



APPENDIX 14-2

**WINTER VESSEL TRAFFIC
SURVEY**



Sceirde Rocks Vessel Traffic Survey Summer 2022

Prepared by	Anatec Limited
Presented to	Xodus on behalf of Corio Generation
Date	10 November 2022
Revision Number	00
Document Reference	A4933-COR-VTS-1

Aberdeen Office	
Address	10 Exchange Street, Aberdeen, AB11 6PH, UK
Tel	+44 1224 253700
Email	aberdeen@anatec.com

Cambridge Office	
	Braemoor, No. 4 The Warren, Witchford Ely, Cambs, CB6 2HN, UK
	+44 1353 661200
	cambs@anatec.com

This study has been carried out by Anatec Ltd for Xodus on behalf of Corio Generation. The assessment represents Anatec's best judgment based on the information available at the time of preparation. Any use which a third party makes of this report is the responsibility of such third party. Anatec accepts no responsibility for damages suffered as a result of decisions made or actions taken in reliance on information contained in this report. The content of this document should not be edited without approval from Anatec. All figures within this report are copyright Anatec unless otherwise stated. No reproduction of these images is allowed without written consent from Anatec.

Revision Number	Date	Summary of Change
00	10 November 2022	First Issue

Table of Contents

1	Introduction	1
2	Survey Methodology	2
2.1	Survey Location	2
2.2	Equipment and Manning	3
2.3	AIS Description.....	5
2.4	Weather Data	6
3	Survey Results	9
3.1	Overview of Survey Results	9
3.2	Temporary Traffic	9
3.3	Vessel Type	10
3.4	Vessel Counts.....	11
3.5	Vessel Length	12
3.6	Vessel Draught.....	13
3.7	Average Vessel Speed.....	14
3.8	Vessel Destination	16
3.9	Vessels Intersecting the Site.....	16
3.10	Anchored Vessels.....	16
4	Detailed Review by Vessel Type	17
4.1	Commercial Vessels	17
4.2	Fishing Vessels	17
4.3	Recreational Vessels	18
5	Summary.....	20
6	References	21

Table of Figures

Figure 2.1:	General Overview of Site and Study Area relative to Shore Base	2
Figure 2.2:	Detailed Overview of Site	3
Figure 2.3:	Radar Scanner Set-Up at Shore Survey Location	5
Figure 3.1:	Temporary Traffic filtered out of Final Data Set.....	9
Figure 3.2:	Survey Data by Vessel Type (Summer 2022)	10
Figure 3.3:	Distribution of Vessel Types within 10nm Study Area	11
Figure 3.4:	Number of Unique Vessels per Day (Summer 2022)	12
Figure 3.5:	Survey Data by Vessel Length (Summer 2022)	13
Figure 3.6:	Survey Data by Vessel Draught (Summer 2022).....	14
Figure 3.7:	Survey Data by Average Vessel Speed (Summer 2022)	15
Figure 3.8:	Distribution of Average Vessel Speeds	15

Figure 3.9:	Summer Survey Data Intersecting the Site by Vessel Type	16
Figure 4.1:	14-Day Commercial Vessels by Sub-Type	17
Figure 4.2:	14-Day Fishing Vessels by Activity	18
Figure 4.3:	14-Days Recreational Vessels	19

Table of Tables

Table 2.1:	Equipment utilised in Vessel Traffic Survey	4
Table 2.2:	Vessel Properties Transmitted via AIS	6
Table 2.3:	Weather Data during the Summer Survey Period	7

Abbreviations Table

Abbreviation	Definition
AIS	Automatic Identification System
ARPA	Automatic Radar Plotting Aid
E	East
EIAR	Environmental Impact Assessment Report
GT	Gross Tonnage
IMO	International Maritime Organization
Kt	Knot(s)
MGN	Marine Guidance Note
MSO	Marine Survey Office
MCA	Maritime and Coastguard Agency
m	Metre(s)
MMSI	Mobile Maritime Service Identity
nm	Nautical Mile(s)
nm²	Nautical Miles Squared
NRA	Navigational Risk Assessment
N	North
NE	Northeast
NW	Northwest
OREIs	Offshore Renewable Energy Installations
OWF	Offshore Wind Farm
Radar	Radio Detection and Ranging
RIB	Rigid Inflatable Boat
S	South
SW	Southwest
UK	United Kingdom
UTC	Coordinated Universal Time
VHF	Very High Frequency
W	West
WGS84	World Geodetic System 1984

1 Introduction

As part of the Navigational Risk Assessment (NRA) process for the proposed site of the Sceirde Rocks offshore windfarm (OWF), vessel traffic survey data is being gathered within a study area around the development. Anatec were commissioned to carry out a summer vessel traffic survey covering the proposed Sceirde Rocks OWF site (from here on referred to as 'the site'), located off the west coast of Ireland in the North Atlantic Ocean. The survey was carried out over 14 x 24 hours from the 25th August to 8th September 2022.

The survey was shore based and was carried out using equipment set up at a private property located on Maínis (or Mweenish) island off the Conamara coast on the west coast of Ireland with line-of-sight to the sea area of interest. The data was collected using a combination of Radio Detection and Ranging (Radar), Automatic Identification System (AIS) and visual observations.

To ensure the survey analysis was specific to the site, a study area was defined enclosing the area within ten nautical miles (nm) of the site. The 10nm buffer is recognised as an industry standard radius given it captures relevant traffic while still remaining specific to the site being assessed. This included all the relevant routes and vessel activity within and near the proposed site which are considered relevant to the NRA which will be developed in support of the Environmental Impact Assessment Report (EIAR).

2 Survey Methodology

The vessel traffic survey began at 16:00 Coordinated Universal Time (UTC) on the 25th August 2022 and concluded at 16:00 UTC on the 8th September 2022, giving a full 14 x 24 hours of survey data. Shore based survey equipment was set up at a private property located on Maínis island, approximately 30nm to the west of Galway, Ireland.

The primary objective of the survey was to identify the baseline routing of vessels and level of vessel activity in the study area to inform the NRA/EIAR process. This was achieved by recording in real-time the positions of the vessels within range of the AIS receiver and Automatic Radar Plotting Aid (ARPA) Radar. This was supplemented by observation of vessels within visual range, to obtain information on type and size, where the information was not available from AIS.

2.1 Survey Location

An overview of the site, located within the North Atlantic and covering an area of approximately 8.5 nautical miles squared (nm²), is presented in Figure 2.1. This also shows the onshore base at coordinates 53° 18.0460' North (N), 009° 51.4260' West (W) (World Geodetic System 1984 (WGS84)). The site boundary is located approximately 3nm at the closest point from the onshore base.

The study area for this report has been defined as a 10nm buffer of the site and is included in Figure 2.1 for reference.

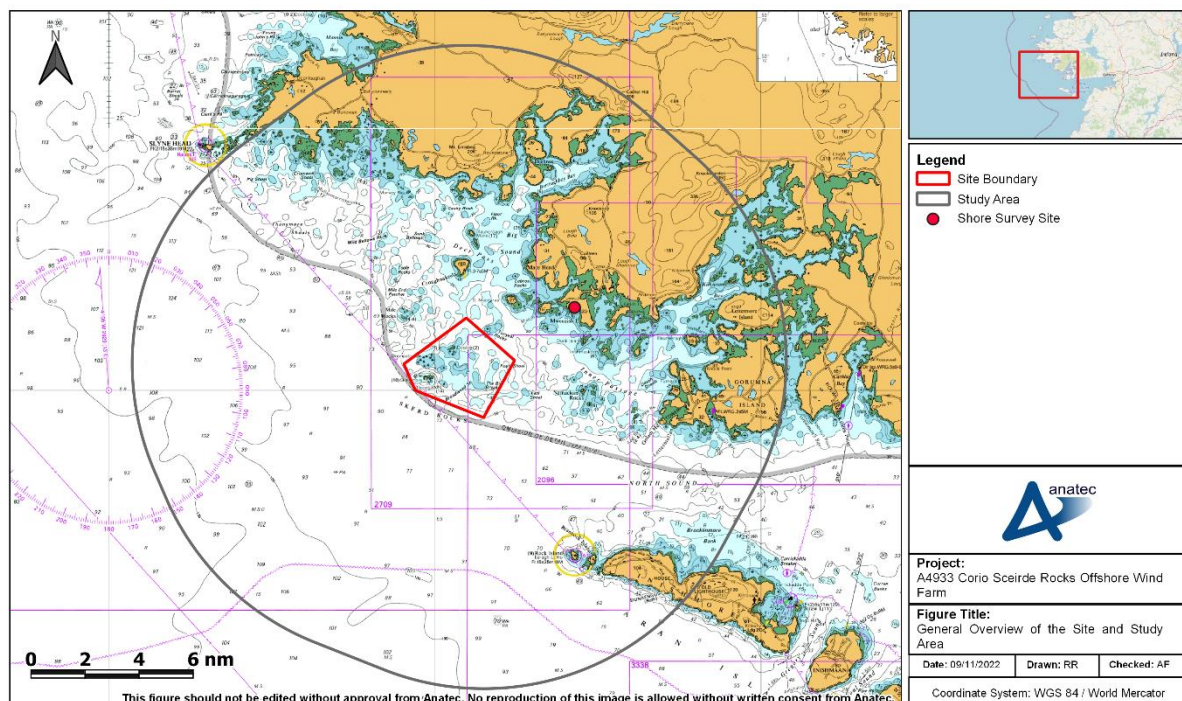


Figure 2.1: General Overview of Site and Study Area relative to Shore Base

The site is situated in waters of depths up to 50 metres (m) with many shallow banks and shoals. It is noted that there are multiple small islands between the site and mainland with the closest being St. Macdara's Island at a distance of 1.5nm from the site boundary. The site itself encompasses small islands including Skedmore Island, Doonguddle Island and Doolick Island. To the northwest of the site there is also Doonpatrick rocks which cover an area of approximately 0.3nm². A detailed overview of the site is presented in Figure 2.2.

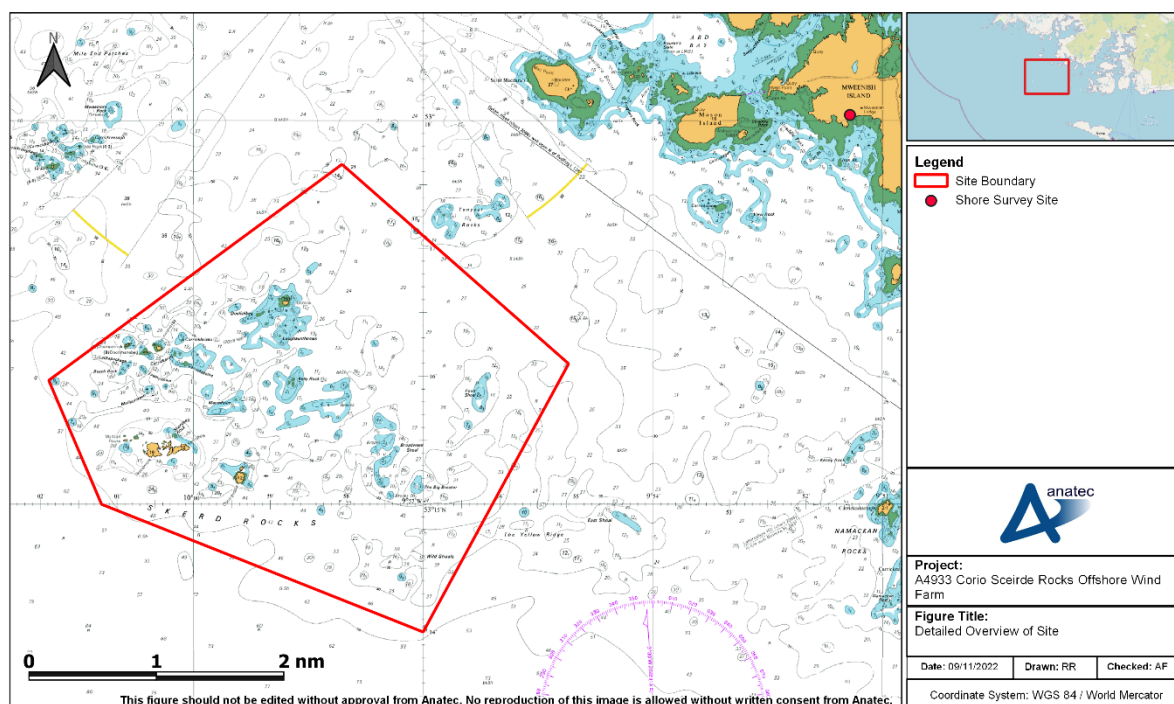


Figure 2.2: Detailed Overview of Site

The closest port or harbour to the site is Galway Port located within Galway Bay, approximately 23nm to the southeast of the site. Positioned west of the bay entrance is the group of islands, the *Aran Islands*, which act as a natural buffer to the bay. The Aran Islands are approximately 7nm southeast of the site and so is situated close to the main transit route for entering/exiting the bay from the north.

2.2 Equipment and Manning

The equipment used to undertake the vessel traffic survey is listed in Table 2.1.

Table 2.1: Equipment utilised in Vessel Traffic Survey

Equipment	Purpose
Furuno FAR-2117 12 kW X-Band Radar with 4ft Scanner ¹	Tracking of targets (manually and automatically) up to 20nm from the survey location.
Furuno GP-32	Global Positioning System used to determine the position of the survey and to input the information to the radar system.
Compass	Used to verify heading.
Admiralty Charts, dividers and parallel ruler	Used for manual plotting and verification of position.
7 x 50 Marine Binoculars	Visual identification of vessels.
Nikon Telescope	Visual identification of vessels.
Digital Camera	Photographic evidence of targets (when possible)
Comar SLR200 AIS Receiver and VHF Antenna	To receive and record data from vessel's transmitting AIS data. Tracks vessels fitted with AIS (majority of vessels > 300 Gross Tonnage (GT)) within a range of approx. 30-40nm.
Notebook PCs	Connected to radar and AIS receiver for real-time recording of tracked target data. Tracked targets displayed on hydrographic charts and can be replayed at high speed when required.
Logbook	Written log of all manual targets acquired during survey as well as other notes such as visual identification information, weather conditions, etc.

The AIS receiver and Radar scanner were set up at the shore base with the Radar scanner positioned on a frame above ground level as illustrated in Figure 2.3 to give an unobstructed view of the site.

The AIS receiver automatically tracked targets 24 hours per day during the survey. Radar targets (not duplicated on AIS) were acquired manually by the watchkeepers between 06:30 and 23:30 hrs, with a visual lookout also maintained and all observations recorded in the logbook. Overnight when the site was unattended, an auto-acquire zone was defined on radar, which encompassed the study area. Overnight radar targets were reviewed each day to remove any duplicates with AIS, as well as any spurious tracks, e.g., on land.

¹Weight of radar scanner plus base mount approximately 33kg. Weight of radar processor unit approximately 8kg.



Figure 2.3: Radar Scanner Set-Up at Shore Survey Location

2.3 AIS Description

Regulation 19 of the International Convention for the Safety of Life at Sea (SOLAS) Chapter V - Carriage requirements for vessel borne navigational systems and equipment - sets out navigational equipment to be carried on board vessels, according to vessel type. In 2000, the International Maritime Organization (IMO) adopted a new requirement (as part of a revised new chapter V) for vessels to carry AIS. AIS is a system by which vessels transmit data concerning their position, Mobile Maritime Service Identity (MMSI) etc., on two individual Very High Frequency (VHF) channels to the shore and other vessels, at very frequent intervals. The data is transmitted automatically via VHF to other vessels and coastal stations/authorities.

