

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

**2016 RESEARCH VESSEL PROGRAMME**

**REPORT: RV Cefas Endeavour: Survey 2/16.**

**STAFF: Alex Callaway (SiC), Alison Pettafor (2SiC), Bill Meadows (Technical lead), Marc Whybrow (Night shift lead), Ken May (Day shift lead), Simeon Archer, Rebecca Faulkner, Ben Hatton, Dave Brown.**

**DURATION: 26/01/2016 – 30/01/2016**

**LOCATION: Silver Pit, North Sea**

**AIMS: Gear trial survey to calibrate Scanmar, HiPAP and EM2040, test SeaSpyder HD camera and fibre-optic system, acquire ADCP data and synchronise various acoustic sensors**

**NARRATIVE:**

The original departure time of 10:20, 25/01/2016 from Lowestoft delayed due to damaged stern roller bearing mounting bracket and housing. Repair work carried out by Small & Co to enable departure on 26/01/2016.

26/01/2016

- Departed Lowestoft 12:30.
- Transited to Silver pit to begin Scanmar sensor trial.

27/01/2016

- Scanmar trial commenced 00:00.
- Continued to 10:00 Scanmar system signed off as operational in shallow (<20 m) and deep (80<100 m) water.
- HiPAP calibration operations commenced 10:30.
- Frame with beacons deployed to seabed and calibration started at 12:30.
- HiPAP calibration completed 15:30.
- Frame retrieved 16:30.
- Target search for MBES calibration commenced and continued until departure to Humber estuary for crew transfer 18:00.
- Transfer completed 21:15 and returned to site at 23:00.

The transfer was planned for external engineers following Scanmar and HiPAP trials. A member of scientific staff became ill and was also transferred to shore at Grimsby.

28/01/2016

- HD Camera trial commenced 00:00.
- Camera housing failed with water ingress observed on video at 100 m. camera retrieved and spare unit fitted. Housing failure within 30 min of deployment.
- Camera operations ceased 05:10.
- Additional Scanmar testing carried out from 08:00 until 12:00.

- MBES calibration and ADCP data acquisition undertaken from 12:30.

29/01/2016

- IP Camera trial commenced 00:00
- Sidescan sonar trial began 08:00. Progress slowed by winch failure, incorrect cable and incorrect settings for responder mode. Once issues were corrected the system was trialled with HiPAP in transponder mode only. At 16:50 the towfish was lost.
- MBES / EK60 synchronisation was attempted but instructions from Kongsberg did not provide a working solution.
- Ferrybox data feed to Tower was investigated.
- Transit back to Lowestoft was begun at 20:00

### **RESULTS:**

Scanmar sensors signed off as functional in both deep and shallow water.

HiPAP calibrated and signed off.

HD and IP camera settings explored with optimum for conditions identified.

Fibre optic cable function proven.

HD camera housing faults observed.

EM2040 MBES calibrated and data acquired for calibration testing post-survey.

Sidescan sonar deployed with beacon, stable positional information at 500 m distance from ship.

Sidescan sonar towfish lost.

Instructions of synchronisation between EM2040 & EK60 identified as incorrect.

Ferrybox input to Tower completed.

Alex Callaway  
Scientist In Charge  
30/01/2016

SEEN IN DRAFT

Master:

Senior Fishing Mate:

INITIALLED:

DISTRIBUTION: