

RESEARCH VESSEL PROGRAMME

RV CEFAS ENDEAVOUR
Expedition code: C END 06 - 2018

STAFF:

Name	Role	Shift
Paul McIlwaine	SIC	06:00 – 18:00
Daniel Wood	2IC	06:00 – 18:00
Gemma Kiff	Data Manager	06:00 – 18:00
Sara Stones	Shift Lead	12:00 – 24:00
Briony Silburn	Shift Lead	24:00 – 12:00
Andrew Bodle	Marine Instrument Technician	12:00 – 24:00
Axayacatl Molina-Ramirez	Marine Instrument Technician	24:00 – 12:00
James Albrecht	Survey Scientist	12:00 – 24:00
Chris McCabe	Survey Scientist	24:00 – 12:00
Anna Downie	Survey Scientist	12:00 – 24:00
Dave Clare	Survey Scientist	12:00 – 24:00
Stef Bolam	Survey Scientist	24:00 – 12:00
Malgorzata Wilczynska	Survey Scientist	24:00 – 12:00
Charlotte Reeve	Survey Scientist	24:00 – 12:00
Rebecca Faulkner	Survey Scientist	12:00 – 24:00
Georgia Robson	Survey Scientist	24:00 – 12:00

DURATION: 12 Days - 23rd April 2018 – 4th May 2018

LOCATION:

Two areas of interest will be visited during expedition CEND0618; namely Farnes East Marine Conservation Zone (MCZ) and North East of Farnes Deep MCZ (Figure 1). The first gear deployment will be in the North East of Farnes Deep MCZ (55.704N 0.595W). Station locations are to be added to the Tower Navigation software in advance of sailing by the SIC and will also be available for use in Transas if required. Two contingency sites may be visited if operations at the primary survey objective sites are completed early.