The regulation requires AIS to be fitted aboard all vessels of 300 GT and upwards, engaged on international voyages, cargo vessels of 500GT and upwards, not engaged on international voyages and passenger vessels irrespective of size, built on or after 1st July 2002. It also applies to vessels engaged on international voyages, constructed before 1st July 2002, according to the following timetable:

- Passenger vessels, not later than 1st July 2003;
- Tankers, not later than the first survey for safety equipment on or after 1st July 2003; and
- Vessels, other than passenger vessels and tankers, of 50,000GT and upwards, not later than 1st July 2004.

An amendment adopted by the Diplomatic Conference on Maritime Security in December 2002 states that vessels, other than passenger vessels and tankers, of 300GT and upwards but less than 50,000GT, will be required to fit AIS no later than the first safety equipment survey after 1st July 2004, or by 31st December 2004, whichever occurs earlier. Vessels fitted with AIS shall always maintain AIS in operation, except where international agreements, rules or standards provide for the protection of navigational information.

The regulation requires that AIS shall:

- Provide information – including the vessel's identity, type, position, course, speed, navigational status and other safety-related information – automatically to appropriately equipped shore stations, other vessels and aircraft;
- Automatically receive such information from similarly fitted vessels; exchange data with shore-based facilities.

Fishing vessels of 15m length and over are also required to carry Class A AIS. Recreational vessels within this report includes sailing and motor craft of between 2.4m and 24m length, with any such vessels over 24m or carrying more than 12 passengers classified as passenger vessels.

Both dynamic and static information are transmitted via AIS. Examples of such information is presented in Table 2.2.

Table 2.2: Vessel Properties Transmitted via AIS

Static	Dynamic
<ul style="list-style-type: none">▪ MMSI▪ IMO Number▪ Call Sign▪ Name▪ Length and Beam▪ Type of Vessel▪ Type of Navigation Sensor	<ul style="list-style-type: none">▪ Position (Latitude/Longitude)▪ Time▪ Course over ground▪ Speed over ground▪ Heading▪ Navigational Status▪ Rate of Turn▪ Draught▪ Hazardous Cargo (type)▪ Destination▪ Estimated Time of Arrival▪ Route Plan

2.4 Weather Data

Weather data was recorded by the surveyors throughout the survey period except for the first evening. A summary is presented in Table 2.3. In general, the weather was representative of a late summer period in western Ireland.

Table 2.3: Weather Data during the Summer Survey Period

Date	Time	Wind (Direction & Speed in knots (kt))	Sea State (Douglas Scale)	Visibility (nm)	Additional Comments
26/08/2022	06:30	Northwest (NW) at 6	Moderate	10	Clear
	12:00	NW at 5	Moderate	10	-
	18:00	W at 5	Moderate	10	Clear
	22:00	N at 4.3	Moderate	10	Clear
27/08/2022	06:30	W at 3	Moderate	7	Cloudy
	12:00	South (S) at 5	Moderate	10	Overcast
	18:00	N at 4	Moderate	10	Clear
	22:00	NW at 1	Slight	10	Clear
28/08/2022	06:30	W at 4	Moderate	7	Cloudy
	12:00	W at 4	Calm	10	Clear
	18:00	W at 8	Moderate	7	Clear
	22:00	W at 8	Moderate	10	Clear
29/08/2022	06:30	Southwest (SW) at 5	Calm	10	Cloudy
	12:00	SW at 8	Calm	10	Sunny
	18:00	SW at 8	Calm	10	Clear
	22:00	SW at 8.9	Calm	10	Clear
30/08/2022	06:30	SW at 5	Calm	10	Clear
	12:00	S at 5	Calm	10	Clear/Sunny
	18:00	S at 5	Calm	10	Sunny
	22:00	SW at 6.2	Calm	10	Sunny
31/08/2022	06:30	SW at 5	Calm	10	Clear/Sunny
	12:00	SW at 8	Calm	10	Clear/Sunny
	18:00	W at 8	Calm	10	Clear
	22:00	SW at 8	Calm	10	Clear
01/09/2022	06:30	Northeast (NE) at 5	Calm	10	Clear
	12:00	NNE at 5	Calm	10	Clear/Sunny
	18:00	N at 5	Calm	10	Sunny

Date	Time	Wind (Direction & Speed in knots (kt))	Sea State (Douglas Scale)	Visibility (nm)	Additional Comments
	22:00	W at 5	Calm	8	Clear
02/09/2022	06:30	NNW at 4	Calm	10	Cloudy
	12:00	NNW at 7	Moderate	10	Sunny/Part Cloud
	18:00	NW at 15	Moderate	1	Full Cloud/Rain
	22:00	W at 10	Moderate	4	Cloudy
03/09/2022	06:30	W at 5	Calm	8	Cloudy
	12:00	WSW at 5	Moderate	8	Sunny/Part Cloud
	18:00	S at 5	Calm	10	Sunny/Part Cloud
	22:00	S at 15	Calm	8	Cloudy/Rain
04/09/2022	06:30	SE at 8	Calm	5	Full Cloud/Rain
	12:00	SE at 15	Moderate	10	Sunny
	18:00	SE at 18	Moderate	10	Sunny
	22:00	SE at 18	Moderate	2	Cloudy
05/09/2022	06:30	SE at 20	Moderate	10	Clear
	12:00	SE at 20	Moderate	10	Clear/Sunny
	18:00	SE at 28	Rough	5	Cloud/Rain
	22:00	SE at 24	Rough	5	Cloudy
06/09/2022	06:30	SE at 26	Rough	8	Cloudy
	12:00	SE at 14	Moderate	8	Cloudy
	18:00	NW at 13	Moderate	6	Cloudy
	22:00	W at 11	Moderate	5	Cloudy
07/09/2022	06:30	East (E) at 9	Calm	5	Cloudy/Dark
	12:00	E at 10	Calm	10	Sunny
	18:00	SW at 10	Calm	2	Mist Rain
	22:00	SW at 9	Calm	5	Cloud
08/09/2022	06:30	N at 9	Calm	5	Cloudy/Dark
	12:00	NE at 9	Calm	10	Clear/Sunny

3 Survey Results

3.1 Overview of Survey Results

This section presents analysis of the vessel tracks recorded on AIS, Radar and by visual observation within the study area throughout the 14-day survey period. The AIS receiver generally tracked vessels over greater range than the corresponding Radar track and provided more accurate information on position and vessel characteristics. Therefore, the AIS track has generally been prioritised where the vessel was recorded by both systems. Vessels not on AIS were tracked on radar with the exception of a single visual observation which was manually plotted as the radar echo was too faint to acquire. All non-AIS data was combined with the AIS data to create a single dataset of all vessels.

3.2 Temporary Traffic

Vessels regarded as temporary traffic (i.e., vessels engaging in bespoke survey or guard work) were removed from the data set as they were deemed non-routine. The vessels which were removed from the analysis are presented in Figure 3.1 and accounted for 65% of all data recorded within the study area.

