

## RESEARCH VESSEL PROGRAMME (V4)

### RV CEFAS ENDEAVOUR Expedition code: C END 20 - 2018

#### STAFF:

Name	Role	Shift
Paul McIlwaine	SIC	06:00 – 18:00
Ian Holmes	Fishing SIC	06:00 – 18:00
Gemma Kiff	Data Manager	06:00 – 18:00
Hayden Close	Shift Lead	12:00 – 24:00
Marc Whybrow	Shift Lead & Marine Instrument Technician	24:00 – 12:00
Axayacatl Molina-Ramirez	Marine Instrument Technician	12:00 – 24:00
Steve Shaw	Deck Master	06:00 – 18:00
Daniel Wood	Survey Scientist	12:00 – 24:00
Alison Pettafor	MBES Lead	24:00 – 12:00
Peter Mitchell	MBES Interpretation and Station Planning	12:00 – 24:00
Dave Clare	Benthic Lead	24:00 – 12:00
Jo Smith	Survey Scientist	06:00 – 06:00
James Pettigrew	Plankton Lead	24:00 – 12:00
Eric Fitton	Oceanographic Lead	24:00 – 12:00
Louise Brown	Survey Scientist	Float
Briony Silburn	Survey Scientist	Float

**DURATION:** 10<sup>th</sup> – 16<sup>th</sup> December 2018

#### LOCATION:

The area of interest for the duration of the survey is within the WGINOSE UK N Offshore sea area, as bounded by the northern extent of English waters. A contingency area of interest (in case of poor weather) is within the UK N Coast sea area (Figure 1).

