

# Hydrocarbon Exploration Program - Exploration Well Asopus-1 in Block 2 - Ionian Sea

## Shipping and Navigation Assessment

Date: 07/08/2026

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| <b>PROJECT</b>           | <b>HYDROCARBON EXPLORATION PROGRAM - EXPLORATION WELL ASOPUS-1 IN BLOCK 2<br/>- IONIAN SEA</b><br><br><b>ECF-3008</b> |            |
| <b>DELIVERABLE TITLE</b> | <b>SHIPPING AND NAVIGATION ASSESSMENT</b>                                                                             |            |
| DATE                     | 07/08/2026                                                                                                            |            |
| VERSION N°               | v.01                                                                                                                  |            |
| REVISION N°              | v.00                                                                                                                  |            |
| CONSULTANT/COMPANY       | LDK Consultants / Anatec Limited                                                                                      |            |
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# TABLE OF CONTENTS

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|          |                                        |           |
|----------|----------------------------------------|-----------|
| <b>1</b> | <b>Introduction</b>                    | <b>1</b>  |
| <b>2</b> | <b>Project Overview</b>                | <b>2</b>  |
| <b>3</b> | <b>Methodology</b>                     | <b>4</b>  |
| 3.1      | Study Area                             | 4         |
| 3.2      | Data Sources                           | 4         |
| 3.2.1    | AIS Data                               | 4         |
| 3.2.2    | Nautical Charts                        | 6         |
| 3.2.3    | Fishing Vessel Fleet Data              | 6         |
| 3.3      | FSA Methodology                        | 6         |
| <b>4</b> | <b>Navigational Features</b>           | <b>10</b> |
| <b>5</b> | <b>Vessel Traffic Data</b>             | <b>12</b> |
| 5.1      | Vessel Count                           | 13        |
| 5.2      | Vessel Type                            | 16        |
| 5.3      | Vessel Length                          | 17        |
| 5.4      | Vessel Speed                           | 18        |
| 5.5      | Individual Types                       | 20        |
| 5.5.1    | Cargo                                  | 20        |
| 5.5.2    | Tanker                                 | 22        |
| 5.5.3    | Passenger                              | 23        |
| 5.5.4    | Recreational (<=24 m in Length)        | 23        |
| 5.5.5    | Fishing                                | 24        |
| 5.6      | Closest Point of Approach              | 26        |
| 5.7      | Future Baseline                        | 27        |
| <b>6</b> | <b>Shipping and Navigation Hazards</b> | <b>29</b> |
| 6.1      | Embedded Mitigation                    | 29        |
| 6.2      | Additional Mitigation                  | 30        |

|          |                                                                                                               |           |
|----------|---------------------------------------------------------------------------------------------------------------|-----------|
| 6.3      | Collision of a Third-Party Vessel with a Project Vessel                                                       | 30        |
| 6.3.1    | Severity of Consequence                                                                                       | 31        |
| 6.3.2    | Frequency of Occurrence                                                                                       | 31        |
| 6.3.3    | Significance of Effect                                                                                        | 32        |
| 6.4      | Works Causing Disruption to Passing Vessel Routeing/Timetables                                                | 32        |
| 6.4.1    | Severity of Consequence                                                                                       | 33        |
| 6.4.2    | Frequency of Occurrence                                                                                       | 33        |
| 6.4.3    | Significance of Effect                                                                                        | 33        |
| 6.5      | Vessel Displacement Leading to Increase in the Risk of Vessel-to-Vessel Collision Between Third-Party Vessels | 33        |
| 6.5.1    | Severity of Consequence                                                                                       | 34        |
| 6.5.2    | Frequency of Occurrence                                                                                       | 34        |
| 6.5.3    | Significance of Effect                                                                                        | 34        |
| 6.6      | FSA Summary                                                                                                   | 34        |
| <b>7</b> | <b>Summary</b>                                                                                                | <b>36</b> |
| <b>8</b> | <b>References</b>                                                                                             | <b>37</b> |

# TABLE OF TABLES

---

|                                                        |    |
|--------------------------------------------------------|----|
| Table 3-1: Vessel properties transmitted via AIS       | 5  |
| Table 3-2: Severity of Consequence Ranking Definitions | 7  |
| Table 3-3: Frequency of Occurrence Ranking Definitions | 8  |
| Table 3-4: Tolerability Matrix and Risk Rankings       | 8  |
| Table 6.1 Summary of the Hazard Assessment             | 34 |

# TABLE OF FIGURES

|                                                                                                                         |    |
|-------------------------------------------------------------------------------------------------------------------------|----|
| Figure 2-1: Overview of Asopus – 1                                                                                      | 2  |
| Figure 3-1: Overview of the Study Area                                                                                  | 4  |
| Figure 3-2: Formal Safety Assessment Process                                                                            | 7  |
| Figure 4-1: Navigational features in proximity to Asopus-1                                                              | 10 |
| Figure 5-1: Twelve Months of AIS Data by Vessel Type within the Study Area (May 2025 to April 2026)                     | 12 |
| Figure 5-2: Density Heat Map of Twelve Months of AIS Data within the Study Area (May 2025 to April 2026)                | 13 |
| Figure 5-3: Daily Average Vessel Counts Per Month Per Type (May 2025 to April 2026)                                     | 14 |
| Figure 5-4: Busiest Day of AIS Data by Vessel Type within the Study Area (26 July 2025)                                 | 15 |
| Figure 5-5: Busiest Day of AIS Data by Vessel Type within the Study Area (02 August 2025)                               | 15 |
| Figure 5.6 Vessel Type Distribution within the Study Area (May 2025 to April 2026)                                      | 16 |
| Figure 5.7 Twelve Months of AIS Data by Vessel Length within the Study Area (May 2025 to April 2026)                    | 17 |
| Figure 5.8 Vessel Length Distribution within the Study Area (May 2025 to April 2026)                                    | 18 |
| Figure 5.9 Twelve Months of AIS Data by Average Vessel Speed within the Study Area (May 2025 to April 2026)             | 19 |
| Figure 5.10 Average Vessel Speed Distribution within the Study Area (May 2025 to April 2026)                            | 20 |
| Figure 5.11 Twelve Months of Cargo Vessel Data by Subtype within the Study Area (May 2025 to April 2026)                | 21 |
| Figure 5.12 Twelve Months of Tanker Data by Subtype within the Study Area (May 2025 to April 2026)                      | 22 |
| Figure 5.13 Twelve Months of Passenger Vessel Data by Subtype within the Study Area (May 2025 to April 2026)            | 23 |
| Figure 5.14 Twelve Months of Recreational Vessel Data (<=24 m in Length) within the Study Area (May 2025 to April 2026) | 24 |
| Figure 5.15 Twelve Months of Fishing Vessel Data by Average Vessel Speed within the Study Area (May 2025 to April 2026) | 25 |
| Figure 5.16 Distribution of CPA to Asopus-1 (May 2025 to April 2026)                                                    | 26 |

Figure 5.17 Twelve Months of AIS Data by Vessel Type within 1 nm of Asopus-1 (May 2025 to April 2026)

27

## LIST OF ABBREVIATIONS

| ABBREVIATION | EXPLANATION                                        |
|--------------|----------------------------------------------------|
| AIS          | Automatic Identification System                    |
| ALARP        | As Low as Reasonably Practicable                   |
| ARPA         | Automatic Radar Plotting Aid                       |
| CPA          | Closest Point of Approach                          |
| EDS          | Emergency Disconnect Sequence                      |
| ESIA         | Environmental and Social Impact Assessment         |
| ETA          | Estimated Time of Arrival                          |
| EU           | European Union                                     |
| FRA          | Fisheries Restricted Area                          |
| FSA          | Formal Safety Assessment                           |
| GFCM         | General Fisheries Commission for the Mediterranean |
| GT           | Gross Tonnage                                      |
| HNHS         | Hellenic Navy Hydrographic Service                 |
| IMO          | International Maritime Organization                |
| LPG          | Liquefied Petroleum Gas                            |
| m            | Metre                                              |
| MMSI         | Mobile Maritime Service Identity                   |
| MODU         | Mobile Offshore Drilling Unit                      |
| NAVTEX       | Navigational Telex                                 |
| nm           | Nautical Mile                                      |
| ODAS         | Ocean Data Acquisition System                      |

| ABBREVIATION | EXPLANATION                                            |
|--------------|--------------------------------------------------------|
| PSV          | Platform Supply Vessels                                |
| RAM          | Restricted in Ability to Manoeuvre                     |
| RoPax        | Roll-on/Roll-off Passenger                             |
| RoRo         | Roll-on/Roll-off Cargo                                 |
| SOLAS        | International Convention for the Safety of Life at Sea |
| UKHO         | United Kingdom Hydrographic Office                     |
| VHF          | Very High Frequency                                    |

# 1 Introduction

---

Anatec was commissioned by RSK on behalf of LDK and Energean Hellas Ltd. ('the Operator') to assess potential shipping and navigation hazards of an exploration site in the Mediterranean Sea. The Operator is planning to drill a single offshore exploration well (Asopus-1) in 2027 within Block 2 of the Ionian Sea.

This report presents an analysis of baseline data (such as vessel traffic and navigational features) within an industry-standard 10 nautical mile (nm) radius of the Asopus-1 location. The baseline assessment is then used to identify and assess the potential hazards to shipping and navigation users. This assessment applies the Formal Safety Assessment (FSA) process, which is the international maritime standard for risk assessment and is used by the International Maritime Organization (IMO) (Ref. i).

The key aims and objectives of this report are therefore as follows:

- Provide a baseline assessment within 10nm of the Asopus-1 location, including:
- an assessment of key navigational features relevant to shipping and navigation.
- an assessment of baseline vessel traffic.
- Identify shipping and navigation hazards.
- Identify existing embedded mitigation measures and provide recommendations for additional mitigation.
- Provide a risk assessment of hazards relating to shipping and navigation resulting from Asopus-1 drilling operation.

The findings from this shipping and navigation assessment will then be incorporated as a technical appendix into an overarching Environmental and Social Impact Assessment (ESIA) for Asopus-1, which will consider hazards of Asopus-1 on additional receptors

## 2 Project Overview

The proposed Asopus-1 exploration well is located within the Block 2 licence area in the Greek Exclusive Economic Zone in the northwestern Ionian Sea. The location of the proposed Asopus-1 exploration well is presented in **Error! Reference source not found.**, alongside Block 2.

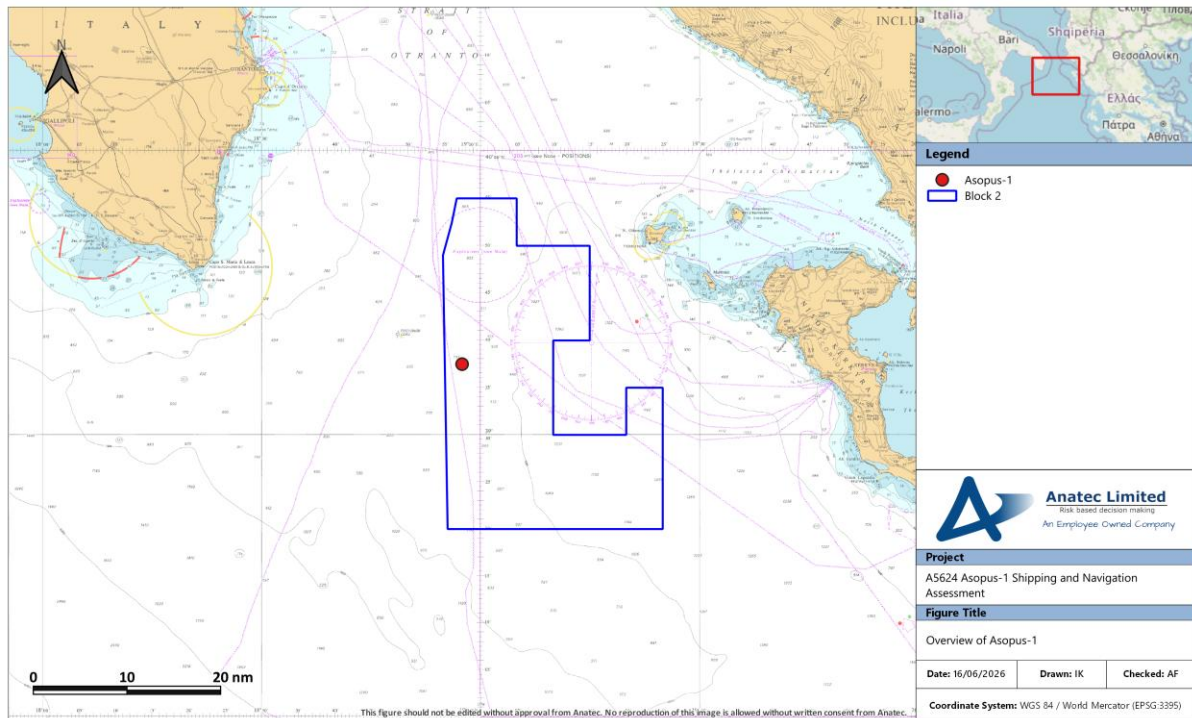


Figure 2-1: Overview of Asopus – 1

The Asopus-1 exploration drilling campaign is planned to take place in 2027, with a planned start window in the first quarter of 2027 (subject to regulatory approvals, contractor availability, and project readiness). The Mobile Offshore Drill Unit (MODU) involved will remain on site for the duration and will be supported by Platform Supply Vessels (PSV) operating between the onshore supply base at Igoumenitsa (east of Corfu on mainland Greece) and Asopus-1. A maximum of two support vessels may operate at the site at any one time, with up to six one-way transits to the onshore supply base estimated per week. Alternating PSV supply runs to the onshore supply base will be prioritised, with one PSV remaining beside the MODU.

The expected duration of the exploration drilling activity is approximately 57 days for a dry well or 67 days if hydrocarbons are encountered, including mobilisation and demobilisation. However, the design envelope allows for a maximum duration of up to 90 days to account for potential unplanned delays such as adverse weather conditions or operational contingencies.

Following completion of the drilling, the well will be plugged and abandoned in accordance with applicable regulatory requirements.