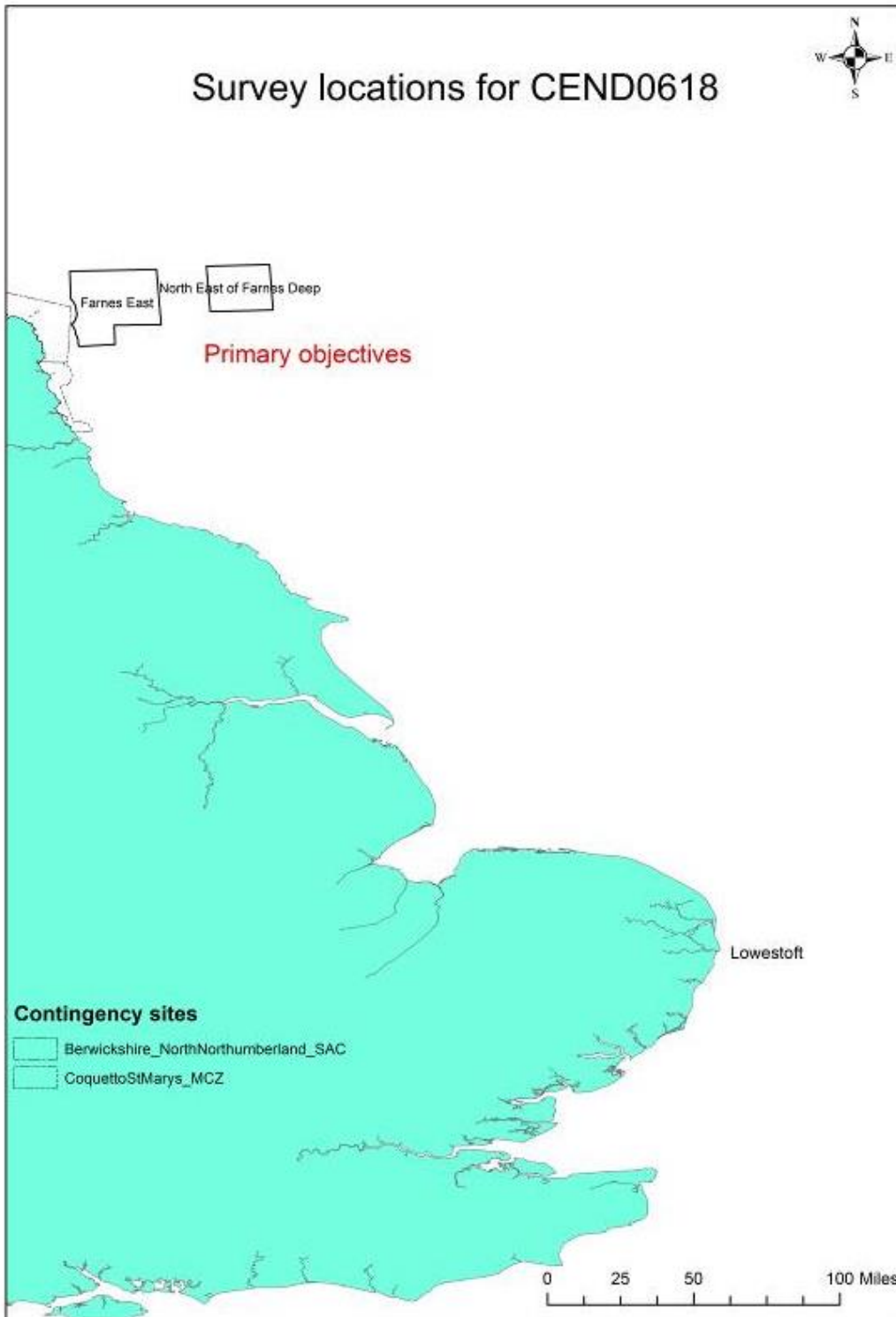


Figure 1 Showing the location of the two primary survey sites; Farnes East and North East of Farnes Deep MCZs (labelled and solid line). Contingency sites (broken lines) are included in the permissions and objectives for the survey and may be surveyed using sediment samplers or cameras.

AIMS:

The aim of this expedition is to acquire information to contribute to the development of monitoring time-series' for the Farnes East and North East Farnes Deep MCZs. The operations will be conducted, and the resulting data processed, to gather evidence on the structure, function and condition of each sites protected features. Seabed imagery and sediment samples will be collected to acquire quantitative and semi-quantitative infaunal and epifaunal community data to enable sentinel ('Type 1') monitoring of the subtidal sediment features, the FOCI and SOCI features (Sea-pen and burrowing megafauna communities and Ocean Quahog), and circalittoral rock features present and designated in each site. Seabed imagery will be acquired from the sediment features using the camera sledge while the circalittoral rock features will be surveyed using the drop frame mounted camera system. Additional parameters will be recorded using a data logger in conjunction with both camera systems to further our understanding of the environmental conditions associated with each feature surveyed. The entire Farnes East MCZ will be surveyed while the area of interest in the North East Farnes Deep MCZ is in the south-eastern corner of the site and immediately outside the site boundary.

PLAN:

The vessel will be mobilised on or before 20th April 2018. Equipment, consumables and chemicals will be loaded by POMS and Cefas teams as per the distributed gear list.

Vessel inductions are scheduled for 11:00 BST on Monday 23rd April 2018 for eight (TBC) survey staff.

The vessel will sail on the HW tide of Monday 23rd April 2018 (HW 16:03 BST) and arrive at the North East Farnes Deep site at approximately midday on the 24th April 2018 to conduct a sediment sampling survey using the 'mini' Hamon grab. A total of 60 stations will be sampled in replicate (n=5) for macrofauna and particle size distribution analyses. A tool box talk will be carried out, discussing the safe deployment, recovery and deck processing procedure, in advance of each watch encountering the gear.

Following successful completion of the sediment sampling survey at the North East Farnes Deep MCZ, and a short transit to the neighbouring Farnes East MCZ, a seabed imagery survey will be conducted using the sledge mounted camera, telemetry and sensor system in the mud features at the southern end of the Farnes East MCZ site. Sediment samples will be also acquired from each seabed imagery station (n=90). Note, four of these stations will be sampled for sediment and fauna using the 'mini' Hamon grab with increased replication as they are 'sentinel' stations and part of the sedimentary broad scale habitat monitoring survey.

A total of 16 sentinel stations will be surveyed using the 'mini' Hamon grab (two stations per sedimentary habitat) with increased replication. Up to 10 samples will acquired from each station (100m diameter target) for macrofauna and particle size distribution analyses.

Seabed imagery using the drop frame OR sledge mounted camera will be conducted at each of these 16 stations if time permits. Seabed imagery will also be acquired from an additional 12 locations, identified as rock, using the drop frame camera. Sledge operations will be conducted first, followed by drop frame operations.

The vessel will return to the Lowestoft quay on the HW tide (13:00 BST) of the 4th May 2018.

GEAR:

Please see the detailed gear list for a full inventory of gears and equipment for expedition CEND0618. In summary, seabed imagery will be acquired using the camera and telemetry system mounted on either a drop frame or sledge configuration and sediment samples will be collected using the 'mini' 0.1 m² Hamon grab.

Paul McIlwaine
Scientist in Charge
05 April 2018

INITIALLED: PMcI

DISTRIBUTION:

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