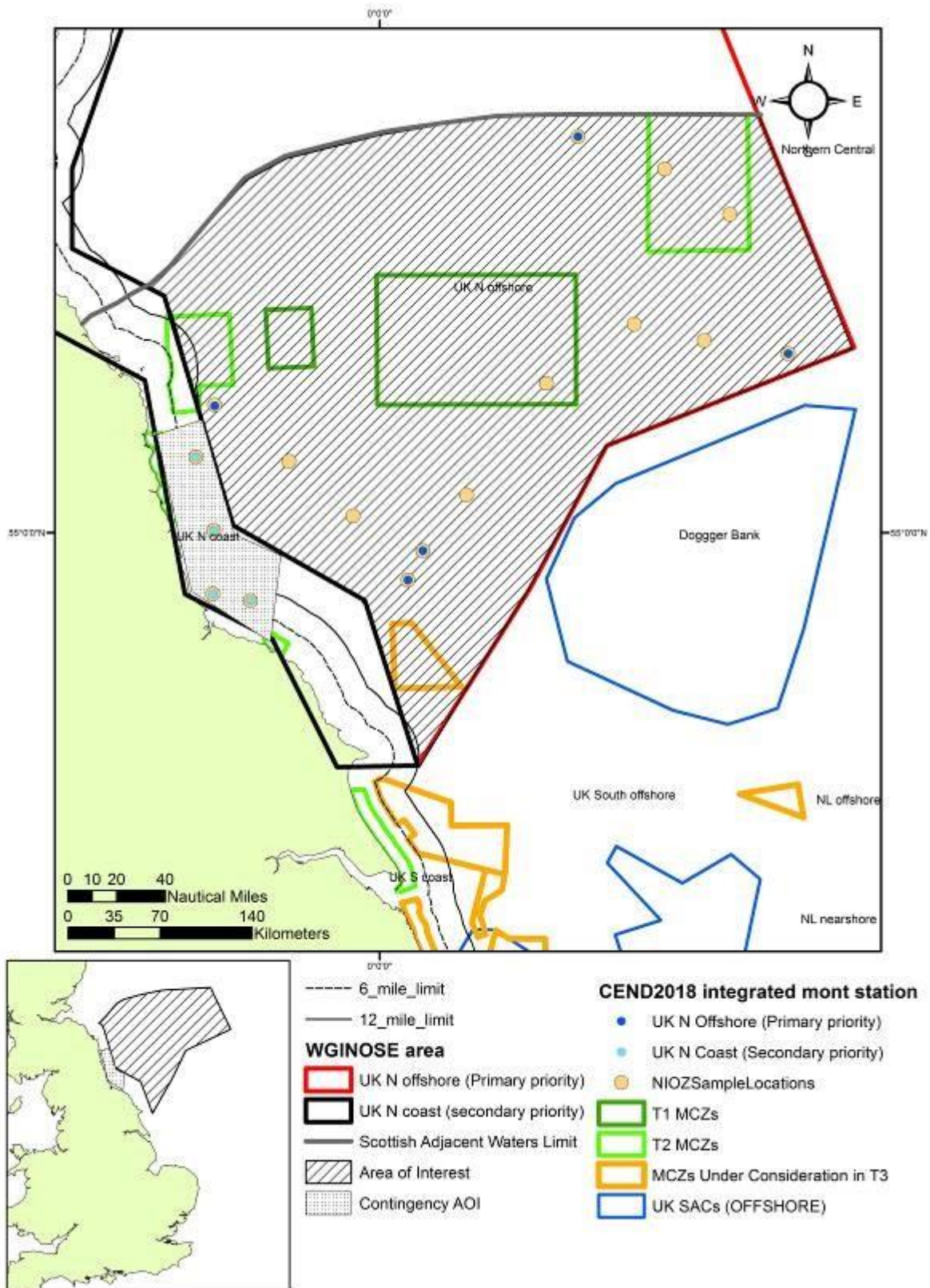


Figure 1 Showing the location of the UK N offshore (hatched lines) area of interest and primary sampling locations (dark blue and orange circles) within the UK N offshore area of interest (dot shaded). Contingency stations are shown as light blue circles within the UK N coast sea area.

## **AIMS:**

This expedition is concerned with two main objectives, 1) conducting an integrated monitoring survey of the 'UK North offshore' sea area (from the Working Group on Integrated Assessments of the North Sea) and 2) conducting a seabed biogeochemical survey to acquire sediment samples for use in a variety of collaborative projects (University of East Anglia, Cefas, Leeds University).

## **PLAN:**

The vessel will be mobilised on 10<sup>th</sup> Dec 2018. Equipment, consumables and chemicals will be loaded by POMS and Cefas teams as per the distributed gear list.

Vessel inductions are scheduled for 08:00 GMT on 10<sup>th</sup> Dec 2018 for up to 16 (TBC) survey staff.

The vessel will sail on the HW tide of Monday 10<sup>th</sup> Dec. 2018 (HW 11:20 GMT). Arrival at the first location will depend on the weather conditions and the choice of commencing objective e.g. UK N coast or offshore area of interest AND integrated monitoring (IM) station or biogeochemistry station. A total of five IM stations will be sampled throughout the survey (see below plan for sequence and rationale). A total of 13 or 5 sediment sampling stations will be surveyed with the NIOZ from the UK N offshore OR UK N coast areas respectively.

A tool box talk will be carried out, discussing the safe deployment, recovery and deck processing procedure, in advance of each watch encountering each survey gear.

The vessel will return to the Lowestoft quay on the HW tide (16:46 GMT) of the 16<sup>th</sup> Dec. 2018.

## **Sequence of events**

Fishing will be restricted to daylight hours and the sequence of gears deployed will aim to maximise efficiencies around vessel transits and deployment restrictions. The expected deployment routine, subject to weather conditions and time available at each IM station (blue circles in

Figure 1) will be:

1. Acquire MBES along orientation of planned fishing tow
  - Process MBES data and plan GT stations
2. Deploy GOV with CTD (30 mins per tow)
  - Process trawl catch and download CTD info
3. Deploy Zooplankton ring nets (with CTD), ESM2 logger and Niskin within 1 nautical mile of end of GOV tow
  - a. Preserve zooplankton samples, process water samples and download CTD data
  - b. Collect and preserve phytoplankton sample
4. Deploy 0.1 m<sup>2</sup> Hamon Grab
  - Process sediment sample

5. Deploy camera sledge
  - Record seabed imagery
6. Deploy SPI camera
  - Acquire sediment profile imagery
7. Deploy Scientific 2 m 'Jennings' Beam Trawl
  - Process trawl catch
8. Deploy NIOZ core
  - Process sediment sample(s)

The expected deployment routine, subject to weather conditions and time available at each BIOGEOCHEMISTRY station (orange circles in Figure 1) will be:

1. Deploy NIOZ core (up to three deployments per station within the 50 m radius bullring)
  - Process sediment sample(s)
2. Deploy Day grab
  - Process sediment samples
3. Deploy Shipek grab
  - Process sediment samples
4. Deploy SPI
  - Acquire sediment profile images

**GEAR:**

Please see the detailed gear list for a full inventory of gears and equipment for expedition C END 20 - 2018.

Paul McIlwaine  
Scientist in Charge  
30 November 2018

INITIALLED: PMcI

DISTRIBUTION:

POMS (shore)  
RV Cefas Endeavour Master  
MIST Team,  
Survey Scientists  
BODC