



MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Environmental Statement

Volume 2, Figures - Part 2 of 5



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Prepared by:

RPS

Prepared for:

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

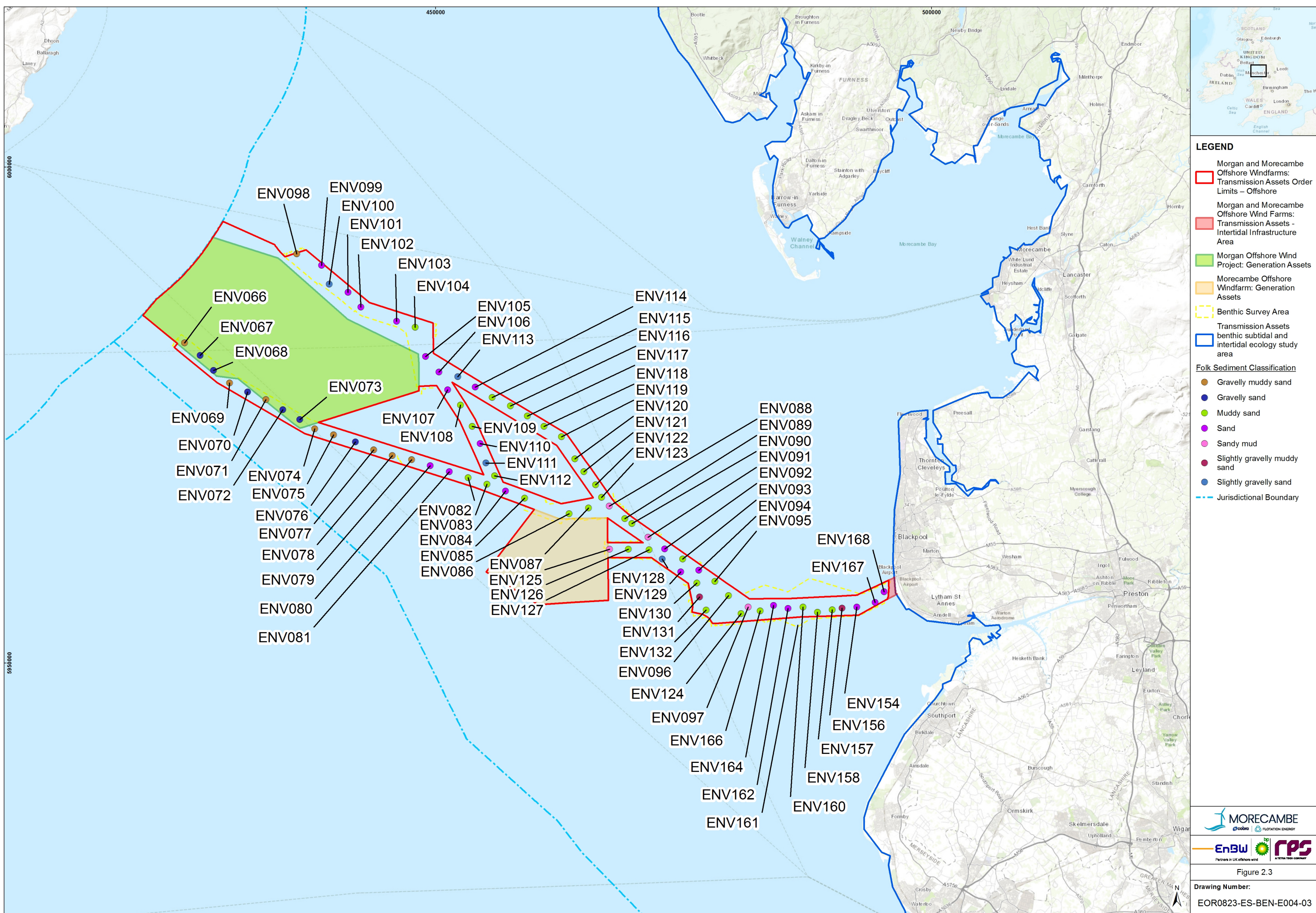
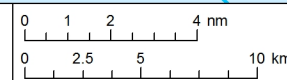


Figure 2.3

Drawing Number:
EOR0823-ES-BEN-E004-03

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

Drawing Title:
FOLK SEDIMENT CLASSIFICATIONS FOR EACH BENTHIC GRAB SAMPLE WITHIN THE SURVEY AREA

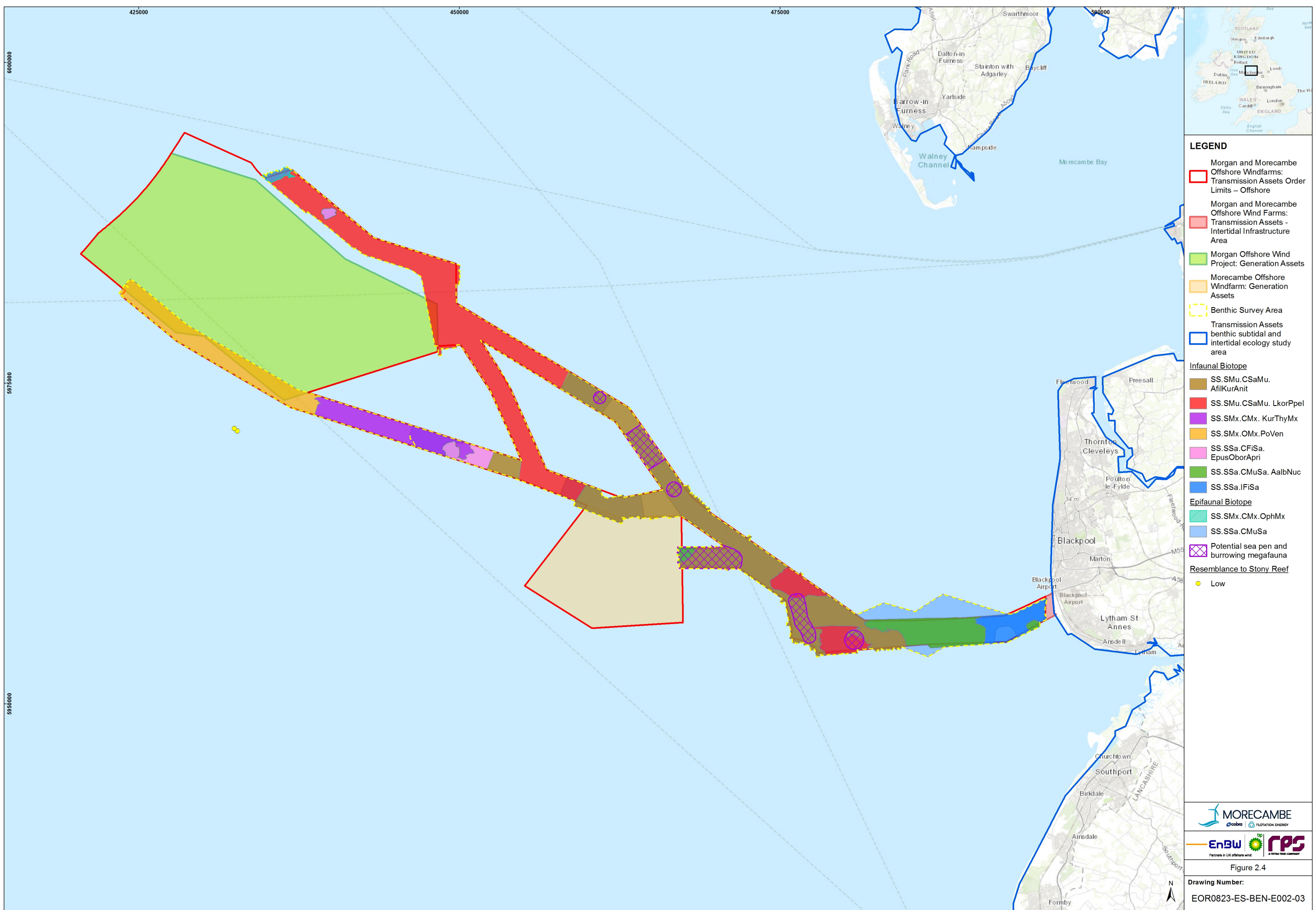


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Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

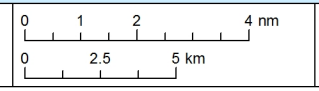
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VER	DATE	DETAILS	BY	CHECK
00	11/03/24	Initial Issue	MJ	BM
03	17/09/24	Final	MJ	BM



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

Drawing Title:
COMBINED INFAUNAL AND EPIFAUNAL BIOTOPES



Geodetic Information:
Datum: ETRS 1989
Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:250,000

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

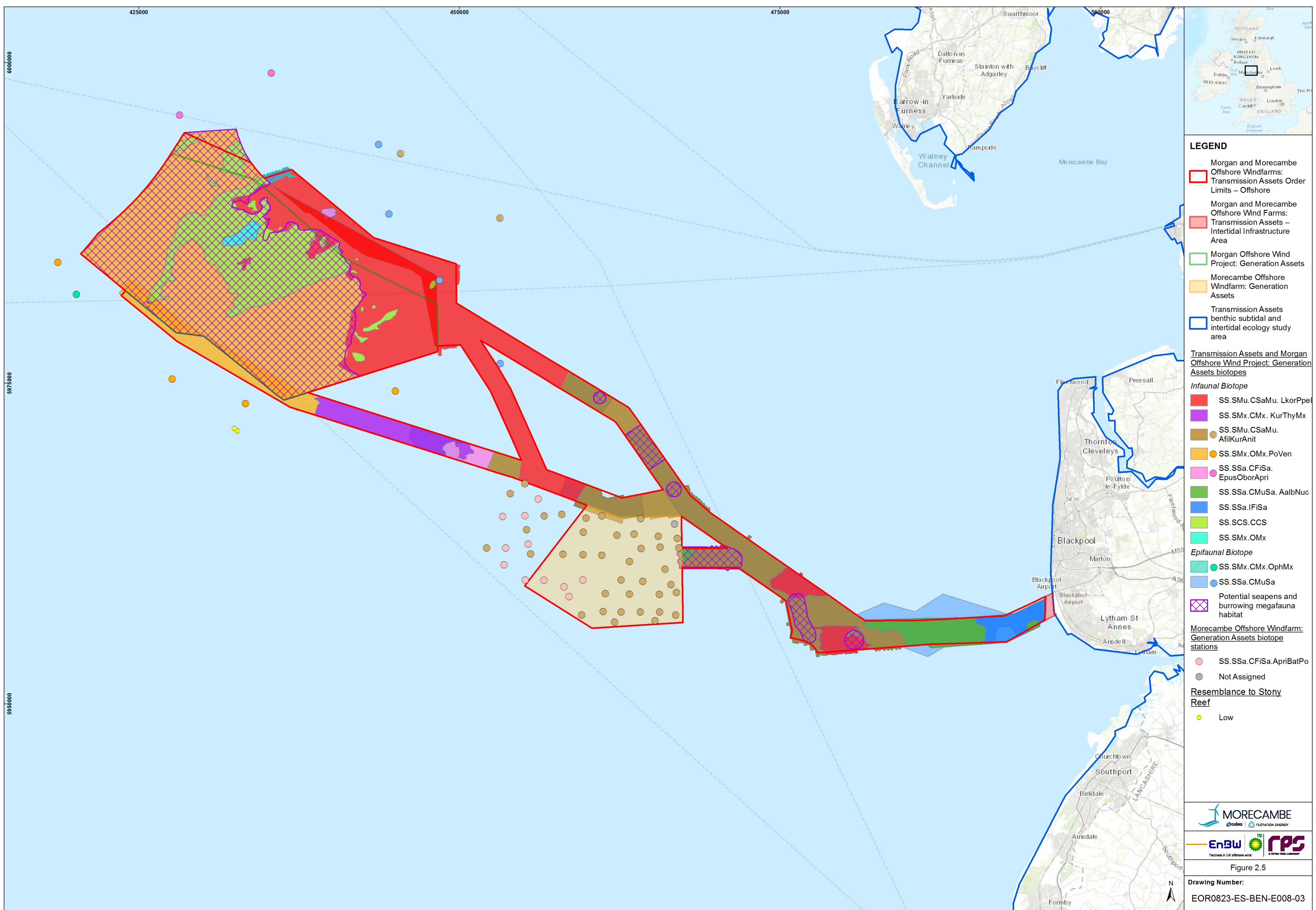
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00	11/03/24	Initial Issue	MJ	HM
03	17/09/24	Final	MJ	BM

MORECAMBE

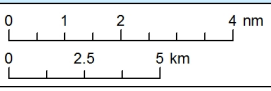
EnBW
 Partners in UK offshore wind
RPS
 A TETRA TECH COMPANY

Figure 2.4
Drawing Number:
 EOR0823-ES-BEN-E002-03



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

Drawing Title:
COMBINED TRANSMISSION ASSETS AND GENERATION ASSETS
INFAUNAL AND EPIFAUNAL BIOTOPES



Geodetic Information:
Datum: ETRS 1989
Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:250,000

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

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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00	11/03/24	Initial Issue	M.J	HM
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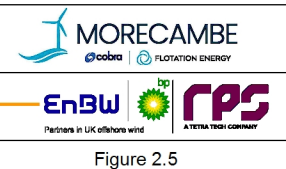
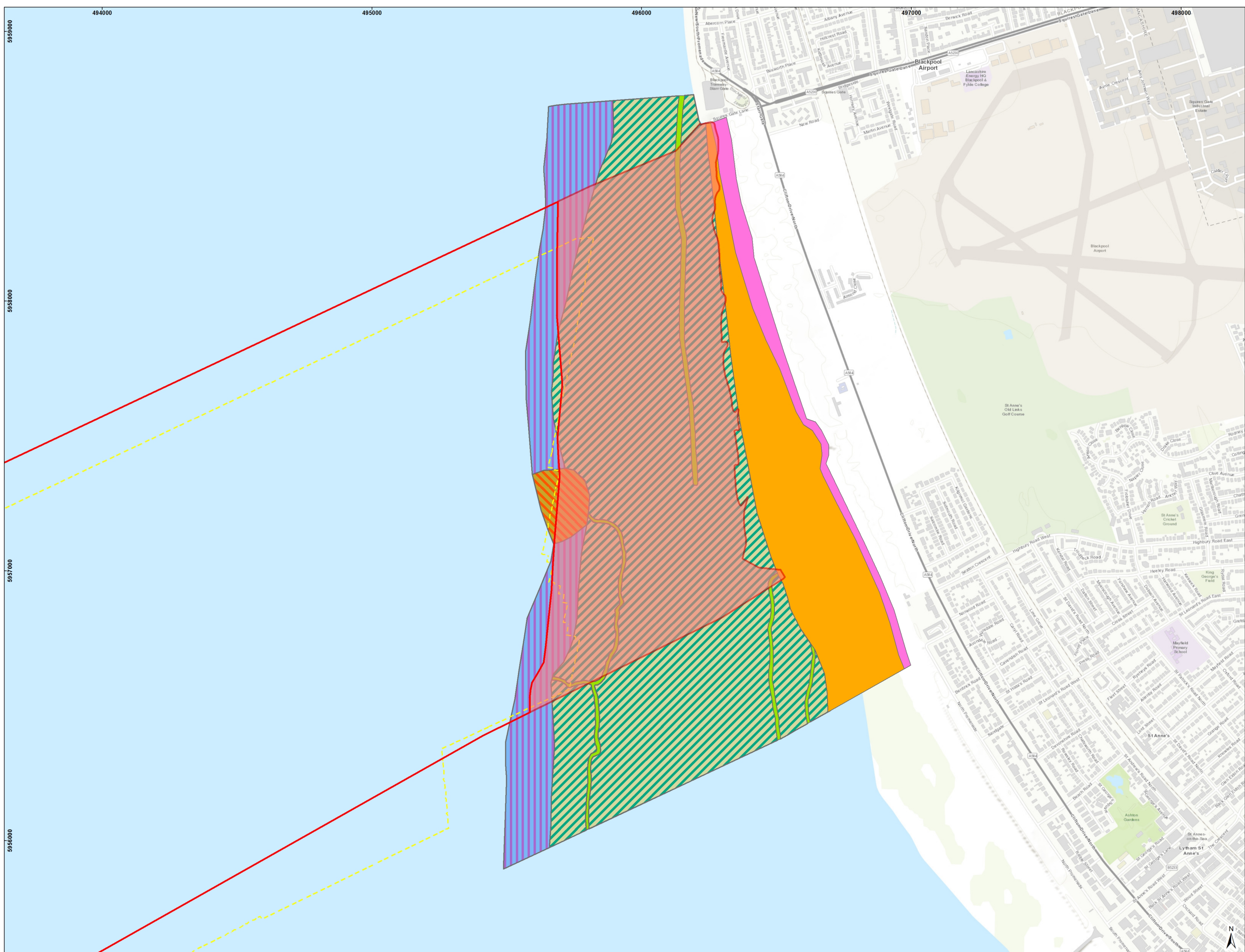


Figure 2.5



- LEGEND**
- Morgan and Morecambe Offshore Windfarms:
 - Transmission Assets Order Limits – Offshore
 - Morgan and Morecambe Offshore Wind Farms:
 - Transmission Assets - Intertidal Infrastructure Area
 - Benthic Survey Area
 - Intertidal Biotope**
 - LS.LSa.FiSa
 - LS.LSa.MuSa
 - LS.LSa.St.Tal
 - Mosaic 50% LS.LSa.MoSa, 40% LS.LSa.MuSa, 10% LS.LSa.MuSa.MacAre
 - Mosaic 50% LS.LSa.MuSa, 45% LS.LSa.MuSa.MacAre, 5% LS.LSa.MuSa.Lan
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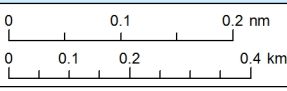


Figure 2.6

Drawing Number:
EOR0823-ES-BEN-E005-03

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

Drawing Title:
INTERTIDAL ZONE AT LANDFALL – BIOTOPE MAP

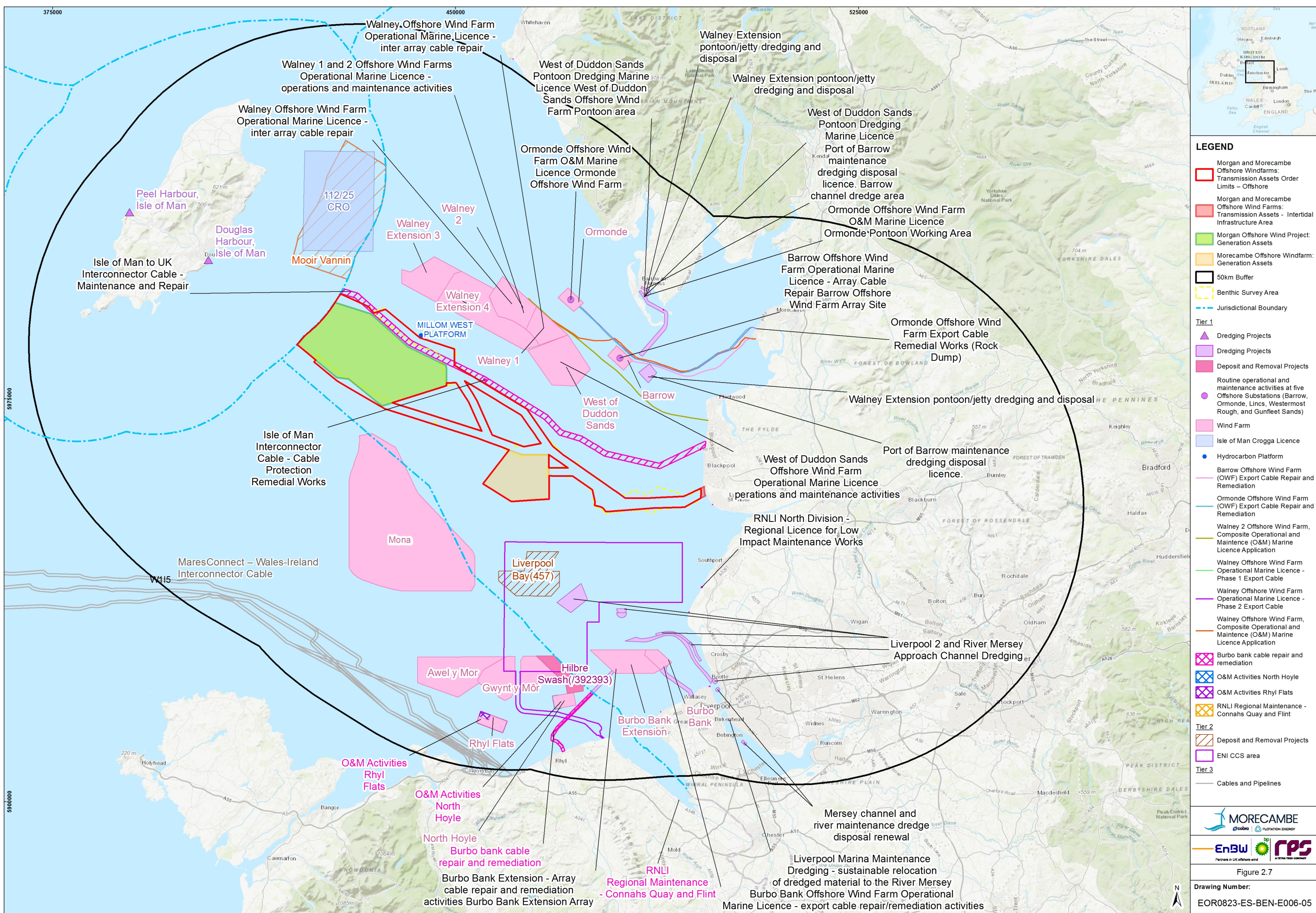


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Projection: ETRS 1989 UTM Zone 30N
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Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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03	17/09/24	Final	MJ	BM



