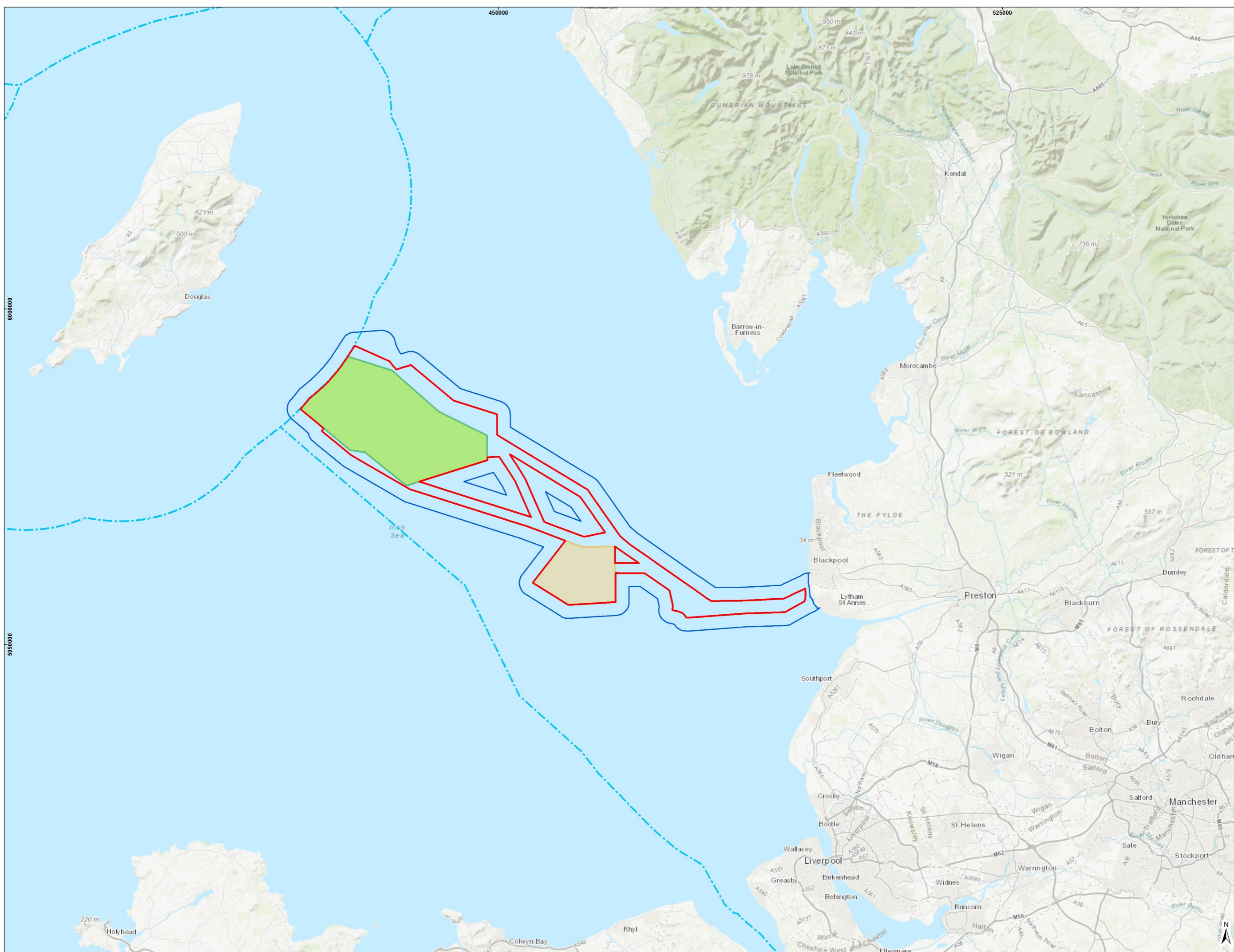
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 Symbols not to scale

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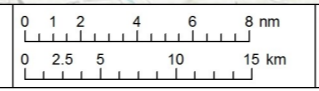
- LEGEND**
- Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits – Offshore
 - Morgan Offshore Wind Project: Generation Assets
 - Morecambe Offshore Windfarm: Generation Assets
 - Marine Archaeology Study Area
 - Jurisdictional Boundary



