

RESEARCH VESSEL PROGRAMME

RV CEFAS ENDEAVOUR
Survey: C END 13 - 2017.

STAFF:

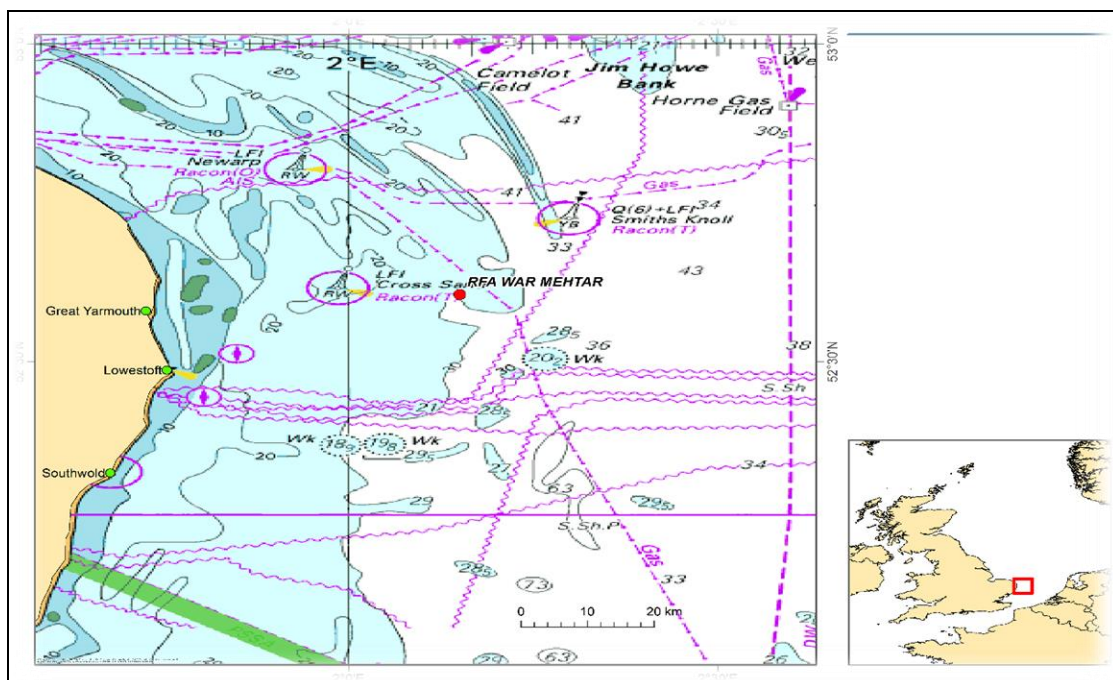
Name	Role	Cabin	Shift
Marc Whybrow	SIC	SIC	07:00 – 19:00
Peter Mitchell	2IC/Mapping Lead	B1	00:00 – 12:00
Freya Goodsir	Data Manager	B2	07:00 – 19:00
Sue Ware	Shift Lead	C1	12:00 – 00:00
Paul McIlwaine	Shift Lead	D2	00:00 – 12:00
Anna Downie	Mapping Lead	C2	12:00 – 00:00
Bill Meadows	Hydrographer/Tech	C5	12:00 – 00:00
Annie Brown	Hydrographer/Tech	D3	00:00 – 12:00
Eric Fitton	CTD/Water Lead	D4	00:00 – 12:00
Briony Silburn	CTD/Water Lead	C3	12:00 – 00:00

DURATION: 3 days

MOBILISE: Lowestoft 28th June 2017

DEMOBILISE: Lowestoft 30th June 2017

LOCATION: Current position of RFA War Mehtar wreck (WGS 1984: 52.60605210° N, 2.14845118° E)



AIMS & Objectives: MoD On-site Wreck Environmental Survey

1. Wreck integrity assessment/validation

The first objective of the survey is to provide verification that the position and condition of the wreck structure at the time of environmental survey remains in line with that described in the wreck integrity assessment document.

2. Habitat characterisation (including contaminant load assessment) of the wreck site and surrounding area

This element of survey will utilise the Stage II On-site Environmental Survey Methodology (MOD 004). The survey will target an area of 3 km x 3 km around the centroid of the wreck of the RFA *War Mehtar*, and will include a broadscale benthic habitat characterisation with targeted sampling for contaminants in the water column and biota. The wider environmental survey around the wreck site is intended: 1) to improve our understanding of the potential risk of oil release and associated impact that may have on any features of ecological importance, and 2) to act as a baseline for any subsequent monitoring that may occur prior to, during and/or after any remedial action (at Stage III of the process). Targeted sampling will be carried out as appropriate to further our understanding of the 'contaminant load' of the sediment, water and biota surrounding the wreck to help identify the occurrence of current or recent leaks.

PLAN:

The vessel will leave Lowestoft on the 28th June 2017 to transit to the location of the RFA *War Mehtar* wreck. On arrival, the survey will begin with a calibration of multibeam echosounder (MBES). Following successful calibration, acoustic survey operations will commence with full cover MBES survey of the 3 km x 3 km survey extent centred on the location of the wreck. On completion of the wider area MBES survey, a high frequency, targeted acoustic survey covering the wreck site will be carried out. MBES data will be processed on board to provide mapping leads with bathymetry and backscatter mosaics of the 3 km x 3 km survey extent. The onboard habitat mappers will provide a preliminary habitat map on delivery of the MBES products, which will be used to inform the design of the seabed characterisation element of survey.

Following the acoustic survey the rosette will be deployed at a subset of stations along two predefined survey transects, one aligned with the predominant tidal direction and one perpendicular to the predominant tidal direction, running over the wreck site, to obtain in situ fluorimetry profiles. Water samples will be collected with the rosette as directed by the real-time results of the fluorimetry profiles.

Grab samples and seabed imagery will be collected at locations determined on board, as part of the adaptive seabed characterisation survey strategy. Grab samples will be collected at up to 25 stations using either the 0.1m² mini Hamon grab or the Day grab according to expected sediment type. A subset of the Day grab stations will also be sampled for sediment contaminants. Seabed imagery will be collected along planned camera tows at up to 25 stations, prioritising any hard substrate identified in the preliminary habitat map. SOL and EOL will be determined based on the map output. In situ fluorimetry measurements of vertical oil concentration will be obtained at the additional benthic sampling stations as appropriate to assist in informing the requirement for further water sampling and to determine the presence of local contaminant gradients.

The vessel will leave the survey site in advance of returning to Lowestoft port on the 30th June 2017.

Marc Whybrow
Scientist in Charge
26th April 2017

INITIALLED:

Anna Downie
Marc Whybrow

DISTRIBUTION:

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Briony Silburn
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P&O Maritime
BODC