LEGEND

- Morgan and Morecambe Offshore Windfarms: Transmission Assets Order Limits - Offshore
- Morgan and Morecambe Offshore Wind Farms: Transmission Assets - Intertidal Infrastructure Area
- Morgan Offshore Wind Project: Generation Assets
- Morecambe Offshore Windfarm: Generation Assets
- 50km Buffer
- Benthic Survey Area
- Jurisdictional Boundary

Tier 1

- Dredging Projects
- Dredging Projects
- Deposit and Removal Projects
- Routine operational and maintenance activities at five Offshore Substations (Barrow, Ormonde, Lincs, Westermost Rough, and Gunfleet Sands)
- Wind Farm
- Isle of Man Crogga Licence
- Hydrocarbon Platform
- Barrow Offshore Wind Farm (OWF) Export Cable Repair and Remediation
- Ormonde Offshore Wind Farm (OWF) Export Cable Repair and Remediation
- Walney 2 Offshore Wind Farm, Composite Operational and Maintenance (O&M) Marine Licence Application
- Walney Offshore Wind Farm Operational Marine Licence - Phase 1 Export Cable
- Walney Offshore Wind Farm Operational Marine Licence - Phase 2 Export Cable
- Walney Offshore Wind Farm, Composite Operational and Maintenance (O&M) Marine Licence Application

- Burbo bank cable repair and remediation
- O&M Activities North Hoyle
- O&M Activities Rhyll Flats
- RNLI Regional Maintenance - Connahs Quay and Flint

Tier 2

- Deposit and Removal Projects
- ENI CCS area

Tier 3

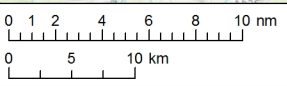
- Cables and Pipelines

MORECAMBE
EnBW **RPS**
 Partners in UK offshore wind

Figure 2.7
 Drawing Number:
 EOR0823-ES-BEN-E006-05

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

Drawing Title:
 CUMULATIVE ASSESSMENT PROJECTS

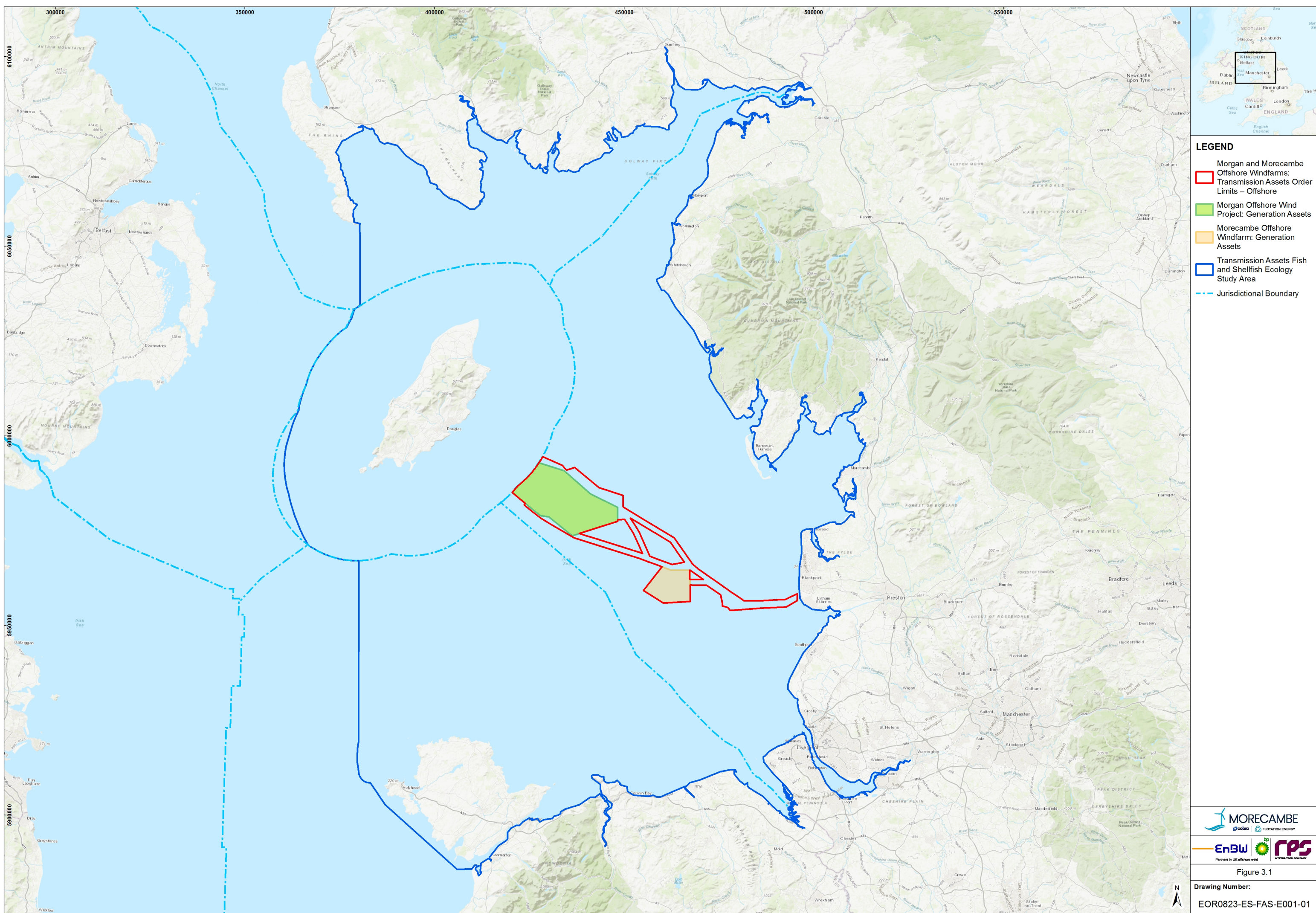


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Data Sources: Client, EMODnet, TCE, MMO