Figure 8.1
 Drawing Number:
 RPSE-ES-MAR-E002-03

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

Drawing Title:
 TRANSMISSION ASSETS MARINE ARCHAEOLOGY STUDY AREA

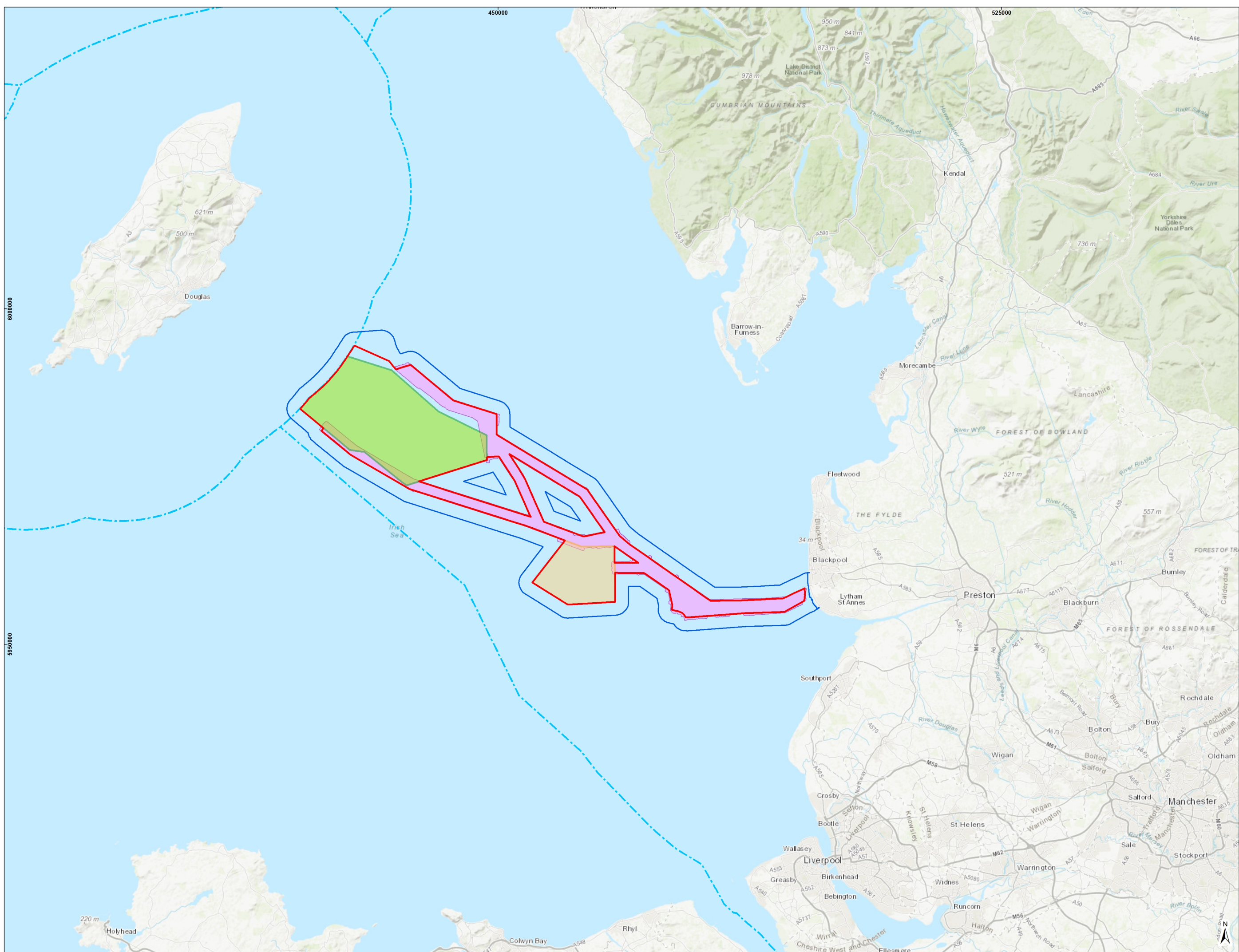


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Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

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03	17/09/24	Final	M.J	BM



- LEGEND**
- Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits – Offshore
 - Morgan Offshore Wind Project: Generation Assets
 - Morecambe Offshore Windfarm: Generation Assets
 - Marine Archaeology Study Area
 - Transmission Assets Survey Area
 - Jurisdictional Boundary