During drilling operations, a temporary 500 metre (m) safety zone will be established around the drillship working at Asopus-1 to ensure navigational safety and safe conduct of offshore operations, as a MODU

engaged in such activities is classified as restricted in its ability to manoeuvre (RAM) and other vessels are required to keep clear.

All offshore activities will cease once the exploration programme is completed and the MODU departs the site.

## 3 Methodology

### 3.1 Study Area

The baseline information presented within this report has been compiled with reference to a study area defined as a 10 nm buffer around Asopus-1 as presented in **Error! Reference source not found..** This has been chosen as it provides local context to the hazard assessment by capturing passing vessel traffic movements and shipping routes, while maintaining relevance to the specific well location. It is an industry practice for shipping and navigation assessments for this reason.

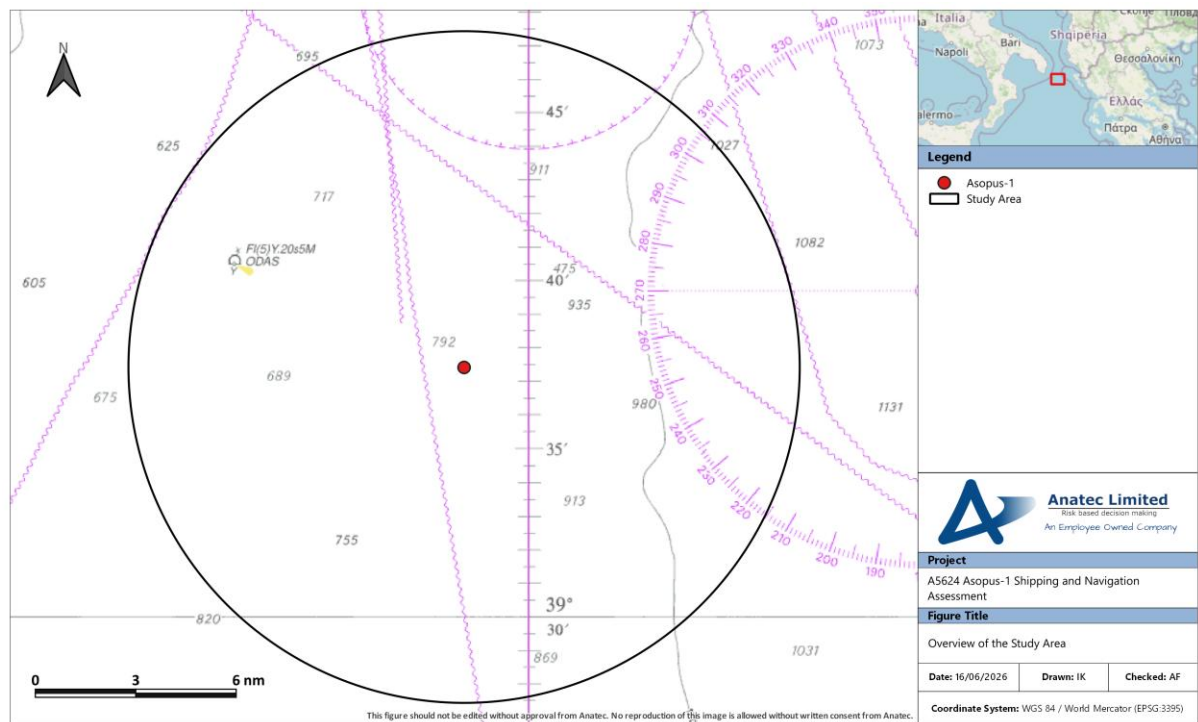


Figure 3-1: Overview of the Study Area

### 3.2 Data Sources

#### 3.2.1 AIS Data

The vessel traffic data source considered within this report is Automatic Identification System (AIS) data collected over a period of twelve months, from 01 May 2025 to 30 April 2026. Vessels transmit data on their position, Mobile Maritime Service Identity (MMSI), and various other variables via Very High Frequency (VHF) channels to coastal stations, other vessels and satellites using the AIS system.

Regulation 19 of the International Convention for the Safety of Life at Sea (SOLAS) Chapter V (Ref. ii) states that it is mandatory for AIS equipment to be fitted on vessels of 500 gross tonnage (GT) or above, any vessel of 300 GT or above when travelling internationally, and all passenger vessels regardless of size, built on or

after 01 July 2002. All vessels constructed before 01 July 2002 must have had AIS equipment fitted prior to July 2008, noting the requirements were amended in 2002.

Vessels fitted with AIS should always maintain the AIS unit 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; monitor and track vessels; exchange data with shore-based facilities.

European Union (EU) fishing vessels of 15 m length and over are also required to carry Class A AIS. It is noted that a proportion of smaller vessels also carry AIS voluntarily but may not broadcast continuously.

Examples of dynamic and static AIS information broadcast by vessels are given in **Error! Reference source not found..**

**Table 3-1: Vessel properties transmitted via AIS**

| STATIC                                                                                                                                                                                                        | DYNAMIC                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• MMSI</li> <li>• IMO Number</li> <li>• Call sign</li> <li>• Name</li> <li>• Length and beam</li> <li>• Type of vessel</li> <li>• Type of navigation sensor</li> </ul> | <ul style="list-style-type: none"> <li>• Position (latitude/longitude)</li> <li>• Time</li> <li>• Course over ground</li> <li>• Speed over ground</li> <li>• Heading</li> <li>• Navigational status</li> <li>• Rate of turn</li> <li>• Draught</li> <li>• Hazardous cargo (type)</li> <li>• Destination</li> <li>• Estimated time of arrival (ETA)</li> </ul> |

As AIS carriage and broadcast is not compulsory for fishing vessels less than 15 m in length, or vessels of less than 500 GT, such traffic may be underrepresented within the characterisation of the baseline. For the purposes of this report, all information broadcast via AIS is assumed accurate unless there is clear evidence to the contrary. It has also been assumed that all vessels required to broadcast will do so.

For the purposes of this report, recreational vessels refer to those with a length of 24 m or less in line with EU directive 2013/53/EU, and are hereafter termed as 'recreational vessels (<=24 m in length)'. Those above 24 m in length are therefore grouped with passenger vessels.

### 3.2.2 Nautical Charts

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Navigational features in proximity to Asopus-1 have been compiled using United Kingdom Hydrographic Office (UKHO) charts - namely Chart 188 (Ref. iii). The latest available version of the chart has been used, noting it is possible there have been changes to the baseline environment since publication.

The Hellenic Navy Hydrographic Service (HNHS) Chart 212 ("N. Othonoi to A. Mytikas – N. Corfu and Nisoi Paxoi," 1:150,000, 2013 edition) was also reviewed against the UKHO charts and shipping data and no additional navigational features were identified. The UKHO chart has been used for the assessment as it is more recent and contains some subsea cables that are not present in the HNHS chart.

### 3.2.3 Fishing Vessel Fleet Data

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Additional information from the Greek fishing fleet is provided by the Hellenic Republic Ministry of Rural Development and Food, which outlines fishing vessel statistics through 2024 (Ref. vi). In addition, characteristics of all trawling vessels in the Ionian Sea are available from the General Fisheries Commission for the Mediterranean (GFCM) and used as validation for fishing vessel sizes in the area (Ref. vii).

## 3.3 FSA Methodology

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The IMO FSA process approved under the IMO circular MSC-MEPC.2/Circ.12/Rev.2 (Ref. i) has been applied within this assessment. This is a structured, systematic methodology based on risk analysis and cost benefit analysis (if applicable) to reduce hazards to As Low as Reasonably Practicable (ALARP). There are five basic steps within this process (with this assessment focusing on Steps 1-3):

- Step 1: Identification of hazards (a list of all relevant accident scenarios with potential causes and outcomes).
- Step 2: Assessment of risks (evaluation of risk factors).
- Step 3: Risk control options (devising regulatory measures to control and reduce the identified risks).
- Step 4: Cost benefit analysis (determining cost effectiveness of risk control measures).
- Step 5: Recommendations for decision-making (information about the hazards, their associated risks and the cost effectiveness of alternative risk control measures).

A flow diagram of the FSA methodology applied is presented in **Error! Reference source not found.**



Figure 3-2: Formal Safety Assessment Process

The FSA assigns each hazard a “severity of consequence” and “frequency of occurrence” to evaluate the significance during the project works.

**Error! Reference source not found.** and **Error! Reference source not found.** identify how the severity of consequence and the frequency of occurrence has been defined.

Table 3-2: Severity of Consequence Ranking Definitions

| RANK | DESCRIPTION | DEFINITION                                   |                                                    |                                      |                                             |
|------|-------------|----------------------------------------------|----------------------------------------------------|--------------------------------------|---------------------------------------------|
|      |             | PEOPLE                                       | PROPERTY                                           | ENVIRONMENT                          | BUSINESS                                    |
| 1    | Negligible  | No perceptible risk                          | No perceptible risk                                | No perceptible risk                  | No perceptible risk                         |
| 2    | Minor       | Slight injury(ies)                           | Minor damage to property, i.e., superficial damage | Local assistance required            | Minor reputational risks – limited to users |
| 3    | Moderate    | Multiple minor or single serious injury      | Damage not critical to operations                  | Limited external assistance required | Local reputational risks                    |
| 4    | Serious     | Multiple serious injuries or single fatality | Damage resulting in critical risk to operations    | Regional assistance required         | National reputational risks                 |

| RANK | DESCRIPTION | DEFINITION             |                        |                              |                                  |
|------|-------------|------------------------|------------------------|------------------------------|----------------------------------|
|      |             | PEOPLE                 | PROPERTY               | ENVIRONMENT                  | BUSINESS                         |
| 5    | Major       | More than one fatality | Total loss of property | National assistance required | International reputational risks |

**Table 3-3: Frequency of Occurrence Ranking Definitions**

| RANK | DESCRIPTION | DEFINITION                              |
|------|-------------|-----------------------------------------|
| 1    | Negligible  | Less than 1 occurrence per 10,000 years |
| 2    | Minor       | 1 per 100 to 10,000 years               |
| 3    | Moderate    | 1 per 10 to 100 years                   |
| 4    | Serious     | 1 per 1 to 10 years                     |
| 5    | Major       | Yearly                                  |

The severity of consequence and frequency of occurrence are then used to define the significance of risk via a tolerability matrix approach as shown in **Error! Reference source not found..** The significance of risk is defined as Broadly Acceptable (low risk), Tolerable (intermediate risk) or Unacceptable (high risk).

**Table 3-4: Tolerability Matrix and Risk Rankings**

|                         |               |                         |                          |              |                           |                |
|-------------------------|---------------|-------------------------|--------------------------|--------------|---------------------------|----------------|
| Severity of Consequence | 5: Major      |                         |                          |              |                           |                |
|                         | 4: Serious    |                         |                          |              |                           |                |
|                         | 3: Moderate   |                         |                          |              |                           |                |
|                         | 2: Minor      |                         |                          |              |                           |                |
|                         | 1: Negligible |                         |                          |              |                           |                |
|                         |               | 1:<br>Negligible        | 2:<br>Extremely unlikely | 3:<br>Remote | 4:<br>Reasonably probable | 5:<br>Frequent |
|                         |               | Frequency of occurrence |                          |              |                           |                |

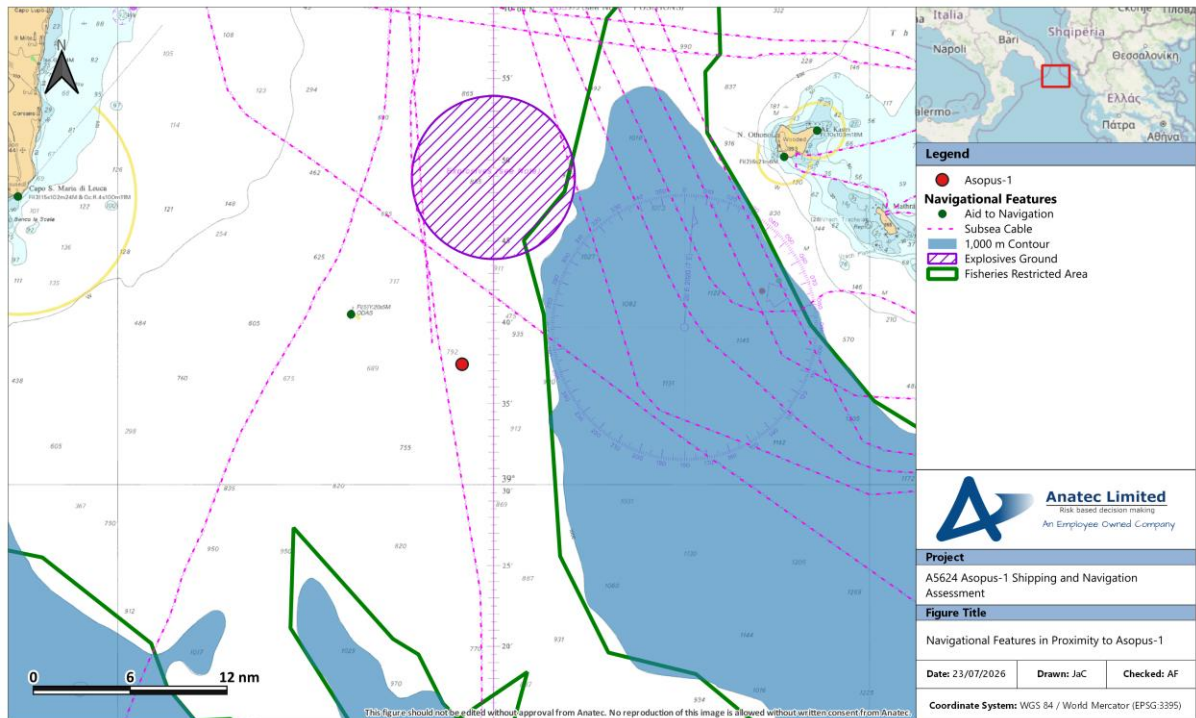
|  |                               |
|--|-------------------------------|
|  | Unacceptable (high risk)      |
|  | Tolerable (intermediate risk) |

|  |                               |
|--|-------------------------------|
|  | Broadly Acceptable (low risk) |
|--|-------------------------------|

Once identified, the significance of risk will be assessed to ensure it is ALARP. Further risk control measures may be required to further mitigate a hazard in accordance with the ALARP principles. Unacceptable risks are not considered to be ALARP.

