

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

2016 RESEARCH VESSEL PROGRAMME

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

STAFF:

Alex Callaway (Cefas SIC)	SIC
Alison Pettafor (Cefas 2SIC)	B1
William Meadows (Cefas MIST Technical lead)	B2

Day Shift (12:00-24:00)

Ken May (Cefas Shift Lead)	C2
Dave Brown (Cefas Fisheries)	C1
Rebecca Faulkner (Cefas UW Noise)	C3

Night Shift (00:00-12:00)

Marc Whybrow (Cefas Shift Lead)	D3
Simeon Archer (Cefas Mapper)	D6
Ben Hatton (Cefas Fisheries)	D5

NB. Staff requiring inductions are highlighted in yellow

DURATION: 8 Days (Including mob/demob): Lowestoft-Lowestoft

Sailing dates: 10:24, 25th January 2016 - 12:52, 29th January 2016 (00:53, 30/01/2016) if required.

LOCATION:

A: Off Lowestoft Trials Area (Decimal degrees)

TL: 52.990237 ; 2.164074

TR: 52.990237 ; 2.667955

BR: 52.409508 ; 2.667955

BL: 52.409508 ; 2.164074

B: Silver Pit Trials Area (Decimal degrees)

TL: 53.622667 ; 0.692333

TR: 53.586167 ; 0.835000

BR: 53.384500 ; 0.573167

BL: 53.341000 ; 0.729333

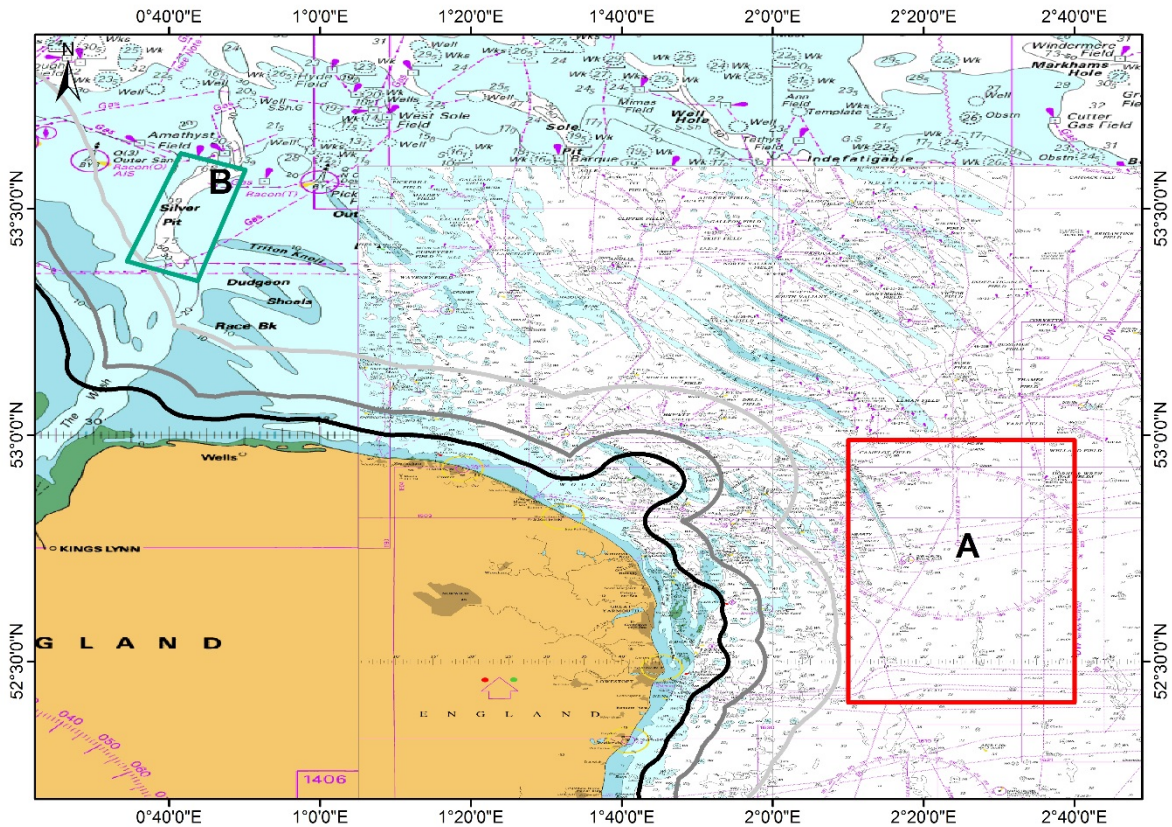


Figure 1. Location of CEND 02/16 survey areas A - Off Lowestoft and B - Silver Pit.

AIMS:

- Multidisciplinary survey capability – Verification/development of equipment critical to multidisciplinary survey work.
- Vessel capability – Verification/development of equipment critical for a range of multidisciplinary surveys.
- Training – Opportunity for bespoke training/upskilling technical staff.

