



Awel y Môr Offshore Wind Farm

Category 6: Environmental Statement

Volume 4, Annex 2.5: Seafloor and Shallow Geological Results (Offshore ECC) (Part 3)

Date: April 2022

Revision: A

Application Reference: 6.4.2.5.3

Pursuant to: APFP Regulation 5(2)(a)



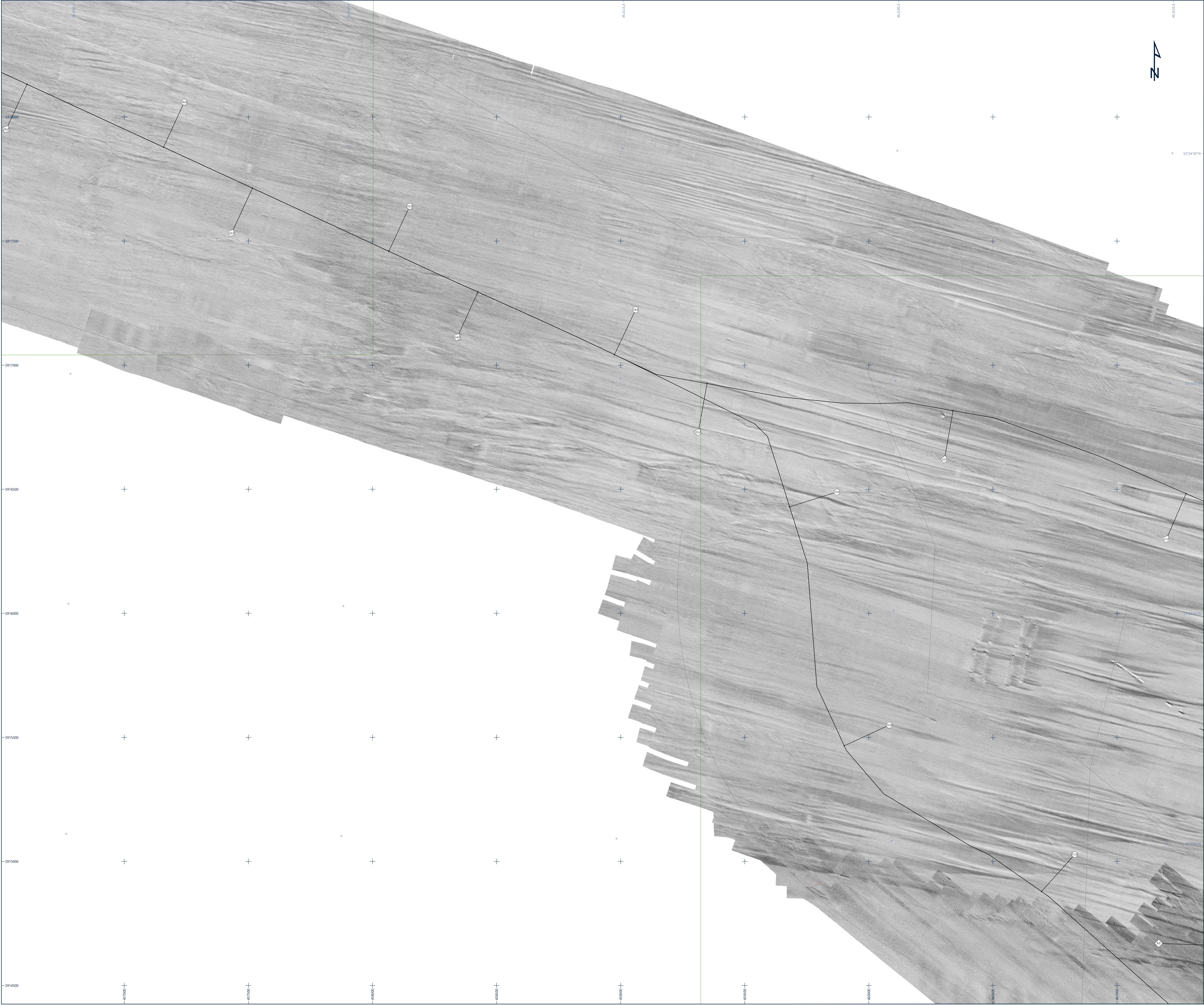
REVISION	DATE	STATUS/ REASON FOR ISSUE	AUTHOR:	CHECKED BY:	APPROVED BY:
A	March 2022	ES	Fugro	RWE	RWE

www.awelymor.cymru

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Whitehill Way
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Legend

- UTM Grid
- Geographical Grid
- Route East A Kilometre Post
- Route East B Kilometre Post
- Export Corridor Centre Line
- Export Cable Route Survey Extent
- Wind Farm Extent
- Array Survey Extent
- Chart Extent
- Land