## 4 Navigational Features

Navigational charts pertinent to Asopus-1 were studied to define charted features or key navigational practices. The key navigational features charted in proximity to Asopus-1 are presented in **Error! Reference source not found..**



**Figure 4-1: Navigational features in proximity to Asopus-1**

Subsea cables are present in Block 2, with the closest passing approximately 1.1 nm to the west of the Asopus-1 location. These cables were predominantly oriented north-south, with connections primarily between landfalls, including Corfu, and those in the Adriatic Sea.

An Ocean Data Acquisition System (ODAS) buoy is located approximately 7.5 nm northwest of Asopus-1 and is used to collect meteorological and ocean data. This buoy has aids to navigation installed, flashing yellow lights of 5 nm range.

An explosives ground is charted approximately 6.6 nm to the north - according to Admiralty charts, "*Mariners are advised to avoid the areas indicated owing to the presence of unexploded devices on the seabed which may constitute a danger, particularly for seabed activities.*"

There are no ports or harbours in the immediate vicinity of Asopus-1, given its offshore location; the closest is Ammos Port, approximately 24 nm to the northeast on the island of Othonoi (Greece). In addition, Mathraki Port (Greece) lies approximately 27 nm to the northeast. Although small ferry services operate from these two ports between the Diapontian Islands, these ports serve primarily as berths for recreational craft. To the west, Porto Turistico di Santa Maria di Leuca is approximately 30 nm from Asopus-1, on the Puglia coast of Italy. As with the ports in the Diapontian Islands, this port is also primarily used by recreational craft.

Asopus-1 is located in the 'Western Ionian Sea' region for the GFCM. Fisheries restricted areas (FRAs) are active in proximity to Asopus-1, which curtail (or outright ban) select fishing activities. The Deepwater FRA

overlaps the eastern portion of the study area – this bans trawling and dredging at depths of over 1,000 m (Ref. viii). The FRA is illustrated in **Error! Reference source not found.** alongside the areas of the sea of depth 1,000 m and deeper.

This Shipping and Navigation Assessment considers the relevance of the identified features to vessel routing, navigational safety and marine traffic interactions. Other environmental, seabed, fisheries, emergency-response and ecological aspects are addressed, where relevant, in the corresponding ESIA technical assessments.

## 5 Vessel Traffic Data

A total of twelve months of AIS vessel traffic data was collected from 01 May 2025 to 30 April 2026. The vessel traffic data collected within the study area during the 12-month study period is colour-coded by vessel type and presented in **Error! Reference source not found..** Following this, the same data converted into a density heat map is presented in **Error! Reference source not found..**

Vessels deemed as constituting temporary traffic (e.g., vessels involved in surveys) have been removed on the basis that these are not representative of the typical baseline environment. As noted within Section **Error! Reference source not found.**, for the analysis provided, recreational vessels above 24 m in length are classified as passenger vessels (included in the 'recreational vessel (>24 m in length)' subset). 'Other' vessels include vessel types not captured under the other categories; this includes tugs, fishery patrol vessels and oil and gas vessels, as well as vessels of unspecified type. Together 'other' vessels contribute less than 1% of all traffic.

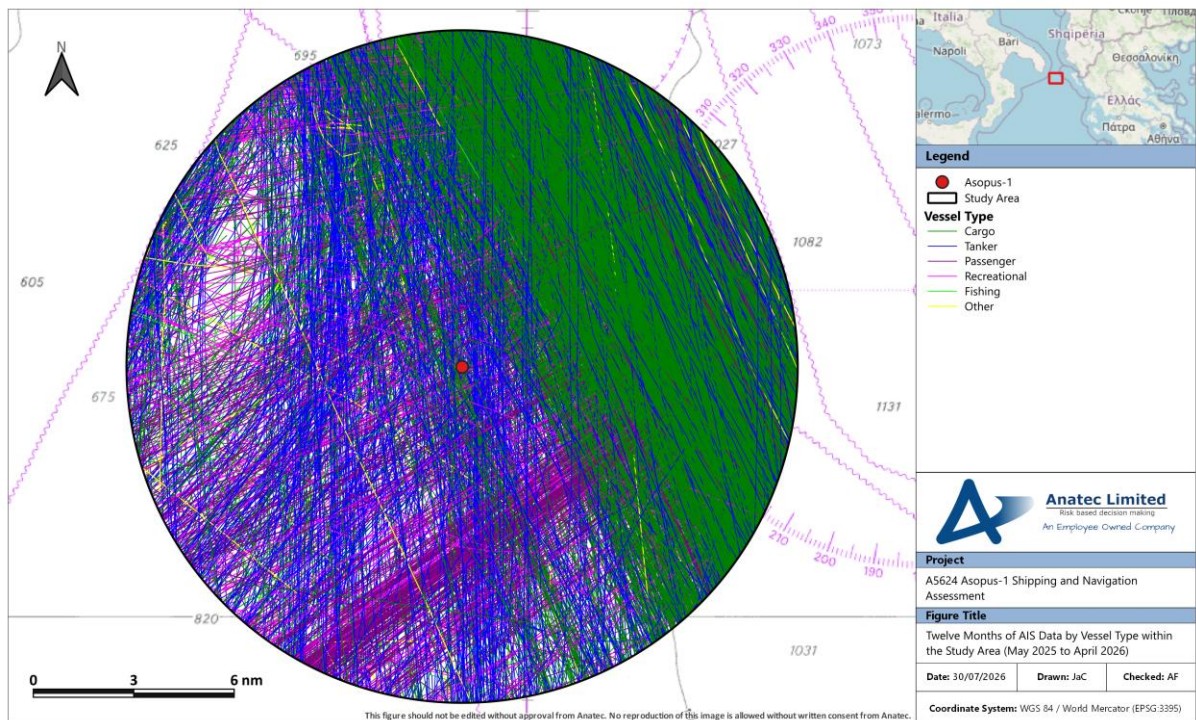


Figure 5-1: Twelve Months of AIS Data by Vessel Type within the Study Area (May 2025 to April 2026)

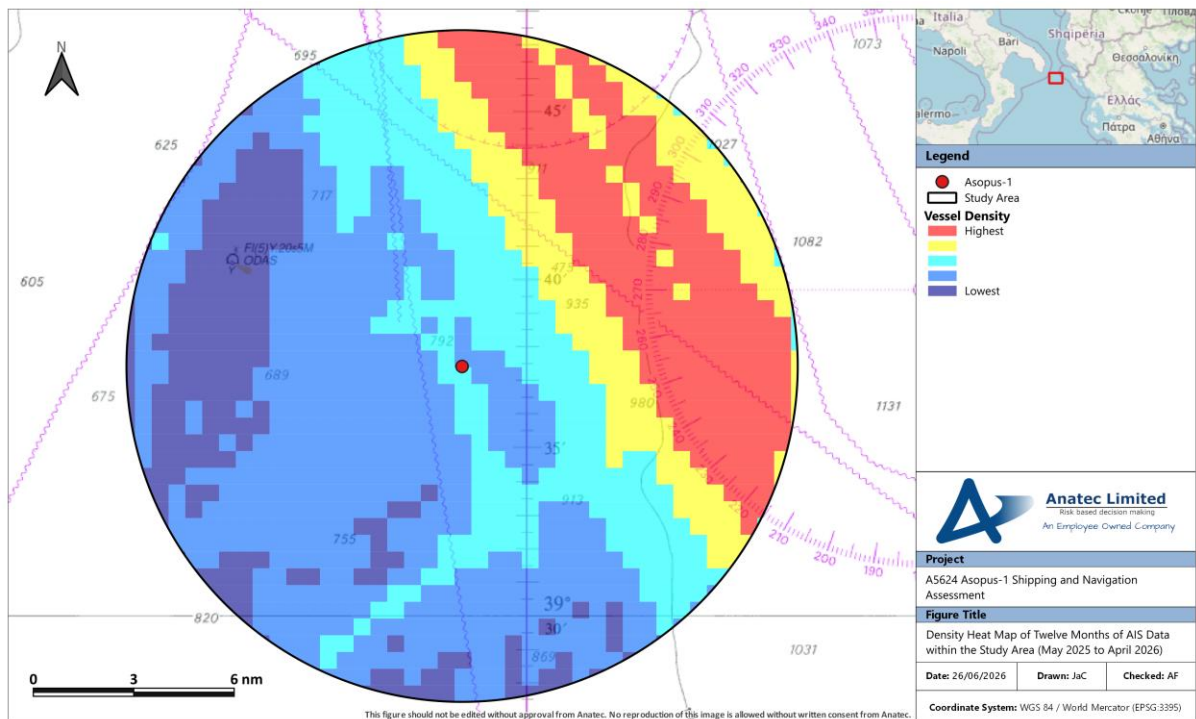


Figure 5-2: Density Heat Map of Twelve Months of AIS Data within the Study Area (May 2025 to April 2026)

Areas of low density were noted within the western and southern regions of the study area, with higher traffic volumes primarily to the northeast. This included routeing cargo vessels, comprised largely of regularly scheduled Roll-on/Roll-off cargo (RoRo) vessels. There was an average of 13 unique vessel transits per day along this northwest-southeast route recorded within the study area.

An additional, narrower band of vessel density was noted to the south of Asopus-1, with this largely entailing the recreational vessels (>24 m in length) subset of passenger vessels routeing to/from Sarandë (Albania) and Corfu. The Asopus-1 location was in a medium-density area relative to the study area.

## 5.1 Vessel Count

The daily average number of unique vessels recorded within the study area, for each month of the 12-month study period and for each vessel type, is presented in **Error! Reference source not found.**

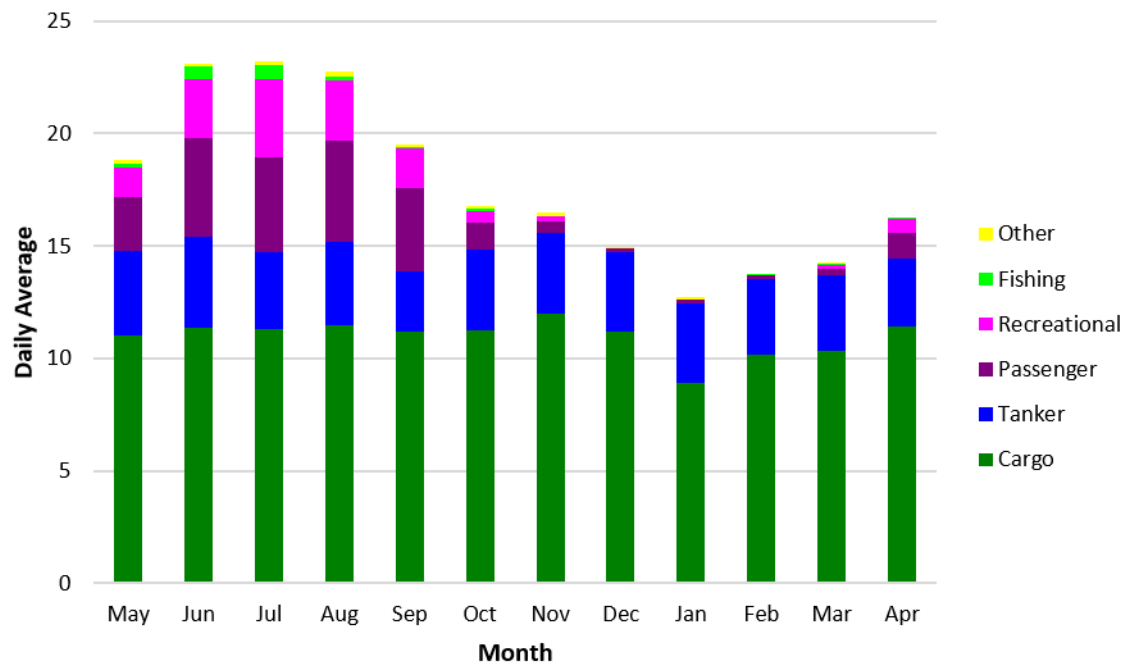


Figure 5-3: Daily Average Vessel Counts Per Month Per Type (May 2025 to April 2026)

Overall, there was an average of 18 unique vessels per day recorded within the study area across the 12-month study period. The busiest months were the summer months of June, July and August; during each of these months, an average of 23 unique vessels per day was recorded within the study area.

