

This is a published notice on the Find a Tender service: <https://www.find-tender.service.gov.uk/Notice/086534-2025>

Contract

Wyville Thomson Ridge (0924S) Imagery Analysis

JNCC SUPPORT CO

UK7: Contract details notice - Procurement Act 2023 - [view information about notice types](#)

Notice identifier: 2025/S 000-086534

Procurement identifier (OCID): ocds-h6vhtk-05fe73

Published 31 December 2025, 10:42am

Scope

Reference

C25-0877-2114

Description

JNCC wishes to commission a contract to undertake the analysis of seabed imagery (still images and video) collected on the 0924S survey from a drop-frame camera. Seabed imagery will be analysed using the image and video annotation software BIIGLE . During 0924S, imagery data was collected for MPA monitoring purposes.

The total number of sampled drop-camera stations was 80; circa 38 hours of high-definition video. Due to technical difficulties, the camera had to be restarted during 4 transects, resulting in multiple videos for these transects, giving a total of 85 videos to be analysed. Videos from one transect should be analysed together. A total of 3,530 still images were collected across 79 of the drop-camera stations.

More detailed metadata will be provided including information from logs and the survey report. Throughout the tender process, guest access to the 2024 BIIGLE project will be

provided to allow review of the available images. The successful contractor will be provided with access to the 2024 BIIGLE project and the annotated 2018 WTR seabed imagery to aid with identification.

Please note that experience in the identification of deep-sea taxa is required to complete this contract.

The bid submission should clearly state which of the following options are being bid for, please provide a quote for either option 1, 2 or 3:

Option 1

Video analysis, please provide a quote for the cost and breakdown per video hour

Option 2

Stills analysis, please provide a quote for the cost and breakdown of the number of stills

Option 3

Video analysis and stills analysis, please provide a quote for complete analysis of all imagery (video and stills), breaking down the costs as per options 1 and 2.

3. Project Background

JNCC and the Marine Directorate of the Scottish Government (MD) conducted a survey aboard MRV Scotia (0924S) in 2024 to gather evidence to monitor Wyville Thomson Ridge Special Area of Conservation (WTR) (Figure 1) and inform assessment of the extent and condition of the designated features of the site. A survey of WTR was conducted in 2017/18, but the 0924S survey will form the first monitoring point (T0) in the time series at WTR.

WTR is located to the northwest of mainland Scotland at the northern end of the Rockall Trough, with the closest land approximately 77 km away at Rona, Scotland. The site has an area of 1,740 km² and a depth range of 350 m to 1000 m.

Table 1. Designated features of Wyville Thomson Ridge SAC.

The UK has a greater range and extent of rocky reefs than biogenic reefs, and rocky reefs are extremely variable in their structure and in the communities they support (Brown et al. 1997). They range from vertical rock walls to horizontal ledges, sloping or flat bed rock, broken rock, boulder fields, and aggregations of cobbles. A variety of invertebrates can inhabit rocky reefs, including sponges, corals, and sea squirts, which attach to the rock surface. Mobile species, such as fish, lobsters and crustaceans, may also use rocky reefs

for shelter. Both types of rocky reefs - bedrock reefs and stony reefs - are protected features within WTR.

Bedrock reef

Bedrock reef occurs where the bedrock that underlies surface sediments on the seafloor arises from the surrounding seabed, creating a habitat that is colonised by many different marine animals and plants. Bedrock is consolidated rock and can be composed of most rock types (granite, limestone, sandstone etc.).

Stony reef

Stony reef occurs where 10% or more of the seabed substratum are composed of particles greater than 64 mm across, i.e. cobbles and boulders (European Commission 2013a). The remaining supporting 'matrix' could be of smaller sized material. The reef may be consistent in its coverage or it may form patches with intervening areas of finer sediment. Epifaunal species dominate biological cover. Stony reef should be topographically distinct from the surrounding sea floor with a minimum area of 25 m² (this also applies to the total area of a patchy reef) (Irving, 2009).

Iceberg ploughmarks can be considered as a special type of stony reef. They occur along the UK continental shelf edge off northern and western Scotland, including in WTR (Irving 2009). Iceberg 'ploughmarks' consist of ridges of boulders, cobbles and gravel where finer sediments have been winnowed away by high energy currents at the site, interspersed with finer sediment troughs up to 5 -10 m deep (Masson et al., 2000). They are thought to have been formed by the ploughing movement of icebergs through the seabed at the end of the last ice age. The iceberg ploughmarks in WTR are stable and consolidated and have been classified as stony reef (Irving 2009).

Although the Irving (2009) stony reef criteria can be applied in WTR, as iceberg ploughmark Annex I Reef is a special case of Annex I stony reef, regardless of the substrate present, the area identified as iceberg ploughmarks is considered to be Annex I Reef. The patchy nature of stony substrate within the wider iceberg ploughmark area results in a small-scale mosaic of stony and non-stony substrate of the seabed. Hence, small scale variation in the presence or absence of stony reef substratum can occur within the wider Annex I Reef area.