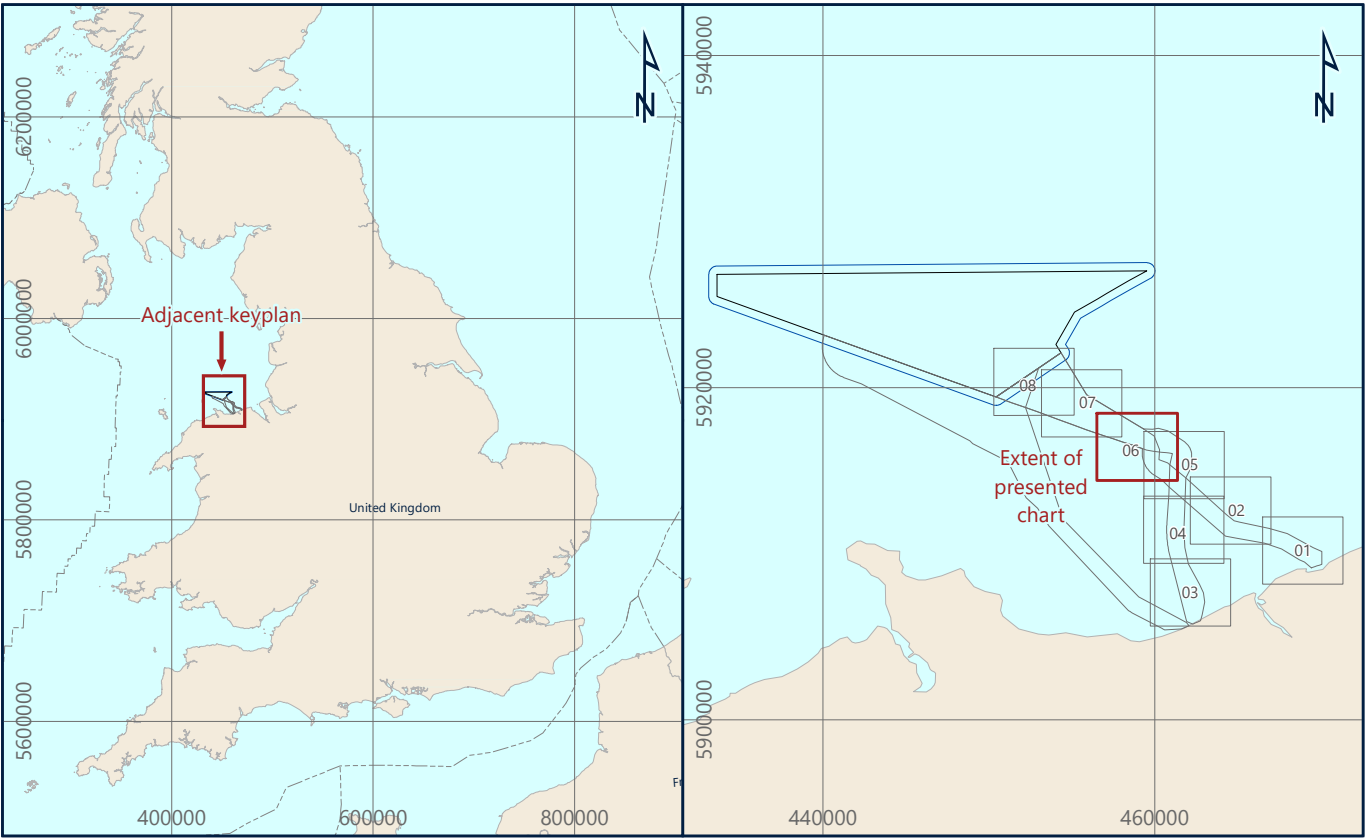
Notes

- 1) Fugro Mercator side scan sonar mosaic created from Edgetech 4205 simultaneous tri-frequency (230 / 540 / 850 kHz), processed with a 0.1 m cell size.
- 2) Fugro Seeker and Fugro Valkyrie side scan sonar mosaic created from Edgetech 4200 simultaneous dual-frequency (300 / 600 kHz), processed with a 0.1 m cell size.

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Geodetic Parameters

Geodetic datum	World Geodetic System 1984
Ellipsoid	WGS84
Semi-Major Axis	6,378,137.000 m
Inverse Flattening	298.257222563
Projection	WGS84 / UTM Zone 30N (EPSG: 32630)
Central Meridian (CM)	03°00'00" W
Latitude of Origin	00°00'00" N
Fake Easting	500,000 mE
Fake Northing	0 mN
Scale factor at CM	0.9996
Vertical datum	Lowest Astronomical Tide (LAT) - calculated using the Vertical Offshore Reference Frame (VORF)



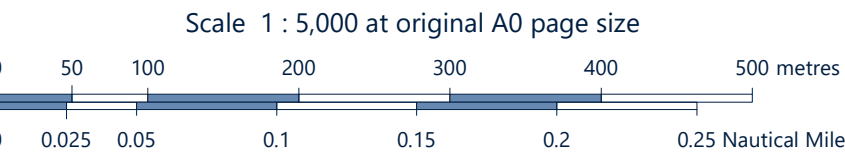
Awel Y Môr Offshore Wind Farm Ltd
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AWEL Y MÔR

Fugro
Victory House, Trellicker Wharf Unit 163, Hamilton Road, Portsmouth PO6 4PX
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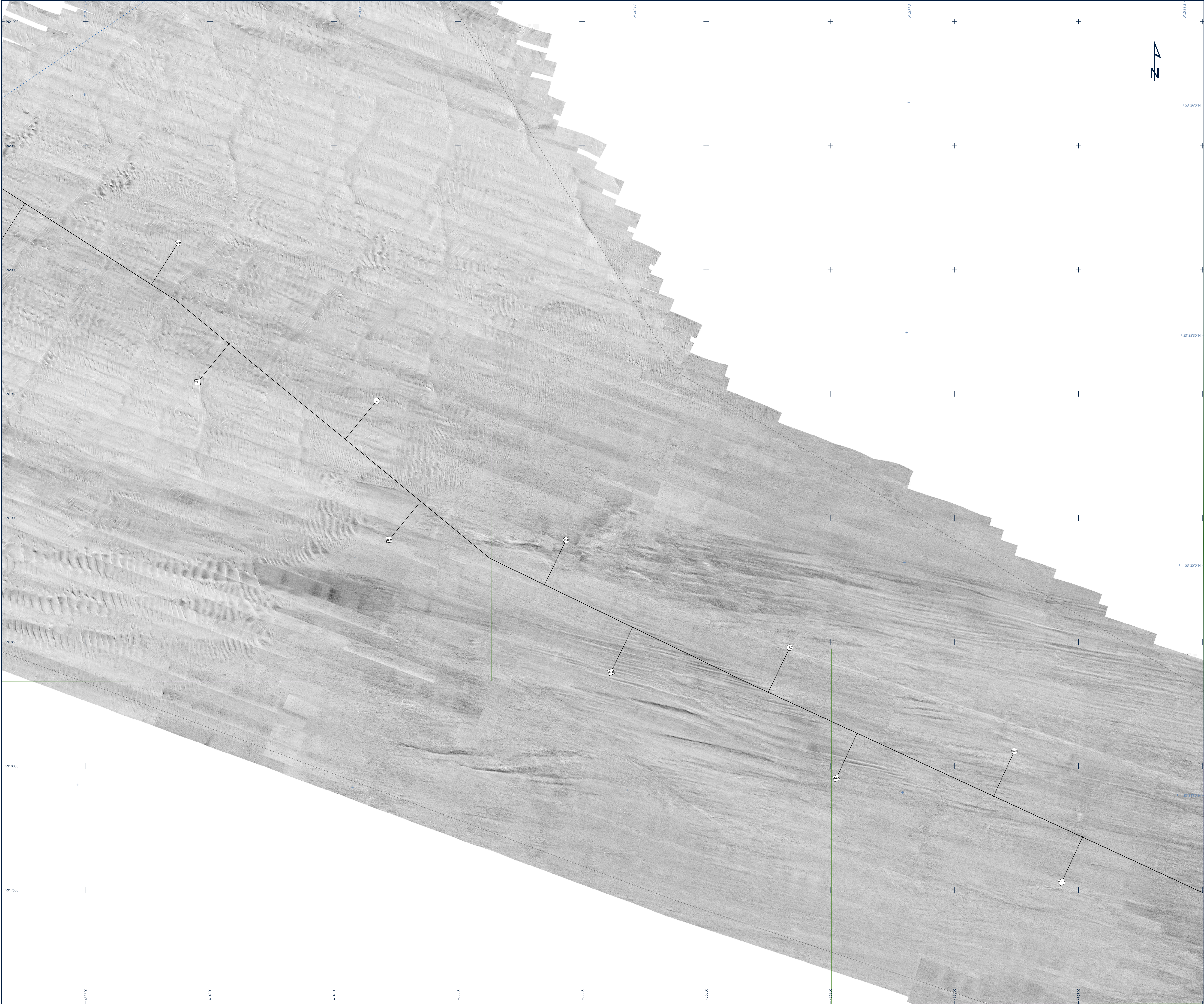
FUGRO

