

Centre for Environment, Fisheries and Aquaculture Sciences,
Lowestoft Laboratory, Pakefield Rd, Suffolk NR33 0HT, England

1999 Research Vessel Report PROGRAMME

~~REPORT~~
Programme: RV Corystes : Cruise 10

STAFF

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DURATION: 6 – 11 October

LOCALITY: Hastings Shingle Bank

AIMS (all under project code A0910):

1. To survey the seabed using sidescan around the proposed Minipod and Loggerpot locations to detect obstructions and assess seabed morphology.
2. To undertake sediment surveys using the Day grab to collect sediment samples for calibration of optical suspended load sensors.
3. To deploy 2 Minipods and 3 Loggerpots in a line NE from the Hastings Shingle Bank dredge area.
4. To determine lateral and longitudinal dispersion and composition of the plume at 5m using a towed body passing through the sediment plume generated by the dredger.
5. To determine the current regime around Hastings Shingle bank by undertaking a 13 hr ADCP section across the site.
6. To undertake a sidescan sonar and biotope survey of the area as part of the Biotope survey project (at night).

NARRATIVE: [note all times in GMT]

RV Corystes sailed on the 0800 tide of the 6st, and sailed to the Hastings Shingle Bank and arrived on site at approximately 2030. A sidescan sonar line was undertaken down the proposed Minipod/Micrologger deployment line. An intensive sidescan survey was then undertaken overnight north and south of the Hastings Shingle Bank dredge area.

During the morning of the 7th a series of trials were undertaken using the tadpole towed body containing the LISST particle size analyser, the CEFAS micrologger and also a pumped water supply to the surface. During the afternoon both longitudinal and

circuits of the plume generated by the dredger Adur were undertaken. An attempt was made to deploy the Minipod but due to adverse weather conditions it was aborted. Over night more sidescan sonar and seabed discrimination (QTC) lines were completed.

Weather conditions were still marginal next morning so the remaining QTC lines were completed and a 13 hour Acoustic Doppler Current Profiler (ADCP) survey completed. Weather conditions had improved on the morning of the 9th allowing deployment of the two Minipods and Guard buoys. Further Tadpole profiler runs were planned for the afternoon but no dredgers arrived so further sidescan sonar lines were completed. Over night sediment samples were taken at 16 sites characterising the seabed in terms of sediment composition and biological community around the intensively surveyed sidescan sonar area. The three loggerpots were deployed next day with under water television pictures and sediment samples of the Loggerpot and Minipod stations. Two CTDs were completed for calibration of Optical sensors area. Two further sidescan sonar lines were completed during the afternoon and evening.

On the 11th suspended sediment samples were obtained using the CTD for calibration of the optical sensors as further tadpole runs were not possible as no dredgers were in the vicinity.

RV Corystes docked at 2300 in Lowestoft on the 11th.

RESULTS:

1. Two Minipods and three loggerpots were deployed in a line NE from the Hastings dredge area and sediment samples collected at each site.
2. The Tadpole towed body was proved to be stable up to approximately 3 to 4 knots at a depth of 10 m. Data from the LISST particle size analyser was transmitted up the cable to allow real time sampling of the suspended sediment plume. Initial results show good agreement between LISST data and ADCP data (over 100 water samples taken for suspended load and particle size analysis).
3. CTD casts were undertaken at the first Minipod site to help calibrate the OBS sensors.
4. A total of 60 miles of sidescan sonar data was collected from an intensive survey box (100 % coverage) and a further 90 from a wider regional survey. Duplicate Hamon Grab sediment samples were collected from 16 sites along with TV pictures.

Jon Rees SIC
11 Oct 1999

**SEEN IN DRAFT: Master
Senior Fishing Mate**

Distribution:

Basic List + (names on staff list)