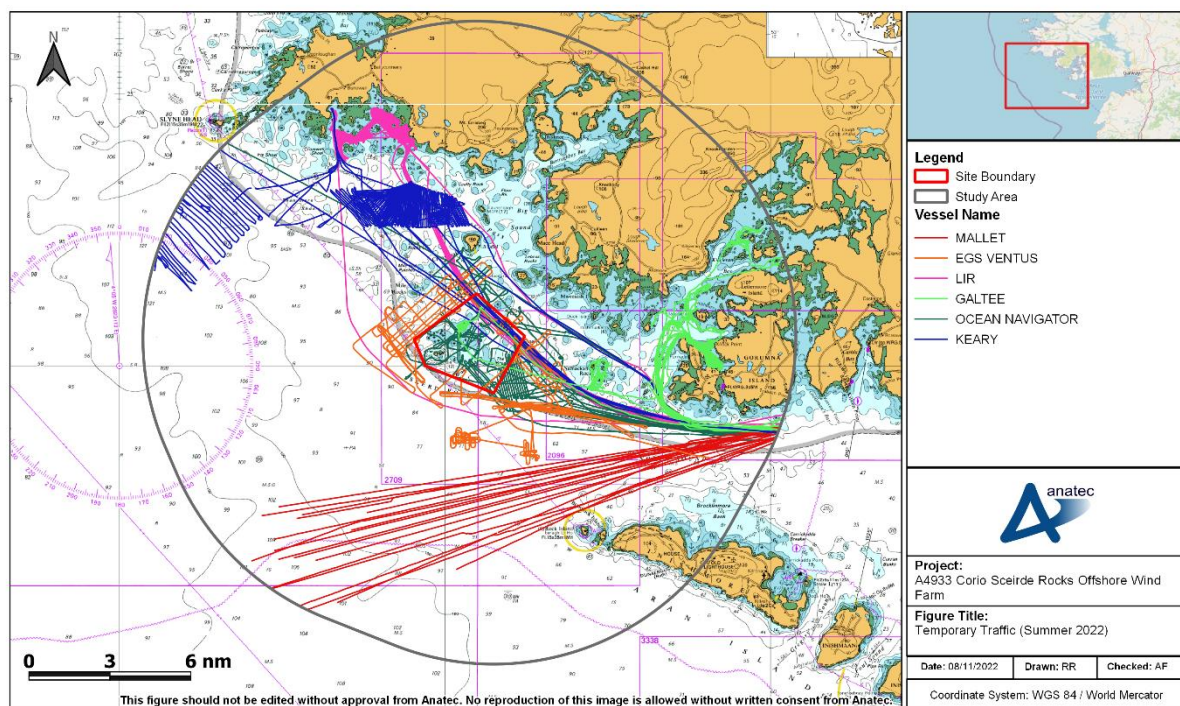


Figure 3.1: Temporary Traffic filtered out of Final Data Set

The vessels removed from the data set were all involved in active survey operations within and/or extending beyond the study area boundary. Vessels *RV Mallet*, *RV Keary*, *RV Lir*, and *RV Galtee* are small inshore research vessels operated by Geological Survey Ireland and carry out hydrographic and geophysical data acquisition surveys. Vessel *Egs Ventus* is a larger

geophysical and geotechnical survey vessel which was working on surveying the area for the proposed cable corridor and coastal tug *Ocean Navigator* was carrying out a geophysical survey of the array area during the survey period.

3.3 Vessel Type

An overview of the filtered vessel traffic recorded during the survey period, colour-coded by vessel type, is presented in Figure 3.2. Approximately half was on AIS and half was non-AIS, mostly tracked by radar.

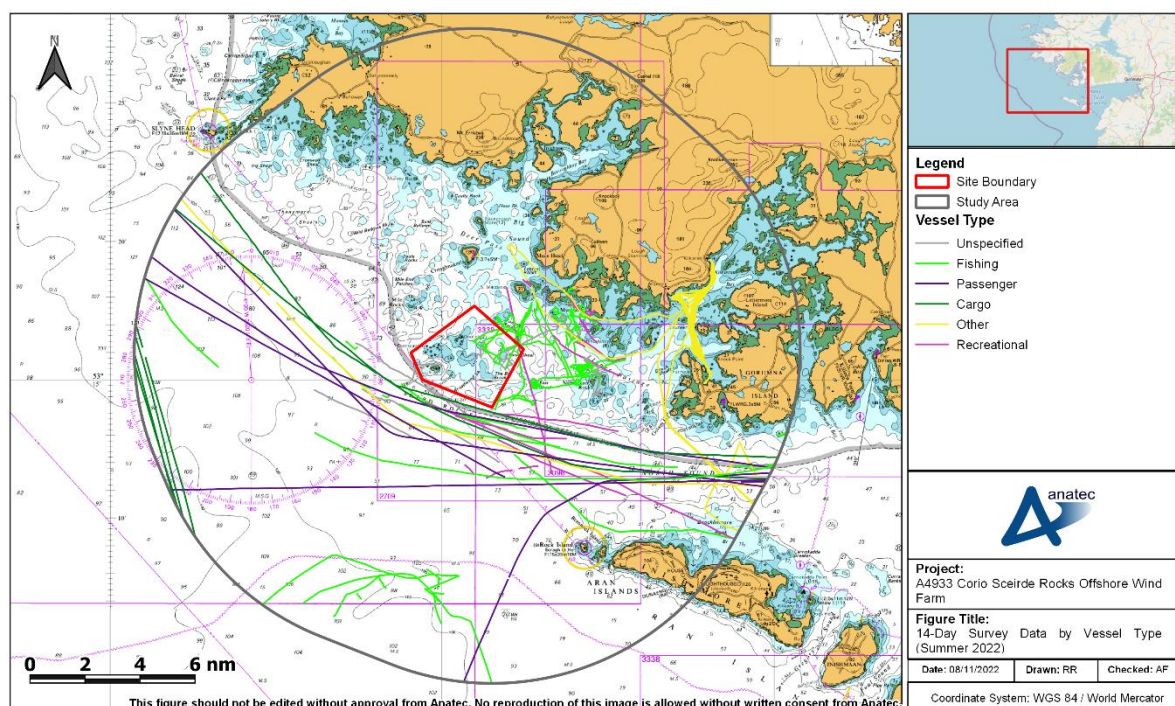


Figure 3.2: Survey Data by Vessel Type (Summer 2022)

AIS generally tracked targets to the extents of the study area. Vessels were mainly on transit passing to the south of the site utilising the route to/from Galway Bay and the north which follows the coastline while avoiding the shallow water and outcrops close to shore. This route passes to the north of the Aran Islands and is used by all vessel types recorded in the study area. Cargo vessels were tracked at the western extent of the study area heading on a northwest-southeast bearing (see Section 4.1).

Non-AIS vessels tracked on radar were typically fishing vessels operating close to shore particularly to the east of the site. Some fishing vessels were tracked in deeper water to the south. Fishing vessels are detailed more in Section 4.2.

A summary of the vessel type distribution is provided in Figure 3.3. A total of 9% were unspecified (all radar targets with no visual identification).

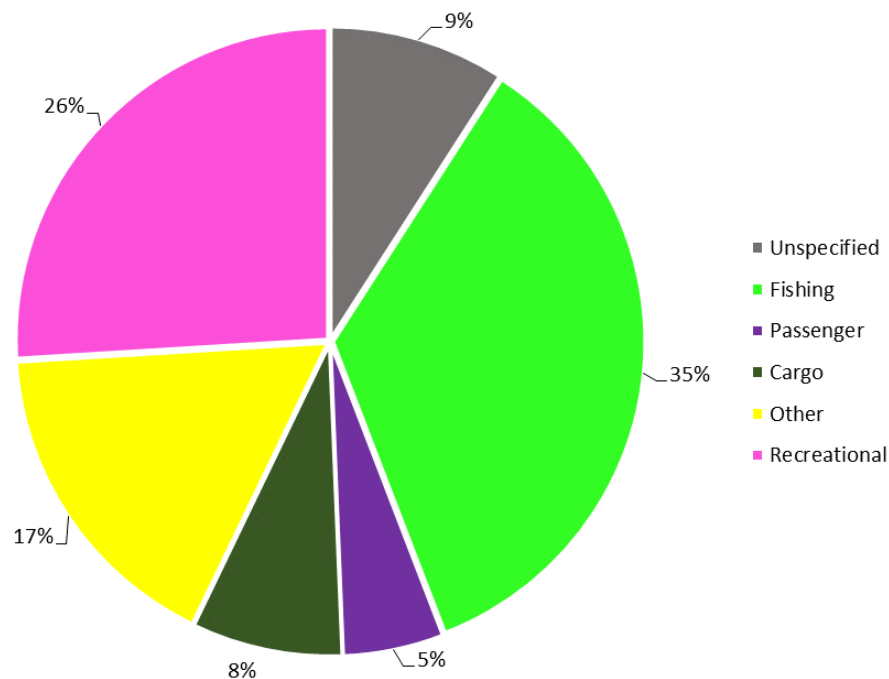


Figure 3.3: Distribution of Vessel Types within 10nm Study Area

The most common vessel type within the study area was fishing vessels (35%), recreational vessels (26%) and vessels classed as 'other' (17%). These 'other' vessels included vessels supporting fish farms and marine research vessels.