SIDE SCAN SONAR MOSAIC
AWEL Y MÔR OFFSHORE WIND FARM
GEOPHYSICAL SURVEY 2020
UK IRISH SEA



Issue	Date	Status	Interpreted	Prepared	Checked	Approved
01	25 November 2020	Draft Issue - Revision 1	OOT	DS	SB	BPT
02	18 January 2021	Final Issue - Revision 2	OOT	DS	SB	BPT
03	19 February 2021	Final Reissue - Revision 3	OOT	JL	DS	BPT
-	-	-	-	-	-	-

Fugro Project No.	200655	Vessel(s)	Fugro Mercator Fugro Seeker Fugro Valkyrie	Survey Date	10 June to 11 August 2020 17 July to 11 August 2020 16 July to 30 September 2020
File Name	200655_EstAB_SideScanSonarMosaic_06	Chart No.	06 of 08		



Legend

- UTM Grid
- Geographical Grid
- Route East A Kilometre Post
- Route East B Kilometre Post
- Export Corridor Centre Line
- Export Cable Route Survey Extent
- Wind Farm Extent
- Array Survey Extent
- Chart Extent
- Land

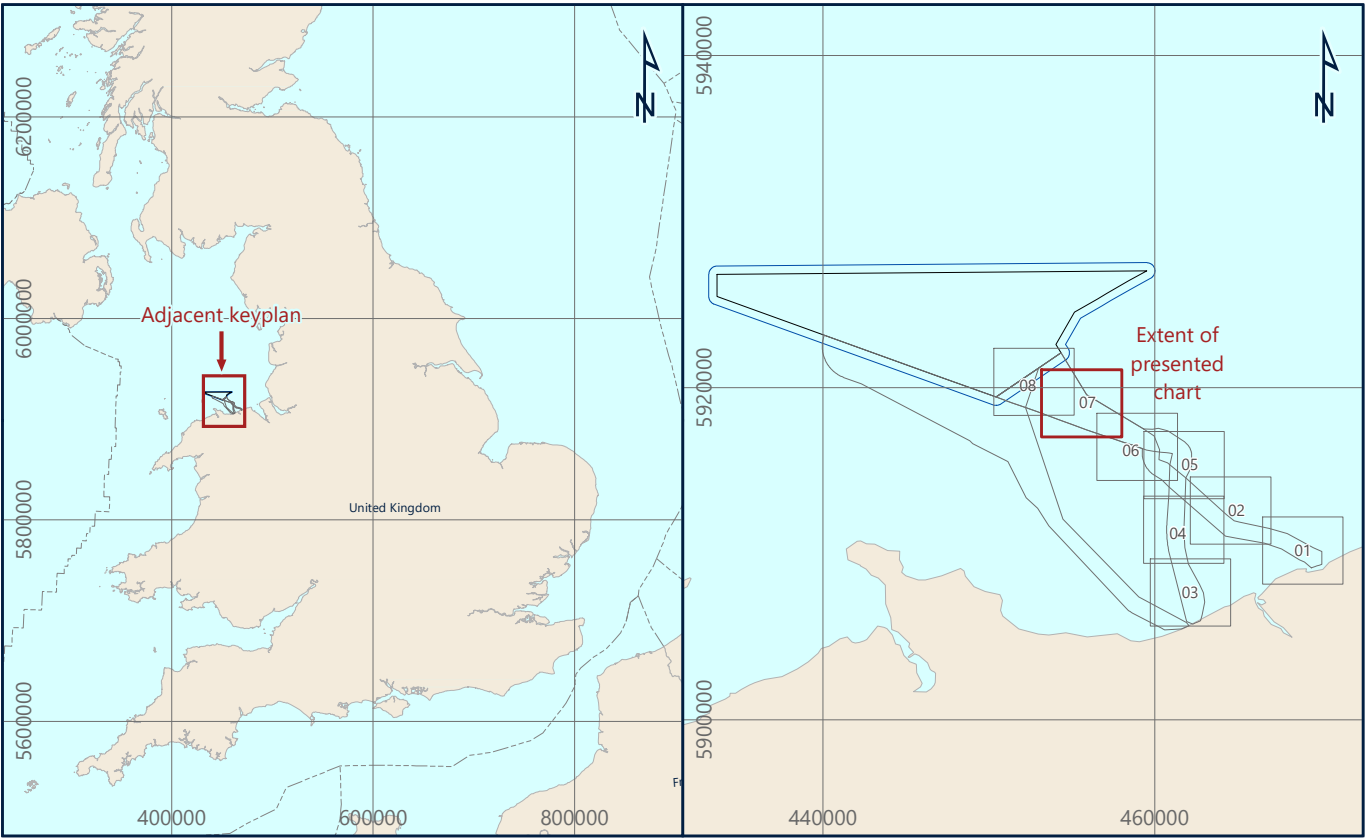
Notes

- 1) Fugro Mercator side scan sonar mosaic created from Edgetech 4205 simultaneous tri-frequency (230 / 540 / 850 kHz), processed with a 0.1 m cell size.
- 2) Fugro Seeker and Fugro Valkyrie side scan sonar mosaic created from Edgetech 4200 simultaneous dual-frequency (300 / 600 kHz), processed with a 0.1 m cell size.