Biogenic reef

Biogenic reefs are made up of hard matter, formed by animals themselves. The reef structure can be composed of the reef-building organism (including its tubes or shells), or it may also be composed of sediments, stones and shells that the organism has bonded together. In the deep sea, the main species that form biogenic reefs include cold-water corals (e.g. *Lophelia pertusa*, *Madrepora oculata* and *Solenosmilia variabilis*). Biogenic

reefs can provide complex habitats for species assemblages, such as for sponges, bryozoans, and sea squirts.

WTR 2024 Survey (0924S)

The 0924S survey departed from Aberdeen on the 23rd of July 2024 and returned to Aberdeen on the 12th of August 2024. Data from this survey will form the first time point (T0) of a monitoring series. The monitoring aims and objectives of survey 0924S relating to seabed imagery are:

1. Collect evidence to inform type one (sentinel) monitoring of the structure and function of Annex I Reef at WTR SAC.
2. Collect evidence to inform the physical extent and distribution of the Annex I Reef within WTR SAC.

Imagery was collected with a drop-frame camera (DC) system, towed by the vessel at a target speed of 0.5 knots and a target altitude of 1 m.

The following instruments were mounted on the drop-frame camera:

- Kongsberg OE 14-408 digital stills camera (10 MP) mounted in a planar (downwards facing) orientation
- High definition SubC 1 Alpha video camera in a planar orientation
- Four-point (green) laser-scaling with the bottom two set to 67 mm spacing
- Additionally: four SEALED lamps, Valeport CTD, Ultra-short Baseline (USBL) acoustic positioning beacon

Sampling during the 0924S survey was stratified by zones and depth. Seven zones were selected for the purposes of sampling design, with seven depth contours chosen from within these zones (Figure 2).

Video and stills imagery were collected from 80 stations across the seven depth bands. The 300, 400, 450 and 800 m depth bands were prioritised and all stations at these depths, across all zones, were sampled. It was not possible to sample the 500, 600 and 700 m depth bands in all zones during the survey (Figure 3).

At each station, the camera tow was continued until a suitable number of images had been collected. As a result, the length of video tows varies. In total, 38 hours and 13 minutes of video and 3,530 still images will be analysed (Table 2). All imagery will be made available via a BIIGLE project. Access to the imagery via the BIIGLE project can be

provided on request to aid in the tendering process (see contacts for technical information on page 1) and more detailed metadata will be provided to the successful contractor following contract award.

The following will be provided to the successful contractor:

1. Access to the 2024 BIIGLE project with all stills, videos and label trees.
2. Associated metadata including USBL positions
3. 2024 WTR cruise report
4. Epibiota Quality Assurance Framework Proforma spreadsheets
5. Access to the 2017/18 WTR annotation catalogue in BIIGLE

4. Project Objectives

JNCC wishes to commission a contract to undertake the analysis of seabed imagery including video and still imagery from the 0924S survey as set out in the sections below. Analysis of video should be completed first as a priority. The successful contractor will:

- Undertake the analysis as set out below, adhering to the NMBAQC Epibiota interpretation guidelines (Turner et al., 2016).
- Use BIIGLE to annotate video and still images as described below. Alternative image annotation software may be used subject to agreement with the project officer.
- Ensure that still images and video references used in analysis outputs are identical to those used in the naming of the original media to enable future reconciliation between data and media. If identical naming is not possible, a suitable alternative should be sought with JNCC.
- Produce a final analysis report including, at a minimum, sections detailing the methodology, results including results of Annex I Stony Reef analysis, and details of all QA work undertaken with any remedial action deemed necessary. The report should be no longer than 15,000 words including all tables and appendices and be provided electronically via email as a Microsoft Word document.
- Provide substrate and taxonomic image reference collections for each substrate type and taxon identified from imagery.
- (Costed extra) Create a subset of still images annotated in a way suitable to act as training data for artificial intelligence model training as described below

Contract 1

Supplier

- Mara Consultants Limited

Contract value

- £35,470 excluding VAT
- £42,564 including VAT

Below the relevant threshold

Date signed

8 December 2025

Contract dates

- 8 December 2025 to 23 March 2026
- 3 months, 16 days

Main procurement category

Services

CPV classifications

- 73000000 - Research and development services and related consultancy services

Contract locations

- UK - United Kingdom

Procedure

Procedure type

Below threshold - unknown

Supplier

Mara Consultants Limited

31 Malleny Millgate, Edinburgh, EH14 7AY

Edinburgh

EH14 7AY

United Kingdom

Email: info@maraconsultants.co.uk

Region: UKM75 - Edinburgh, City of

Small or medium-sized enterprise (SME): No

Voluntary, community or social enterprise (VCSE): No

Contract 1

Contracting authority

JNCC SUPPORT CO

- Companies House: 05380206
- Public Procurement Organisation Number: PRPL-6981-TDJT

QUAY HOUSE, 2 EAST STATION ROAD, FLETTON QUAYS

PETERBOROUGH

PE2 8YY

United Kingdom

Email: contractqueries@jncc.gov.uk

Region: UKH11 - Peterborough

Organisation type: Public authority - central government

Devolved regulations that apply: Scotland

