DEFRA
CEFAS LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND, UK.

2012 RESEARCH VESSEL REPORT
RV *CEFAS ENDEAVOUR* : **CRUISE 02/12**

STAFF:

Name	Role	Cabin	Shift
Dave Sivyer	SIC	SIC	Not specified
Naomi Greenwood	Watch leader	B1	08:00 to12:00 and 20:00 to 24:00
Chris Read		C5	08:00 to12:00 and 20:00 to 24:00
Sonia Obeckerman		C4	08:00 to12:00 and 20:00 to 24:00
Tom Hull	Watch leader	C3	00:00 to 04:00 and 12:00 to 16:00
Marc Wybrow		D3	00:00 to 04:00 and 12:00 to 16:00
Paul Nelson	Nutrients	B2	Not specified
Dave Pearce	Moorings	C2	Not specified
Jennie Keable	Watch leader	C6	04:00 to 08:00 and 16:00 to 20:00
Neil Needham		C7	04:00 to 08:00 and 16:00 to 20:00
Briony Silburn	Sediments	C1	04:00 to 08:00 and 16:00 to 20:00
Fay Couceiro		D6	
Charlie Thompson		D5	
Geraldine Turner		D4	

DURATION: 20 January to 31 January 2012

MOBILISE: Lowestoft (18 and 19 January)

DEMOBILISE: Swansea (1 February)

OPERATION AREAS: North Sea, English Channel, Western Approaches, Celtic Sea, Bristol Channel.

FOREIGN WATERS: None

SEA FISHERIES AREAS: None

MILITARY AREAS: None

PORTCALLS: None

SMALL BOAT TRANSFERS:

SHIFTS: 12-4, 4-8, 8-12

AIMS:

1. Deploy and recover a SmartBuoy at Warp and West Gabbard (SLA25G).
2. Deploy and recover a Waverider at West Gabbard, Tyne/Tees, Hastings, Scarweather and Poole (C3212A).
3. Collect surface and bottom “nutrient” samples and profiles at CSEMP locations including “shelf edge”. (SLA25L/E5304A/B).

4. Collect surface “nutrient samples every two hours (SLA25L/DP240B).
5. Recover 5 landers, 5 guard buoys and 3 waveriders for EAOW(C5228A)
6. Collect OA samples (C3667A/DP240B)
7. Recover SmartBuoy at Dowsing (E5304A)
8. Collect c12 sediment samples at convenient locations (DP240H)
9. Collect sediment samples at 3 locations (Portsmouth University and NOCS)
10. Collect surface litter with Manta Trawl (University of Hull)

CRUISE REPORT

RV Cefas Endeavour sailed from Lowestoft at 18:00 on 19 January. After engine trials overnight the ship arrived at the Warp in the morning 20 January. The SmartBuoy was serviced, the Manta trawl was towed for an hour and surface water samples were collected every 30 mins en-route to West Gabbard. At West Gabbard the waverider and SmartBuoy were serviced before another Manta tow as the ship headed north to arrive at Dowsing for first light on 21 January. Water samples were collected hourly on the way and from the CTD rosette on arrival. The SmartBuoy was serviced, a Manta trawl deployed for an hour as the Endeavour headed into the Wash. After further water stations coring commenced off the Tyne before breakfast on 22nd January. An attempt was soon made to recover the Tyne/Tees waverider but this was aborted due the weather. More coring proceeded a return south to EAOW sites overnight.

EAOW. At first light on 23rd January Endeavour was on site at EAOW DWR “B” to retrieve the remaining guard buoy, but it was missing. Two hours later EAOW “A” waverider and guard buoy were successfully recovered. After moving to EAOW AWAC 1, another waverider and a minilander (dep 7) was recovered before surface sediment samples were collected by day grab. On arrival at AWAC 2 it was already dark so the intention was to pick up the guard buoy but as the ship manoeuvred the surface buffs of the minilander were spotted so they that was retrieved first. Day grabs and CTD were mopped up before transferring to West Gabbard to collect SmartBuoy calibration samples overnight. Endeavour was back at AWAC 2 for first light on 24 January and used the new grapples in combination with acoustic beacons to guide the ship to recover the minilanders left behind on CEND 20/11 (dep 6) and CEND15x/11 (dep 5). Unfortunately this performance was not repeated at AWAC 1 and after nearly 11 hours and 19 attempts we abandoned operations. The last job at the two AWAC sites was to provide detailed multibeam swath bathymetry which was completed by around 06:00 on 25 January.

The Channel. The next phase of the cruise began as the ship moved into the English Channel collecting hourly surface water samples with occasional CTD casts. The Hastings waverider was serviced late afternoon on 25 January. The Poole waverider was serviced at 05:00 the next morning before moving to a coring site off Swanage. The sediment substrate was unsuitable so a secondary plan instigated to core near Jennicliffe Bay, Plymouth. There was a minor delay with some engine problems en-route but NIOZ

coring was successful that evening. Several CTD casts and surface water samples were taken throughout that day and night.

The Shelf Edge. A transect was planned from Plymouth generally following the UK/France boundary to the shelf edge (~2000m) and then north east to the Celtic Deep SmartBuoy and eventually finishing at Hinkley Point in the Bristol Channel (~450 miles). The early phase looked good with light airs and diminishing swell contributing to good progress until we reached the first deep (~2000m) station. Unfortunately a fault with the CTD rosette "sea cable" resulted in a six hour delay but it was re-terminated and water samples were collected from 5 depths between 1870m and the surface. It was not possible to determine the true depth as neither of the ships sounders gave any indication. The weather held throughout Saturday 28 January and by sunset the second deep dip was under way to 1880m. Both CTD casts were limited by the amount of wire available, an estimated 50-60m was left on the winch drum. Another 1000+m cast was achieved before returning to the shelf for a series of CTD stations throughout 29 January until NIOZ coring commenced at 21:00 in the Celtic Deep.

Celtic Deep to Nash Point. Once at the Celtic Deep SmartBuoy site, arriving in the early hours of 30 January, an "anchor station" of hourly CTD casts commenced interspersed by 30min bursts of multibeam to assess the site, trial the new deep water version and look for the lost SmartBuoy (from 2009). The anchor station was suspended at 05:30 when the CTD rosette sea cable termination failed again. Once there was sufficient light the SmartBuoy was investigated visually to ascertain the reason it had stopped transmitting, but it was not apparent so it was left in the water. The ship moved north to collect water (sea cable repaired again) off the Pembrokeshire coast before passing between the fogbound islands of Grassholm and Skomer to the entrance of Milford Haven in a freshening easterly breeze. The ship made the NMMP site at Nash Point by around midnight and proceeded to collect hourly water samples with the CTD rosette. The turbid water making firing bottles erratic.

Final Day. Leaving Nash Point the Manta trawl was towed in very calm conditions for an hour. The Endeavour arrived at Hinkley Point to service the waverider at 10:30, one hour before high water (giving 9.8m beneath the hull). A CTD was undertaken first then the waverider was serviced while the THV MAIR also did some survey work in the close vicinity. The mooring at Hinkley was not recovered as the rubber cord parted under strain. After a single successful final NIOZ core for sediment pH measurements the ship navigated serenely back up the Bristol Channel to Scarweather with the ebbing tide. The Scarweather waverider recovery was the 200th station of the cruise. The deployment was delayed slightly as the new rubber cord had a defect, only noticed when laid out on deck, and had to be swapped out. The pilot cutter nudged alongside at 20:30, we slid through the lock gates around 21:00 and tied up securely by 21:30. Nearly all cruise aims were achieved.

Dave Sivyer
31/01/11