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Geodetic Parameters

Geodetic datum: World Geodetic System 1984
Ellipsoid: WGS84
Semi-Major Axis: 6,378,137.000 m
Inverse Flattening: 298.257223563
Projection: WGS84 / UTM Zone 30N (EPSG: 32630)
Central Meridian (CM): 03°00'00" W
Latitude of Origin: 07°00'00" N
False Easting: 500,000 mE
False Northing: 0 mN
Scale factor at CM: 0.9996
Vertical datum: Lowest Astronomical Tide (LAT) - calculated using the Vertical Offshore Reference Frame (VORF)



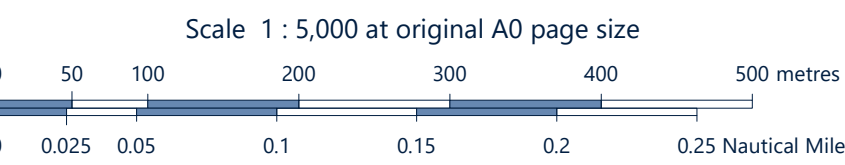
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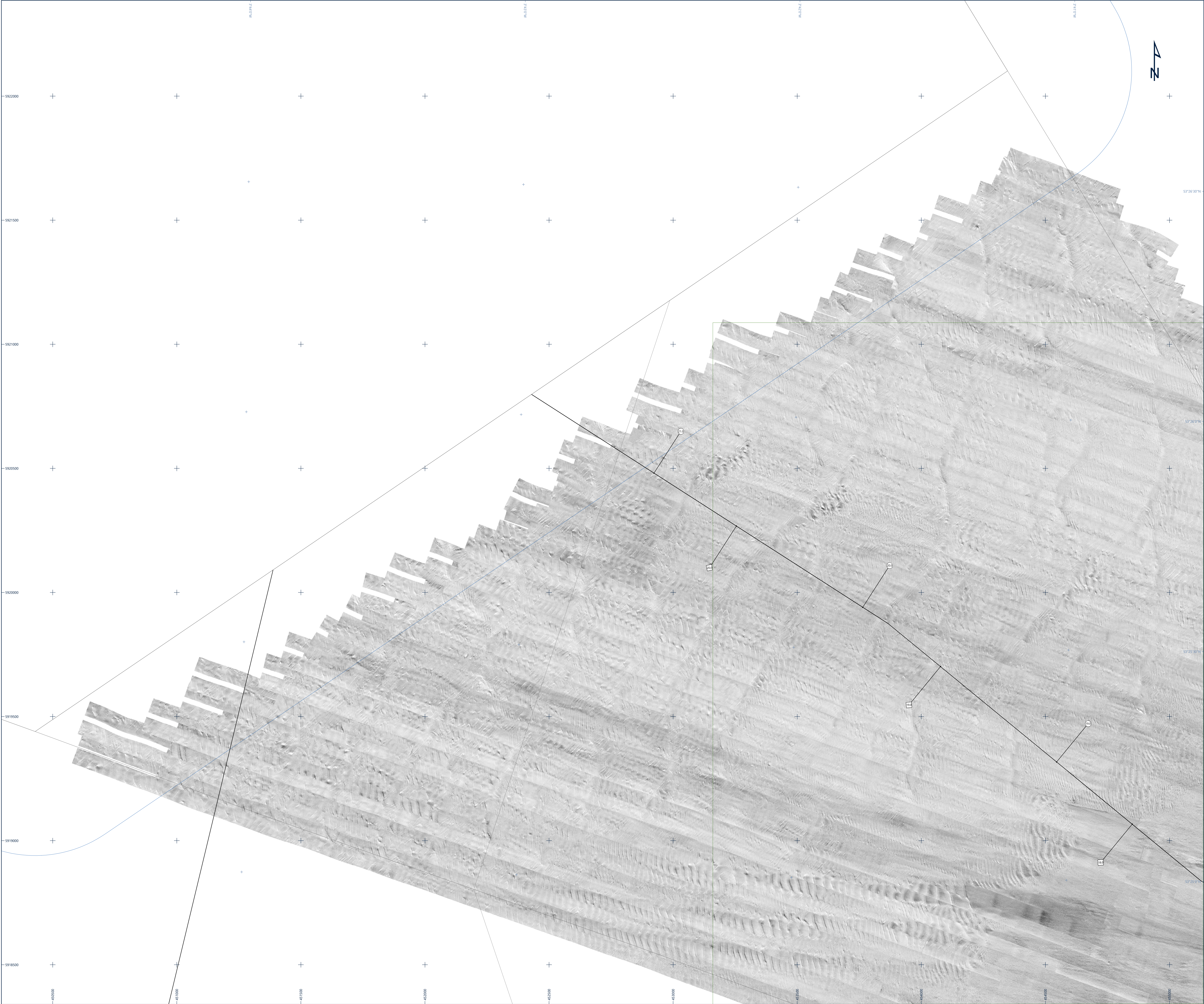
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SIDE SCAN SONAR MOSAIC
AWEL Y MÔR OFFSHORE WIND FARM
GEOPHYSICAL SURVEY 2020
UK IRISH SEA



Issue	Date	Status	Interpreted	Prepared	Checked	Approved
01	25 November 2020	Draft Issue - Revision 1	OOT	DS	SB	BPT
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-	-	-	-	-	-	-

Fugro Project No.	Vessel(s)	Survey Date
200655	Fugro Mercator Fugro Seeker Fugro Valkyrie	10 June to 11 August 2020 17 July to 11 August 2020 16 July to 30 September 2020
File Name		Chart No.
200655_EstAB_SideScanSonarMosaic_07		07 of 08



