

**CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE SCIENCE
LOWESTOFT LABORATORY, SUFFOLK, NR33 0HT**

2013 RESEARCH VESSEL PROGRAMME

PROGRAMME: Cefas Endeavour Survey: 22/13.

STAFF:

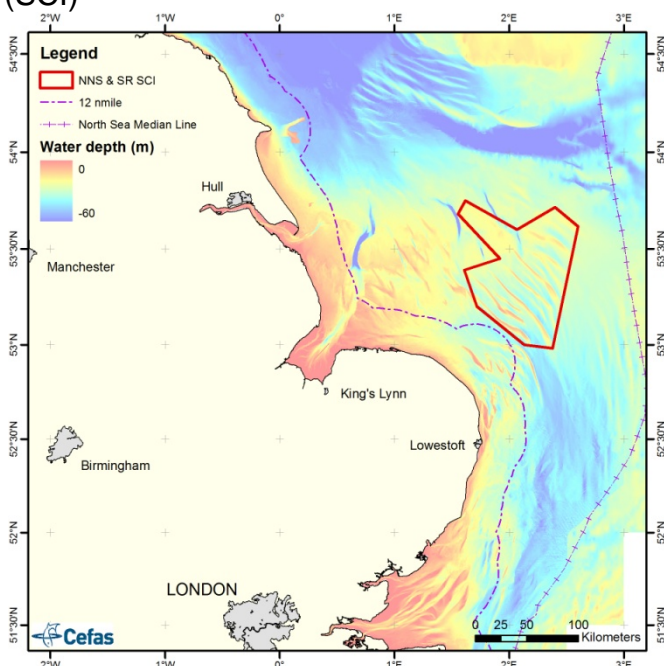
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DURATION:

Monday 4th November - Monday 11th November 2013 (8 days)

LOCATION:

North Norfolk Sandbanks and Saturn Reef (NNS & SR) Site of Community Interest (SCI)



The North Norfolk Sandbanks and Saturn Reef site comprises i) a series of ten main sandbanks and associated fragmented smaller banks formed as a result of tidal processes; and ii) areas of *Sabellaria spinulosa* biogenic reef.

The North Norfolk Sandbanks are the most extensive example of the offshore linear ridge sandbank type in UK waters. They extend from about 40km (22 nautical miles) off the north-east coast of Norfolk out to approximately 110km (60n miles). The banks included are: Leman, Ower, Inner, Well, Broken, Swarte and four banks called, collectively, the Indefatigables. The summits of the banks are in water shallower than 20m below Chart Datum, and the flanks of the banks extend into waters up to 40m deep. The banks support communities of invertebrates which are typical of sandy sediments in the southern North Sea such as polychaete worms, isopods, crabs and starfish.

The Saturn *Sabellaria spinulosa* biogenic reef, first discovered in 2002, consists of thousands of fragile sand-tubes made by ross worms (polychaetes) which have consolidated together to create a solid structure rising above the seabed. Reefs formed by *Sabellaria* allow the settlement of other species not found in adjacent habitats leading to a diverse community of epifaunal and infaunal species. In 2003, the Saturn reef covered an area approximately 750m by 500m just to the south of Swarte Bank.

AIMS:

This survey is part of a 3 week investigation at the North Norfolk Sandbanks and Saturn Reef SCI. During the first week (Survey 22/13) there is the additional aim to build the knowledge of JNCC staff on how to undertake survey work.

1. The aim on this survey is to train a number of participating JNCC survey staff in order that they are able to lead offshore surveys for JNCC in the future. The training element of the cruise will be led by JNCC staff, with support from the Cefas staff in certain instances, such as TOWER training or taxonomic identification.
2. The aim of this survey is to gather additional seabed data to assist with the development of management advice. Objectives can be broken down in terms of priority:
 - a. Survey areas of existing known *Sabellaria spinulosa* reef or areas where it has previously been found in order to better delineate the Annex I feature and characterise associated fauna;
 - b. Survey areas where *Sabellaria spinulosa* reef is predicted to occur based on observations from (a) in order to better delineate the Annex I feature and characterise associated fauna; and
 - c. Survey areas of sandbank to characterise distribution of infauna communities in order to better understand sensitivities to demersal fishing pressures.