The busiest days overall were 26 July and 02 August 2025, with 39 unique vessels each within the study area. Vessel traffic from 26 July 2025 is colour-coded by vessel type and presented in **Error! Reference source not found.**, with an equivalent plot for 02 August 2025 presented in **Error! Reference source not found.**

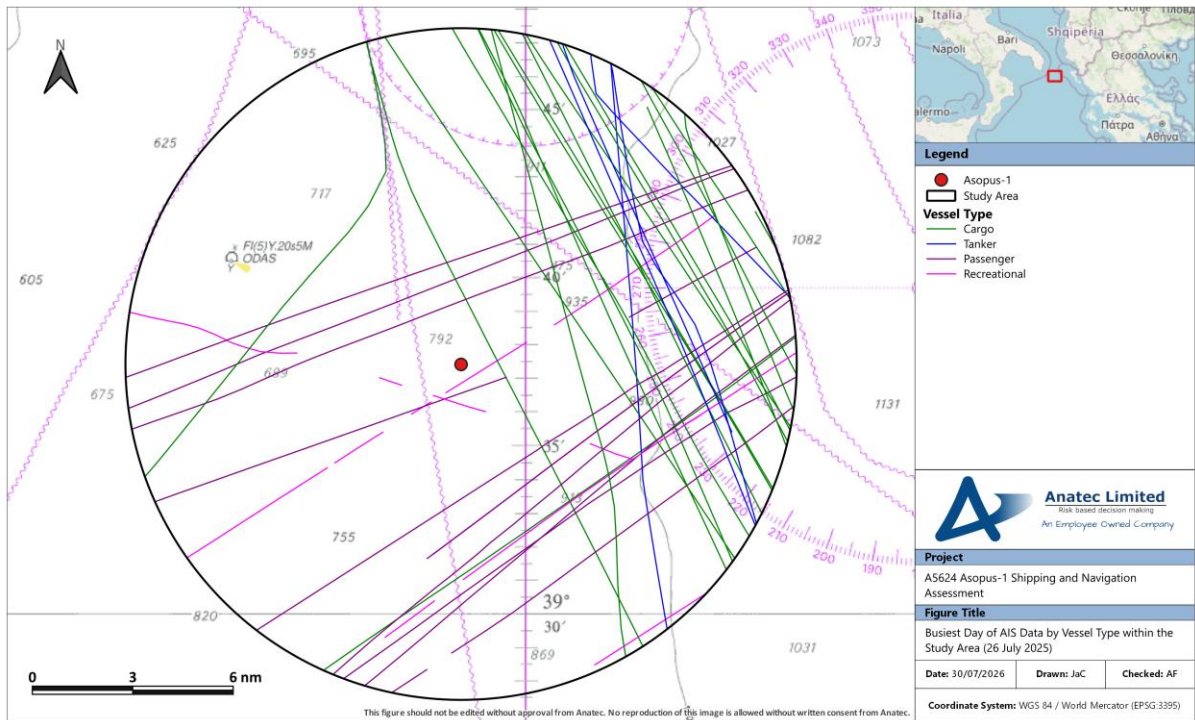


Figure 5-4: Busiest Day of AIS Data by Vessel Type within the Study Area (26 July 2025)

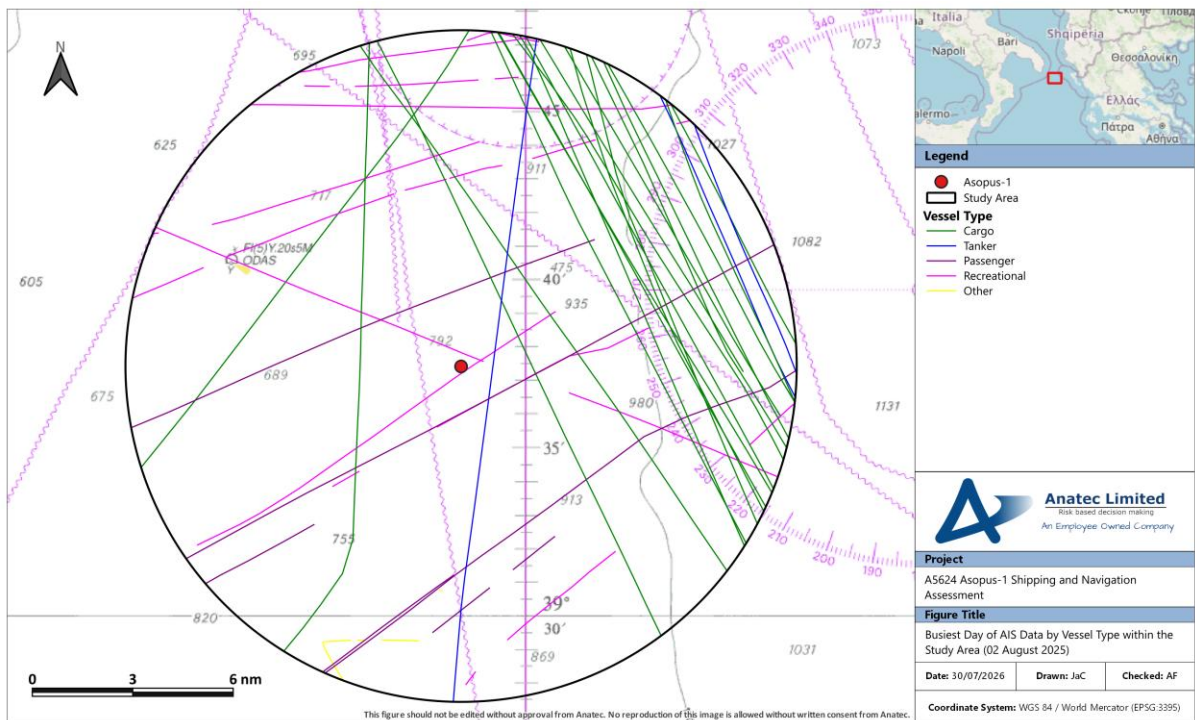


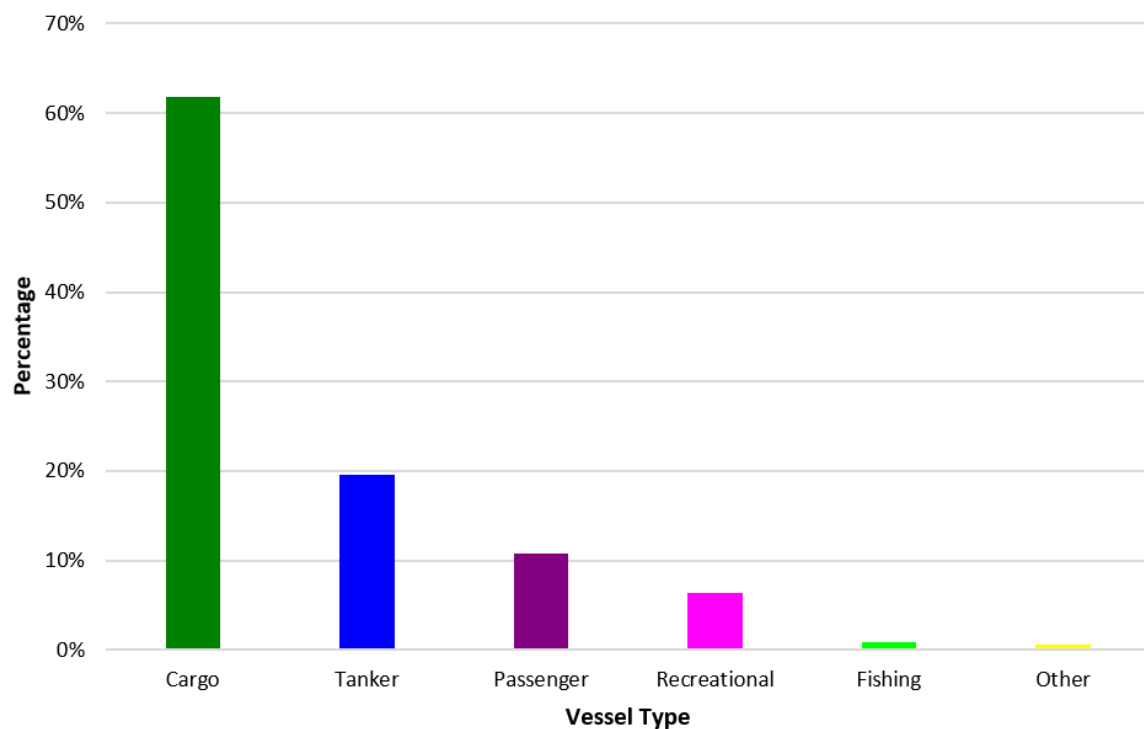
Figure 5-5: Busiest Day of AIS Data by Vessel Type within the Study Area (02 August 2025)

The quietest month was January 2026, with an average of 13 unique vessels per day in the study area. The seasonality observed during the 12-month period was mainly attributed to passenger vessels and recreational vessels ( $\leq 24$  m in length), which were more frequent during the summer.

The planned drilling window is expected to fall in Q1 / early 2027, subject to approvals and project readiness. The monthly count analysis indicated Q1 as the quietest time of year; January was the quietest month of the 12-month period, with an average of 13 unique vessels per day, while February and March each had an average of 14 unique vessels per day. This was considerably quieter than the peak period of the year for traffic, which was the summer period of June, July and August; each of these months had an average of 23 unique vessels per day. This indicates that the planned drilling window is not expected to coincide with the peak summer recreational/passenger period, although commercial cargo and tanker traffic remains present year-round.

## 5.2 Vessel Type

The distribution of the vessel types recorded within the study area during the 12-month study period is presented in Figure 5.6.

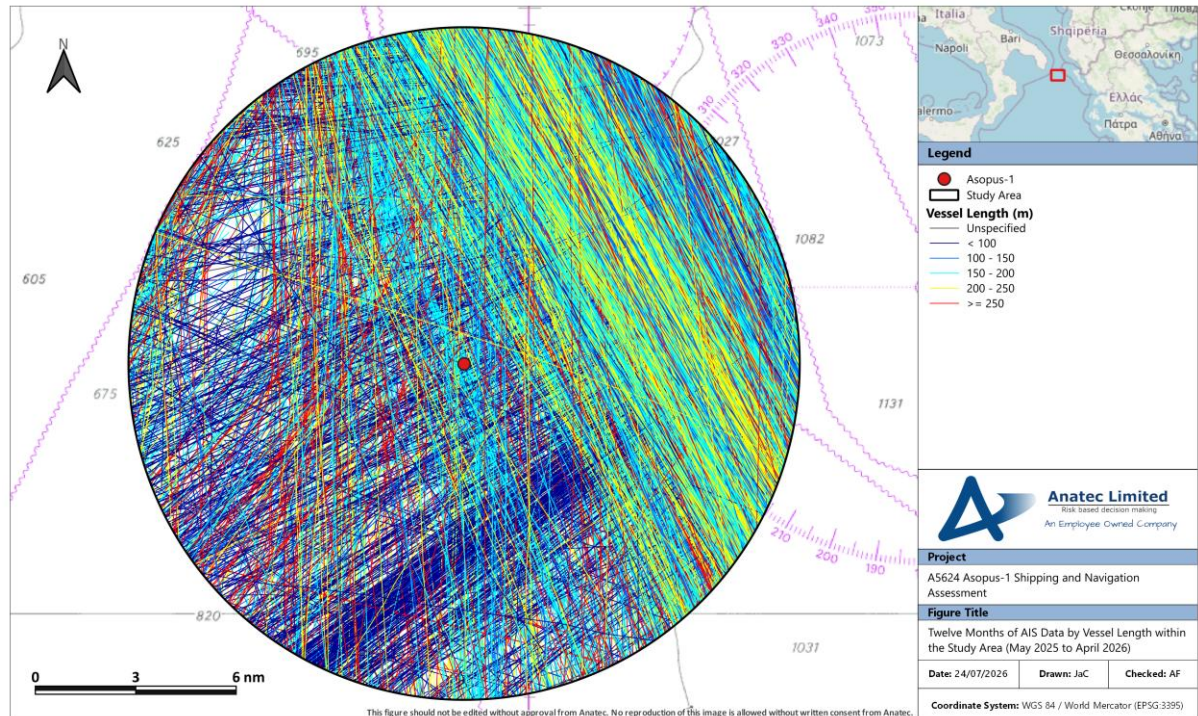


**Figure 5.6** Vessel Type Distribution within the Study Area (May 2025 to April 2026)

The majority of vessels recorded within the study area during the 12-month study period were cargo vessels (comprising 62% of the total number). Other notable vessel types included tankers (20%), passenger vessels (11%), and recreational vessels ( $\leq 24$  m in length) (6%) while fishing vessels accounted for 1%. 'Other', which encompasses the remaining vessel types, accounted for less than 1%. Further analysis of the key vessel types recorded is provided in Section 5.5.

### 5.3 Vessel Length

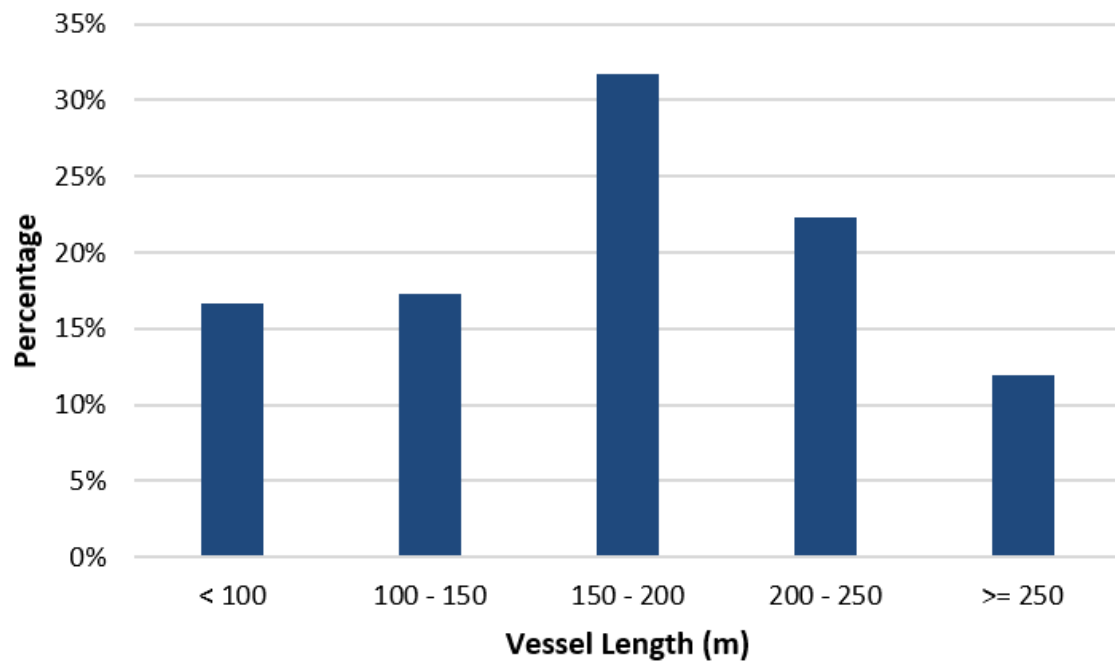
The vessel traffic recorded within the study area during the 12-month study period is presented in Figure 5.7, colour-coded by vessel length. Less than 1% of the total vessels recorded did not broadcast a valid length; these have been labelled as ‘unspecified’ in Figure 5.7 and excluded from further length analysis.



**Figure 5.7** Twelve Months of AIS Data by Vessel Length within the Study Area (May 2025 to April 2026)

Smaller vessel lengths (below 100 m) were primarily associated with recreational vessels ( $\leq 24$  m in length) transiting on a northeast-southwest bearing, with larger lengths from commercial vessels passing through the Adriatic Sea.

The distribution of vessel lengths recorded within the study area during the 12-month study period is presented in Figure 5.8.