Legend

- UTM Grid
- Geographical Grid
- Route East A Kilometre Post
- Route East B Kilometre Post
- Export Corridor Centre Line
- Export Cable Route Survey Extent
- Wind Farm Extent
- Array Survey Extent
- Chart Extent
- Land

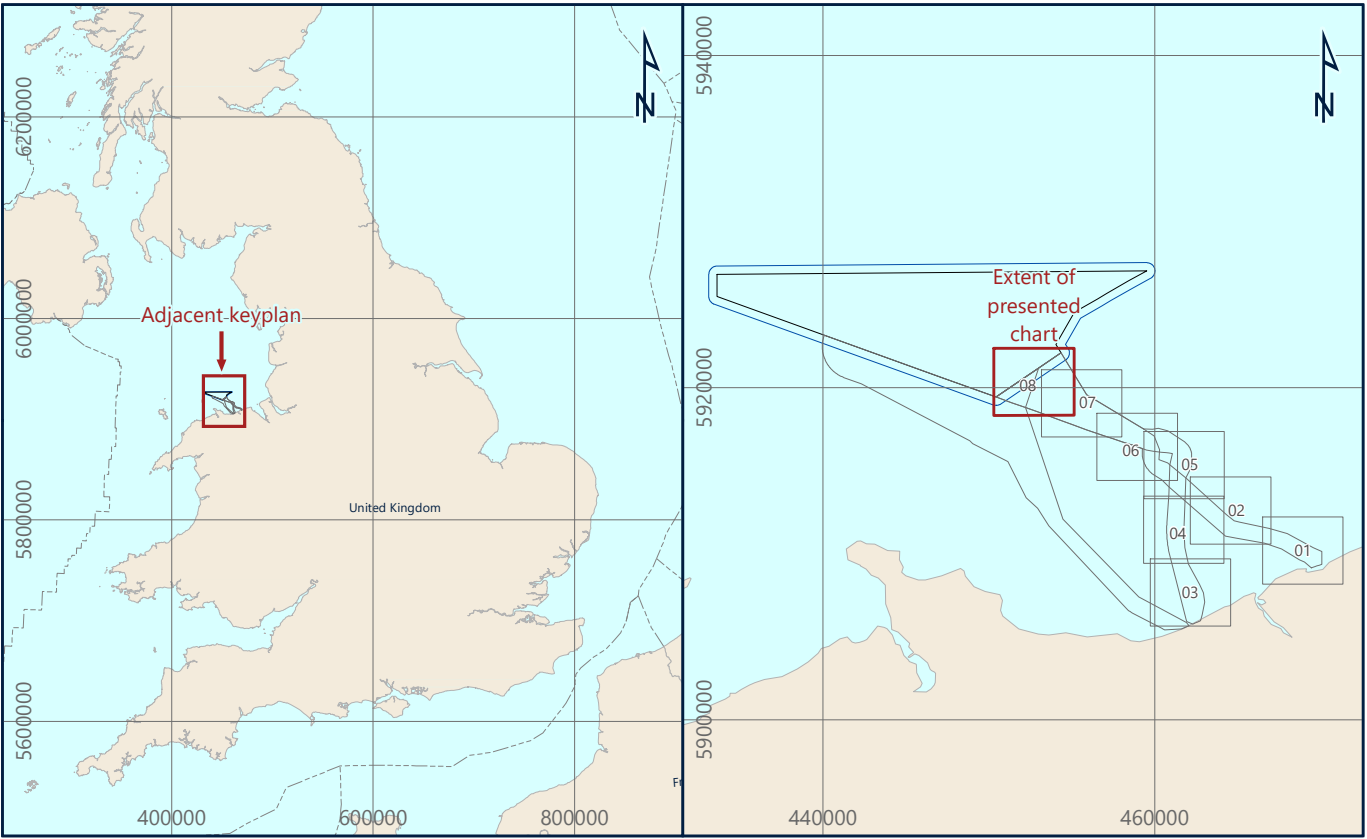
Notes

- 1) Fugro Mercator side scan sonar mosaic created from Edgetech 4205 simultaneous tri-frequency (230 / 540 / 850 kHz), processed with a 0.1 m cell size.
- 2) Fugro Seabeck and Fugro Valkyrie side scan sonar mosaic created from Edgetech 4200 simultaneous dual-frequency (300 / 600 kHz), processed with a 0.1 m cell size.

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Geodetic Parameters

Geodetic datum: World Geodetic System 1984
Ellipsoid: WGS84
Semi-Major Axis: 6,378,137.000 m
Inverse Flattening: 298.257223563
Projection: WGS84 / UTM Zone 30N (EPSG: 32630)
Central Meridian (CM): 03°00'00" W
Latitude of Origin: 07°00'00" N
False Easting: 500,000 mE
False Northing: 0 mN
Scale factor at CM: 0.9996
Vertical datum: Lowest Astronomical Tide (LAT) - calculated using the Vertical Offshore Reference Frame (VORF)



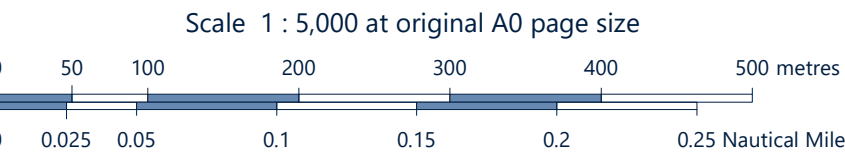
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SIDE SCAN SONAR MOSAIC
AWEL Y MÔR OFFSHORE WIND FARM
GEOPHYSICAL SURVEY 2020
UK IRISH SEA