3.4 Vessel Counts

The daily numbers of unique vessels present within the study area during the survey period are provided in Figure 3.4.

An average of between five and six unique vessels per day were present within the study area during the survey period. The busiest days were Saturday 27th and Wednesday 31st August 2022, on which ten unique vessels were present. The quietest (full) day was the Friday 2nd September 2022, on which one unique vessel was present.

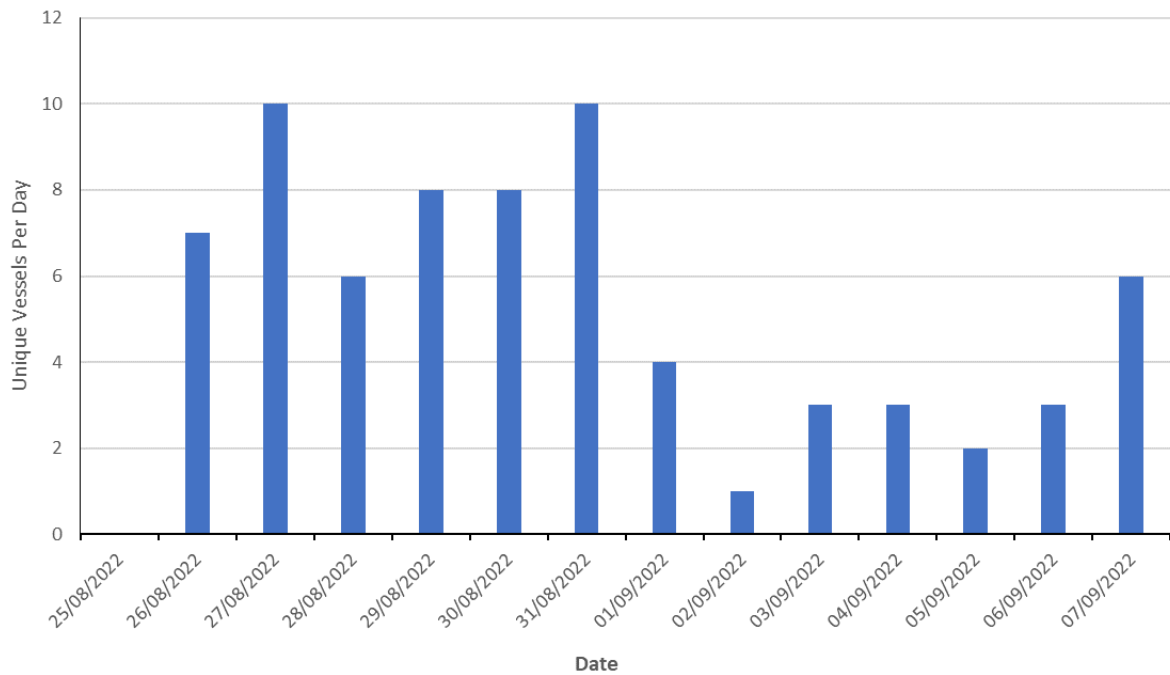


Figure 3.4: Number of Unique Vessels per Day (Summer 2022)

3.5 Vessel Length

The tracks of vessels present within the study area during the survey period, colour-coded by vessel length, are presented in Figure 3.5. Vessel length was able to be established for 40% of targets. All vessels with a precise vessel length were recorded via AIS.

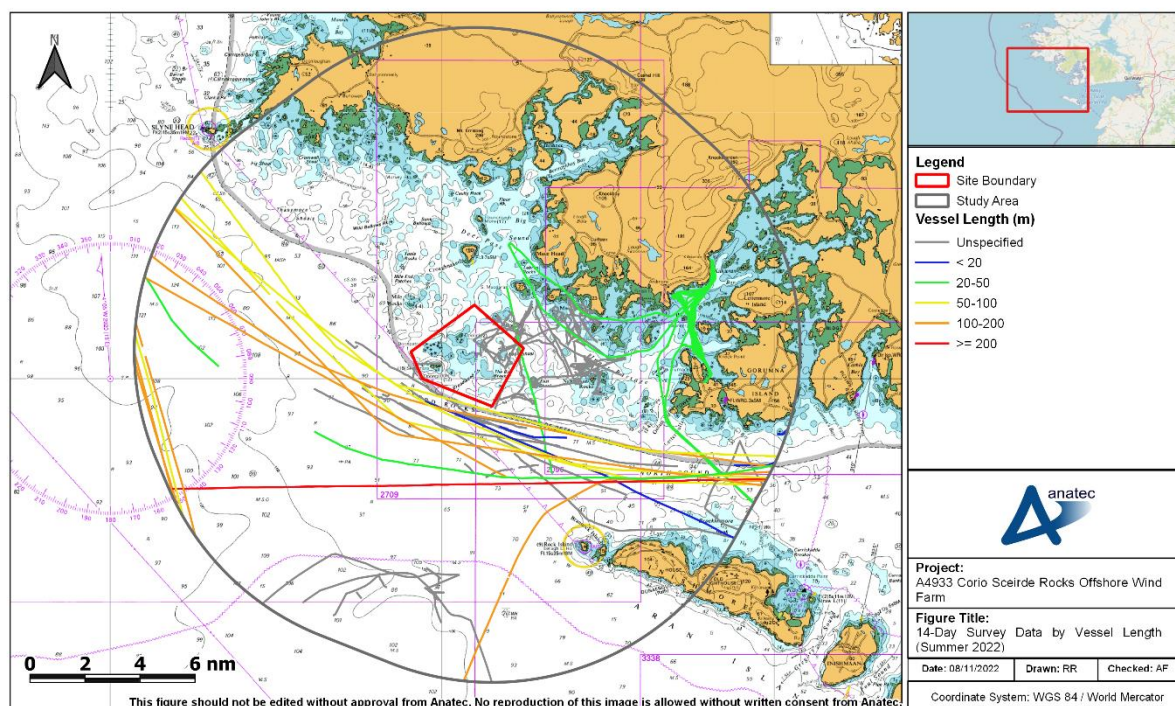


Figure 3.5: Survey Data by Vessel Length (Summer 2022)

The longest vessels were predominantly commercial vessels (cargo and passenger) transiting further offshore in the deeper waters and utilising the routes passing to the south of the site. Vessels of smaller (or unspecified) length were typically fishing vessels, recreational vessels, and a few small cargo vessels.

The average vessel length was 65m. The largest was a passenger cruise ship at 238m transiting from Galway to Belfast on the 26th August 2022 passing approximately 3nm south of the site.

3.6 Vessel Draught

An overview of the vessels within the study area during the survey period, colour-coded by vessel draught, is provided in Figure 3.6. Vessel draught was able to be established for 17% of tracks within the study area (a subset of the AIS data).