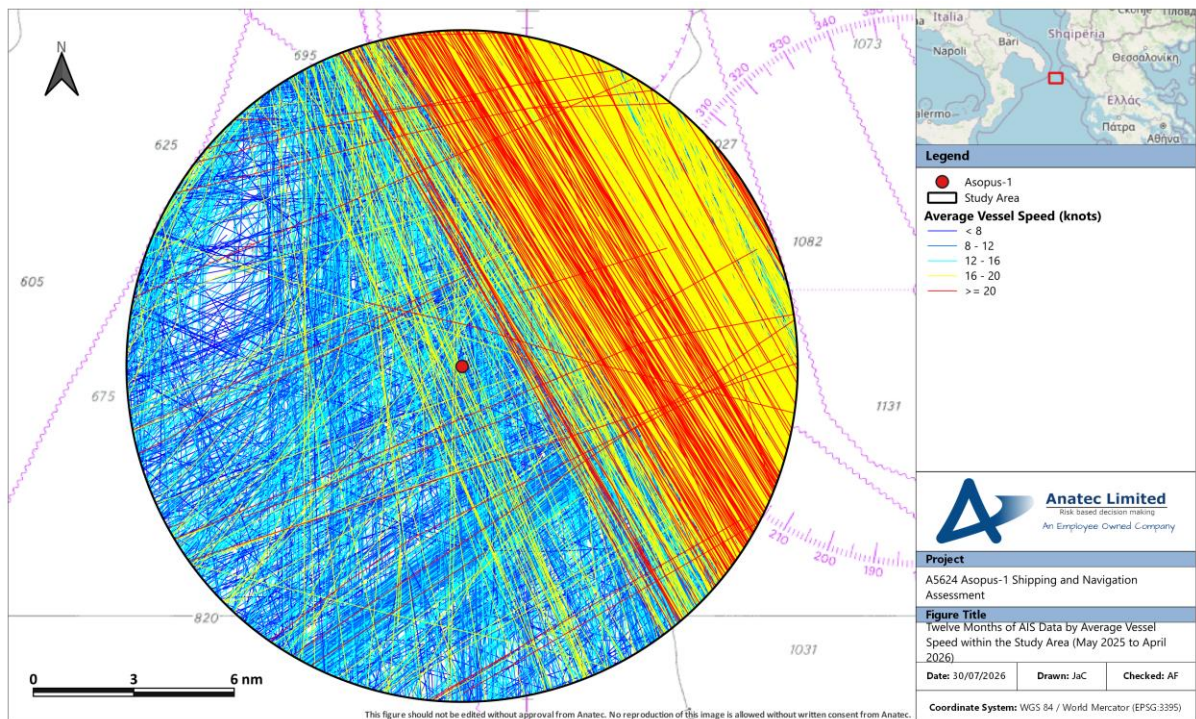
**Figure 5.8** Vessel Length Distribution within the Study Area (May 2025 to April 2026)

The overall average vessel length recorded in the study area over the 12-month period was 171 m. The longest vessel recorded was a 399 m containership in northwest transit to Trieste, approximately 4.9 nm east of Asopus-1.

The longest vessel recorded within 1 nm of the Asopus-1 location was a 369 m containership, which was recorded in southeast transit to Port Said (Egypt) on two separate occasions (each time to the southwest of Asopus-1, at a distance of 0.5 nm on one day and at a distance 0.6 nm on another day). Further details on commercial craft passing within 1 nm of Asopus-1 are presented in Section 5.6.

## 5.4 Vessel Speed

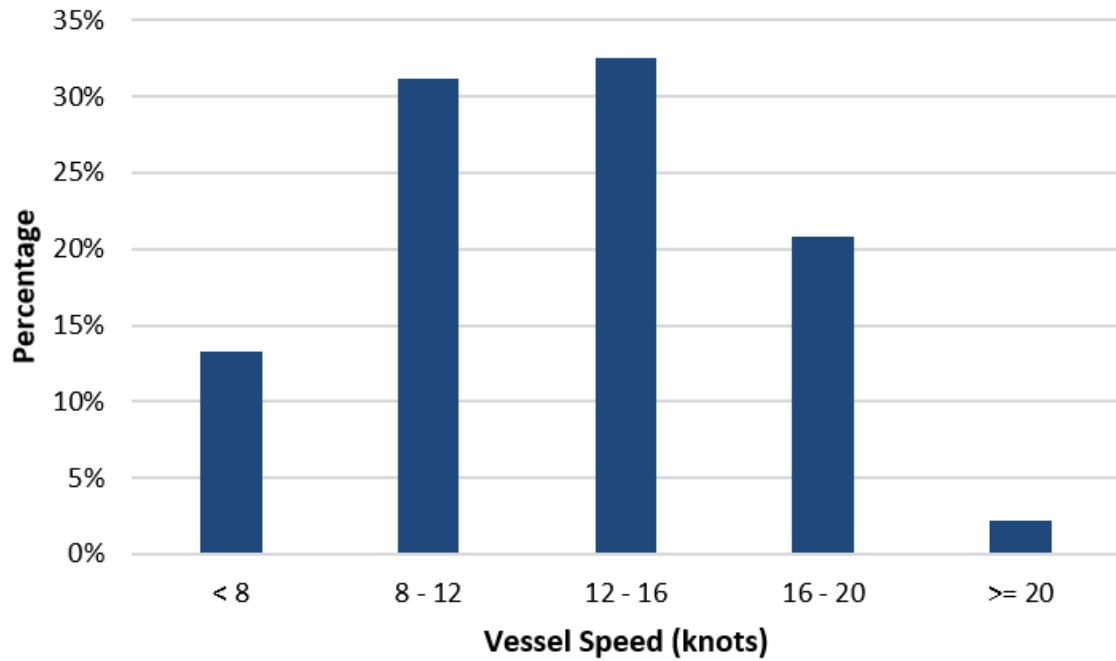
The vessel traffic recorded within the study area during the 12-month study period, colour-coded by average vessel speed for each track, is presented in Figure 5.9. All vessels recorded broadcast a valid average speed.



**Figure 5.9** Twelve Months of AIS Data by Average Vessel Speed within the Study Area (May 2025 to April 2026)

Vessel transits of lower average speeds correlated primarily with smaller craft (primarily recreational vessels ( $\leq 24$  m in length)), with routeing commercial vessels typically recorded at higher speeds; these were primarily composed of the band of vessels undertaking northwest-southeast transits to the east of Asopus-1.

The distribution of average vessel speeds recorded within the study area during the 12-month study period is presented in **Figure 5.10**.



**Figure 5.10** Average Vessel Speed Distribution within the Study Area (May 2025 to April 2026)

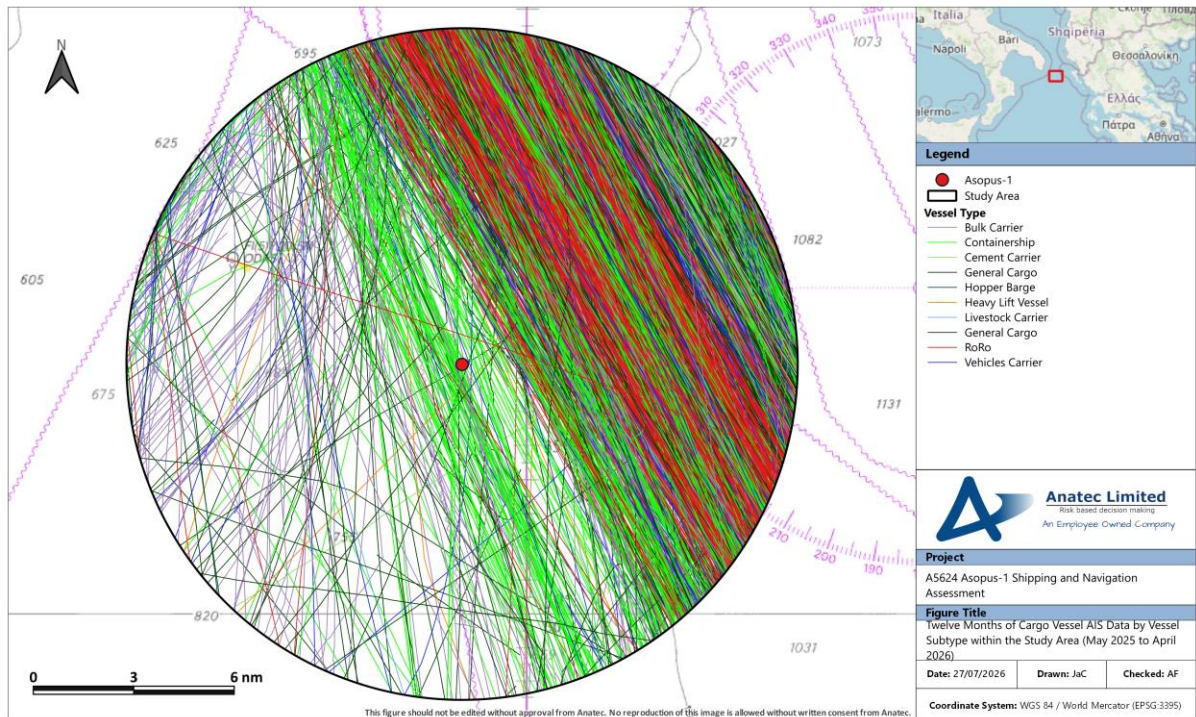
The overall average vessel speed recorded within the study area during the 12-month study period was 12.7 knots (kt).

## 5.5 Individual Types

This section presents further review of the most common vessel types recorded within the study area during the 12-month study period, as presented in Section 5.2.

### 5.5.1 Cargo

Cargo vessels were the most common vessel type, recorded at an average frequency of 11 per day and accounting for approximately 62% of all vessel tracks. The cargo vessel tracks recorded within the study area during the 12-month study period are colour-coded by subtype and presented in Figure 5.11.



**Figure 5.11 Twelve Months of Cargo Vessel Data by Subtype within the Study Area (May 2025 to April 2026)**

Cargo vessels were noted as primarily routeing to the east of Asopus-1, on a northwest-southeast bearing. These vessels largely routed to/from destinations in the Adriatic Sea (such as Trieste (Italy)), and Greece/Türkiye.

The most common cargo subtype recorded was RoRo vessels (33%). These vessels were on regular routeing within the study area to the east of Asopus-1, with almost all recorded routes between destinations in Italy and Türkiye. The main operators were as follows:

- DFDS Seaways – an average of two transits per day across twelve vessels; main destinations were Damietta (Egypt), Bari (Italy), Trieste (Italy), Istanbul (Türkiye), Mersin (Türkiye) and Tuzla (Türkiye).
- Ulusoy – an average of one transit every one to two days across five vessels; these vessels were generally routeing between Trieste (Italy) and Cesme (Türkiye).
- Grimaldi Line – an average of one transit every one to two days mainly across four vessels; routes were between Trieste (Italy) and either Gemlik (Türkiye) or Ambarli (Türkiye).
- Polish Ocean Lines – an average of one transit a week across two vessels; destinations were Trieste (Italy), Bari (Italy), Pendik (Türkiye) and Tuzla (Türkiye).

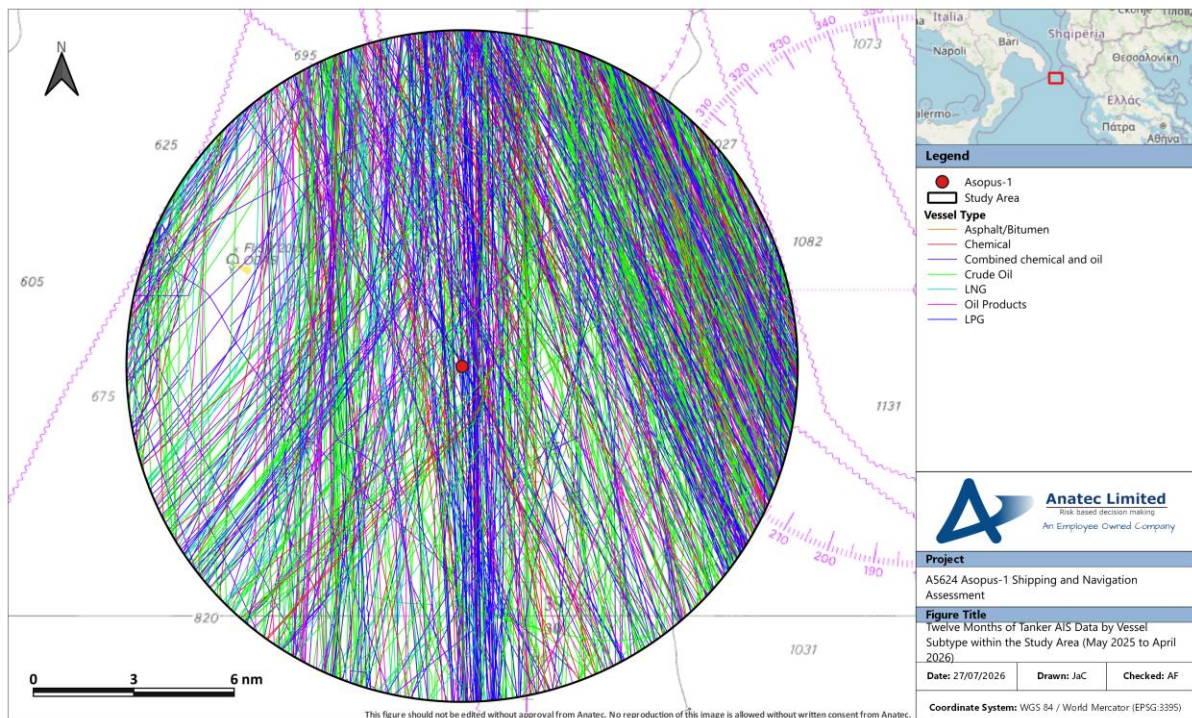
The closest RoRo route to the Asopus-1 location was from a single vessel, operated by DFDS Seaways, which routed between Trieste (Italy) and either Mersin (Türkiye) or Tuzla (Türkiye); the routeing of this vessel was similar to the other RoRo routeing when bound for Türkiye but it was observed to pass closer to the Asopus-1 location when routeing back to Italy (approximately 1.5 nm from the Asopus-1 location). With the exception of this route, all regular RoRo routeing was observed to pass at least 3 nm from the Asopus-1 location.

A proportion of cargo vessels were noted to transit within 1 nm of Asopus-1; these were most commonly containerships, which accounted for 59% of all cargo vessels that were recorded within 1 nm. The closest-passing cargo vessel was a 199 m long containership passing approximately 60 m to the west. Further detail

on cargo vessels (as well as other commercial craft) in close proximity to Asopus-1 is presented in Section 5.6.