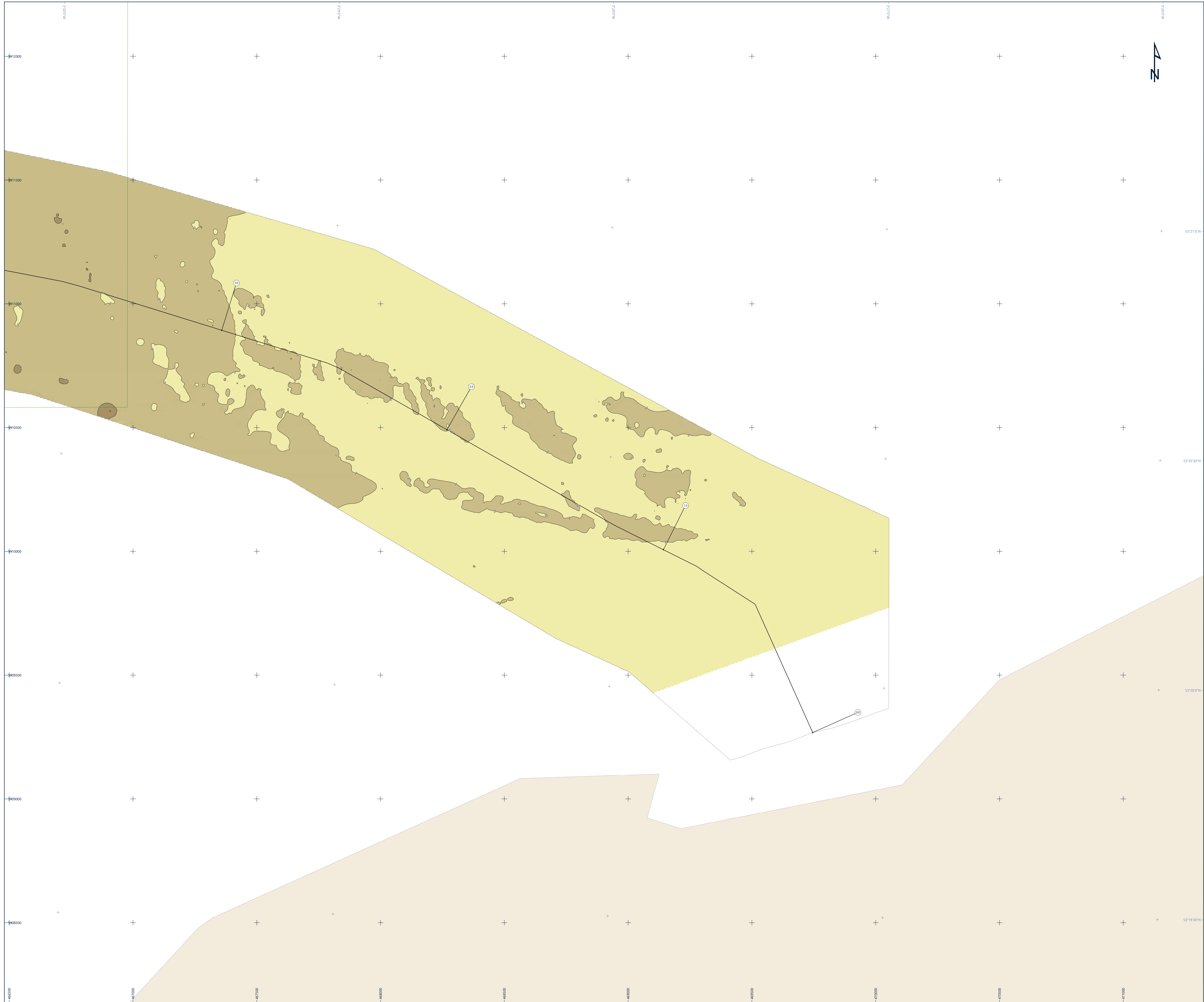


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03	19 February 2021	Final Reissue - Revision 3	OOT	JL	DS	BPT
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Fugro Project No.	Vessel(s)	Survey Date
200655	Fugro Mercator Fugro Seabeck Fugro Valkyrie	10 June to 11 August 2020 17 July to 11 August 2020 16 July to 30 September 2020
File Name		Chart No.
200655_EastAB_SideScanSonarMosaic_08		08 of 08

Appendix G

Charts – R01 Holocene Upper
Sediment Isochores



Legend

UTM Grid

Geographical Grid

Route East A Kilometre Post

Route East B Kilometre Post

Export Corridor Centre Line

Export Cable Route Survey Extent

Windfarm Extent

Array Survey Extent

Chart Extent

Land

R01 Holocene Upper Sediment Isochore Thickness [m]

≤ 2.0

2.1 - 4.0

4.1 - 6.0

6.1 - 8.0

> 8.0

Sediment Isochore at 2 m Interval

Area of No Interpretation

Notes

1) Sub-bottom profiler interpretation was conducted using Innmar Medium SES-2000 parametric sub-bottom profiler data.

2) Grids have been derived from SBP data in conjunction with BGS sediment charts and client supplied geological background documentation (Innogy, 2019).

3) Isochores have been generated by subtracting the time to the top from the time to the base of each unit and have been depth converted using an ASV of 1600 m/s. All isochore have been gridded with a 5 m cell size.

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Geodetic Parameters

Geodetic datum

World Geodetic System 1984

Ellipsoid

WGS84

Semi-Major Axis

6,378,137.000 m

Inverse Flattening

298.257222563

Projection

WGS84 / UTM Zone 30N (EPSG: 32630)

Central Meridian (CM)