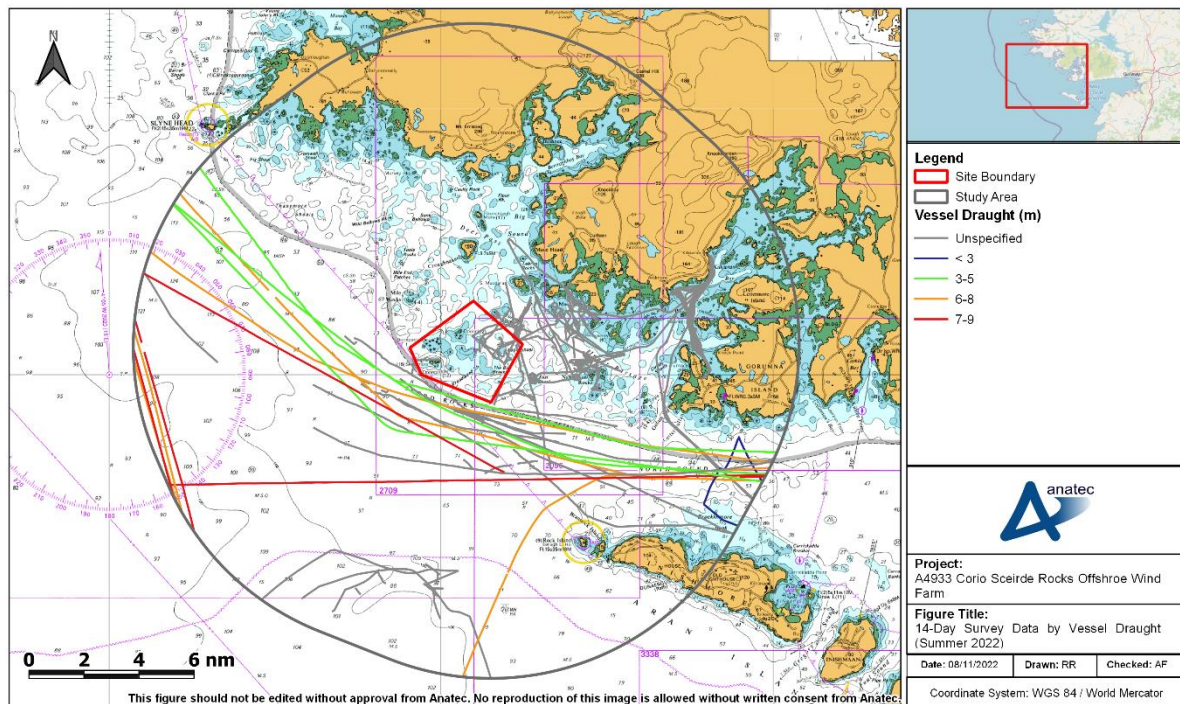


Figure 3.6: Survey Data by Vessel Draught (Summer 2022)

The average vessel draught was 5.9m. Vessels with deeper draughts were mainly commercial vessels. The deepest draught was a general cargo vessel at 8.6m transiting to Kubikenborg, Sweden on the 4th September 2022 passing through the western extent of the study area.

3.7 Average Vessel Speed

Vessel tracks colour-coded by average track speed are presented in Figure 3.7. Following this, the speed distribution is summarised in Figure 3.8. The average vessel speed within the study area was 7.1 knots (kt).

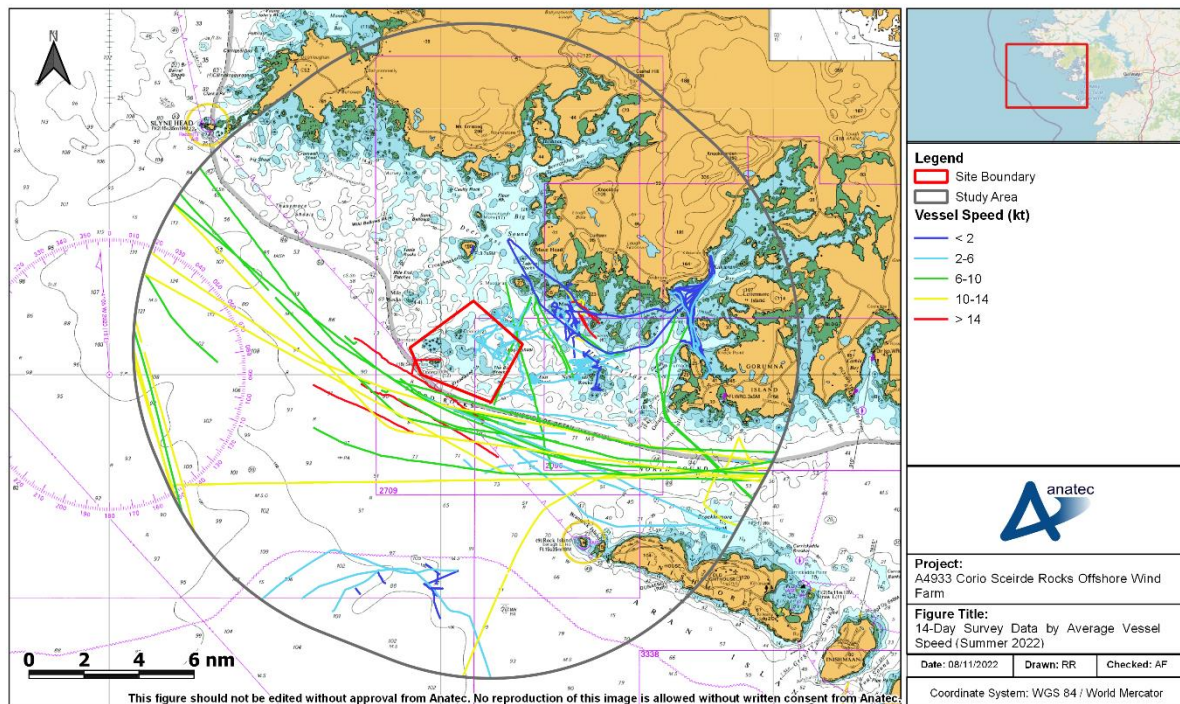


Figure 3.7: Survey Data by Average Vessel Speed (Summer 2022)

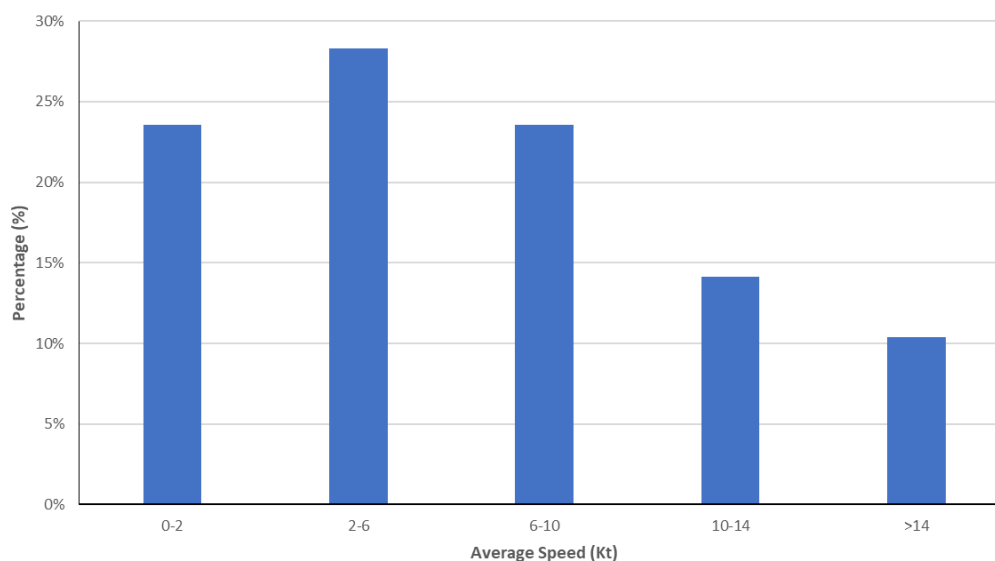


Figure 3.8: Distribution of Average Vessel Speeds

Higher speed vessels were typically motorised recreational vessels. Vessels of slower speeds were generally fishing and recreational vessels as well as those vessels classed as 'other' which were involved in work operations rather than transiting on passage.