PLAN:

The table below details the planned operations and the relative priority of each task.

Priority No.	Specific Objective	Off Lowestoft	Silver pit	Duration Days	Category	Secondary category
1	Scanmar sensor test	Yes	yes	0.5	Vessel capability	
2	HIPAP calibration	Reduced scope	yes	0.5	MPA	Training
2	MB full calibration plus MRU test	Yes	yes	0.5	MPA/Vessel capability	Training
3	Shallow camera trial	Yes	yes	1.5	MPA	Training
4	Sidescan positioning	Reduced scope	yes	1	Vessel capability	Vessel enhancement
N/A	Ferrybox/camera sensors (In tandem with Priority 3)	yes	yes	In parallel with camera trials	Vessel enhancement	Training

5	Synchronise Multibeam and split beam sounder	yes	yes	In parallel with MB Cal	Vessel enhancement	MPA
6	ADCP trial	yes	yes	0	Vessel capability	training
N/A	Transit (Lowestoft to Silver Pit)	N/A	N/A	20 Hours	N/A	N/A
N/A	Transit (Silver Pit to Lowestoft)	N/A	N/A	20 Hours	N/A	N/A
	Mob/demob (zero vessel cost, staff time only)	N/A	N/A	2 Days (Mob) + 1 Day (Demob)	N/A	N/A

The timings of survey operations are dependent on prevailing conditions and any technical issues arising. Therefore, the following scenarios are for guidance only.

25/01/2016, 10:24 - Depart Lowestoft

Transit to Silver Pit for arrival ~23:00

26/01/2016, 00:00 – 12:00 Scanmar deployment and calibration

12:00 – 23:59 HiPAP beacon deployment and calibration (simultaneous MBES calibration if possible)

27/01/2016 00:00/02:00 – transit to Humber area for small boat transfer @ ~ 08:00; (ADCP/Split-beam ES - MBES compatibility tests if possible during transit)

12:00 – return transit to site (additional acoustic tests where possible, i.e. sidescan sonar positioning trial)

18:00 – 23:59 trial of camera system (simultaneous scientific display trial where possible)

28/01/2016 00:00 – 23:59 camera trial

29/01/2016 01:00 – 12:30 Return transit to Lowestoft

12:50 – Pilot

[If return on 00:53, 30/01/2016 tide possible]

[29/01/2016] [00:00 – 06:00 camera trial]

[07:00 – 12:00 dedicated sidescan sonar trials]

[13:00 – 23:59 return transit to Lowestoft]

[30/01/2016] [00:50 – Pilot]

GEAR (from list circulated 22/12/2015):

Item	Description	Qty
1	EM2040 with full acquisition and processing capability (CARIS/Fledermaus/Geocoder). To include data acquisition and processing PCs.	1
2	Sound velocity measurement system (SD200) for multibeam, with software. (Saiv CTD)	1
3	Fully functional continuous data logging system providing at least the following parameters: <ul style="list-style-type: none"> • Date & Time (GMT) • Latitude & Longitude • Vessel heading • Water depth Cable out (all winches)	1

Item	Description	Qty
4	Operational Olex system	3
5	<ul style="list-style-type: none"> Hi-Pap positioning system for towed and "dropped" sampling tools (sidescan, trawls, grabs, camera sledge). Patched into Tower. Ensure fully compatible with TOWER navigation. 	1
6	4 x High power Beacons 1 x Charger	1
7	Tower survey software Ensure backup system available.	1
8	Towed body winch with Fibre Optic slipping and cable	-
9	New STR fibre camera system	2
10	Sledge with mounts for Fibre camera system	1
11	Drop frame as delivered from STR	1
12	Video processing PC (with splitter box) and 'Pinnacle Studio' software for recording direct to hard drive.	1
13	Square 1 m frame modified for acoustic calibrations	1
14	Dahn buoy, light, anchor line and weight for HIPAP transponder calibration	1
15	Motion reference unit for use on blade	1
16	PHHT and all sensors for Scanmar testing (Ian Holmes/Sophy McCully to detail requirement)	1
17	Egdetech sidescan sonar topsides, acquisition PC running latest version of Discover, Towfish and responder link lead	1
18	Sidescan Cable out info via Nport	1
19	Perspective processing package and dongle	1
20	Infiniti remote PC display modules	1
21	EM2040 to EK60 synchronization link	?
22	Vessel mounted ADCP, Acquisition PC and processing PC	1
23	Instrument carriage for ADCP deployment down Seat Tube. Adaptor flange to be modified if necessary.	3
24	Qinsy Multibeam processing software and Processing PC	1
25	Box of lab consumables (gloves etc)	1

Alex Callaway
Scientist In Charge
07/01/2016

INITIALLED: AC

DISTRIBUTION: Cefas; POMS