03°00'00" W

Latitude of Origin

07°00'00" N

False Easting

500,000 mE

False Northing

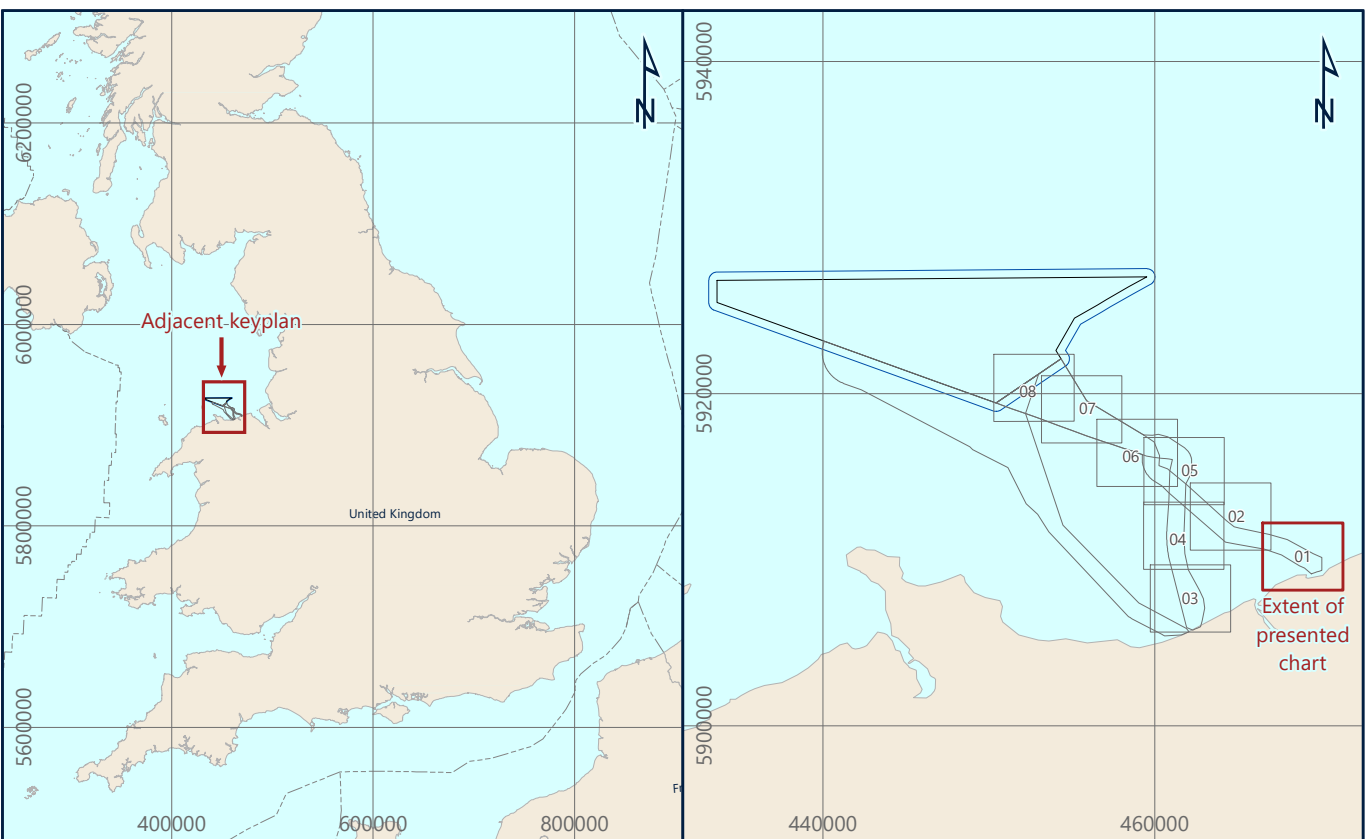
0 mN

Scale Factor at CM

0.9996

Vertical datum

Lowest Astronomical Tide (LAT) - calculated using the Vertical Offshore Reference Frame (VORF)



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R01 HOLOCENE UPPER SEDIMENT ISOCHORE

AWEL Y MÔR OFFSHORE WIND FARM

GEOPHYSICAL SURVEY 2020

UK IRISH SEA

Scale 1 : 5,000 at original A0 page size

0 50 100 200 300 400 500 metres

0 0.025 0.05 0.1 0.15 0.2 0.25 Nautical Miles

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-	-	-	-	-	-	-

Fugro Project No.

200655

Vessel(s)

Fugro Mercator
Fugro Seaker
Fugro Valkyrie

Survey Date

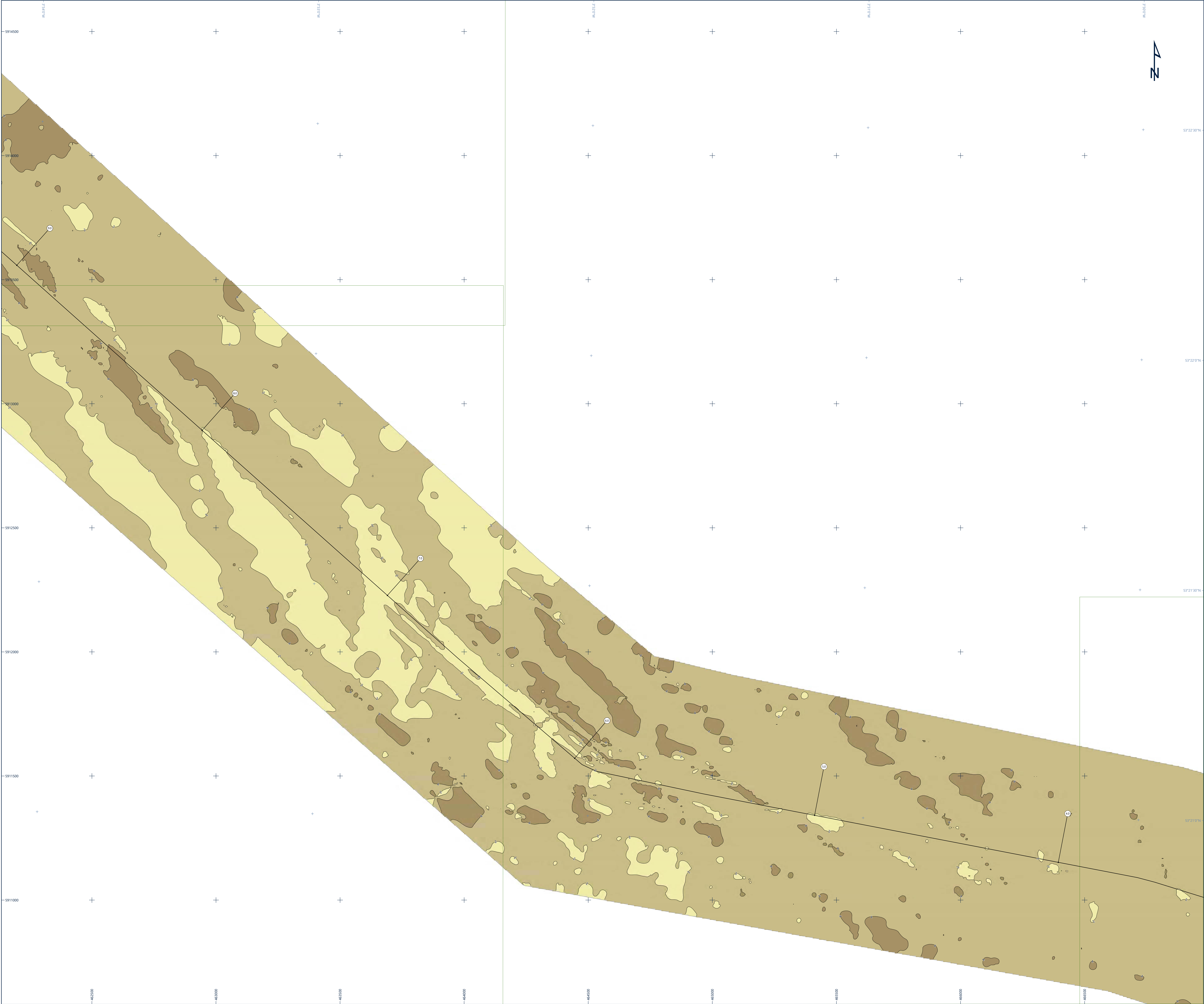
10 June to 11 August 2020
17 July to 11 August 2020
16 July to 30 September 2020