PLAN:

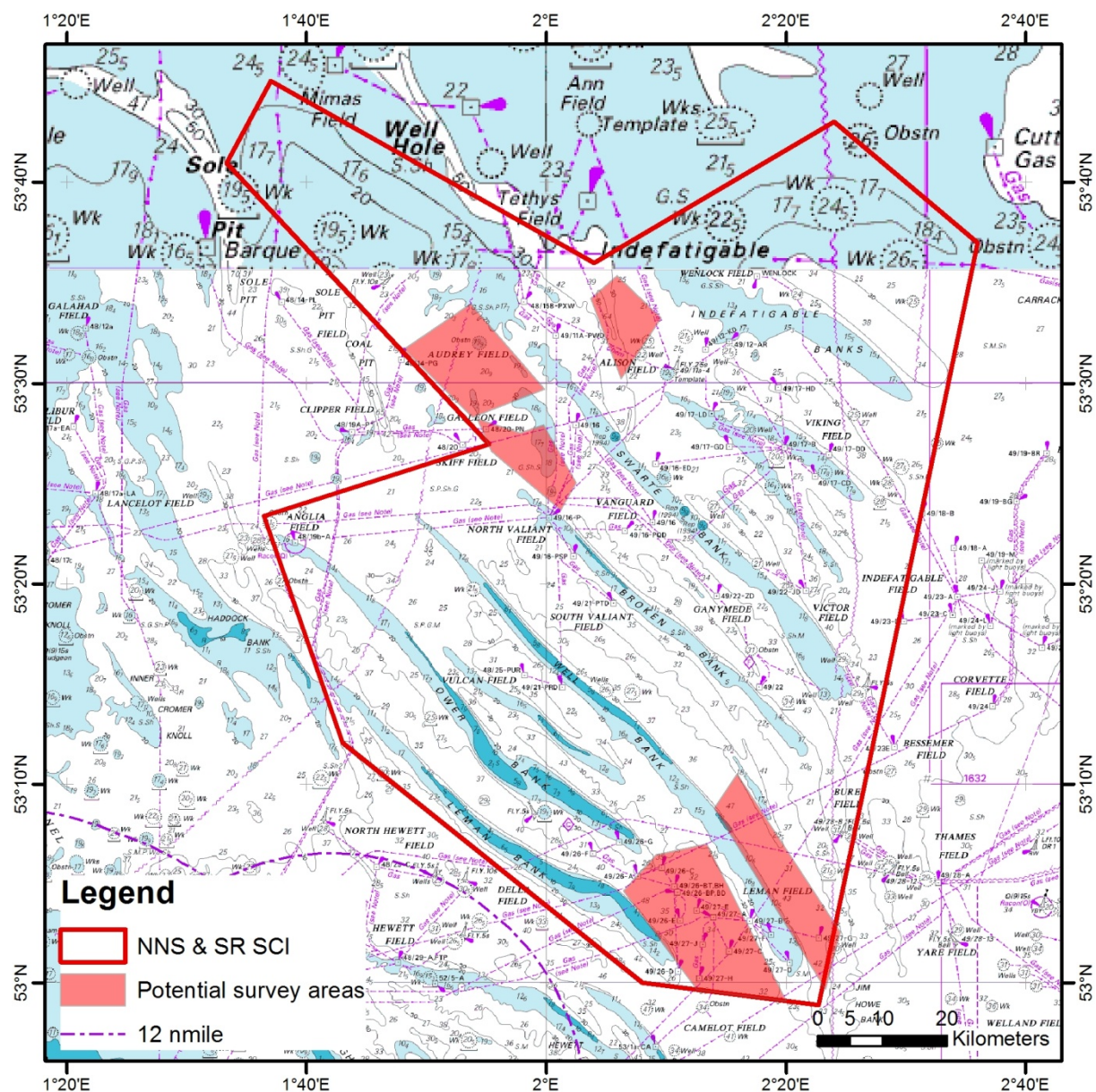
RV Cefas Endeavour will be mobilised in Lowestoft on Friday 1st and Monday 4th November 2013. The vessel will set sail on the afternoon tide (21:00) on Monday 4th November 2013.

The vessel will set sail to the NNS&SR survey area and in agreement with the vessel's captain a detailed operational plan will be developed. It is envisaged that survey work will start in one of the three northernmost boxes, starting with sidescan sonar operations.

A suite of survey tools will be deployed in order to best meet the requirements of the site. It is likely that acoustic survey tools (multibeam echosounder and sidescan sonar) will be used to characterise seabed habitats. In addition, a combination of camera and grabbing work will be undertaken.

The primary focus of the work will be within the highlighted boxes, where *Sabellaria spinulosa* was previously found, although some work may take place in other parts of the larger site.

As part of the training element for JNCC staff, during sidescan sonar operations training sessions will take place on deck or in the recreation room.



The vessel will return and dock in Lowestoft on the afternoon tide (16:00) of Monday 11th November 2013.

NOTE:

The survey work will take place in the vicinity of shallow sandbanks.
Operational limitations will be discussed between the Master and SIC on a daily basis.

GEAR:

Multibeam echosounder
Sidescan sonar
Camera sledge
Drop camera
Watercurtain camera
Hamon grab
Day grab
(for full details see gear list)

Koen Vanstaen
Scientist In Charge
23/10/2013

INITIALLED:

DISTRIBUTION:

Survey staff
David Limpenny
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