## 5.5.2 Tanker

Tankers were recorded at an average frequency of three to four per day and contributed to 20% of the overall vessel traffic recorded. The tanker tracks recorded within the study area during the 12-month study period are colour-coded by subtype and presented in Figure 5.12.



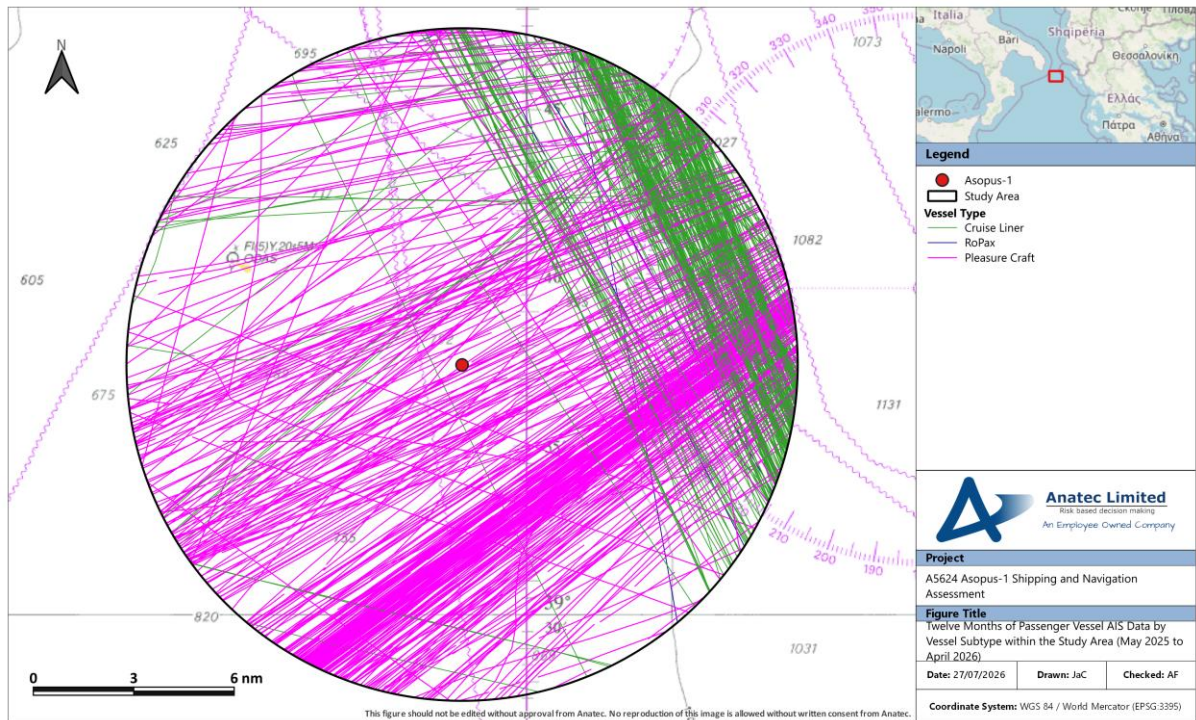
**Figure 5.12 Twelve Months of Tanker Data by Subtype within the Study Area (May 2025 to April 2026)**

The most common tanker subtype recorded was crude oil tankers (35% of all tankers) followed by combined chemical and oil (28%). Tankers were recorded routeing in a variety of orientations, including northwest-southeast (between Italian and Greek/Turkish ports), northeast-southwest (between Italian and Maltese ports), and north-south (largely comprised of a narrow band of Liquefied Petroleum Gas (LPG) tankers between Italian and Egyptian ports).

As with cargo vessels, a number of tankers were noted as transiting within 1 nm of Asopus-1, with these primarily associated with the north-south routeing LPG tankers (which comprised approximately 33% of tankers within 1 nm of Asopus-1). The closest of these tankers was a 159 m long LPG tanker passing directly over the location. Further detail on tankers (as well as other commercial craft) in close proximity to Asopus-1 is provided in Section 5.6.

### 5.5.3 Passenger

Passenger vessels were recorded at an average frequency of two per day and contributed to 11% of the overall vessel traffic recorded. The passenger vessel tracks recorded within the study area during the 12-month study period are colour-coded by subtype and presented in Figure 5.13.



**Figure 5.13** Twelve Months of Passenger Vessel Data by Subtype within the Study Area (May 2025 to April 2026)

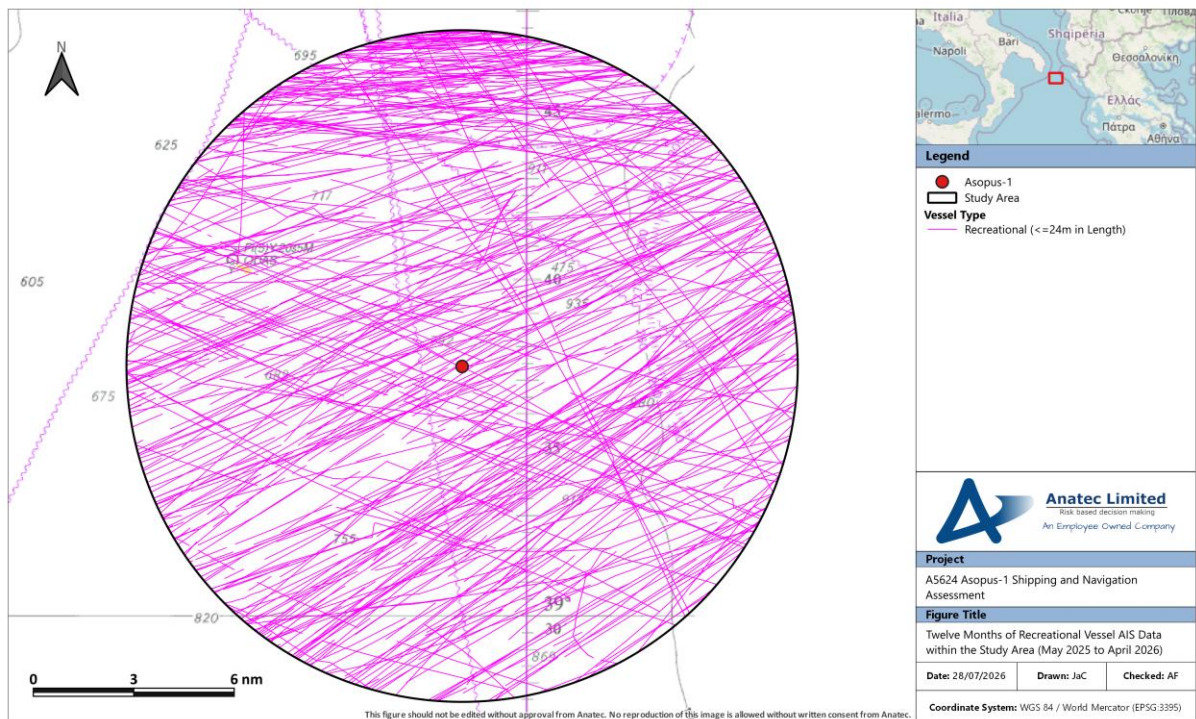
Passenger vessels primarily comprised recreational vessels (>24 m in length) (55%) and cruise liners (45%), with distinct traffic patterns noted for each. Cruise liners were typically recorded transiting to the east of Asopus-1 on a northwest-southeast bearing with common destinations including Corfu, Argostoli, Mykonos, Santorini, Katakolo, and Piaeus (all Greek destinations) in the south; and Split (Croatia), Ancona (Italy), Marghera (Italy), and Bar (Montenegro) to the north.

Recreational vessels (>24 m in length) were noted typically on a northeast-southwest bearing, with the majority of these vessels transiting to/from Sarandë and Corfu to the east.

No regularly-scheduled Roll-on/Roll-off passenger (RoPax) routeing was recorded within the study area during the 12-month study period, with only four such tracks identified in total.

### 5.5.4 Recreational (<=24 m in Length)

Recreational vessels (<=24 m in length) contributed to 6% of the overall vessel traffic recorded. The recreational vessel (<=24 m in length) tracks recorded within the study area during the 12-month study period are presented in Figure 5.14.

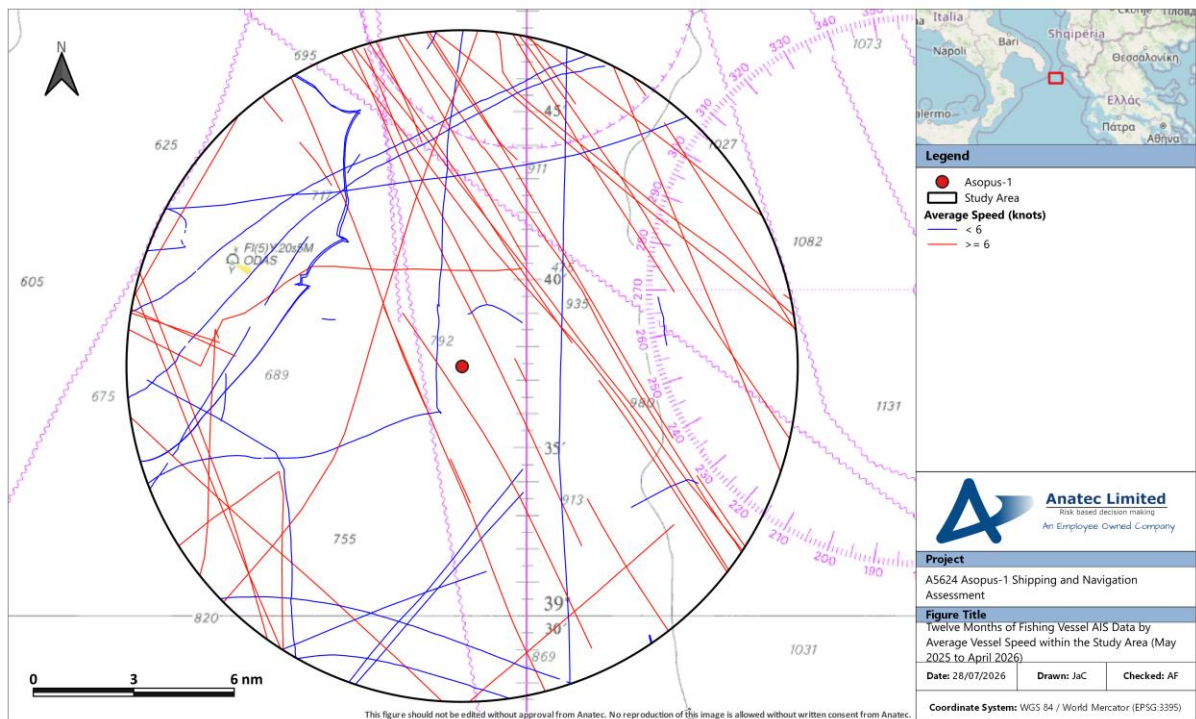


**Figure 5.14 Twelve Months of Recreational Vessel Data (≤24 m in Length) within the Study Area (May 2025 to April 2026)**

Recreational vessels (≤24 m in length) exhibited widespread northeast-southwest and northwest-southeast routing throughout the study area, with a thicker band of east-west routing to the north. As this assessment considers vessel traffic recorded via AIS only, it is likely to under-represent the number of recreational vessels (≤24 m in length). Information on vessel destination was not available for the vast majority of recreational vessels (≤24 m in length) recorded.

### 5.5.5 Fishing

Fishing vessels accounted for 1% of all vessel tracks recorded. As a general rule, there is potential that fishing vessels operating at below 6 knots may be actively fishing i.e., have gear deployed. Therefore, to highlight potential active fishing behaviour, the fishing vessel traffic recorded within the study area during the 12-month study period is presented in Figure 5.15 colour-coded by average speed.



**Figure 5.15** Twelve Months of Fishing Vessel Data by Average Vessel Speed within the Study Area (May 2025 to April 2026)

There was an average of one fishing vessel per week recorded within the study area during the 12-month study period. From track speed and behaviour of those recorded, it is likely that the majority of these fishing vessels recorded on AIS in proximity to Asopus-1 were in transit rather than actively fishing, noting some potential trawling activity to the west was identified.

However, it should be considered that AIS data may underrepresent the number of fishing vessels of less than 15 m in length (see Section **Error! Reference source not found.**). No fishing vessels of less than 15 m in length were recorded on AIS, indicating either such vessels are not present, or are electing not to broadcast on AIS noting there is no obligation for them to do so.

Given the distance offshore and the deep water in this area, and noting the presence of restricted fishing areas (see Section **Error! Reference source not found.**), fishing vessel activity may be less prevalent than in coastal regions particularly for smaller fishing vessels. This aligns with the findings of the Annual Fishing Fleet Report for Greece in 2024 (Ref. vi), which indicated that the vast majority of the Greek fishing fleet are under 12 m in length. It states that “Based on their overall length, most of these vessels (95.01%) are classified in the category of small coastal fishing vessels”.

The GFCM provides details of authorised fishing vessels with demersal trawls within the Ionian Sea (Ref. vii) as of April 2026 at the time of writing. This data shows a total of 343 such fishing vessels, with 222 from Greece, 106 from Italy, and 15 from Malta. The majority of these vessels were greater than 15 m in length (85%). It cannot be confirmed exactly where in the Ionian Sea these 343 vessels operate. However, some may use the area around Asopus-1 given the FRA does not cover all of the local area. This aligns with review of the AIS data which shows that certain vessels were present in both datasets.

Based on the available data, it is assumed for the purposes of hazard identification and assessment (see Section 6) that smaller fishing vessels not broadcasting on AIS may be present albeit not necessarily in large

numbers. This AIS limitation is taken into account in the hazard assessment, with non-AIS small craft to be managed through the same visual, Radio Detection and Ranging, VHF and safety zone monitoring arrangements described in Section 6.1, where detected during operations.

## 5.6 Closest Point of Approach

The average number of vessels per month recorded within 3 nm of Asopus-1 based on the 12 months of AIS is presented in Figure 5.16 in terms of their Closest Point of Approach (CPA) ranges.