3.8 Vessel Destination

Around one-third of vessels recorded via AIS broadcast a valid destination. The most common destinations were Ardmore Fish Farm (37%) and Galway (15%). Other destinations included various ports and harbours in Ireland, UK and continental Europe.

3.9 Vessels Intersecting the Site

The tracks of vessels recorded intersecting the site during the survey period is presented in Figure 3.9 colour-coded by vessel type.

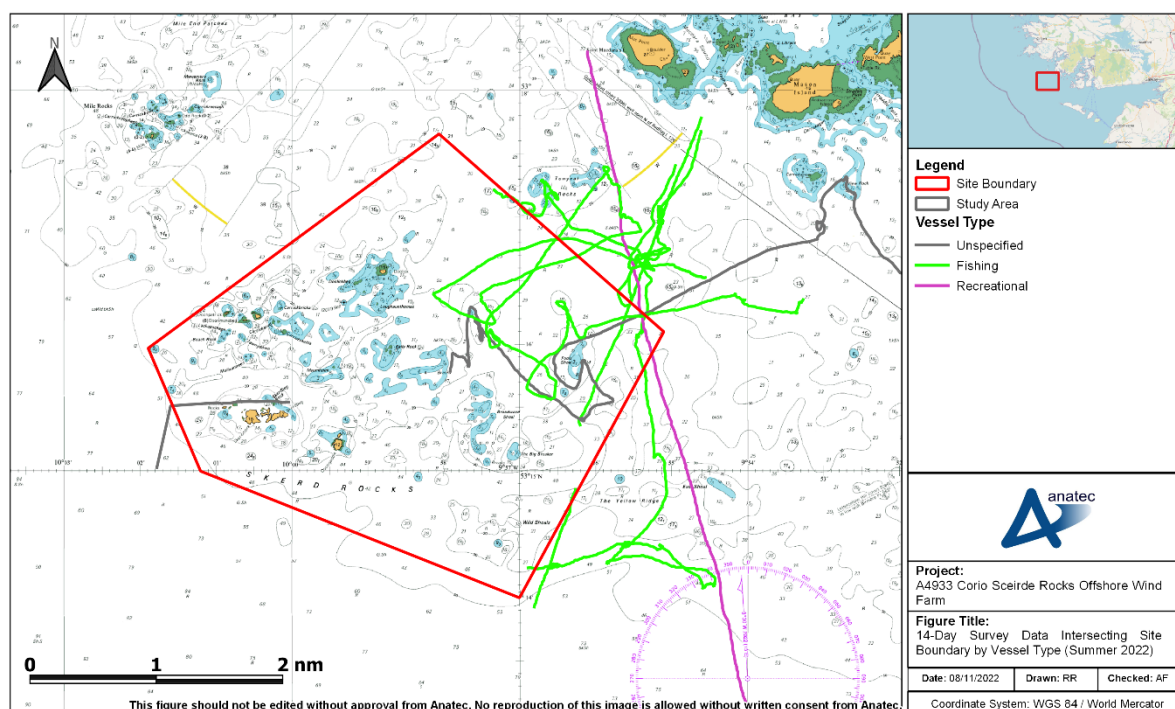


Figure 3.9: Summer Survey Data Intersecting the Site by Vessel Type

An average of one unique vessel every two days was seen within the site. All intersecting vessels were recorded via Radar, which reflects the fact that only smaller vessels tended to be operating close to shore due to the shallow water and rocky outcrops acting as a deterrent to larger vessels.

The most common vessel type intersecting the site was fishing vessel. One recreational vessel and two unspecified vessels were also present.

3.10 Anchored Vessels

No vessels were identified to be at anchor in the study area during the survey period.

4 Detailed Review by Vessel Type

The following sub-sections present a more detailed analysis of the main vessel types recorded within the study area during the survey period.

4.1 Commercial Vessels

An overview of the commercial vessels (cargo and passenger vessels) present within the study area throughout the survey period, colour-coded by sub-type, is present in Figure 4.1. All commercial vessels were recorded via AIS.

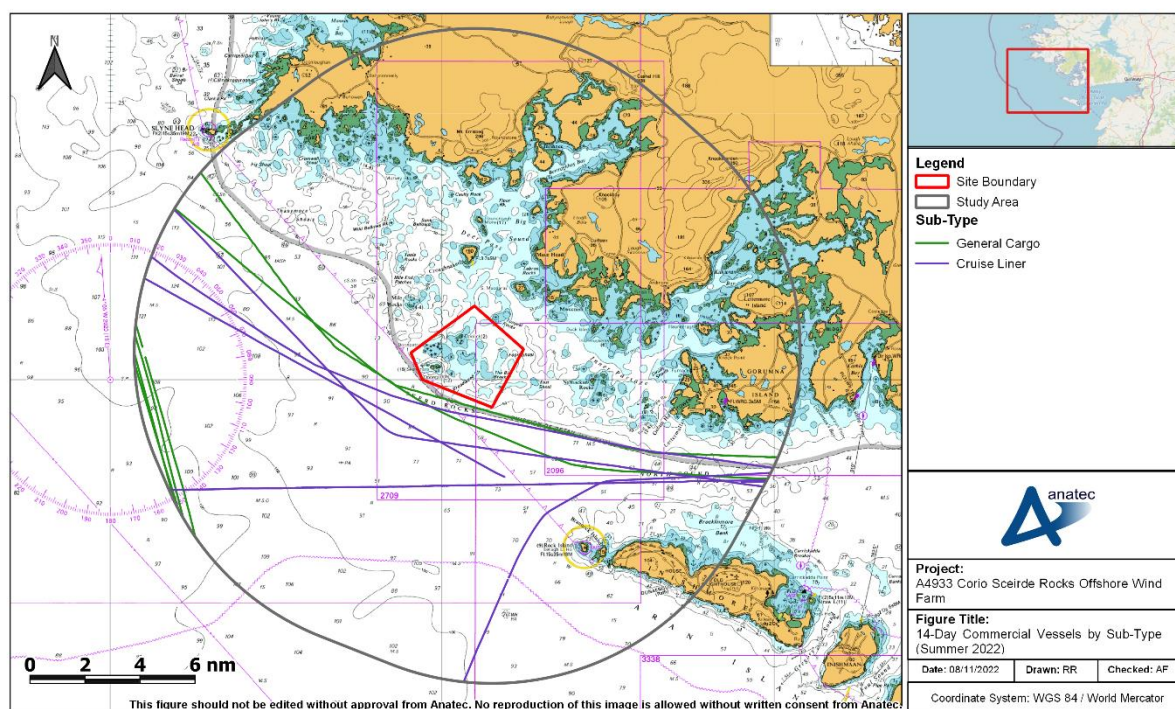


Figure 4.1: 14-Day Commercial Vessels by Sub-Type

An average of between one and two commercial vessels per day were present within the study area during the survey period.

All cargo vessels were general cargo with destinations including ports and harbours in Ireland, UK, and Sweden. All passenger vessels were cruise liners and were heading to/from Galway.

4.2 Fishing Vessels

An overview of the fishing vessels present within the study area during the survey period, colour-coded by vessel activity, is present in Figure 4.2. Fishing vessels were recorded on AIS (30%) Radar (67%) and by visual observations (3%). Vessel activity was estimated based on vessel speed and track behaviour as well as navigational status broadcast on AIS. Around half were estimated to be transiting on passage, and half engaged in fishing activity.

