Not to be cited without prior reference to Marine Scotland, Marine Laboratory, Aberdeen.

MRV Alba na Mara

Survey 1416A

PROGRAMME

25 July - 04 August 2016

Ports
Loading: Fraserburgh, 22 July 2016
Unloading: Fraserburgh, 4 August 2016

In setting the survey programme and specific objectives, etc the Scientist-in-Charge needs to be aware of the restrictions on working hours and the need to build in adequate rest days and rest breaks as set out in Marine Scotland's Working Time Policy (Lab Notice 34/03). In addition, the Scientist-in-Charge must formally review the risk assessments for the survey with staff on-board before work is commenced.

In the interest of efficient data management it is now mandatory to return the Survey Report, to I Gibb and the Survey Summary Report (old ROSCOP form) to M Geldart, within four weeks of a survey ending. In the case of the Survey Summary Report a nil return is required, if appropriate.

Personnel

R Watret (SIC)	(MSS)
P Stainer	(MSS)
R Duncan	(MSS)
E Edwards	(MSS)
C Carter	(JNCC)

Project: 20231, 11 days

Gear: Surface and sub-surface passive acoustic monitoring (PAM) moorings.

Objectives:

To retrieve and re-deploy a series of moorings comprising either dhan buoys (eight surface marked moorings) or acoustic release systems (22 sub-surface acoustic release moorings) and the acoustic recording devices attached to them (30 C-POD and 10 SM units) as part of the east coast marine mammal monitoring programme (ECOMMAS).Table 1 and Figure 1 give the locations for the moorings.

Procedure:

Loading of all equipment will be carried out on 22 July when the previous survey (1316A) returns to Fraserburgh. *Alba na Mara* will sail from Fraserburgh on the morning of 25 July and after all vessel drills make for the first mooring position. The ultimate order in which the moorings are retrieved/deployed will be dictated by the weather forecast and the likely shelter that can be sought along the east coast. Accurate position records will be kept detailing where the moorings are eventually placed as this may differ slightly from the planned position.
Moorings that cannot be found or retrieved will be replaced with the same type of mooring if spares are available. Recovered PAM devices will be returned to the Marine Laboratory at the end of the survey.

Once all the moorings have been retrieved and redeployed *Alba na Mara* will return to Fraserburgh by 4 August to unload the remaining gear and allow the scientific crew to disembark and return to Aberdeen.

Normal contacts will be maintained with the Marine Laboratory.

Submitted:
R Watret
30 June 2016

Approved:
I Gibb
01 July 2016

Table 1: Name, position, mooring type and use of SM unit or not of all 30 moorings deployed in May during-1416A.

Location name	Lat (dec deg)	Long (dec deg)	Depth (m)	Mooring type	SM unit
Arbroath 10	56.50	-2.38	56	Sub-surface	Y
Arbroath 15	56.46	-2.30	58	Sub-surface	
Arbroath 5	56.55	-2.48	39	Sub-surface	
Cromarty 10	57.69	-3.88	28	Sub-surface	
Cromarty 15	57.71	-3.81	21	Sub-surface	Y
Cromarty 5	57.67	-3.99	13	Sub-surface	
Cruden Bay 10	57.38	-1.74	75	Sub-surface	
Cruden Bay 15	57.38	-1.62	87	Surface	
Cruden Bay 5	57.38	-1.83	28	Sub-surface	Y
Fraserburgh 10	57.77	-2.14	64	Sub-surface	
Fraserburgh 15	57.85	-2.09	88	Sub-surface	
Fraserburgh 5	57.71	-2.13	44	Sub-surface	Y
Helmsdale 10	58.01	-3.61	50	Surface	
Helmsdale 15	57.98	-3.54	57	Surface	Y
Helmsdale 5	58.05	-3.72	30	Sub-surface	
Latheron 10	58.23	-3.21	62	Surface	
Latheron 15	58.19	-3.14	69	Surface	
Latheron 5	58.27	-3.32	32	Sub-surface	Y
Spey Bay 10	57.74	-3.04	28	Sub-surface	Y
Spey Bay 15	57.79	-3.06	40	Sub-surface	
Spey Bay 5	57.69	-3.06	15	Sub-surface	
St. Andrews 10	56.26	-2.50	49	Sub-surface	Y
St. Andrews 15	56.29	-2.43	55	Surface	
St. Andrews 5	56.26	-2.57	25	Sub-surface	
St.Abbs 10	55.96	-2.16	70	Sub-surface	
St.Abbs 15	56.03	-2.08	65	Sub-surface	
St.Abbs 5	55.93	-2.18	39	Sub-surface	Y
Stonehaven 10	56.96	-2.11	51	Surface	
Stonehaven 15	56.98	-2.02	62	Surface	
Stonehaven 5	56.95	-2.18	35	Sub-surface	Y

.

