

DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS.
2006 RESEARCH VESSEL PROGRAMME: *RV CEFAS ENDEAVOUR*
Cruise Programme: C END 12/06

STAFF:

Part 1 :

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DURATION:

Part 1 : 24th May – 1st June (approx.)

Part 2 : 1st June (approx.) – 17th June

Changeover at sea off Thames or Lowestoft

LOCALITY:

Sea areas Dogger, Humber, Thames, Dover, Wight, Portland, Plymouth, Lundy and Irish Sea?

AIMS:

1. To survey dredged material disposal sites at the Blyth, North Tyne, Souter Point (Tyne), Tees Bay, Inner Gabbard East (outer Thames estuary), Roughs Tower (off Harwich), South Falls, Dover, Swanage Bay and Rame Head (off Plymouth) for benthos, trace metal and organic contaminants in sediments, using grabbing and coring. At a number of sites the SPI camera and various acoustic methods will also be used.
2. To undertake sampling at the historic sewage sludge disposal site off the river Tyne using grabbing, coring and beam trawls for later analyses of macrofauna, meiofauna, epifauna, metals and organic contaminants.
3. To sample representative NMMP locations using grabbing, coring, and trawl methods. Samples will be later analysed for trace metal and organic contaminants, litter and epi-, macro- and meio- fauna.
4. To sample sediments and water at various stations in the Humber/Wash region for later analysis of macro- and meio- fauna, metals, chlorophyll a, porosity, organic contaminants, nutrients and salinity. This survey forms part of a pilot study to inform a revision of the National Marine Monitoring programme.

5. To sample horse-mussels from the Humber/Wash area for later analyses of contaminants in flesh.
6. To sample the benthos and sediments for time-series studies using the Hamon grab, in the vicinity of aggregate extraction sites off the Isle of Wight and Lowestoft.
7. To undertake surveys on the Hastings Shingle Bank and Saturn Reef in order to develop methodologies for the identification and monitoring of *Sabellaria spinulosa* reef. Additional surveys may also be carried out where opportunities arise.
8. To undertake acoustic surveys within an area to the south of the Isle of Wight and off Portland Bill. The purpose of this work is to identify Annex 1 habitats (offshore reefs). Any spare time following completion of this work would be used for ground-truthing (grabbing and under water TV). Both these areas border, but do not cross, the median line.
9. To undertake a broadscale spatial survey, using grabbing, under water TV and acoustic methods within sea areas 'Plymouth' and Lundy. Some stations are within Irish territorial waters and permission has been sought to undertake this work.

PLAN:

Part A:

CEFAS Endeavour will leave Lowestoft on 24th May and sail to the Humber/Wash area to begin work on aims 4 and 7. On completion of this work the vessel will sail to NMMP 345 and later to NMMP 295 (off Tees) and NMMP 285 (off Tyne) where samples will be collected for later analysis of benthic and chemical determinants. A number of further surveys will then be carried out in the Tyne area. These include the historic sewage sludge disposal site at North Tyne (Aim 2), the dredged material disposal site at Blyth (Aim 1), the North Tyne Dredging transect (Aim 1), Souter Point (Aim 1) and also the inshore NMMP site 245 (Aim 3). On completion, *CEFAS Endeavour* will then steam to sites off the Tees for collection of further samples under aim 1. The ship will then continue south to the historic Humber sewage sludge disposal site in order to collect Horse Mussels (Aim 5). On completion the ship will steam south to undertake sampling at two NMMP sites. Following completion of sampling at NMMP sites 376 and 386 in the Wash (Aim 3) further sampling for Horse Mussels will be conducted at a site near the Inner Dowsing (Aim 5). At a convenient point in the programme a changeover of scientific staff will take place, on or about 1st June, in the southern North Sea either at Lowestoft, or at a suitable location in the Thames Estuary.

Part B:

Following the changeover, a number of Hamon grab samples will be collected from temporal sites in the vicinity of the Cross Sand aggregate extraction licensed block (Aim 6). *CEFAS Endeavour* will then head south to NMMP 475 (Aim 3). On completion the ship will undertake surveys at the Roughs Tower and Inner Gabbard East dredging disposal sites (Aim 1). The ship will then steam, via NMMP 466, to a further dredging disposal site at South Falls (outer Thames estuary) before sailing into the English Channel to the dredging disposal site off Dover. On completion of the work at Dover (Aim 1) a further NMMP site 484 will be sampled. The vessel will then continue westwards and carry out survey work off Hastings (Aim 7) and in an area to the east of the Isle of Wight (Aim 6). The ship will then steam offshore to undertake work on Aim 8 to the south of the Isle of Wight. Sampling at the dredged material disposal site in Swanage bay will be conducted prior to steaming to an area off Portland to continue work on Aim 8. On completion the ship will steam to NMMP sites 536 (Lyme Bay) and 575 (Plymouth) (Aim 3). Following this a survey of the Rame Head dredged material disposal site will be carried out. *CEFAS Endeavour* will then begin

work on the broadscale spatial survey within sea areas Plymouth and Lundy (Aim 9) and also NMMP 605 (Aim 3). On completion of the work the ship will dock in Swansea on 17th June.

INITIALLED:

K Cooper

03.05.06

DISTRIBUTION:

All scientific cruise personnel +

M Waldock

S Malcolm

L Murray

D Morris

J Hunt

R Jolliffe

R Law

C Kelly

H Rees

C Vivian

J Thain

J Rees

D Sivyer

J Jones