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05	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
- Transmission Assets Fish and Shellfish Ecology Study Area
- Jurisdictional Boundary

MORECAMBE
enbw | bp | FLOTATION ENERGY

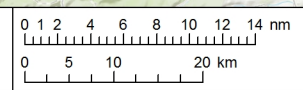
enbw **bp** **FPS**
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Figure 3.1

Drawing Number:
EOR0823-ES-FAS-E001-01

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

Drawing Title:
STUDY AREA EXTENDING ACROSS THE EAST IRISH SEA, INCLUDING THE OFFSHORE ORDER LIMITS

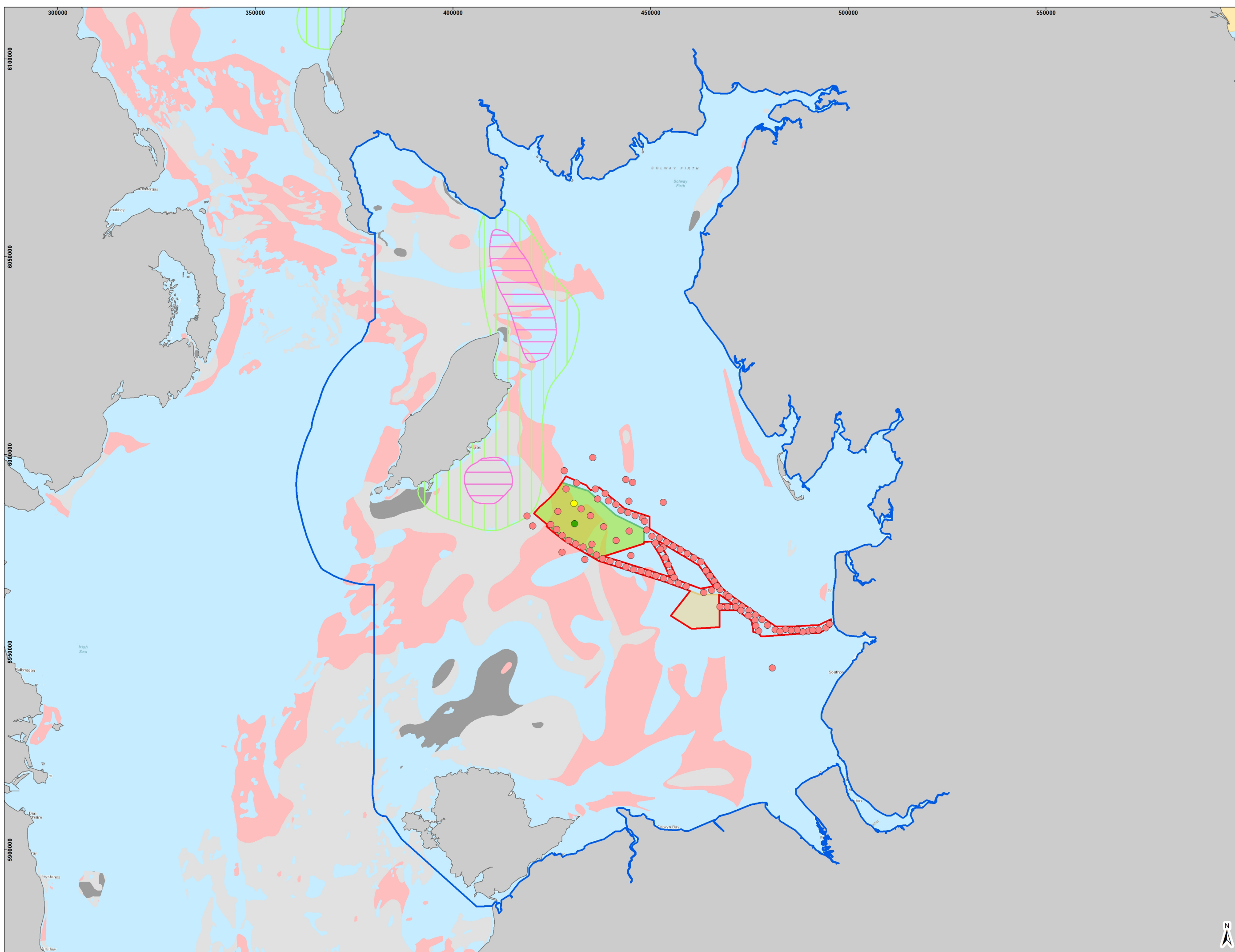


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Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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00	27/08/24	Initial Issue	MJ	TH
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LEGEND

- Offshore Windfarms:
 - Transmission Assets Order Limits – Offshore
 - Morgan Offshore Wind Project: Generation Assets
 - Morecambe Offshore Windfarm: Generation Assets
 - Transmission Assets Fish and Shellfish Ecology Study Area
 - Spawning Ground - High Intensity (Coull *et al.*, 1998)
 - Spawning Ground - Low Intensity (Coull *et al.*, 1998)
 - Spawning Ground - Undetermined Intensity (Coull *et al.*, 1998)
- Habitat Suitability (Reach *et al.*, 2013)**
- Preferred
 - Marginal
 - Unsuitable
- EMODnet Seabed Substrates Folk 16 Classification:**
- Herring Potential Spawning Habitat:**
- 321. Sandy Gravel
 - 331. Gravel
- Herring Marginal Spawning Habitat:**
- 311. Gravelly Sand