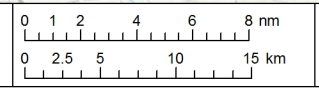


Figure 8.2

Drawing Number:
RPSE-ES-MAR-E003-03

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

Drawing Title:
TRANSMISSION ASSETS SURVEY AREA

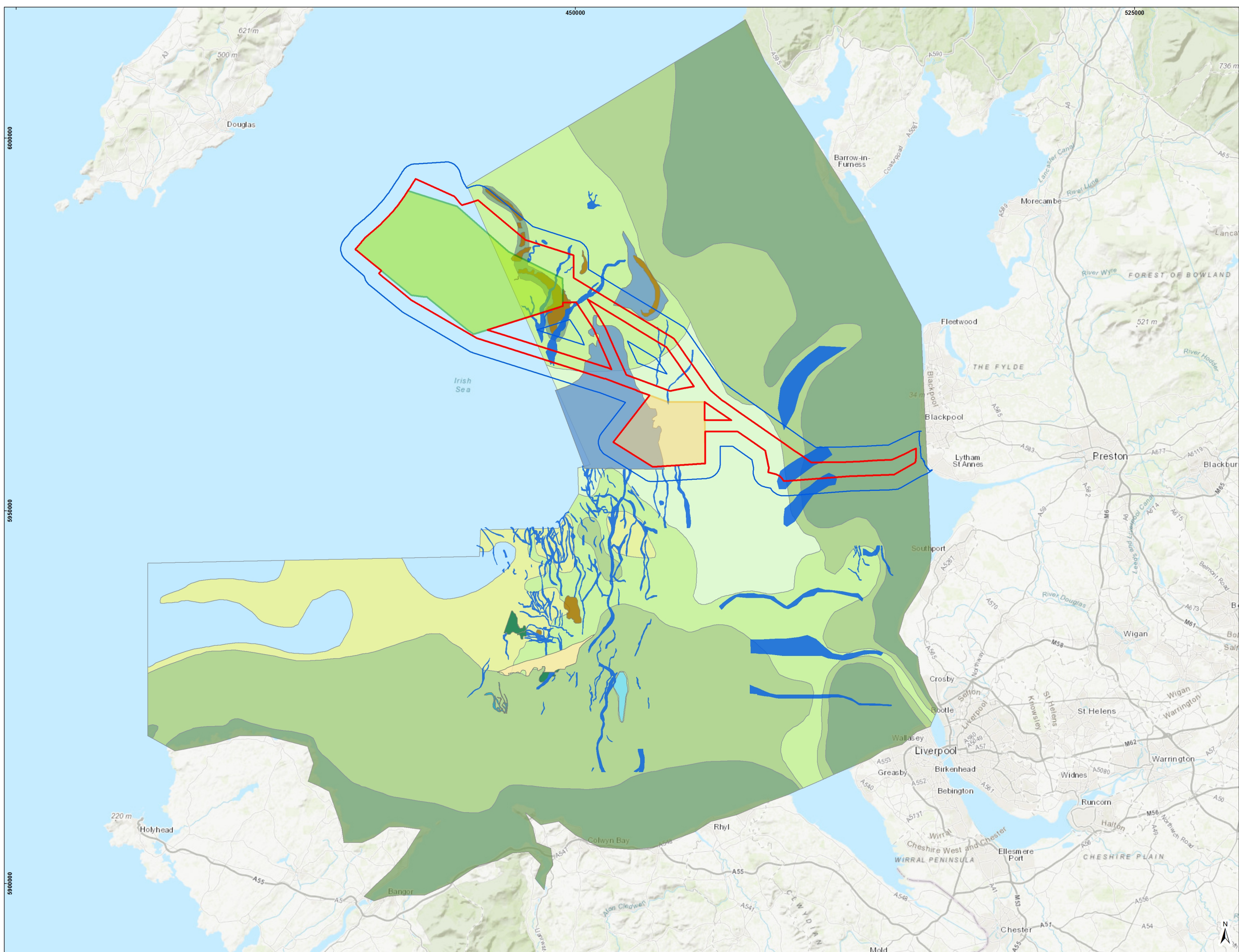


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Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:500,000

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

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03	17/09/24	Final	MJ	BM



LEGEND

- Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits – Offshore
- Morgan Offshore Wind Project: Generation Assets
- Morecambe Offshore Windfarm: Generation Assets
- Marine Archaeology Study Area
- Channel
- Basin structure
- High ground
- Floodplain

Relative Topography

- High
- High - Intermediate
- Intermediate
- Intermediate - Low
- Low
- Very Low

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enbw | bp | FPS

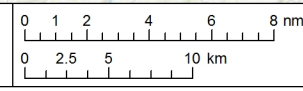
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Figure 8.3

Drawing Number:
 RPSE-ES-MAR-E004-03

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

Drawing Title:
 WEST COAST PALAEO LANDSCAPE STUDY RECONSTRUCTION OF THE TRANSMISSION ASSETS MARINE ARCHAEOLOGY STUDY AREA



Geodetic Information:
 Datum: ETRS 1989
 Projection: ETRS 1989 UTM Zone 30N
 Scale@379mmx231mm: 1:450,000

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VER	DATE	DETAILS	BY	CHECK
00	22/04/24	Initial Issue	MJ	LD
03	17/09/24	Final	MJ	BM