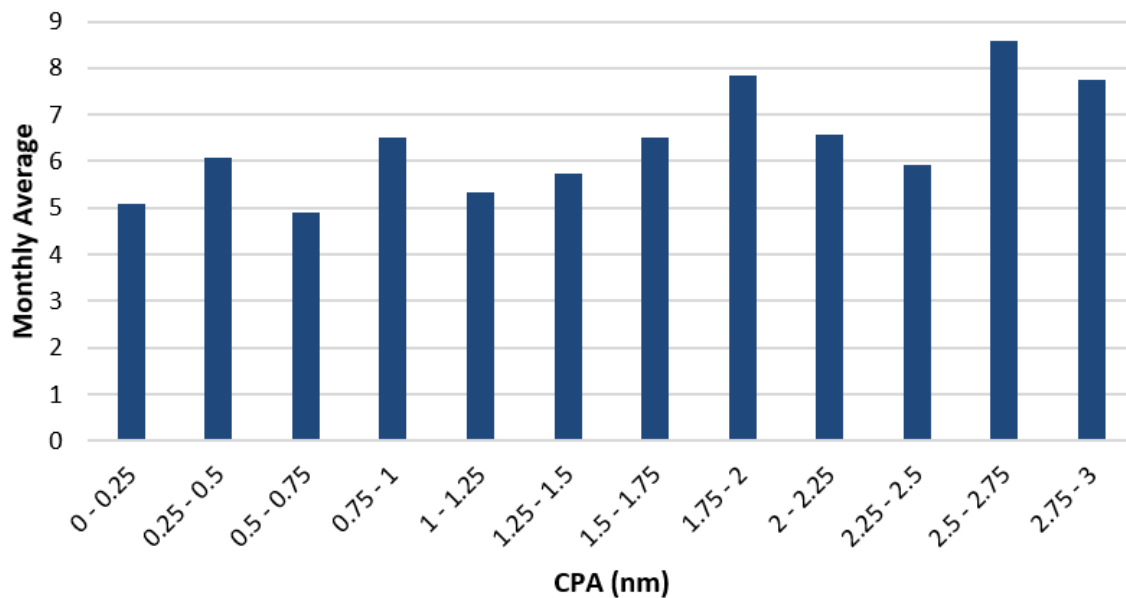
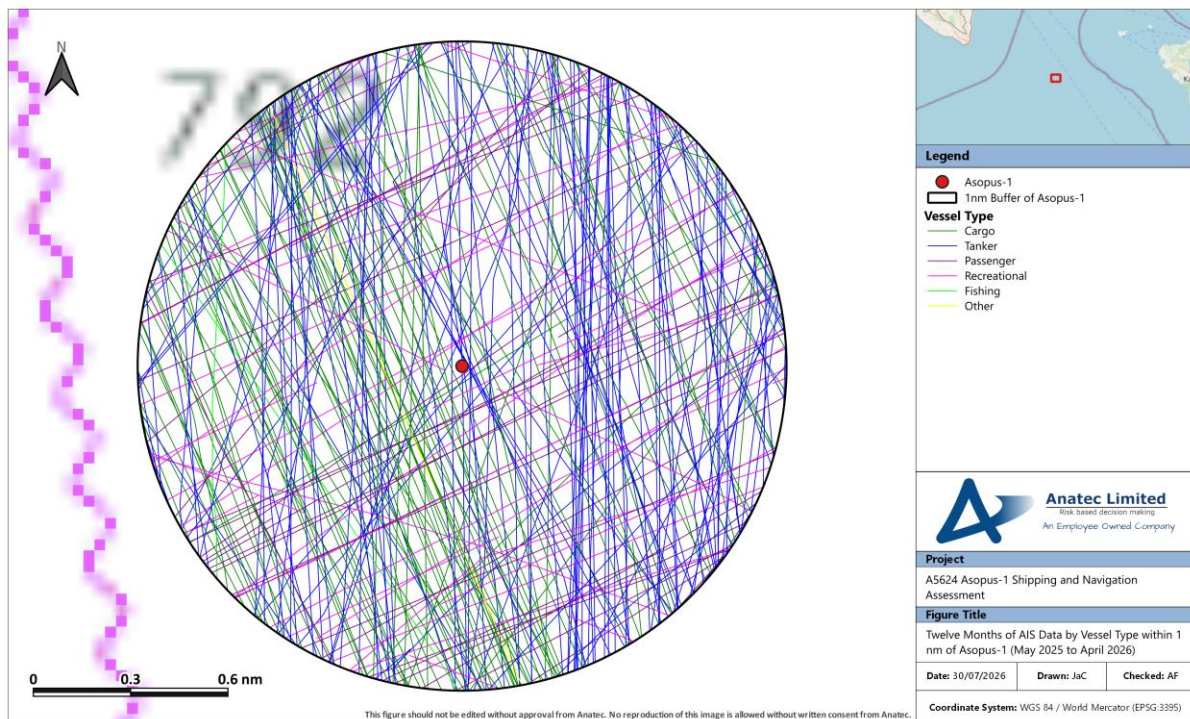


Figure 5.16 Distribution of CPA to Asopus-1 (May 2025 to April 2026)

An average of one vessel every one to two days was recorded as passing within 1 nm of Asopus-1. The operators of commercial vessels recorded within 1 nm of Asopus-1 included Maersk, ASBI Shipping and BW Epic.

An overview of the vessels recorded within 1 nm of Asopus-1 is presented in Figure 5.17.



**Figure 5.17 Twelve Months of AIS Data by Vessel Type within 1 nm of Asopus-1 (May 2025 to April 2026)**

The most common vessel type recorded within 1 nm of Asopus-1 during the 12-month study period was tankers (44%), with cargo vessels (33%), passenger vessels (11%) and recreational vessels (<=24 m in length) (11%) also present. Average length for these vessels was 157 m.

The vessel transiting in closest proximity to Asopus-1 recorded during the 12-month study period was the LPG tanker noted in Section 5.5.2. The next three closest vessels to Asopus-1 were also tankers (two LPG tankers and one oil/chemical tanker).

## 5.7 Future Baseline

The characterisation of vessel traffic established in the baseline is used as input to the assessment. Therefore, it is necessary to consider whether the assessed data are representative of longer-term trends.

In the study area, the most common vessel destination was the Port of Trieste in Italy. Based on historic port statistics for the Trieste Marine Terminal (Ref. ix), total container volume decreased in 2025 compared to previous years (and down approximately 28% from 2024). This is understood to be due to certain vessel services ceasing and not being replaced (Ref. x). It should therefore be considered that vessel numbers to/from Trieste may have been higher in previous years, and vessel numbers to/from Trieste may rise should new routes be opened in the future. However, the average number of vessels in the study area is already 18 per day, so adding new routes (even if used daily) would not substantially affect the baseline findings. Longer-term expansion at the Port of Trieste is anticipated (Ref. xi), however significant changes in associated traffic over the works period for Asopus-1 are considered unlikely, with changes expected to be in the long term.

Offshore wind development is planned in Italian waters to the west of Asopus-1, including the Messapia floating offshore wind farm (Ref. xii). This may displace traffic to the west; however, the baseline assessment shows that the higher-density traffic areas are already east of Asopus-1 and clear of the planned offshore

wind development areas. There is ample searoom in the area east of Asopus-1 as per Section **Error! Reference source not found.**

Fishing trends are difficult to project into the future, as they depend on numerous factors, including fish stocks and quotas. However, there is no clear indication that an increase in fishing vessel activity would be expected. In addition, the available evidence indicates that numbers are low in the area (Section 5.5.5) although it is noted that the AIS may under-represent fishing vessel levels (Section **Error! Reference source not found.**). Recreational activity can be similarly difficult to predict but is assumed it may remain similar or slightly increase in future years.

## 6 Shipping and Navigation Hazards

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This section presents the analysis of the hazards that have been considered as part of the risk assessment process. Three shipping and navigation hazards from Asopus-1 have been identified following review of the users in the area within the baseline data. These are:

- Collision of a third-party vessel with a project vessel.
- Works causing disruption to passing vessel routeing/timetables.
- Vessel displacement leading to an increase in the risk of vessel-to-vessel collision between third-party vessels.

It is assumed that any impact from project vessels on shipping and navigation while within port limits (e.g., transiting to/from Igoumenitsa) will be managed by the ports themselves, and associated hazards have therefore not been assessed within this report. In addition, the assessment only considers hazards as they arise while the MODU is at the Asopus-1 location i.e. hazards associated with the movement of the MODU from port and back are not considered, as this should be subject to specific assessments undertaken prior to commencing the voyage, including vessel safety management systems, collision risk management plans, appropriate passage planning and a HIRA (Hazard Identification Risk Assessment), and the MODU will be compliant with COLREGs.

### 6.1 Embedded Mitigation

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It is considered that the following mitigation measures will be in place to minimise the risks associated with the operation:

- The MODU and two PSVs will comply with applicable international and national requirements, such as COLREGs (Ref. ii) and SOLAS (Ref. xiii). In addition, the MODU will have a site-specific collision risk management plan to reduce the collision risk from third-party vessels when it is performing operations, given that this will require it to be RAM and connected to the seabed by the drilling equipment. The PSVs will also be managed by marine logistics (including onshore personnel responsible for overall marine coordination).
  - Compliance with these international regulations and site-specific risk management plans will include review of the latest nautical charts and Notices to Mariners prior to mobilisation, appropriate warning time, use of AIS and Automatic Radar Plotting Aid (ARPA) for monitoring shipping, ensuring competent watchkeepers (24/7), and broadcasting navigational status via AIS alongside the appropriate lighting and marking when on site. These arrangements will be implemented through the drilling contractor's established marine, collision-risk, watchkeeping and emergency-response procedures, bridged as necessary with Energean's project requirements prior to mobilisation.
- A 500 m safety zone around the MODU prohibiting unauthorised vessel activity will be in place whilst project activities are ongoing. The PSVs will assist with monitoring the safety zone whilst on-site. Monitoring will include the use of AIS as well as Radar, visuals and VHF to account for small non-AIS craft.
- Promulgation of information regarding the establishment/existence of the safety zone and details of the operation will be communicated through official maritime notifications, including Navigational Telex (NAVTEX) messages and Notices to Mariners, issued by the Hellenic Coast Guard.

- The drillship will have an Emergency Response Plan detailing procedures to be followed in an emergency. This may include a contingent Emergency Disconnect Sequence (EDS) to be initiated in the unlikely event the MODU needs to rapidly disengage from the well.
- Communication shall be continuously maintained with the Hellenic Coast Guard, fisheries organisations and port authorities throughout offshore operations.

## 6.2 Additional Mitigation

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In addition to the embedded mitigation outlined in Section 6.1, the following mitigation is recommended to reduce risk further:

- Where practicable, the main operators of regularly scheduled vessels passing in close proximity to the site will be provided with advance notice of the operation at Asopus-1 to allow them to review and/or revise their passage plan, should they consider it necessary. The main relevant operators are described within Section 5.5.1.

## 6.3 Collision of a Third-Party Vessel with a Project Vessel

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There may be an increased risk of collision due to the presence of vessels associated with the Asopus-1 drilling campaign. Vessels expected to be involved in the works are detailed in Section **Error! Reference source not found.**, and will include a MODU and two PSVs. Operational activity from vessels will last a maximum period of 90 days. As the MODU will be connected to the seabed and RAM, it will have limited ability to take avoidance action to prevent a collision with a passing vessel.

Vessel collision risk will be highest where project vessels are in or close to busy shipping areas. The vessel traffic baseline within the 10 nm study area identified high-density regions associated with established routes, primarily in the eastern region of the study area, while Asopus-1 was sited in a lower-density area (see **Error! Reference source not found.**). In addition, the drilling operation is planned to take place in early 2027 (subject to approvals and project readiness), which the baseline indicated is a quieter time of year, thus reducing encounter probability (see Section **Error! Reference source not found.**).

As per Section 5.6, commercial vessel activity within 1 nm was not recorded in large volumes. A proportion of these tracks entered into the future 500 m safety zone area. These occurred without project notifications, an established safety zone, MODU lights/marks/AIS status, or PSV/MODU monitoring. During drilling, such transits would typically be managed through safety zone notifications, vessel monitoring, and standard collision-avoidance procedures, noting there is sufficient room for these vessels to deviate around the safety zone.

Project vessels will be managed by marine logistics, will display suitable lights and marks, and will broadcast on AIS, including an appropriate navigational status, particularly for the MODU whilst it is connected to the seabed and RAM. Project vessels will also comply with relevant Flag State regulations including the COLREGs and SOLAS. Information on project activities, including the establishment of the 500 m safety zone, will be promulgated to mariners through the applicable Greek maritime authority process, with support from the PSVs, to ensure mariner compliance.

On this basis, mariners are expected to not enter the safety zone – furthermore, there is considered to be ample searoom for vessels to pass further than 500 m from the MODU and vessels are expected to make

use of this searoom to increase their passing distance to at least 1 nm, further reducing the potential for a collision between a third-party vessel and a project vessel. Support vessels will generally remain outside the safety zone but will have greater manoeuvrability in the event of any encounters.

A maximum of two PSVs will be on-site at any one time, and will transit between Asopus-1 and the onshore supply base at Igoumenitsa. To transit to/from the onshore supply base, these vessels will have to cross routing RoRo traffic (see Section 5.5.1). The crossing of these routes may result in a higher likelihood of an encounter; however, it should be noted that the relative increase in traffic within the study area will be low, given that there was an average of 18 unique vessel transits per day within the study area during the 12-month period compared to an estimated average of up to six one-way transits from support vessels per week (Section **Error! Reference source not found.**), equivalent to an average of less than one additional one-way PSV transit per day, although individual operational days may include more than one PSV movement. The risk of an encounter developing into a collision will be mitigated by compliance with the COLREGs (Ref. ii) and SOLAS (Ref. xiii), marine logistics (marine coordination), the display of suitable lights/marks and the use of AIS.

In addition, the MODU will be able to effectively monitor traffic in the vicinity using both AIS and ARPA and will therefore be aware of any potential vessel encounters developing, with both PSVs also able to assist in detecting and communicating with vessels close to the safety zone to ensure they are aware of the works and the prohibition of entry into the safety zone. One PSV will remain beside the MODU (Section **Error! Reference source not found.**) and therefore may be in a position to render assistance under SOLAS in the unlikely event in which a third-party vessel drifts into the 500 m safety zone due to machinery failure. A collision risk management plan will also be implemented to mitigate the risk of an encounter developing.