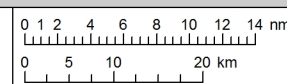
Figure 3.2

Drawing Number:
EOR0823-ES-FAS-E002-01



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

Drawing Title:
HERRING SUBSTRATE SUITABILITY CLASSIFICATIONS FOR THE TRANSMISSION ASSETS SITE-SPECIFIC SURVEY (2022 BENTHIC SURVEY)

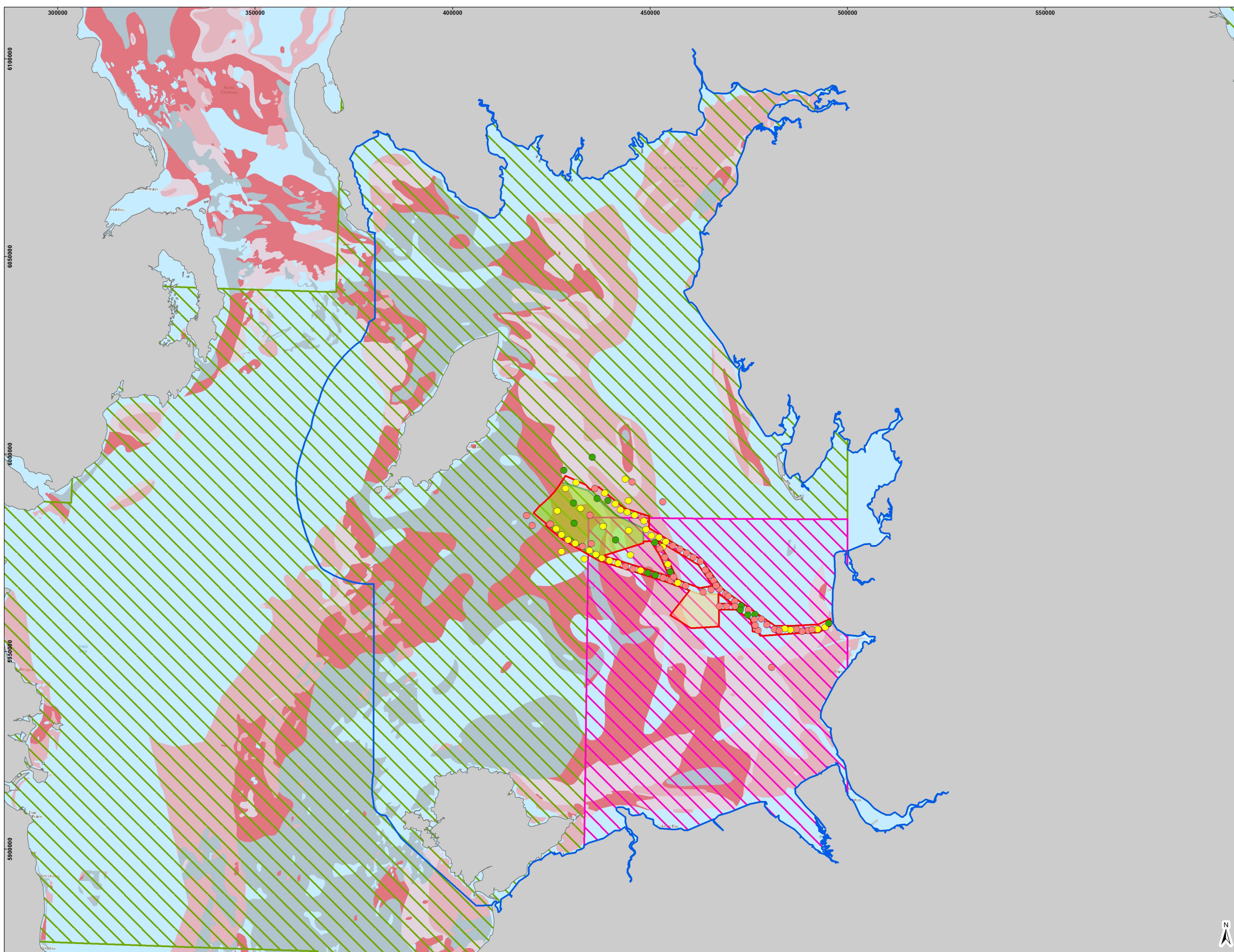


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Scale@379mmx231mm: 1:850,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org, Marine Scotland, Natural Resources Wales, CEFAS, EMODnet

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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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
- Transmission Assets Fish and Shellfish Ecology Study Area
- Spawning Ground - High Intensity (Ellis *et al.*, 2012)
- Spawning Ground - Low Intensity (Ellis *et al.*, 2012)
- Habitat Suitability (Latto *et al.*, 2013)**
 - Preferred
 - Marginal
 - Unsuitable
- EMODnet Seabed Substrates Folk 16 Classification:**
 - Sandeel Preferred Habitat**
 - 311. gravelly Sand
 - 212. (gravelly) Sand
 - 211. Sand
 - Sandeel Marginal Habitat**
 - 321. sandy Gravel



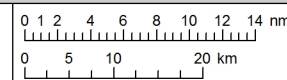
Figure 3.3

Drawing Number:
EOR0823-ES-FAS-E003-01



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

Drawing Title:
SANDEEL SUBSTRATE SUITABILITY CLASSIFICATIONS FOR THE TRANSMISSION ASSETS SITE-SPECIFIC SURVEY (2022 BENTHIC SURVEY)