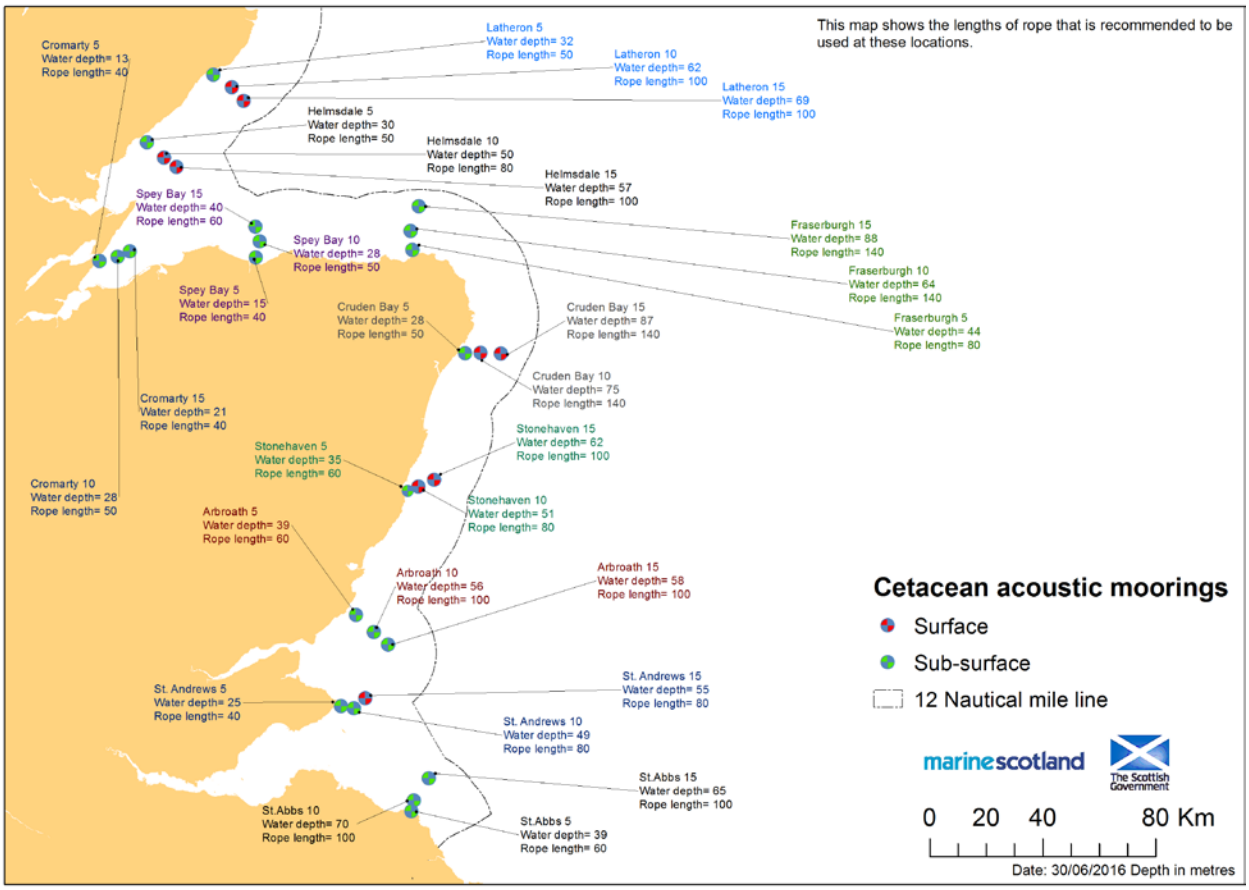

Figure 1: Positions of all 30 moorings, with depth in metres and type of mooring to be firstly retrieved, then re-deployed or replaced the during survey.