### 6.3.1 Severity of Consequence

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The most likely consequences of a collision between a project vessel and a third-party vessel are minor contact between the vessels, resulting in minor property damage and minor reputational effects on the business, with no perceptible effect on people or the environment. The worst-case scenario may involve damage to the vessels, leading to Potential Loss of Life (PLL) and environmental pollution.

Overall, the severity of consequence is considered to be moderate.

### 6.3.2 Frequency of Occurrence

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Noting the risk control measures listed (in particular, the implementation of a safety zone and the communication of its establishment to mariners), as well as the vessel numbers in proximity to the Asopus-1 location, it is considered unlikely that a close encounter between a third-party vessel and a project vessel occurs. Should such an encounter occur, vessels would implement collision avoidance action as per the COLREGs, including Rule 18, which outlines responsibilities if one of the vessels is RAM, ensuring that the probability of an encounter developing into a collision incident remains low.

The frequency of occurrence is therefore considered to be extremely unlikely.

### 6.3.3 Significance of Effect

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Overall, the significance of consequence is considered to be moderate, and the frequency of occurrence is considered to be extremely unlikely. Therefore, the effect is of broadly acceptable significance.

## 6.4 Works Causing Disruption to Passing Vessel Routeing/Timetables

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Project vessel activities may disrupt vessel routeing/timetables. This is most likely to impact busier shipping areas, where vessels are transiting along regular routes with a defined schedule.

Vessels expected to be involved in the works are detailed in Section **Error! Reference source not found.**, and will include a MODU and two PSVs. Operational activity by vessels will be limited to a maximum of 90 days. In addition, the operation is planned to take place during early 2027 (subject to approvals and project readiness) which the baseline has indicated is a quieter time of year (see Section **Error! Reference source not found.**).

Vessel traffic data collected between May 2025 and April 2026 has been used in establishing the baseline. Potentially affected routes are most likely to be those detailed within Section 5.5.1 and include regularly-scheduled RoRo routes from four operators. The busiest scheduled route was operated by DFDS Seaways between Mersin and Trieste, with an average of one transit per day over the 12-month period. No regular RoPax activity was recorded.

As per Section **Error! Reference source not found.**, passing vessels will only be prohibited from entering a 500 m radius of the MODU once drilling operations are underway, and will be free to transit around the safety zone. None of the regularly-scheduled RoRo routeing vessels were seen to pass within 500 m of the Asopus-1 location on any occasion during the 12 months, and therefore these routes in general would not encounter a necessity to deviate to avoid the safety zone. Only on two occasions throughout the 12-month period did any of these vessels come within 1 nm of the Asopus-1 location; therefore, any deviation to 1 nm from the Asopus-1 location would be highly unlikely/infrequent during the period of operations (which will be up to 90 days in duration).

Other commercial routes, in particular those that comprise container carriers and tankers, pass closer to the Asopus-1 location; however, these routes are less sensitive to displacement because they are not regularly scheduled.

The routes themselves also have relatively long total distances, with destinations primarily between Italy and Türkiye. Therefore, in the event that a vessel needs to deviate around the 500 m safety zone, the additional distance would be minimal (both in absolute terms and as a proportion of the route). Considering the majority of traffic tended to route in a general north-south bearing, there is ample searoom to both the east and west for vessels to pass, with the closest surface-piercing navigational feature to Asopus-1 being an ODAS buoy 7.5 nm to the west (Section **Error! Reference source not found.**).

In addition, effective dissemination of information will ensure that the majority of timetabled vessels in the area are aware of ongoing activities, allowing third-party vessels to carry out appropriate passage planning to minimise impact on schedules. The Masters of the PSVs will also undertake suitable passage planning when transiting between Asopus-1 and the onshore supply base, and will comply with Flag State regulations (COLREGS and SOLAS) to minimise disruptions to passing routeing traffic.

### 6.4.1 Severity of Consequence

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The most likely consequences of works that disrupt passing vessel routeing/timetables are a limited increase in journey distance or time, with no impact on schedule. The worst-case scenario may involve an increase in journey length, resulting in minor reputational effects on the business.

Overall, the severity of consequence is therefore considered to be minor.

### 6.4.2 Frequency of Occurrence

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The hazard is temporally limited, given that it is a short-term operation lasting no more than 90 days, as well as spatially limited, given that the passing distances will apply to a single location and associated 500 m safety zone. The number of vessels expected to be affected (those that would otherwise pass closer during the time of operation) is anticipated to be low.

The frequency of occurrence is therefore considered to be remote.

### 6.4.3 Significance of Effect

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Overall, the significance of consequence is considered to be minor, and the frequency of occurrence is considered to be remote. Therefore, the effect is of broadly acceptable significance.

## 6.5 Vessel Displacement Leading to Increase in the Risk of Vessel-to-Vessel Collision Between Third-Party Vessels

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Project activities may displace third-party vessels, increasing the risk of collision between them. In particular, these vessels will be required to deviate around the 500 m safety zone around the MODU.

Vessel displacement is most likely to increase vessel encounters in high-density shipping areas. The highest density shipping was recorded at the eastern region of the study area, while Asopus-1 was sited in an area of lower density (see **Error! Reference source not found.**). In addition, the operation is planned to take place during early 2027 (subject to approvals and project readiness) which the baseline has indicated is a quieter time of year (see Section **Error! Reference source not found.**).

The assessment of vessels within 1 nm of CPA to Asopus-1 (see Section 5.6) indicated commercial vessel activity, primarily from containerships and LPG tankers, although tracks from fishing vessels and recreational craft were also recorded<sup>1</sup>. An average of one vessel transit every one to two days was recorded within 1 nm of the Asopus-1 location over the 12-month period. The presence of Asopus-1 and associated safety zone will lead to displacement of these vessels, which in turn may lead to an increase in vessel encounters (and so vessel to vessel collision risk).

Considering vessel traffic passing in proximity to Asopus-1 within the 12-month period, an average of one vessel every one to two days was recorded within 1 nm, with this number decreasing to one vessel every two to three days for vessels within 0.5 nm. Noting that approximately 14 unique transits per day routed north-

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<sup>1</sup> Noting that the latter may be under-represented as they are not required to broadcast on AIS

south to the east of Asopus-1, vessels within 1 nm deviating to the east would represent a relatively low increase in vessel traffic numbers, and so potential for an encounter to develop.

In addition, effective dissemination of information will ensure that vessels are aware of ongoing activities, allowing vessel Masters to carry out suitable passage planning prior to departure. As noted in Section 6.4, any displacement to routing traffic is considered to be of relatively low magnitude, with appropriate searoom available for deviation dependent on the choice of the vessel Master. Vessels are also expected to comply with international and flag-state regulations (including COLREGs (Ref. ii) and SOLAS (Ref. xiii)) to further reduce the potential for collision.

One PSV will normally remain beside the MODU (Section **Error! Reference source not found.**) and therefore may be in a position to render assistance under SOLAS in the event of a collision between third-party vessels.

### 6.5.1 Severity of Consequence

The most likely consequence of displacement leading to an increase in third-party vessel-to-vessel collisions is an increase in encounters resulting in low-impact collisions. The worst-case scenario may involve a high-impact collision event leading to vessel damage, PLL, and pollution.

Overall, the severity of consequence is therefore considered to be moderate.

### 6.5.2 Frequency of Occurrence

Due to the low incidence of vessel traffic in close proximity to Asopus-1 and available searoom to the east and west, vessel encounters are anticipated to remain infrequent. In addition, any increase in encounter frequency would be limited to the short-term operations period, which is up to 90 days.

The frequency of occurrence is therefore considered to be extremely unlikely.

### 6.5.3 Significance of Effect

Overall, the significance of consequence is considered to be moderate, and the frequency of occurrence is considered to be extremely unlikely. Therefore, the effect is of broadly acceptable significance.

## 6.6 FSA Summary

A summary of the risk assessment of shipping and navigation hazards associated with the Project is presented in Table 6.1, including (per hazard), frequency of occurrence, severity of consequence and resulting significance of risk (as per **Error! Reference source not found.**).

Table 6.1 Summary of the Hazard Assessment

| HAZARD                                                  | SEVERITY OF CONSEQUENCE | FREQUENCY OF OCCURRENCE | SIGNIFICANCE OF RISK |
|---------------------------------------------------------|-------------------------|-------------------------|----------------------|
| Collision of a third-party vessel with a project vessel | Moderate                | Extremely unlikely      | Broadly acceptable   |

| HAZARD                                                                                                           | SEVERITY OF CONSEQUENCE | FREQUENCY OF OCCURRENCE | SIGNIFICANCE OF RISK |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------|----------------------|
| Works causing disruption to passing vessel routeing/timetables                                                   | Minor                   | Remote                  | Broadly acceptable   |
| Vessel displacement leading to an increase in the risk of vessel-to vessel collision between third-party vessels | Moderate                | Extremely unlikely      | Broadly acceptable   |

## 7 Summary

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This report presented a baseline analysis of 12 months of AIS data recorded between 01 May 2025 and 30 April 2026 within 10 nm of the Asopus-1 exploration well. Key navigational features in the vicinity have also been identified and assessed.

Navigational features in proximity to Asopus-1 include an ODAS buoy approximately 7.5 nm to the northwest, explosives ground 6.6 nm to the north, and various subsea cables (1.1 nm to the west at the closest).

The full 12 months of AIS analysis indicated an average of 18 unique vessels per day within the study area. The most common vessel type was cargo vessels at 62%, followed by tankers (20%), passenger vessels (11%) and recreational vessels ( $\leq 24$  m in length) (6%). The overall average vessel length was 171 m and average speed was 12.7 kt.

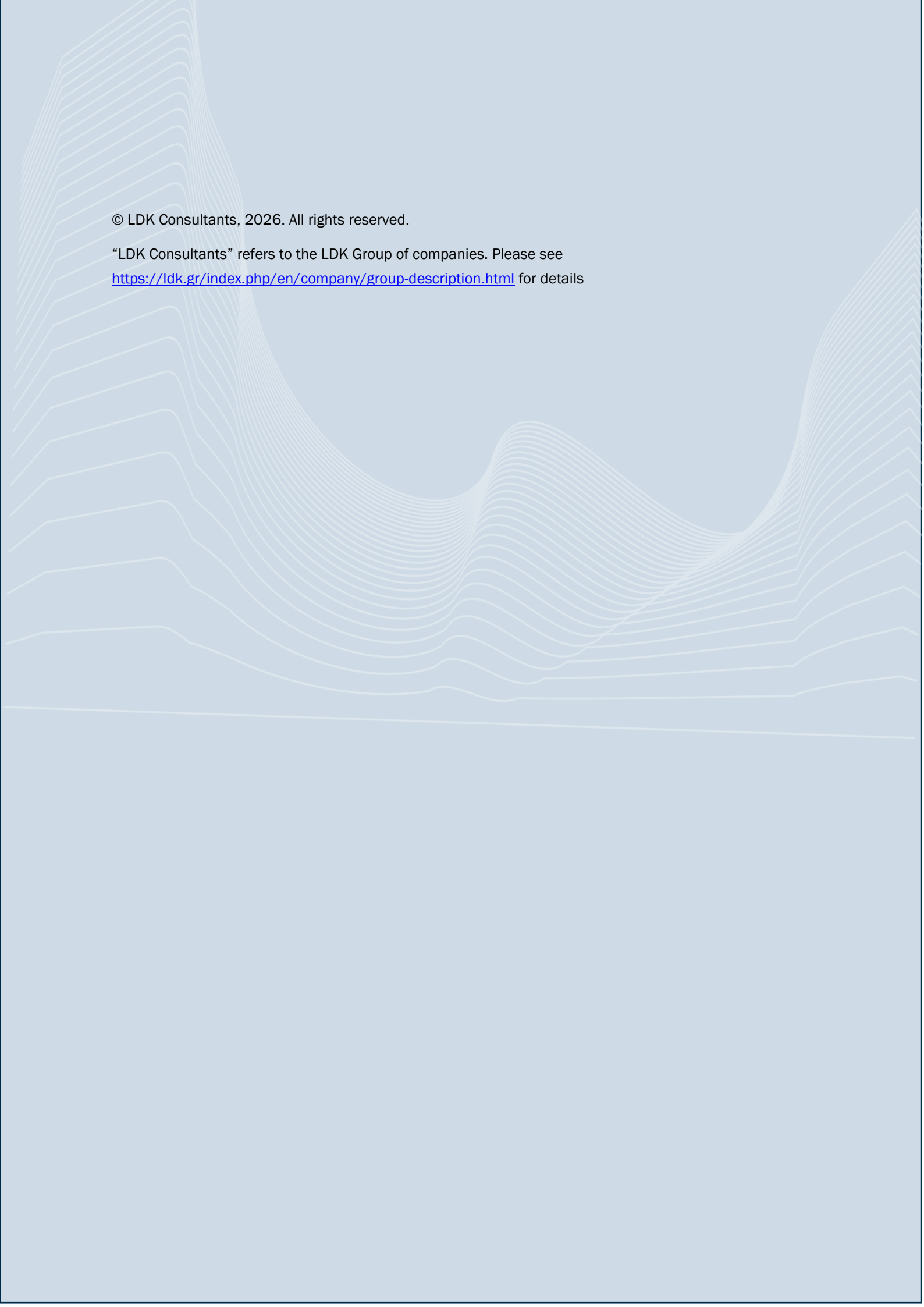
Regularly scheduled routeing was recorded from various RoRo operators in the area, with the vast majority of related traffic transiting between Italian and Turkish ports. No regular RoPax routeing was recorded, although cruise liner activity and transits from recreational vessels ( $>24$  m in length), were prevalent in distinct patterns. Vessels recorded passing in close proximity to Asopus-1 were predominantly tankers and containerships. An average of one vessel every one to two days was recorded as passing within 1 nm of Asopus-1 over the 12-month period.

Using the baseline data and lessons learnt from existing offshore developments, shipping and navigation hazards have been identified and assessed. The significance of risk has been determined to be broadly acceptable for all shipping and navigation hazards assessed, with all risks therefore assessed as ALARP. This assumes the mitigations detailed in Section 6.1 are implemented.

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