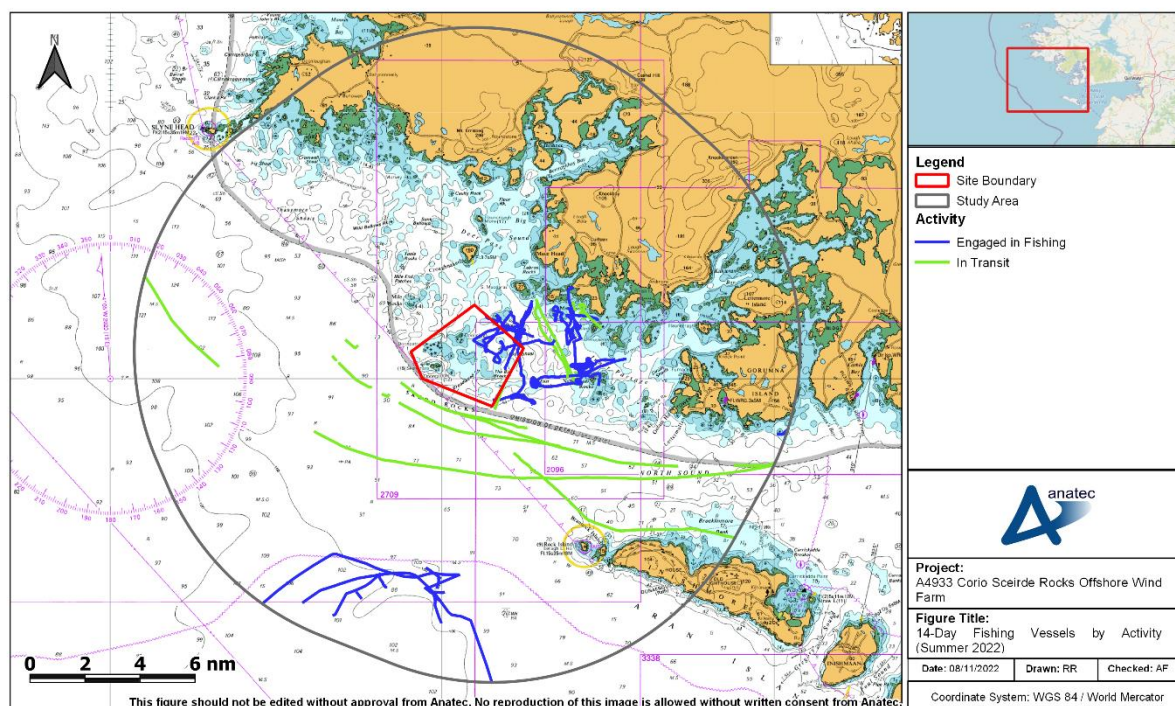


Figure 4.2: 14-Day Fishing Vessels by Activity

An average of two unique fishing vessels per day were present within the study area during the survey period.

As noted in Section 3.2, there was survey work being carried out at the site during most of the survey period. Agreement was reached with nearly all local fishing vessels to stay clear of the survey area encompassing the site and a wider area extending to the NW and SE until 4th September 2022. Based on inspection of the fishing activity pre- and post-4th September it was observed that activity within the site mainly occurred from the 4th September onwards.

4.3 Recreational Vessels

An overview of recreational vessels present within the study area during the survey period is present in Figure 4.3. Recreational vessels were recorded on AIS (22%) and Radar (78%).

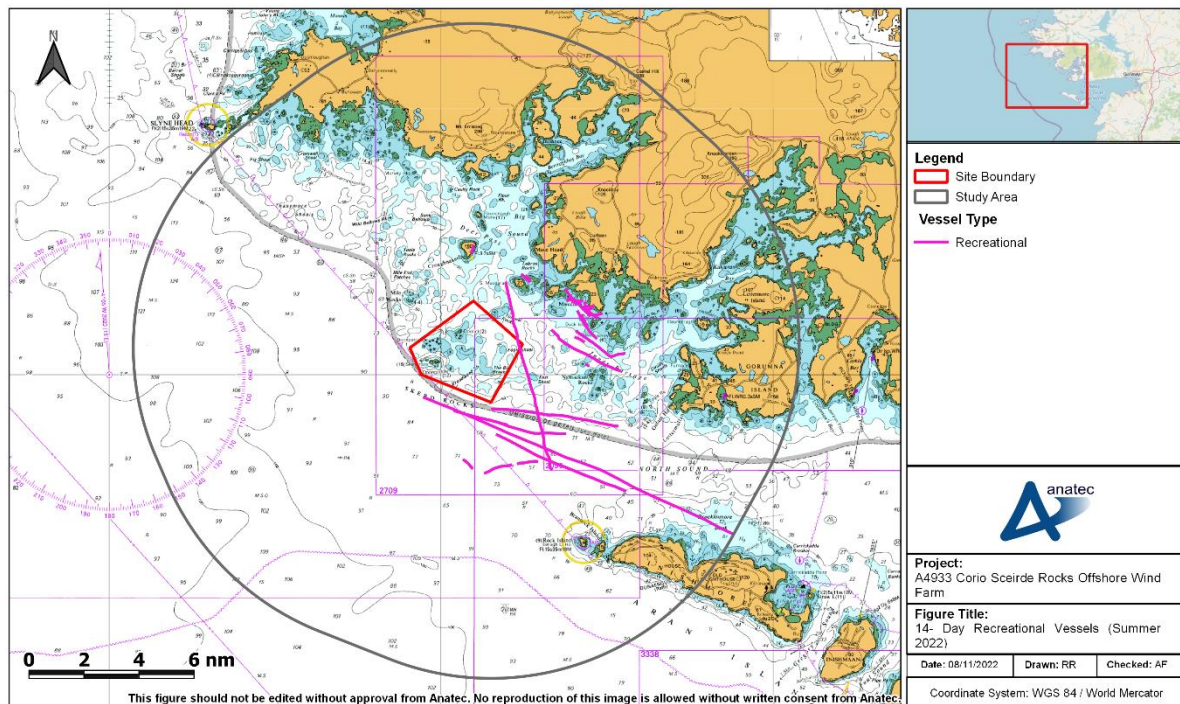


Figure 4.3: 14-Days Recreational Vessels

An average of between one and two unique recreational vessels per day were recorded.

Recreational vessels were observed close to shore to the northeast of the site boundary and also passing to the south, inshore of the Aran Islands. The coastal area was mainly utilised by jet skis and rigid inflatable boats (RIBs) with yachts and sailing boats noted using the waters further out.

5 Summary

This report presents analysis of AIS, Radar, and visual data collected within a 10nm study area around the proposed Sceirde Rocks Offshore Wind Farm site during a 14-day survey period in summer 2022. The survey was carried out from the 25th August to 8th September 2022.

After filtering out temporary (non-routine) traffic, on average there was between five and six unique vessels per day recorded within the study area. The most common vessel types were fishing vessels (35%), recreational vessels (26%) and other vessels (17%). The busiest days were the 27th and 31st August 2022, on which ten unique vessels were present.

The average length and draught of vessels was 65m and 5.9m, respectively. The longest vessel was 238m and the deepest draught vessel was 8.6 m. The average speed of vessels within the study area was 7.1kt. There were no vessels deemed at anchor within the study area.

The most frequently broadcast destinations for vessels within the study area were Ardmore Fish Farm (37%) and Galway (15%).

One unique vessels every two days intersected the site during the survey period, the most common type being fishing vessels. However, it should be noted that an agreement with local fishermen meant that most fishing vessels avoided the site until 4th September 2022 when other offshore survey work associated with the project was completed.

6 References

UKHO (2019). *Admiralty Sailing directions Irish Coast Pilot NP40*. 21st Edition. Taunton: UKHO.