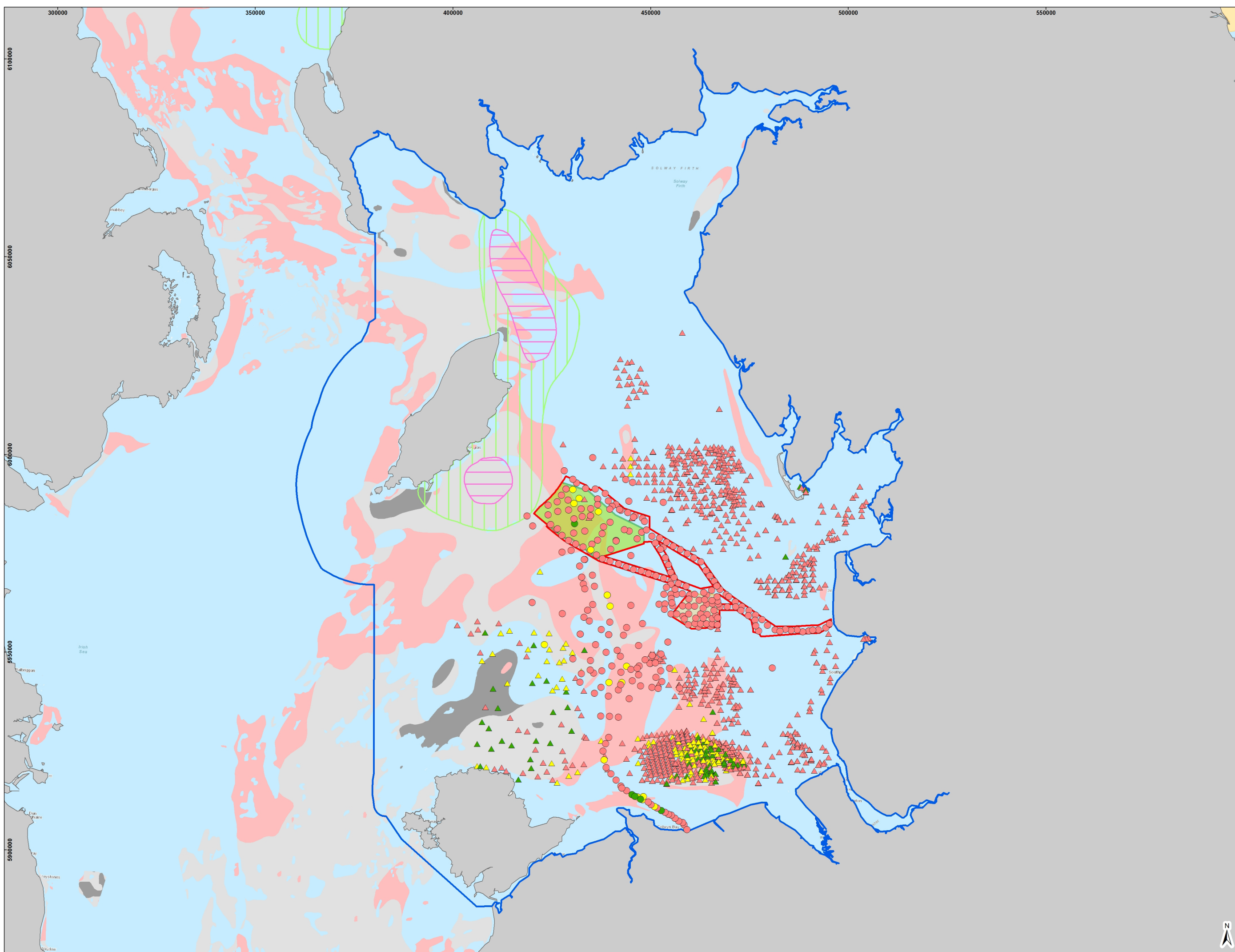


Geodetic Information:
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Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:850,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org, Marine Scotland, Natural Resources Wales, CEFAS, EMODnet

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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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
- Transmission Assets Fish and Shellfish Ecology Study Area
- Spawning Ground - High Intensity (Coull *et al.*, 1998)
- Spawning Ground - Low Intensity (Coull *et al.*, 1998)
- Spawning Ground - Undetermined Intensity (Coull *et al.*, 1998)
- Habitat Suitability (Reach *et al.*, 2013)**
- Preferred
- Marginal
- Unsuitable
- Habitat Suitability (Other Survey)**
- ▲ Preferred
- ▲ Marginal
- ▲ Unsuitable
- EMODnet Seabed Substrates Folk 16 Classification:**
- Herring Potential Spawning Habitat:**
- 321. Sandy Gravel
- 331. Gravel
- Herring Marginal Spawning Habitat:**
- 311. Gravelly Sand

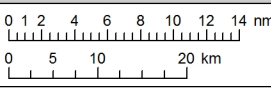


Figure 3.4

Drawing Number:
EOR0823-ES-FAS-E004-01

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

Drawing Title:
REGIONAL HERRING SUBSTRATE SUITABILITY FROM TRANSMISSION ASSETS, MONA OFFSHORE WIND PROJECT AND ONEBENTHIC SOURCES



Geodetic Information:
Datum: ETRS 1989
Projection: ETRS 1989 UTM Zone 30N
Scale@379mmx231mm: 1:850,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org, Marine Scotland, Natural Resources Wales, CEFAS, EMODnet

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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