File Name

200655_EstAB_R01_Holocene_Upper_SedimentsIsochore_01

Chart No.

01 of 08



Legend

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R01 Holocene Upper Sediment Isochore Thickness [m]

- 2.0
- 2.1 - 4.0
- 4.1 - 6.0
- 6.1 - 8.0
- > 8.0

- Sediment Isochore at 2 m Interval
- Area of No Interpretation

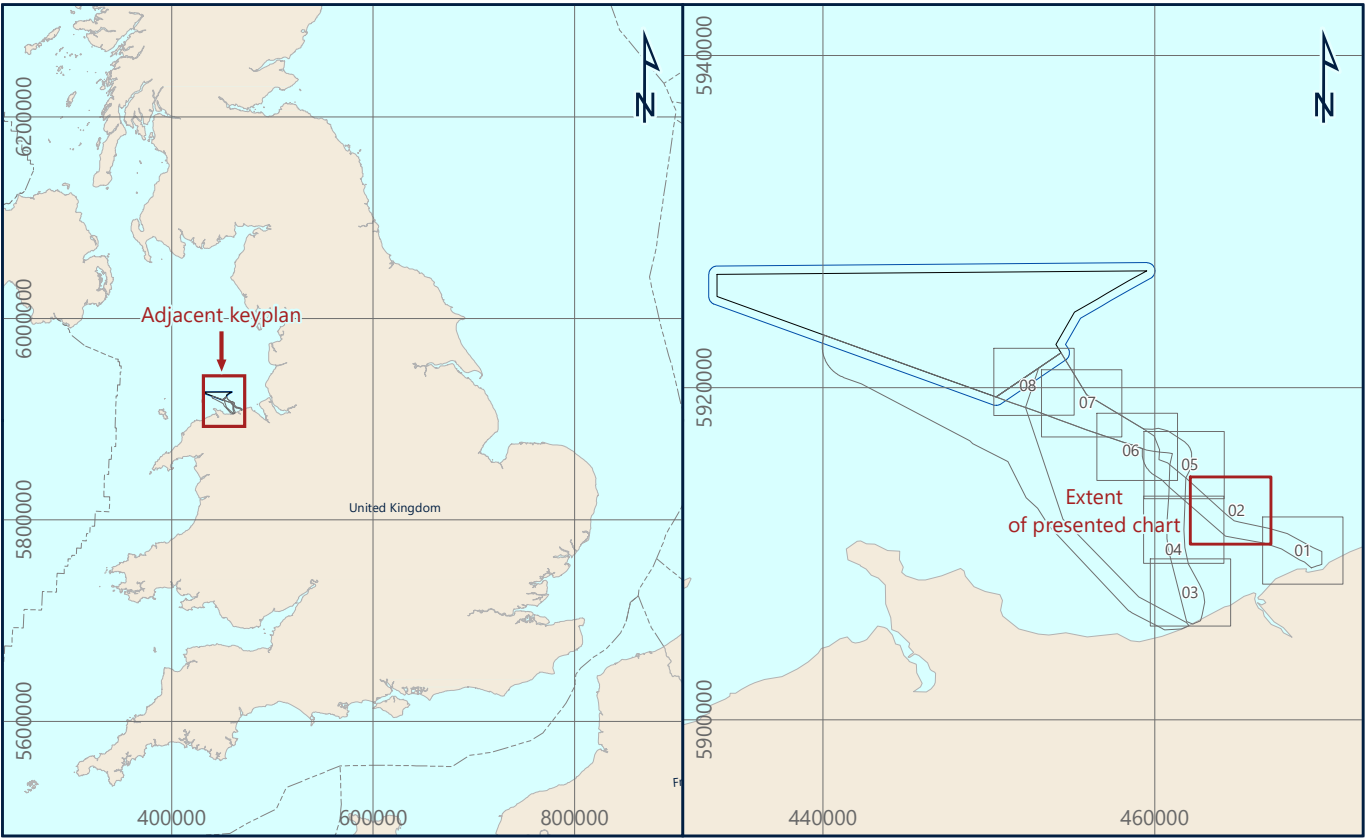
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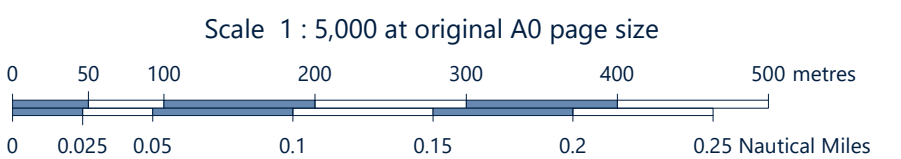
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R01 HOLOCENE UPPER SEDIMENT ISOCHORE
AWEL Y MÔR OFFSHORE WIND FARM
GEOPHYSICAL SURVEY 2020
UK IRISH SEA



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Fugro Project No.	Vessel(s)	Survey Date
200655	Fugro Mercator Fugro Seaker Fugro Valkyrie	10 June to 11 August 2020 17 July to 11 August 2020 16 July to 30 September 2020
File Name		Chart No.
200655_EstAB_R01_Holocene_Upper_SedimentsIsochore_02		02 of 08



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